Status of South Asian Chiroptera

Conservation Assessment and Management Plan (C.A.M.P.) Workshop Report, 2002

Editors

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Conservation Assessment and Management Plan Workshop (C.A.M.P.)

South Asian Chiroptera

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A Conservation Assessment and Management Plan Workshop is in many ways a "phenomenon". With the collaboration and cooperation of a great number of people, it could not come about in the first instant and could never be completed successfully. The three stages of a C.A.M.P. – planning, implementation and follow-up are all exercises in chaotic activity and grueling work. The people who help it happen, planners, participants as well as those who put together the Report deserve special credit, which is the purpose of this page.

Preparation: preparation for a C.A.M.P. primarily involves putting together two important lists: 1) a list of potential participants and 2) a list of target species. Assembling a list of participants for just any workshop may not be so difficult but for a C.A.M.P. one wants people who have genuine information – field biologists, taxonomists, foresters who have studied the target taxa. There are few readymade lists of these people so hunting them down demands painstaking work. The list of taxa also is not straightforward in India and South Asia – this requires collecting species lists from many sources and verifying each species and subspecies with published references. It also requires tracking down all synonyms and common names and recent taxonomic modifications. Preparation also requires collecting all published sources of field surveys, sightings and identifications for reference in the workshop. It takes months. For this we should thank first our Chiroptera Conservation and Information Network members who sent articles and reprints for our use. Also many thanks to **P.O. Nameer** for his painstaking research list of Chiroptera and **Paul Bates** for his excellent book, *Bats of the Indian Subcontinent*. Finally but most, we must thank our Research Associate **K. Padma Priya** who coordinated all lists of people and animals, briefing material, sources, invitations, schedules and travel; as well as **Latha G. Ravi Kumar, A.R. Binu Priya, J. Sheela, B.A. Daniel, A. Jyoti Maler, B. Ravichandran, S. Saroja, Geetha Kannan, S. Sudha, K. Krishnaveni, Sonali Lahiri, Arul Jegadeesh, Hanneke de Boer, Senthilkumar** and **Manju Siliwal** who assisted with various stages of the C.A.M.P. There were many, many late nights and frayed nerves, with some learning a new computer programme so they could input data directly during the C.A.M.P. and others designing and printing bat masks so we could break the tension with a bit of fun.

Implementation: When the C.A.M.P. begins, no matter how much you tell the participants to be prepared for hard work, nobody can quite believe what this actually entails. Filling out 8-page Taxon Data Sheets with information that you might have come across in the field years ago, arguing with other participants, facilitators, learning the brain-boggling IUCN Red List Criteria takes its toll. The first night that you work till 9 or 10 p.m. is kind of fun – something different for a workshop – but by the 3rd and 4th days (and nights) of filling in the ubiquitous sheets, participants are wondering what kind of monsters invented the C.A.M.P. Workshop. By the last day when everyone thinks they can't part with another piece of information, suddenly it's over – there is a list of species which have been carefully assessed and categorized using IUCN's Red List Criteria and Categories and more information on any one than has ever been compiled before. This information will go into a Report that can be used to save species. This makes it all worthwhile. The participants are not the only ones to suffer. C.A.M.P. recorders, which come from CBSG, South Asia, also sit up late at night with strained eyes and aching backs to record information in a computerized database. This makes it possible for participants to take home a draft report right from the workshop. For this we must thank **Latha G. Ravi Kumar, A.R. Binu Priya, K. Padma Priya, Hanneke de Boer** and **B.A. Daniel** for their hours of recording as well as **B. Ravichandran and J. Sheela** for duplicating the report in such a short time.

Even then, it is not over. Participants take home the Taxon Data Sheets and make corrections and supply missing information and send it back. It is another long, difficult task to incorporate the information, rectify the Taxon Data Sheets and organize the material for writing the Report. It takes many hours of many days over many weeks of checking and rechecking data. **A.R. Binu Priya** and **K. Padma Priya** probably dream nightly about bat taxon data sheets and we thank them as well as the many office staff who assembled the actual book.

Our host **G. Marimuthu** of the School of Animal Behaviour and Physiology, Madurai Kamaraj University, and his team deserve much credit for hosting the workshop and putting up with the many unusual requests required to keep more than 40 bat biologists happy enough to stick around for a full five days.

We should also thank our guests from far away, **Tony Hutson**, Co-chair, IUCN SSC Chiroptera Specialist Group, **Paul Bates** and **Dr. Sharoukh Mistry**, Indian field biologist from USA, for coming all the way to contribute to the workshop. Many participants endured travel hardships (such as the team from Ahmednagar who drove 1000 kilometers in a jeep to attend the workshop) and all gave one full week out of their lives to make the workshop work.

Now the Report is out, all of us must utilize it to the maximum to ensure the survival of all species of Chiroptera of South Asia.

Sally Walker and **Sanjay Molur**, Facilitators and Organizers
Conservation Assessment and Management Plan Workshop for South Asian Chiroptera

Executive Summary

Conservation Assessment and Management Plan (C.A.M.P.) Workshop for Chiroptera of South Asia

EXECUTIVE SUMMARY

Introduction

A Conservation Assessment and Management Plan (C.A.M.P.) Workshop for South Asian Chiroptera assessed a total of 120 of the 123 species of bats occurring in South Asia according to the 2001 IUCN Red List Criteria and made conservation, research and management recommendations on the basis of the assessments. The five-day workshop was conducted from 21-25 January 2002 at the Department of Animal Behaviour and Physiology, School of Biological Sciences, Madurai Kamaraj University, Madurai. A total of 43 bat experts including currently active field biologists from 25 scientific institutions from Nepal, Sri Lanka, India, Myanmar, U.K. and U.S.A. participated in the workshop.

The workshop was facilitated and coordinated by the IUCN SSC Conservation Breeding Specialist Group's regional network for South Asia (CBSG, South Asia). The IUCN/SSC Chiroptera Specialist Group was represented by its Co-Chair. Other organizers and collaborators were the Chiroptera Conservation and Information Network of South Asia (CCINSA), Department of Animal Behaviour & Physiology, Madurai Kamaraj University, Zoo Outreach Organisation (ZOO), and Wildlife Information & Liaison Development Society (WILD). The workshop was sponsored by Chester Zoo/North of England Zoological Society, Bat Conservation International, Columbus Zoo Conservation Fund and Metro-Toronto Zoo.

The workshop was also a five-year review of an earlier C.A.M.P. for Mammals of India conducted in 1997 at the Centre for Ecological Sciences, Bangalore, under the auspices of the Biodiversity Conservation Prioritisation Project (BCPP) for India. The current exercise extended its mandate to the political unit of South Asia. The review aimed to rectify the 50% data deficienct species that characterized the 1997 assessments of Indian bats by increasing the number of chiroptera specialists participating. For this a network of chiroptera field biologists was formed and provided with information and a series of tasks, which helped in bringing together biologists and data for the workshop.

The C.A.M.P. Process

The Conservation Assessment and Management Plan (C.A.M.P.) Process was developed by the IUCN SSC Conservation Breeding Specialist Group (CBSG) initially to assist zoos to prioritise species for conservation breeding but now as a tool of IUCN for assessing species for the Red List of Threatened Animals and as a means of assisting the regional and national biodiversity planning process. A C.A.M.P. workshop brings together a broad spectrum of experts and stakeholders (e.g., wildlife managers, biologists, representatives of the academic community or private sector, researchers, government officials and captive managers) who contribute data from field studies which is used by the workshop to evaluate the current status of species, populations and habitats and make recommendations for specific conservation-oriented research, management and public education. C.A.M.P.s are run according to a philosophy of sharing information, resolving conflict, putting conservation of species first and achieving consensus to forward conservation action.

A C.A.M.P. Workshop is intensive and interactive which facilitates objective and systematic discussion of research and management actions needed for species conservation, both *in situ* and *ex situ*. Information and recommendations are compiled for each species on a Taxon Data Sheet, which also provides documentation of the reasoning behind recommendations of the criteria used for deriving a status. All assessments were ratified by participants in plenary sessions with much discussion ultimately leading to consensus within the workshop. The results of the initial C.A.M.P. workshops are reviewed by workshop participants in varying iterations and as a Report to experts and other users of the information in the greater conservation community.

After assessments have been completed, participants form special issue working groups to highlight problem areas which have been identified during the workshop for further discussion, and formulate recommendations. Some participants make personal commitments to carry out these recommendations.

The 2001 IUCN Red List Criteria (Version 3.1)

The C.A.M.P. workshop process employs the IUCN Red List Criteria as a tool in assessing species status in a group of taxa. The structure of the categories includes extinct, threatened, non-threatened, data deficient and not evaluated divisions. In the last decade IUCN has improved the method of assessment of species by incorporating numerical values attached to the different criteria for threat categories. The 2001version of the Red List threatened categories are derived through a set of 5 criteria (population reduction, restricted distribution, continuing decline and fluctuation; restricted population and probability of extinction) based on which the threatened category is assigned. The term "threatened" according to the 2001 IUCN categories means Critically Endangered, Endangered or Vulnerable.

The Workshop

The Order Chiroptera contains 1,001 species of bats, which are the only volant mammals. Bats are sub-categorized as Megachiroptera (fruit bats) and Microchiroptera (insectivorous bats), on the basis of their specialization in feeding habits and morphological adaptations. Chiroptera is the second largest mammal group.

Bats are not popular mammals. They are viewed with fear and revulsion for such habits as poaching ripe fruits from orchards and defecating on public pathways. Conflict with fruit farmers provoked the Indian government to list fruit bats as "vermin" in 1972 in the Indian Wildlife (Protection) Act, which persists even today. In other South Asian countries bats are given no protection, or are listed negatively, e.g. being specifically exempted from protective legislation! A strong motivation for organizing and conducting the C.A.M.P. workshop was to collect information for use in generating support for basic legal protection of these biotically useful animals. The role of bats in regeneration of forests, dispersing seeds and pollen and in consumption of harmful insects has been well documented in scientific papers from around the world. Unfortunately, such ecological studies are sparse in South Asia and the lack of this information was noted at the workshop.

South Asian Chiroptera number 123 species with about 139 valid subspecies designated within. The C.A.M.P. assessment was conducted only at the species level. Chiroptera species constitute about one third of the mammalian diversity of the (political) region.

Status of South Asian Chiroptera

The final assessment figures are given numerically in the Table below :

Status of Chiroptera of South Asia – C.A.M.P. 2002			
Category	**Endemic to South Asia**	**Not endemic**	**Total number**
Critically Endangered CR	1	1	2
Endangered EN	4	5	9
Vulnerable VU	4	16	20
Near Threatened NT	2	30	32
Least Concern LC	4	45	49
Data Deficient DD	2	6	8
Not Evaluated NE	0	3	3
	17	106	123

Seventeen species of bats are endemic to South Asia. Only 8 of the 123 species of South Asian Chiroptera assessed in the C.A.M.P. workshop have been categorized as Data Deficient, a high contrast to 52 out of 102 Indian species, which were assessed at the 1997 Mammal C.A.M.P. workshop.

Threats to bats include human interference leading to habitat loss, loss of habitat quality, deforestation, direct human interference both in forest areas and in human settlements where bats have colonized. Although 40% of Chiroptera were assessed and categorized as Least Concern there is yet reason for vigilance even for these species. The assessment was conducted at the species level only, which did not include at least 139 subspecies, some of them highly restricted to small areas such as Andaman & Nicobar Islands and Sri Lanka. These subspecies and even individual populations of species may be under tremendous pressure leading to loss of biodiversity and resulting ecological impact.

Recommendations

Research recommendations confirmed that bats are one of the least studied mammalian groups in the region. Information for many species is based only on museum or literature references, with no recent population or distributional information. Therefore, chiroptera surveys make up the primary research recommendation for nearly all bats (120 species). Ecological studies were also very strongly recommended for better understanding of the status and economic value of species as well as to provide justification for upgrading bats in national legislation. Other research recommendations include life history studies, limiting factor research, taxonomic studies, genetic studies, and population and habitat viability analysis.

Management recommendations focused on the need for periodic monitoring to follow surveys, the lack of which has hindered the understanding of population structure and dynamics of bats of the region. Other recommendations included habitat management and public awareness. Habitat management is crucial from not only conserving roost areas such as caves, trees, old buildings, temples and wells, but also in conserving its sources of food, be it fruits or insects. Education should form a part of management as man is the only genuine threat to bats.

Field surveys, monitoring and conservation priorities were discussed by the Working Group. The group recommended surveys in unknown or unsurveyed localities, surveys of all the 8 Data Deficient species and resurveys in some areas where bats seemed to have disappeared. Modern scientific field techniques for field studies should be utilized with conservation as the first priority of the studies. Training was recommended for this as well as for identification of bat species so that monitoring is effective. In regard to monitoring, bats should be included in association with routine wildlife monitoring as well as in Environmental Impact Assessment (including effect of pesticides). Threatened species should be prioritised so that their population trends can be ascertained. Study and documentation of pollination and seed dispersal by bats in different ecosystems, would help improve the image of bats. For captive management, two Indian endemic bats were recommended for captive breeding programmes, *Hipposideros durgadasi* (Khajuria, 1970) and *Latidens salimalii* Thonglongya, 1972. Forty species were recommended for captive management for education and public awareness.

Legislation and policy issues included a priority recommendation as the removal of Megachiroptera or fruit bats from Schedule V (Vermin) of the Indian Wildlife (Protection) Act, 1972 with legislation to extend to other species of Chiroptera. Over time, legislation and forest management plans and guidelines should include control measures for disturbance, selling, bartering whole or parts of bats, protection of key roosting sites and important habitats of bats, particularly of threatened and endemic species. Migratory bat species should be identified and appropriate international agreement drafted.

Bat taxonomy was discussed by working group members with particular focus on rectifying the ever growing lacunae in qualified bat taxonomists, coordinating access to collections in the region, capacity building and development of taxonomic keys for easier identification.

A temple bats working group recommended simple but effective methods to promote the need for protecting bats in Bats in temples and tourism sites. The group recommended that when the need for disturbing bats in tourism sites arises, the cave authority and tourism authority should investigate and arrange alternate habitat for bats.

Education working group members discussed a strategy for tackling the negative attitudes towards bats which consisted of a variety of educational activities, items and projects aimed at audiences of different ages and in different strata of society.

During a session devoted to personal commitments there were many pledges to conduct educational and awareness activities for all levels of people, to start bat clubs, and to conduct a variety of research projects. Some of the projects included to study Nepal and Myanmar cave bats, pollination and seed dispersal in a forest ecosystem; to coordinate the import of bat detectors; develop a model for a bat box appropriate for South Asian environment. Other commitments included working against illegal trade of bats, adopting of orphaned bats, mapping of bats in South Asia, working for upgradation of legislation, making available the Bombay Natural History Society collections for study and preparation of bat education materials for use by all participants and zoos.

List of South Asian Chiroptera assessed in the Conservation Assessment and Management Plan Workshop, Madurai, 2002

Scientific name and status

Areilulus circumdatus (Temminck, 1840) - LC
Asellia tridens (Geoffroy, E., 1813) - NE
Barbastella leucomelas (Cretzschmar, 1830/31) - NT
Coelops frithii Blyth, 1848 - NT
Cynopterus brachyotis (Muller, 1838) - LC
Cynopterus sphinx (Vahl, 1797) - LC
Eonycteris spelaea (Dobson, 1871) - LC
Eptesicus bottae (Peters, 1869) - DD
Eptesicus gobiensis Bobrinskii, 1926 - DD
Eptesicus nasutus (Dobson, 1877) - DD
Eptesicus pachyotis (Dobson, 1871) - DD
Eptesicus serotinus (Schreber, 1774) - NT
Eptesicus tatei Ellerman and Morrison-Scott, 1951 - DD
Harpiocephalus harpia (Temminck, 1840) - NT
Harpiocephalus mordax Thomas, 1923 - DD
Hesperoptenus tickelli (Blyth, 1851) - LC
Hipposideros armiger (Hodgson, 1835) - LC
Hipposideros ater Templeton, 1848 - LC
Hipposideros cineraceus Blyth, 1853 - NT
Hipposideros diadema (E. Geoffroy, 1813) - VU -- D2
Hipposideros durgadasi (Khajuria, 1970) - EN -- D
Hipposideros fulvus Gray, 1838 - LC
Hipposideros galeritus Cantor, 1846 - NT
Hipposideros hypophyllus Kock & Bhat, 1994 - EN -- B1ab(ii,iii) + 2ab(ii,iii)
Hipposideros lankadiva Kelaart, 1850 - LC
Hipposideros larvatus (Horsfield, 1823) - NT
Hipposideros pomona Andersen, 1918 - LC
Hipposideros speoris (Schneider, 1800) - LC
Ia io Thomas, 1902 - EN -- B1ab(iii)+2ab(iii)
Kerivoula hardwickii (Horsfield, 1824) - LC
Kerivoula papillosa Temminck, 1840 - NT
Kerivoula picta (Pallas, 1767) - LC
Latidens salimalii Thonglongya, 1972 - EN -- B1ab(iii)+2ab(iii)
Macroglossus sobrinus (K. Andersen, 1911) - NT
Megaderma lyra E. Geoffroy, 1810 - LC
Megaderma spasma (Linnaeus, 1758) - LC
Megaerops niphanae Yenbutra & Felten, 1983 - NT
Miniopterus pusillus Dobson, 1876 - VU -- B2ab(iii,iv)
Miniopterus schreibersii (Kuhl, 1819) - LC
Murina aurata (Milne-Edwards, 1872) - NT
Murina cyclotis Dobson, 1872 - LC
Murina grisea Peters, 1872 - CR -- B1ab(iii)
Murina huttonii (Peters, 1872) - LC
Murina leucogaster (Milne-Edwards, 1872) - NT
Murina tubinaris (Scully, 1881) - NT
Myotis annectans (Dobson, 1871) - VU -- D2
Myotis blythii (Tomes, 1857) - VU -- D1
Myotis csorbai Topal, 1997 - DD
Myotis daubentonii (Kuhl, 1819) - EN -- B1ab(iii)+2ab(iii)
Myotis formosus (Hodgson, 1835) - LC
Myotis hasseltii (Temminck, 1840) - NT
Myotis horsfieldii (Temminck, 1840) - LC
Myotis longipes (Dobson, 1873) - NT
Myotis montivagus (Dobson, 1874) - VU -- B2ab(iii)
Myotis muricola (Gray, 1846) - LC
Myotis mystacinus (Kuhl, 1819) - VU -- D1
Myotis sicarius Thomas, 1915 - VU -- B2ab(iii)
Myotis siligorensis (Horsfield, 1855) - NT
Nyctalus leisleri (Kuhl, 1819) - EN -- D
Nyctalus montanus (Barrett-Hamilton, 1906) - NT
Nyctalus noctula (Schreber, 1774) - LC

Otomops wroughtoni (Thomas, 1913) - CR -- B2ab(iii)
Otonycteris hemprichii Peters, 1859 - NT
Philetor brachypterus (Temminck, 1840) - VU -- B1ab(iii)+2ab(iii)
Pipistrellus abramus (Temminck, 1840) - DD
Pipistrellus affinis (Dobson, 1871) - NT
Pipistrellus cadornae Thomas, 1916 - NT
Pipistrellus ceylonicus (Kelaart, 1852) - LC
Pipistrellus coromandra (Gray, 1838) - LC
Pipistrellus dormeri (Dobson, 1875) - LC
*Pipistrellus javanicus (*Gray, 1838) - LC
Pipistrellus kuhlii (Kuhl, 1819) - LC
Pipistrellus paterculus Thomas, 1915 - LC
Pipistrellus pipistrellus (Schreber, 1774) - LC
Pipistrellus savii (Bonaparte, 1837) - VU -- B1ab(iii)
Pipistrellus tenuis (Temminck, 1840) - LC
Plecotus auritus (Linnaeus, 1758) - NT
Plecotus austriacus (Fischer, 1829) - NT
Pteropus faunulus Miller, 1902 - EN -- B1ab(iii)+2ab(iii)
Pteropus giganteus Brunnich, 1782 - LC
Pteropus hypomelanus Temminck, 1853 - EN -- B1ab(iii) + 2ab(iii)
Pteropus melanotus Blyth, 1863 - VU -- B1ab(iii), 2ab(iii)
Pteropus vampyrus Linnaeus, 1758 - EN -- B1ab(iii)+2ab(iii)
Rhinolophus affinis Horsfield, 1823 - LC
Rhinolophus beddomei Andersen, 1905 - NT
Rhinolophus blasii Peters, 1866 - NT
Rhinolophus cognatus Andersen, 1906 - VU -- D2
Rhinolophus ferrumequinum (Schreber, 1774) - VU -- B2ab(iii)
Rhinolophus hipposideros (Bechstein, 1800) - VU -- B1ab(iii)+2ab(iii)
Rhinolophus lepidus Blyth, 1844 - LC
Rhinolophus luctus Temminck, 1835 - NT
Rhinolophus macrotis Blyth, 1844 - NT
Rhinolophus mitratus Blyth, 1844 - VU -- D2
Rhinolophus pearsonii Horsfield, 1851 - LC
Rhinolophus pusillus Temminck, 1834 - LC
Rhinolophus rouxii Temminck, 1835 - NT
Rhinolophus sinicus (Andersen, 1905) - LC
Rhinolophus subbadius Blyth, 1844 - VU -- B2ab(iii)
Rhinolophus trifoliatus Temminck, 1834 - VU -- B1ab(iii)+2ab(iii)
Rhinolophus yunanensis Dobson, 1872 - VU -- B1ab(iii)+2ab(iii)
Rhinopoma hardwickii Gray, 1831 - LC
Rhinopoma microphyllum (Brünnich, 1782) - LC
Rhinopoma muscatellum Thomas, 1903 - NT
Rousettus aegyptiacus (E. Geoffroy, 1810) - VU -- B1ab(iii)
Rousettus leschenaulti (Desmarest, 1820) - LC
Scotoecus pallidus (Dobson, 1876) - NT
Scotomanes ornatus (Blyth, 1851) - LC
Scotophilus heathii Horsfield, 1831 - LC
Scotophilus kuhlii Leach, 1821 - LC
Sphaerias blanfordi (Thomas, 1891) - NT
Tadarida aegyptiaca (E. Geoffroy, 1818) - LC
Tadarida plicata (Buchannan, 1800) - LC
Tadarida teniotis (Rafinesque, 1814) - NE
Taphozous longimanus Hardwicke, 1825 - LC
Taphozous melanopogon Temminck, 1841 - LC
Taphozous nudiventris Cretzschmer, 1830-31 - LC
Taphozous perforatus E. Geoffroy, 1818 - LC
Taphozous saccolaimus Temminck, 1838 - LC
Taphozous theobaldi Dobson, 1872 - VU -- A2a
Triaenops persicus Dobson, 1871 - VU -- D2
Tylonycteris pachypus (Temminck, 1840) - NT
Tylonycteris robustula Thomas, 1915 - NE
Vespertilio murinus Linnaeus, 1758 - NT

Report

Conservation Assessment and Management Plan (C.A.M.P.) Workshop for Chiroptera of South Asia

REPORT

The Order Chiroptera contains 1,001 species of bats, which are the only volant mammals. Bats are sub-categorized as Megachiroptera and Microchiroptera, on the basis of their specialization in feeding habits and morphological adaptations. While Megachiroptera are predominantly fruit eaters, Microchiroptera, which form the majority of bat species globally, feed on insects. There are 834 species of insectivorous bats in the world and 167 fruit bats. Among the world's mammals, bats make up 20% of the total number. Bats are found all over the world except the Arctic, the Antarctic and some islands (Mickleburgh, *et al*. 2002)

Almost everywhere they are found, they are viewed with mild disdain to revulsion due to a combination of fictitious information and their natural habits. They have found a place in almost all folklore -- not for the right reasons -- but to depict evil, bad omen, spirits of the night, vampires, etc. Even in recent times farmers frown upon fruit bats for inflicting heavy losses to their crops. Landlords, homeowners and authorities complain of bats dirtying houses, buildings, places of worship, wells and other man-made structures. The common perception of bats is negative, particularly in Asian countries, where they have had few champions such as Bat Conservation International in USA or Bat Conservation Trust in the United Kingdom. This has led to many ignorant and shortsighted policies such as the Indian legislation, which has categorised fruit bats as vermin for three decades. Slowly, this is beginning to change.

In South East Asia, the importance of the positive role of bats in the ecosystem was recognized in 1998, by the Malaysian government whose Parliament of the state of Sarawak in Borneo passed a Wild Life Protection Ordinance which includes protection for all bats. Domestic possession of bats or any part or derivative is legal only when held in accordance with the terms and conditions of a license issued under the 1998 law. In 1999, another law provided that a license is required for the sale and use of all mistnets, with a penalty of both imprisonment and fine for sale and/or use of mistnets in the country (Gumal & Racey, 1999).

In India, on 30 September 2002, the Central Government listed two species of bats (*Otomops wroughtonii*, Wroughton's Free-tailed Bat, and *Latidens salimalii*, Salim Ali's Fruit Bat) on Schedule I of the Wildlife (Protection) Act, 1972, according the highest degree of protection to these threatened species. No other of the 112 species of Indian bats are protected; in fact, the remaining twelve fruit bats are listed still under Schedule V where they are defined as "Vermin" and can be captured or killed with impunity.

Bats have a tremendous role to play in the ecosystem, a very simplistic example being fruit bats' role as flower pollinators and in seed dispersal, and that of insectivorous bats in controlling much of the insect pest population. Although fruit bats damage a small percentage of agricultural crops, their role in forest regeneration more than compensates this loss in the long term from the perspective of the greater good.

Research on insect consumption by bats in other parts of the world has shown that *Tadarida brasiliensis* of Mexico can consume more than half its weight in insects nightly with colonies estimated to consume 10 tonnes per million bats on a nightly basis. Similar estimates for other insectivorous species are known from Borneo where one cave population consumes 7500 kg per night. *Myotis lucifugus*, the little brown bat, which can eat up to its own body weight in insects per night, much of which is likely to be mosquitos (S. Mistry, *in litt*.). Some insectivorous bats also eat small mammals. Y.P. Sinha has described the Indian False Vampire (*Megaderma lyra*) as a "good friend of farmers" in the state of Bihar. Colonies of this species, ranging from 25 to 240 individuals, consume rats and mice, which destroy different grains stored in bags (Sinha, 1986, 1994) and are rewarded with protection by farmers, who call it the "goddess Laxmi" (Y.P. Sinha, *in litt*., 1 Nov 2002).

Status Information of South Asian Bats

The World Conservation Union (IUCN) Species Survival Commission (SSC) Chiroptera Specialist Group (CSG) has been active in promoting research, conservation and conservation management of bats around the world. One of CSG's important contributions in conservation of bats is the publication of Action Plans -- the Old World Fruit Bats Action Plan (Mickleburgh *et al*., 1992) and the Microchiroptera Action Plan (Hutson *et al*., 2001). These compilations highlight the conservation status of bats globally and focus on the need for conservation action plans at the national and local levels. National and International Red Data Books have included some threatened bat species. A number of publications including reports, newsletters and peer-reviewed articles have indicated the status of bats in the wild, a recent one being that published in *Oryx* (Mickleburgh *et al*., 2002).

In India the first list of threatened bats was compiled after assessing the status of 102 Indian bats at the 1997 Conservation Assessment and Management Plan (C.A.M.P.) workshop for Indian mammals (Molur *et al*., 1998). Bates and Harrison's (1997) book entitled *Bats of the Indian Subcontinent* was published the same year as the mammal C.A.M.P. in India, but unfortunately was not available in time for the workshop. An initial assessment based on 1994 IUCN Red List Criteria was attempted for all Indian bats. A total of 102 species of endemic and non-endemic bats were assessed, of which 16 were categorized as threatened in India, and 52 species were categorized as Data Deficient. One of the recommendations at the Indian C.A.M.P. was to assess the status of all species after five years, based on new information.

As a result of the 1997 Mammal C.A.M.P. workshop recommendation for a five-year review and particularly in view of the distressing number of Data Deficient species of bats, a network of Chiroptera specialists and enthusiasts was initiated. The objectives of the network were: to locate bat specialists of the South Asian region and encourage them to compile information on bats for a comprehensive assessment; to promote the ecological importance of bats and to provide training, information and education on bats. The Chiroptera Conservation and Information Network of South Asia (CCINSA) has recorded nearly 100 known bat biologists in the region and could bring 43 of them together for the Chiroptera C.A.M.P., 2002 as opposed to the six which participated in the Mammal C.A.M.P. CCINSA was recognized by the IUCN SSC Chiroptera Specialist Group in 1999 and asked to represent CSG in the region of South Asia. Since its inception CCINSA has actively pursued networking of bat researchers and compiled new information. As part of the objectives and goals of the network as well as of the IUCN SSC Chiroptera Specialist Group, a C.A.M.P. workshop for Chiroptera was held in early 2002 to assess the status of bats of South Asia.

The C.A.M.P. workshop for South Asian bats was held from 21-25 January 2002 at the Department of Animal Behaviour and Physiology, School of Biological Sciences, Madurai Kamaraj University, Madurai. As the department is known for its bat behaviour studies and Dr. G. Marimuthu, Professor, is the Scientific Chair of CCINSA and CSG, South Asia, the university was identified as the most appropriate venue for the workshop. A total of 43 bat experts from 25 reputed institutions attended the C.A.M.P., including active field biologists from the region and representatives from abroad dealing with taxonomic and conservation issues. Representation from countries included Nepal (1), Sri Lanka (2), United Kingdom (2), United States of America (1), Myanmar (1) and India (36). At the end of the 5-day workshop a total of 123 species of bats had been assessed according to the 2001 IUCN Red List Criteria. Conservation research and management recommendations were also made species-wise after the assessments were completed. The workshop was facilitated and coordinated by the Conservation Breeding Specialist Group regional network for South Asia (CBSG, South Asia). Anthony Hutson, Co-chair of the IUCN/SSC Chiroptera Specialist Group represented CSG and lent support to the South Asian regional network of CSG formed in association with CCINSA.

The Chiroptera Conservation and Information Network of South Asia (CCINSA), the Zoo Outreach Organisation (ZOO), CBSG - South Asia, Wildlife Information Liaison Development Society (WILD) and the

Chiroptera Specialist Group of South Asia (CSG-SA) organized the workshop in collaboration with the IUCN/SSC Chiroptera Specialist Group and the IUCN/SSC Conservation Breeding Specialist Group. Madurai Kamaraj University, School of Biological Sciences, Department of Animal Behaviour & Physiology was the host and co-organizer. Chester Zoo/North of England Zoological Society, Bat Conservation International, Columbus Zoo Conservation Fund and Metro-Toronto Zoo sponsored the exercise.

Initial discussions with some potential participants and literature survey indicated the near impossibility of assessing all bat taxa of South Asia, since they numbered upwards of 250. It was decided at the workshop, after much deliberation, that assessments would be made only at the species level. In all, 120 of the 123 species were assessed. This Report represents the work generated at the workshop by bat specialists, e.g., participants who are credited as authors of the Report, and at the end of every Taxon Data Sheet. The Recorders in the working groups have compiled the information gathered at the workshop in a readable form. The Editors have checked and corrected the assessments, and have given an interpretive analysis. The results in this report reflect the group process rather than information by any single individual.

The Conservation Assessment and Management Plan (C.A.M.P.) Process

The Conservation Assessment and Management Plan (C.A.M.P.) Workshop is a "process" which was designed and developed by the IUCN SSC Conservation Breeding Specialist Group (CBSG) initially to assist zoos to prioritise species for conservation breeding. Over the years, and as a result of the careful manner in which the workshops have been planned and conducted, C.A.M.P.s have been and are being increasingly used as a means of assisting the regional and national biodiversity planning process and for contributing far greater numbers of species to the Red List of Threatened Animals. During this time C.A.M.P.s have evolved to encompass more recent scientific methodologies related to the requirements of the Convention on Biodiversity. C.A.M.P. Workshop Reports make available the most current information from the most recent fieldwork, and thus provide crucial direction for strategic management of threatened taxa in larger taxonomic groups.

Because the output of C.A.M.P. workshops affects wildlife policy and management through the IUCN Red List and wildlife legislation which takes its cue from the Red List, the social and scientific principles and methods established by the Conservation Breeding Specialist Group, and which are in a continuous process of evolution and improvement, should be followed meticulously. C.A.M.P. workshops have been designed to collect the knowledge of many stakeholders and to reflect the result of their combined experience and opinion after discussion. The IUCN Red List Criteria developed by IUCN SSC and the Taxon Data Sheet which summarises information needed to derive a status, provides a logical framework for discussion, which provides a uniform standard and maintains scientific integrity.

A C.A.M.P. Workshop brings together a broad spectrum of experts and stakeholders to:

a. evaluate the current status of populations and habitats in the wild and in captivity;
b. assess the degree of threat using IUCN Red List Criteria;
c. make recommendations for intensive management action; and
d. make recommendations for specific conservation-oriented research and education.

A C.A.M.P. Workshop is intensive and interactive which facilitates objective and systematic discussion of research and management actions needed for species conservation, both *in situ* and *ex situ*. Workshop participants assess the risks to the target group of taxa and formulate recommendations for action using a Taxon Data Sheet. The Taxon Data Sheet serves as a compendium of the data on the status of population and its habitat in the wild as well as recommendations for intensive conservation action. Taxon Data Sheets also provide documentation of the reasoning behind recommendations, of the criteria used for deriving a status, as well as details of other species-pertinent information.

The C.A.M.P. workshop assembles 10 to 60 experts (e.g., wildlife managers, biologists, representatives of the academic community or private sector, researchers, government officials and captive managers) to pull together all pertinent information necessary to evaluate threat status (using IUCN Red List Criteria) of all taxa in a broad taxonomic group (e.g., Orchids), geographical region or country (e.g., Western Ghats).

Information gathering is focused on the most recent available data, estimates, informed guesses and identification of needed knowledge that allow:

1. assignment to IUCN categories of threat;
2. broad-based management recommendations;
3. specific conservation-oriented research recommendations useful to generate the knowledge needed to develop more comprehensive management and recovery programs *in situ* and/or *ex situ.*

On the last day of a C.A.M.P. workshop, participants form Special Issue Working Groups to discuss problems of conservation and management that emerged in the workshop, making recommendations for their solution using information and assessments generated in the C.A.M.P. If time permits there is also a session for personal commitments related to the recommendations.

The results of the initial CAMP workshops are reviewed by distribution to the following:

1. as a draft to workshop participants immediately following the workshop
2. as a draft after corrections to a few senior biologists who were participants in the workshop
3. as a Report to experts and other users of the information in the greater conservation community

A C.A.M.P. workshop is defined as a "process" because it is a part of a continuing and evolving development of creating and improving conservation and recovery plans for the taxa involved. The C.A.M.P. review process facilitates dissemination of information from experts locally and internationally. The "process" presumes that conditions will change for the populations and habitat and a follow-up workshop will be required to reconsider issues in greater depth, or on a regional basis, or incorporate the inevitable changes. This "process" provides a system of monitoring of the population status over time as well as of the implementation and effectiveness of the earlier workshop recommendations.

The C.A.M.P. process is unique in its ability to prioritize intensive management action for species conservation in the wild and in captivity, if required. C.A.M.P. documents are used as guidelines by national and regional wildlife agencies, NGO's, and zoos as they develop their own action plans. C.A.M.P. reports, with their dependence on methodology that is participatory, objective and scientific have proved to be acceptable to states and nations as well as institutions for developing biodiversity strategies. The C.A.M.P. process contributes to the wise worldwide use of limited resources for species conservation.

The 2001 IUCN Red List Criteria (Version 3.1)

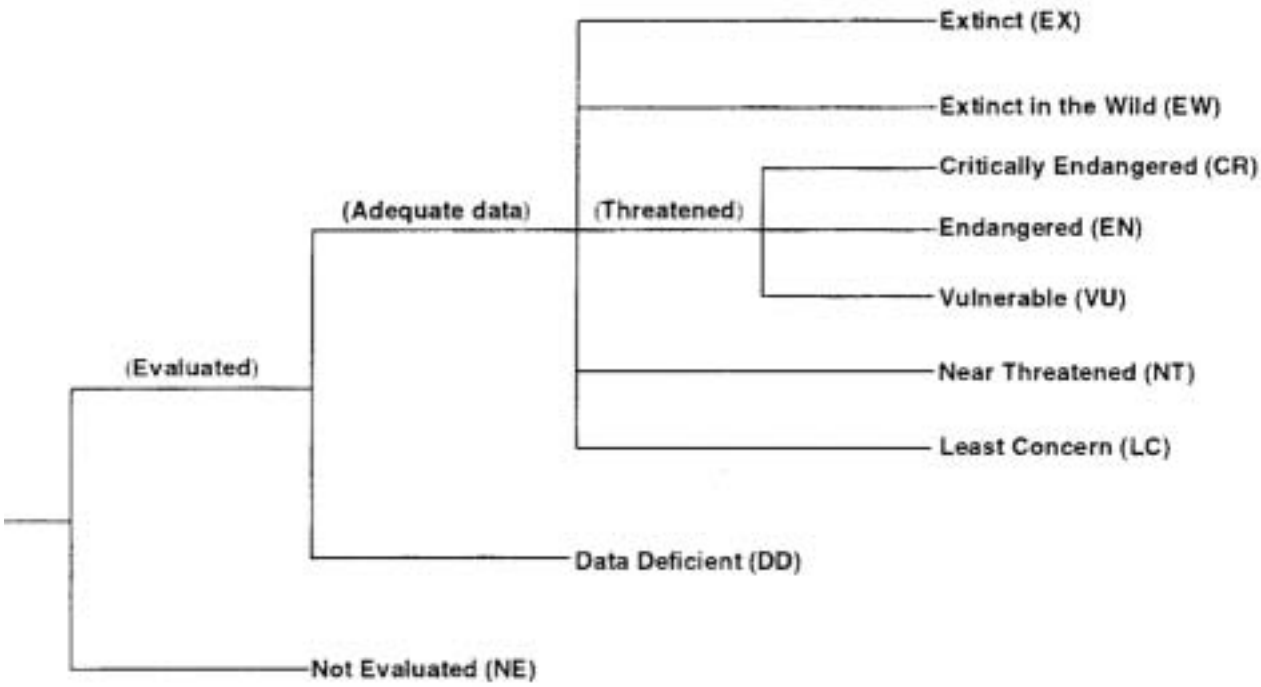
The C.A.M.P. workshop process employs the IUCN Red List Criteria as a tool in assessing species status in a group of taxa. The IUCN Red List Criteria were revised in 1994 and these objective criteria were revised again in 2000 and ratified by the IUCN for use in threat categorisation at the global level (IUCN, 2001). The structure of the categories includes extinct, threatened, non-threatened, data deficient and not evaluated divisions; the first three divisions are further split into subcategories (Figure 1). Since 1991, the old Red Data Book categories have undergone successive changes to accommodate general guidelines for across taxonomic groups. To make application of the Criteria more universal, numerical values were attached to the different criteria for threat categories. The 2001 version (version 3.1) also includes a purely quantitative criterion, which involves computation of the probability of extinction (such as in a population viability analysis) over a time frame for a taxon. The 2001 version of the Red List threatened categories are derived through a set of 5 criteria based on which the threatened category is assigned. The term "threatened" according to the 2001 IUCN categories means Critically Endangered, Endangered or Vulnerable. The 5 criteria for threat categories (IUCN, 2001) are

(A) Population reduction
(B) Restricted distribution, continuing decline and fluctuation
(C) Population restriction and continuing decline
(D) Restricted population
(E) Probability of extinction

For a taxon to be categorised as threatened, it needs to qualify for any one of the above 5 criteria only. Not qualifying for any of the above criteria could mean that a taxon is either not threatened or is data deficient.

With the popularisation of the 1994 IUCN Red List Criteria and its application around the world, various specialists and scientists of taxonomic groups suggested a more serious look at the criteria. The IUCN formed a Red List Review Committee in 1998 to suggest changes to the 1994 Criteria and after nearly 2 years of workshops and deliberations, the 2001 IUCN Red List Criteria were drafted and accepted in October 2000. All assessments from 2001 are based on the latest version (3.1) of the Red List Criteria, including the current Conservation Assessment and Management Plan (C.A.M.P.) Workshop for Chiroptera of South Asia (2002). This C.A.M.P.Workshop was the first to use the new version of the criteria on a large number of bat species, as all previous assessments of bats around the world were based on the 1994 criteria. The changes in the Criteria can be referred in IUCN (2001) (Appendix I of this report) but the overall structure of the Categories is shown in figure 1. The changes in the structure of the categories from the 1994 iteration include the upgrading of Lower Risk near threatened and least concern to full categories Near Threatened and Least Concern. The subcategory of Lower Risk conservation dependant was removed completely from the new structure.

Figure 1. Structure of the 2001 IUCN Categories



Interpretation and data source

Chiroptera of the Indian Subcontinent (now called South Asia) have not been studied systematically. Most of the available information is based on sporadic publications by a few biologists, and many notes by different wildlife researchers or species inventory keepers. In 1997, however, a book brought out by Bates and Harrison, *Bats of the Indian Subcontinent,* captured all information in historical and current publications on bats of the region and also provided a systematic key to resolving taxonomic and nomenclatural problems. Much of the distribution information in the South Asian Regional Chiroptera C.A.M.P. Taxon Data Sheets is based on literature, taken from the excellent compilation in the book. Bates and Harrison's book also provided the basis for taxonomic clarity at the workshop so that valid species were assessed.

The term South Asia applies to the bio-geographical area, which includes Pakistan, India, Nepal, Bhutan, Bangladesh and Sri Lanka. Based on opinions from some bio-geographers, portions of Afghanistan and Myanmar were also considered as being a part of the South Asian region. However, the status assessment was based on the political region of South Asia, which includes the six countries listed above plus Maldives. Some compromises with regard to the bio-geographical region had to be made due to the assessments being restricted to political boundaries of South Asia. This involved the exclusion of northern Myanmar and eastern Afghanistan from the status assessments, although information on the distribution of bats had been provided. Also, the islands of Andaman and Nicobar in the Bay of Bengal, which have closer affinity to the Southeast and East Asian fauna, were included as part of the assessment since the islands are a part of India.

The workshop and the assessments were made possible by the participation of many retired and currently working bat researchers from the region. Although India was well represented, only two bat researchers from Sri Lanka were present and none from Bhutan, Bangladesh, Pakistan or Maldives. Bat studies are considerably fewer in the northern South Asian countries compared to southern India and Sri Lanka; therefore, much of the information for those countries was taken from literature and from Dr. Paul Bates who had compiled information for whole South Asia. Nepal was represented by one mammologist with information on bats as well as the current habitat status. Bat experts from Bhutan and Maldives have not been identified while researchers from Bangladesh and Pakistan were unable to attend.

All bats ranging across to Myanmar were noted for their distribution in the northern part of the country. A bat researcher from the country was present at the workshop, which made it possible to include distribution information and also assess some endemic bats of Myanmar. Nine species occurring in Myanmar and other Southeast Asian countries, but not occurring in South Asia that were assessed at the workshop are listed in Appendix IV along with their status in Myanmar.

The Taxon Data Sheet used at the workshop was divided into various sections, *viz.*:

1. Part one
   General information including taxonomy, habit, habitat, distribution, locality information, threats, populations, trade, field studies, data quality, qualifier and uncertainty.

2. Part two
   Status assessment as per information provided in Part One based on the 2001 IUCN Red List Criteria, CITES listing, national wildlife laws, presence in protected areas, previous assessments, microchiroptera and old world fruit bats action plans.

3. Part three
   Uncertainty issues related to data quality, qualifiers and group dynamics with respect to assessments.

4. Part four

Recommendations for research, monitoring, captive breeding, education, population and habitat viability assessment and comments on the species.

5. Part five
   Information on migration between adjacent populations across international boundaries, threats, colonization effects, etc. to do with assessing species at the national level.

6. Part six
   Compilers of primary working group, reviewers of the data and sources referred in deriving literature and other unpublished information.

Information was gathered in this 8-page Taxon Data Sheet and also electronically recorded in the CAMP Data Entry Programme developed by the Conservation Breeding Specialist Group. For some of the common species that were assessed towards the end of the workshop, a 4-page version of the Taxon Data Sheet was used to save time. National assessment for bats within South Asia was attempted for a few species, however, due to constraint of time, only information was gathered and an agreement taken from the participants that the status could be derived after the workshop using the information provided. All assessments were ratified by the participants in plenary sessions with much discussion ultimately leading to consensus within the workshop.

The Taxon Data Sheets are included in a seperate section of this report. A synopsis of information compiled for the species and data interpretation is given below for better understanding of the process and status assessments.

Synopsis -- Information compiled for the species and data interpretation

Part one:

Synonyms and Vernacular names

Synonyms have been taken from Bates and Harrison (1997). Synonyms gleaned from Corbett and Hill (1992) are listed in Appendix II. Synonyms from regions other than South Asia have been avoided in the Taxon Data Sheets, but are also listed in Appendix II. Common names in English are derived from various sources, but mainly from Bates and Harrison (1997). Vernacular names for only certain well-known bats are provided. Not much importance has been given to varieties of bats locally. Some of the Sri Lankan and Bangladesh bats have been accorded Sinhala names transliterated from English.

Habit, habitat, elevation and niche

Information on habit, habitat, elevation and niche either was taken from literature or from personal observations. It was decided at the workshop to restrict "niche" to just microhabitat information and not include ecological or behavioural information.

Distribution

Distribution information was compiled and gathered only for South Asia, not from the entire geographic range of a species. Historical distribution was compiled on a very broad scale either at the country or regional level. Regional distribution was recorded in as much detail as possible especially with respect to locality information. Personal observations from field studies were recorded whether or not they had been published. Current distribution information for many species included new localities, range extensions and information never published before. In case of the Sri Lankan bats, information on localities was available from an ongoing Ph.D. study. The student was willing to provide locality information, but since it was part of his ongoing Ph.D. work it was decided to use broad areas rather than precise localities. The latter information will be made available after the completion of his dissertation. Locality-specific information with respect to habitat and threats were gathered and the table presented in the Taxon Data Sheets on locality records includes habitat and threat information for some recent studies. In case of literature compilations derived from Bates and Harrison (1997) habitat and threats data for only a few localities and a few species are provided. Since the compilation was more from a taxonomic and zoogeographic perspective, conservation notes were difficult to obtain. The

distribution table in the Taxon Data Sheets includes distribution records with GPS information from gazettes and from Bates and Harrison (1997). Although Afghanistan and Myanmar are not included in status assessments, distribution of bats in the two countries has been included for reference.

Range

Range (Extent of Occurrence) and Area (of Occupancy) were mostly estimated based on available distribution records. For most bats the range was estimated as a polygon including all known localities. In some instances where there was a huge gap between localities due to geographical barriers, the range polygons were split. Area of Occupancy was estimated calculating the foraging radius for species with restricted distribution. Though information on foraging distance was not available for bats of the region, the distance was inferred for families based on studies conducted in other parts of the world as informed by Anthony Hutson at the workshop. Three gross distance of 10, 15 and 20 kilometers were taken as the radius for a bat's flight from its roosting site. The area was calculated using the formula πr^2. This approach was adopted because of lack of precise information on roosting area and feeding area. It was decided at the workshop that the feeding area for a bat is equally important while calculating its area of occupancy since just a roosting site had no value without adequate feeding resources.

Locations and subpopulations

Although the IUCN Red List defines locations and subpopulations based on threats and migration, the participants at the workshop felt that precise information for most bats was not available with respect to subpopulations. As for locations they decided that indicating a location for every locality was the closest to realistic interpretation of available information. Similarly, information on fragmentation was inferred for some bats with patchy distribution and between islands and the mainland (e.g. India and Sri Lanka; Andaman & Nicobar Islands and India or Malaysia).

Habitat status

Habitat status information was compiled for all species except those that had no type locality information. Since no monitoring or ecological studies have been conducted on bats of the region, habitat information and influence of threats on habitat were inferred from literature and general trends in habitat in localities over years. Change in quality of habitat was inferred from similar data and also based on changes in use/management pattern of habitats.

Threats

Threats to both habitat and populations were compiled in the sheets for localities with recent studies. For most bat species, however, literature constituted much of the known localities, and threats for a few localities as derived from literature were included. Since data on populations is sparse, the workshop looked at the likely habitat threats that were affecting the species or likely to affect the species. General deductions from habitat loss were inferred for several species whose dependence on primary habitat is a limiting factor for their existence. Despite lack of proper understanding of their ecology, lack of information was overridden by a precautionary approach, especially of those species with highly restricted distribution. Information on trade was included and was treated as threat when it was known that trade affected populations.

Mature individuals and generation time

Mature individuals, global population and trends for mature individuals were discussed, but the information was infrequently recorded because of lack of adequate data. In a few cases, especially in widely distributed species, the number of mature individuals was indicated as being more than 10,000, which is the threshold for small populations. For certain well-known species such as *Otomops wroughtoni* mature individuals were indicated. Generation time, which is defined as the "average age of parents" in the IUCN Red List was inferred for all families of bats based on studies on a few species in other parts of the world.

Population trends

Population trends for species were not determined in most cases due to lack of basic population information and the effects of threats on the population. Although several indications to population declines based on declines in relative abundance from perceptions were noted and indicated, specific levels of decline or ranges were not attempted.

Part two:

Status

IUCN Red List (version 3.1) status was derived at the workshop with information compiled and compared with earlier efforts such as the Old World Fruit Bats Action Plan (Mickleburgh *et al*., 1992) and the Microchiroptera Action Plan (Hutson *et al*., 2001). For the purposes of the workshop, status was derived for endemic species at the global level and a regional assessment for South Asia for species with a wider distribution. Regional guidelines of IUCN Red List were applied to individual countries, which is included in the taxon data sheets. Other than the IUCN Red List assessments, status listings in CITES, national wildlife legislation (e.g. Indian Wildlife (Protection) Act, Fauna and Flora Protection Act of Sri Lanka) and national Red Data Books were included. Locality records from protected areas (e.g. National Parks, Wildlife Sanctuaries) in South Asia were compiled at the workshop.

Part three:

Assessments

Red List status assessments of South Asian bats were derived from literature as well as observations and studies conducted by the participants at the workshop. For most species the status was derived as a result of wide consultation within the groups and during workshop plenary. Although uncertainty in information gathering, interpretation, analysis, statistics, inference, estimates, observations, predictions, etc. is high, all plausible values were considered for the assessments and most assessments were made based on evidence.

Part four:

Recommendations

Since bats in the region are not well studied, research and management recommendations were made by the participants to help understand the situation of bats better in the future. Captive breeding recommendations were made as part of management recommendations, either for research, education or conservation.

Part five:

Global, regional and national assessments

The assessments to determine IUCN Red List categories were made at the global level for endemics and at the regional level (for South Asia only) for species with wider distribution. However after the workshop regional categories were derived by the CCINSA Red List Advisor at the Zoo Outreach Organisation office using the latest IUCN Regional Application Guidelines with available information from the taxon data sheets. Group consensus was taken at the workshop to derive the regional assessments after the workshop. National status is included for species within the South Asian region and does not include Afghanistan and Myanmar.

Part six:

Compilers and sources

The workshop participants were divided into four groups according to regions – northeastern group (including Bangladesh, Bhutan, Myanmar, northeastern India, eastern India and Andaman & Nicobar Islands), southern Indian group I (including Sri Lanka), southern Indian group II (including Sri Lanka) and northwestern group (including Afghanistan, Pakistan, Nepal, northern India and central India). Compilers indicated in the taxon data sheets are those who provided information in the working groups for the assessment. Reviewers included are other participants who reviewed the information during the plenary session and later with comments on the

draft report. Sources include all literature consulted, unpublished biological information sheet consulted and personal communications from individuals not present at the workshop.

Consistency in deriving status from available data

The South Asian Regional Chiroptera C.A.M.P. Workshop was conducted using the principles of a Conservation Assessment and Management Plan workshop and the status was derived according to the 2001 IUCN Red List Criteria (version 3.1) (IUCN, 2001) as ratified by IUCN committee in 2000. A set of guidelines in deriving the assessments was followed given the fact that although the process is objective, data interpretation can differ between groups. For example, when a species is known only from its type description and nothing is known of its distribution or habitat, there is obviously no scope for speculation of threats affecting either its habitat or its population. In such cases the species was considered Data Deficient. Similarly, a logical system of gathering information in the taxon data sheet and interpreting the data as per the IUCN Red List Criteria guidelines were followed. Various processes affect the status of a species in the wild; a very simplified approach to a standardized interpretation of data is represented in the flowchart below.

Results

Chiroptera are one of the less studied groups in mammals with sparse information due to limited field studies, surveys and monitoring and a resulting paucity of publications. The low percentage of studies in Chiroptera in the Oriental (Asia) region has been documented by Amori *et al.* (2000) while pointing out that the most speciose orders of mammals (Chiroptera, Rodentia, etc.) receive the least academic attention in regions of high biodiversity with Asia coming last.

South Asian Chiroptera number 123 species with about 139 valid subspecies designated within. The South Asian Chiroptera C.A.M.P. workshop was an effort to assess the status of bats with as much accuracy as possible. After much deliberation, the workshop participants decided to assess only at the species level, as distributional ranges of the subspecies were not very well defined and assessing at the subspecies level could result in improper assessments. Status of all South Asian species of Chiroptera is summarized in Table 1 and a graphic representation of the status is given in Figure 2.

Table 1. Status of South Asian bats
(Regional assessments for non-endemics and global assessments for South Asian endemics)

No.	Scientific name English name Family	Status 2002	Criteria with its expansion
Endemic to South Asia			
1	*Eptesicus tatei* Ellerman & Morrison-Scott, 1951 Sombre Bat Vespertilionidae	Data Deficient	-
2	*Hipposideros durgadasi* (Khajuria, 1970) Khajuria's Leaf-nosed Bat Hipposideridae	Endangered	D (Very small population)
3	*Hipposideros hypophyllus* Kock & Bhat, 1994 Kolar Leaf-nosed Bat Hipposideridae	Endangered	B1ab(ii,iii) + 2ab(ii,iii) (Restricted extent & area and continuing decline in area & quality of habitat)
4	*Hipposideros lankadiva* Kelaart, 1850 Kelaart's Leaf-nosed Bat Hipposideridae	Least Concern	-
5	*Hipposideros speoris* (Schneider, 1800) Schneider's Leaf-nosed Bat Hipposideridae	Least Concern	-
6	*Latidens salimalii* Thonglongya, 1972 Salim Ali's Fruit Bat Pteropodidae	Endangered	B1ab(iii) + 2ab(iii) (Restricted extent & area and continuing decline in quality of habitat)
7	*Murina grisea* Peters, 1872 Peter's Tube-nosed Bat Vespertilionidae	Critically Endangered	B1ab(iii) (Restricted extent and continuing decline in quality of habitat)
8	*Myotis csorbai* Topal, 1997 Csorba's Mouse-eared Bat Vespertilionidae	Data Deficient	-
9	*Myotis sicarius* Thomas, 1915 Mandelli's Mouse-eared Bat Vespertilionidae	Vulnerable	B2ab(iii) (Restricted area and continuing decline in quality of habitat)
10	*Pipistrellus dormeri* (Dobson, 1875) Dormer's Bat Vespertilionidae	Least Concern	-
11	*Pteropus faunulus* Miller, 1902 Nicobar Flying Fox Pteropodidae	Endangered	B1ab(iii) + 2ab(iii) (Restricted extent & area and continuing decline in quality of habitat)
12	*Rhinolophus beddomei* Andersen, 1905 Lesser Woolly Horseshoe Bat Rhinolophidae	Near Threatened	-
13	*Rhinolophus cognatus* Andersen, 1906 Andaman Horseshoe Bat Rhinolophidae	Vulnerable	D2 (Very small population in restricted area and locations)
14	*Rhinolophus ferrumequinum* (Schreber, 1774) Greater Horseshoe bat Rhinolophidae	Vulnerable	B2ab(iii) (Restricted area and continuing decline in quality of habitat)
15	*Rhinolophus mitratus* Blyth, 1844 Mitred Horseshoe Bat Rhinolophidae	Vulnerable	D2 (Very small population in restricted area and locations)
16	*Scotoecus pallidus* (Dobson, 1876) Desert Yellow bat Vespertilionidae	Near Threatened	-
17	*Taphozous perforatus* E. Geoffroy, 1818 Egyptian Tomb Bat Emballonuridae	Least Concern	-
Non-endemic to South Asia			
18	*Areilulus circumdatus* (Temminck, 1840) Black-gilded Pipistrelle Vespertilionidae	Least Concern	-
19	*Asellia tridens* (E. Geoffroy, 1813)	Not Evaluated	-

No.	Scientific name English name Family	Status 2002	Criteria with its expansion
	Trident Bat Hipposideridae		
20	*Barbastella leucomelas* (Cretzschmar, 1830/31) Eastern Barbastelle Vespertilionidae	Near Threatened	-
21	*Coelops frithii* Blyth, 1848 Tail-less Leaf-nosed Bat Hipposideridae	Near Threatened	-
22	*Cynopterus brachyotis* (Muller, 1838) Lesser Dog-faced Fruit Bat Pteropodidae	Least Concern	-
23	*Cynopterus sphinx* (Vahl, 1797) Short-nosed (Indian) Fruit Bat Pteropodidae	Least Concern	-
24	*Eonycteris spelaea* (Dobson, 1871) Dawn (Cave fruit) bat Pteropodidae	Least Concern	-
25	*Eptesicus bottae* (Peters, 1869) Botta's Serotine Vespertilionidae	Data Deficient	-
26	*Eptesicus gobiensis* Bobrinskii, 1926 Bobrinskii's serotine Vespertilionidae	Data Deficient	-
27	*Eptesicus nasutus* (Dobson, 1877) Sind Serotine Bat Vespertilionidae	Data Deficient	-
28	*Eptesicus pachyotis* (Dobson, 1871) Thick-eared Bat Vespertilionidae	Data Deficient	-
29	*Eptesicus serotinus* (Schreber, 1774) Serotine Thick-eared Bat Vespertilionidae	Near Threatened	-
30	*Harpiocephalus harpia* (Temminck, 1840) Hairy-winged Bat Vespertilionidae	Near Threatened	-
31	*Harpiocephalus mordax* Thomas, 1923 Hairy-winged Bat Vespertilionidae	Data Deficient	-
32	*Hesperoptenus tickelli* (Blyth, 1851) Tickell's Bat Vespertilionidae	Least Concern	-
33	*Hipposideros armiger* (Hodgson, 1835) Great Himalayan Leaf-nosed Bat Hipposideridae	Least Concern	-
34	*Hipposideros ater* Templeton, 1848 Dusky Leaf-nosed Bat Hipposideridae	Least Concern	-
35	*Hipposideros cineraceus* Blyth, 1853 Least Leaf-nosed Bat Hipposideridae	Near Threatened	-
36	*Hipposideros diadema* (E. Geoffroy, 1813) Diadem Leaf-nosed Bat Hipposideridae	Vulnerable	D2 (Very small population in restricted area and locations)
37	*Hipposideros fulvus* Gray, 1838 Fulvous Leaf-nosed Bat Hipposideridae	Least Concern	-
38	*Hipposideros galeritus* Cantor, 1846 Cantor's Leaf-nosed Bat Hipposideridae	Near Threatened	-
39	*Hipposideros larvatus* (Horsfield, 1823) Horsfield's Leaf-nosed Bat Hipposideridae	Near Threatened	-
40	*Hipposideros pomona* Andersen, 1918	Least Concern	-

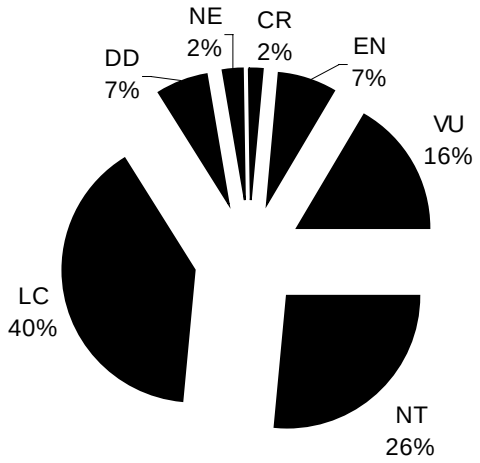
No.	Scientific name English name Family	Status 2002	Criteria with its expansion
	Andersen's Leaf-nosed Bat Hipposideridae		
41	*Ia io* Thomas, 1902 Great Evening Bat Vespertilionidae	Endangered	B1ab(iii) + 2ab(iii) (Restricted extent & area and continuing decline in quality of habitat)
42	*Kerivoula hardwickii* (Horsfield, 1824) Hardwicke's Forest Bat Vespertilionidae	Least Concern	-
43	*Kerivoula papillosa* Temminck, 1840 Papillose bat Vespertilionidae	Near Threatened	-
44	*Kerivoula picta* (Pallas, 1767) Painted Bat Vespertilionidae	Least Concern	-
45	*Macroglossus sobrinus* (K. Andersen, 1911) Hill Long-tongued Fruit Bat Pteropodidae	Near Threatened	-
46	*Megaderma lyra* E. Geoffroy, 1810 Greater false vampire bat Megadermatidae	Least Concern	-
47	*Megaderma spasma* (Linnaeus, 1758) Lesser false vampire bat Megadermatidae	Least Concern	-
48	*Megaerops niphanae* Yenbutra & Felten, 1983 Ratanaworabhan's Fruit Bat Pteropodidae	Near Threatened	-
49	*Miniopterus pusillus* Dobson, 1876 Nicobar Long-fingered Bat Vespertilionidae	Vulnerable	B2ab(iii,iv) (Restricted area and continuing decline in quality of habitat & locations)
50	*Miniopterus schreibersii* (Kuhl, 1819) Schreiber's Long-fingered Bat Vespertilionidae	Least Concern	-
51	*Murina aurata* (Milne-Edwards, 1872) Little Tube-nosed Bat, Vespertilionidae	Near Threatened	-
52	*Murina cyclotis* Dobson, 1872 Round-eared Tube-nosed Bat Vespertilionidae	Least Concern	-
53	*Murina huttonii* (Peters, 1872) Hutton's Tube-nosed Bat Vespertilionidae	Least Concern	-
54	*Murina leucogaster* (Milne-Edwards, 1872) Greater Tube-nosed Bat Vespertilionidae	Near Threatened	-
55	*Murina tubinaris* (Scully, 1881) Scully's Tube-nosed Bat Vespertilionidae	Near Threatened	-
56	*Myotis annectans* (Dobson, 1871) Intermediate Bat Vespertilionidae	Vulnerable	D2 (Very small population in restricted area and locations)
57	*Myotis blythii* (Tomes, 1857) Lesser Mouse-eared Bat Vespertilionidae	Vulnerable	D1 (Very small population)
58	*Myotis daubentonii* (Kuhl, 1819) Water Bat Vespertilionidae	Endangered	B1ab(iii) + 2ab(iii) (Restricted extent & area and continuing decline in quality of habitat); D (Very small population)
59	*Myotis formosus* (Hodgson, 1835) Hodgson's Bat Vespertilionidae	Least Concern	-
60	*Myotis hasseltii* (Temminck, 1840) Lesser Large-tooth Bat Vespertilionidae	Near Threatened	-
61	*Myotis horsfieldii* (Temminck, 1840)	Least Concern	-

No.	Scientific name English name Family	Status 2002	Criteria with its expansion
	Horsfield's Bat Vespertilionidae		
62	*Myotis longipes* (Dobson, 1873) Kashmir Cave Bat Vespertilionidae	Near Threatened	-
63	*Myotis montivagus* (Dobson, 1874) Burmese Whiskered Bat Vespertilionidae	Vulnerable	B2ab(iii) (Restricted area and continuing decline in quality of habitat); D2 (Very small population in restricted area and locations)
64	*Myotis muricola* (Gray, 1846) Nepalese Whiskered Bat Vespertilionidae	Least Concern	-
65	*Myotis mystacinus* (Kuhl, 1819) Whiskered Bat Vespertilionidae	Vulnerable	D1 (Very small population)
66	*Myotis siligorensis* (Horsfield, 1855) Himalayan Whiskered Bat Vespertilionidae	Near Threatened	-
67	*Nyctalus leisleri* (Kuhl, 1819) Leisler's Bat Vespertilionidae	Endangered	D (Very small population)
68	*Nyctalus montanus* (Barrett-Hamilton, 1906) Mountain Noctule Vespertilionidae	Near Threatened	-
69	*Nyctalus noctula* (Schreber, 1774) Noctule Vespertilionidae	Least Concern	-
70	*Otomops wroughtoni* (Thomas, 1913) Wroughton's Free-tailed Bat Molossidae	Critically Endangered	B2ab(iii) (Restricted area and continuing decline in quality of habitat)
71	*Otonycteris hemprichii* Peters, 1859 Hemiprich's Long-eared Bat Vespertilionidae	Near Threatened	-
72	*Philetor brachypterus* (Temminck, 1840) Rohu's Bat Vespertilionidae	Vulnerable	B1ab(iii) + 2ab(iii) (Restricted extent & area and continuing decline in quality of habitat)
73	*Pipistrellus abramus* (Temminck, 1840) Japanese Pipistrelle Vespertilionidae	Data Deficient	-
74	*Pipistrellus affinis* (Dobson, 1871) Chocolate Pipistrelle Vespertilionidae	Near Threatened	-
75	*Pipistrellus cadornae* Thomas, 1916 Cadornae's Pipistrelle Vespertilionidae	Near Threatened	-
76	*Pipistrellus ceylonicus* (Kelaart, 1852) Kelaart's Pipistrelle Vespertilionidae	Least Concern	-
77	*Pipistrellus coromandra* (Gray, 1838) Coromandel Pipistrelle Vespertilionidae	Least Concern	-
78	*Pipistrellus javanicus (*Gray, 1838) Javan Pipistrelle Vespertilionidae	Least Concern	-
79	*Pipistrellus kuhlii* (Kuhl, 1819) Kuhl's Pipistrelle Vespertilionidae	Least Concern	-
80	*Pipistrellus paterculus* Thomas, 1915 Mount Popa Pipistrelle Vespertilionidae	Least Concern	-
81	*Pipistrellus pipistrellus* (Schreber, 1774) Common Pipistrelle Vespertilionidae	Least Concern	-
82	*Pipistrellus savii* (Bonaparte, 1837)	Vulnerable	B1ab (iii)

No.	Scientific name English name Family	Status 2002	Criteria with its expansion
	Savi's Pipistrelle Vespertilionidae		(Restricted extent and continuing decline in quality of habitat)
83	*Pipistrellus tenuis* (Temminck, 1840) Indian Pygmy Bat Vespertilionidae	Least Concern	-
84	*Plecotus auritus* (Linnaeus, 1758) Brown long-eared Bat Vespertilionidae	Near Threatened	-
85	*Plecotus austriacus* (Fischer, 1829) Common Long-eared Bat Vespertilionidae	Near Threatened	-
86	*Pteropus giganteus* Brunnich, 1782 Indian Flying Fox Pteropodidae	Least Concern	-
87	*Pteropus hypomelanus* Temminck, 1853 Island Flying Fox Pteropodidae	Endangered	B1ab(iii) + 2ab(iii) (Restricted extent & area and continuing decline in quality of habitat)
88	*Pteropus melanotus* Blyth, 1863 Blyth's Flying Fox Pteropodidae	Vulnerable	B1ab(iii) + 2ab(iii) (Restricted extent & area and continuing decline in quality of habitat)
89	*Pteropus vampyrus* Linnaeus, 1758 Large Flying Fox Pteropodidae	Endangered	B1ab(iii) + 2ab(iii) (Restricted extent & area and continuing decline in quality of habitat)
90	*Rhinolophus affinis* Horsfield, 1823 Intermediate Horse-shoe Bat Rhinolophidae	Least Concern	-
91	*Rhinolophus blasii* Peters, 1866 Blasius' Horseshoe Bat Rhinolophidae	Near Threatened	-
92	*Rhinolophus hipposideros* (Bechstein, 1800) Lesser Horseshoe bat Rhinolophidae	Vulnerable	B1ab(iii) + 2ab(iii) (Restricted extent & area and continuing decline in quality of habitat)
93	*Rhinolophus lepidus* Blyth, 1844 Blyth's Horseshoe Bat Rhinolophidae	Least Concern	-
94	*Rhinolophus luctus* Temminck, 1835 Woolly Horseshoe Bat Rhinolophidae	Near Threatened	-
95	*Rhinolophus macrotis* Blyth, 1844 Big-eared Horse-shoe Bat Rhinolophidae	Near Threatened	-
96	*Rhinolophus pearsonii* Horsfield, 1851 Pearson's Horse-shoe Bat Rhinolophidae	Least Concern	-
97	*Rhinolophus pusillus* Temminck, 1834 Least Horseshoe Bat Rhinolophidae	Least Concern	-
98	*Rhinolophus rouxii* Temminck, 1835 Rufous Horseshoe Bat Rhinolophidae	Near Threatened	-
99	*Rhinolophus sinicus* (Andersen, 1905) Andersen's Rufous Horseshoe Bat Rhinolophidae	Least Concern	-
100	*Rhinolophus subbadius* Blyth, 1844 Chestnut Horseshoe Bat Rhinolophidae	Vulnerable	B2ab(iii) (Restricted area and continuing decline in quality of habitat)
101	*Rhinolophus trifoliatus* Temminck, 1834 Trefoil Horseshoe Bat Rhinolophidae	Vulnerable	B1ab(iii)+2ab(iii) (Restricted extent & area and continuing decline in quality of habitat)
102	*Rhinolophus yunanensis* Dobson, 1872 Asian Horseshoe Bat Rhinolophidae	Vulnerable	B1ab(iii)+2ab(iii) (Restricted extent & area and continuing decline in quality of habitat)
103	*Rhinopoma hardwickii* Gray, 1831	Least Concern	-

No.	Scientific name English name Family	Status 2002	Criteria with its expansion
	Lesser Mouse-tailed Bat Rhinopomatidae		
104	*Rhinopoma microphyllum* (Brünnich, 1782) Greater Mouse-tailed Bat Rhinopomatidae	Least Concern	-
105	*Rhinopoma muscatellum* Thomas, 1903 Small mouse-tailed Bat Rhinopomatidae	Near Threatened	-
106	*Rousettus aegyptiacus* (E. Geoffroy, 1810) Egyptian Fruit Bat Pteropodidae	Vulnerable	B1ab(iii) (Restricted extent and continuing decline in quality of habitat)); D1 (Very small population)
107	*Rousettus leschenaulti* (Desmarest, 1820) Fulvous Fruit Bat Pteropodidae	Least Concern	-
108	*Scotomanes ornatus* (Blyth, 1851) Harlequin Bat Vespertilionidae	Least Concern	-
109	*Scotophilus heathii* Horsfield, 1831 Asiatic Greater Yellow House Bat Vespertilionidae	Least Concern	-
110	*Scotophilus kuhlii* Leach, 1821 Asiatic Lesser Yellow House Bat Vespertilionidae	Least Concern	-
111	*Sphaerias blanfordi* (Thomas, 1891) Blanford's Fruit Bat Pteropodidae	Near Threatened	-
112	*Tadarida aegyptiaca* (E. Geoffroy, 1818) Egyptian Free-tailed Bat Molossidae	Least Concern	-
113	*Tadarida plicata* (Buchannan, 1800) Wrinkle-lipped Free-tailed Bat Molossidae	Least Concern	-
114	*Tadarida teniotis* (Rafinesque, 1814) European Free-tailed Bat Molossidae	Not Evaluated	-
115	*Taphozous longimanus* Hardwicke, 1825 Long-winged Tomb Bat Emballonuridae	Least Concern	-
116	*Taphozous melanopogon* Temminck, 1841 Black-bearded Tomb Bat Emballonuridae	Least Concern	-
117	*Taphozous nudiventris* Cretzschmer, 1830-31 Naked-rumped Tomb Bat Emballonuridae	Least Concern	-
118	*Taphozous saccolaimus* Temminck, 1838 Pouch-bearing Bat Emballonuridae	Least Concern	-
119	*Taphozous theobaldi* Dobson, 1872 Theobald's Bat Emballonuridae	Vulnerable	A2a (Observed population reduction in the last 10 years)
120	*Triaenops persicus* Dobson, 1871 Persian Trident Bat Hipposideridae	Vulnerable	D2 (Very small population in restricted area and locations)
121	*Tylonycteris pachypus* (Temminck, 1840) Bamboo Bat Vespertilionidae	Near Threatened	-
122	*Tylonycteris robustula* Thomas, 1915 Greater Flat-headed Bat Vespertilionidae	Not Evaluated	-
123	*Vespertilio murinus* Linnaeus, 1758 Particoloured Bat Vespertilionidae	Near Threatened	-

Figure 2. Status of South Asian bats



Assessments were derived for the political region of South Asia only and, as such, did not include Myanmar or Afghanistan for widely distributed species, although Afghanistan and northern Myanmar are part of the biogeographical region. However, one participant in the workshop was from Myanmar and, with help from Bates, could assess nine Myanmar species, which are included at the end of the report.

South Asian bat species constitute about one third of the mammalian diversity of the (political) region. They belong to a total of eight (8) families, of which one is a megachiropteran (Old World fruit bat) and seven are microchiropteran (insectivorous bat) families. India constitutes a major landmass of South Asia (ca.70%) and for that reason has the most bats – 114 species (92.7%), while Bangladesh has 34 species (27.6%), Bhutan 9 species (7.3%), Maldives 2 species (1.6%), Nepal 50 species (40.6%), Pakistan 45 species (36.6%) and Sri Lanka 32 species (26%). The two species of bats in Maldives are Megachiroptera. Although subspecies were not considered, it is important to note the number of island populations of bats in the region, which is 45.5% (56 species): Andaman and Nicobar Islands (part of India) have 22 bat taxa, Maldives has 2 taxa and Sri Lanka has 32 taxa. For the purposes of assessing the status at the species level, insular populations were considered under the higher taxonomic level. The distribution of Megachiroptera and Microchiroptera in different countries of South Asia is given below in figure 3.

Figure 3. Distribution of Chiroptera in countries of South Asia

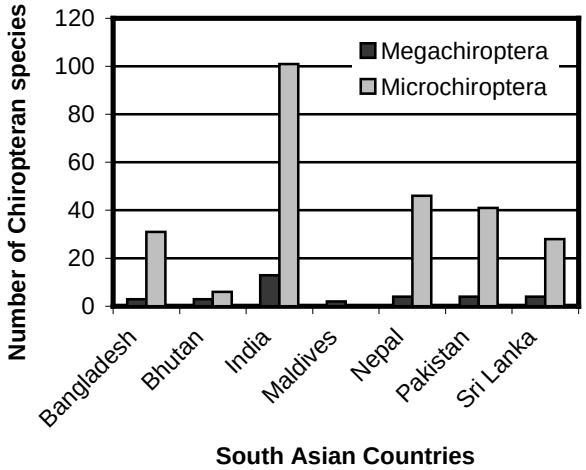


Table 2. Checklist of bats of South Asia with status in individual countries derived at the workshop.

No	Scientific name	South Asia	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka
	Endemics of South Asia								
1.	*Eptesicus tatei* Ellerman and Morrison-Scott, 1951	DD	-	-	DD	-	-	-	-
2.	*Hipposideros durgadasi* Khajuria, 1970	EN	-	-	EN	-	-	-	-
3.	*Hipposideros hypophyllus* Kock & Bhat, 1994	EN	-	-	EN	-	-	-	-
4.	*Hipposideros lankadiva* Kelaart, 1850	LC	LC	-	LC	-	-	-	LC
5.	*Hipposideros speoris* (Schneider, 1800)	LC	-	-	LC	-	-	-	LC
6.	*Latidens salimalii* Thonglongya, 1972	EN	-	-	EN	-	-	-	-
7.	*Murina grisea* Peters, 1872	CR	-	-	CR	-	-	-	-
8.	*Myotis csorbai* Topal, 1997	DD	-	-		-	DD	-	-
9.	*Myotis sicarius* Thomas, 1915	VU	-	-	EN	-	VU	-	-
10.	*Pipistrellus dormeri* (Dobson, 1875)	LC	LC	DD	LC	-	-	NT	-
11.	*Pteropus faunulus* Miller, 1902	EN	-	-	EN	-	-	-	-
12.	*Rhinolophus beddomei* Andersen, 1905	NT	-	-	NT	-	-	-	NT
13.	*Rhinolophus cognatus* Andersen, 1906	VU	-	-	VU	-	-	-	-
14.	*Rhinolophus ferrumequinum* Schreber, 1774	VU	-	-	VU	-	-	-	-
15.	*Rhinolophus mitratus* Blyth, 1844	VU	-	-	VU	-	-	-	-
16.	*Scotoecus pallidus* (Dobson, 1876)	NT	-	-	NT	-	-	NT	-
17.	*Taphozous perforatus* E. Goeffroy, 1818	LC	-	-	LC	-	-	LC	-
	Non-endemics of South Asia								
18.	*Areilulus circumdatus* (Temminck, 1840)	LC	-	-	LC	-	NT	-	-
19.	*Asellia tridens* (Geoffroy, E., 1813)	NE	-	-	-	-	-	NE	-
20.	*Barbastella leucomelas* (Cretzschmar, 1830/31)	NT	-	-	NT	-	NT	DD	
21.	*Coelops frithii* Blyth, 1848	NT	NT	-	NT	-	-	-	-
22.	*Cynopterus brachyotis* (Muller, 1838)	LC	-	-	LC	-	-	-	LC
23.	*Cynopterus sphinx (*Vahl, 1797)	LC	LC	DD	LC	-	LC	DD	LC
24.	*Eonycteris spelaea* (Dobson, 1871)	LC	-	-	LC	-	-	-	-
25.	*Eptesicus bottae* (Peters, 1869)	DD	-	-	-	-	-	DD	-
26.	*Eptesicus gobiensis* Bobrinskii, 1926	DD	-	-	-	-	DD	DD	-
27.	*Eptesicus nasutus* (Dobson, 1877)	DD	-	-		-	-	DD	-
28.	*Eptesicus pachyotis* (Dobson, 1871)	DD	LC	-	DD	-	-	-	-
29.	*Eptesicus serotinus* (Schreber, 1774)	NT	-	-	NT	-	NT	DD	-
30.	*Harpiocephalus harpia* (Temminck, 1840)	NT	-	DD	NT	-	-	-	-
31.	*Harpiocephalus mordax* Temminck, 1840	DD	-	-	DD	-	-	-	-
32.	*Hesperoptenus tickelli* (Blyth, 1851)	LC	-	DD	LC	-	DD	-	NT
33.	*Hipposideros armiger* Hodgson, 1835	LC	-	-	LC	-	LC	-	-
34.	*Hipposideros ater* Templeton, 1848	LC	-	-	LC	-	-	-	LC
35.	*Hipposideros cineraceus* Blyth, 1853	NT	-	-	NT	-	NT	DD	-
36.	*Hipposideros diadema* (E. Geoffroy, 1813)	VU	-	-	VU	-	-	-	-
37.	*Hipposideros fulvus* Gray, 1838	LC	-	-	LC	-	LC	LC	LC
38.	*Hipposideros galeritus* Cantor, 1846	NT	NT	-	NT	-	-	-	VU
39.	*Hipposideros larvatus* (Horsfield, 1823)	NT	NT	-	NT	-	-	-	-
40.	*Hipposideros pomona* Andersen, 1918	LC	DD	-	LC	-	NT	-	-
41.	*Ia io* Thomas, 1902	EN	-	-	EN	-	CR	-	-
42.	*Kerivoula hardwickii* (Horsfield, 1824)	LC	-	-	LC	-	-	DD	LC
43.	*Kerivoula papillosa* Temminck, 1840	NT	NT	-	NT	-	-	-	-
44.	*Kerivoula picta* (Pallas, 1767)	LC	LC	LC	LC	-	LC	-	LC
45.	*Macroglossus sobrinus* (K. Andersen, 1911)	NT	-	-	NT	-	-	-	-
46.	*Megaderma lyra* E. Geoffroy, 1810	LC	LC	-	LC	-	LC	LC	LC
47.	*Megaderma spasma* Linnaeus, 1758	LC	LC	-	LC	-	-	-	LC
48.	*Megaerops niphanae* Yenbutra & Felten, 1983	NT	-	-	NT	-	-	-	-
49.	*Miniopterus pusillus* Dobson, 1876	VU	-	-	VU	-	CR	-	-
50.	*Miniopterus schreibersi* (Kuhl, 1819)	LC	-	-	LC	-	LC	-	LC

No	Scientific name	South Asia	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka
51.	*Murina aurata* Milne-Edwards, 1872	NT	-	-	NT	-	NT	-	-
52.	*Murina cyclotis* Dobson, 1872	LC	-	-	LC	-	-	-	LC
53.	*Murina huttonii* (Peters, 1872)	LC	-	-	LC	-	DD	DD	-
54.	*Murina leucogaster* Milne-Edwards, 1872	NT	-	-	NT	-	VU	-	-
55.	*Murina tubinaris* (Scully, 1881)	NT	-	-	NT	-	-	NT	-
56.	*Myotis annectans* (Dobson, 1871)	VU	-	-	VU	-	-	-	-
57.	*Myotis blythii* (Tomes, 1857)	VU	-	-	VU	-	VU	DD	-
58.	*Myotis daubentonii* (Kuhl, 1819)	EN	-	-	EN	-	-	-	-
59.	*Myotis formosus* (Hodgson, 1835)	LC	LC	-	LC	-	NT	-	-
60.	*Myotis hasseltii* (Temminck, 1840)	NT	-	-	NT	-	-	-	VU
61.	*Myotis horsfeldii* (Temminck, 1840)	LC	-	-	LC	-	-	-	-
62.	*Myotis longipes* (Dobson, 1873)	NT	-	-	NT	-	NT	-	-
63.	*Myotis montivagus* (Dobson, 1874)	VU	-	-	VU	-	-	-	-
64.	*Myotis muricola* (Gray, 1846)	LC	-	-	LC	-	LC	LC	DD
65.	*Myotis mystacinus* (Kuhl, 1819)	VU	-	-	VU	-	VU	VU	-
66.	*Myotis siligorensis* (Horsfield, 1855)	NT	-	-	NT	-	NT	-	-
67.	*Nyctalus leisleri* (Kuhl, 1819)	EN	-	-	EN	-	-	EN	-
68.	*Nyctalus montanus* (Barrett-Hamilton, 1906)	NT	-	-	NT	-	NT	-	-
69.	*Nyctalus noctula* (Schreber, 1774)	LC	-	-	LC	-	LC	LC	-
70.	*Otomops wroughtoni* (Thomas, 1913)	CR	-	-	CR	-	-	-	-
71.	*Otonycteris hemprichi* Peters, 1859	NT	-	-	NT	-	-	NT	-
72.	*Philetor brachypterus* (Temminck, 1840)	VU	-	-	EN	-	VU	-	-
73.	*Pipistrellus abramus* (Temminck, 1840)	DD	-	-	DD	-	-	-	-
74.	*Pipistrellus affinis* Dobson, 1871	NT	-	-	NT	-	?	-	NT
75.	*Pipistrellus cadornae* Thomas, 1916	NT	-	-	NT	-	-	-	-
76.	*Pipistrellus ceylonicus* (Kelaart, 1852)	LC	LC	-	LC	-	-	LC	LC
77.	*Pipistrellus coromandra* (Gray, 1838)	LC	LC	-	LC	-	LC	-	LC
78.	*Pipistrellus javanicus (*Gray, 1838)	LC	LC	-	LC	-	LC	LC	-
79.	*Pipistrellus kuhlii* (Kuhl, 1819)	LC	-	-	LC	-	-	LC	-
80.	*Pipistrellus paterculus* Thomas, 1915	LC	-	-	LC	-	-	-	-
81.	*Pipistrellus pipistrellus* (Schreber, 1774)	LC	-	-	LC	-	-	LC	-
82.	*Pipistrellus savii* (Bonaparte, 1837)	VU	EN	-	VU	-	-	-	-
83.	*Pipistrellus tenuis* (Temminck, 1840)	LC	LC	-	LC	-	LC	LC	LC
84.	*Plecotus auritus* Linnaeus, 1758	NT	-	-	NT	-	NT	NT	-
85.	*Plecotus austriacus* (Fischer, 1829)	NT	-	-	NT	-	NT	NT	-
86.	*Pteropus giganteus* Brunnich, 1782	LC	EN	-	LC	LC	LC	LC	LC
87.	*Pteropus hypomelanus* Temminck, 1853	EN	-	-	EN	CR	-	-	-
88.	*Pteropus melanotus* Blyth, 1863	VU	-	-	VU	-	-	-	-
89.	*Pteropus vampyrus* (Linnaeus, 1758)	EN	-	-	EN	-	-	-	-
90.	*Rhinolophus affinis* Horsfield, 1823	LC	-	LC	LC	-	LC	-	DD
91.	*Rhinolophus blasii* Peters, 1866	NT	-	-	-	-	-	NT	-
92.	*Rhinolophus hipposideros* (Bechstein, 1800)	VU	-	-	VU	-	-	VU	-
93.	*Rhinolophus lepidus* Blyth, 1844	LC	LC	-	LC	-	NT	NT	-
94.	*Rhinolophus luctus* Temminck, 1835	NT	NT	-	NT	-	NT	-	-
95.	*Rhinolophus macrotis* Blyth, 1844	NT	-	-	NT	-	NT	NT	-
96.	*Rhinolophus pearsonii* Horsfield, 1851	LC	NT	NT	LC	-	LC	-	-
97.	*Rhinolophus pusillus* Temminck, 1834	LC	-	-	LC	-	LC	-	-
98.	*Rhinolophus rouxii* Temminck, 1835	NT	-	-	NT	-	NT	-	NT
99.	*Rhinolophus sinicus* (Andersen, 1905)	LC	-	-	LC	-	LC	-	-
100.	*Rhinolophus subbadius* Blyth, 1844	VU	VU	-	VU	-	EN	-	-
101.	*Rhinolophus trifoliatus* Temminck, 1834	VU	-	-	VU	-	-	-	-
102.	*Rhinolophus yunanensis* Dobson, 1872	VU	-	-	VU	-	-	-	-
103.	*Rhinopoma hardwickii* Gray, 1831	LC	LC	-	LC	-	-	LC	-
104.	*Rhinopoma microphyllum* (Brunnich, 1782)	LC	LC	-	LC	-	-	LC	-
105.	*Rhinopoma muscatellum* Thomas, 1903	NT	-	-	NT	-	-	NT	-
106.	*Rousettus aegyptiacus* (E. Geoffroy, 1810)	VU	-	-	-	-	-	VU	-

No	Scientific name	South Asia	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka
107.	*Rousettus leschenaulti* (Desmarest, 1820)	LC	LC	NT	LC	-	NT	LC	LC
108.	*Scotomanes ornatus* (Blyth, 1851)	LC	NT	-	LC	-	NT	-	-
109.	*Scotophilus heathii* Horsfield, 1831	LC	NT	-	LC	-	LC	LC	LC
110.	*Scotophilus kuhlii* Leach, 1821	LC	LC	-	LC	-	NT	LC	LC
111.	*Sphaerias blanfordi* (Thomas, 1891)	NT	-	NT	NT	-	NT	-	-
112.	*Tadarida aegyptiaca* (E. Geoffroy, 1818)	LC	NT	-	LC	-	-	LC	LC
113.	*Tadarida plicata* (Buchanan, 1800)	LC	-	-	LC	-	-	-	LC
114.	*Tadarida teniotis* (Rafinesque, 1814)	NE	-	-	NE	-	-	-	-
115.	*Taphozous longimanus* Hardwicke, 1825	LC	LC	-	LC	-	DD	-	LC
116.	*Taphozous melanopogon* Temminck, 1841	LC	LC	-	LC	-	-	-	LC
117.	*Taphozous nudiventris* Cretzschmer, 1830	LC	-	-	LC	-	-	LC	-
118.	*Taphozous saccolaimus* Temminck, 1838	LC	LC	-	LC	-	-	-	LC
119.	*Taphozous theobaldi* Dobson, 1872	VU	-	-	VU	-	-	-	-
120.	*Triaenops persicus* Dobson, 1871	VU	-	-	-	-	-	VU	-
121.	*Tylonycteris pachypus* Temminck, 1840	NT	NT	-	NT	-	-	-	
122.	*Tylonycteris robustula* Thomas, 1915	NE	-	-	NE	-	-	-	-
123.	*Vespertilio murinus* Linnaeus, 1758	NT	-	-	-	-	-	NT	-
	Total	**123**	**34**	**9**	**114**	**2**	**50**	**45**	**32**

The above Table 2 is a summary of the status of South Asian bats in different countries. After the initial assessment of the status in South Asia, national status for every country was derived based on the IUCN Red List Criteria Regional Guidelines (Gärdenfors *et al*., 2001). This process of national assessments has its advantage for national conservation action and management planning. For most non-endemic species in India, the national status is the same as the status of the species in South Asia. This is because of the vastness of the area, which in most cases encompasses a majority of the species distribution in the region. In other countries like Bhutan, Nepal and Bangladesh, which have a relatively smaller area, the status is different based on the threats and the area occupied, along with the status of the species in neighbouring India. Since information on bat distribution in Bhutan and Pakistan were not available at the workshop, national status for some species in these two countries are Data Deficient.

Although much of the information on distribution was taken from literature and from Bates and Harrison (1997), many crucial pieces of information were compiled for the first time at the workshop, such as habitat, threats, distribution information, taxonomic validity, range extensions, population data and much more of the important data components to deriving status assessment. A quick comparison of the status derived at the Indian Mammal CAMP workshop in 1997 (Molur *et al*., 1998) and that of the present effort indicates that there is a change in status for a total of 70 species of bats. This is both because more bat specialists were present at the 2002 CAMP workshop compared to the earlier effort and because new information became available in the span of 5 years between the two efforts and the publication of Bates and Harrison (1997) book. The assessments also vary from the earlier status indicated in the Old World Fruit Bats Action Plan (Mickleburgh *et al*., 1992) and the more recent Microchiroptera Action Plan (Hutson *et al*., 2001), due to the fact that while the first attempt was more than a decade back, the more recent Microchiroptera Action Plan involved assessments based on information from literature rather than recent field information. The differences in assessments for widely distributed species is also due to the status derived in the current workshop at the regional level as compared to the earlier global efforts.

Regional assessments have their own importance compared to global assessments due to the following advantages:

a. Smaller area of assessment resulting in greater accuracy
b. More participation by local field biologists in the assessment process
c. Assessments based on more recent field information
d. Implications for regional action plans and management plans
e. Bottom-up approach to assessments, i.e. regional/national information feeding into global assessments.
f. Post assessment follow-up actions such as surveys, monitoring and education
g. Information is likely to be used in regional or national red data books and national biodiversity strategies
h. Lobbying for conservation efforts with local governments can be done more effectively
i. Sustained effort in gathering field information and networking

A comparative account of species assessments of the South Asian region (this report), global region (Hilton-Taylor, 2000), Old World Fruit Bat Action Plan (Mickleburgh *et al*., 1992) and Microchiroptera Action Plan (Hutson *et al*., 2001) is presented in Table 3.

Table 3. Comparative assessment of bats occurring in South Asia with global assessment(s)

No	Scientific name	Status assessed in South Asia Bat CAMP (This Report, 2002)	2000 Red List of Threatened Species (Hilton-Taylor, 2000)	Microchiroptera Action Plan (Hutson *et al.,* 2001)	Old World Fruit Bats Action Plan (Mickleburgh *et al.,* 1992)
Endemic to South Asia					
1.	*Eptesicus tatei*	DD	DD	DD	
2.	*Hipposideros durgadasi*	EN (D)	VU (B1+2c, D2)	VU (B1+2c, D2)	
3.	*Hipposideros hypophyllus*	EN (B1ab(ii,iii)+2ab(ii,iii))	VU (B1+2c, D2)	VU (B1+2c, D2)	
4.	*Hipposideros lankadiva*	LC		LRlc	
5.	*Hipposideros speoris*	LC		LRlc	
6.	*Latidens salimalii*	EN (B1ab(iii)+2ab(iii))	CR (B1+2c, D)		Rare: Limited distribution
7.	*Murina grisea*	CR (B1ab(iii))	EN (B1+2c)	EN (B1+2c)	
8.	*Myotis csorbai*	DD	DD	DD	
9.	*Myotis sicarius*	VU (B2ab(iii))	VU (A2c, D2)	VU (A2c, D2)	
10.	*Pipistrellus dormeri*	LC		LRlc	
11.	*Pteropus faunulus*	EN (B1ab(iii)+2ab(iii))	VU (B1+2c)		No data: Limited distribution
12.	*Rhinolophus beddomei*	NT	LRnt	LRnt	
13.	*Rhinolophus cognatus*	VU (D2)	VU (A2c, D2)	LRnt	
14.	*Rhinolophus ferrumequinum*	VU (B2ab(iii))	LRnt	LRnt	
15.	*Rhinolophus mitratus*	VU (D2)	DD	DD	
16.	*Scotoecus pallidus*	NT		LRlc	
17.	*Taphozous perforatus*	LC		LRlc	
Non-endemic to South Asia					
18.	*Areilulus circumdatus*	LC		LRlc	
19.	*Asellia tridens*	NE		LRlc	
20.	*Barbastella leucomelas*	NT		LRlc	
21.	*Coelops frithii*	NT		LRlc	
22.	*Cynopterus brachyotis*	LC			Not threatened
23.	*Cynopterus sphinx*	LC			Not threatened
24.	*Eonycteris spelaea*	LC			Not threatened
25.	*Eptesicus bottae*	DD		LRlc	
26.	*Eptesicus gobiensis*	DD		LRlc	
27.	*Eptesicus nasutus*	DD	VU (A2c)	VU (A2c)	
28.	*Eptesicus pachyotis*	DD	LRnt	LRnt	
29.	*Eptesicus serotinus*	NT		LRlc	
30.	*Harpiocephalus harpia*	NT		LRlc	
31.	*Harpiocephalus mordax*	DD	LRnt	-	
32.	*Hesperoptenus tickelli*	LC		LRlc	
33.	*Hipposideros armiger*	LC		LRlc	

No	Scientific name	Status assessed in South Asia Bat CAMP (This Report, 2002)	2000 Red List of Threatened Species (Hilton-Taylor, 2000)	Microchiroptera Action Plan (Hutson *et al.*, 2001)	Old World Fruit Bats Action Plan (Mickleburgh *et al.*, 1992)
34.	*Hipposideros ater*	LC		LRlc	
35.	*Hipposideros cineraceus*	NT		LRlc	
36.	*Hipposideros diadema*	VU (D2)		LRlc	
37.	*Hipposideros fulvus*	LC		LRlc	
38.	*Hipposideros galeritus*	NT		LRlc	
39.	*Hipposideros larvatus*	NT		LRlc	
40.	*Hipposideros pomona*	LC		LRlc	
41.	*Ia io*	EN (B1ab(iii)+2ab(iii))	LRnt	LRnt	
42.	*Kerivoula hardwickii*	LC		LRlc	
43.	*Kerivoula papillosa*	NT		LRlc	
44.	*Kerivoula picta*	LC		LRlc	
45.	*Macroglossus sobrinus*	NT		-	Not threatened
46.	*Megaderma lyra*	LC		LRlc	
47.	*Megaderma spasma*	LC		LRlc	
48.	*Megaerops niphanae*	NT		-	No data
49.	*Miniopterus pusillus*	VU (B2ab(iii,iv))		LRlc	
50.	*Miniopterus schreibersi*	LC	LRnt	LRnt	
51.	*Murina aurata*	NT	LRnt	LRnt	
52.	*Murina cyclotis*	LC		LRlc	
53.	*Murina huttonii*	LC	LRnt	LRnt	
54.	*Murina leucogaster*	NT		LRlc	
55.	*Murina tubinaris*	NT		LRlc	
56.	*Myotis annectans*	VU (D2)	LRnt	LRnt	
57.	*Myotis blythii*	VU (D1)		LRlc	
58.	*Myotis daubentonii*	EN (B1ab(iii)+2ab(iii); D)		LRlc	
59.	*Myotis formosus*	LC		LRlc	
60.	*Myotis hasseltii*	NT		LRlc	
61.	*Myotis horsfeldii*	LC		LRlc	
62.	*Myotis longipes*	NT	VU (B1+2c, D2)	VU (B1+2c, D2)	
63.	*Myotis montivagus*	VU (B2ab(iii); D2)	LRnt	LRnt	
64.	*Myotis muricola*	LC		LRlc	
65.	*Myotis mystacinus*	VU (D1)		LRlc	
66.	*Myotis siligorensis*	NT		LRlc	
67.	*Nyctalus leisleri*	EN (D)	LRnt	LRnt	
68.	*Nyctalus montanus*	NT	LRnt	LRnt	
69.	*Nyctalus noctula*	LC		LRlc	
70.	*Otomops wroughtoni*	CR (B1ab(iii))	CR (B1+2c)	CR (B1+2c)	
71.	*Otonycteris hemprichi*	NT		LRlc	
72.	*Philetor brachypterus*	VU (B1ab(iii)+2ab(iii))		LRlc	
73.	*Pipistrellus abramus*	DD		LRlc	
74.	*Pipistrellus affinis*	NT		LRlc	
75.	*Pipistrellus cadornae*	NT	LRnt	LRnt	
76.	*Pipistrellus ceylonicus*	LC		LRlc	
77.	*Pipistrellus coromandra*	LC		LRlc	
78.	*Pipistrellus javanicus*	LC		LRlc	
79.	*Pipistrellus kuhlii*	LC		LRlc	
80.	*Pipistrellus paterculus*	LC	LRnt	LRnt	
81.	*Pipistrellus pipistrellus*	LC		LRlc	
82.	*Pipistrellus savii*	VU (B1ab(iii))		LRlc	
83.	*Pipistrellus tenuis*	LC		LRlc	
84.	*Plecotus auritus*	NT		LRlc	
85.	*Plecotus austriacus*	NT		LRlc	
86.	*Pteropus giganteus*	LC			Not threatened
87.	*Pteropus hypomelanus*	EN (B1ab(iii)+2ab(iii))			No data
88.	*Pteropus melanotus*	VU (B1ab(iii)+2ab(iii))			Not threatened
89.	*Pteropus vampyrus*	EN (B1ab(iii)+2ab(iii))			Not threatened
90.	*Rhinolophus affinis*	LC		LRlc	
91.	*Rhinolophus blasii*	NT	LRnt	LRnt	
92.	*Rhinolophus hipposideros*	VU (B1ab(iii)+2ab(iii))	VU (A2c)	VU (A2c)	
93.	*Rhinolophus lepidus*	LC		LRlc	

No	Scientific name	Status assessed in South Asia Bat CAMP (This Report, 2002)	2000 Red List of Threatened Species (Hilton-Taylor, 2000)	Microchiroptera Action Plan (Hutson *et al.*, 2001)	Old World Fruit Bats Action Plan (Mickleburgh *et al.*, 1992)
94.	*Rhinolophus luctus*	NT		LRlc	
95.	*Rhinolophus macrotis*	NT		LRlc	
96.	*Rhinolophus pearsonii*	LC		LRlc	
97.	*Rhinolophus pusillus*	LC		LRlc	
98.	*Rhinolophus rouxii*	NT		LRlc	
99.	*Rhinolophus sinicus*	LC		LRlc	
100.	*Rhinolophus subbadius*	VU (B2ab(iii))	DD	DD	
101.	*Rhinolophus trifoliatus*	VU (B1ab(iii)+2ab(iii))		LRlc	
102.	*Rhinolophus yunanensis*	VU (B1ab(iii)+2ab(iii))	LRnt	LRnt	
103.	*Rhinopoma hardwickii*	LC		LRlc	
104.	*Rhinopoma microphyllum*	LC		LRlc	
105.	*Rhinopoma muscatellum*	NT		LRlc	
106.	*Rousettus aegyptiacus*	VU (B1ab(iii); D1)			Not Threatened
107.	*Rousettus leschenaulti*	LC			Not Threatened
108.	*Scotomanes ornatus*	LC	LRnt	LRnt	
109.	*Scotophilus heathii*	LC		LRlc	
110.	*Scotophilus kuhlii*	LC		LRlc	
111.	*Sphaerias blanfordi*	NT		-	No data
112.	*Tadarida aegyptiaca*	LC		LRlc	
113.	*Tadarida plicata*	LC		-	
114.	*Tadarida teniotis*	NE		LRlc	
115.	*Taphozous longimanus*	LC		LRlc	
116.	*Taphozous melanopogon*	LC		LRlc	
117.	*Taphozous nudiventris*	LC		LRlc	
118.	*Taphozous saccolaimus*	LC		LRlc	
119.	*Taphozous theobaldi*	VU (A2a)		LRlc	
120.	*Triaenops persicus*	VU (D2)		LRlc	
121.	*Tylonycteris pachypus*	NT		LRlc	
122.	*Tylonycteris robustula*	NE		LRlc	
123.	*Vespertilio murinus*	NT		LRlc	

Endemic species

Seventeen species of bats are endemic to South Asia. One species of microchiroptera, *Otomops wroughtoni* (Wroughton's Free-tailed Bat), which was until recently known to occur in only one cave in Karnataka, has been reported from Cambodia (Walston & Bates, 2002) and from Siju cave in Meghalaya (Thabah & Bates, in prep.). Therefore, the species is no longer endemic to India. The status of endemic species is listed in Table 4 below.

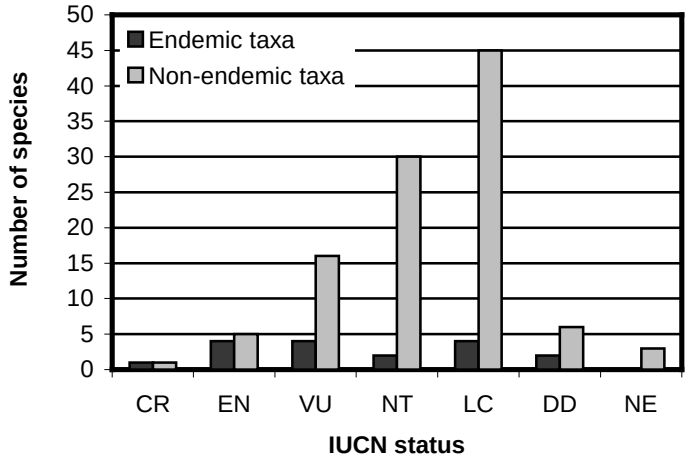
Endemic bats in South Asia, as seen above, are all highly restricted in distribution. Although endemics do pose some interest to wildlife biologists, a few (e.g. *Hipposideros durgadasi*) have not been studied systematically after first description. Other endemics from southern India have been better studied, but systematic surveys and monitoring have not been undertaken. There are some changes in categories compared to previous attempts as a result of new information available at the workshop.

As seen in Table 1, the threatened species have been categorized as such due to the restricted distribution within the region. Irrespective of their wide distribution in the world some of the species are threatened within the South Asian region because of limited area of occupancy or extent of occurrence within South Asia. Some of the typical examples of bats with restricted distribution within South Asia are those that occur in northeastern India, Bhutan, Bangladesh, eastern parts of Nepal and Andaman & Nicobar Islands. They are restricted within South Asia because of political boundaries, but their range extends into Myanmar and other countries of Southeast Asia. Twenty-three species of bats that have a restricted distribution in the region with a wider global

distribution are threatened in the region, while 11 species of these are threatened at the global level (Hilton-Taylor, 2000).

The status of endemic and non-endemic species of South Asian chiroptera is shown in Figure 4.

Figure 4. Status of endemic and non-endemic South Asian chiroptera



Restricted distribution was estimated, inferred or calculated based on available information at the workshop. For species with reliable information from recent observations, range (extent of occurrence) and area (of occupancy) were calculated using maps. While it was easier to calculate range for widely distributed species, the area of restricted species was estimated based on the minimum foraging distance a bat flies from its roost site. Although no information on minimum foraging distance is available for any bat species in the South Asian region, some studies have been conducted abroad which suggest the foraging radius for certain species of bats (Anthony Hutson at the workshop). This was applied to bats with fragmented populations, and the area of occupancy for each locality was calculated using the formula Area = πr^2. In case of widely distributed species this was not applied since it was assumed that the colonies were close enough to migrate or shift roosts if disturbed. This was also not applied to species with known capability to adapt to changing habitats.

IUCN defines area of occupancy as critical area needed for a taxon to survive. In the case of bats, in earlier exercises this has been interpreted as the actual area in which a bat roosts. For example, in the case of *Otomops wroughtoni*, area as per IUCN definition and interpretation would mean the area of the cave(s) in which the bat roosts. It was argued at the workshop that the roosting area alone is not enough to sustain a bat colony if its foraging area was destroyed. In the case of *O. wroughtoni*, the cave may be protected but if the proposed dam submerges the surrounding habitat, it is not known whether the bat would be able to find sufficient food under the resulting environmental changes. The area of occupancy in this case was therefore calculated based on a minimum foraging radius.

In case of species with information only from literature or known only from type localities, depending on the information available of its original habitat, area of occupancy was inferred. To be more specific, if a species was known from only one locality and if the type locality was known, area was calculated on the present availability of habitat. If the type locality was at a broad level with no specific habitat mentioned (e.g. Malabar or Mussoorie), then the area of occupancy and/or extent of occurrence were not estimated.

Number of locations and subpopulations were inferred or estimated based on the number of localities. Although IUCN definitions for the two terms are dependent on genetic flow and threats respectively, for want of detailed information on bats, the workshop participants could make a generalization only. The number of localities indicated includes all known, published and unpublished records, irrespective of whether the localities currently have any viable population or not. It was assumed that in every case (unless otherwise known), old published localities were potential habitats for bats and whatever form of degradation to the habitat has occurred in the recent past would be reflected in change in quality of habitat. Decline in number of locations or subpopulations were indicated only if sampling efforts indicated absence of the species in the area.

Habitat loss was considered one of the major threats to bats. Many commensal species with good adaptation to changing environment and wide distribution were not categorized as threatened. Those species categorized as threatened or near threatened with restricted distribution were assessed as such because of some significant change to their habitat, either in decrease in area or decrease in quality of habitat. Sixty-five species in all were assessed as having a decline in habitat, some more pronounced than others.

Number of mature individuals was indicated for some well-studied species with restricted distribution or inferred from literature. For many widely distributed species, numbers were indicated as being more than 10,000, which falls outside the threshold for restricted populations.

For want of adequate information the workshop participants did not want to speculate on factors of extreme fluctuation in area, extent, locations and number of mature individuals.

Only one species (*Taphozous theobaldi*) was assessed as threatened due to population reduction. Although there was a general consensus about decline in bat numbers for many species, actual rates or range of decline was not mentioned. In most cases habitat loss was correlated to population decline, which however did not meet the threshold values of the decline criterion. In comparison, six species of bats occurring in the region have been assessed as threatened based on population decline at the global level (Hilton-Taylor, 2000).

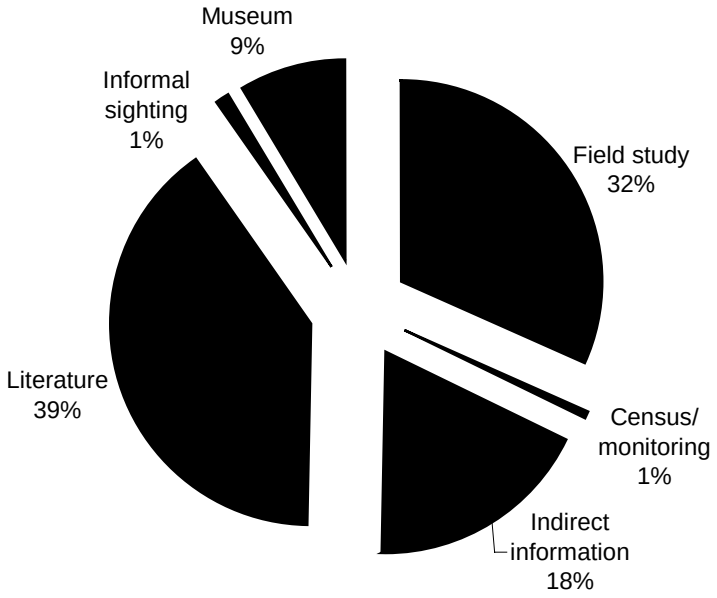
Since population data was available for a few species, small numbers criterion (D) was applied occassionally. However, since population trends were not known or subpopulation and location information ws not known, restricted criterion (C) was not applied. Similarly, probability of extinction criterion was not applied due to lack of information.

Species not assessed as threatened, but suffering some declines in populations or being impacted by other threats were assigned to the Near Threatened category. Documentation for all categories is included in the Taxon Data Sheets.

Data quality

Assessments were derived from a wide variety and quality of data available at the workshop. Much of the information on taxonomy and distribution was gathered from literature. More recent studies for some species provided updated information with respect to new localities, habitat characteristics, some population information, threats, elevation, habit and habitat of the species. The quality of data varied for species from literature-based assessments to observations. Figure 5 illustrates the quality of data in the assessments.

Figure 5. Quality of data of the assessed South Asian chiroptera



Data Deficient species

Only 8 of the 123 species of South Asian Chiroptera assessed in the C.A.M.P. workshop have been categorized as Data Deficient (Table 4). This is a high contrast to 52 out of 102 Indian species, which were assessed at the 1997 Mammal C.A.M.P. The paucity of data at the Mammal C.A.M.P. was a result of fewer biologists (only six to represent the country), the absence the Bates and Harrison (1997) information and the reticence of biologists at the workshop to use what data existed to its fullest capacity as permitted by the IUCN Red List Categories and Criteria protocol. Many foresters and even biologists believe that there is not enough information to determine the status of certain species in the wild. In fact, the level of information desired for absolute certainty is never available!

A common mistake made by many individuals attempting to assess and categorise species under the IUCN Red List Criteria and Categories is to leap to the conclusion that a species is Data Deficient when information is sparse. In fact, The IUCN Red List Criteria guidelines are very clear in stating that if no observations are available, inference, estimates, and predictions are permitted within reason. Consistency in applying the boundaries of the limits to inference is crucial. At the beginning of the Chiroptera C.A.M.P., there was unanimity in declaring many bats as being data deficient, however, when the confidence level in the process of logical deduction in compiling and analyzing information increased, many species were found to have sufficient data to assign a status. Further, for those with limited data, inference within reason and justification was adopted.

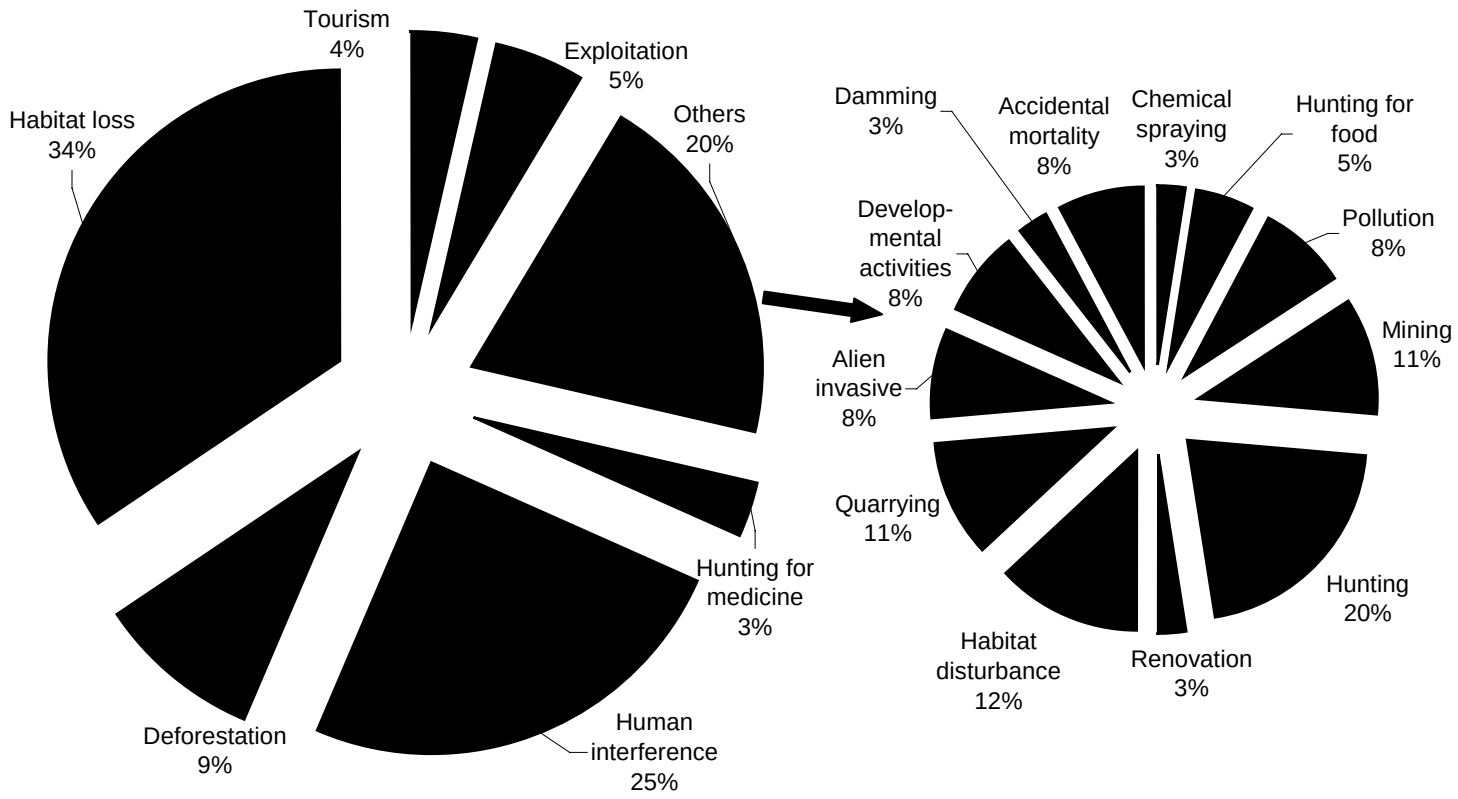
Table 4. List of Data Deficient species

Scientific name
Eptesicus bottae (Peters, 1869)
Eptesicus gobiensis Bobrinskii, 1926
Eptesicus nasutus (Dobson, 1877)
Eptesicus pachyotis (Dobson, 1871)
Eptesicus tatei Ellerman and Morrison-Scott, 1951 *
Harpiocephalus mordax Thomas, 1923
Myotis csorbai Topal, 1997 *
Pipistrellus abramus (Temminck, 1840)

* Endemic to South Asia

Threats

Figure 6. Threats impacting South Asian chiroptera.



Human interference leading to habitat loss is a major threat to almost all species of bats. Felling of roost trees for widening of roads is a common threat to fruit bats. Deforestation for different reasons such as development, timber, local needs, forest policies, etc. destroys many roost and fruit trees for fruit bats. The resulting loss from loss of habitat due to felling of trees reduces the quality of habitat for microchiropterans – reduction in canopy insect populations. Human interferences such as lopping, fires, roost disturbance, anti fruit bat measures, etc. results in negative effect on bat colonies in both wild and semi wild habitats. Bats that live in caves that are a tourist attraction such as Ajantha and Ellora are prone to roost disturbance. Bats that have colonised old or abandoned buildings, temples, disused wells and timber yeards are under threat from changes in policies of the concerned authorities.

In addition, hunting accounts for threats to about 15% of bat species. There are different types of hunting. Locals hunt most species of bats for meat and medicine. Some species of bats such as the fruit bats are considered pests and therefore persecuted. Of the 19 species that are hunted, eight are fruit bats. Four hunted species are endemic to South Asia (Table 5).

Table 5. Species of Chiroptera hunted in South Asia (other threats are also included).

No	Scientific name	Threats
1.	*Cynopterus sphinx* (Vahl, 1797)	Habitat loss, development, dams, deforestation, exploitation, hunting, hunting for medicine
2.	*Eptesicus serotinus* (Schreber, 1774)	Exploitation, hunting for medicine in Assam, habitat destruction
3.	*Hesperoptenus tickelli* (Blyth, 1851)	Habitat loss, deforestation, exploitation, hunting, hunting for medicine, human interference
4.	*Hipposideros diadema* (E. Geoffroy, 1813)	Habitat loss, hunting for food
5.	*Hipposideros galeritus* Cantor, 1846	Exploitation, hunting for medicine in Sri Lanka, human interference, habitat loss
6.	*Hipposideros lankadiva* Kelaart, 1850 *	Habitat loss, deforestation, hunting, human interference
7.	*Hipposideros pomona* Andersen, 1918	Habitat loss, development, exploitation, hunting for food, human interference
8.	*Hipposideros speoris* (Schneider, 1800) *	Habitat loss, stone quarrying, chemical spraying, renovation of temples, hunting
9.	*Latidens salimalii* Thonglongya, 1972 *	Habitat loss, agriculture, farming, horticulture, extraction, harvesting non-woody vegetation, exploitation, hunting for medicine and food, trade,
10.	*Megaderma lyra* E. Geoffroy, 1810	Exploitation, illegal trade for food, human interference, renovation of old temples, quarrying, human habitation, habitat disturbance
11.	*Nyctalus montanus* (Barrett-Hamilton, 1906)	Hunting for medicine, habitat loss, deforestation, quarrying and mining
12.	*Pipistrellus ceylonicus* (Kelaart, 1852)	Exploitation, hunting, hunting for medicine
13.	*Pteropus faunulus* Miller, 1902 *	Habitat loss, possibly hunted
14.	*Pteropus giganteus* Brunnich, 1782	Exploitation, hunting, habitat loss
15.	*Pteropus hypomelanus* Temminck, 1853	Habitat loss, persecution
16.	*Pteropus melanotus* Blyth, 1863	Habitat loss, possibly hunted
17.	*Pteropus vampyrus* Linnaeus, 1758	Habitat loss, persecution, possibly hunted
18.	*Rousettus leschenaulti* (Desmarest, 1820)	Exploitation, hunting, tourism
19.	*Taphozous melanopogon* Temminck, 1841	Hunting, human interference

* Endemic to South Asia

Although it may seem that many South Asian bats, having been assessed Least Concern, are still relatively safe, it is very important to understand that the assessments have been done only at the species level and not at subspecies or population level. There are at least 139 known and valid subspecies of bats in the region (Appendix III), some of them highly restricted to small areas such as Andaman & Nicobar Islands and Sri Lanka. Even though the status of most species is safe for now, individual populations or subspecies may be under tremendous pressure. If appropriate measures are not taken to conserve such subspecies and populations, genetic diversity could be lost forever. Of course, no country wants to lose an endemic species due to national disgrace but losing non-endemic species population and subspecies is nationally a danger due to their benefits to ecosystems and human needs.

Recommendations

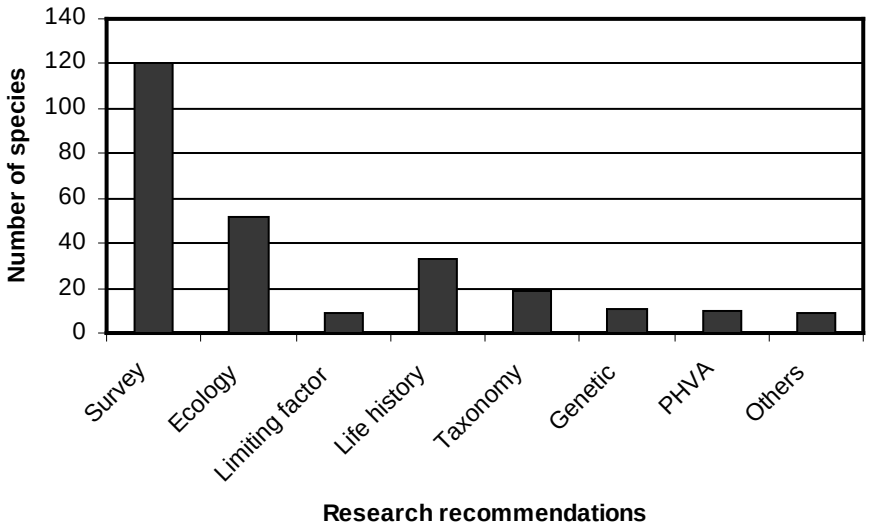
Research

Bats are one of the least studied mammalian groups in the region. Apart from status assessments, the objective of a C.A.M.P. workshop is also to make research and management recommendations for every species considered for assessment. There is an obvious dirth of information on bats in the wild. Information for many species is based only on museum or literature references, with no recent distribution information in the wild. Lack of this information prompted the group to recommend survey as the primary research recommendation for nearly all bats (120 species). Surveys are needed to understand the distribution and status of all South Asian species all over the region. Paucity of information is so dramatic that there could be a few species that may be locally extinct already, but these possible extinctions cannot be ascertained for want of systematic surveys. Most bat studies in the past have been on occasional and opportunistic collections for taxonomic works and in a few cases, distribution and status in certain areas. Systematic surveys have been conducted for one or two well known bats of importance, such as *Otomops wroughtonii* and *Latidens salimalii* among others, but even so, surveys in regions other than the known localities failed to locate the species. In point of fact is the recent discovery of *Otomops wroughtonii* in Cambodia (Walston & Bates, 2001) and in Meghalaya (Thabah & Bates,

in prep). This indicates not only the range extension of the species, but also the fact that the species could be distributed more widely than is known today. Similarly, there is no current information on the distribution or even the presence of *Hipposideros durgadasi*, another endemic bat of India.

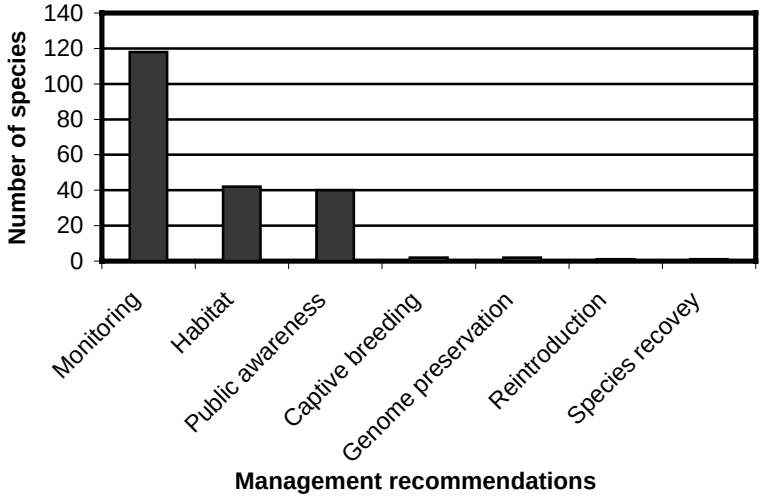
Ecological studies are critical for better understanding of the status of the species as well as the very much-needed documentation of the ecological value of bats. The assessments carried out at this stage lack much of ecological data, which when available could help in the actual understanding of the status. For example, foraging distance from the roost site is an important aspect that can determine the distribution of a bat given various influences on the habitat. Other research recommendations include life history studies, limiting factor research, taxonomic studies, genetic studies, population and habitat viability analysis, among others.

Figure 7. Research recommendations for South Asian bats



Management

Figure 8. Management recommendations for South Asian bats



For a thorough understanding of the species status in the wild, it is imperative that surveys are followed by periodic monitoring. Lack of monitoring has hindered our understanding of population structure and dynamics of bats of the region. Very little is known of the better-known bats like the endemics mentioned before through occasional field visits and trapping, but no systematic studies involving monitoring of population has been conducted for either *O. wroughtonii* or *L. salimalii*. For the rest of the bats, monitoring is recommended as a priority in management followed by habitat management and public awareness. In some cases roosts of certain species are known, but foraging areas are not well understood or assessed. It is imperative that habitat studies be done initially to determine the potential of a given area to support bats in the roost. Habitat management is crucial from not only conserving roost areas such as caves, trees, old buildings, temples and well, but also in conserving the source of food, be it fruits or insects.

Even bat biologists admit that they know very little about South Asian bats but their knowledge is staggering when compared to that of the common man in South Asia and even of many professional foresters. Public awareness is a crucial component of the actions that must be taken to implement a holistic conservation action plan for bats of this region. Other management recommendations include captive breeding, genome preservation, reintroduction and species recovery.

Bats in protected areas

From a quick addition of the information gathered at the workshop for bats in protected areas, only 49 species have any record of occurring in protected areas of the region. Only seven of the 17 endemic bats of South Asia are found in protected areas. Information from protected areas for this group of mammals is very meager as evidenced in Table 6. Mammal surveys in protected areas have a very strong bias towards larger, more conspicuous forms and many protected area management plans do not even list bats in the inventories. The list below is not complete, but is a fair representation of what is understood of bats in protected areas in South Asia.

Table 6. South Asian Chiroptera in Protected Areas

No.	Scientific name	Status, 2002	Presence in Protected Areas according to information supplied in workshop
Endemic to South Asia			
1.	*Eptesicus tatei*	DD	--
2.	*Hipposideros durgadasi*	EN	--
3.	*Hipposideros hypophyllus*	EN	--
4.	*Hipposideros lankadiva*	LC	India: Nagarjunsagar-Srisailam TR, Andhra Pradesh; Kanha NP, Madhya Pradesh
5.	*Hipposideros speoris*	LC	India: Nagarjunsagar-Srisailam TR, Andhra Pradesh
6.	*Latidens salimalii*	EN	India: Kalakkad-Mundanthurai TR, Tamil Nadu; Periyar TR, Kerala
7.	*Murina grisea*	CR	--
8.	*Myotis csorbai*	DD	--
9.	*Myotis sicarius*	VU	Nepal: Annapurna Conservation area
10.	*Pipistrellus dormeri*	LC	India: Satpura NP
11.	*Pteropus faunulus*	EN	--
12.	*Rhinolophus beddomei*	NT	India: Chinnar WLS, Kerala; Nagarjunasagar-Srisailam TR, Gundla Brahmeshwaram WLS, Andhra Pradesh
13.	*Rhinolophus cognatus*	VU	India: Narcondam Island WLS
14.	*Rhinolophus ferrumequinum*	VU	--
15.	*Rhinolophus mitratus*	VU	--
16.	*Scotoecus pallidus*	NT	--
17.	*Taphozous perforatus*	LC	--
Non-endemic to South Asia			
18.	*Areilulus circumdatus*	LC	--
19.	*Asellia tridens*	NE	--
20.	*Barbastella leucomelas*	NT	Nepal: Annapurna Conservation Area, Makala Barun NP and Rara NP
21.	*Coelops frithii*	NT	--
22.	*Cynopterus brachyotis*	LC	India: Nagarahole NP, Karnataka; Kalakkad-Mundanthurai TR, Tamil Nadu

No.	Scientific name	Status, 2002	Presence in Protected Areas according to information supplied in workshop
			Sri Lanka: Hakgalla NP
23.	*Cynopterus sphinx*	LC	India: Point Calimere WLS, Tamil Nadu; Coringa WLS, Kawal WLS, Nagarjunasagar-Srisailam TR, Andhra Pradesh; Kanha NP, Madhya Pradesh; Indravati NP, Chhattisgarh
24.	*Eonycteris spelaea*	LC	India: Kalakkad-Mundanthurai TR, Tamil Nadu
25.	*Eptesicus bottae*	DD	--
26.	*Eptesicus gobiensis*	DD	--
27.	*Eptesicus nasutus*	DD	--
28.	*Eptesicus pachyotis*	DD	--
29.	*Eptesicus serotinus*	NT	Nepal: Makalu Barun NP
30.	*Harpiocephalus harpia*	NT	--
31.	*Harpiocephalus mordax*	DD	--
32.	*Hesperoptenus tickelli*	LC	--
33.	*Hipposideros armiger*	LC	--
34.	*Hipposideros ater*	LC	--
35.	*Hipposideros cineraceus*	NT	--
36.	*Hipposideros diadema*	VU	--
37.	*Hipposideros fulvus*	LC	India: Bhimashankar WLS, Maharashtra.
38.	*Hipposideros galeritus*	NT	India: Melghat TR, Maharashtra; Borivili NP, Maharashtra; Kanha NP, Madhya Pradesh
39.	*Hipposideros larvatus*	NT	India: Orang NP, Assam
40.	*Hipposideros pomona*	LC	--
41.	*Ia io*	EN	--
42.	*Kerivoula hardwickii*	LC	India: Siju WLS, Meghalaya
43.	*Kerivoula papillosa*	NT	India: Sunderbans NP, West Bengal
44.	*Kerivoula picta*	LC	India: Borivili NP, Maharashtra; Kawal WLS, Andhra Pradesh; Orang NP, Assam Nepal: Chitwan NP
45.	*Macroglossus sobrinus*	NT	India: Namdapha WLS, Arunachal Pradesh
46.	*Megaderma lyra*	LC	India: Tadoba-Andhari TR, Radhanagari WLS, Maharastra; Kawal WLS, Andhra Pradesh; Orang NP, Assam; Nagarjunsagar-Srisailam TR, Andhra Pradesh
47.	*Megaderma spasma*	LC	India: Tadoba TR, Melghat TR, Pench NP, Maharasthra; Sunderbans NP, West Bengal
48.	*Megaerops niphanae*	NT	India: Namdapha WLS, Arunachal Pradesh
49.	*Miniopterus pusillus*	VU	India: Kalakkad-Mundanthurai TR, Tamil Nadu
50.	*Miniopterus schreibersi*	LC	India: Siju WLS, Meghalaya
51.	*Murina aurata*	NT	--
52.	*Murina cyclotis*	LC	Nepal: Royal Chitwan NP
53.	*Murina huttonii*	LC	--
54.	*Murina leucogaster*	NT	--
55.	*Murina tubinaris*	NT	--
56.	*Myotis annectans*	VU	--
57.	*Myotis blythii*	VU	--
58.	*Myotis daubentonii*	EN	--
59.	*Myotis formosus*	LC	--
60.	*Myotis hasseltii*	NT	--
61.	*Myotis horsfeldii*	LC	India: Silent Valley NP, Kerala; Kanha NP, Madhya Pradesh
62.	*Myotis longipes*	NT	India: Balpakram NP, Mizoram
63.	*Myotis montivagus*	VU	--
64.	*Myotis muricola*	LC	Pakistan: Murree NP (?); Nepal: Langtung NP
65.	*Myotis mystacinus*	VU	--
66.	*Myotis siligorensis*	NT	--
67.	*Nyctalus leisleri*	EN	--
68.	*Nyctalus montanus*	NT	--
69.	*Nyctalus noctula*	LC	--
70.	*Otomops wroughtoni*	CR	India: Siju WLS, Meghalaya
71.	*Otonycteris hemprichi*	NT	--
72.	*Philetor brachypterus*	VU	--
73.	*Pipistrellus abramus*	DD	--
74.	*Pipistrellus affinis*	NT	--
75.	*Pipistrellus cadornae*	NT	--
76.	*Pipistrellus ceylonicus*	LC	--
77.	*Pipistrellus coromandra*	LC	India: Kanha NP, Madhya Pradesh

No.	Scientific name	Status, 2002	Presence in Protected Areas according to information supplied in workshop
78.	*Pipistrellus javanicus*	LC	India: Kanha NP, Madhya Pradesh
79.	*Pipistrellus kuhlii*	LC	--
80.	*Pipistrellus paterculus*	LC	--
81.	*Pipistrellus pipistrellus*	LC	--
82.	*Pipistrellus savii*	VU	--
83.	*Pipistrellus tenuis*	LC	India: Satpura NP, Madhya Pradesh
84.	*Plecotus auritus*	NT	Nepal: Makalu Barun NP, Rara NP
85.	*Plecotus austriacus*	NT	--
86.	*Pteropus giganteus*	LC	India: Point Calimere WLS, Tamil Nadu; Palamau TR, Hazaribagh WLS, Jharkhand; Kawal WLS, Andhra Pradesh; Molem NP, Goa; Kanha NP, Madhya Pradesh; Chulka, Malaban WLS, Orissa; Indravati NP, Chhattisgarh
87.	*Pteropus hypomelanus*	EN	India: Barren Island WLS, Andaman & Nicobar Islands
88.	*Pteropus melanotus*	VU	--
89.	*Pteropus vampyrus*	EN	--
90.	*Rhinolophus affinis*	LC	--
91.	*Rhinolophus blasii*	NT	--
92.	*Rhinolophus hipposideros*	VU	--
93.	*Rhinolophus lepidus*	LC	India: Ranthambore NP, Rajasthan; Karnala Bird Sanctuary, Maharashtra; Satpura NP, Madhya Pradesh
94.	*Rhinolophus luctus*	NT	India: Satpora NP, Madhya Pradesh
95.	*Rhinolophus macrotis*	NT	--
96.	*Rhinolophus pearsonii*	LC	--
97.	*Rhinolophus pusillus*	LC	India: Phamong Lho WLS, Sikkim
98.	*Rhinolophus rouxii*	NT	India: Dandeli WLS, Karnataka; Karnala WLS, Maharashtra; Kanha NP, Madhya Pradesh; Indravati NP, Chhattisgarh
99.	*Rhinolophus sinicus*	LC	--
100.	*Rhinolophus subbadius*	VU	--
101.	*Rhinolophus trifoliatus*	VU	--
102.	*Rhinolophus yunanensis*	VU	--
103.	*Rhinopoma hardwickii*	LC	India: Kanha NP, Madhya Pradesh
104.	*Rhinopoma microphyllum*	LC	--
105.	*Rhinopoma muscatellum*	NT	--
106.	*Rousettus aegyptiacus*	VU	--
107.	*Rousettus leschenaulti*	LC	India: Namdapha Biosphere Reserve, Arunachal Pradesh; Nagarhole WLS, Karnataka; Sambalpur WLS, Orissa; Kanha NP, Madhya Pradesh; Indravati NP, Chhattisgarh
108.	*Scotomanes ornatus*	LC	--
109.	*Scotophilus heathii*	LC	--
110.	*Scotophilus kuhlii*	LC	India: Satpura NP
111.	*Sphaerias blanfordi*	NT	India: Phambong Lho WLS, Sikkim; Namdapha NP, Assam
112.	*Tadarida aegyptiaca*	LC	--
113.	*Tadarida plicata*	LC	--
114.	*Tadarida teniotis*	NE	--
115.	*Taphozous longimanus*	LC	India: Hazaribagh WLS, Jharkhand; Kanha NP, Madhya Pradesh
116.	*Taphozous melanopogon*	LC	India: Kanha NP, Satpura NP, Madhya Pradesh
117.	*Taphozous nudiventris*	LC	India: Kanha NP, Madhya Pradesh
118.	*Taphozous saccolaimus*	LC	India: Campbell Bay NP, Andaman & Nicbar Island; Kanha NP, Madhya Pradesh
119.	*Taphozous theobaldi*	VU	India: Silent Valley NP, Kerala; Bhimshankar WLS, Maharashtra
120.	*Triaenops persicus*	VU	--
121.	*Tylonycteris pachypus*	NT	--
122.	*Tylonycteris robustula*	NE	--
123.	*Vespertilio murinus*	NT	--

Bats in captivity

Bats are maintained in captivity by both laboratories and zoological gardens around the world. In South Asia, the keeping of bats in zoos has not been systematic or scientific, perhaps due to lack of interest since bats are so commonly observed in both cities and rural areas. They are not "popular" zoo animals in this region due to this commonness as well as their negative image. Moreover, bats require special housing and other treatment if they are to survive and thrive in captivity. Finally, bats are not active during the day and visitors are not satisfied

unless they can see an animal move around. For these reasons, a very unsatisfactory practice of keeping bats in poorly designed and ventilated "nocturnal houses" has evolved. In fact, Indian zoo legislation prohibits keeping a "nocturnal" animal in any other exhibit than a nocturnal house. This is in some way a blessing as the expense of establishing and maintaining a nocturnal house has discouraged most zoos from keeping bats. The zoos of the South Asian region may one day achieve a standard, which would enable them to maintain and breed threatened bats but this is not the case currently.

In the South Asian Chiroptera C.A.M.P. only two bats were recommended for captive breeding programmes, e.g. *Hipposideros durgadasi* (Khajuria, 1970) and *Latidens salimali* Thonglongya, 1972, both endemic to India. So far no zoo in India has bred bats successfully. While some births might have occurred opportunistically, no systematic effort has been made to continue the practice or even to observe and record the conditions under which it took place. Only Dhaka Zoo, Bangladesh, has some experience in this regard with a researcher having monitored the breeding biology of some fruit bats in 1997-98, recording length of gestation, lactation, etc.

Table 7. Bats in South Asian zoos

Name of the Zoo	M	F	U	T
Pteropus giganteus				
Kamala Nehru Zoological Park, Ahmedabad	0	0	3	3
Nehru Zoological Park, Hyderabad	12	7	0	19
Sanjay Gandhi Biological Park, Patna	0	0	5	5
Total	12	7	8	27
Rousettes leschenaultii				
Dhaka Zoo	2	3	0	5

Forty species of bats were recommended for captivite breeding for the sake of creating public awareness or public education. In fact, many South Asian zoos are well vegetated and could easily support bat trees which could form part of the zoo education programme. In many zoos also there is space for creating good exhibits around trees or within semi-structures so that visitors could observe bats sleeping at least, without having to tolerate the terrible smell and congestion of nocturnal houses. The need for public education, for upgrading the image of Chiroptera in South Asia is great. If more "friends of bats" could be created, bats would stand a better chance of survival.

There are successful captive breeding programmes for a few threatened bats in the world, the most notable being the Rodrigues Fruit Bat (*Pteropus rodricensis*), a highly threatened species from the island of Rodrigues in the Indian Ocean. The last remaining population in 1974 numbered only 70 individuals, which were in danger of extinction from deforestation. The (then) Jersey Wildlife Preservation Trust and the Forest Department of the Mauritian government initiated a breeding programme with 18 individuals in 1976. By 1998 a programme of interactive management had brought the numbers of bats on Rodrigues up to about 1000. Several zoos located all over the world participated in a coordinated captive breeding programme for this species.

The Lubee Foundation, a research organisation, in Gainesville, Florida, U.S.A. keeps, studies and breeds Old World fruit bats for conservation management. The Foundation conducts laboratory research on reproduction, genetics, nutrition, etc. in order to help zoos with their conservation programmes. Lubee Foundation also breeds bats to provide to zoos and living museums for starting and maintaining their captive programmes. The Foundation also funds field projects in the range countries of Old World fruit bats.

In South Asia, reproductive research for zoos has not yet developed but bats are used in laboratories for studying their biology and behaviour both for understanding the species better as well as to understand certain behaviours such as echolation, night vision, etc. for the use of mankind. In India a total of 24 CCINSA members reported maintaining captive collections of a variety of species of Chiroptera for several types of research.

Economic value of insectivorous bats

Of the 1000+ species of bats in the world, almost three-fourths are insectivorous. These bats consume many types of insects including common crop pests such as moths, beetles, corn borers, june bugs, cucumber bugs and even mosquitoes. The majority of bats in South Asia feed upon insects, yet we know very little about the beneficial economic impacts they might have on agricultural systems. If studies in other countries are any indication, insectivorous bats in the subcontinent may provide enormous services by reducing crop pests and keeping a check on mosquito populations.

Research on insect consumption by bats has shown that in the case of *Tadarida brasiliensis*, the Mexican free-tailed bat, each bat can consume more than half its weight in insects every night. Colonies of these bats, which often number in the millions, are estimated to consume 10 tonnes per million bats on a nightly basis. This amounts to 6-13 thousand tonnes of insects per summer. Similar estimates for other insectivorous species are known from Borneo where one cave population consumes 7500 kg per night.

Rates of insect consumption are also known from studies on *Myotis lucifugus*, the little brown bat, which can eat up to its own body weight in insects per night. Coupled with a very fast digestion rate (as fast as 20 minutes) and numerous foraging bouts per night, these bats can eat a considerable number of insects. *Myotis* bats are also known to have remnants of mosquitoes in most of their feces, suggesting that mosquitoes play an important role in their diet.

Similar estimates for bat species in South Asia are difficult because we have very little knowledge about the types of insects consumed or the rates of consumption. However, given the diversity of insectivorous species across the subcontinent, and the importance of agriculture to the economy, the study of insectivorous bats and their feeding habits should be considered a major priority.

Moreover, it has been observed by Sinha (1986; 1994) that one species, *Megaderma lyra*, consumes the flesh of rats and mice found in farmers' godowns, crops, fields and houses. Rats and mice destroy different types of grains, which are stored in bags in the house as well as crops in the field. The size of its colony varies from 25 to 340 individuals. Farmers in the state of Bihar call the bat as the "goddess Laxmi", goddess of wealth, and protect it colonies. According to Sinha, this species selects mostly small vertebrates like fishes, amphibians, lizards, small mammals and birds and large insects like locusts, grass hoppers and beetles etc. The bat may thus play a more complex role in agricultural economics and ecosystems than previously thought.

Economic value of fruit bats

The economic value of Chiroptera has been well documented for Megachiroptera also, but as in the case of Microchiroptera, no long range, systematic ecological studies have been carried out in South Asia. In brief, Megachiroptera contribute via their ecological significance as seed dispersers and pollinators with a wealth of additional assets, which come along with these activities. Fruit bats play an important role in the regeneration of forests, a known fact noted by Goyal and Sale (1992) of the Wildlife Institute of India who conducted a four-year study of fruit bats around Dehra Dun, India. Goyal and Sale also made a strong recommendation that fruit bats be removed from the Vermin category (Schedule V) of the WL(P)Act, 1972. Although there are a few other studies from this region, they were not sufficiently long-term or appropriately formulated to understand the holistic ecological and economic value of fruit bats.

Studies from other parts of the world can give some indication of the immense value fruit bats contribute to tropical and other forest types. It is a misconception held by many people, even agriculturists and foresters that fruit bats are found primarily in fruit orchards and contribute nothing but a hard time to struggling farmers. In fact there are numerous species of forest bats which feed on fruits or husks which are not agricultural produce but are associated with a variety of economically important trees and their products, e.g. dyes, tannin, medicine, fiber, fuel, lumber, etc. which depend on fruit bats for their propagation.

Fleming (1997) studying fruit bats in Costa Rica cites Seba's Short-tailed Fruit Bat, to illustrate the impact of one species of small, common bat on the dynamics of a tropical forest. One bat may eat up to 60,000 seeds of fruits in a night, averaging in the tens of thousands. If each bat consumed an average of only 1000 seeds, one bat colony would disperse 146 million seeds a year. If only one tenth of these germinated, the resulting 146,000 seedlings from one bat colony can be fully appreciated when compared to the total cost of such numbers of plantings by human beings.

Fleming also comments on the importance of frugivorous bats in regeneration of forests in disturbed habitats: "bat-dispersed plants are among the first and most abundant plants to invade natural and man-made clearings…quick to grow and mature, these plants attract hungry bats which also may bring later successional plant species into the clearing…". Shahroukh Mistry, one of the few Chiroptera specialists to conduct ecological studies of forest bats in India, points out the difference in India where the tropical forests are dry and deciduous and fruit bats more often disperse old growth and canopy species. Each behaviour has its own value but must be known and understood in order to be used for best management of forests.

Thomas (1991) studying fruit bat interactions with trees and shrubs in forest-savannah in West Africa noted that in the tropics seed-eating insect populations under trees and shrubs are so numerous that few fallen seeds germinate. The reproductive strategy evolved by 80-95% trees and shrubs in tropical forests to combat this problem is to hide their seeds in edible fruits which are carried away by frugivouous mammals and birds, of which many are bats. Using a series of simple but very clever experiments over years, Thomas could conclude that i) 75% of ripe fruits on an important tree species were removed by bats, ii) that bats accounted for 95% of seed-bearing feces at any of his research sites, iii) that bats (as compared to birds) moved more ingested seeds away from sites where insect seed predation is typically high, iv) that certain bats which consume from 1-2 times their body weight per night stuff their mouths with fruit and after digesting easy matter spit out a bolus which contains some seeds. Thomas evaluated the efficacy of the seeds eaten by bats and found that fecal seeds and bolus seeds germinated with far greater efficiency than seeds germinated from ripe fruits. Finally, Thomas was able to demonstrate that in terms of insect predation, such as from ants, seeds containing remnants of fruit (such as you would get from fallen seeds) were located and consumed first by ants as compared with fecal seeds. In a day ants removed 92% of seeds associated with fruit and only 72% of fecal seeds, suggesting that more fecal seeds might survive to germinate and produce the next generation of plants.

Estrada and Coates-Estrada (1993) studying bats in Mexico commented on the resilience of neo-tropical bats in adapting to the clearing of rainforests and the fragmentation and isolation of habitats. Their surveys revealed that a considerable species bank of bats survived this destruction with 80% of species found in historical surveys still surviving, and helping to restore the habitat. They also discovered that small fragments of forest held as rich a diversity of species as large fragments. This is not to say that we are safe from the effects of forest degradation or from extinctions of bat species, but that such resilience is an additional value of bats as seed dispersers. Clearing of rainforests is not going to stop so easily so until a way to stop it is found, such value in a species is noteworthy.

It was also noted by Estrada that agricultural lands in between forest patches act as a sort of way station to bats, providing perches, food, and shelter. It was suggested that in a disturbed landscape the bats use what fragmented forest areas are left along with the human created islands of vegetation as "stepping stones." While

such scenarios may not be ideal, it may be useful for forest management in today's world where human beings are winning in so many temporary and potentially fatal ways.

These few studies have been cited only to illustrate the power of well-planned, systematic ecological studies in determining the value of bats. The fact that few such studies have been carried out in South Asia may be indicative of the fact that protective legislation is almost non-existant, while negative Acts defining bats as vermin are very clear and also seemingly difficult to change. Since the agricultural lobby presumably provides much of the clout behind the presence of bats (as well as rats and mice) on Schedule V, Goyal and Sale, (1992) spent much of their study on damage done by fruit bats to fruit trees and the lack of efficacy of any method in protecting farm crops while also protecting fruit bats. Their conclusion "there is no cheap or simple answer to the problem of fruit bat damage to crops" provides its own solution. If there is no viable way to stop crop damage by fruit bats, then the alternative is to prove categorically that fruit bats contribution to the greater ecological and economic good outweighs the individual and collective damage done to trees of fruit growers. Convincing farmers, whose perspective is understandably short term, of the long-range value of fruit bats may be impractical in time to save species, but the government which creates legislation should not take such a view.

It should be noted that the absence of studies of fruit bats includes those which determine the cause of decline in fruit bat populations to ascertain whether extermination by farmers actually has an appreciable effect when compared to the widespread destruction of habitat and the total absence of forest management practices which focus on bats. Fujita (1988) who studied the economic importance of bats in South East Asia noted the difficulty of assessing the impact of commerical hunting of bats due to the lack of historical data on bat populations. The same holds true for any hunting and in South Asia as well as South East Asia. Fujita and others have noted that very large numbers of bats are necessary for reproduction and propagation of some rain forest plants. Mistry (1997) found dramatic declines in half the studied roosts in one of his recent surveys on Indian Flying Foxes. In this regard he comments that flying fox colonies, which contained thousands of bats historically now average 500 or fewer.

Legislation

Bats are protected in many parts of the world due to their demonstrated ecological value. Ironically, temperate countries of the western world (Europe, U.K., and USA) are far more organized in this aspect than the tropics, where the diversity of Chiroptera is enormous. In the tropics, Australia, Mexico and some states in Malaysia have strong protective legislation for bats while most other tropical countries and continents have no or actually negative legislation. Mexico's legislation includes full protection of caves partly because of their role as bat habitats (Hutson, *in litt*.).

Many countries are currently updating wildlife legislation as a result of the Rio Convention. In this regard, it is not really sensible to sign the Convention on Biological Diversity and continue to treat pollinating and seed dispersing animals as "noxious". CITES regulations regarding *Pteropus* and *Acerodon* also have influenced some states to introduce protective legislation for bats (Hutson, *in litt*).

In South East Asia the Malaysia Parliament in Borneo has protected all bats under a Wild Life Protection Ordinance (1998), which requires a license for domestic possession of bats or any part or derivative. A more recent Malaysian law requires a license for the sale and use of all mist nets with severe penalties for their sale and use (Gumal & Racey, 1999). In fact, peninsular Malaysia has included fruit bats in legislation for control of hunting since 1972 and there is similar legislation for some other states in Malaysia. Other South East Asian states legislations are not so specific.

Protective legislation for Chiroptera is a vexed subject in the region of South Asia, particularly in India where fruit bats are caught and eaten as food by some local people, and used for medicines to cure headache and female ailments by others. They can be trapped for zoos or laboratory work in any numbers with impunity.

Fruit bats are killed in great numbers from time to time due to what is considered their nuisance value to farmers when they damage orchards. Participants in the C.A.M.P. workshop recorded 11 species of Microchiroptera and 8 species of Megachiroptera that were hunted for food or medicinal use in India, Nepal, Sri Lanka and Myanmar (Table 5).

No South Asian country protects bats in principle. Sri Lankan legislation gives full protection to one subspecies, *Rousettus leschenaulti seminudus*. Other countries, such as Pakistan go to the other extreme of exempting bats from wildlife legislation. Bats are exempted from the regulation of international trade in Pakistan and the Punjab excludes *Pteropus giganteus* from protection (Mickleburgh *et al.,* 1992).

In India fruit bats are listed as a group on Schedule V of the Indian Wildlife (Protection) Act, 1972 which is the only Schedule that carries no penalty or restriction at all for the killing or capture of bats, crows, mice, and rats. At one time wild boar and jackal were also listed on Schedule V but have since been de-listed.

Several appeals to the government have been made over the years to remove fruit bats from Schedule V considering their ecological utility, including that of Goyal and Sale (1992) mentioned earlier. These recommendations have not been taken up, but this year for the first time the Ministry for Environment amended the Wildlife (Protection) Act to include two threatened bats, one of them a fruit bat, on Schedule I, providing a high level of protection. This will, perhaps, create a precedent for delisting of fruit bats from Schedule V and upgrading to a Schedule that will provide some protection. Without more hard information about the status and value of fruit bats and thorough documentation of their ecological significance, it has been impossible to persuade the government to do so.

Insectivorous bats are not listed in any schedule and can be similarly persecuted with impunity if they prove to be a nuisance to human beings. They settle in temples, in the eaves of houses and in deserted structures where they are driven out by various means without regard for their value in nature. As insectivorous bats are not listed anywhere in the Wildlife (Protection) Act, 1972, the only circumstance under which anyone can be charged and prosecuted for harming them is within a Protected Area, where every living creature comes under the protection of the Chief Wildlife Warden of the state.

In any case, legislation cannot be implemented if officials whose duty is to uphold the law are not aware of its implications. Many foresters not only do not know that bats are so essential to healthy ecosystems, they are unaware even of the number and variety of species. Forest officers attending a biodiversity conservation course in Coimbatore, India were shocked to hear that a workshop would be conducted for 130 species of bats as they were under the impression that there were only one or two “kinds” of bats.

Special issue working groups

A part of the C.A.M.P. workshop process is to highlight special issues, which come up during the workshop for further discussion in special issue working groups. In the South Asian Chiroptera C.A.M.P., five Special Issue Working Groups were suggested, e.g. 1. Conservation priorities and field surveys; 2. Legislation and policy; 3. Taxonomy; 4. Temple bats; and 5. Education and public awareness. After discussion, the working groups made recommendations which were reported aloud in a plenary session of all participants who made further contributions. The full text of these recommendations and personal commitments for action is included in Appendix V and a summary given below.

Field surveys, monitoring and conservation priorities were discussed by working group members J.C. Daniel, Manoj Muni, A.C. Girish, A. Thabah, P. Padmanabhan and A.R. Binu Priya. The working group recommended surveys in unknown or unsurveyed localities, surveys of all the 8 Data Deficient species and resurveys in some areas where bats seemed to have disappeared. Proper scientific field techniques for field studies including the science of population dynamics should be given more importance with conservation as the

first priority of the studies. Monitoring was recommended for many species in the Taxon Data Sheets and the working group stressed the need to include bats in association with routine wildlife monitoring as well as Environmental Impact Assessment (including effect of pesticides). In this regard, training is essential for the identification of bat species so that monitoring is effective. In addition, priority species of Chiroptera should be undertaken so that their population trends can be ascertained. The study and documentation of pollination and seed dispersal by Chiroptera in different ecosystems would help improve the image of bats. Bat workers should utilize the CCINSA and CSG South Asia Newsletter to report current studies to avoid duplication of effort. CCINSA and CSG should encourage survey and monitoring projects and help find sources of funding.

Legislation and policy issues were taken up by working group members A.M. Hutson, Azad Ali, N. Gopukumar, Singaravelan, P. Thiruchenthil Nathan, K. Seedikkoya, Augustine Noble, R. Rajashekar, Hanneke de Boer and B.A. Daniel. A priority recommendation is the removal of Megachiroptera or fruit bats from Schedule V (Vermin) of the Indian Wildlife (Protection) Act, 1972 with legislation to extend to other species of Chiroptera. It should include prevention of disturbance, selling, bartering bats and parts of bats as well as killing, etc. Key roosting sites and important habitats of bats, particularly of threatened and endemic species should be identified and protected, and this should be built into future government plans, strategies and similar policies of all South Asian countries. Migratory bat species should be identified and the development of international agreement for their conservation through the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) should be investigated.

Bat taxonomy was discussed by working group members: Y.P. Sinha, M.S. Pradhan, C. Srinivasulu, Dr. Mrs. Korad, K.S. Sreepada, Wipula Yapa, K. Padma Priya, Sanjay Molur, Sally Walker, Paul Bates who suggested the following: Geographic limitation should be taken into account in relation to taxonomic issues. Taxonomic institutions throughout the region may be identified and addressed for developing communication and cooperation for the benefit of working chiroptera biologists requiring taxonomic assistance. A taxonomic key for easy identification should be developed for Bats of South Asia; Bates' matrix can be used to develop field identification guide. Taxonomically important bats and evaluated species should be deposited in regional and national-natural History Museums. Capacity Building should be undertaken to fill the growing gap in taxonomists: taxonomic and systematic research for Chiroptera should be encouraged and taxonomy training conducted. Subspecies should be recognized as a taxonomic unit where subspecies become appropriate taxonomic unit where there is a distinct island (insular) race and a disjunct geographically and taxonomically well-defined population.

Temples, tourism and bats issues were analysed by working group members G. Marimuthu, Tej Kumar Shrestha, E.A.A. Shukkur, A. Madhavan, Kulam Nathar, Juliet Vanitharani, E. Yuvana Satya Priya, Dilip Joshi. Bats in temples are often subjected to misunderstanding and persecution. Some simple but effective methods to promote the need for protecting bats were suggested such as slides in movie theatres, permanent poster boards in temples, discussions with temple authorities, involving forest officials, media coverage.

Ajantha-Ellora caves, tourism and bats. Dr. Dilip Joshi. Ajantha caves are sealed off to protect old paintings from Bats, which leads to loss of habitat. The Cave Authority should provide alternate habitat to bats. The constant influx of millions of tourists in Ellora caves leads to disturbance to Bats; this could be mitigates to an extent by creating awareness among visitors. The recently constructed Baravi Dam in which 16 villages were submerged under water led to many bat colonies being drowned since water levels were raised during day hours. In such instances the colonies should be evicted before raising the water level and provide alternate habitat to bats.

Education. Kranti Yardi (facilitator), Hanneke de Boer (recorder), Kalu Ram Senacha, Sally Walker, A.R. Binu Priya discussed a strategy for educating the public about bats. Bats have a bad public image with most of the people thinking that bats are harmful nuisance, instead of a force for good. The only way to change public

opinion is to tackle the negative attitudes with a variety of educational activities, items and projects aimed at audiences of different ages and in different stratas of society.

Personal commitments

Another activity undertaken at the Zoo Outreach Organisation/CBSG, South Asia C.A.M.P.s is to give participants an opportunity to make personal commitments to action after listening to recommendations of the special issue working groups. In the Chiroptera C.A.M.P. personal commitments included many commitments to conduct educational and awareness activities for all levels of people, to start Bat Clubs. A variety of research commitments included the study of *C. sphinx*, of pollination by bats, bat diversity in lunar crater, of Myanmar bats particularly in caves, sexual maturity of *Rousettus leschenaultii*; pollination and seed dispersal by bats in a forest ecosystem; exploration of caves, caverns in Nepal and study the *Rhinolophus*; coordinate the import of bat detectors; develop a model for a bat box appropriate for this environment. Other commitments included to work against illegal trade of bats and educate youngsters; help with expansion of CCINSA network action; adopt orphaned bats; do mapping of bats in South Asia; insure the removal bats from vermin status; and make available the BNHS collections for study

Conclusion

In the Conservation Assessment and Management Plan (C.A.M.P.) Workshop for South Asian Chiroptera held in Madurai, January 2002, 43 bat biologists from the species range assessed a total of 123 species of bats according to the 2001 IUCN Red List Criteria and made conservation research and management recommendations on the basis of the assessments. The status of the total is Critically Endangered - 2; Endangered - 9; Vulnerable - 20; Near Threatened - 32; Least Concern - 49; Data Deficient – 8; and Not Evaluated - 3

Although the South Asian Chiroptera C.A.M.P. (2002) was an improvement over the previous assessment in 1997, which in itself was vastly superior to the total inattention to status of bats which preceded it, the current workshop has brought into full focus how much still is unknown about the second largest mammal group in the world and in South Asia as well as one of the most ecologically and economically valuable.

Although most of the bats could be assessed with far fewer Data Deficient species, the information used to derive the categories was dependent to a greater extent on inference and indirect sources.

By and large the field biologists and taxonomists of South Asia have yet to consider the overall threats impacting the population dynamics of bats, as evidenced by the example of *Pteropus giganteus* and other widespread species. It was evident that a widespread species is considered "safe" irrespective of various threats identified, especially loss of roost trees, hunting, pesticide use and change in habitat quality.

It is also clear from the workshop that ecological studies need special focus both for better status assessments and for understanding the ecological and economic role of bats. It is also clear that that there is a crying need for more active, full-time field biologists working on bats in South Asia to deal with the 123 species of this large, neglected and complex group of mammals.

The fate of man's quality of life depends to a great extent on his capacity to reverse some current trends in science, management and legislation, which are based on subjective impressions and unpractical policies.

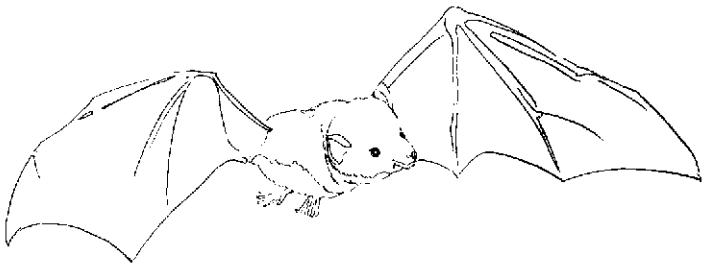
In science, systematic reviews of literature reveal that even scientists focus far more attention on species which are large in size and whose importance to ecosystems may be more symbolic than actual. Amori *et al.* (2000) showed that published articles on highly speciose but small-bodied groups such as bats and rodents were dramatically less numerous than those on large mammals, and very much less in tropical countries where species richness is far greater. Barnett (2002), quoted a recent review by Alan Clarke of University of

Washington of 32,000 articles on conservation research revealed a tremendous bias towards more attractive animals with the most speciose group -- invertebrates -- at the low end of the list. Further in the 1990's the U.S. state and federal endangered species agencies spent far more on threatened birds and mammals than invertebrates. Clark goes on to say that there has been no improvement in this regard for the last 15 years, although scientists are aware of the discrepancy.

In management, species such as small mammals, invertebrates, amphibians, etc. do not get the concentrated attention they need even though landscape approaches might preserve larger swatches of habitat. So much habitat are already lost that species and niches or islands of forest require intensive and intelligent maintenance to preserve the valuable and unique biodiversity they represent.

Legislation is still based on false economic principles and political salvation without sufficient attention to genuine scientific information from active field biologists.

The lack of scientific objectivity in general wildlife practices in the world is what makes the IUCN Red List Criteria so valuable. Focusing on biological values, using the most current information from active field workers from the range of the species, recommendations based on hard data, and objective application of the IUCN Red List Criteria to this information – provides a compass by which the direction of a viable conservation action plan can be understood and put into practice.



Taxon Data Sheets

Areilulus circumdatus (Temminck, 1840)

LEAST CONCERN in South Asia

Synonyms: *Pipistrellus (Arielulus) circumdatus* (Temminck, 1840)
Pipistrellus circumdatus (Temminck, 1840)
Vespertilio circumdatus Temminck, 1840

Common names: Black-gilded Pipistrelle

Family: Vespertilionidae

Niche: At least 2031m.

Distribution
Global: China, India, Myanmar, Nepal

South Asia:
India: Assam, Meghalaya, Sikkim
Nepal

Extent of Occurrence: > 20,000 sq km

Area of Occupancy: > 2,000 sq km

Locations/subpopulations: 4 / 2. Fragmented.

Habitat status: Stable

Data source: Literature, field study; inferred, observed

Threats
Threats to the taxon: Not known

Population
Generation time: 4-6 years

Mature individuals: Not known

Population trend: Not known

Red List 2001 Status derived in the workshop

Ver. 3.1: **LEAST CONCERN**

National Status:
India: Least Concern
Nepal: Near Threatened

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, ecology.

Management: Habitat management, monitoring.

Captive breeding: Techniques not known at all.

Comments
The species *Pipistrellus* (*Arielulus) circumdatus* has been upgraded to species *Arielulus circumdatus.* Only known from four locations. No information is available on population size or threats or habitat. Recent information for one site suggests that the habitat is not threatened.

Sources
Bates & Harrison, 1997; Hutson *et al*., 2001; Temminck, 1835, 1837, 1840, 1841.

Compilers
A.C. Girish, J.K. Immanuel, S. Kandula, V.S. Korad, G. Nair, P.T. Nathan, A. Nobel, J. Koilraj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
A. Ali, Gauhati University, Jalukbari, Assam, India. 1999, bat survey
S. Mistry, Sikkim, India. 1992. Survey

Distribution in South Asia from literature and recent field studies

Distribution in South Asia	Lat°	Long°	Notes/Sources
INDIA			
Assam			
Guwahati University	26° 10	91° 45	Surrounding area was man-made teak forest No threats Azad Ali, 1999

Distribution in South Asia	Lat°	Long°	Notes/Sources
Meghalaya			
Shillong	25° 34	91° 53	Bates & Harrison, 1997
Sikkim			
Hee Gyathang	-	-	Montane forest S. Mistry, 1992
NEPAL			
Num	27° 33	87° 17	Bates & Harrison, 1997

Asellia tridens (Geoffroy, E., 1813)

NOT EVALUATED

Synonyms: *Rhinolophus tridens* Geoffroy, E. 1813
Phyllorhina tridens var. *murraiana* Anderson, 1881

Common names: Trident Bat

Habit: Gregarious and colonial

Habitat: Arid areas

Niche: Crevices or in the roofs of cliffs

Distribution
Global: West Africa, Arabia and Iran to Pakistan

South Asia:
Pakistan

Afghanistan

Extent of Occurrence: Not known

Area of Occupancy: Not known

Locations/subpopulations: Not known

Habitat status: Not known

Threats
Threats to the taxon: Not known

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Data source:

Red List 2001 Status derived in the workshop

Ver. 3.1: NOT EVALUATED

Other status
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research:

Management:

Comments

Sources
Anderson, 1881; Bates & Harrison, 1997; Geoffroy, E. 1813

Compilers

Reviewers

Recent Field Studies
None

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Dilaram	32º 11	63º 27	Bates & Harrison, 1997
Kandahar	31º 36	65º 47	Bates & Harrison, 1997
Seistan	Not located		Bates & Harrison, 1997
PAKISTAN			
Baluchistan			
Panjgur	26º 56	64º 06	Bates & Harrison, 1997
Nushki	29º 33	66º 02	Bates & Harrison, 1997
Sind			
Karachi	24º 51	67º 02	Type locality of *murriana* Bates & Harrison, 1997
Thatta	24º 45	67º 56	Bates & Harrison, 1997

Barbastella leucomelas (Cretzschmar, 1830/31) — NEAR THREATENED in South Asia

Synonyms: *Vespertilio leucomelas* Cretzschmar, 1830/31
Barbastella blandfordi Bianchi, 1917
Plecotus darjelingensis Hodgson, in Horsfield, 1855

Common name: Eastern Barbastelle

Family: Vespertilionidae

Habit: Solitary, nocturnal

Habitat: Himalayan moist temperate forest and dry coniferous forest.

Niche: Caves, tunnels, crevices, tree hollows, bark. 1800m.

Distribution
Global: Afghanistan, India, Iran, Nepal, Pakistan

South Asia:
India: Himachal Pradesh, Jammu & Kashmir, Meghalaya, Sikkim, Uttar Pradesh, West Bengal
Nepal
Pakistan: NWFP, Northern Areas

Afghanistan

Extent of Occurrence: > 20,000 sq km

Area of Occupancy: > 2,000 sq km

Locations/subpopulations: Approximately 20 / not known. Not fragmented.

Habitat status: Decrease in area < 10% in the last 5 years due to deforestation. Decrease in quality due to deforestation. Habitat status is based on information from Nepal. Since the threat is similar in other parts of the species distribution, habitat status may be the same.

Data source: Field study, literature; inferred

Threats
Threats to the taxon: Habitat loss, habitat alteration in the past, present and predicted in future. Threats influencing the status of the taxa are not understood, not reversible and have not ceased to be a threat.

Trade: Not in trade

Data source: Field study; inferred.

Population
Generation time: Not known

Mature individuals: Not known

Population trends: Not known

Recent Field Studies
T.K. Shrestha in Western Nepal, 1997-1999, Mammals of Nepal.
S. Mistry in Sikkim, 1992, Survey.

Red List 2001 Status derived in the workshop

Ver. 3.1: **NEAR THREATENED**

Although widely distributed, habitat change and destruction could have an impact on the populations in the future. The species is not of least concern in the region.

National Status:
India: Near Threatened
Nepal: Near Threatened
Pakistan: Data Deficient

Uncertainty
Assessed based on evidence, inference, precaution and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
Nepal: Annapurna Conservation Area, Makalu Barun National Park, Rara National Park

Recommendations
Research: Survey

Management: Monitoring

Captive breeding: Propagation techniques not known at all.

Comments
Hibernates in winter. Shrestha has observed 15 individuals near Mugu village in Rara National Park, Nepal. Locations or subpopulations may not be fragmented if found in Central and Western Nepal.

Sources
Bates & Harrison, 1997; Cretzschmar, 1826-31; Hutson *et al*., 2001; Shrestha, 1997; Wilson & Reeder, 1993

Compilers
S. Mistry, M. Muni, K.R. Senacha, T.K. Shrestha, K.S. Sreepada, C. Srinivasulu

Reviewers
Rest of the participants

Distribution in South Asia and Afghanistan based on literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Kalat-us-Seraj	34º 40	70º 18	Bates & Harrison, 1997
Kamdesh	35º 25	71º 26	Bates & Harrison, 1997
Wazi Bagh	-	-	Bates & Harrison, 1997
INDIA			
Himachal Pradesh			
Simla	31º 07	77º 09	Bates & Harrison, 1997
Jammu & Kashmir			
Akhnoor	32º 54	74º 44	Bates & Harrison, 1997
Bhaderwah	32º 56	75º 47	Bates & Harrison, 1997
Poonch	33º 43	74º 54	Bates & Harrison, 1997
Yangi Dawar	35º 57	79º 24	Bates & Harrison, 1997
Meghalaya			
Khasi Hills	25º 34	91º 53	Bates & Harrison, 1997
Shangpung	25º 30	92º 02	Bates & Harrison, 1997
Sikkim			
Hee Gyathang	-	-	Montane forest S. Mistry, 1992
Lachung	27º 46	88º 36	Bates & Harrison, 1997
Mangpu	-	-	Bates & Harrison, 1997
Uttar Pradesh			
Kapkot	29º 55	79º 54	Bates & Harrison, 1997
Uttaranchal			
Mussoorie	30º 26	78º 04	Bates & Harrison, 1997
West Bengal			
Darjeeling	27º 02	88º 20	type loc. of *B. leucomelas* darjelingensis
			Bates & Harrison, 1997
Hasimara	26º 52	89º 48	Bates & Harrison, 1997
Karseong	27º 04	88º 25	BNHS collection
Nimbong	27º 04	88º 25	BNHS collection Bates & Harrison, 1997
Tong Song	27º 04	88º 24	Bates & Harrison, 1997
NEPAL			
Annapurna conservation area	-	-	Hilly temperate forest Deforestation Shrestha, 1999
Makalu Barun National Park	-	-	Hilly temperate forest Deforestation Shrestha, 1999
Rara National Park	29º 34	82º 05	Hilly temperate forest Deforestation Shrestha, 1999
Nepal, map 60, 5 localities	-	-	Corbet & Hill, 1992
PAKISTAN			
Northern Areas			
Gilgit	35º 54	74º 20	Bates & Harrison, 1997
Naltar	36º 07	74º 14	Bates & Harrison, 1997
NWFP			
Dunga Gali	34º 03	77º 22	Bates & Harrison, 1997

Coelops frithii Blyth, 1848

NEAR THREATENED in South Asia

Common names: Bengali: *Lejhin Patanak Chamchika*; English: Tail-less Leaf-nosed Bat

Family: Hipposideridae

Habit: Colonial species with up to 16 individuals.

Habitat: Forests

Niche: Hollow trees or caves. Up to 1370m.

Distribution
Global: Bangladesh, China, India, Indonesia, Malaysia, Myanmar, Taiwan and Vietnam

South Asia:
Bangladesh
India: Meghalaya, West Bengal

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 4 / 4. Fragmented.

Habitat status: Decrease in area < 20% in 10 years due to deforestation. Decrease in quality due to deforestation.

Data source: Literature, museum; inferred.

Threats
Threats to the taxon: Deforestation. Threat influencing the status of the taxa is not well understood, not reversible and has not ceased.

Data source: Field study; inferred.

Population
Generation time: Not known

Mature individuals: Not known

Population trends: Not known

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Although widely distributed, habitat change and destruction could have an impact on the populations in the future. It is Near Threatened on account of only four locations, no recent collections and loss of forest habitat.

National Status
Bangladesh: Near Threatened
India: Near Threatened

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, limiting factor research, PHVA pending

Management: Monitoring public awareness

Captive breeding: Techniques not known at all.

Comments
There is decrease in forest due to human habitation expansion (Y.P. Sinha).

Sources
Blyth, 1848; Bates & Harrison, 1997; Hutson *et al*., 2001; Khan, 2001; Wilson & Reeder, 1993

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, E.A.A. Shukkur, R. Rajashekar, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia and Myanmar based on literature and field study

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
Sunderbans	21º 50	89º 00	Bates & Harrison, 1997 Khan, 2001
INDIA			
Meghalaya			
Cherrapunji	25º 16	91º 42	Bates & Harrison, 1997
West Bengal			
Darjeeling	27º 02	88º 20	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Htingnan	26º 36	97º 53	Bates & Harrison, 1997

Cynopterus brachyotis (Muller, 1838) — LEAST CONCERN in South Asia

Synonyms: *Pachysoma brachyotis* Müller, 1838
Cynopterus marginatus var. *ceylonicus* Gray, 1871

Common names: Lesser Dog-faced Fruit Bat

Family: Pteropodidae

Habit: Arboreal, solitary and in small colonies.

Habitat: Urban areas, forests.

Niche: Palm-foliage. Up to 2000m.

Distribution
Global: Sri Lanka, India, Malaysia, Phillippines, Borneo, Sumatra, Sulawesi and Talaud Islands and adjacent small islands

South Asia:
India: Andhra Pradesh, Bihar, Goa, Karnataka, Maharashtra, Nagaland, Tamil Nadu
Sri Lanka: Central Province, Uva Province

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many. May not be fragmented.

Habitat status: Decrease in area and quality of habitat due to felling of trees.

Data source: General field study; observed.

Threats
Threats to the taxon: Habitat loss, timber, deforestation. Threats well understood, reversible but have not ceased.

Data source: Field study; inferred.

Population
Generation time: 4-6 years.

Mature individuals: > 10,000. Mature individuals stable.

Population trend: Not known

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status:
India: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Old World Fruit Bats Action Plan (Global): Not threatened
CITES: Not listed

Known presence in Protected Areas:
India: Nagarahole National Park, Kalakkad-Mundanthurai Tiger Reserve,
Sri Lanka: Hakgalla National Park

Recommendations
Research: Survey

Management: Monitoring

Comments
Information on threats from India only. There is no threat in Sri Lanka. Breeding seasonality and other behavioural and activity patterns are not fully understood. Though it is found in the plains of South East Asian countries, it is found only in hilly regions of the Indian subcontinent (P.T. Nathan).

Sources
Bates & Harrison, 1997; Mickleburgh *et al*., 1992; Müller, 1838; Wilson & Reeder, 1993

Compilers
D.P.S. Doss, A.C. Girish, N. Gopukumar, J.K. Immanuel, D.S. Joshi, S. Kandula, A.J. Koilraj, V.S. Korad, G. Marimuthu, P.T. Nathan, K. Nathar, A. Noble, P. Padmanabhan, R. Rajashekar, K. Seedikkoya, E.A. A. Shukkur, N. Singaravelan, S.P.R. Solomon, D.P. Swamidoss, W. Yapa, K. D. Yardi

Reviewers
Rest of the participants

Recent Field Studies
J. Balasingh, D.P. Swamidoss, A. Prakash and K. Immanuel in Agasthyamalai, Coutralam Hills, Kannikatti, Kakachi, 1997-2000, habitat specification, foraging behaviour and population estimation.
Y.P. Sinha in Nagaland, June 1990.

Distribution in South Asia from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Andhra Pradesh			
?Balapalli	-	-	Bates & Harrison, 1997
Goa			
Molem	15º 20	74º 15	Sea level, forests. Information refers to *C. b ceylonensis*. Extension of range of distribution in Western Ghats has been published in Mammalia. M.S. Pradhan, Survey, 1991, 1997 and specimen collection. Specimen from Goa (Agrawal, 1973); Kerala (Das, 1986a); Bihar; West Bengal; Assam; Tamil Nadu; Andamans (Sinha, 1986a) provisionally assigned to this species appear to be doubtfully valid on the basis of the measurments given (Bates & Harrison, 1997)
Paiguin	-	-	Forest in a Wildlife Sanctuary. M.S. Pradhan, Survey, 1991, 1997 and specimen collection. Information refers to *C. b ceylonensis*. Extension of range of distribution in Western Ghats has been published in Mammalia.
Karnataka			
Nagarahole	11º 58	76º 01	Information refers to *C. b ceylonensis*. Extension of range of distribution in Western Ghats has been published in Mammalia. M.S. Pradhan, Survey, 1991, 1997 and specimen collection.
Jog Falls	14º 12	74º 41	Bates & Harrison, 1997
Sirsi	14º 40	74º 51	Bates & Harrison, 1997
?Virajpet	-	-	Bates & Harrison, 1997
Maharashtra			
Khandala	18º 45	73º 25	Information refers to *C. b ceylonensis*. Extension of range of distribution in Western Ghats has been published in Mammalia. M.S. Pradhan, 1991-1997
Mahabaleshwar	17º 56	73º 42	Information refers to *C. b ceylonensis*. Extension of range of distribution in Western Ghats has been published in Mammalia. M.S. Pradhan, Survey, 1991, 1997 and specimen collection.
Nagaland			
Mon Dishilt	-	-	Sinha, 1990
Tamil Nadu			
Agasthyamalai	-	-	P.T. Nathan, J. K. Immanuel and D.P. Swami Doss, 1997-2000
Centre Camp, near Chinnamanur	09º 50	77º 26	Bates & Harrison, 1997
Coutrallam Hills	-	-	Human interference, lopping, habitat loss, fragmentation P.T. Nathan, J.K. Immanuel and D.P. Swami Doss, 1997-2000
Kakachi	-	-	Human interference, lopping, habitat loss, fragmentation. P.T. Nathan, J.K. Immanuel and D.P. Swami Doss, 1997-2000 Bates & Harrison, 1997
Kalakkad-Mundanthurai Tiger Reserve	-	-	P.T. Nathan, J. K. Immanuel and D.P. Swami Doss, 1997-2000
Kanikatti	-	-	Human interference, lopping, habitat loss, fragmentation. P.T. Nathan, J.K. Immanuel and D.P. Swami Doss, 1997-2000 Bates & Harrison, 1997
Madurai	09º 55	78º 07	Bates & Harrison, 1997
SRI LANKA			
Central Province			
Hakgalla	06º 55	80º 48	Bates & Harrison, 1997
Kumbalgamuwa	07º 08	80º 50	Bates & Harrison, 1997
Medamahanuwera	07º 16	80º 48	Bates & Harrison, 1997
Mousakande	07º 32	80º 42	Bates & Harrison, 1997
Pundaluoya	07º 01	80º 43	type locality of *ceylonensis* Bates & Harrison, 1997
Urugala	07º 17	81º 00	Bates & Harrison, 1997
Uva Province			
Dammeria	06º 57	81º 09	Bates & Harrison, 1997
Passara	06º 58	81º 09	Bates & Harrison, 1997

Cynopterus sphinx (Vahl, 1797)

LEAST CONCERN in South Asia

Synonyms: *Vespertilio sphinx* Vahl, 1797
Cynopterus angulatus Miller, 1898
Cynopterus brachysoma Dobson, 1871
Cynopterus marginatus (var. *Pachysoma scherzeri*) Zelebor, 1869
Cynopterus marginatus var. *andamensis* Dobson, 1873
Cynopterus marginatus var. *ellioti* Gray, 1870
Cynopterus sphinx gangeticus Andersen, 1910
Pachysoma brevicaudatum Temminck, 1837
Pteropus marginatus Geoffroy, E. 1810
Pteropus pusillus Geoffroy, E., 1803
Vespertilio fibulatus Vahl, 1797

Common names: Bengali: *Bucha-nak Kola Badur*; English: Short-nosed (Indian) Fruit Bat

Family: Pteropodidae

Habit: Arboreal.

Habitat: Agricultural lands, orchards, forests, buildings.

Niche: Trees. Up to 2000m.

Distribution
Global: Bangladesh, Bhutan, India, Myanmar, Nepal, Pakistan, Sri Lanka

South Asia:
Bangladesh
Bhutan
India: Andaman & Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Goa, Gujarat, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Nagaland, Orissa, Rajasthan, Tamil Nadu, Tripura, Uttaranchal, Uttar Pradesh, West Bengal
Nepal
Pakistan: Sind
Sri Lanka: Central Province, North Central Province, North Western Province, Sabaragamuwa Province, Southern Province, Western Province

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,001 sq km.

Locations/subpopulations: Many. Not fragmented.

Habitat status: Communal species. Highly adaptive species.

Data source: Field studies; observed.

Threats
Threats to the taxon: Habitat loss, development, dams, deforestation, exploitation, hunting, hunting for medicine.

Data source: Field study; inferred.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: There is no decline in population and it is not predicted in the future.

Data source: Field study; inferred.

Red List 2001 Status derived in the workshop

Ver.3.1: LEAST CONCERN

National Status:
Bangladesh: Least Concern
Bhutan: Data Deficient
India: Least Concern
Nepal: Least Concern
Pakistan: Data Deficient
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Old World Fruit Bats Action Plan (Global): Not threatened
CITES: Not listed

Known presence in Protected Areas:
India: Point Calimere Wildlife Sanctuary, Tamil Nadu; Coringa Wildlife Sanctuary, Kawal Wildlife Sanctuary, Nagarjunasagar-Srisailam Tiger Reserve, Andhra Pradesh; Kanha National Park, Madhya Pradesh; Indravati National Park, Chhattisgarh.

Recommendations
Research: Survey

Management: Monitoring

Comments
One of the most abundant bats in South Asia. Recently it has been found that adult male bats roosting alone are also engaged in breeding activities. So it is extremely important that an adequate number of sites for male roosts are supplied near a harem. Commensal species, the abundance of which has probably increased due to man.

Sources
Bates & Harrison, 1997; Harshey & Chandra, 2001; Khan, 2001; Mickleburgh *et al.,* 1992; Vahl, 1797; Wilson & Reeder, 1993

Compilers
A. Ali, P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies

H. Raghuram in Meelakkal, Solavandan Taluk, Oothupatti, Madurai, TN, India, 2000-2001.
V. Elangovan, G. Marimuthu, N. Gopukumar in Madurai, Jan 2000-Sep 2001, Age estimation and feeding behaviour.
D.S. Joshi, *et al.* in Lonar Crater, Buldhana district, Maharashtra, Mar 2000, Field study.
P.T. Nathan in Tirunelveli, 2000, Roosting pattern
J. K. Immanuel, K. Y. S. Priya, H. Raghuram, N. Singaravelan, N. Gopukumar, G. Marimuthu, P.T. Nathan & V. Elangovan in Madurai, 1996-1999, Group composition.
P.S. Doss in Courtallam, 2001, Juvenile dispersion, mating systems.
P.T. Nathan in Tirunelveli, 1996-2000, breeding population age-structure.
B. Srinivasulu & C. Srinivasulu in Hyderabad city, 1997 onwards, monitoring the effects of control netting in grape orchards on target and non target species.
C. Srinivasulu throughout Andhra Pradesh, 1995 onwards, documentation of bat/Chiroptera diversity in Andhra Pradesh.
J. Vanitharani & S. Jayaprabha in Mukkudal near Ambai, Rajendra nagar, Palayamkottai, 2000.
Y.S. Korad & K.D. Yardi in Pune city, 1998-2001, Ecological study and faunistic survey of bats in Pune corporation limits.
M.A. Ali, Srimantapur in Guwahati, 1997, Food and feeding behaviour of *C. sphinx.*
A.K. Chakravarthy & A.C. Girish in Kidu, Chettalli, Karnataka, 1999-2000

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
Dhaka	23º 42	90º 22	Khan, 2001; Bates & Harrison, 1997
Jaintiapur	25º 06	92º 08	Bates & Harrison, 1997
Jalchatra	24º 38	90º 04	Bates & Harrison, 1997
Pabna District	24º 09	89º 04	Bates & Harrison, 1997
Savar Farm	23º 53	90º 17	Bates & Harrison, 1997
Sundarabans			Khan, 2001
Southern, Western, Northern Districts			Khan, 2001
BHUTAN			
Phuntsholing	26º 52	89º 30	named as *C. brachyotis angulatus* in Saha, 1979 Bates & Harrison, 1997
INDIA			
Andaman & Nicobar Islands			
Car Nicobar, Nicobar Islands	9º 12	92º 46	type locality of *scherzeri* Bates & Harrison, 1997
Great Nicobar, Nicobar Islands	07º 00	93º 45	named as *brachyotis scherzeri* in Andersen, 1912 Bates & Harrison, 1997
Mandapahar, Andaman Islands	11º 50	92º 50	named as *brachyotis* in Hill, 1967 Bates & Harrison, 1997
Mondopobae, Andaman Islands	04º 50	92º 20	Bates & Harrison, 1997
Port Blair, Andaman Islands	11º 40	92º 44	Bates & Harrison, 1997
Andhra Pradesh			
Balapalli	-	-	Bates & Harrison, 1997
Bimlipatam	-	-	Bates & Harrison, 1997
Coringa Wildlife Sanctuary	15º17	76º26	Srinivasulu, C.
Cuddapah	14º 30	78º 50	Bates & Harrison, 1997
Hyderabad city			Srinivasulu, C.
Kawal Wildlife Sanctuary	19º12	79º00	Srinivasulu, C.
Koduru	13º 58	79º 14	Bates & Harrison, 1997
Nallamala hills	-	-	Habitat destruction, felling of trees Srinivasulu, C.
Telengana	-	-	Habitat destruction, felling of trees Srinivasulu, C.
Vishakhapatnam	17º 42	83º 24	Bates & Harrison, 1997
Arunachal Pradesh			
Bhalukpung	26º 22	93º 52	Bates & Harrison, 1997
Miao	27º 39	96º 15	Bates & Harrison, 1997
Namdapha	27º 39	96º 30	named as *C. angulatus* in Saha, 1985
			Bates & Harrison, 1997
Assam			
Golaghat	26º 30	93º 57	Bates & Harrison, 1997
Srimantapur area	-	-	Man-made orchards Damaging orchards A. Ali, 1997
Bihar			
Barkagaon	23º 50	85º 23	Bates & Harrison, 1997
Champaran, Koch	27º 06	84º 29	Bates & Harrison, 1997
Darbhanga	26º 10	85º 54	Bates & Harrison, 1997
Gaya	24º 48	85º 00	Bates & Harrison, 1997
Hazaribag	24º 00	85º 23	Bates & Harrison, 1997
Katihar	25º 33	87º 34	Bates & Harrison, 1997
Luia	22º 29	85º 15	Bates & Harrison, 1997
Munger	24º 57	86º 14	Bates & Harrison, 1997
Patna	25º 37	85º 12	Bates & Harrison, 1997
Purnea	25º 47	87º 28	Bates & Harrison, 1997
Rohtas	24º 40	83º 59	Bates & Harrison, 1997
Samastipur	25º 52	85º 47	Bates & Harrison, 1997
Santal Pargana	24º 17	87º 15	Bates & Harrison, 1997
Singar	24º 48	85º 00	Bates & Harrison, 1997
Singhbhum	23º 30	85º 50	Bates & Harrison, 1997
Chhattisgarh			
Bastar	-	-	Harshey & Chandra, 2001
Indravati National Park	-	-	Harshey & Chandra, 2001
Goa			
Margao	15º 15	73º 59	Bates & Harrison, 1997
Valpoi	15º 30	74º 05	Bates & Harrison, 1997
Gujarat			
Anand	22º 34	73º 01	Bates & Harrison, 1997
Danta	24º 13	72º 50	Bates & Harrison, 1997
Silvassa	20º 12	73º 11	Bates & Harrison, 1997
Surat	21º 10	72º 54	Bates & Harrison, 1997
Vedtial	-	-	Bates & Harrison, 1997
Jammu & Kashmir			
Jhajjar Kotli	32º 55	75º 54	Bates & Harrison, 1997
Karnataka			
Bangalore	12º 58	77º 35	Bates & Harrison, 1997
Belgaum	15º 54	74º 36	Bates & Harrison, 1997
Chettalli	12º 00	72º 00	Orchards Human interference for control A.K. Chakravarthy & A.C. Girish.
Dharwar	15º 30	75º 04	type locality of *ellioti*
Hampi	15º 20	76º 25	Bates & Harrison, 1997
Honawar	14º 19	74º 27	possibly = *C. brachyotis* Bates & Harrison, 1997
Kidu	12º 00	72º 00	Orchards Human interference for control A.K. Chakravarthy & A.C. Girish.
Mangalore	12º 54	74º 51	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Mysore	12º 18	76º 37	Bates & Harrison, 1997
Seringapatnam	12º 25	76º 41	Bates & Harrison, 1997
Kerala			
Azhur	-	-	Bates & Harrison, 1997
Cochin	-	-	Bates & Harrison, 1997
Kalli	-	-	Bates & Harrison, 1997
Talipot	-	-	A. Noble, S. Kandula and A. Prakash, 2000
Trivandrum	08º 41	76º 57	Bates & Harrison, 1997
Vulany	-	-	Bates & Harrison, 1997
Madhya Pradesh			
Ambikapur	23º 09	83º 12	Bates & Harrison, 1997
Balaghat	-	-	Harshey & Chandra, 2001
Jabalpur	23º 10	79º 59	Bates & Harrison, 1997 Harshey & Chandra, 2001
Kanha National Park			Harshey & Chandra, 2001
Mandla	21º 30	76º 20	Bates & Harrison, 1997 Harshey & Chandra, 2001
Orcha	25º 21	78º 38	Bates & Harrison, 1997
Shahpura	23º 10	80º 45	Bates & Harrison, 1997
Umaria	-	-	Harshey & Chandra, 2001
Maharashtra			
Bandra	19º 04	72º 58	Bates & Harrison, 1997
Bombay	18º 56	72º 51	Bates & Harrison, 1997
Chanda	19º 58	79º 21	Bates & Harrison, 1997
Lonar Crater forest	-	-	Well lit porches of crowded houses, temples etc. No threats D.S. Joshi.
Nasik	20º 00	73º 52	Bates & Harrison, 1997
Pune	18º 31	73º 51	Fish-tailed Palm, Drooping Ashok trees, old buildings Felling trees, painting and renovation of buildings V.S. Korad & K.D. Yardi, 2001 Bates & Harrison, 1997
Meghalaya			
Baghmara	-	-	Bates & Harrison, 1997
Cherrapunji	25º 16	91º 42	Bates & Harrison, 1997
Daragiri	25º 30	90º 20	Bates & Harrison, 1997
East Khasi hills	25º 20	91º 55	Tree Human predation A. Thabah, 2001
Kherapera	25º 28	90º 13	Bates & Harrison, 1997
Margherita	27º 17	95º 40	Bates & Harrison, 1997
Mawryngkueng	-	-	Bates & Harrison, 1997
Rongrengiri	25º 49	90º 22	Bates & Harrison, 1997
Sibbari	-	-	Bates & Harrison, 1997
Songsak	-	-	Bates & Harrison, 1997
Tura	25º 32	90º 14	Bates & Harrison, 1997
Umkiang	-	-	Bates & Harrison, 1997
Williamnagar	-	-	Bates & Harrison, 1997
Nagaland			
Naga Hills	26º 00	94º 30	Bates & Harrison, 1997
Orissa			
Baleshwar	-	-	Bates & Harrison, 1997
Bolangir	-	-	Bates & Harrison, 1997
Bonaigarh	-	-	Bates & Harrison, 1997
Dhenkanal	20º 40	85º 39	Bates & Harrison, 1997
Ganjam	-	-	Bates & Harrison, 1997
Kalahandi	19º 57	83º 00	Bates & Harrison, 1997
Keonjhar	21º 52	86º 48	Bates & Harrison, 1997
Koraput	18º 48	82º 41	Bates & Harrison, 1997
Mayurbhanj	21º 52	86º 48	Bates & Harrison, 1997
Phulbani	20º 30	84º 18	Bates & Harrison, 1997
Puri	-	-	Bates & Harrison, 1997
Sambalpur	-	-	Bates & Harrison, 1997
Sundargarh	22º 04	84º 08	Bates & Harrison, 1997
Rajasthan			
Banswara and Jhalawar	23º 32	74º 28	Bates & Harrison, 1997
Bundi	25º 28	75º 42	Bates & Harrison, 1997
Tamil Nadu			
Coimbatore	11º 02	76º 59	Bates & Harrison, 1997
Courtallam	-	-	Foliages Hunting for medicinal purpose, deforestation N. Gopukumar, P.T. Nathan, H. Raghuram, E.Y.S. Priya, Singaravelan, G. Marimuthu, Elangovan, 1995-2000
Cumbam valley	-	-	N. Singaravelan
Dharmapuri	12º 11	78º 07	Bates & Harrison, 1997
Kanyakumari	08º 44	72º 42	Plains and hilly area Reduction in availability of roost sites, hunting for food. P.T. Nathan, J.K. Immanuel, N. Gopukumar, D.P. Swami Doss, J. Balasingh, 1995-2001
Karapar, Cotengady	10º 46	76º 42	Bates & Harrison, 1997
Keezhappatti	-	-	Logging, habitat loss
Madurai	09º 55	78º 07	Plains and hilly area Reduction in availability of roost sites, hunting for food P.T. Nathan, J.K. Immanuel, N. Gopukumar, D.P. Swami Doss, J. Balasingh, 1995-2001 Bates & Harrison, 1997
Meelakkal, Solanvandan Taluk	-	-	Palm plantations Cutting palm trees H. Raghuram, E.Y.S. Priya, Singaravelan, G. Marimuthu, Elangovan, 2001
Mukkudal	8º 44	77º 42	Tropical plains, palm plantations J. Vanitharani. 2000 onwards
Oothupatti	-	-	Palm plantations cutting palm trees H. Raghuram, E.Y.S. Priya, Singaravelan, G. Marimuthu, Elangovan, 2001
Point Calimere	15º 00	74º 00	Akash Deep Baruah; Bates & Harrison, 1997
Puddupatti	-	-	Logging, habitat loss
Silukkuvarpatti	-	-	N. Singaravelan
Sri Vaikundam	08º 40	77º 56	N. Gopukumar, P.T. Nathan, H. Raghuram, E.Y.S. Priya, Singaravelan, G. Marimuthu, Elangovan, 1995-2000
Suruli Hills	-	-	N. Singaravelan
Tirunelveli	08º 44	72º 42	Plains and hilly area Reduction in availability of roost sites, hunting for food P.T. Nathan, J.K. Immanuel, Gopukumar N., D.P. Swami Doss, J. Balasingh, 1995-2001 Bates & Harrison, 1997
Tirunelveli	-	-	Foliages Hunting for medicinal purpose, deforestation N. Gopukumar, P.T. Nathan, H. Raghuram, E.Y.S. Priya, Singaravelan, G. Marimuthu, Elangovan, 1995-2000
Tranquebar, Cumbum	11º 04	79º 50	type locality of *sphinx* Bates & Harrison, 1997
Upper Manalaar	09º 50	77º 24	Bates & Harrison, 1997
Vannathiparai	09º 44	77º 19	Bates & Harrison, 1997
Tripura			
Abhoya	23º 18	91º 25	Bates & Harrison, 1997
Agartala	23º 50	91º 23	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Ambassa	23º 55	91º 50	Bates & Harrison, 1997
Ampi	23º 40	91º 38	Bates & Harrison, 1997
Chailingta	24º 02	92º 02	Bates & Harrison, 1997
Charilam	23º 38	91º 18	Bates & Harrison, 1997
Ganganager	23º 45	91º 50	Bates & Harrison, 1997
Garjee	23º 25	91º 27	Bates & Harrison, 1997
Kanchanpur	23º 50	91º 50	Bates & Harrison, 1997
Teliamura	23º 50	91º 35	Bates & Harrison, 1997
Uttar Pradesh			
Almora	-	-	Bates & Harrison, 1997
Banaras	25º 20	83º 00	Bates & Harrison, 1997
Chamoli	-	-	Bates & Harrison, 1997
Dehra Dun	30º 19	78º 03	Bates & Harrison, 1997
Lucknow	26º 50	80º 54	type locality of *gangeticus*
Mirzapur	27º 41	79º 33	Bates & Harrison, 1997
Naini Tal	29º 22	76º 26	Bates & Harrison, 1997
Pauri	30º 08	78º 48	Bates & Harrison, 1997
Philibhit	28º 37	79º 48	Bates & Harrison, 1997
Pithoragarh	29º 35	80º 12	Bates & Harrison, 1997
West Bengal			
Bankura	23º 14	87º 05	Bates & Harrison, 1997
Barddhama	23º 14	87º 05	Bates & Harrison, 1997
Birbhum	23º 14	87º 05	Bates & Harrison, 1997
Kolkata	22º 35	88º 21	Bates & Harrison, 1997
Darjeeling	22º 35	88º 21	Bates & Harrison, 1997
Haora	22º 35	88º 21	Bates & Harrison, 1997
Hugli	22º 52	88º 21	Bates & Harrison, 1997
Jalpaiguri	22º 52	88º 21	Bates & Harrison, 1997
Maldah	-	-	Bates & Harrison, 1997
Medinipur	-	-	Bates & Harrison, 1997
Murshidabad	24º 11	88º 19	Bates & Harrison, 1997
Nadia	24º 11	88º 19	Bates & Harrison, 1997
North 24-Parganas	-	-	Bates & Harrison, 1997
Puruliya	23º 20	86º 24	Bates & Harrison, 1997
South 24-Parganas	22º 22	88º 25	Bates & Harrison, 1997
West Dinajpur	25º 38	88º 44	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Amharst	-	-	Buildings Human disturbance K.M. Swe, 2001
Bagan	-	-	Cave Human disturbance K.M. Swe, 2000
Kin	23º 42	94º 29	Bates & Harrison, 1997
Kindat	23º 42	94º 29	Bates & Harrison, 1997
Mon state	-	-	Limestone cave Human disturbance K.M. Swe, 2001
Mount Popa, Pagan	20º 56	95º 16	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Pyaunggaung	22º 38	97º 22	Bates & Harrison, 1997
Toungoo	23º 42	94º 29	Bates & Harrison, 1997
Yangon	-	-	Buildings Human disturbance K.M. Swe, 2000
NEPAL			
Barabisse	27º 35	85º 35	Bates & Harrison, 1997
Chisapani	28º 38	81º 17	Bates & Harrison, 1997
Salthar	28º 01	84º 37	Bates & Harrison, 1997
Shebu	-	-	Bates & Harrison, 1997
Tumlingter	27º 33	87º 16	Bates & Harrison, 1997
Wana	-	-	Bates & Harrison, 1997
PAKISTAN			
Sind			
Karachi	24º 51	67º 02	Bates & Harrison, 1997
Malir	24º 59	67º 13	Bates & Harrison, 1997
SRI LANKA			
North Central Province			
Anuradhapu	08º 20	80º 25	Bates & Harrison, 1997
Noitchigama	-	-	Bates & Harrison, 1997
Tammannewa	08º 27	80º 37	Bates & Harrison, 1997
North Western Province			
Kala Oya	08º 12	80º 04	Bates & Harrison, 1997
Kurenegala	36º 47	68º 51	Bates & Harrison, 1997
Central Province			
Ambawela	-	-	Bates & Harrison, 1997
Elahera	07º 44	80º 47	Bates & Harrison, 1997
Matale	07º 28	80º 37	Bates & Harrison, 1997
Mousakande	07º 32	80º 42	Bates & Harrison, 1997
Pallama	07º 32	80º 39	Bates & Harrison, 1997
Sigiriya	07º 57	80º 46	Bates & Harrison, 1997
Urugala	07º 17	81º 00	Bates & Harrison, 1997
Western Province			
Bulathsinghala	06º 39	80º 13	Bates & Harrison, 1997
Colombo	06º 55	79º 52	Bates & Harrison, 1997
Dehiwala	06º 52	79º 52	Bates & Harrison, 1997
Matugama	06º 32	80º 05	Bates & Harrison, 1997
Sabaragamuwa Province			
Bogala	06º 44	80º 26	Bates & Harrison, 1997
Pagoda	06º 44	80º 26	Bates & Harrison, 1997
Southern Province			
Hambantota	12º 31	75º 40	Bates & Harrison, 1997
Mapalagama	06º 15	80º 16	Bates & Harrison, 1997

Eonycteris spelaea (Dobson, 1871)

LEAST CONCERN in South Asia

Synonym: *Macroglossus spelaeus* Dobson, 1871

Common names: Dawn (Cave) Fruit Bat

Family: Pteropodidae

Habit: Cave dweller, colonial/social.

Habitat: Moist deciduous, hilly-forested tracts, evergreen forests.

Niche: Cave. Up to 1000m.

Distribution
Global: India, Burma, S. China, Thailand, W. Malaysia, Borneo, Sumatra, Java, Sumba, Indonesia, Philippines

South Asia:
India: Andaman & Nicobar islands, Andhra Pradesh, Assam, Karnataka, Manipur, Meghalaya, Nagaland, Sikkim, Tamil Nadu, Uttaranchal.

Myanmar (Northern): Yangon

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many. Fragmented

Habitat status: Habuitat loss due to deforestation and human interference.

Data source: Field study, observed.

Threats
Threats to the taxon: Habitat loss. Influence of threat on the population well understood, not reversible and has not ceased.

Data source: Field study; inferred.

Population
Generation time: 4-6 years.

Mature individuals: > 10,000. Global population could be > 100,000.

Population trend: Decline in the past unknown.

Data source: Field study; inferred.

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

1997 C.A.M.P. (Ver. 2.3): Vulnerable D2

National Status:
India: Least Concern

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Old World Fruit Bats Action Plan (Global): Not threatened
CITES: Not listed

Known presence in Protected Areas:
India: Kalakkad-Mundanthurai Tiger Reserve, Tamil Nadu

Recommendations
Research: Survey

Management: Monitoring

Comments
More than 100,000 individuals in Myanmar.

Sources
Dobson, 1871; Bates & Harrison, 1997; Bhat & Sreenivasan, 1990; Mickleburgh *et al*., 1992; Wilson & Reeder, 1993

Compilers
S. Mistry, M. Muni, Y.P. Sinha, K.S. Sreepada, C. Srinivasulu, K.M. Swe

Reviewers
Rest of the participants

Recent Field Studies
K.M. Swe in Myanmar, 1999-2001, Systematics and Conservation.
S. Doss *et al* in KMTR, India, 1999, Survey
Y.P. Sinha in Siju Cave and Garo hills, India, 1990-95, Bats of northeastern India
S. Kandula in Muroor, Karnataka, India, 1990, Survey

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Andaman & Nicobar Islands			
Chiriatapu, Andaman Islands	11º 40	92º 50	Bates & Harrison, 1997
Andhra Pradesh			
Vishakhapatnam District	17º 42	83º 24	Bates & Harrison, 1997
Assam			
Kherkheria	-	-	Bates & Harrison, 1997
Karnataka			
Muroor	14º 26	74º 29	Subterrenean caves Bhat & Srinivasan, 1972-83 K.S. Sreepada, 1990 Bates & Harrison, 1997
Nislneer	14º 12	74º 33	Subterrenean caves Bhat & Srinivasan, 1972-83 K.S. Sreepada, 1990 Bates & Harrison, 1997
Manipur			
Jiribam	-	-	Bates & Harrison, 1997
Meghalaya			
Cherrapunji	25º 16	91º 42	Bates & Harrison, 1997
La-ilad	-	-	Bates & Harrison, 1997
Siju Cave	25º 32	75º 47	Bates & Harrison, 1997
Umkiang	-	-	Bates & Harrison, 1997
Nagaland			
Zunheboto	-	-	Bates & Harrison, 1997
Sikkim			
Hee Gyathang	-	-	Montane forests Deforestation S. Mistry, 1992 Bates & Harrison, 1997
Tamil Nadu			
KMTR-Ingikuzhi	-	-	Subterrenean caves D.P.S. Doss, J.K. Immanuel, P.T. Nathan, 1999
Uttaranchal			
Naini Tal	29º 22	76º 26	Bates & Harrison, 1997
Pithoragarh	29º 35	80º 12	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Yangon			
Amherst	-	-	Cave, buildings, trees Swe, 1999-2001
Kyan	-	-	Cave, buildings, trees. Swe, 1999-2001
Mon	-	-	Cave, buildings, trees Swe, 1999-2001
Moulmein	16º 30	97º 39	type locality of *spelea* Bates & Harrison, 1997

Synonyms: *Vesperus botae* Peters, 1869
Eptesicus ognevi Bobrinskii, 1918

Common names: Botta's Serotine

Family: Vespertilionidae

Habit: Roost in buildings, arboreal, insectivore.

Habitat: Open desert, arid or semi arid regions, cultivated areas.

Niche: Building and rock crevices in Palearctic regions. Up to 3400m.

Distribution
Global: Turkey, Egypt, Yemen, Mongolia, Pakistan, Afghanistan

South Asia:
Pakistan: Northern areas

Afghanistan

Extent of Occurrence: 101-5,000 sq km.

Area of Occupancy: 11-500 sq km.

Locations/subpopulations: 3 / 3. Contiguous.

Habitat status: Not known.

Data source: Literature; inferred.

Threats
Threats to the taxon: Not known

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Recent Field Studies
None

Distribution in South Asia and Afghanistan based on literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Faizabad	37º 05	70º 40	Bates & Harrison, 1997
?Kabul	-	-	Bates & Harrison, 1997
PAKISTAN			
Northern areas			
Shenkagarh	35º 21	74º 52	Bates & Harrison, 1997

Red List 2001 Status derived in the workshop

Ver. 3.1: DATA DEFICIENT

National Status:
Pakistan: Data Deficient

Uncertainty
Assessed based on inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas:
None

Recommendations
Research: Survey, life history, ecological studies.

Management: Monitoring, habitat management, public awareness

Captive breeding: Techniques not known at all.

Comments
No information on habitat quality. No new information. Only one specimen described from Pakistan. Widespread in (Eastern) Palaearctic - marginal in this region.

Sources
Peters, 1869; Wilson & Reeder, 1993; Bates & Harrison, 1997.

Compilers
A.C. Girish, N. Gopukumar, J.K. Immanuel, S. Kandula, V.S. Korad, P.T. Nathan, A. Nobel, J.K. Raj, R. Rajashekar, K. Seedikkoya, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Eptesicus gobiensis Bobrinskii, 1926

Synonyms: *Eptesticus nilssonii* Bobrinskii, 1926
Eptesticus nilssonii centralasiaticus Bobrinskii, 1926
Eptesticus nilssonii gobiensis Bobrinskii, 1926
Eptesticus nilssonii kashgaricus Bobrinskii, 1926

Common names: Bobrinskii's serotine

Family: Vespertilionidae

Habit: Arboreal, insectivore in open habitat.

Habitat: Desert areas of former USSR.

Niche: Rock crevices. 3200-3250m.

Distribution
Global: Pakistan, Afghanistan, Nepal, Tibet, China, Mongolia, Russia and other Central Asian countries.

South Asia:
Nepal
Pakistan: Northern areas

Afghanistan

Extent of Occurrence: 101-5,000 sq km. Inferred based on literature

Area of Occupancy:11-500 sq km. Inferred based on literature

Locations/subpopulations: 2 / not known. Fragmented.

Habitat status: Not known

Data source: Literature; inferred.

Threats
Threats: Not known

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Red List 2001 Status derived in the workshop

Ver. 3.1: DATA DEFICIENT

National Status:
Nepal: Data Deficient
Pakistan: Data Deficient

Uncertainty
Assessed based on literature inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments
E. nilsonii is a misidentificaton so it has to be treated as *E. gobiensis*. No recent literature other than Bates and Harrison, 1997. Widespread in eastern Palaearctic, marginal in this area.

Sources
Bates & Harrison, 1997; Bobrinskii, 1926; Chakraborty, 1983

Compilers
A.C. Girish, N. Gopukumar, J.K. Immanuel, S. Kandula, J. Koilraj, V.S. Korad, P.T. Nathan, A. Nobel, R. Rajashekar, K. Seedikkoya, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia and Afghanistan from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Kabul	34º 30	69º 10	As *nilssonii kashgaricus* in Felten, 1971 Bates & Harrison, 1997
NEPAL			
No exact locality	-	-	Bates & Harrison, 1997
PAKISTAN			
Northern areas			
Gilgit	35º 54	74º 20	Possible record. Bates & Harrison, 1997

Eptesicus nasutus (Dobson, 1877)

DATA DEFICIENT in South Asia

Synonyms: *Vesperugo (Vesperos) nasutus* Dobson, 1877

Common names: Sind Serotine Bat

Family: Vespertilionidae

Habit: Walls of ruined buildings, caves.

Habitat: Semi desert terrain, river borders.

Distribution
Global: Arabia, Iraq, Iran, Afganistan, Pakistan

South Asia:
Pakistan: Baluchistan, Sind

Afghanistan

Extent of Occurrence: 101-5,000 sq km. Inferred based on literature

Area of Occupancy: 11-500 sq km. Inferred based on literature

Locations/subpopulations: 4 / not known. Contiguous.

Habitat status: Not known

Data source: Literature; inferred.

Threats
Threats: Not known

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Red List 2001 Status derived in the workshop

Ver. 3.1: DATA DEFICIENT

National Status:
Pakistan: Data Deficient

Uncertainty
Assessed based on literature inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Vulnerable A2c
Microchiroptera Action Plan (Global): Vulnerable A2c
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, life history, limiting factor research, ecological studies.

Management: Monitoring, habitat management, public awareness

Comments
No recent studies available.

Sources
Bates & Harrison, 1997; Dobson, 1877; Wilson & Reeder, 1993

Compilers
A.C. Girish, N. Gopukumar, J.K. Immanuel, S. Kandula, V.S. Korad, A. Nobel, P.T. Nathan, J.K. Raj, R. Rajashekar, K. Seedikkoya, E.A. A.Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia and Afghanistan from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Jalalabad	-	-	Bates & Harrison, 1997
Laghman	34º 38	70º 18	Bates & Harrison, 1997
PAKISTAN			
Baluchistan			
Kharan	28º 34	65º 26	Bates & Harrison, 1997
near Rajbar	-	-	Bates & Harrison, 1997
junction of Razhai & Sichk rivers in Baluchistan	-	-	Bates & Harrison, 1997
Sind			
near Rohri	-	-	type loc. of *nasutus*, according to Blanford 1888-91. Bates & Harrison, 1997

Eptesicus pachyotis (Dobson, 1871)

Synonyms: *Vesperugo pachyotis* Dobson, 1871

Common names: Bengali: *Motakanwala Chamchika*; English: Thick-eared Bat

Family: Vespertilionidae

Habit: Not known

Habitat: Not known

Distribution
Global: Bangladesh, India, Myanmar, Thailand, Tibet

South Asia:
Bangladesh: Northeastern hill country
India: Meghalaya

Extent of Occurrence: < 5,000 sq km. Inferred based on literature

Area of Occupancy: Not known

Locations/subpopulations: Not known

Habitat status: Not known

Data source: Literature; inferred

Threats
Threats to the taxon: Not known

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Red List 2001 Status derived in the workshop

Ver. 3.1: DATA DEFICIENT

National Status:
Bangladesh: Data Deficient
India: Data Deficient

Uncertainty
Assessed based on literature and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Lower Risk near threatened
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, taxonomic research, PHVA pending

Management: Monitoring, public awareness

Captive breeding: Techniques not known at all.

Comments
Further taxonomic research to assess status of this bat is recommended. No information on population size, threats or distribution.

Sources
Bates & Harrison, 1997; Dobson, 1871; Khan, 2001; Wilson & Reeder, 1993

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia from literature and field sighting

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
Northern hill country (Sylhet)			Khan, 2001
INDIA			
Meghalaya			
Khasi Hills	25º 34	91º 53	Type locality of *pachyotis*. Deforestation Bates & Harrison, 1997

Eptesicus serotinus (Schreber, 1774) — NEAR THREATENED in South Asia

Synonyms: *Vespertilio serotinus* Schreber, 1774
Eptesicus serotinus pashtonus Gaisler, 1970
Scotophilus pachyomus Tomes, 1857
Vespertilio turcomanus Eversmann, 1840

Common names: Serotine Thick-eared Bat

Family: Vespertilionidae

Habit: Solitary or in small numbers, insectivorous.

Habitat: Caves and cracks in rocks, rocky riverines, montane.

Niche: Tree hollows, caves and cracks in rocks. 462-2338m.

Distribution
Global: W Europe through S. Asiatic Russia to Himalayas, Thailand and China, north to Korea, Taiwan, S. England, N. Africa, most islands in Mediterranean; perhaps sub-Saharan Africa, India, Nepal, Pakistan, Tibet, Afghanistan (Himalayan tracts).

South Asia:
India: Assam, Jammu & Kashmir, Nagaland, Rajasthan, Uttar Pradesh
Nepal
Pakistan: NWFP

Afghanistan

Migration regions: Known for its long distance migration.

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km. Estimated based on 15 locations, foraging distance of 5 km. and assuming that all localities still exist.

Locations/subpopulations: 18 / not known. Fragmented.

Habitat status: Decrease in area >10% in 5 years due to deforestation, mining (quarry), roads, buildings replacing thatched houses and loss of habitat. Decrease in quality.

Data source: Literature, field study; observed, inferred; range of opinion. Based on group opinion of possible existence in western Nepal, with no recorded location, it is assumed that the locations are fragmented.

Threats
Threats to the taxon: Exploitation, traditional medicine in Assam, habitat destruction. Threats are well understood, are reversible but have not ceased.

Data source: Field study; observed, inferred.

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Although widely distributed, habitat change and destruction could have an impact on the populations in the future. The species is not vert common and due to its patchy distribution it is Near Threatened.

National Status:
India: Near Threatened
Nepal: Near Threatened
Pakistan: Data Deficient

Uncertainty
Assessed based on evidence and precaution and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas:
Nepal: Makulu Barun National Park

Recommendations
Research: Survey, ecology

Management: Monitoring, habitat management

Comments
WWF India - Biodiversity of Jammu and Kashmir reports this species to be uncommon in Kashmir.

Sources
Debojit Phukan, Biological Information sheet; Bates & Harrison, 1997; Shrestha, 1997; WWF – India, 1997

Compilers
S. Mistry, M. Muni, K.R. Senacha, T.K. Shrestha, K.S. Sreepada, C. Srinivasulu

Reviewers
Rest of the participants

Recent Field Studies
T.K. Shrestha in Makalu Barun, Nepal, 1997-99, Mammals of Nepal
D. Phukan in Dhakuakhana, Gogamukh, Jonai, 1999-2001, Habitat and Population studies

Distribution in South Asia and Afghanistan from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Faizabad	37º 05	70º 40	Bates & Harrison, 1997
Jalalabad	34º 26	70º 25	type locality of *pashtonus* Bates & Harrison, 1997
Kund	36º 47	68º 51	Bates & Harrison, 1997
Tschaga Serail	-	-	Bates & Harrison, 1997
INDIA			
Assam			
Darrang	26º 50	91º 30	Bates & Harrison, 1997
Lakimpur	27º 20	95º 00	Thatched houses Hunted for medicine D. Phukan, 1999-2001
Jammu & Kashmir			
Akhnoor	32º 54	74º 44	Bates & Harrison, 1997
Bhaderwah	32º 56	75º 47	Bates & Harrison, 1997
Pahlgam	34º 01	75º 25	Bates & Harrison, 1997
Shar	33º 44	75º 11	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Nagaland			
Takubama	25º 37	94º 32	Bates & Harrison, 1997
Rajasthan			
no fixed locality	-	-	type locality of *pachyomus* Bates & Harrison, 1997
Uttar Pradesh			
near Mussoorie	-	-	Bates & Harrison, 1997
NEPAL			
Makalu Barun National Park	-	-	Mountain foothills, forest Deforestation T.K. Shrestha, 1997-1999
Tumlingter	27º 33	87º 16	Bates & Harrison, 1997
PAKISTAN			
NWFP			
Karakar Pass	34º 26	72º 13	Bates & Harrison, 1997

Eptesicus tatei Ellerman and Morrison-Scott, 1951 — DATA DEFICIENT

Synonyms: *Nycticieius atratus* Blyth, 1863

Common names: Sombre Bat

Family: Vespertilionidae

Habit: Insectivorous

Habitat: Wet montane forest

Distribution
Global: Endemic to South Asia (India)

South Asia: Endemic to India
West Bengal: Darjeeling

Extent of Occurrence: Not known.

Area of Occupancy: Not known.

Locations/subpopulations: 1 / not known

Habitat status: Not known.

Data source: Literature, museum; inferred

Threats
Threats to the taxon: Not known

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Red List 2001 Status derived in the workshop

Ver.3.1: DATA DEFICIENT

1997 C.A.M.P. (Ver. 2.3): Data Deficient

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Data Deficient
Microchiroptera Action Plan (Global): Data Deficient
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, taxonomic research; life history, PHVA

Management: Monitoring, habitat management, public awareness

Comments
Further taxonomic research is needed to determine whether it is a true species. If yes, surveys within Darjeeling district should be undertaken to determine whether the bat still exists. A candidate for research priority studies. Collected from only one locality. Only one source of information.

Sources
Ellerman & Morrison-Scott, 1951; Wilson & Reeder, 1993; Bates & Harrison 1997; Agrawal *et al.,* 1992

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
West Bengal			
Darjeeling	27º 02	88º 20	Bates & Harrison, 1997

Harpiocephalus harpia (Temminck, 1840) — NEAR THREATENED in South Asia

Synonyms: *Vespertilio harpia* Temminck, 1840
Harpiocephalus harpia madrassius Thomas, 1923
Harpiocephalus rufus Gray, 1842
Lasiurus pearsoni Horsifield, 1851
Noctulinia lasyurus Hodgson, 1847

Common names: Hairy-winged Bat

Family: Vespertilionidae

Habit: Solitary

Habitat: Foothills, waterpools, valley covered with tall trees.

Niche: Up to 1600m.

Distribution
Global: India to Taiwan, Vietnam, east to Indonesia, south to Molucca Islands, Java and Lesser Sunda.

South Asia:
Bhutan
India: Assam, Kerala, Meghalaya, Mizoram, Sikkim, Tamil Nadu, Uttar Pradesh, West Bengal

Extent of Occurrence: > 20,000 sq km. Inferred based on literature

Area of Occupancy: >2,000 sq km. Inferred based on literature

Locations/subpopulations: Many. Fragmented.

Habitat status: < 10% decrease in the last 10 years due to deforestation. Decrease in quality due to deforestation.

Data source: Literature; inferred, observed.

Threats
Threats to the taxon: Habitat loss, deforestation

Data source: Field study; inferred.

Population
Generation time: 4-6 years

Mature individuals: > 10,000. <10% decline in the number of mature individuals predicted in the future due to habitat loss.

Population trend: Trends not known

Data source: Literature; inferred

Recent Field Studies
None

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Deforestation has a heavy influence on the species. Reduction of the population is predicted due to human interference. Being a solitary species, careful survey is essential. No current recordings of this species in the forested areas of Kerala and Megalaya.

National Status:
Bhutan: Data Deficient
India: Near Threatened

Uncertainty
Assessed based on evidence and precaution and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): -
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey; life history, ecological research.

Management: Monitoring, habitat management, public awareness

Comments
Harpiocephalus mordax is no more considered to be a synomym of *H. harpia* and is a different species [Corbet & Hill, 1992]. Treated as Meghalaya specimen *Harpiocephala mordax* (Thomas, 1923). Specific habitat mentioned for tall trees has to be noted. Mandal *et al.,* 1996. More specimens in collection from Mizoram. No recent sightings. Das, 1986 reviewed the status of the forms described under genus *Harpiocephalus* and later Corbet and Hill, 1992 opined that specimens from northeastern India are *H. mordax* Thomas, 1923. Thus presently *Harpiocepahlus* is not considered as monospecific as has been considered by Koopman, 1993 after the consensus of workshop participants. However, it is to be noted that Bates & Harrison (1997) treated *Harpiocephalus* as a monospecific genus.

Sources
Temminck, 1840; Wilson & Reeder, 1993; Bates & Harrison 1997; Sinha, 1999.

Compilers
A.C. Girish, J.K. Immanuel, S. Kandula, V.S. Korad, G. Nair, P.T. Nathan, A. Nobel, J.K. Raj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Distribution in South Asia from literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
BHUTAN			
Bhutan Duars	26º 45	89º 25	BNHS collections
INDIA			
Assam			
Ripu	26º 45	90º 09	Bates & Harrison, 1997
Kerala			
Baliaparathodu	10º 46	76º 42	Bates & Harrison, 1997
Malabar Coast	10º 00	76º 15	Bates & Harrison, 1997
No exact locality	-	-	No new information is available. Survey undertaken by KFRI had no sightings of the species in the last 10 years. Padmanabhan P., 1990-1999
Meghalaya			
Cherrapunji	25º 16	91º 42	Bates & Harrison, 1997
Mawphlang	25º 25	92º 13	Bates & Harrison, 1997
Mizoram			
Sangao	23º 30	93º 00	Bates & Harrison, 1997
Sikkim			
Rivers Tackchom/Ro Ro	27º 30	88º 30	Bates & Harrison, 1997
Tamil Nadu			
Perumal	10º 18	77º 31	Bates & Harrison, 1997
West Bengal			
Darjeeling	27º 02	88º 20	type localities of *lasyura* & *pearsoni* Bates & Harrison, 1997
Ghum	27º 02	88º 20	Bates & Harrison, 1997
Hasimara	26º 52	89º 48	Bates & Harrison, 1997
Karsiyang	26º 53	88º 20	Bates & Harrison, 1997
Kurseong	26º 54	88º 21	BNHS collections
Teesta Valley	26º 30	88º 50	BNHS collections Bates & Harrison, 1997
Tong Song	27º 04	88º 24	Bates & Harrison, 1997

Harpiocephalus mordax Thomas, 1923

DATA DEFICIENT in South Asia

Common names: Hairy-winged Bat

Family: Vespertilionidae

Habit: Solitary

Habitat: Forest

Niche: Not known

Distribution
Global: India to Taiwan, Vietnam, Molucca Islands, Java and Lesser Sunda islands.

South Asia:
India

Extent of Occurrence: Not known

Locations/subpopulations: Not known

Habitat status: Deforestation

Data source: Infered.

Threats
Threats to the taxon: Deforestation. Threat not well understood, not known to be reversible and has not ceased.

Data source: Indirect information; inferred.

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Recent Field Studies
None

Red List 2001 Status derived in the workshop

Ver. 3.1: DATA DEFICIENT

1997 C.A.M.P. (Ver. 2.3): Not Evaluated

National Status:
India: Data Deficient

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Lower Risk near threatened
Microchiroptera Action Plan (Global): -
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Taxonomic study, survey

Management: Habitat management, monitoring

Comments
No recent data. As previously included in *Harpiocephalus harpia* it is unclear which localities refer to which species. Clarification is needed in relation to taxonomy, distribution of the species, habitat and threats.

Sources
Bates & Harrison, 1997, Thomas, 1923

Compilers
M.A. Ali, P.J.J. Bates, Y.P. Sinha, K.M. Swe, A. Thabah

Reviewers
Rest of the participants

Hesperoptenus tickelli (Blyth, 1851)

LEAST CONCERN in South Asia

Synonyms: *Nycticejus tickelli* Blyth, 1851
Nycticejus isabellinus Kelaart, 1850

Common names: Assamese: *Chunga baduli*; English: Tickell's Bat

Family: Vespertilionidae

Habit: Solitary in foliage; high flying.

Habitat: Common in low lands and paddy fields, dry and wet zones.

Niche: Large folliage; up to 1000m.

Distribution
Global: India, Sri Lanka, Nepal, Bhutan, Myanmar, Thailand, and perhaps Southwest China

South Asia:
Bhutan
India: Andaman & Nicobar Islands, Assam, Bihar, Goa, Karnataka, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, West Bengal
Nepal
Sri Lanka: Central Province, North Central Province, North Western Province, Northern Province, Sabaragamuwa Province, Southern Province, Uva Province, Western Province

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km. Inferred based on literature

Area of Occupancy: > 2,001 sq km. Inferred based on literature

Locations/subpopulations: Many. Fragmented.

Habitat status: < 10% decrease in habitat in the past 10 years. < 10% decline predicted in the next 10 years due to deforestation in highlands and human habitation in lowlands. There is decrease in quality due to low land human habitation and highland destruction.

Data source: Literature, Indirect information; inferred.

Threats
Threats to the taxon: Habitat loss, deforestation, exploitation, hunting, hunting for medicine, human interference

Trade: Unknown

Data source: Field study; inferred.

Population
Generation time: Unknown

Mature individuals: > 10,000. Mature individuals have declined by <10% and will decline by <10% in the next 10 years due to habitat loss.

Population trend: > 10,000.

Data source: Literature; inferred; 95% confidence.

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status:
Bhutan: Data Deficient
India: Least Concern
Nepal: Data Deficient
Sri Lanka: Near Threatened

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, life history, limiting factor research, ecology, PHVA

Management: Monitoring, habitat management, public awareness

Comments
Y.P. Sinha 1986 made collections of species other than *Hesperoptenus tickelii* from Chaibassa, Jharkhand (type locality *tickelli* - Andersen, 1881). It's a known high flyer, hence rare in recent collections, no recent information. Could be considered to have a stable population in India. However, work done by Dr. Yapa didn't find any specimens of this species in Sri Lanka in the past years and hence could be Near Threatened. Recommended for call recognition survey using bat detector. Shrestha has not recorded this species from Nepal. Population numbers are based on wide distribution.

Sources
Blyth, 1851; Debojit Phukan, Unpublished Biological Information Sheet; Phillips, 1980; Shrestha, 1997; Wilson & Reeder, 1993

Compilers
A.C. Girish, J.K. Immanuel, S. Kandula, V.S. Korad, G. Nair, P.T. Nathan, A. Nobel, J.K. Raj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
W. Yapa and P.C.M.B. Digana in Sri Lanka, 1996-1999, survey and ecological studies.
D. Phukan in Assam, 1999-2000, Presence, population, habitat and behaviour.

Dirstribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
BHUTAN			
Bhutan Duars	26º 45	89º 25	BNHS collections
INDIA			
Andaman & Nicobar Islands			
Diglipur, South Andaman, Andaman Islands	-	-	BNHS collections
Long Island, Middle Andaman	12º 12	92º 58	BNHS collections; Bates and Harrison, 1997
Wrightmyo, Andaman Islands	11º 43	92º 43	Bates and Harrison, 1997
Assam			
Assam	-	-	Hunting for medicine, deforestation D. Phukan, 1999-2001
Bihar			
Chaibassa	22º 31	85º 50	type loc. of *tickelli* Y.P. Sinha in 1986 Bates and Harrison, 1997
Goa			
Molem	15º 20	74º 15	Bates and Harrison, 1997
Karnataka			
Astoli	15º 26	74º 30	Bates and Harrison, 1997
Dharwar	15º 30	75º 04	Bates and Harrison, 1997
Hulekad-sirsi	14º 42	74º 46	Bates and Harrison, 1997; BNHS collections
Potoli	15º 09	74º 44	Bates and Harrison, 1997
Samasgi	14º 40	75º 10	Bates and Harrison, 1997; BNHS collections
Yellapur	14º 59	74º 46	Bates and Harrison, 1997
Madhya Pradesh			
Jashpur	21º 16	81º 42	Bates and Harrison, 1997
Maharashtra			
Chahade	19º 42	72º 50	Bates and Harrison, 1997
Bombay	18º 56	72º 51	BNHS collections; Bates and Harrison, 1997
Poona	18º 34	73º 58	BNHS collections; Bates and Harrison, 1997
Orissa			
Kasipur	19º 02	82º 46	Bates and Harrison, 1997
Koira	21º 50	85º 12	Bates and Harrison, 1997
Rajasthan			
Nusserabad	-	-	Bates and Harrison, 1997
West Bengal			
Bharnabari	26º 50	89º 20	Bates and Harrison, 1997
Hasimara	26º 52	89º 48	Bates and Harrison, 1997
MYANMAR (NORTHERN)			
Moulmein	16º 30	97º 39	Bates and Harrison, 1997
NEPAL			
Dan-Deokhuri	28º 09	82º 17	Bates and Harrison, 1997
SRI LANKA			
Anuradhapura Province			
Anasigalla	06º 25	80º 00	BNHS collections
Central Province			
Kandy	07º 17	80º 40	Bates and Harrison, 1997
Kumbalgamuwa	07º 08	80º 50	Bates and Harrison, 1997
Peradeniya	07º 15	80º 40	Bates and Harrison, 1997
Sigiriya	07º 57	80º 46	Bates and Harrison, 1997
Northern Province			
Cheddikulam	08º 40	80º 18	Bates and Harrison, 1997
North Central Province			
Alakanagoda	07º 51	81º 07	Bates and Harrison, 1997
Anuradhapura	08º 20	80º 25	Bates and Harrison, 1997; BNHS collections
North Western Province			
Wariyapola	07º 37	80º 15	Bates and Harrison, 1997
Sabaragamuwa Province			
Madola	06º 41	79º 52	Bates and Harrison, 1997
Southern Province			
Bentota	06º 25	80º 00	Bates and Harrison, 1997; BNHS collections
Talgasmankande	06º 26	81º 20	Bates and Harrison, 1997
Uva Province			
Bibile	07º 09	81º 14	Bates and Harrison, 1997
Passara	06º 58	81º 09	Bates and Harrison, 1997
Western Province			
Dehiwala	06º 52	79º 52	Bates and Harrison, 1997
Kalutara	06º 35	79º 59	Bates and Harrison, 1997

Hipposideros armiger (Hodgson, 1835)

LEAST CONCERN in South Asia

Synonyms: *Rhinolophus armiger* Hodgson, 1835

Common names: Great Himalayan Leaf-nosed Bat

Family: Hipposideridae

Habitat: Montane forest.

Niche: Cave, Lofts of houses. 1000-2500m.

Distribution
Global: India, Nepal, Myanmar

South Asia:
India: Assam, Manipur, Meghalaya, Sikkim, Uttar Pradesh, West Bengal
Nepal

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 34 / not known. May not be fragmented.

Habitat status: Decline in area and quality due to habitat loss (disturbance to caves) and deforestation

Data source: Field studies, indirect information; observed, inferred.

Threats
Threats to the taxon: Habitat loss, deforestation (past), disturbance to caves. The influence on the population well understood, not reversible and have not ceased to be a threat.

Data source: Field study, indirect information; observed, inferred.

Population
Generation time: 4-6 years

Mature individuals: > 10,000.Population trend: <10% decline in the last 10 years. <10% decline predicted in the future.

Data source: Field study, indirect information; inferred, predicted.

Recent Field Studies
K.M. Swe in Myanmar, 2000-2001
S. Mistry in Sikkim, 1992
P.J. J. Bates in Mussourie, 1993
A. Thabah in Meghalaya, 2001

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status:
India: Least Concern
Nepal: Least Concern

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Mahanandi Wildlife Sanctuary, West Bengal

Recommendations
Research: Survey

Management: Monitoring

Sources
Bates & Harrison, 1997; Hodgson, 1835

Compilers
S. Mistry, K.R. Senacha, T.K. Shrestha, Y.P. Sinha, S. Sreepada, C. Srinivasulu, C.

Reviewers
Rest of the participants

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Assam			
Rajapara	26º 30	92º 00	Bates & Harrison, 1997
Manipur			
Temenglong	-	-	Bamboo forest Mandal et al, 1983 Y. P. Sinha, 1999
Meghalaya			
Cherrapunji	25º 16	91º 42	Bates & Harrison, 1997
Dura Bandara	25º 32	90º 14	Bates & Harrison, 1997
Garo hills	25º 32	90º 15	2 locations, Cave Deforestation A. Thabah, 2001
Jaintia hills	25º 26	93º 14	2 locations, Cave Deforestation A. Thabah, 2001
Khasia hills	-	-	2 locations, Cave Deforestation A. Thabah, 2001
Konshnong	25º 30	92º 01	Bates & Harrison, 1997
Laitkynsao	25º 48	91º 58	Bates & Harrison, 1997
Shangpung	25º 30	92º 02	Bates & Harrison, 1997
Shillong	25º 34	91º 53	Bates & Harrison, 1997
Sikkim			
Hee Gyanthang	-	-	Montane forest S. Mistry, 1992
Rongli	27º 17	88º 45	Bates & Harrison, 1997
Uttar Pradesh			
Bageswar	29º 50	79º 46	Bates & Harrison, 1997
Katarmal	29º 36	79º 40	Bates & Harrison, 1997
Mussoorie	30º 26	78º 04	Cave in degraded forest Bates & Harrison, 1997
West Bengal			
Goonati	-	-	Bates & Harrison, 1997
Gopaldhara	26º 59	88º 17	Bates & Harrison, 1997
Lopchu	27º 02	88º 19	Bates & Harrison, 1997
Mahanandi Wildlife Sanctuary	-	-	Bates & Harrison, 1997
Nimbong	27º 04	88º 25	Bates & Harrison, 1997
Pashok	27º 04	88º 24	Bates & Harrison, 1997
Tong Song	27º 04	88º 24	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Chin Hills	23º 40	94º 15	Bates & Harrison, 1997
Gokteik	22º 38	97º 24	Bates & Harrison, 1997
Hai Bum	26º 02	95º 52	Bates & Harrison, 1997
Kauktaung	25º 22	95º 19	Bates & Harrison, 1997
Kayan state	-	-	Cave Mining Swe, 2001
Mamsam Falls	22º 38	97º 26	Bates & Harrison, 1997
Mon state	-	-	Cave Mining Swe, 2001
Pyaunggaung	22º 38	97º 22	Bates & Harrison, 1997
Shan state	-	-	Cave mining Swe, 2001
NEPAL			
Bachek	28º 01	84º 37	Bates & Harrison, 1997
Bimalnagar	27º 45	84º 29	Bates & Harrison, 1997
Bouzini	27º 42	85º 13	Bates & Harrison, 1997
Dano Kharka	-	-	Bates & Harrison, 1997
Gari	-	-	Bates & Harrison, 1997
Godavari	27º 34	85º 24	Bates & Harrison, 1997
Hathiban	-	-	Bates & Harrison, 1997
Kathmandu Valley	27º 42	85º 12	Bates & Harrison, 1997
near Baglung	-	-	Bates & Harrison, 1997
near Pokhara	-	-	Bates & Harrison, 1997
Num	27º 33	87º 17	Bates & Harrison, 1997
Pattibhagan	27º 48	85º 15	Bates & Harrison, 1997
Syangja	28º 49	83º 42	Bates & Harrison, 1997

Synonyms: *Hipposideros amboiensis* Peters, 1871
Hipposideros atratus Kelaart, 1850
Hipposideros nicobarulae Miller, 1902

Common names: Sinhalese: *Dwiwarna pathra nas wawalu*; English: Bi coloured Leaf-nosed Bat, Dusky Leaf-nosed Bat;

Family: Hipposideridae

Habit: Colonial.

Habitat: Ruins, village houses, old dwellings, abandoned mines.

Niche: 90m.

Distribution
Global: Sri Lanka, India to W. Malaysia, through Philippines, Indonesia and New Guinea to Australia

South Asia:
India: Andaman & Nicobar Islands, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Orissa, Tamil Nadu
Sri Lanka: Eastern Province, Matara Province, North Central Province, North Western Province, Sabaragamuwa Province, Western Province

Extent of Occurrence: > 20,000 sq km.

Extent of Occurrence: > 2,000 sq km.

Locations/subpopulations: Many. Contiguous.

Habitat status: Probably stable since the bat uses human habitations and abandoned buildings and mines.

Data source: Field study, indirect indirect information; observed, inferred.

Threats
Threats to the taxon: Human interference, human disturbance

Data source: Field study; inferred.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Population stable.

Data source: Indirect information; inferred.

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status:
India: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Threat impact

Management: Monitoring

Sources
Bates & Harrison, 1997; Templeton, 1848; Wilson & Reeder, 1993;

Compilers
A.C. Girish, J.K. Immanuel, S. Kandula, V.S. Korad, G. Nair, P.T. Nathan, A. Nobel, J.K. Raj, R. Rajashekar, K. Seedikkoya, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
W. Yapa & P.C.M.B. Digana in Puttalum, Anuradapura, Kurunegala, Rathnapura, Sri Lanka, 1996-2000, Survey.
D.P. Swami Doss, J.K. Immanuel, P.T. Nathan, J. Balasingh in Palayamkottai, Cheranmadevi, Krishnapuram, Tamil Nadu, 1999
S. Kandula and G. Marimuthu in Madurai, 1989-90.
S. Kandula, Usmaan and Rubsamani in Ilayangudi, Tamil Nadu, 1992.
J. Vanitharani in Sattupathu near Ambai; Kurukkuthurai Kalyanamandapam near town; Sarah Tucker College Dark Room, Palayamkottai; Workshop, Tirunelveli Junction, 2000 onwards
A. Madhavan in Kerala, 1985-1992

Distribution in South Asia from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Andaman & Nicobar islands			
Little Nicobar Isl, Nicobar Islands	07º 18	93º 40	type locality of *nicobarulae* Bates & Harrison, 1997
Nankauri, Nicobar Islands	07º 59	93º 22	Bates & Harrison, 1997
Campbell Bay, Nicobar Islands	07º 00	93º 45	Bates & Harrison, 1997
Camorta Island, Nicobar Islands	08º 08	93º 42	Bates & Harrison, 1997
Car Nicobar, Nicobar Islands	09º 12	92º 46	Bates & Harrison, 1997
Karnataka			
Dharwar	15º 30	75º 04	Bates & Harrison, 1997
Hanumanhalli	13º 09	78º 07	named *cineraceus* in Bhat & Jacob, 1990 Bates & Harrison, 1997
Lingasugur	15º 11	76º 54	Bates & Harrison, 1997
?Therhalli	13º 10	78º 23	Sreepada et al., 1993. Bates & Harrison, 1997 identify *H. cineraceus* by Bhat & Jacob, 1990 occuring in peninsular India as *H. ater* as the distribution of *H. cineraceus* is trans-himalayan.
Kerala			
Ernakulam	10º 00	76º 16	Bates & Harrison, 1997
Thrissur	-	-	Hollows in the walls of wells, roosts in banyan tree, dark caves. Human interference. A. Madhavan, 1985-1992 Bates & Harrison, 1997
Trivandrum	08º 41	76º 57	Bates & Harrison, 1997
Madhya Pradesh			
Guwarghat	23º 09	79º 58	Bates & Harrison, 1997
Maharashtra			
Marathwada	-	-	Bates & Harrison, 1997
Nanded	19º 11	77º 21	Bates & Harrison, 1997
Meghalaya			
Cherrapunji	25º 16	91º 42	doubtful record in Kurup, 1968 Bates & Harrison, 1997
Orissa			
Konark	19º 52	86º 12	Bates & Harrison, 1997
Tamil Nadu			
Cheranmahadevi	8º 44	74º 42	Temples, unused buildings Human interference D.P. Swami Doss, J.K. Immanuel, P.T. Nathan, J. Balasingh, 1999
Cumbum	09º 44	77º 19	Bates & Harrison, 1997
Ilayangudi	-	-	Unused buildings K. Sripathy, Usmaan and Rubsamani, 1992
Krishnapuram	8º 44	77º 42	D.P. Swami Doss, J.K. Immanuel, P.T. Nathan, J. Balasingh, 1999 Temples, unused buildings Human interference
Kurukkuthurai			Kalyanamandapam near town, J. Vanitharani, 2000 onwards
Kurumbapatti	-	-	Bates & Harrison, 1997
Madras	13º 05	80º 18	Bates & Harrison, 1997
Madurai	09º 55	78º 07	unused buildings and small culverts Sripathi, K. and Marimuthu, G 1989-90
Palayamkottai	8º 44	77º 42	Temples, unused buildings Human interference D.P. Swami Doss, J.K. Immanuel, P.T. Nathan, J. Balasingh, 1999; Dark Room, Sarah Tucker College, J. Vanitharani, 2000 onwards
Sattupathu			Abandoned house near Ambai, J. Vanitharani, 2000 onwards
Tirthamalai	12º 06	78º 36	named *cineraceus* in BMNH Bates & Harrison, 1997
Tirunelveli Junction			Workshop, J. Vanitharani, 2000 onwards
SRI LANKA			
Eastern Province			
Trincomalee	08º 34	81º 13	named as *fulvus* in Wroughton, 1915ci Bates & Harrison, 1997
Valaichenai	07º 54	81º 32	Bates & Harrison, 1997
Matara Province			
Rathnapura	-	-	Temples, both occupied and unused buildings and caves Yapa & Digana, 1996-2000
North Central Province			
Anuradhapura	08º 20	80º 25	named as *fulvus* in Wroughton, 1915ci Temples, both occupied and unused buildings and caves Yapa & Digana, 1996-2000. Bates & Harrison, 1997
Kaduganava	07º 15	80º 32	Bates & Harrison, 1997
Kandy	07º 17	80º 40	Bates & Harrison, 1997
Medamahanuwera	07º 16	80º 48	Bates & Harrison, 1997
Peradeniya	07º 15	80º 40	Bates & Harrison, 1997
Rattota	07º 31	80º 41	Bates & Harrison, 1997
North Western Province			
Kurenegala	36º 47	68º 51	Temples, both occupied and unused buildings and caves Yapa & Digana, 1996-2000
Puttalum	-	-	Temples, both occupied and unused buildings and caves Yapa & Digana, 1996-2000
Sabaragamuwa Province			
Pelmadulla	06º 38	80º 33	Bates & Harrison, 1997
Western Province			
Anasigalla	06º 29	80º 03	Bates & Harrison, 1997
Colombo	06º 55	79º 52	type locality of *ater* Bates & Harrison, 1997
Dehiwala	06º 52	79º 52	Bates & Harrison, 1997
Kalutara	06º 35	79º 59	Bates & Harrison, 1997
Matugama	06º 32	80º 05	Bates & Harrison, 1997
Negombo	07º 13	79º 51	Bates & Harrison, 1997

Hipposideros cineraceus Blyth, 1853

NEAR THREATENED in South Asia

Synonyms: *Phyllorhina micropus* Peters, 1872

Common name: Least Leaf-nosed Bat

Family: Hipposideridae

Habit: Insectivorous

Habitat: Montane forests.

Niche: Tree hollows. 62-1477m.

Distribution
Global: Vietnam and Borneo, adjacent small islands; probably the Philippines, India, Nepal, Myanmar

South Asia:
India: Arunachal Pradesh, Assam, Madhya Pradesh, Meghalaya, Uttaranchal, West Bengal
Nepal
Pakistan: Punjab

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km. Inferred based on literature

Area of Occupancy: > 2,000 sq km. Estimated based on 16 locations and a foraging range of 10 km radius.

Locations/subpopulations: 16 / not known. Contiguous.

Habitat status: Decrease in area due to habitat loss. There is decrease in quality due to habitat loss.

Data source: Literature; Inferred.

Threats
Threats to the taxon: Human interference, recreation / tourism

Data source: Field study; inferred.

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Recent Field Studies
None

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Although inferred to be distributed all along the Trans-Himalaya, the species' habitat, the montane forests are under pressure from human activities. Due to continuing loss of habitat, the species is not completely secure.

National Status:
India: Near Threatened
Nepal: Near Threatened
Pakistan: Data Deficient

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments
M. Muni reported 2 locations in southern India based on BNHS collections. These have been rejected as *Hipposideros ater* based on Bates & Harrison (1997).

Sources
Blyth, 1853; Bhat & Jacob, 1990; Harshey & Chandra, 2001; Sreepada *et al.,* 1993; Wilson & Reeder, 1993

Compilers
S. Mistry, M. Muni, K.R. Senacha, T.J. Shrestha, K.S. Sreepada, C. Srinivasulu

Reviewers
Rest of the participants

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Arunachal Pradesh			
Tiki	28º 00	96º 20	Bates & Harrison, 1997
Assam			
Golaghat	26º 30	93º 57	Bates & Harrison, 1997
Margherita	27º 17	95º 40	Bates & Harrison, 1997
Madhya Pradesh			
Jabalpur	-	-	Harshey & Chandra, 2001
Meghalaya			
Cherrapunji	25º 16	91º 42	BNHS collection
Shangpung	25º 30	92º 02	Bates & Harrison, 1997
Uttaranchal			
Dehra Dun	30º 19	78º 03	named *amboinensis* in Scully (1887) Bates & Harrison, 1997
Mussoorie	30º 26	78º 04	Bates & Harrison, 1997
Nimbong	27º 04	88º 25	BNHS collections

Distribution in South Asia	Lat.	Long.	Notes/Sources
West Bengal			
Panigaon	-	-	Bates & Harrison, 1997
Sangser	27º 04	88º 30	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Gokteik	22º 38	97º 24	Bates & Harrison, 1997
Mingun	22º 00	95º 58	Bates & Harrison, 1997
Mogok	22º 55	96º 29	Bates & Harrison, 1997
Nam Tamai Valley	27º 42	97º 54	Bates & Harrison, 1997
near Sagaing	-	-	Bates & Harrison, 1997
NEPAL			
Kathmandu Valley	27º 42	85º 12	Bates & Harrison, 1997
PAKISTAN			
Punjab			
Pind Dadan Khan	32º 36	72º 57	type loc. of *cineraceus* Bates & Harrison, 1997

Hipposideros diadema (E. Geoffroy, 1813) — VULNERABLE in South Asia

Synonyms: *Rhinolophus diadema* E. Geoffroy, 1813
Phyllorhina nicobarensis Dobson, 1871

Common name: Diadem Leaf-nosed Bat

Family: Hipposideridae

Habit: Insectivorous.

Habitat: Cave on sea shore.

Niche: Natural caves, crevices and hollows in trees, sea level.

Distribution
Global: India, Burma and Vietnam through Thailand, Malaysia and Indonesia to New Guinea, Bismark Arch., Solomon Is. Australia, Philippines

South Asia:
India: Andaman & Nicobar Islands

Extent of Occurrence: < 100 sq km. Inferred based on literature.

Area of Occupancy: < 100 sq km.

Locations/subpopulations: 1

Habitat status: Not known

Data source: Literature; inferred.

Threats
Threats to the taxon: Possible threats include loss of habitat or human predation for food.

Data source: Indirect information; inferred.

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Red List 2001 Status derived in the workshop

Ver. 3.1: VULNERABLE D2

Although there is only one population with an extremely restricted range, nothing is known about the population size or its trend. Only known from one island in the Nicobars.

1997 C.A.M.P. (Ver. 2.3): Not Evaluated

National Status:
India: Vulnerable D2

Uncertainty
Assessed based on inference, precaution and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, taxonomic research; limiting factor research, ecological studies.

Management: Habitat management, monitoring

Captive breeding: Techniques not known at all.

Comments
The local subspecies (= *nicobarensis*) is unique to the Nicobar Islands. It is characterized by its very small size relative to *H. ater* populations. Since the local population is an endemic and a well-defined subspecies, it is a priority for further research and possible conservation measures.

Sources
Bates & Harrison, 1997; Dobson, 1871; Geoffroy, 1813; Wilson & Reeder, 1993

Compilers
P.J.J. Bates, A.C. Girish, J.K. Immanuel, S. Kandula, V.S. Korad, D. Koya, P.T. Nathan, A. Nobel, J.K. Raj, R. Rajashekar, K. Seedikkoya, E.A. A. Shukkur, D. P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Andaman & Nicobar Islands			
Trinkut, Nicobar Islands	08º 07	93º 37	Bates & Harrison, 1997

Hipposideros durgadasi (Khajuria, 1970) — ENDANGERED

Synonyms: *Hipposideros cineraceus durgadasi* Khajuria, 1970

Common names: Khajuria's Leaf-nosed Bat

Family: Hipposideridae

Habit: Insectivorous (mainly beetles and crickets), nocturnal.

Habitat: Caves - natural and artificial.

Niche: Cave-dwelling, 200m.

Distribution
Global: Endemic to India

South Asia:
India: Madhya Pradesh

Extent of Occurrence: 101-5,000 sq km.

Area of Occupancy: 11-500 sq km. Assuming foraging radius as 10km the area of occupancy is less than 500 sq km.

Locations/subpopulations: 2 / 1. Contiguous since the locations are close by.

Habitat status: Habitat change not known.

Data source: Literature; inferred, suspected; range of opinion.

Threats
Threats to the taxon: Habitat loss is a probable threat

Data source: Field study, indirect information; inferred.

Population
Generation time: 5-7 years

Mature individuals: < 200

Population trend: Not known

Data source: Literature; estimated

Red List 2001 Status derived in the workshop

Ver. 3.1: ENDANGERED D

Since known only from two locations and the probable threats identified due to human habitation, a higher threat category of Endangered has been accorded rather than a precautionary category of Vulnerable (D2) as proposed in the earlier version.

1997 C.A.M.P. (Ver. 2.3): Vulnerable B1+2c, D2

Uncertainty
Assessed based on indirect evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Vulnerable B1+2c, D2
Microchiroptera Action Plan (Global): Vulnerable B1+2c, D2
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, genetic research, taxonomic research, life history, basic ecology, PHVA pending

Management: Habitat management, monitoring, public awareness, captive breeding / cultivation, preservation of live genome, ecological studies

Captive breeding: Techniques not known at all.

Comments
This is a species with extremely strange distribution. It would seem certain that i) the species has a greater distribution than is currently known. ii) further taxonomic evaluation is required. Based on evaluation carried out by Khajuria, 1970, 1980, 1982 from Katangi and Rachchai in Jabalpur district, the type localities of *H. durgadasi*. Population numbers based on Khajuaria's estimates. Vulnerable with a very restricted population in a declined area of habitat. (Baillie & Groombridge, 1996). Based on information available the range of opinion was 101-5,000 sq km. It could be less than 100 sq km. given the populations of the two locations.

Sources
Bates & Harrison, 1997; Baillie & Groombridge, 1996; Khajuria, 1970; Wilson & Reeder, 1993

Compilers
S. Mistry, M. Muni, T.K. Shrestha, K.S. Sreepada, C. Srinivasulu

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Madhya Pradesh			
Katangi	23º 26	79º 52	Type loc. of *durgadasi* (Khajuria, 1970, 82) Bates & Harrison, 1997
Richhai	23º 10	79º 59	Bates & Harrison, 1997

Synonyms: *Hipposideros murinus* Gray, 1838
Phyllorhina aurita Tomes, 1859
Phyllorhina atra Fitzinger, 1870
Rhinolophus fulgens Elliot, 1839
Hipposideros fulvus pallidus Andersen, 1918

Common names: Fulvous Leaf-nosed Bat

Family: Hipposideridae

Habit: Colonial (single and mixed roosts), insectivorous

Habitat: Subterranean caves, wells, ruins of houses, thorn scrub.

Niche: Caves/ wide range.

Distribution
Global: Pakistan to Vietnam, south to Sri Lanka, Afghanistan, India

South Asia:
India: Bihar, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Andaman & Nicobar Islands
Nepal
Pakistan: Baluchistan, Punjab, Sind
Sri Lanka: Matara, North Western Province, Sabaragamuwa Province, Southern Province

Afghanistan

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many / not known. Contiguous except for Nicobar Island population.

Habitat status: No change in habitat.

Data source: Field study, literature, museum; observed, estimated.

Threats
Threats to the taxon: Human interference, recreation / tourism, stone-quarrying, sealing and fumigation of caves in Ajanta and Ellora caves. Threat due to stone quarrying is irreversible whereas threat in caves is reversible. The influence on the population well understood, not reversible and have not ceased to be a threat.

Data source: Field study, indirect information; observed, inferred

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Population stable.

Data source: Field study, indirect information; inferred.

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status:
India: Least Concern
Nepal: Least Concern
Pakistan: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Bhimashankar Wildlife Sanctuary, Maharashtra.

Recommendations
Research: Survey, genetic research, ecology

Management: Monitoring, public awareness

Comments
The population seems to be contiguous except for Nicobar Islands. Delicate bat, requires humidity.

Sources
Bates & Harrison, 1997; Gray, 1838; Harshey & Chandra, 2001; Wilson & Reeder, 1993

Compilers
P.J.J. Bates, P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, H. Raghuram, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Recent Field Studies
J. Vanitharani & S. Jayapraba in caves of Parapadi, Rodiyarpatti hills, 2000-2002 ongoing, survey of bats of Tirunelvelli district and role in ecosystem
T.R. Radhamani in Madurai, 1988-1996, behaviour
A. Madhavan in Cochin in Kerala, 1993, survey
H.R. Bhat and S. Srinivasan in Karnataka, 1990, ecological record
D. Joshi in Aurangabad caves, Ellora Caves, Ajantha Caves, Bhimashankar slope caves, Maharashtra, 2001

Distribution in South Asia and Afghanistan from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Jalalabad	34º 26	70º 25	Bates & Harrison, 1997
INDIA			
Andaman & Nicobar Islands			
Nicobar Islands	-	-	May be referrable to *H. fulvus* [Hill, 1967] Bates & Harrison, 1997
Bihar			
Chaibassa	22º 31	85º 50	Bates & Harrison, 1997
Darbhanga	26º 10	85º 54	Bates & Harrison, 1997
Gaya	24º 48	85º 00	Bates & Harrison, 1997
Giridih	24º 10	86º 20	Bates & Harrison, 1997
Hazaribag and Munger	24º 00	85º 23	Bates & Harrison, 1997
Gujarat			
Bhuj	23º 12	69º 54	Bates & Harrison, 1997
Bochasan	22º 25	72º 51	Named as *H. bicolor* in Brosset, 1962b Bates & Harrison, 1997
Junagadh	21º 31	70º 28	type loc. of H. *pallidus* Bates & Harrison, 1997
Keshod	21º 17	71º 32	Bates & Harrison, 1997
Palanpur	24º 12	72º 29	Bates & Harrison, 1997
Rajkot	22º 18	70º 56	Bates & Harrison, 1997
Sadla	23º 06	7º 47	Bates & Harrison, 1997
Sasan	21º 00	70º 40	Bates & Harrison, 1997
Talala	21º 00	70º 39	Bates & Harrison, 1997
Karnataka			
Coromandal	11º 43	79º 46	Bates & Harrison, 1997
Dharwar	15º 30	75º 04	Bates & Harrison, 1997
Gadag	15º 26	75º 42	Bates & Harrison, 1997
Hanumanhalli	13º 09	78º 07	Bates & Harrison, 1997
Honawar	14º 19	74º 27	Bates & Harrison, 1997
Therhalli	13º 10	78º 23	Bates & Harrison, 1997
Vijayanagar	15º 20	76º 28	Bates & Harrison, 1997
Kerala			
Ernakulum	10º 00	76º 16	Bates & Harrison, 1997
Madhya Pradesh			
Guwarghat	23º 09	79º 58	Bates & Harrison, 1997
Hoshangabad	-	-	Harshey & Chandra, 2001
Jabalpur	23º 10	79º 59	Bates & Harrison, 1997 Harshey & Chandra, 2001
Sheopore	25º 41	76º 42	Bates & Harrison, 1997
Sohagpur	22º 43	78º 14	Bates & Harrison, 1997
Maharashtra			
Ajantha Caves			D.S. Joshi, 2001
Aurangabad caves	19º 52	75º 22	Dry region, evergreen forest Sealing of caves for tourism D.S. Joshi, 2001 Bates & Harrison, 1997
Bandra	19º 04	72º 58	Bates & Harrison, 1997
Bhaja	18º 42	73º 30	Bates & Harrison, 1997
Bhimashankar caves	-	-	Human interference and man-induced threats because of tourists D. S. Joshi, 2001
Chikalda	21º 29	77º 12	Bates & Harrison, 1997
Elephanta	18º 54	72º 58	Bates & Harrison, 1997
Ellora caves			D. Joshi, 2001
Lonavla	18º 45	73º 27	Bates & Harrison, 1997
Mahableshwar	17º 56	73º 42	Bates & Harrison, 1997
Marathwada	-	-	Bates & Harrison, 1997
Mumbai	18º 56	72º 51	Bates & Harrison, 1997
Nagpur	21º 10	79º 12	Bates & Harrison, 1997
Nanded	19º 11	77º 21	Bates & Harrison, 1997
Nasik	20º 00	73º 52	Bates & Harrison, 1997
Panchgani	17º 56	73º 49	Bates & Harrison, 1997
Ratnagiri	17º 00	73º 20	Named as *H. bicolor* in Brosset, 1962b Bates & Harrison, 1997
Shirgaum	17º 13	73º 35	Bates & Harrison, 1997
Vihar Lake	18º 56	72º 51	Bates & Harrison, 1997
Orissa			
Bhubaneswar	20º 13	85º 50	Bates & Harrison, 1997
Dhauli	19º 51	85º 16	Bates & Harrison, 1997
Harisankar	20º 42	83º 30	Bates & Harrison, 1997
Udayagiri	20º 06	84º 32	Bates & Harrison, 1997
Punjab			
Hissar	29º 10	75º 45	Was identified as *H. cineraceus* in Siddiqi, 1961 Bates & Harrison, 1997
Rajasthan			
Ajmer	26º 29	74º 40	Bates & Harrison, 1997
Bharatpur	27º 14	77º 28	Bates & Harrison, 1997
Bundi	25º 28	75º 42	Bates & Harrison, 1997
Dungarpur	23º 53	73º 48	Bates & Harrison, 1997
Jaipur	26º 53	75º 50	Bates & Harrison, 1997
Jhalara-Patan	24º 35	76º 12	Bates & Harrison, 1997
Jhalawar	24º 32	76º 12	Bates & Harrison, 1997
Jodhpur	26º 18	73º 08	Bates & Harrison, 1997
Tamil Nadu			
Keela Kuyil Kudi	09º 52	78º 09	Named as *H. bicolor* in Usman, 1988 Bates & Harrison, 1997
Uttar Pradesh			
Varanasi	25º 20	83º 00	Bates & Harrison, 1997
NEPAL			
Kathmandu Valley	27º 42	85º 12	Bates & Harrison, 1997
PAKISTAN			
Baluchistan			
Hoshab	26º 01	63º 55	Bates & Harrison, 1997
Panjgur	26º 56	64º 06	Bates & Harrison, 1997
Punjab			
Chaklala	33º 40	73º 08	Bates & Harrison, 1997
Rawalpindi	33º 36	73º 03	Bates & Harrison, 1997
Sind			
Gharo	24º 44	67º 36	Bates & Harrison, 1997
Gholam	25º 06	67º 48	Bates & Harrison, 1997
Shujawal	24º 36	68º 05	Bates & Harrison, 1997
Sukkur	27º 42	68º 52	Bates & Harrison, 1997
Thatta	24º 45	67º 56	Bates & Harrison, 1997
SRI LANKA			
North Western Province			
Kurenegala	36º 47	68º 51	Caves in scrub land; North central subregion and north western region Yapa & Digana, 1996
Sabaragamuwa Province			
Ratnapura	-	-	Caves in scrub land; North central subregion and north western region Yapa & Digana, 1996
Wavulpane	06º 25	80º 40	Bates & Harrison, 1997
Southern Province			
Anuradhapura	08º 20	80º 25	Caves in scrub land; North central subregion and north western region Yapa & Digana, 1996
Hambantota	06º 07	81º 07	Bates & Harrison, 1997
Matara			Yapa & Digana, 1996

Hipposideros galeritus Cantor, 1846

NEAR THREATENED in South Asia

Synonyms: *Phyllorhina brachyota* Dobson, 1874

Common name: Bengali: *Cantora Patanak Chamchika*; English: Cantor's Leaf-nosed Bat

Family: Hipposideridae

Habit: Insectivorous, in small colonies, avoids other bat species.

Habitat: Caves, crevices, pile of boulders, temples.

Niche: Cracks, boulders, roofs etc. Up to 1100m.

Distribution
Global: Bangladesh, India, Sri Lanka, Southeast Asia, Java, Borneo.

South Asia:
Bangladesh
India: Bihar, Gujarat, Karnataka, Madhya Pradesh, Maharashtra
Sri Lanka: Central Province, Northwestern Province, Ratnapura Province, Sabaragamuwa Province, Southern Province, Uva Province, Western Province

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,001 sq km.

Locations/subpopulations: >20 / not known. Fragmented.

Habitat status: No change in habitat.

Data source: Field study, Literature; observed, inferred.

Threats
Threats to the taxon: Exploitation, hunting for medicine in Sri Lanka, human interference, habitat loss

Data source: Field study; inferred.

Population
Generation time: 4-6 years

Mature individuals: < 10,000

Population trend: Not known.

Data source: Field study; observed.

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Based on the distribution, few locations and small size of the colonies, this species is thought to be Near Threatened in South Asia, while it is Vulnerable in Sri Lanka due to restricted locations.

National Status
Bangladesh: Near Threatened
India: Near Threatened
Sri Lanka: Vulnerable

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Melghat Tiger Reserve, Borivili National Park, Maharashtra; Kanha National Park, Madhya Pradesh

Recommendations
Research: Survey, life history, basic ecology

Management: Monitoring, public awareness

Comments
Reported threat in Sri Lanka, Vulnerable due to population estimate and small colonies of few individuals. Area of Occupancy based on the locations, the species reported + occupancy in Sri Lanka. Two locations in India and Sri Lanka. Population numbers based on the number and distribution and size of the colonies in India and Sri Lanka. The colonies keep changing sites. Sri Lankan assessment based on a 5-year study.

Sources
Bates & Harrison, 1997; Cantor, 1846; Dobson, 1874; Harshey & Chandra, 2001; Khan, 2001; Sinha, 1999; Wilson & Reeder, 1993

Compilers
P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, H. Raghuram, Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Recent Field Studies
W. Yapa & P.C.M.B. Digana in Gammaduwa, Bulathsinghala, Anasigalla, Kalutara, Passara, Walhaputanne, Labugama, Balangoda, Kitulgala, Pitabeddera and Kegalle in Sri Lanka, 1996, Ecology and biology of Sri Lankan bats.
M.S. Pradhan in Melghat Tiger Reserve, 1992-96, survey

Distribution in South Asia from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
Widely distributed			Khan, 2001
INDIA			
Bihar			
Singar	24º 48	85º 00	Bates and Harrison, 1997
Gujarat			
Danta	24º 13	72º 50	Bates and Harrison, 1997
Palanpur	24º 12	72º 29	Bates and Harrison, 1997
Madhya Pradesh			
Gwari	23º 09	79º 52	Bates and Harrison, 1997
Jabalpur	-	-	Harshey & Chandra, 2001
Kanha National Park	-	-	Harshey & Chandra, 2001
Karnataka			
Badami	15º 58	75º 45	Bates and Harrison, 1997
Honawar	24º 55	95º 01	Bates and Harrison, 1997
Maharashtra			
Ajanta	20º 30	75º 48	Bates and Harrison, 1997
Bedsar Caves	18º 50	73º 30	Bates and Harrison, 1997
Chikalda	21º 29	77º 12	Bates and Harrison, 1997
Ellora	20º 04	75º 15	Bates and Harrison, 1997
Kanheri	19º 13	72º 59	Bates and Harrison, 1997
Mumbai	18º 56	72º 51	Bates and Harrison, 1997
SRI LANKA			
Central Province			
Gammaduwa	07º 32	80º 41	Bates and Harrison, 1997
Northwestern Province			
Kala Oya	08º 12	80º 04	Bates and Harrison, 1997
Kurenegala	36º 47	68º 51	Bates and Harrison, 1997
Sabaragamuwa Province			
Labugama	06º 55	80º 11	Bates and Harrison, 1997
Balangoda	06º 39	80º 42	Bates and Harrison, 1997
Kitulgala	07º 00	80º 22	Bates and Harrison, 1997
Kegalle	-	-	Secondary forest, village outskirts of forest Hunting for medicine Yapa & Digana, 2000
Ratnapura			Secondary forest, village outskirts of forest Hunting for medicine Yapa & Digana, 2000
Southern Province			
Pitabeddera	06º 11	80º 28	Bates and Harrison, 1997
Uva Province			
Passara	06º 58	81º 09	Bates and Harrison, 1997
Walhaputanne	06º 45	80º 54	Bates and Harrison, 1997
Western Province			
Anasigalla	06º 29	80º 03	Bates and Harrison, 1997
Bulathsinghala	06º 39	80º 13	Bates and Harrison, 1997
Kalutara	06º 35	79º 59	Bates and Harrison, 1997

Hipposideros hypophyllus Kock & Bhat, 1994 — ENDANGERED

Common names: Kolar Leaf-nosed Bat

Family: Hipposideridae

Habit: Insectivorous, cave-dwelling

Habitat: Dry Tropical Woods.

Niche: Subterranean, cave-dweller

Distribution
Global: Endemic to India

South Asia:
India: Karnataka

Extent of Occurrence: 101-5,000 sq km.

Area of Occupancy: 11-500 sq km. Estimated based on foraging range of 10km radius from the roosting areas, and survey in Mysore and Kolar.

Locations/subpopulations: 2 / not known. Fragmented.

Habitat status: Decrease in area >20% in the last 6 years due to deforestation and mining activity. Decrease in quality of the habitat mainly due to mining [Bhat *et al.,* 1993], and deforestation.

Data source: Informal sighting; observed, inferred.

Threats
Threats to the taxon: Habitat loss, extraction, mining, habitat loss and deforestation. In the case of deforestation, it is not reversible, especially after human occupation. The influence of threats on the population well understood, not reversible and have not ceased.

Data source: Informal field sighting; inferred.

Population
Generation time: 3-5 years

Mature individuals: Not known

Population trend: Not known

Data source: Indirect information; inferred

Red List 2001 Status derived in the workshop

Ver. 3.1: ENDANGERED B1ab(ii,iii) + 2ab(ii,iii)

The species has a restricted distribution, found only in two locations and is under threat from habitat destruction and modification.

1997 C.A.M.P. (Ver. 2.3): Not Evaluated

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Vulnerable B1+2c, D2
Microchiroptera Action Plan (Global): Vulnerable B1+2C; D2
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey studies, genetic research, taxonomic research, life history, ecological research

Management: Habitat management, monitoring, public awareness

Comments
Recently described endemic species that requires urgent follow-up studies to determine its distribution, population status and threats to its survival. The species is found only in Kolar district, Karnataka, India. There has been controversy regarding the systematic position of the species. Identity of the specimens in caves must be clarified. Known from only two localities Hanumanhalli and Therhalli in Karnataka. Current existence of this population is unknown (Srepada). Kolar locality is based upon 2 undated specimens from BM(NH), London. Srinivasulu had been visiting Kolar areas infrequently and the information on habitat is based on informal observations. Kolar and Mysore being 250km apart the group feels that it probably occurs between these two points and nearby areas and calculated the EOO based on 250km on either side. The existing database needs to be corrected with regard to distribution, that is, Thailand; this species is only found in India as described by Kock & Bhatt (1994). Wilson & Reeder (1992) list *H. hylophyllus* not *H. hypophyllus* and is not found in Thailand (?). Proper methodology must be applied for counting the number of individuals.

Sources
Bates & Harrison, 1997; Kock & Bhat, 1994; Sreepada *et al.,* 1993; Wilson & Reeder, 1993

Compilers
M.A. Ali, J.K. Immanuel, V.S. Korad, S. Mistry, P.T. Nathan, A. Noble, M. Singaravelan, Y.P. Sinha, C. Srinivasulu

Reviewers
Rest of the participants

Recent Field Studies
Sreepada *et al.,* in Therahalli, India, 1993, Trends of karyotypic evolution in the genus *Hipposideros - Cytobios*. 75, p. 49-57

Distributionin South Asia from recent field sighting

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Karnataka			
Hanumanhalli	13º 09	78º 07	Cave mining Sreepada *et al*. 1993, 1997.
Therhalli	13º 10	78º 23	Subterranean cave. - coexisting with three other species of *Hipposideros.* Mining Sreepada *et al*. 1993, 1997.

Hipposideros lankadiva Kelaart, 1850 — LEAST CONCERN

Synonyms: *Hipposideros indus* Andersen, 1918
Hipposideros indus mixtus Andersen, 1918
Hipposideros indus unitus Andersen, 1918
Hipposideros schistaceus Andersen, 1918

Common names: Bengali: *Guhabashi Patanak Chamchika*; Sinhalese: *Kelaarta Pathra-nas Wavula*; English: Kelaart's Leaf-nosed Bat, Large Ceylon Leaf-nosed Bat.

Family: Hipposideridae

Habit: Colonial, sympatric, gregarious, insectivorous

Habitat: Cave, ruins, mines, temples.

Niche: Temples, cellars, crevices of trees, in Nypa palm fronds and in abandoned forest lodges. Up to 1000m.

Distribution
Global: Bangladesh, India, Sri Lanka

South Asia:
Bangladesh: Sunderbans
India: Andhra Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Meghalaya, Orissa, Rajasthan, West Bengal
Sri Lanka: Badulla Province, Central Province, Eastern Province, Sabaragamuwa Province, Southern Province, Western Province

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,001 sq km.

Locations/subpopulations: Many / many. Fragmented.

Habitat status: Habitat status stable. Decrease in quality due to deforestation

Data source: Field study; observed; 95% confidence.

Threats
Threats to the taxon: Habitat loss, deforestation, hunting, human interference. The influence of threats on the population is well understood, reversible and has not ceased.

Data source: Field study; observed, inferred.

Population
Generation time: 5-7years

Mature individuals: > 10,000. Mature individuals may decline in the future by <20%.

Population trend: <10% decline in the last 5 years. <10% decline likely in the future.

Data source: Field study; observed, inferred

Red List 2001 Status derived in the workshop

Ver. 3.1: **LEAST CONCERN**

National Status:
Bangladesh: Least Concern
India: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Nagarjunsagar-Srisailam Tiger Reserve, Andhra Pradesh; Kanha National Park, Madhya Pradesh

Recommendations
Research: Survey, research on human interference as a threat for the species.

Management: Monitoring public awareness

Comments
Hipposideros schistaceus is considered a separate endemic species by some authors [Bates & Harrison, 1997 and W.W.A. Philips, 1980]. *H.l. indus* is a valid subspecies in India. It is smaller than its Lankan counterpart. It is always found *with H. speoris, Rhinolophus rouxii, H. fulvus, H. galeritus, Miniopterus schreibersii, Rousettus leishenaulti* in Sri Lanka [Yapa & Digana] and *H. armiger, Miniopterus schreibersii, Rousettus leishenaulti, Myotis blythii, Rhinolophus pearsonii, Ia io* in India [Thabah]. In Mandu a colony of 1000 individuals of this species in 1970s was replaced by *Rousettes leschenaulti* in 1990s [Bates]. *Eonycteris, Megaderma lyra, Taphozous melanopogon* [W. Yapa, P.C.M.B. Digana, A. Thabah]. In 1970s there was a large group of *H. lankadiva* recently it was found to be displaced by *Rousettes* sp. In Sri Lanka, 11351 bats were counted from various localities [Yapa & Digana]. In Meghalaya there are about 6000 individuals [Tabah]. Considering the population estimates of 16000 both in Sri Lanka and Meghalaya in India an estimate of 20,000 and 10,000 adult mature individuals is a conservative estimate. The species is hunted extensively by locals in Sri Lanka and Meghalaya. However, it is not in trade. Wide geographical range from Sri Lanka to Southeast India. Wide geographical range from Sri Lanka to North east India.

Sources
Andersen, 1918; Bates & Harrison, 1997; Bhat and Sreenivasan, 1990; Bhatnagar, 1981; Harshey & Chandra, 2001; Khan, 2001; Philips 1980; Sapkal & Bandarkar, 1984; Wilson & Reeder, 1993

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
M. Muni in Madhya Pradesh, 1992, Maharashtra, 1993;
Y.P. Sinha in Meghalaya, 1990-1994;
P.P. Kulkarni in Tadoba National Park, 1996
W. Yapa & P.C.M.B. Digana in Bogala, Sabaragamuwa, Kegolle, Wavulpane,Yala, Hasticuchchiya & Rideegama, Wavulgalge, Badulla, 1995-2000, Ecology and distribution of bats.
A. Thabah, Shella & Sohbar in E. Khasi hills, Khadum, Jaintia hills, 2000-2002, Ecolocation and census.
P.J.J. Bates in Mandu, 1992.
H.R. Bhat, S. Sreenivasan & K.S. Sreepada in Kamalashille, Dakshina Kannada, Karnataka, India, 1984, 1993, 1997. Records of bats in Kyasanu forest disease area and environs in Karnataka, India with ecological notes.

Distribution in South Asia based on literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
Sunderbans			Khan, 2001
INDIA			
Andhra Pradesh			
Kurnool	15º 51	78º 01	Bates & Harrison, 1997
Karnataka			
Gersoppa	14º 12	74º 42	Type loc. of *indus* Bates & Harrison, 1997
Kamalashille	-	-	Human interference Sreepada, 1993
Kolar	13º 09	78º 10	Type locality of *mixtus* Bates & Harrison, 1997
Muroor	14º 26	74º 29	Bates & Harrison, 1997
Talewadi	15º 25	74º 22	Bates & Harrison, 1997
Vijayanagar	15º 20	76º 28	Type loc. of *schistaceus* Bates & Harrison, 1997
Yellapur	14º 59	74º 46	Human interference Bhat & Srinivasan, 1983
Madhya Pradesh			
Balharshah	-	-	Bates & Harrison, 1997
Balaghat	-	-	Harshey & Chandra, 2001
Gandigram	23º 10	79º 59	Bates & Harrison, 1997
Hoshangabad	-	-	Harshey & Chandra, 2001
Mandla	-	-	Harshey & Chandra, 2001
Kanha National Park	-	-	Harshey & Chandra, 2001
Mandu	22º 22	75º 24	type loc. of *unitus* Bates & Harrison, 1997
Sohagpur	22º 43	78º 14	Bates & Harrison, 1997
Maharashtra			
Chandrapur in Nagpur	19º 55	79º 28	Old temples, unused tunnel Bates & Harrison, 1997
Sangameshwar	17º 10	73º 30	Old temples Manoj Muni, 1993 Bates & Harrison, 1997
Meghalaya			
Chokpot, Garo hills	25º 32	75º 47	Caves A. Thabah, 2000-2002
Khadum, Jaintia hills	-	-	Caves A. Thabah, 2000-2002
Rongmachok	-	-	Bates & Harrison, 1997
Shella & Sohbar, East Khasi hills	-	-	Caves. Human disturbance. Hunted for meat. In May 2000 found at least 30-40 bats, in November 2001 only one bat was found and in December 2001 there were no bats. A. Thabah, 2000-2002
Siju Cave	25º 32	75º 47	Caves A. Thabah, 2000-2002 Bates & Harrison, 1997
Orissa			
Khandagiri	20º 20	85º 50	Bates & Harrison, 1997
Rajasthan			
Bhimbharak	26º 09	73º 08	Bates & Harrison, 1997
West Bengal			
Darjeeling	27º 02	88º 20	Bates & Harrison, 1997
Khuntimari	26º 31	8º 50	Bates & Harrison, 1997
SRI LANKA			
Badulla Province			
Wavulgale	-	-	Cave Yapa & Digana, 1995-1999
Central Province			
Gampaha	-	-	Bates & Harrison, 1997
Kandy	07º 17	80º 40	type locality of *lankadiva* Bates & Harrison, 1997
Kumbalgamuwa	07º 08	80º 50	Bates & Harrison, 1997
Kitulgala	07º 00	80º 22	Bates & Harrison, 1997
Labugama	06º 55	80º 11	Bates & Harrison, 1997
Medagama	07º 02	81º 17	Bates & Harrison, 1997
Eastern Province			
Inginiyagala	07º 16	81º 30	Bates & Harrison, 1997
North Central Province			
Hasticuchchiya	7º 57	80º 46	Cave Yapa & Digana, 1995-1999
Ridigama	7º 28	80º 23	Cave [Yapa & Digana, 1995-1999].
Sabaragamuwa Province			
Bogala	7º 57	80º 15	Mine Hunted for food and medicine Yapa & Digana, 1995-1999
Wavulpane	06º 25	80º 40	Cave Yapa & Digana, 1995-1999
Southern Province			
Yala	06º 22	81º 30	Cave Yapa & Digana, 1995-1999
Western Province			
Papiliana, Colombo	06º 55	79º 52	Cave Yapa & Digana, 1995-1999

Hipposideros larvatus (Horsfield, 1823)

NEAR THREATENED in South Asia

Synonyms: *Rhinolophus larvatus* Horsfield, 1823
Hipposideros larvatus grandis Allen, 1936
Phyllorhina leptophylla Dobson, 1874

Common name: Bengali: *Majhari Patanak Chamchika*; English: Horsfield's Leaf-nosed Bat

Family: Hipposideridae

Habit: Colonial, insectivore, co-exists with other species

Habitat: Dry zones, grassland, forest

Niche: Caves, buildings, pagoda. 40-860m.

Distribution
Global: Bangladesh, India, Thailand, Vietnam, Myanmar, China, Malaysia Borneo, Indonesia, Laos, Cambodia.

South Asia:
Bangladesh
India: Arunachal Pradesh, Assam, Meghalaya

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many / not known. Contiguous.

Habitat status: Not known

Data source: Field study; observed

Threats
Threats to the taxon: No threats.

Data source: Field study; inferred.

Population
Generation time: 4-6 years

Mature individuals: Not known

Population trend: Not known

Data source: Field study, indirect information, museum; observed, inferred.

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

In northeastern India only 2 colonies consisting of <100 individuals each have been observed in the last 5 years. Although no visible threats have been observed, given its restricted distribution in South Asia with few numbers, it is Near Threatened.

National Status:
Bangladesh: Near Threatened
India: Near Threatened

Uncertainty
Assessed based on inference, evidence, precaution and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Orang National Park (Assam).

Recommendations
Research: Survey, taxonomic research, life history

Management: Monitoring, habitat management, public awareness

Captive breeding: Some techniques known for taxon or similar taxon.

Comments
In Myanmar, this is a very common bat with large colonies; common and widespread species in the northeastern part of Southeast Asia. Habitat quality decreasing due to mining for the manufacture of cement in Myanmar -- 4000 tons of cement is manufactured per day in Myanmar from the limestone caves. < 10% decrease in area in the last 10 years. < 10% decrease in habitat predicted in the next 10 years due to limestone mining in Myanmar. Mature individuals in India and Myanmar > 10,000. Declines in Myanmar <10% in mature individuals in the past. <10% decline likely in the future.

Sources
Allen, 1936; Bates, & Harrison, 1997; Dobson, 1874; Horsfield, 1821-24; Khan, 2001

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
A. Ali in Orang National Park, Assam, India, 1998, General field study.
A. Thabah in East Khasi Hills, India, 2001, Echolocation.
K.M. Swe in Kayin State, Mon state, Bagan, Kayah, 1999-2000, Biodiversity survey.

Distribution in South Asia and Myanmar based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
Notheastern hill country (Sylhet)	24º 53	91º 51	Khan, 2001; Bates & Harrison, 1997
Southeastern hill country (Chittagong)			Khan, 2001
INDIA			
Arunachal Pradesh			
Dirang valley	-	-	Chakravorty, 1991
Assam			
Goalpara	26º 10	90º 38	Bates & Harrison, 1997
Kamrup	26º 25	91º 30	Chakravorty, 1991
Orang National Park	-	-	Grassland. Azad Ali, 1998
Rajapara	26º 30	92º 00	Bates & Harrison, 1997
Meghalaya			
Cherrapunji	25º 16	91º 42	Bates & Harrison, 1997
East Khasi Hills	25º 20	91º 55	Cave. Beetle nut plantation. Human disturbance. A. Thabah, 2001 Chakravorty, 1991
Laitkynsao	25º 48	91º 58	Chakravorty, 1991 Bates & Harrison, 1997
Nongpoh	25º 34	91º 53	Bates & Harrison, 1997
Tura	25º 32	90º 14	Chakravorty, 1991 Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
MYANMAR (NORTHERN)			
Akanti	-	-	Type locality of *grandis* Bates & Harrison, 1997
Bagan	-	-	Buildings in grasslands, K.M. Swe, 2000 March-April.
Hai Bum	26º 02	95º 52	Bates & Harrison, 1997
Hkamti	26º 01	95º 45	Bates & Harrison, 1997
Kayah	-	-	Caves in shrubland K.M. Swe, 2000.
Kayin State	-	-	Limestone caves. Possible some human disturbance, K.M. Swe, 1999
Kayouk-Myoung	26º 36	95º 55	Bates & Harrison, 1997
Mamsam Falls	22º 38	97º 26	Bates & Harrison, 1997
Mingun	22º 00	95º 58	Bates & Harrison, 1997
Mon state	-	-	Limestone cave and paddy fields Human disturbance Swe, 1999
Mount Popa	20º 56	95º 16	Bates & Harrison, 1997
Pagan	21º 07	94º 53	Bates & Harrison, 1997
Pyaunggaung	22º 38	97º 22	Bates & Harrison, 1997
Yin	22º 45	94º 46	Bates & Harrison, 1997

Hipposideros pomona Andersen, 1918

LEAST CONCERN in South Asia

Synonyms: *Hipposideros gentilis* Andersen, 1918

Common name: Andersen's Leaf-nosed Bat

Family: Hipposideridae

Habit: Insectivorous, associated with other *Hipposideros* sp.

Habitat: Caves, subterranean habitats.

Niche: Caves, crevices of rocks and buildings. Up to 2000m.

Distribution
Global: India, Nepal, Bangladesh, Myanmar, China, Laos, Malaysia, Thailand

South Asia:
Bangladesh
India: Andaman & Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Karnataka, Kerala, Meghalaya, Nagaland, Sikkim, Tamil Nadu, West Bengal
Nepal

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 20 / Many. Contiguous.

Habitat status: Human interference in Nepal. Decrease in quality due to human interference in Nepal.

Data source: Field study; observed.

Threats
Threats to the taxon: Habitat loss, development, exploitation, hunting for food, human interference.

Data source: Field study, indirect information; observed, inferred.

Population
Generation time: 4-6 years

Mature individuals: < 2,500. Mature individuals have declined in the past and are likely to decline in the future.

Population trend: Not known.

Data source: Indirect information; inferred

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status:
Bangladesh: Data Deficient
India: Least Concern
Nepal: Near Threatened

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, taxonomic research, basic ecology.

Management: Monitoring

Comments
Controversy regarding the systematics of the species and it was proposed that it should be synonymized with *H. hypophyllus*. The 2 species are discrete. Specimens collected from southern Indian localities were initially identified *as H. pomona,* however Bhat has clarified in his paper (Bhat & Kock, 1994) as *H. hypophyllus*. The above does not alter the status of the name *pomona* (Bates). Stable in area in Myanmar. It occurs in small groups in each roost. EOO based on distribution in South Asia only, not Myanmar. Tourism in Myanmar (for religious purpose) and collection by locals for food and medicine in Myanmar are threats in that country.

Sources
Andersen, 1918; Bates, & Harrison, 1997; Wilson & Reeder, 1993.

Compilers
P.J.J. Bates, P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, E. Pandaranayaka, M.S. Pradhan, Y.S. Priya, H. Raghuram, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Recent Field Studies
Agrawal in Arunachal Pradesh, Assam, Meghalaya, Sikkim, 1992, survey
K.M. Swe and P.J.J. Bates in Bagan (1999), Shan State, Rakhine State, Kayah State (2000), Survey

Distribution in South Asia and Myanmar from literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
Sylhet	24º 53	91º 51	Bates and Harrison, 1997
INDIA			
Andaman & Nicobar Islands			
Camorta Island		08º 08	93º 42
Andhra Pradesh			
Macherla		16º 29	79º 25
Arunachal Pradesh			
Dreyi	-	-	Bates and Harrison, 1997
Hugel	-	-	Bates and Harrison, 1997
Tiki	28º 00	96º 20	Bates and Harrison, 1997
Assam			
Cachar	25º 00	93º 00	named as *bicolor fulvus* ? In Kurup, 1926 Bates and Harrison, 1997
Golaghat	26º 30	93º 57	Bates and Harrison, 1997
Guwahati	26º 10	91º 45	Bates and Harrison, 1997
Margherita	27º 17	95º 40	Bates and Harrison, 1997
Nazira	26º 51	94º 42	Bates and Harrison, 1997
Rajapara	26º 30	92º 00	Bates and Harrison, 1997
Karnataka			
Haleri	12º 31	75º 40	Type locality of *pomona* Bates and Harrison, 1997
Kerala			
Thrissur	10º 32	76º 14	Collected from car shed with *H. ater* A. Madhavan, 1993
Venginissery	10º 32	76º 14	Bates and Harrison, 1997
Meghalaya			
Cherrapunji	25º 16	91º 42	Bates and Harrison, 1997
Dura Bandara	25º 32	90º 14	Bates and Harrison, 1997
Laitkynsao	25º 48	91º 58	Bates and Harrison, 1997
Mawryngkueng	-	-	Bates and Harrison, 1997
Nagaland			
Mokokchung	26º 20	94º 30	Bates and Harrison, 1997
Sikkim			
Rongli	27º 17	88º 45	named as *fulvus* in Wroughton, 1916b Bates and Harrison, 1997
Tamil Nadu			
Madhavoram	11º 39	78º 09	Bates and Harrison, 1997
West Bengal			
Hasimara	26º 52	89º 48	Named as *fulvus* in Wroughton, 1917a Bates and Harrison, 1997
Laljal	-	-	named as fulvus in Agrawal et al., 1992 Bates and Harrison, 1997
Narbong	27º 04	88º 24	Named as *fulvus* in Wroughton, 1916b Bates and Harrison, 1997
Nimbong	27º 04	88º 25	Bates and Harrison, 1997
Pashok	27º 04	88º 24	Bates and Harrison, 1997
Sangser	27º 04	88º 30	named as *fulvus* in Wroughton, 1917b Bates and Harrison, 1997
Tong Song	27º 04	88º 24	Bates and Harrison, 1997
NEPAL			
Mehendra Gupha	-	-	Bates and Harrison, 1997
Pokhra	28º 14	83º 58	Urban area - heart of the city Tourism T.K. Shrestha
MYANMAR (NORTHERN)			
Bagan	-	-	K.M. Swe and P.J.J. Bates, 1999-2000
Gokteik	22º 38	97º 24	Bates and Harrison, 1997
Hai Bum	26º 02	95º 52	Bates and Harrison, 1997
Homalin	24º 55	95º 01	Bates and Harrison, 1997
Kayah state	-	-	Khin Maung Swe and Bates, 1999-2000
Mandalay	21º 57	96º 04	Bates and Harrison, 1997
Mingun	22º 00	95º 58	Bates and Harrison, 1997
Monywa	22º 05	95º 12	Bates and Harrison, 1997
Mount Popa	20º 56	95º 16	Bates and Harrison, 1997
Nyaung Oo, Yakhine, Kalaw, Loi Kaw	-	-	Caves, crevices Visits by locals, electrification K.M. Swe, March 2000
Pagan	21º 07	94º 53	Bates and Harrison, 1997
Pegu	17º 18	96º 31	Bates and Harrison, 1997
Rakhine state	-	-	K.M. Swe and Bates, 1999-2000
Thayetmyo	19º 20	95º 18	Type locality of *gentiles* Bates and Harrison, 1997
Toagine	-	-	Bates and Harrison, 1997

Hipposideros speoris (Schneider, 1800) — LEAST CONCERN

Synonyms: *Vespertilio speoris* Schneider, 1800
Hipposideros apiculatus Gray, 1838
Hipposideros aureus Kelaart, 1852
Hipposideros blythi Kelaart, 1852
Hipposideros penicillatus Gray, 1838
Hipposideros speoris pulchellus Andersen, 1918
Hipposideros templetonii Kelaart, 1850
Rhinolophus dukhunensis Sykes, 1831
Rhinolophus marsupialis Desmarest, 1820

Common names: Marathi: *Paboli*; English: Schneider's Leaf-nosed Bat

Family: Hipposideridae

Habit: Insectivorous, nocturnal, colonial (mixed colonies).

Habitat: Dry and forested areas, caves, temples, abandoned buildings.

Niche: Crevices of unused buildings, ruins, temples, wells, attics in old houses, hilly terrain, caverns, ladhani (temporary structures in houses in Maharashtra). Any place with darkness and humidity. Up to 1385m.

Distribution
Global: India, Sri Lanka

South Asia:
India: Andhra Pradesh, Gujarat, Karnataka, Kerala, Maharashtra, Orissa, Tamil Nadu, Uttar Pradesh
Sri Lanka: Central Province, Eastern Province, North Western Province, Northern Central Province, Northern Province, Sabaragamuwa Province, Southern Province, Southern Province**,** Uva Province, Western Province

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many. Fragmented.

Habitat status: No change in habitat.

Data source: Census/monitoring, field study, literature; observed.

Threats
Threats to the taxon: Habitat loss, stone quarrying, chemical spraying, renovation of temples in southern India. It is hunted for medicine/food in some villages in Tamil Nadu. The influence of threats on the population well understood, not reversible and have not ceased.

Data source: Field study; observed.

Population
Generation time: 4-6 years

Mature individuals: > 10,000. Mature individuals have not declined in the past but may decline by 10% in the future.

Population trend: > 10,000. Population stable at present. <10% decline likely in the next 10 years due to habitat loss.

Data source: Indirect information; inferred; range of opinion.

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

Widely distributed and very common endemic bat.

National Status
India: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Nagarjunsagar-Srisailam Tiger Reserve (Andhra Pradesh).

Recommendations
Research: Survey studies genetic research, life history, ecological and habitat studies

Management: c

Captive breeding: Techniques not known at all.

Comments
Hipposideros pulchellus, Andersen has been synonomised as *Hipposideros speoris speoris* (Schneider, 1800). It is a very delicate species, easily affected by slightest disturbance, especially during breeding season. No special management and conservation plan required. No decline in habitat and no major threats. In some villages in Tamil Nadu *H. speoris* is hunted for medicine and food. Population found to be exhibiting maternity colony elsewhere [Sreepada & H.R. Bhat]. Continuous distribution except for population recorded in Dehra Dun (Historical 1874 record). Roost disturbance affects the species in some parts of southern India. Sri Lankan population: EOO >20,000, AOO approx. 1000. Approximately 76 locations. No decline in habitat and no major threats in Sri Lanka. Extensive field studies by many workers, extensive data available. There is a distinct increase in the number of females during breeding season [Wipula Yapa]. A cave in the above study has more than 600 individuals in the above studies. Sri Lankan population more than 20,000 in 76 locations.

Sources
Andersen, 1918; Bates, & Harrison, 1997; Bhat & Sreenivasan, 1990; Desmarest, 1820; Gray, 1838; Hutson *et al*., 2001; JBNHS Collections; Kelaart, 1850, 1852, 1853; Schneider, 1800; Sreepada & Ravishankar, 2000; Sykes, 1831; Wilson & Reeder, 1993

Compilers
A.C. Girish, G. Marimuthu, M. Muni, H. Raghuram, K.R. Senacha, T.K. Shrestha, K.S. Sreepada, J. Vanitharani

Reviewers
Rest of the participants

Recent Field Studies
J. Vanitharani in Tirunelveli, 1991till date, survey of bats
J. Balasingh in Tirunelveli, 1990-97;
M. Muni in Aurangabad, 1992;
G. Marimuthu in Samanar Cave near Madurai, 1977-1997;
Y.P. Sinha in Gujarat, 1976
M. Muni in Mumbai, Belgaum [1991-93], Ratnagiri [2000]
T. R. Radhamani in Samanar Cave near Madurai, 1988-96, behavioural diversity betwwen 2 species of Hipposiderid bat

K.S. Sreepada & H.R. Bhat in KFD (Kyasanur Forest Disease) area in Karnataka, 1991-93
C. Srinivasulu in whole of Andhra Pradesh, 1995 onwards, Documentation of Chiropteran diversity in Andhra Pradesh.
V.S. Korad and K.D. Yardi in Pune, 1998-200, Ecological study and faunistic survey of Bats in Pune corporation limits.
W. Yapa & P.C.M.B. Digana in Sri Lanka, 1995-99. Ecology and Distribution.

Distribution in South Asia based on literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Andhra Pradesh			
Chintarjunapally, Palkonda hills	-	-	BNHS collections
Cuddapah	14º 30	78º 50	Bates & Harrison, 1997
Ethipotla Fall	16º 35	79º 17	Bates & Harrison, 1997
Koduru	13º 58	79º 14	BNHS collections Bates & Harrison, 1997
Macherla	16º 29	79º 25	Bates & Harrison, 1997
Madhavoram	11º 39	78º 09	BNHS collections
Nallamala Hills	-	-	Dry Deciduous and mixed forests Construction of underground tunnels for water supply, Loss of habitat; habitat fragmentation; overexploitation of natural resources C. Srinivasulu, 1995-present
Nellore	14º 27	80º 01	Bates & Harrison, 1997
Pakhal	-	-	Bates & Harrison, 1997
Palkonda Hills	13º 50	79º 00	Bates & Harrison, 1997
Rajampetta	-	-	BNHS collections
Thummalah	-	-	Bates & Harrison, 1997
Gujarat			
Baroda	22º 19	73º 14	Bates & Harrison, 1997
Rajmahal	22º 19	73º 15	Bates & Harrison, 1997
Karnataka			
Badami	15º 58	75º 45	Bates & Harrison, 1997
Bangalore	12º 58	77º 35	R. Krishnan Bates & Harrison, 1997
Belgaum	15º 54	74º 36	Caves Tourism, human Inteference M. Muni, 1991-1993 Bates & Harrison, 1997
Gadag	15º 26	75º 42	BNHS collections Bates & Harrison, 1997
Gersoppa	14º 12	74º 42	Loss of habitat Population number: 1000 K.S. Sreepada & H.R. Bhat, 1991-1993 BNHS collections Bates & Harrison, 1997
Gokarna	14º 34	74º 21	Human Interference Population range: 50-100 K.S. Sreepada & H.R. Bhat, 1991-1993
Hampi	15º 20	76º 25	Bates & Harrison, 1997
Hannasar	-	-	BNHS collections
Hanumanhalli	13º 09	78º 07	Bates & Harrison, 1997
Honawar	14º 19	74º 27	Bates & Harrison, 1997
Kolar	13º 09	78º 10	BNHS collections Bates & Harrison, 1997
Konaje	-	-	Population range: 0-100 K.S. Sreepada & H.R. Bhat, 1991-1993
Lingasugur	15º 11	76º 54	Bates & Harrison, 1997
Muroor	14º 26	74º 29	Human Interference Population range: 400-500 K.S. Sreepada & H.R. Bhat, 1991-1993
Mysore	12º 18	76º 37	Bates & Harrison, 1997
Nislneer	14º 12	74º 33	Human Interference
			Population range: 400-500 K.S. Sreepada & H.R. Bhat, 1991-1993
Pattadkal	16º 00	75º 47	Bates & Harrison, 1997
Ratnagiri	17º 00	73º 20	BNHS collections
Seringapatnam	12º 25	76º 41	BNHS collections Bates & Harrison, 1997
Sivasamudram	12º 16	77º 08	BNHS collections Bates & Harrison, 1997
Sogala	-	-	Habitat loss Population range: 0-15 K.S. Sreepada & H.R. Bhat, 1991-1993
Therhalli	13º 10	78º 23	Bates & Harrison, 1997
Vijayanagar	15º 20	76º 28	type loc. of *pulchellus* BNHS collections Bates & Harrison, 1997
Kerala			
Arambol	08º 15	77º 33	BNHS collections Bates & Harrison, 1997
Kottayam	-	-	A. Noble, 2001
Kozhikode	11º 15	75º 45	Underground cellars, underbridges, caves, uninhabited old palaces A. Madhavan
Travancore	09º 00	77º 00	Bates & Harrison, 1997 (Tamil Nadu)
Trivandrum	08º 41	76º 57	Bates & Harrison, 1997
Maharashtra			
Alibag	18º 38	72º 55	Bates & Harrison, 1997
Asgani	17º 38	73º 26	Bates & Harrison, 1997
Borivli	19º 14	72º 57	Bates & Harrison, 1997
Chanda	19º 58	79º 21	Bates & Harrison, 1997
Chatrushringi temple (?)	18º 31	73º 51	Habitat loss (?) Population numbers: 250 K.D. Yardi, 2000
Elephanta	18º 54	72º 58	Caves Tourism, Human Interference BNHS collections Bates & Harrison, 1997
Ellora	20º 04	75º 15	Bates & Harrison, 1997
Ganesh-Khind	-	-	Human interference
Hill Chatrushringi temple	-	-	Human interference Korad & Yardi
Kanheri	19º 13	72º 59	Bates & Harrison, 1997
Murbad	-	-	Human interference and man induced threats D.S. Joshi
Nanded	19º 11	77º 21	Bates & Harrison, 1997
near Satara	-	-	Bates & Harrison, 1997
Poona	18º 34	73º 58	Bates & Harrison, 1997
Sasanee, Thane	-	-	Replacing old houses with new ones, leading to population decline. Species have been replaced in 23 villages due to human intereference Population number: 2 D.S. Joshi - August 2001
Thane	-	-	Human interference and man induced threats D.S. Joshi
Wotekolli	12º 00	76º 00	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Orissa			
Bhubaneshwar	20º 13	85º 50	Bates & Harrison, 1997
Mahendragiri	19º 00	84º 19	Bates & Harrison, 1997
Tamil Nadu			
Cheranmadevi	08º 44	74º 42	Well, Temple [<1500], Houses [500-600] Human Intereference Population range: 500-1500 J. Vanitharani, 1991 till date
Dharmapuri	12º 11	78º 07	BNHS collections
Idachivillai	-	-	Abandoned house Human Intereference J. Vanitharani, 1991 till date
Kanavai Katha Bootham	-	-	Bates & Harrison, 1997
Karungulam	-	-	Temple Human Intereference J. Vanitharani, 1991 till date
Keela Kuyil Kudi	09º 52	78º 09	Bates & Harrison, 1997
Kurumbapatti	-	-	BNHS collections; Bates & Harrison, 1997
Madras	13º 05	80º 18	Bates & Harrison, 1997
Madurai	09º 55	78º 07	Caves Hunting, Netting, Human Interference G. Marimuthu, 1977-83 T. R. Radhamani, 1988-93 Bates & Harrison, 1997
Murappanadu	8º 44	77º 42	Temple Human Intereference J. Vanitharani, 1991 till date
Mutheesvaram	-	-	Abandoned house Human Intereference J. Vanitharani, 1991 till date
Nagarcoil	08º 11	77º 30	Bates & Harrison, 1997
Palayamkottai (NGO colony)	8º 44	77º 42	Abandoned motar room Human Interference J. Vanitharani, 1991 till date
Pannian Malai	09º 55	78º 02	Bates & Harrison, 1997
Parappadi	-	-	Cave Stone quarry, Temple renovation work disturbs them, capturing by TVS company, Hunting. J. Vanitharani, 1991 till date
Rajendra Nagar, Palayamkottai	-	-	35 kms from Palayamkottai Abandoned house J. Vanitharani, 1991 till date
Salem	11º 38	78º 08	Bates & Harrison, 1997
Thimmarajapuram	-	-	Abandoned house Human Intereference J. Vanitharani, 1991 till date
Thirupadaimarudhur	-	-	Near Ambhasamudram Temple Human Intereference J. Vanitharani, 1991 till date
Tirthamalai	12º 06	78º 36	Bates & Harrison, 1997; BNHS collections
Tirunelveli	08º 44	72º 42	S. Balasingh & P.T. Nathan, 2000
Trichinopoly	10º 50	78º 46	Bates & Harrison, 1997
Urkadu	-	-	Temple Human Intereference J. Vanitharani, 1991 till date
Vitillapuram	-	-	Temple
			Human Intereference J. Vanitharani, 1991 till date
Uttaranchal			
Dehra Dun	30º 19	78º 03	Bates & Harrison, 1997
SRI LANKA			
Central Province			
Gammaduwa	07º 32	80º 41	Bates & Harrison, 1997
Kandy	07º 17	80º 40	Yapa & Digana, 1995-1999
Matale	07º 28	80º 37	Yapa & Digana, 1995-1999
Nitre Cave	07º 20	80º 47	Bates & Harrison, 1997
Peradeniya	07º 15	80º 40	Bates & Harrison, 1997
Eastern Province			
Trincomalee	08º 34	81º 13	Bates & Harrison, 1997
Valaichenai	07º 54	81º 32	BNHS collections Bates & Harrison, 1997
Northern Province			
Mannar	08º 58	79º 54	Bates & Harrison, 1997
Northern Central Province			
Anuradhapura	08º 20	80º 25	Yapa & Digana, 1995-1999 Bates & Harrison, 1997
Kala Wewa	08º 00	80º 34	Yapa & Digana, 1995-1999 Bates & Harrison, 1997
Polonnaruwa	07º 56	81º 02	Yapa & Digana, 1995-1999 Bates & Harrison, 1997
Tammannewa	08º 27	80º 37	Yapa & Digana, 1995-1999 BNHS collections Bates & Harrison, 1997
North Western Province			
Kala Oya	08º 12	80º 04	Bates & Harrison, 1997
Kurunegala	07º 28	80º 23	Yapa & Digana, 1995-1999
Puttalum	-	-	Yapa & Digana, 1995-1999
Sabaragamuwa Province			
Balangoda	06º 39	80º 42	Bates & Harrison, 1997
Bogala	7º 57	80º 15	Bates & Harrison, 1997
Kegalle	-	-	Yapa & Digana, 1995-1999
Ratnapura	-	-	Yapa & Digana, 1995-1999
Southern Province			
Galle	06º 01	80º 13	Yapa & Digana, 1995-1999
Hambantota	06º 07	81º 07	Yapa & Digana, 1995-1999 Bates & Harrison, 1997 BNHS collections
Welligata	06º 12	81º 10	BNHS collections Bates & Harrison, 1997
Uva Province			
Badulla	-	-	Yapa & Digana, 1995-1999
Monaragala	-	-	Yapa & Digana, 1995-1999
West Haputale	-	-	Bates & Harrison, 1997
Western Province			
Colombo	06º 55	79º 52	Yapa & Digana, 1995-1999
Kalutara	06º 35	79º 59	Yapa & Digana, 1995-1999 Bates & Harrison, 1997
Matugama	06º 32	80º 05	Bates & Harrison, 1997
Hosama	-	-	Bates & Harrison, 1997
Unknown provinces			
Palutupana	-	-	BNHS collections
Rasagalla	-	-	BNHS collections
Samarakalu	-	-	BNHS collections

Ia io Thomas, 1902

ENDANGERED in South Asia

Synonyms: *Ia longimana* Pen, 1962
Parascotomanes beaulieui Bourret, 1942

Common name: Great Evening Bat

Family: Vespertilionidae

Habit: Insectivorous.

Habitat: Natural caves, subtropical dense karst forest.

Niche: Limestone caves. 1600-1700m.

Distribution
Global: India, Nepal, China, Thailand, Laos, Vietnam.

South Asia:
India: Meghalaya
Nepal

Extent of Occurrence: 101-5,000 sq km.

Area of Occupancy: 11-500 sq km.

Locations/subpopulations: 3 / 2. Fragmented.

Habitat status: Declining in quality due to threats.

Data source: Indirect information; inferred, estimated

Threats
Threats to the taxon: Habitat loss, deforestation, human interference. Threats are resulting in population decline.

Population
Generation time: Not known

Mature individuals: < 2,500. >10% decline in mature individuals in the last 2 years. >10% decline likely in the next 5 years.

Population trend: >10% decline in mature individuals in the last 2 years. >10% decline likely in the next 5 years

Data source: Field study; observed.

Recent Field Studies
Y.P. Sinha in Meghalaya, 1992.
A. Thabah in East Khasi Hills, Meghalaya, India, 2001, Echolocation study

Distribution in South Asia based on literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Meghalaya			
Cherrapunji	25º 16	91º 42	Bates & Harrison, 1997
East Khasi Hills	25º 20	91º 55	Limestone cave in a tropical evergreen forest Habitat destruction, A. Thabah, 2001
NEPAL			
Bimalnagar	27º 45	84º 29	Bates & Harrison, 1997

Red List 2001 Status derived in the workshop

Ver. 3.1: ENDANGERED B1ab(iii) + 2ab(iii)

Only three locations in South Asia and no evidence of continuity in distribution with the Southeast Asian population, hence regionally more threatened.

National Status:
India: Endangered B1ab(iii)+2ab(iii)
Nepal: Critically Endangered B1ab(iii)+2ab(iii)

Uncertainty
Assessed based on evidence, precaution and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Lower Risk near threatened
Microchiroptera Action Plan (Global): Lower Risk near threatened
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey studies, life history

Management: Monitoring

Captive breeding: Techniques not known at all.

Comments
Single species of the genus *Ia*.

Sources
Bates & Harrison 1997; Bourret, 1942; Hutson *et al*., 2001; Mickleburgh *et al*., 1992; Pen 1962; Thomas, 1902; Topal, 1970

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, Nair, R. Rajashekar, A. Thabah, E.A.A. Shukkur, Y.P. Sinha, W. Yapa

Reviewers
Rest of the participants

Kerivoula hardwickii (Horsfield, 1824)

LEAST CONCERN in South Asia

Synonyms: *Vespertilio hardwickii* Horsfield, 1824
Kerivoula crypta Wroughton & Ryley, 1913
Kerivoula depressa Miller, 1906
Kerivoula fusca Dobson, 1871
Kerivoula malpasi Phillips, 1932

Common name: Hardwicke's Forest Bat

Family: Vespertilionidae

Habit: Solitary

Habitat: Found in warm valleys, caves, forest, buildings.

Niche: Roof; up to 2060m.

Distribution
Global: Sri Lanka, India, Myanmar, Thailand, China to Malaysia, Indonesia, Philippines

South Asia:
India: Assam, Jammu & Kashmir, Karnataka, Meghalaya, Mizoram, Nagaland, West Bengal
Pakistan: Punjab
Sri Lanka: Central Province

Myanmar (Northern)

Extent of Occurrence: > 20,001 sq km.

Area of Occupancy: > 2,001 sq km.

Locations/subpopulations: > 20 / at least 4. Fragmented.

Habitat status: Stable in area. Adapts to secondary or disturbed habitat.

Threats
Threats to the taxon: Pollution, pesticides(?). The influence of the threats on the population is not well understood.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Not known.

Data source: Literature; inferred.

Recent Field Studies
Paul Bates in Pallama, Sri Lanka, 1994, survey
P. Sinha, India, 1999, survey

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

Widespread distribution and common habitat type suggests that this little known bat is in reality probably quite common.

National Status
India: Least Concern
Pakistan: Data Deficient
Sri Lanka: Least Concern

Uncertainty
Assessed based on inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Siju Wildlife Sanctuary (Meghalaya)

Recommendations
Research: Survey, life history, basic ecology, toxicological studies

Management: Monitoring

Comments
Apparent rarity may well reflect the difficulty in collecting specimens rather than actual situation in nature. The species lives in polluted agricultural areas. In Sri Lanka it lives in secondary disturbed habitat. The assessment was based on full range of plausible values and evidence assuming that habitat change has a negative impact on the species.

Sources
Bates & Harrison 1997; Dobson, 1871; Horsfield, 1821-24; Hutson *et al*., 2001; Miller, 1906; Phillips, 1932; Wroughton & Ryley. 1913

Compilers
P.J.J. Bates, P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, H. Raghuram, J. Vanitharani, K. Yardi

Reviewers
Rest of the participants

Distribution in South Asia and Myanmar based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Assam			
Rajapara	26º 30	92º 00	Bates & Harrison, 1997
Jammu & Kashmir			
Patni Top	32º 55	75º 07	Bates & Harrison, 1997
Karnataka			
Kardibetta	14º 08	75º 20	Bates & Harrison, 1997
Meghalaya			
Garo Hills	25º 32	90º 15	Caves Y.P. Sinha, 1999
Konshnong	25º 30	92º 01	Bates & Harrison, 1997
Siju Wildlife Sanctuary	25º 32	75º 47	Caves Y.P. Sinha, 1999 Bates & Harrison, 1997
Shangpung	25º 30	92º 02	Bates & Harrison, 1997
Mizoram			
Sangao	23º 30	93º 00	Bates & Harrison, 1997
Nagaland			
Chekrima	25º 35	94º 30	Bates & Harrison, 1997
Pakubama	-	-	Bates & Harrison, 1997
West Bengal			
Gopaldhara	26º 59	88º 17	Bates & Harrison, 1997
Pashok	27º 04	88º 24	Bates & Harrison, 1997
Tong Song	27º 04	88º 24	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Nam Tamai Valley	27º 42	97º 54	Bates & Harrison, 1997
Sumka Uma	25º 57	97º 49	Bates & Harrison, 1997
PAKISTAN			
Punjab			
"on the Indus"	-	-	Bates & Harrison, 1997
SRI LANKA			
Central Province			
Kumbalgamuwa	07º 08	80º 50	Bates & Harrison, 1997
Pallama	07º 32	80º 39	Paddy fields and forests P.J.J. Bates, 1994
Pundaluoya	07º 01	80º 43	Bates & Harrison, 1997

Kerivoula papillosa Temminck, 1840

NEAR THREATENED in South Asia

Synonyms: *Kerivoula lenis* Thomas, 1916

Common names: Bengali: *Jhalarjukta Rongila Chamchika*; English: Papillose Bat

Family: Vespertilionidae

Habit: Lives in pairs.

Habitat: Semi-evergreen forest, Sal forest.

Niche: Internode of dead bamboo. 308-1077m.

Distribution
Global: From India to Vietnam, Malaysia and Indonesia.

South Asia:
Bangladesh: Sunderbans
India: West Bengal

Extent of Occurrence: < 20,000

Area of Occupancy: Not known

Locations/subpopulations: Not known

Habitat status: Loss of habitat and change in quality due to deforestation, human interference

Threats
Threats to the taxon: Loss of habitat, human interference, deforestation

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Restricted to the Sunderbans of India and Bangladesh, this species is subject to severe habitat threats.

National Status
Bangladesh: Near Threatened
India: Near Threatened

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Sunderbans NP (West Bengal)

Recommendations
Research: Survey, ecology

Management: Monitoring

Captive breeding: Techniques not known at all.

Comments
Widespread but very little known species throughout its entire range.

Sources
Bates & Harrison 1997; Hutson *et al*., 2001; Khan, 2001; Temminck, 1835, 1837, 1840, 1841; Thomas, 1916a;

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia based on field sighting and literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
Sunderbans			Khan, 2001
INDIA			
West Bengal			
Kolkata	22º 35	88º 21	type locality of *lenis* Bates & Harrison, 1997

Kerivoula picta (Pallas, 1767)

LEAST CONCERN in South Asia

Synonyms: *Vespertilio kerivoula* Cuvier, F., 1832
Vespertilio pictus Pallas, 1767
Vespertilio pictus rubellus Kerr, 1792

Common names: Bengali: *Komola–badami Chamchika*; English: Painted Bat

Family: Vespertilionidae

Habit: Solitary or in pairs, insectivores.

Habitat: Plantations, desert, deciduous, broadleaf tropical forest.

Niche: Tall grass, flowers, sugar cane, birds nests, rolled up dry plantain leaves, among dry leaves. Up to 1200m.

Distribution
Global: Bnagladesh, Sri Lanka, India, Nepal, Bhutan, Myanmar, Vietnam, Malaysia, China, Malaysia, Indonesia, Molocca Islands.

South Asia:
Bangladesh
India: Assam, Karnataka, Kerala, Maharashtra, Orissa, Rajasthan, Sikkim, Tamil Nadu, West Bengal
Nepal
Sri Lanka: Central Province, Anuradhapura, Eastern Province, Southern Province, Western Province

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many. Fragmented.

Habitat status: No change

Data source: Indirect information; inferred, suspected.

Threats
Threats to the taxon: Change in plantation crops.

Population
Generation time: 4-6 years assuming average age of maturity 1-2 years.

Mature individuals: > 10,000

Population trend: Not known.

Data source: Indirect information; inferred; range of opinion

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status:
Bangladesh: Least Concern
Bhutan: Least Concern
India: Least Concern
Nepal: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Borivili National Park (Maharashtra), Kawal Wildlife Sanctuary (Andhra Pradesh), Orang National Park (Assam)
Nepal: Chitwan National Park

Recommendations
Research: Survey studies, life history, limiting factor research, basic ecological and alternate habitat studies required.

Management: Habitat management, monitoring, public awareness

Comments
Dr. Madhavan has collected 67 specimens till date. Studies required for threats affecting the species. At least 2 bats per banana plantation [Madhavan]. It is considered rare because it is difficult to catch in mist nets [Muni]. Mist net is not an appropriate technique for trapping the species. Harp net technique can be used as in Australia [Hutson]. Banana traders in Sri Lanka come across this species often [Yapa]. Species is very adaptable to change in habitat. In wild, animals live for 5-6 years. Life span of microchiropterans in wild is 30 years but most of the individuals die at around 5-6 years due to predation [Hutson & Mistry]. Most individuals die before reaching senility. Paddy cultivation is replaced by banana plantations in Tamil Nadu, whereas in Kerala banana plantations are converted into housing areas. Threats only speculated.

Sources
Bates & Harrison, 1997; Cuvier, 1832; Hutson *et al*., 2001; Kerr, 1792; Khan, 2001; Pallas, 1767

Compilers
P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, H. Raghuram, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, J. Vanitharani, W. Yapa, K.D. Yardi

Reviewers
Rest of the participants

Recent Field Studies
A. Madhavan, Paralam, Oorakam, Mannuthy, Trichur, India, 1993.
E.A. Jayson, 1994, K.K. Ramachandran & P. Padmanabhan, 1996, Peechi, Kannaram, Trichur, India.
Sreepada, Bansara Plateau, Sagar, Shimoga, Karnataka, India, 1996.
C. Srinivasulu throughout Andhra Pradesh, 1995 onwards.

Distribution in South Asia based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
All forests			Khan, 2001
Dacca	23º 42	90º 22	Bates & Harrison, 1997
INDIA			
Andhra Pradesh			
Kawal Wildlife Sanctuary	19º 12	79º 00	C. Srinivasulu, 1995 onwards
Assam			
Lakhimpur	27º 20	95º 00	Bates & Harrison, 1997
Jalpaiguri	26º 30	88º 50	Bates & Harrison, 1997
Goa	-	-	Bates & Harrison, 1997
Karnataka			
Sagar	16º 37	76º 45	Banana plantation K.S. Sreepada, 1996
Dharwar	15º 30	75º 04	Bates & Harrison, 1997
Sivasamudrum	12º 16	77º 08	Bates & Harrison, 1997
Malabar coast	10º 00	76º 15	Bates & Harrison, 1997
Kerala			
Paralam	10º 3	76º 04	Banana plantations. Predators A. Madhavan, Dec 1993 till date
Oorakam	-	-	Inside dry plantain leaves Habitat loss, human interference A. Madhavan, 1993
Mannuthy	-	-	Inside dry plantain leaves Habitat loss, human interference A. Madhavan, 1993
Peechi	-	-	Inside dry plantain leaves Habitat loss, human interference Jason, E.A., and Ramachandran, K.K., 1994
Kannara	-	-	Inside dry plantain leaves Habitat loss, human interference P. Padmanabhan, 1996.
Thrissur	10º 32	76º 14	Bates & Harrison, 1997
Maharashtra			
Dahanu	-	-	Banana plantations, forests
			M. Muni, 1991-1996
Ghatmatha	17º 43	73º 42	Bates & Harrison, 1997
Mumbai	18º 56	72º 51	Bates & Harrison, 1997
Rajasthan			
Alwar	27º 32	76º 35	Baya nests on prosopis Sharma, 1992 Bates & Harrison, 1997
Jeypore	18º 48	82º 41	Bates & Harrison, 1997
Sikkim			
No exact locality	-	-	Bates & Harrison, 1997
Tamil Nadu			
Madras	13º 05	80º 18	Bates & Harrison, 1997
High Wavy Mountains	09º 50	77º 26	Bates & Harrison, 1997
West Bengal			
Darjeeling	27º 02	88º 20	Bates & Harrison, 1997
Kolkata	22º 35	88º 21	Bates & Harrison, 1997
NEPAL			
Pokhra town	28º 14	83º 58	Deciduous forests T.K. Shreshta, 2000
SRI LANKA			
Central Province			
Balangoda	06º 39	80º 42	Bates & Harrison, 1997
Bogawantalawa	06º 48	80º 41	Bates & Harrison, 1997
Peradeniya	07º 15	80º 40	Bates & Harrison, 1997
Rozelle	06º 58	80º 36	Bates & Harrison, 1997
Eastern Province			
Kantalai	08º 22	81º 00	Bates & Harrison, 1997
Trincomalee	08º 34	81º 13	Bates & Harrison, 1997
North Central Province			
Anuradhapura	08º 20	80º 25	Banana plantations Yapa & Digana 1997-2000
Southern Province			
Galle	06º 01	80º 13	Bates & Harrison, 1997
Western Province			
Colombo	06º 55	79º 52	Bates & Harrison, 1997
Kalutara	06º 35	79º 59	Bates & Harrison, 1997
Veyangoda	07º 08	80º 04	Bates & Harrison, 1997

Latidens salimalii Thonglongya, 1972 — ENDANGERED

Common name: Salim Ali's Fruit Bat

Family: Pteropodidae

Habit: Frugivorous, colonial, cave dwelling

Habitat: Evergreen broadleaf forest, broad-leaved montane forest, interspersed with coffee / cardamom plantations, cave-dwelling.

Niche: Caves, tree holes. 800 -1100m.

Distribution
Global: Endemic to South Asia (India).

South Asia:
India: Kerala, Tamil Nadu

Extent of Occurrence: 101-5,000 sq km.

Area of Occupancy: 501-2,000 sq km.

Locations/subpopulations: 2 / not known. Contiguous.

Habitat status: <10% decrease in area in the last 5-10 years due to plantation activities and forest fragmentation. Decrease in quality due to plantation activities.

Data source: Field study, literature; observed; 95% confidence.

Threats
Threats to the taxon: Habitat loss, agriculture, farming, horticulture, extraction, harvesting non-woody vegetation, exploitation, hunting for medicine and food in High Wavy Mountains, trade, illegal traditional medicine in High Wavy Mountains for oil to cure asthma, human interference. The influence on the population is well understood, not reversible and has not ceased to be a threat.

Trade: Local trade for meat, medicine.

Population
Generation time: 4-7 years

Mature individuals: < 2,500

Population trend: Population likely to decline in the future due to human interference, habitat loss, scientific collections.

Data source: Field study; observed.

Red List 2001 Status derived in the workshop

Ver. 3.1:	**ENDANGERED**	**B1ab(iii)+2ab(iii)**
1997 C.A.M.P. (Ver. 2.3):	Endangered	B1+2a, C2a

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Critically Endangered B1+2c; D
Old World Fruit Bats Action Plan: Rare: Limited distribution
CITES: Not listed

Known presence in Protected Areas
India: Kalakkad-Mundanthurai Tiger Reserve (Tamil Nadu); Periyar Tiger Reserve (Kerala)

Recommendations
Research: Survey, genetic research, life history, ecological studies.

Management: Habitat management, monitoring, public awareness, captive breeding, species recovery, reintroduction, preservation of live genome.

Captive breeding: Initiate *ex situ* program within 3 years. Some techniques known for similar taxon.

Comments
This is a charismatic species with an international profile it is a high priority for further research, conservation efforts and public awareness. The species is found in association with *Pteropus giganteus* on orchard trees (A.K. Chakravarthy). Distribution restricted to Highwavy & Agastyamalai, Tamil Nadu. As no information on subpopulation exists presently, and the locations from where they have been reported being close, these two locations belong to the same population. If this is true, the locations are contiguous. Bats are captured to serve as food & medicine for local people. However, threats need to be verified. Male:female ratio is 1:2 at High Wavy Mountain Caves [Koilraj]. P.T. Nathan esstimated about 50 individuals from a cave in Periyar Tiger Reserve. Manoi Muni had noticed many bats (about 80-100) fluttering around in 1993. Koilraj tagged 43 individuals from a cave in High Wavy Mountains and estimates that population to be about 80-100. Given the questionable information used in this evaluation,S. Mistry is uncertain of the final status. A.K. Chakravarthy and Riki Krishnan identified *L. salimalii* from Uppinangadi, Mangalore from coastal Karnataka. If the identification is correct the status might change accordingly. Karnataka population of the species needs to be verified.

Sources
Bates & Harrison 1997; Bates *et al.,* 1994; Easa *et al.,* 2000; Ghosh *et al.,* 1999; Krishnan & Chakravarthy, 1998; Mickleburgh *et al.,* 1992; Simmons, (in prep.); Thonglongya, 1972

Compilers:
S. Mistry, M. Muni, K.R. Senacha, T.K. Shrestha, K.S. Sreepada, C. Srinivasulu

Reviewers
Rest of the participants

Recent Field Studies
Agoramoorthy *et al.* 1996-2000. High Wavy Mountains
Manoj Muni & Nikky Thomas. 1993. High Wavy Mountains
Koil Raj, KMTR, 1999.
Padmanabhan, Periyar Tiger Reserve, 1996

Distribution in South Asia based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Karnataka			
Uppinangadi, Mangalore?	12º 24	74º 51	A.K. Chakravarthy, 1998
Kerala			
Periyar Tiger Reserve	-	-	Tropical evergreen forest and teak plantation. Recorded by P. Padmanabhan, 1996. KFRI, 2000 survey of small mammals
Tamil Nadu			
Kalakkad-Mundanthurai Tiger Reserve	-	-	Human interference John Koilraj, 1999 Ghosh *et al*., 1999
Kardana Coffee Estate	09º 50	77º 27	In the High Wavy Mountains (type locality) Bates & Harrison, 1997
Megamalai, High Wavy Mountain	-	-	Evergreen broadleaved forest Plantation activities recorded by G. Agoramoorty, 1996-2001 Bats collected for asthma treatment, Bates & Harrison, 1997 Recorded by M. Muni, 1993.

Macroglossus sobrinus (K. Andersen, 1911)

NEAR THREATENED in South Asia

Synonyms: *Macroglossus minimus sobrinus* K. Andersen, 1911

Common name: Hill Long-tongued Fruit Bat

Family: Pteropodidae

Habit: Nectarivore, frugivore.

Habitat: Evergreen, montane and lowland forest, swamps, mangrove.

Niche: Palm trees; branches. Up to 2000m.

Distribution
Global: India, Myanmar, Thailand to Sumatra, Nias island, Kraktatoa Island, Java and the Islands of Sipora, Sibnerut and Mentawei

South Asia:
India: Arunachal Pradesh, Meghalaya, Mizoram

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 8 / not known. Contiguous.

Habitat status: Habitat loss due to harvest, deforestation and human interference.

Data source: Literature; inferred

Threats
Threats to the taxon: Habitat loss, harvest of bamboo for commercial purposes

Population
Generation time: 4-6 years

Mature individuals: < 10,000. Low density species.

Population trend: Not known.

Data source: Indirect information; estimated

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Low-density bat. Bamboo harvest in the northeast and illegal encroachment and felling could threaten the habitat os the species.

1997 C.A.M.P. (Ver. 2.3): Data Deficient

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Old World Fruit Bats Action Plan (Global): Not threatened
CITES: Not listed

Known presence in Protected Areas
India: Namdapha Wildlife Sanctuary (Arunachal Pradesh)

Recommendations
Research: Survey, life history, ecology.

Management: Habitat management, monitoring.

Captive breeding: Techniques not known at all.

Comments
Very common in forests of Southeast Asia, so may be more abundant than we think [Paul Bates]. Last described in 1995 by Das in Meghalaya. Population numbers may be < 10,000 because of its distribution and habitat status. This species tends to be in low density. Although limited number of localities, at least one falls within a protected area. ZSI, Kolkata has recorded the species recently. No change in habitat in Myanmar (K.M. Swe).

Sources
Andersen, 1911; Bates & Harrison 1997; Mickleburgh *et al.,* 1992

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, E.A.A. Shukkur, A. Thabah, R. Rajashekar, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
Sinha, Chintuipui District, Mizoram, India, 1993, ZSI survey.

Distribution in South Asia and Myanmar based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Arunachal Pradesh			
Miao			Bates & Harrison, 1997.
Namdapha	27º 39	96º 30	Bates & Harrison, 1997.
Meghalaya			
Umkiang	-	-	Das, 1995 in Bates & Harrison, 1997.
Mizoram			
Chirtuipui District	-	-	Bamboo forests. No threats Sinha, 1993

Distribution in South Asia	Lat.	Long.	Notes/Sources
Sangao	23º 3	93º 00	Bates & Harrison, 1997
Sikkim			
No exact locality	-	-	Bates & Harrison, 1997.
Tripura			
No exact locality	-	-	Bates & Harrison, 1997.
West Bengal			
Darjeeling	27º 02	88º 20	Bates & Harrison, 1997.
MYANMAR (NORTHERN)			
Taho	19º 30	97º 12	Bates & Harrison, 1997.
Biapo	-	-	Bates & Harrison, 1997.

Synonyms: *Eucheira lyra caurina* Anderson & Wroughton, 1907
Megaderma schistacea Hodgson, 1847
Megaderma spectrum Wagner, 1844
Vespertilio (Megaderma) carnatica Elliot, 1839

Common names: Bengali: *Daini Badur*; Sinhalese: *Indianu Borule Wavula*; Tamil: *Muyalkadu vaval*; English: Greater False Vampire Bat, Indian False Vampire

Family: Megadermatidae

Habit: Colonial

Habitat: Widely distributed, many biotypes

Niche: Old building, caves, temples, tunnels, attics, stone mines, cow sheds, grain godowns - up to 923m.

Distribution
Global: Afghanistan, Bangladesh, China, Pakistan, India, Sri Lanka and Malaysia.

South Asia:
Bangladesh
India: Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Orissa, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal
Nepal
Pakistan: Baluchistan, Punjab, Sind
Sri Lanka: Northern Province, Central Province, Western Province, Southern Province

Afghanistan
Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km. Observed and inferred from field studies and literature.

Area of Occupancy: > 2,000 sq km. Observed and inferred from field studies and literature.

Locations/subpopulations: Many. Contiguous.

Habitat status: Increase in area due to human habitation: bats live in old, unused houses. Decrease in quality due to quarrying.

Data source: Literature, field study; observed, inferred; 95% confidence.

Threats
Threats to the taxon: Exploitation, illegal trade for food, human interference, renovation of old temples, quarrying, human habitation, habitat disturbance. The influence on the population well understood, not reversible and have not ceased to be a threat.

Trade: Illegal trade for food

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Population stable.

Data source: Literature, field study; census, observed, inferred.

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status:
Bangladesh: Least Concern
India: Least Concern
Nepal: Least Concern
Pakistan: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Tadoba-Andhari Tiger Reserve, Radhanagari Wildlife Sanctuary, Maharastra; Orang National Park, Assam; Kawal Wildlife Sanctuary, Nagarjunsagar-Srisailam Tiger Reserve, Andhra Pradesh; Kanha National Park, Madhya Pradesh; Indravati National Park, Chhattisgarh

Recommendations
Research: Survey

Management: Monitoring, public awareness

Captive breeding: Techniques known for this taxon or similar taxon. Captive stocks exist at Munich and Hannover, Germany.

Comments
The species is known to migrate between populations and locations. Known to be a shy species, prone to human disturbance, so monitoring of the population is suggested. The group believes that the numbers will not dwindle, but the population will just move into more inaccesible/safe places (from humans). Wide spread and many localities in whole of India and Sri Lanka. Northern and central Indian populations could have decreased. In Bihar, the population is increasing. Sri Lanka population has been stable for the last 15 years. In 1960, there were 500-700 individuals seen at Mandu and Jodhpur Fort. Gaur (1982) did not find the bats in the area. Senacha also did not find the bats in the reported locality in 2001. Ishwar Prakash observed a population of 700 in 1970s, but in 1990s the entire population has disappeared.

Sources
Andersen & Wroughton. 1907; Elliot, 1839; Geoffroy, 1810; Harshey & Chandra, 2001; Hodgson, 1847a; Hutson *et al*., 2001; Khan, 2001; Wagner, 1844

Compilers
A.C. Girish, J.K. Immanuel, S. Kandula, V.S. Korad, C.D. Koya, G. Nair, P.T. Nathan, A. Nobel, J.K. Raj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
Azad Ali, Assam, India, 2001
Srinivasulu C. Andhra Pradesh, India, 1995 onwards
J. Vanitharani, wing morphology, Idachivillai, VOC distr., Tamil Nadu, India, 1991-1998
J. Vanitharani & J. Selwyn, Tirunelveli district, TN, India, 2000-onwards. survey
J. Vanitharani & J. Selwyn, VOC district, TN, India S. Kandula, Madurai, TN, 1993-2000, Population studies
Y.P. Sinha, Bihar , India, 2000, survey.
Y.P. Sinha, Arunchal Pradesh, India, 1994, survey.
Y.P. Sinha, Chessa, Nagaland, India, 1996-1997, survey.
M.S. Pradhan, Rathnagari WLS, Kolhapur, Tadoba Tiger Reserve & Chandrapur, Maharashtra, India, 1991-1996. Survey Sri Lanka,
V. Yapa & P.C.M. B. Digana, 1996-99, survey
A. Thabah, Maghalaya, India, 2001, Survey

Distribution in South Asia, Afghanistan and Myanmar based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
near Jalalabad	-	-	Bates & Harrison, 1997
BANGLADESH			
Throughout			Khan, 2001
Sylhet	24º 53	91º 51	Bates & Harrison, 1997
INDIA			
Andhra Pradesh			
Balapalli	13º 50	79º 15	Bates & Harrison, 1997
Cuddapah	14º 30	78º 50	Bates & Harrison, 1997
Cumbum	15º 36	79º 07	Bates & Harrison, 1997
Diguvametta	-	-	Bates & Harrison, 1997
Hyderabad city	-	-	Sreenivasulu C., 1995 onwards
Kawal, Adilabad	19º 12	79º 00	Sreenivasulu C., 1995 onwards
Nallamalas	-	-	Sreenivasulu C., 1995 onwards
Visakapattanam	17º 42	83º 24	Bates & Harrison, 1997
Arunachal Pradesh			
Banderdeva	27º 20	92º 30	Bates & Harrison, 1997
Assam			
Angarakhta	26º 37	90º 30	Bates & Harrison, 1997
B.N. College, Dhubri			A. Ali, 2001
Orang National Park	-	-	A. Ali, 2001
Polahari	26º 10	91º 20	Bates & Harrison, 1997
Bihar			
No exact locality	-	-	Sinha, 1972-1980
Aurangabad	24º 46	84º 23	Bates & Harrison, 1997
Bhagalpur	25º 14	86º 59	Bates & Harrison, 1997
Dhanbad	23º 47	86º 32	Bates & Harrison, 1997
Giridih	24º 10	86º 20	Bates & Harrison, 1997
Gopalganj	26º 28	84º 26	Bates & Harrison, 1997
Madhubani	26º 21	86º 05	Bates & Harrison, 1997
Nimighat	23º 56	86º 07	Bates & Harrison, 1997
Purnea	25º 47	87º 28	Bates & Harrison, 1997
Saharsa	25º 54	86º 36	Bates & Harrison, 1997
Salbani	22º 25	87º 24	Bates & Harrison, 1997
Sangajata	22º 31	85º 50	Bates & Harrison, 1997
Vaishali	25º 49	85º 25	Bates & Harrison, 1997
Chhattisgarh			
Indravati National Park	-	-	Harshey & Chandra, 2001
Gujarat			
No exact locality	-	-	Sinha, 1972-1980
Anand	22º 34	73º 01	Bates & Harrison, 1997
Danta	24º 13	72º 50	Bates & Harrison, 1997
Deesa	24º 14	72º 13	Bates & Harrison, 1997
Garudeshwar	21º 40	73º 02	Bates & Harrison, 1997
Kim	21º 30	73º 00	Bates & Harrison, 1997
Mandvi	21º 16	73º 22	Bates & Harrison, 1997
Palanpur	24º 12	72º 29	Bates & Harrison, 1997
Surat	21º 10	72º 54	Bates & Harrison, 1997
Himachal Pradesh			
Kangra	32º 04	76º 16	Bates & Harrison, 1997
Jammu & Kashmir			
Rambon	33º 15	75º 18	Bates & Harrison, 1997
Karnataka			
Belgaum	15º 54	74º 36	Bates & Harrison, 1997
Devikop	15º 12	75º 05	Bates & Harrison, 1997
Hangal	14º 49	75º 14	Bates & Harrison, 1997
Honawar	14º 19	74º 27	Bates & Harrison, 1997
Honkan	14º 30	75º 10	Bates & Harrison, 1997
Jog	14º 12	74º 41	Bates & Harrison, 1997
Kadkal	-	-	Sreepada, 1993
Kardibetta Forest	14º 08	75º 20	Bates & Harrison, 1997
Kasakola	12º 12	76º 37	Bates & Harrison, 1997
Kolar	23º 09	78º 10	Bates & Harrison, 1997
Pattadkal	16º 00	75º 47	Bates & Harrison, 1997
Puttur	12º 45	75º 11	Bates & Harrison, 1997
Sagar	16º 37	76º 45	Sreepada, 1993; Bates & Harrison, 1997
Seringapatnam	12º 25	76º 41	Bates & Harrison, 1997
Shimoga	13º 56	75º 31	Bates & Harrison, 1997
Sirsi	14º 40	74º 51	Bates & Harrison, 1997
Terakanambi	-	-	Sreepada, 1993
Vijayanagar	15º 20	76º 28	Bates & Harrison, 1997
Kerala			
Azhur	-	-	Bates & Harrison, 1997
Trichur	10º 32	76º 14	Bates & Harrison, 1997
Trivandrum	08º 41	76º 57	Bates & Harrison, 1997
Madhya Pradesh			
Asirgarh	21º 31	76º 22	Bates & Harrison, 1997
Balaghat	21º 48	80º 16	Bates & Harrison, 1997 Harshey & Chandra, 2001
Bhind	26º 33	78º 47	Bates & Harrison, 1997
Chachora Fort	-	-	Bates & Harrison, 1997
Damoh	23º 50	79º 30	Bates & Harrison, 1997
Dhain	22º 29	78º 14	Bates & Harrison, 1997
Guwarghat	23º 09	79º 58	Bates & Harrison, 1997
Gwalior	26º 12	78º 09	Bates & Harrison, 1997
Hoshangabad	22º 44	77º 45	Bates & Harrison, 1997
Jabalpur	23º 10	79º 59	Bates & Harrison, 1997 Harshey & Chandra, 2001
Kanha National Park	-	-	Harshey & Chandra, 2001
Malwa	23º 44	76º 01	Bates & Harrison, 1997
Mandla	-	-	Harshey & Chandra, 2001
Mundra	23º 50	78º 44	Bates & Harrison, 1997
Narsingarh	24º 00	79º 29	Bates & Harrison, 1997
Sagar	23º 50	78º 44	Bates & Harrison, 1997
Sheopore	25º 41	76º 42	Bates & Harrison, 1997
Sohagpur	22º 43	78º 14	Bates & Harrison, 1997
Maharashtra			
Ajanta	20º 30	75º 48	Bates & Harrison, 1997
Aurangabad	19º 52	75º 22	Bates & Harrison, 1997
Bhandra	21º 09	79º 42	Bates & Harrison, 1997
Borivili	19º 14	72º 57	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Bulapur	19º 58	79º 22	Bates & Harrison, 1997
Chinchpali	19º 57	79º 22	Bates & Harrison, 1997
Devikop	15º 12	75º 05	Bates & Harrison, 1997
Ellora	20º 04	75º 15	Bates & Harrison, 1997
Ghodasgaum	20º 48	75º 45	Bates & Harrison, 1997
Kanheri	19º 13	72º 59	Bates & Harrison, 1997
Khed	17º 44	73º 25	Bates & Harrison, 1997
Nagpur	21º 10	79º 12	Bates & Harrison, 1997
Nasik	20º 00	73º 52	Bates & Harrison, 1997
Powai Lake	-	-	Bates & Harrison, 1997
Pune	18º 31	73º 51	Bates & Harrison, 1997
Ratnagiri	17º 00	73º 20	Bates & Harrison, 1997
Vijyadurg	16º 34	73º 22	Bates & Harrison, 1997
Meghalaya			
Kherapera	25º 28	90º 13	Bates & Harrison, 1997
Orissa			
Angul	20º 48	85º 04	Bates & Harrison, 1997
Balugaon	19º 49	85º 16	Bates & Harrison, 1997
Barbara	-	-	Bates & Harrison, 1997
Chilka Lake	19º 55	85º 30	Bates & Harrison, 1997
Cuttack	20º 26	85º 56	Bates & Harrison, 1997
Konark	19º 52	86º 12	Bates & Harrison, 1997
Mohana	19º 30	84º 38	Bates & Harrison, 1997
Tikarpara	20º 32	84º 56	Bates & Harrison, 1997
Rajasthan			
No exact locality	-	-	Sinha, 1972-1980
Ajmer	26º 29	74º 40	Bates & Harrison, 1997
Banswara	23º 32	74º 28	Bates & Harrison, 1997
Bundi	25º 28	75º 42	Bates & Harrison, 1997
Dungarpur	23º 53	73º 48	Bates & Harrison, 1997
Jhalawar	24º 32	76º 12	Bates & Harrison, 1997
Jhunjhunu	28º 05	75º 30	Bates & Harrison, 1997
Jodhpur	26º 18	73º 08	Bates & Harrison, 1997
Kota	25º 11	75º 58	Bates & Harrison, 1997
Mandu & Jodhpur Fort	22º 22	75º 24	Senacha K.R.
Sawai Madhopur	26º 00	76º 28	Bates & Harrison, 1997
Sirohi	24º 53	72º 58	Bates & Harrison, 1997
Tonk	25º 52	75º 50	Bates & Harrison, 1997
Udaipur	27º 40	75º 32	Bates & Harrison, 1997
Tamil Nadu			
Coimbatore	11º 02	76º 59	Bates & Harrison, 1997
Idachivillai	-	-	J. Vanitharani, wing morphology, 1991-1998
Keela Kuyil Kudi	09º 52	78º 09	Bates & Harrison, 1997
Madras	13º 05	80º 18	Bates & Harrison, 1997
Madurai	09º 55	78º 07	Bates & Harrison, 1997
Palni	10º 18	77º 31	Bates & Harrison, 1997
Pannian Malai	09º 55	78º 02	Bates & Harrison, 1997
Salem	11º 38	78º 08	Bates & Harrison, 1997
Seelaiyampatti	-	-	Bates & Harrison, 1997
Tirthamalai	12º 06	78º 36	Bates & Harrison, 1997
Tirunelveli	08º 44	72º 42	J. Vanitharani & J. Selwyn, survey, 2000-onwards; Bates & Harrison, 1997
Vannathiparai	09º 44	77º 19	Bates & Harrison, 1997
VOC district	-	-	J. Vanitharani, 1997
Uttar Pradesh			
Agra	27º 09	78º 00	Bates & Harrison, 1997
Gazipur	-	-	Bates & Harrison, 1997
Khamaria	27º 40	79º 32	Bates & Harrison, 1997
Lucknow	26º 50	80º 54	Bates & Harrison, 1997
Nishangara	-	-	Bates & Harrison, 1997
Ranibagh	29º 22	79º 26	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
West Bengal			
Bankura	23º 14	87º 05	Bates & Harrison, 1997
Barddhaman	23º 15	87º 52	Bates & Harrison, 1997
Birbhum	23º 54	87º 32	Bates & Harrison, 1997
Kolkata	22º 35	88º 21	Bates & Harrison, 1997
Darjeeling	27º 02	88º 20	Bates & Harrison, 1997
Haora	-	-	Bates & Harrison, 1997
Hugli	22º 52	88º 21	Bates & Harrison, 1997
Jalpaiguri	26º 30	88º 50	Bates & Harrison, 1997
Koch Bihar	26º 17	89º 40	Bates & Harrison, 1997
Maldah	-	-	Bates & Harrison, 1997
Medinipur	22º 25	87º 24	Bates & Harrison, 1997
Murshidabad	24º 11	88º 19	Bates & Harrison, 1997
Nadia	30º 22	76º 12	Bates & Harrison, 1997
North 24-Parganas	-	-	Bates & Harrison, 1997
Puruliya	23º 20	86º 24	Bates & Harrison, 1997
South 24-Parganas	22º 22	88º 25	Bates & Harrison, 1997
West Dinajpur	25º 38	88º 44	Bates & Harrison, 1997
NEPAL			
Barabisse	27º 35	85º 35	Bates & Harrison, 1997
Hazaria	26º 51	85º 20	Bates & Harrison, 1997
Kathmandu	27º 42	85º 12	Bates & Harrison, 1997
PAKISTAN			
Baluchistan			
no exact locality	-	-	Bates & Harrison, 1997
Punjab			
Lahore	31º 34	74º 22	Bates & Harrison, 1997
Lehtrar	33º 42	73º 26	Bates & Harrison, 1997
Sialkot	32º 30	74º 32	Bates & Harrison, 1997
Sind			
Karachi	24º 51	67º 02	Bates & Harrison, 1997
Sukkur	27º 42	68º 52	Bates & Harrison, 1997
SRI LANKA			
Northern Province			
Mannar	08º 58	79º 54	Bates & Harrison, 1997
Central Province			
Peradeniya	07º 15	80º 40	Bates & Harrison, 1997
Western Province			
No exact locality	-	-	Yapa & Digana, 1996-99
Anasigala	06º 29	80º 03	Bates & Harrison, 1997
Colombo	06º 55	79º 52	Bates & Harrison, 1997
Kalutara	06º 35	79º 59	Bates & Harrison, 1997
Maharagama	06º 52	79º 56	Bates & Harrison, 1997
Matugama	06º 32	80º 05	Bates & Harrison, 1997
Southern Province			
Udugama	06º 13	80º 20	Bates & Harrison, 1997
Mapalagama	06º 15	80º 16	Bates & Harrison, 1997
Nagoda	06º 11	80º 17	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Kin	22º 45	94º 45	Bates & Harrison, 1997
Paumgaum	-	-	Bates & Harrison, 1997
Pyaunggaung	22º 38	97º 22	Bates & Harrison, 1997
Taron Valley	27º 38	98º 12	Bates & Harrison, 1997
Toungoo	-	-	Bates & Harrison, 1997
Yin	22º 45	94º 46	Bates & Harrison, 1997

Megaderma spasma (Linnaeus, 1758)

LEAST CONCERN in South Asia

Synonyms: *Vespertilio spasma* Linnaeus, 1758
Megaderma spasma ceylonense Andersen, 1918
Megaderma horsfieldi Blyth, 1863

Common names: Bengali: *Chhoto Daini Badur*; Sinhalese: *Sri Lanka Boru Le Wavula*; English: Lesser False Vampire Bat, Sri Lankan False Vampire Bat

Family: Megadermatidae

Habit: Colonial, carnivorous.

Habitat: Humid and forested biomes, rural and suburban areas.

Niche: Caves, disused wells, temples, verandahs, native houses, hollow trees, mines. Up to 1500m.

Distribution
Global: India, Bnagladesh, Sri Lanka, Myanmar, south-east Asia to Java, Philippines and Molucca Islands, Andaman & Nicobar Islands.

South Asia:
Bangladesh: Sunderbans
India: Andaman & Nicobar Islands, Assam, Goa, Karnataka, Kerala, Maharashtra, Meghalaya, Mizoram, West Bengal, Tamil Nadu
Sri Lanka: Central Province, Eastern Province, Northern Province, Southern Province, Western Province

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many. Fragmented.

Habitat status: No decrease in area of the habitat. Decrease in quality due to human habitation.

Data source: Field study, literature; inferred, observed;

Threats
Threats to the taxon: Habitat loss. Adapts to changing habitat.

Data source: Field study, census; observed; 95% confidence

Population
Generation time: 4-6 years

Mature individuals: > 10,000. No decline in the past and their decline in the future are not known.

Population trend: Population stable. <10% decline predicted in the next 10 years due to habitat loss.

Data source: Field study, literature; observed, inferred

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status:
Bangladesh: Least Concern
India: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Tadoba Tiger Reserve, Melghat Tiger Reserve, Pench National Park (Maharasthra); Sundarbans National Park (West Bengal)

Recommendations
Research: Survey, life history, ecological studies

Management: Habitat management, monitoring, public awareness

Comments
Highly adaptable species, threats can be minimized by public awareness programs. Fragmented since it occurs in southern India as well as in Andaman Islands. Stable populations in Sri Lanka.

Sources
Andersen, 1918; Bates & Harrison, 1997; Blyth, 1863; Hutson *et al*., 2001; Khan, 2001; Linnaeus, 1758; Mandal & Nandi, 1989; Wilson & Reeder, 1993

Compilers
A.C. Girish, J.K. Immanuel, S. Kandula, V.S. Korad, G. Nair, P.T. Nathan, A. Nobel, J.K. Raj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
A. Madhavan, Paralam, Trichur district, India [1986-1993].
M.S. Pradhan, Melghat Tiger Res, Amaravathi, Maharashtra, India [1990-1996], survey
M.S. Pradhan, Pench NP, Nagpur, India, 1990-1996, survey
M.S. Pradhan, Tadoba Tiger Reserve Chandrapur, Maharashtra, India, 1990-1996, survey
A. Thabah, Meghalaya, India, 2001, echolocation
Swe K.M., Myanmar, 1999, survey
Mistry, S. & Parab, Talawady, India, 2001, population ecology

Distribution in South Asia and Myanmar based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
Sunderbans			Khan, 2001
INDIA			
Andaman & Nicobar Islands			
Andaman Island	12º 00	92º 45	Reviewed from H.V. Andrews & Bandana A. (C.A.M.P. Briefing book) Hill, 1967
Wrightmyo	11º 43	92º 43	Bates & Harrison, 1997
Assam			
Kulsi	25º 50	91º 20	Bates & Harrison, 1997
Rajapara	26º 30	92º 00	Bates & Harrison, 1997
Srimantapur, Guwahati	26º 10	91º 45	informal study A. Ali, 1998
Goa			
Valpoi	15º 30	74º 05	Bates & Harrison, 1997
Karnataka			
Coorg	-	-	Sreepada, K.S. 1995
Gersoppa	14º 12	74º 42	Bates & Harrison, 1997
Haleri	12º 31	75º 40	Bates & Harrison, 1997
Honkan	14º 30	75º 10	Bates & Harrison, 1997
Hulekal	14º 42	74º 46	Bates & Harrison, 1997
No exact locality	-	-	Bhat & Srinivasan, 1967-71
Sagar	16º 37	76º 45	Loss of habitat Sreepada, K.S. 1993
Sirsi	14º 40	74º 51	Bates & Harrison, 1997
Talewadi	15º 25	74º 22	Mistry & Parab, 2001 Bates & Harrison, 1997
Kerala			
Cochin	09º 56	76º 15	Bates & Harrison, 1997
Palghat	8º 44	77º 42	Bates & Harrison, 1997
Paralam	10º 03	76º 04	*M. s. horsfieldii.* Well and top of coconut tree Hunting for medicine A. Madhavan
Trichur	10º 32	76º 14	Bates & Harrison, 1997
Trivandrum	08º 41	76º 57	Bates & Harrison, 1997
Maharashtra			
Borivili	19º 14	72º 57	Bates & Harrison, 1997
Chanda	19º 58	79º 21	Bates & Harrison, 1997
Kanheri	19º 13	72º 59	Bates & Harrison, 1997
Khandala	18º 45	73º 25	Bates & Harrison, 1997
Melaghat Tiger Reserve	-	-	M.S. Pradhan 1990-96
Pench National Park	-	-	M.S. Pradhan 1990-96
Rajapur	16º 38	73º 32	Bates & Harrison, 1997
Thana	19º 14	73º 02	Bates & Harrison, 1997
Tadoba Tiger Reserve, Chandrapur	-	-	M.S. Pradhan 1990-96
Meghalaya			
Meghalaya	-	-	A. Thabah, 2001
Mizoram			
Paikla	23º 30	93º 00	Bates & Harrison, 1997
West Bengal			
Chunabhatti	26º 30	88º 50	Bates & Harrison, 1997
Gosaba	22º 10	88º 49	Bates & Harrison, 1997
Sunderbans			Mandal & Nandi, 1989
Tamil Nadu			
Chettiri Range	-	-	Bates & Harrison, 1997
near Cumbum	-	-	Bates & Harrison, 1997
High Wavy Mountains	09º 50	77º 26	Bates & Harrison, 1997
Vannathipari	09º 44	77º 19	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Mon state	-	-	Caves Hunting K.M. Swe, 1999
Kin	22º 45	94º 45	Bates & Harrison, 1997
Kyouk Myoung	22º 36	95º 55	Bates & Harrison, 1997
Prome	18º 50	95º 14	Bates & Harrison, 1997
Yin	22º 45	94º 46	Bates & Harrison, 1997
SRI LANKA			
No exact locality	-	-	Habitat loss & hunting for food Bandara & Yapa, 1996-1999 Phillips, 1980
Central Province			
Kumbalgamuwa	07º 08	80º 50	Bates & Harrison, 1997
Eastern Province			
Mankeni	08º 00	81º 28	Bates & Harrison, 1997
Panichi Kankeni	-	-	Bates & Harrison, 1997
Trincomalee	08º 34	81º 13	Bates & Harrison, 1997
Western Province			
Anasigalla	06º 29	80º 03	Bates & Harrison, 1997
Godigamua	07º 16	79º 59	Bates & Harrison, 1997
Gonapola	06º 45	80º 01	Bates & Harrison, 1997
Kalutara	06º 35	79º 59	Bates & Harrison, 1997
Pilikutthuwa	07º 06	80º 00	Bates & Harrison, 1997
Southern Province			
Mapalagama	06º 15	80º 16	Bates & Harrison, 1997
Nagoda	06º 11	80º 17	Bates & Harrison, 1997
Samarakella	-	-	Bates & Harrison, 1997
Udugama	06º 13	80º 20	Bates & Harrison, 1997
Yala	06º 22	81º 30	Bates & Harrison, 1997

Megaerops niphanae Yenbutra & Felten, 1983 — NEAR THREATENED in South Asia

Common name: Ratanaworabhan's Fruit Bat

Family: Pteropodidae

Habit: Frugivorous

Habitat: Forested areas

Niche: 100-2100m.

Distribution
Global: India, Thailand, Vietnam

South Asia:
India: Arunachal Pradesh, Manipur, Mizoram, Nagaland, West Bengal

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 3 / not known. Contiguous.

Habitat status: Habitat loss due to fragmentation

Data source: Literature; estimated, inferred.

Threats
Threats to the taxon: Not known

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

It is NT because of limited number of known localities and projected loss of habitat and fragmentation.

1997 C.A.M.P. (Ver. 2.3): Data Deficient

National Status
India: Near Threatened

Uncertainty
Assessed based on evidence, precaution and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Old World Fruit Bats Action Plan (Global): No data.
CITES: Not listed

Known presence in Protected Areas
India: Namdapha Wildlife Sanctuary (Arunachal Pradesh)

Recommendations
Research: Survey

Management: Monitoring

Captive breeding: Techniques not known at all.

Comments
In Southeast Asia this species is common in forest habitats. It is not known whether the species is common in northeastern India. The situation in South Asia deserves further study. Not known if the locations or subpopulations are contiguous or fragmented.

Sources
Mandal *et al.,* 1993; Mickleburgh *et al.,* 1992; Yenbutra & Felten, 1983

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
Y.P. Sinha, Dimapur, Kohima, Mokokchung, Nagaland, India, 1997-98, ZSI Survey.

Distribution in South Asia based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Arunachal Pradesh			
Banderdeva	27º 20	92º 30	Bates & Harrison, 1997
Namdapha	27º 39	96º 30	Deciduous and subtropical mixed forest. The area is Protected (Biosphere Reserve). Bates & Harrison, 1997
Manipur			
Tamonglong	-	-	Mandal *et al.,* 1993
Uchathol	-	-	Mandal *et al.,* 1993
Mizoram			
Aizwal & Lunglei	-	-	Mandal *et al.,* 1993
Nagaland			
Dimapur	-	-	Bamboo forest Habitat loss, fragmentation Sinha, Y.P., 1997-98.
Kohima	25º 42	94º 15	Bamboo forest Habitat loss, fragmentation Sinha, Y.P., 1997-98.
Mokokchung	26º 20	94º 30	Bamboo forest Habitat loss, fragmentation Sinha, Y.P., 1997-98.
West Bengal			
Pashok	27º 04	88º 24	Coniferous forest? Deforestation Bates & Harrison, 1997

Miniopterus pusillus Dobson, 1876

VULNERABLE in South Asia

Common name: Nicobar Long-fingered Bat

Family: Vespertilionidae

Habit: Cave dweller, insectivorous, lives in colonies of up to 700 individuals.

Habitat: Limestone caves, rock clefts, culverts, crevices of trees.

Niche: Up to 1200m.

Distribution
Global: India, Nepal, Hong Kong, Indonesia, Loyalty Island and New Caledonia.

South Asia:
India: Andaman & Nicobar Islands, Karnataka, Tamil Nadu
Nepal

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: 501-2,000 sq km.

Locations/subpopulations: 6 / 5. Fragmented. Decline in number of locations. Nepal population has disappeared.

Habitat status: Habitat in Nepal totally destroyed. Status in India not known.

Data source: Field study, informal sighting; observed, inferred.

Threats
Threats to the taxon: Human interference, ecological imbalance, habitat loss in Nepal, disturbance of roosts by man, habitat destruction in Nepal.

Data source: Field study; observed, inferred.

Population
Generation time: 4-6 years.

Mature individuals: < 2,500

Population trend: Not known

Data source: Field study; inferred.

Red List 2001 Status derived in the workshop

Ver. 3.1: VULNERABLE B2ab(iii,iv)

Vulnerable due to restricted area with threats to habitat as known in Nepal.

National Status
India: Vulnerable B2ab(iii,iv)
Nepal: Critically Endangered B2ab(iii)

Uncertainty
Assessed based on evidence, inference and precaution and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Kalakkad-Mundanthurai Tiger Reserve (Tamil Nadu).

Recommendations
Research: Survey, basic ecology

Management: Monitoring

Comments
Difficult to calculate extent of occurrence with certainity since the localities are so fragmented. In Australia similar taxa is known to have a small home range of <300 sq. km for each location. The known localities are fragmented and far apart. In Pokhara, Nepal earlier studies have reported the species however presently there is a decline because of habitat destruction (Shreshtha). Several hundred individuals observed in two sites in Myanmar but situation elsewhere unknown. Habitat is stable in Myanmar.

Sources
Bates & Harrison, 1997; Dobson, 1876; Hutson *et al*., 2001

Compilers
P.J.J. Bates, P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, H. Raghuram, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Recent Field Studies
P.T. Nathan and J. Balasingh in Kalakkad-Mundanthurai Tiger Reserve, 1999-2000

Distribution in South Asia and Myanmar based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Andaman & Nicobar Islands			
Katchal Island	07º 58	93º 20	Bates & Harrison, 1997
Karnataka			
Hubli	15º 20	75º 12	Bates & Harrison, 1997
Tamil Nadu			
Kalakkad-Mundanthurai Tiger Reserve	-	-	Evergreen forest P.T. Nathan and J. Balasingh, 1999-2000
Madras	13º 05	80º 18	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Hpa-an	-	-	Large limestone caves in paddy fields Bates, P.J.J., 1999
Mawlamyine	-	-	Large limestone caves in paddy fields Collection for food P.J.J. Bates, 1999
NEPAL			
Pokhra	28º 14	83º 58	Locality queried by Corbet & Hill, 1992 Bates & Harrison, 1997

Miniopterus schreibersii (Kuhl, 1819)

LEAST CONCERN in South Asia

Synonyms: *Vespertilio scheibersii* Kuhl, 1819
Vespertilio fuliginosa Hodgson, 1835

Common names: Sinhalese: *Schreibersge dik-angeli wawula*;
English: Schreiber's Long-fingered Bat

Family: Vespertilionidae

Habit: Large colonies.

Habitat: Hilly and forested country-side.

Niche: Caves, caverns and crevices in rocks. Up to 338-1230m.

Distribution
Global: Southern Europe and Morocco through the Caucasus and Iran to Japan, the Indian subcontinent and east to Australia; also sub-Saharan Africa.

South Asia:
India: Arunachal Pradesh, Maharashtra, Meghalaya, Sikkim, Tamil Nadu, Uttaranchal, West Bengal
Nepal
Sri Lanka: Central Province, North Western Province, Sabaragamuwa Province, Uva Province, Western Province

Afghanistan
Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many.

Habitat status: Change in quality.

Data source: Indirect information; inferred.

Threats
Threats to the taxon: Human interference

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Not known

Data source: Indirect information; inferred

Recent Field Studies
Wipula & Bandara in Wavulpane cave & Koslanda Cave, 1996-1999
Sinha, Y.P. in Kolkata, 1990-93 & Pune, 1994

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
India: Least Concern
Nepal: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence, inferrence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Lower Risk near threatened
Microchiroptera Action Plan (Global): Lower Risk near threatened
CITES: Not listed

Known presence in Protected Areas
India: Siju Wildlife Sanctuary (Meghalaya).

Recommendations
Research: Survey

Management: Monitoring

Comments

Sources
Bates & Harrison, 1997; Hutson *et al*., 2001; Hodgson, 1835; Kuhl, 1819, Sinha, 1994

Compilers
A.C. Girish, J.K. Immanuel, S. Kandula, V.S. Korad, C.D. Koya, G. Nair, P.T. Nathan, A. Nobel, J.K. Raj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Distribution in South Asia, Afghanistan and Myanmar based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
near Kandahar	-	-	Bates & Harrison, 1997
Jalalabad	34º 26	70º 25	Bates & Harrison, 1997
Dilaram	32º 11	62º 27	Bates & Harrison, 1997
Qala Bist	31º 28	64º 21	Bates & Harrison, 1997
Qalat	32º 05	66º 53	Bates & Harrison, 1997
INDIA			
Arunachal Pradesh			
73km ESE Miao	-	-	Bates & Harrison, 1997
Maharashtra			
Mahableshwar	17º 56	73º 42	Bates & Harrison, 1997
Panchgani	17º 56	73º 49	Bates & Harrison, 1997
Pune	18º 31	73º 51	Sinha, 1994
Robbers Cave	-	-	Caves P.J.J. Bates & M. Muni, 1992
Satara	17º 43	74º 05	Bates & Harrison, 1997
Meghalaya			
Siju Cave	25º 32	75º 47	Caves Sinham 1994; P.J.J. Bates & M. Muni, 1992; Bates & Harrison, 1997
Sikkim			
?Sonari	-	-	Bates & Harrison, 1997
Tamil Nadu			
St. Thome Island	13º 05	80º 18	Bates & Harrison, 1997
Uttar Pradesh			
Mussorie	30º 26	78º 04	Bates & Harrison, 1997
Ramnagar	29º 23	79º 07	Bates & Harrison, 1997
West Bengal			
Kolkata	22º 35	88º 21	Sinha, Y.P., 1990-93 Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Mingun	22º 00	95º 58	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Tragine	-	-	Bates & Harrison, 1997
Nam Tisang Valley	-	-	Bates & Harrison, 1997
Mount Popa	20º 56	95º 16	Bates & Harrison, 1997
Adung Valley	28º 10	97º 40	Bates & Harrison, 1997
NEPAL			
Kathmandu Valley	27º 42	85º 12	Bates & Harrison, 1997
Kakani	27º 56	85º 11	Bates & Harrison, 1997
Bimalnagar	27º 45	84º 29	Bates & Harrison, 1997
Syangja	28º 49	83º 42	Bates & Harrison, 1997
SRI LANKA			
Central Province			
Elkaduwa	07º 17	80º 42	Bates & Harrison, 1997
Galaha	07º 12	80º 40	Bates & Harrison, 1997
Gammuduwa	07º 32	80º 41	Bates & Harrison, 1997
Kandy	07º 17	80º 40	Bates & Harrison, 1997
Kumbalgamuwa	07º 08	80º 50	Bates & Harrison, 1997
Mulhalkelle	07º 06	80º 52	Bates & Harrison, 1997
Rattota	07º 31	80º 41	Bates & Harrison, 1997
North Western Province			
Kurenegala	07º 28	80º 23	Bates & Harrison, 1997
Sabaragamuwa Province			
Madola	06º 41	79º 52	Bates & Harrison, 1997
Wavulpane cave	06º 25	80º 40	Caves Wipula & Bandara, 1996-1999 Bates & Harrison, 1997
Uva Province			
Koslanda Cave	06º 45	81º 00	Caves Wipula & Bandara, 1996-1999
Passara Hills	06º 58	81º 09	Bates & Harrison, 1997
Wellawaya	06º 44	81º 07	Bates & Harrison, 1997
Western Province			
Dehiwala	06º 52	79º 52	Bates & Harrison, 1997

Murina aurata (Milne-Edwards, 1872)

NEAR THREATENED in South Asia

Synonyms: *Murinus aurata* Milne-Edwards, 1872

Common names: Little Tube-nosed Bat, Tibetan Tube-nosed Bat

Family: Vespertilionidae

Habit: Insectivorous

Habitat: Subtropical forest

Niche: Near steep mountain slopes with thick forest; 2000-4154 m.

Distribution
Global: India, Nepal to eastern Tibet, China, Myanmar and northern Thailand.

South Asia:
India: Sikkim, Meghalaya
Nepal

Myanmar

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: 501-2,000 sq km. Estimated based upon foraging radius from 6 locations.

Locations/subpopulations: 6 / not known. Contiguous.

Habitat status: Not known

Data source: Literature; Inferred

Threats
Threats to the taxon: Not known

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Although no evident threats, because of restricted distribution in the region and likelihood of habitat loss in the future, the species is assessed as Near Threatened.

National Status
India: Near Threatened
Nepal: Near Threatened

Uncertainty
Assessed based on evidence, inference and precaution.

Other status
Red List of Threatened Species (2000): Lower Risk near threatened
Microchiroptera Action Plan (Global): Lower Risk near threatened
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments
The specimen was collected last from Shivpuri in Nepal, where threats are minimal to the species. Md. Azad Ali reports a specimen of *Murina aurata aurata* from ZSI, Northeast region Museum. Identification is questionable as Y.P. Sinha feels that the specimen was immature *M. huttoni huttoni.* Mistry and Senacha are of the opinion that the species be assessed as Data Deficient since there is no evidence of habitat decrease or threat other than general habitat decline.

Sources
Bates & Harrison, 1997; Corbet & Hill, 1991; Hutson *et al*., 2001; Milne-Edwards, 1872

Compilers
S. Mistry, M. Muni, K.R. Senacha, T.K. Shrestha, K.S. Sreepada, C. Srinivasulu

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia based on literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Sikkim			
Sedonchen	27º 15	88º 48	Bates & Harrison, 1997
Meghalaya			
Mawphlang	25º 25	92º 13	Bates & Harrison, 1997
NEPAL			
Makut	28º 50	83º 25	Bates & Harrison, 1997
Mount Sheopuri	27º 45	85º 45	Bates & Harrison, 1997

Murina cyclotis Dobson, 1872

LEAST CONCERN in South Asia

Synonyms: *Murina cyclotis* Dobson, 1872
Murina eileenae Phillips, 1932

Common name: Round-eared Tube-nosed Bat

Family: Vespertilionidae

Habit: Occurs in small colony, insectivorous, low flier

Habitat: Occurs in cardamom and coconut plantations, rocky caves in forest.

Niche: 769-1452m.

Distribution
Global: Sri Lanka and India to China, Vietnam, Malaysia, Indonesia and Philippines.

South Asia:
India: Andhra Pradesh, Meghalaya, Sikkim, West Bengal
Nepal
Sri Lanka: Central Province, North Western Province

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 12 / at least 3. Fragmented. All individuals not in one population and one subpopulation does not hold > 90% of the total population.

Habitat status: Not known

Data source: Literature, indirect information; inferred

Threats
Threats to the taxon: Not known

Population
Generation time: 4-6 years

Mature individuals: < 2,500

Population trend: Not known

Data source: Indirect information; inferred.

Recent Field Studies
Yapa & Digana, Kurunegala, North Western Province, Sri Lanka, 1997, Survey

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
India: Least Concern
Nepal: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
Nepal: Royal Chitwan National Park.

Recommendations
Research: Survey, ecology

Management: Monitoring

Comments
Species occurs in small colonies of 2-5 individuals and few locations.

Sources
Bates & Harrison, 1997; Dobson, 1872; Hutson *et al*., 2001; Phillips, 1932

Compilers
P.J.J. Bates, P.M.C.B.Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, H. Raghuram, J. Vanitharani, K. Yardi

Reviewers
Rest of the participants

Distribution in South Asia and Myanmar based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Andhra Pradesh			
Visakhapatnam	17º 42	83º 24	Bates & Harrison, 1997
Meghalaya			
Konshnong	25º 30	92º 01	Bates & Harrison, 1997
Cherrapunji	25º 16	91º 42	Bates & Harrison, 1997
Mawphlang	25º 25	92º 13	Bates & Harrison, 1997
Mawryngkueng	-	-	Bates & Harrison, 1997
Risa colony	-	-	Bates & Harrison, 1997
Sikkim			
No exact locality	-	-	Bates & Harrison, 1997
West Bengal			
Darjeeling	27º 02	88º 20	Type locality of *M. cyclotis* Bates & Harrison, 1997
Gopaldhara	26º 59	88º 17	Bates & Harrison, 1997
Tong Song	27º 04	88º 24	Bates & Harrison, 1997
Singla	27º 02	88º 19	Bates & Harrison, 1997
Pashok	27º 04	88º 24	Bates & Harrison, 1997
Teesta Valley	26º 30	88º 50	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Chin hills	23º 40	94º 15	Bates & Harrison, 1997
Nam Tamai Valley	27º 42	97º 54	Bates & Harrison, 1997
Sumka Uma	25º 57	97º 49	Bates & Harrison, 1997
NEPAL			
Royal Chitwan National Park	27º 37	84º 11	Bates & Harrison, 1997
SRI LANKA			
Central Province			
Medamahanuwera	07º 16	80º 48	Bates & Harrison, 1997
Mousakande	07º 32	80º 42	Bates & Harrison, 1997
North Western Province			
Kurenegala	36º 47	68º 51	Coconut plantation Yapa & Digana, 1997

Murina grisea Peters, 1872

CRITICALLY ENDANGERED

Common names: Peter's Tube-nosed Bat

Family: Vespertilionidae

Habit: Not known.

Habitat: Montane forests, foothills of Himalayas.

Niche: About 1692m.

Distribution
Global: Endemic to South Asia (India).

South Asia:
India: Uttar Pradesh

Extent of Occurrence: < 100 sq km.

Area of Occupancy: May be < 100 sq km.

Locations/subpopulations: 1 / not known.

Habitat status: Extensive loss of habitat due to human interference, housing and tourism.

Data source: Literature; inferred.

Threats
Threats to the taxon: Loss of habitat, human interference, tourism

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Red List 2001 Status derived in the workshop

Ver. 3.1: CRITICALLY ENDANGERED B1ab(iii)

Known only from type locality, which currently does not have the original habitat due to developmental activities. Assessment based on habitat characteristics and not on population characteristics.

1997 C.A.M.P. (Ver. 2.3): Vulnerable D2

Uncertainty
Assessed based on inference, precaution and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Endangered B1+2c
Microchiroptera Action Plan (Global): Endangered B1+2c
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, PHVA

Management: Monitoring

Comments
Appears to be a distinct species with good taxonomic characters. However, its restricted range suggests that other populations probably exist elsewhere in the western Himalayan foothills. It is a top priority species for research in South Asia. Occurs only in one area as per literature, no reports since last 100 years. No new information available.

Sources
Bates & Harrison, 1997; Hutson *et al*., 2001; Peters, 1872

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia based on literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Uttar Pradesh			
Jeripanee, Mussorie, Kumaon	30º 03	79º 17	Holotype Bates & Harrison, 1997

Murina huttonii (Peters, 1872)

LEAST CONCERN in South Asia

Synonyms: *Harpyiocephalus huttonii* Peters, 1872

Common name: Hutton's Tube-nosed Bat

Family: Vespertilionidae

Habit: Nocturnal, insectivore.

Habitat: Montane forests, banana plantations, tropical broadleaf forest.

Niche: Tree bark, leaf base of banana. 2154-2462m.

Distribution
Global: India, Nepal, Pakistan, Tibet, Myanmar, China, Vietnam, Thailand

South Asia:
India: Assam, Darjeeling, Jammu & Kashmir, Meghalaya, Uttaranchal, West Bengal
Nepal
Pakistan

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km. Estimated on the basis of 10 km radius of foraging radius and 16 locations.

Locations/subpopulations: 16 / not known.

Habitat status: Habitat loss, human interference, change in quality of habitat.

Data source: Indirect information; inferred.

Threats
Threats to the taxon: Habitat loss, human interference

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status:
India: Least Concern
Nepal: Data Deficient
Pakistan: Data Deficient

Uncertainty
Assessed based on inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Lower Risk near threatened
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments
Bates *et al.*, 2000 did not collect any specimen of this species during their recent studies in Myanmar.

Sources
Bates & Harrison, 1997; Bates *et al.,* 2000; Hutson *et al*., 2001; Peters, 1872; Sinha, 1999

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent field sightings
None

Distribution in South Asia and Myanmar based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Arunachal Pradesh			
Dening	28º 00	96º 17	BNHS collections
Assam			
Ripu	02º 45	90º 09	Bates & Harrison, 1997
Jammu & Kashmir			
Srinagar	34º 08	74º 50	Bates & Harrison, 1997
Meghalaya			
Shangpong	25º 30	92º 02	BNHS collections
Shillong	25º 34	91º 53	Risa colony Tropical broadleaf forests (1.4.3) Sinha, Y.P. 15.07.1989
Uttaranchal			
Dehra Dun	30º 19	78º 03	Type locality of *M. huttoni* Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Kha	30º 04	79º 55	Bates & Harrison, 1997
West Bengal			
Darjeeling	27º 02	88º 20	Bates & Harrison, 1997
Pashok	27º 04	88º 24	Bates & Harrison, 1997
Sangser	27º 04	88º 30	BNHS collections
Teesta Valley	26º 30	88º 50	Bates & Harrison, 1997
Tong Song	27º 04	88º 24	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Chin Hills	23º 40	94º 15	BNHS collections
Sumka Uma	25º 57	97º 49	Bates & Harrison, 1997
NEPAL			
Kathmandu	27º 42	85º 12	Bates & Harrison, 1997
PAKISTAN			
Gilgit	35º 54	74º 20	Bates & Harrison, 1997
Miranjani	34º 06	73º 25	Bates & Harrison, 1997

Murina leucogaster (Milne-Edwards, 1872) — NEAR THREATENED in South Asia

Synonyms: *Murinus leucogaster* Milne-Edwards, 1872
Murinus rubex Thomas, 1916

Common names: Greater Tube-nosed Bat

Family: Vespertilionidae

Habit: Low flying insectivore, solitary or groups up to six.

Habitat: Grasslands, plantation, mixed woodland.

Niche: Roosts in vegetation or caves; up to 2000m.

Distribution
Global: India, Nepal, Tibet, China, Mongolia, Siberia, Korea, Japan, Thailand.

South Asia:
India: West Bengal
Nepal

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: < 500 sq km.

Locations/subpopulations: 2 / not known.

Habitat status: Change in quality of habitat due to human interference

Data source: Literature, inferred.

Threats
Threats to the taxon: Human interference, conversion of grasslands

Population
Generation time: 4-6 years

Mature individuals: < 2,500

Population trend: Not known

Data source: Indirect information; inferred, suspected.

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

This qualifies for Endangered category, but because of populations existing in neighbouring countries, the chances of recolonisation, if habitat is conducive, is possible to reduce the category to NT.

National Status
India: Near Threatened
Nepal: Vulnerable B2ab(iii)

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments
Very few records and no recent information.

Sources
Bates & Harrison, 1997; Hutson *et al*., 2001; Milne-Edwards, 1872; Thomas, 1916a

Compilers
P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, H. Raghuram, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia based on literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
West Bengal			
Pashok	27º 04	88º 24	Type locality of *rubex* Bates & Harrison, 1997
Sangser	27º 04	88º 30	Bates & Harrison, 1997
NEPAL			
Kathmandu Valley	27º 42	85º 12	Bates & Harrison, 1997

Murina tubinaris (Scully, 1881)

NEAR THREATENED in South Asia

Synonym: *Harpiocephalus tubinaris* Scully, 1881

Common name: Scully's Tube-nosed Bat

Family: Vespertilionidae

Habit: Insectivorous

Habitat: Mountain slopes, hills

Niche: Roosts in trees.

Distribution
Global: India, Pakistan, Myanmar, Thailand, Vietnam

South Asia:
India: Arunachal Pradesh, Jammu & Kashmir, Meghalaya, Mizoram, Sikkim, West Bengal
Pakistan

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 11 / not known.

Habitat status: Loss of habitat and change in quality of habitat due to human interference.

Data source: Literature, indirect information; inferred, suspected.

Threats
Threats to the taxon: Habitat loss, habitat alteration

Population
Generation time: 4-6 years

Mature individuals: Not known.

Population trend: <5% decline predicted in the future due to habitat destruction and altertion.

Data source: Indirect information; inferred.

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Possible threats to the population in future due to loss of habitat, habitat alteration and war.

National Status
India: Near Threatened
Pakistan: Near Threatened

Uncertainty
Assessed based on evidence, inference, precaution and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments

Sources
Bates & Harrison, 1997; Hutson *et al*., 2001; Scully, 1881

Compilers
S. Mistry, C. Srinivasulu, K.S. Sreepada, T.K. Shrestha, M. Muni, K.R. Senacha

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia and Myanmar based on literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Arunachal Pradesh			
Dening	28º 00	96º 17	Bates & Harrison, 1997
Lohit Valley	28º 18	97º 00	Bates & Harrison, 1997
Jammu & Kashmir			
Kashmir Valley (Possibly)	-	-	Bates & Harrison, 1997
Meghalaya			
Mawphlang	25º 25	92º 13	Bates & Harrison, 1997
Shangpung	25º 30	92º 02	Bates & Harrison, 1997
Mizoram			
Sangao	23º 30	93º 00	Bates & Harrison, 1997
Sikkim			
Chungtung	27º 38	88º 35	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
West Bengal			
Darjeeling	27º 02	88º 20	Bates & Harrison, 1997
Gopaldhara	26º 59	88º 17	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Chin Hills	23º 40	94º 15	Bates & Harrison, 1997
Nam Tamai Valley	27º 42	97º 54	Bates & Harrison, 1997
PAKISTAN			
Gilgit	35º 54	74º 20	Type locality of M. tubinaris Bates & Harrison, 1997
Nathia Gali	34º 04	73º 24	Bates & Harrison, 1997

Myotis annectans (Dobson, 1871)

VULNERABLE in South Asia

Synonyms: *Pipistrellus annectans* Dobson, 1871
Myotis primula Thomas, 1920,

Common names: Hairy-faced Bat, Intermediate Bat

Family: Vespertilionidae

Habit: Insectivorous.

Habitat: Not known

Niche: Up to 1100m.

Distribution
Global: India to Thailand.

South Asia:
India: Nagaland, West Bengal

Extent of Occurrence: 5,001-20,000 sq km.

Area of Occupancy: > 2000 sq km.

Locations/subpopulations: 4 / 2. Fragmented.

Habitat status: Change in quality of habitat.

Data source: Literature; inferred, estimated, suspected.

Threats
Threats to the taxon: Human interference

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Red List 2001 Status derived in the workshop

Ver. 3.1: VULNERABLE D2

Habitat is not known, but the bat has been sighted in four localities. There is general change in quality of habitat, which could affect the species. Assessed because eof few localities it is recorded from in the region

1997 C.A.M.P. (Ver. 2.3): Data Deficient

Uncertainty
Assessed based on evidence, precaution and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Lower Risk near threatened
Microchiroptera Action Plan (Global): Lower Risk near threatened
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, ecology

Management: Monitoring, public awareness

Captive breeding: Techniques not known at all.

Comments
Unsure whether the distribution is contiguous. All four locations are historical and no recent information is available. The species *annectans* was originally included in *Pipistrellus* (Topal, 1970).

Sources
Bates & Harrison, 1997; Dobson, 1871; Hutson *et al*., 2001; Thomas, 1920; Topal, 1970.

Compilers
P.J.J. Bates, W. Yapa, P.C.M.B. Digana, S. Kandula, G. Nair, E.A.A. Shukkur, R. Rajashekar, A. Thabah

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia based on literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Nagaland			
Samoogooting	25º 45	93º 45	type locality of *annectans* Bates & Harrison, 1997
Takubama	25º 37	94º 32	Bates & Harrison, 1997
West Bengal			
Pashok	27º 04	88º 24	type locality of *primula* Bates & Harrison, 1997
Teesta Valley	26º 30	88º 50	Bates & Harrison, 1997

Myotis blythii (Tomes, 1857) — VULNERABLE in South Asia

Synonyms: *Vespertilio blythii* Tomes, 1857
?*Myotis africanus* Dobson, 1875
Vespertilio murinoides Dobson, 1837

Common name: Lesser Mouse-eared Bat

Family: Vespertilionidae

Habit: Colonial / clusters, insectivorous.

Habitat: Scrub forest and low foothills with low rainfall, tropical semi evergreen forests.

Niche: Caves, buildings (unused), trees, crevices. 170-1754m.

Distribution
Global: India, Pakistan, Nepal, Afghanistan, Mediterranean zone of Europe and north-west Africa to the Crimea, Asia Minor, Israel, Arabia, China, Mongolia.

South Asia:
India: Jammu & Kashmir, Himachal Pradesh, Meghalaya, Rajasthan
Nepal
Pakistan

Afghanistan

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: About 10 / not known. Fragmented.

Habitat status: < 10% decrease in area likely in the next 5 years due to deforestation. Decrease in quality due to deforestation.

Data source: Field study, literature; observed, suspected.

Threats
Threats to the taxon: Habitat loss, deforestation in the future. The influence on the population is well understood, not reversible and has not ceased to be a threat.

Data source: Field study; observed, inferred, suspected.

Population
Generation time: 4-6 years

Mature individuals: < 800. Based on 40 individuals per colony in 20 locations. <10% decline in the number of mature individuals likely in the future.

Population trend: Actual numbers 800. Population stable at present. <10% decline likely in the next 5 years.

Data source: Field study; observed, inferred, suspected.

Recent Field Studies
A. Thabah in East Khasi hills, Meghalaya, 2001, echolocation studies on bats

Red List 2001 Status derived in the workshop

Ver. 3.1: VULNERABLE D1

Restricted number of mature individuals in fragmented locations in the region.

National Status
India: Vulnerable
Nepal: Vulnerable
Pakistan: Data Deficient

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring, public awareness

Sources
Bates & Harrison, 1997; Dobson, 1873; Dobson, 1875; Hutson *et al*., 2001; Tomes, 1857

Compilers
S. Mistry, M. Muni, K.R. Senacha, T.K. Shrestha, K.S. Sreepada, C. Srinivasulu

Reviewers
Rest of the participants

Distribution in South Asia and Afghanistan based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Baschgar Valley	35º 10	70º 58	Bates & Harrison, 1997
Ghazni	33º 33	68º 28	Bates & Harrison, 1997
Firindjal	35º 00	68º 29	Bates & Harrison, 1997
near Kabul	-	-	Bates & Harrison, 1997
near Maimana	-	-	Bates & Harrison, 1997
near Qalat	-	-	Bates & Harrison, 1997
near Beltchiragh	-	-	Bates & Harrison, 1997
INDIA			
Jammu & Kashmir			
Achabari	33º 41	75º 14	Bates & Harrison, 1997
Shar	33º 44	75º 11	Bates & Harrison, 1997
Himachal Pradesh			
Chamba	32º 33	76º 10	Bates & Harrison, 1997
Dalhousie	32º 32	76º 01	Bates & Harrison, 1997
Simla	31º 07	77º 09	Bates & Harrison, 1997
Meghalaya			
East Khasi hills	25º 20	91º 55	Semievergreen forest Deforestation A. Thabah, 2001
Rajasthan			
Nasirabad	26º 16	74º 42	type locality of blythii Bates & Harrison, 1997
NEPAL			
Tumlingter	27º 33	87º 16	Bates & Harrison, 1997
PAKISTAN			
Karakar Pass	34º 26	72º 13	Bates & Harrison, 1997

Myotis csorbai Topal, 1997

DATA DEFICIENT

Common name: Csorba's Mouse-eared Bat

Family: Vespertilionidae

Habit: Not known

Habitat: Not known

Niche: Cave. 1300m.

Distribution
Global: Endemic to South Asia (Nepal)

South Asia:
Nepal (Central)

Extent of Occurrence: Not known

Area of Occupancy: Not known

Locations/subpopulations: 1.

Habitat status: Not known

Data source: Literature; inferred.

Threats
Threats to the taxon: Not known

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Recent Field Studies
None

Red List 2001 Status derived in the workshop

Ver. 3.1: DATA DEFICIENT

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Data Deficient
Microchiroptera Action Plan (Global): Data Deficient
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Sources
Hutson *et al*., 2001; Simmons *et al.,* in prep.

Compilers
P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, H. Raghuram, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Distribution in South Asia based on literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
NEPAL			
Nepal (Central), no exact location	28º 14	83º 58	Syanjia district, 4 km extent, located at 30 km south of Pokhara town. Subtropical forest (Shrestha, referring to locality given in original description) Deforestation, mining, pollutants

Myotis daubentonii (Kuhl, 1819)

ENDANGERED in South Asia

Synonyms: *Vespertilio daubentonii* Kuhl, 1819
Vespertilio laniger Peters, 1871

Common names: Daubenton's Bat, Water Bat

Family: Vespertilionidae

Habit: Insectivorous

Habitat: Deciduous and mixed forests.

Niche: Caves, lakes, ponds, streams, hollow trees, buildings crevices.

Distribution
Global: India, Tibet; from Ireland and Scandinavia through Europe and Russia to Japan, Korea and China.

South Asia:
India: Meghalaya, Maharashtra

Extent of Occurrence: 101-5,000 sq km.

Area of Occupancy: 11-500 sq km.

Locations/subpopulations: 3 / 3. Fragmented.

Habitat status: Decrease in quality due to deforestation

Data source: Field study; observed, suspected, estimated.

Threats
Threats to the taxon: habitat loss and habitat destruction may be a threat in the future [Korad].

Data source: Field study; observed, inferred.

Population
Generation time: 4-6 years.

Mature individuals: < 250

Population trend: Not known

Data source: field study; literature

Red List 2001 Status derived in the workshop

Ver. 3.1: ENDANGERED B1ab(iii)+2ab(iii); D

1997 C.A.M.P. (Ver. 2.3): Not Evaluated

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, life history, ecological studies.

Management: Habitat management, monitoring

Captive breeding: Techniques not known at all.

Comments
Only 8 individuals seen from Pune area. No other information. Population numbers and threats not known. Based on studies in Europe of average 40 individuals per roost. Colony sizes in Europe range between 20-150 individuals with an average of 40.

Sources
Bates & Harrison, 1997; Hutson *et al*., 2001; Kuhl, 1819

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
Korad & Yardi, Karvey's Vanitashram, Hingane, Pune, India, 1999-2001, Ecological study and faunistic survey of bats in Pune Corporation limits - a minor UGC project.

Distribution in South Asia based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Meghalaya			
Mamosmai	25º 16	91º 42	Named *laniger* in Topal (1974)
Maharashtra			
Karvey's Vanitashram	-	-	Low-roofed old buildings, behind wooden boxes Habitat destruction Korad & Yardi, 1998-2001

Myotis formosus (Hodgson, 1835)

LEAST CONCERN in South Asia

Synonyms: *Vespertilio formosa* Hodgson, 1835
Kerivoula pallida Blyth, 1863
Vespertilio auratus Dobson, 1871
Vespertilio dobsoni Anderson, 1881

Common names: Bengali: *Hodgsoner Chamchika*; English: Hodgson's Bat

Family: Vespertilionidae

Habit: Tree-living, forest.

Niche: Trees and bushes; 1231-2900m.

Distribution
Global: India, Bangladesh, Afghanistan, Nepal, Tibet to China, Taiwan, Korea, Japan, Philippines and Indonesia.

South Asia:
Bangladesh: Northeastern
India: Assam, Bihar, Himachal Pradesh, Jammu & Kashmir, Maharashtra, Meghalaya, Punjab, Sikkim, Uttaranchal, West Bengal
Nepal

Afghanistan

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: At least 19 / some.

Habitat status: Change in quality of habitat

Data source: Literature, indirect information; Inferred, estimated.

Threats
Threats to the taxon: Habitat loss (human induced), deforestation

Population
Generation time: 4-6 years.

Mature individuals: > 10,000. <10% decline likely in number of mature individuals in the next 10 years.

Population trend: Decline predicted in the future.

Data source: Literature; inferred

Recent Field Studies
None

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
Bangladesh: Least Concern
India: Least Concern
Nepal: Near Threatened

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, taxonomic research

Management: Monitoring

Comments
Widespread distribution but rare and little known species. If future studies show the density of population to be very low the status may well have to be revised.

Sources
Anderson, 1881; Bates & Harrison, 1997; Blyth, 1863; Dobson, 1871d; Hodgson, 1835; Hutson *et al*., 2001; Khan, 2001; Trouessart, 1897-1905;

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Distribution in South Asia and Afghanistan based on literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Kalat-us-Seraj	34º 40	70º 18	Bates & Harrison, 1997
BANGLADESH			
Northeastern (Sylhet)			Khan, 2001
INDIA			
Assam			
Goalpara	26º 10	90º 38	Bates & Harrison, 1997
Bihar			
Chaibassa	22º 31	85º 50	Bates & Harrison, 1997
Siripur	25º 46	84º 44	Bates & Harrison, 1997
Purmea	25º 47	87º 28	Bates & Harrison, 1997
Himachal Pradesh			
Dharamsala	32º 14	76º 24	Bates & Harrison, 1997
Jammu & Kashmir			
no exact location	-	-	Bates & Harrison, 1997
Maharashtra			
Nagpur	21º 10	79º 12	Bates & Harrison, 1997
Meghalaya			
Cherrapunji	25º 16	91º 42	Bates & Harrison, 1997
Mowphlang	25º 31	91º 31	Bates & Harrison, 1997
Punjab			
Hoshiapur	31º 30	75º 59	Bates & Harrison, 1997
Sikkim			
No exact location	-	-	Bates & Harrison, 1997
Uttaranchal			
near Mussoorie	-	-	Bates & Harrison, 1997
Dehra Dun	30º 19	78º 03	Bates & Harrison, 1997
Katarmal	29º 36	79º 40	Bates & Harrison, 1997
West Bengal			
Darjeeling	27º 02	88º 20	Bates & Harrison, 1997
Kolkata	22º 35	88º 21	Bates & Harrison, 1997
NEPAL			
Kathmandu Valley	27º 42	85º 12	Type locality of *M. formosus* Bates & Harrison, 1997
Ghorepani	28º 22	83º 35	Bates & Harrison, 1997

Myotis hasseltii (Temminck, 1840)

NEAR THREATENED in South Asia

Synonyms: *Vespertilio hasseltii* Temminck, 1840

Common names: Sinhalese: *Van Hassltge Dumburce Wavula*; English: Lesser Large-tooth Bat, The Brown Bat, Van Hasselt's Bat;

Family: Vespertilionidae

Habitat: Dry zones

Niche: Cracks in tree trunks or bamboos and possibly in holes in walls in ruined buildings; sea level and lowland.

Distribution
Global: India, Sri Lanka, South east Asia

South Asia:
India: West Bengal
Sri Lanka: Eastern Province, Northern Province, North Central Province, Southern Province

Extent of Occurrence: > 20,000 sq km. <10% decline predicted in the next 10 years.

Area of Occupancy: > 2,001 sq km. Inferred based on literature.

Locations/subpopulations: Many. Fragmented.

Habitat status: <10% decrease in area due to human habitation. Decrease in quality.

Data source: Literature, indirect information; inferred, estimated;

Threats
Threats to the taxon: Habitat loss, development, human settlement

Data source: Literature; inferred

Population
Generation time: 4-6 years

Mature individuals: Unknown

Population trend: <10% decline in the population due to habitat loss in the last 10 years. <10% decline likely in the next 10 years.

Data source: Literature; inferred.

Red List 2001 Status derived in the workshop

Ver. 3.1: **NEAR THREATENED**

National Status
India: Near Threatened
Sri Lanka: Vulnerable B1ab(iii)+2ab(iii)

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, life history, limiting factor research, ecological research

Management: Habitat management; Monitoring public awareness

Comments
The species was recorded in 6 different countries [Bates & Harrison], however, in the recent past (last 5 years), despite surveys, no records from Myanmar and Sri Lanka. But, considering the possiblity that it is a common bat, the EOO could be > 20,000 km. Being a lowland species, possiblities of habitat destruction is very high, though not known due to human settlements. No sightings in the last 3 years in two separate regions (Myanmar & Sri lanka) indicates a possible reduction of numbers in population size. Immediate survey is essential in other regions. public awareness in the sense that people who find a bat can take it to the researcher to identify it. Sri Lankan population is a suspect, the quality and quantity of habitat have drastically declined. Southern Myanmar population is unknown [Swe], Northern Myanmar holds a sustainable population [Bates]. Since there is definitive information in Sri Lanka and Myanmar, we suspect a decrease in population. In those areas in Indonesia where there is no human habitation, population may be stable

Sources
Bates & Harrison, 1997; Hutson *et al*., 2001; Philips, 1980

Compilers
A.C. Girish, Immanuel, J.K., S. Kandula, V.S. Korad, C.D. Koya, G. Nair, P.T. Nathan, A. Nobel, J.K. Raj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
Khin Mie Mie, 2001, North Rakhine state, Myanmar, field study.
Yapa & Digana, 1996-1999, Sri Lanka, ecological survey.

Distribution in South Asia and Myanmar based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
West Bengal			
Kolkata	22º 35	88º 21	Bates & Harrison, 1997
MYANMAR			
North Rakhine state			Khin Mie Mie, 2001
SRI LANKA			
Eastern Province			
Kokoputchi	-	-	Bates & Harrison, 1997
Valaichenai	07º 54	81º 32	Bates & Harrison, 1997
Northern Province			
Kappachchi	08º 38	80º 18	Bates & Harrison, 1997
North Central Province			
Anuradhapura	08º 20	80º 25	Bates & Harrison, 1997
Southern Province			
Yala	06º 22	81º 30	Bates & Harrison, 1997

Myotis horsfieldii (Temminck, 1840)

LEAST CONCERN in South Asia

Synonyms: *Vespertilio horsfieldii* Temminck, 1840
Leuconoe peshwa Thomas, 1915
Myotis dryas Andersen, 1907

Common names: Horsfield's Bat, Lesser large-tooth Bat

Family: Vespertilionidae

Habit: Mostly occurs in wooded areas, near water bodies.

Habitat: Caves.

Niche: Up to 1200m.

Distribution
Global: India, Hong Kong, Southeast Asia

South Asia:
India: Andaman & Nicobar islands, Goa, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Tamil Nadu

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: >10 / not known. Fragmented.

Habitat status: Human interference, loss of habitat, change in quality.

Data source: Indirect information, literature; Inferred.

Threats
Threats to the taxon: Human interference. The influence on the population well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Not known

Data source: Indirect information; Inferred

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

1997 C.A.M.P. (Ver. 2.3): Data Deficient

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Silent Valley National Park, Kerala; Kanha National Park, Madhya Pradesh

Recommendations
Research: Survey

Management: Monitoring

Comments

Sources
Andersen, 1907; Bates & Harrison, 1997; Harshey & Chandra, 2001; Hutson *et al*., 2001; Thomas, 1915

Compilers
P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, H. Raghuram, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Recent Field Studies
Das in Silent Valley, 1986; Hill, Madhya Pradesh, 1987; Khajuria, Maharashtra, 1979
V.S. Korad & K.D. Yardi, Pune, 1998-2000, Survey and ecology

Distribution in South Asia based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Andaman & Nicobar Islands			
Port Blair	11º 40	92º 44	Type locality of *dryas*
Goa			
Molem	15º 20	74º 15	Bates & Harrison, 1997
Karnataka			
Belgaum	15º 54	74º 36	Hanging from the roof of temple Bhat & Sreenivas, 1990
Kodai	12º 54	74º 51	Bates & Harrison, 1997
Kerala			
Baliaparathodu	10º 46	76º 42	Bates & Harrison, 1997
Calicut	-	-	Hole of well A. Madhavan, 1993
Silent Valley	10º 46	76º 42	Tropical forest P.K. Das, 1980
Madhya Pradesh			
Jabalpur	23º 10	79º 59	Bates & Harrison, 1997
			Harshey & Chandra, 2001
Kanha National Park	22º 35	80º 28	Bates & Harrison, 1997
Mukhi	21º 48	80º 16	Bates & Harrison, 1997
Sabalgarh	26º 15	77º 24	Bates & Harrison, 1997
Maharashtra			
Elephanta Island	18º 54	72º 58	Brosset, 1962 Bates & Harrison, 1997
Poona	18º 34	73º 58	Type locality of *peshwa* Bates & Harrison, 1997
near Satara	-	-	Bates & Harrison, 1997
Tamil Nadu			
High wavy mountains	09º 50	77º 26	Forest, tea plantations, underground tunnel, small colony, about 20 individuals Bates & Muni, 1993
Venniar Estate	39º 50	77º 29	Bates & Harrison, 1997

Myotis longipes (Dobson, 1873)

NEAR THREATENED in South Asia

Synonyms: *Vespertilio longipes* Dobson, 1873
? *Myotis theobaldi* Blyth, 1856?
? *Vespertilio megalopus* Dobson, 1875
Vespertilio macropus Dobson, 1872

Common names: Kashmir Cave Bat

Family: Vespertilionidae

Habitat: Caves and ruins.

Niche: Cracks and crevices, unused buildings/low lying areas. 1754m.

Distribution
Global: India, Myanmar, Nepal, and Afghanistan

South Asia:
India: Jammu & Kashmir, Meghalaya, Maharashtra
Nepal

Afghanistan
Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,001 sq km.

Locations/subpopulations: 7-10 / 7-10. Fragmented.

Habitat status: Habitat loss and change in quality of habitat.

Data source: Field study, museum; observed

Threats
Threats to the taxon: Accidental mortality, war, human interference, cave disturbance, habitat loss

Data source: Field study, museum; observed, inferred.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: > 10,000. Population likely to decline.

Data source: Field study, literature; observed

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

National Status:
India: Near Threatened
Nepal: Near Threatened

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Vulnerable B1+2c; D2
Microchiroptera Action Plan (Global): Vulnerable B1+2c; D2
CITES: Not listed

Known presence in Protected Areas
India: Balpakram National Park (Mizoram)

Recommendations
Research: Survey, taxonomic research; life history, basic ecology.

Management: Habitat management, monitoring.

Captive breeding: Techniques not known at all.

Comments
Possible occurrence in Iran and Vietnam. Taxonomy of small, big footed Myotis is complex. Species is very difficult to identify unless there is enough expertise. Identification should be done with great care. Since the species is restricted in its distribution, the species might not be found in these localities already surveyed and has to be surveyed for confirmation. Considering that occurrence is full Himalayan range and considering its occupancy in other countries in addition of new records. Since it ccurs in Pune, Meghalaya and Myanmar, the EOO is justified. Specimens from Pune not published but confirmed. The new record by Korad and Yardi in Pune might force Pune population to be considered fragmented. In Afghanistan, bombing could have affected the species. Normally it was recorded at higher altitudes from 1500-2000m. However there are records of collection from 300 and 600m. There is seasonal migration during breeding season in Myanmar [Swe]. Mature Individuals in Kashmir caves - 5000, 2 caves in Afghanistan - 7000 (B&H), so population more than 10,000. Habitat management is essential in view of recent developments in Afghanistan. Fragmented population in few locations, one or two caves have large population.If the entire area is taken into consideration for distribution (greater than 20,000) and when taken individually, the criteria would change from Near Threatened to Least concern (?). - (Paul Bates)

Sources
Bates & Harrison, 1997; Blyth, 1856; Dobson, 1872; Dobson, 1873; Dobson, 1875; Hutson *et al*., 2001

Compilers
P.J.J. Bates, P.C.M.B. Digana, Y.P. Sinha, E.A.A. Shukkur, K.M. Swe, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
Y.P. Sinha, Garo hills, Meghalaya, 1992;
A. Thabah in Meghalaya, 2001, Echolocation.
K.M. Swe in Yangon, 2000, Taxonomic studies.

Distribution in South Asia, Afghanistan and Myanmar based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Jalalabad	34º 26	70º 25	War (occupancy by terrorists) Bates & Harrison, 1997
Lalanda	34º 15	69º 04	Bates & Harrison, 1997
Pialeh Cave	34º 40	70º 30	Bates & Harrison, 1997
INDIA			
Jammu & Kashmir			
Bahmajo Bat Cave	33º 40	75º 23	Bates & Harrison, 1997
Bhima Devi	33º 43	75º 17	Type locality of *longipes* Bates & Harrison, 1997
Bumzov Cave	33º 56	75º 24	Bates & Harrison, 1997
Matar Nag	-	-	Type locality of *theobaldi* Bates & Harrison, 1997
Meghalaya			
Mausami Cave, Cherrapunji	-	-	Sinha, 1999
Siju Cave	25º 32	75º 47	Museum labels A. Thabah, 2001 Bates & Harrison, 1997
Maharashtra			
Guruwarpeth	18º 31	73º 51	Old buildings Human Interference Yardi K.S., 1998-2001
MYANMAR (NORTHERN)			
Twin-tae	-	-	Township area. Only one specimen was collected in between two beams in an old building. Population number: 1 K.M. Swe, 2000
NEPAL			
Syangja	28º 49	83º 42	Bates & Harrison, 1997

Myotis montivagus (Dobson, 1874)

VULNERABLE in South Asia

Synonyms: *Vespertilio montivagus* Dobson, 1874
Myotis peytoni Wroughton & Ryley, 1913

Common name: Burmese Whiskered Bat

Family: Vespertilionidae

Habit: Subterranean refuge, small colonies, insectivorous.

Habitat: Caves and subterranean habitats (non-aquatic)

Niche: Rocky crevices hill in open country, secondary forest. Up to 1100m.

Distribution
Global: China to India, Myanmar, Malaysia, Indonesia.

South Asia:
India: Andhra Pradesh, Karnataka, Kerala

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km. Inferred based on literature.

Area of Occupancy: 501-2,000 sq km. Estimated from the likely home range of small number of colonies in scattered localities.

Locations/subpopulations: 4 / at least 2. Fragmented.

Habitat status: Decrease in quality, habitat loss.

Data source: Field study, literature; observed, suspected; hypothetical.

Threats
Threats to the taxon: Human interference, minor current disturbance at Gersoppa falls due to tourism.

Data source: Field study, literature; observed, suspected; hypothetical.

Population
Generation time: 4-6 years

Mature individuals: < 2,500

Population trend: < 2,500

Data source: Field study; literature; inferred; hypothetical.

Red List 2001 Status derived in the workshop

Ver. 3.1: VULNERABLE B2ab(iii); D2

Threatened due to restricted area and known only from a few localitites, which makes it susceptible to threats due to decrease in habitat quality.

1997 C.A.M.P. (Ver. 2.3): Data Deficient

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Lower Risk near threatened
Microchiroptera Action Plan (Global): Lower Risk near threatened
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey studies, limiting factor research, basic ecology / habitat research.

Management: Monitoring, public awareness

Comments
Specimen from southern India is referred as *Myotis montivagus peytoni* and that from Myanmar is refered as *M. montivagus montivagus* (Bates & Harrison, 1997). There are few locations spread. The number of locations and the colonies are very scattered. Human disturbance in two out of four localities in southern India due to increasing tourism activity affecting locality at Gersoppa falls in Karnataka. Small number of colonies, small numbers in each colony, few localities reported. Based on four locations, severely fragmented populations, small group size.

Sources
Bates & Harrison, 1997; Dobson, 1874; Hutson *et al*., 2001; Wroughton & Ryley, 1913

Compilers
P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, H. Raghuram, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Recent Field Studies
A. Madhavan, Calicut, Kerala, 1993, recorded

Distribution in South Asia and Myanmar based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Andhra Pradesh			
Vishakhapatnam district	17º 42	83º 24	Eastern ghats - Lamkapakalu and Ananathgiri Bates & Harrison, 1997
Karnataka			
Gersoppa Falls	14º 12	74º 42	Type locality of *peytoni*. 400m. Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Kerala			
Anakkampoyle	11º 14	75º 44	Subeterranean refuge in a hillock in a village outside secondary forest Madhavan, 1993 Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Adung Valley	28º 10	97º 40	Bates & Harrison, 1997

Myotis muricola (Gray, 1846)

LEAST CONCERN in South Asia

Synonyms: *Vespertilio muricola* Gray, 1846
Vespertilio blanfordi Dobson, 1871,
Vespertilio caliginosus Tomes, 1859,

Common names: Nepalese Whiskered Bat

Family: Vespertilionidae

Habit: Insectivorous, colonial

Habitat: Montane forests, hilly forests

Niche: Caves, tightly rolled banana leaves. 1230 - 2700m.

Distribution
Global: Afghanistan, India, Nepal, Myanmar, Pakistan

South Asia:
India: Assam, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Maharashtra, Meghalaya, Sikkim, Uttaranchal, West Bengal
Nepal
Pakistan: NWFP, Punjab
Sri Lanka

Afghanistan
Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,001 sq km.

Locations/subpopulations: >20 / not known. Fragmented.

Habitat status: >10% decrease in area in the last 10 years due to habitat alteration. Decrease in quality due to habitat alteration.

Data source: Literature; Inferred.

Threats
Threats to the taxon: Habitat loss, habitat destruction. The influence on the population well understood, not reversible and have not ceased to be a threat.

Data source: Indirect information, literature; Inferred.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: <10% decline in the population likely in the next 5 years.

Data source: Field study, literature; inferred; range of opinion.

Recent Field Studies
V.S. Korad and K. Yardi in Pune, 1998-2001, Faunistic survey.

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
India: Least Concern
Nepal: Least Concern
Pakistan: Least Concern
Sri Lanka: Data Deficient

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
Pakistan: Murree National Park; Nepal: Langtung National Park

Recommendations
Research: Survey

Management: Monitoring

Comments
Note that Korad indicated > 50% projected population decline from Pune which does not meet the group consensus. > 20 site locations. There are 22 sites, with 8 individuals in each, and probable occurrence throughout the range. Species can reduce due to habitat alterations and scientific collections.

Sources
Bates & Harrison, 1997; Dobson, 1871; Gray, 1846; Hutson *et al*., 2001; Tomes, 1859

Compilers
S. Mistry, M. Muni, K.R. Senacha, T.K. Shrestha, K.S. Sreepada, C. Srinivasulu

Reviewers
Rest of participants

Distribution in South Asia, Afghanistan and Myanmar based on literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Kamdesh	35º 25	71º 26	Bates & Harrison, 1997
INDIA			
Assam			
Lokra	26º 50	92º 46	Bates & Harrison, 1997
Himachal Pradesh			
Chamba	32º 33	76º 10	Bates & Harrison, 1997
Dalhousie	32º 32	76º 01	Bates & Harrison, 1997
Samayala	32º 04	76º 16	Bates & Harrison, 1997
Simla	31º 07	77º 09	Bates & Harrison, 1997
Jammu & Kashmir			
Anantnag	33º 44	75º 11	Bates & Harrison, 1997
Kokernag	33º 41	75º 13	Bates & Harrison, 1997
Pahlgam	34º 01	75º 25	Bates & Harrison, 1997
Jharkhand			
Chota Nagpur	23º 12	84º 14	Bates & Harrison, 1997
Meghalaya			
Konshnong	25º 30	92º 01	Bates & Harrison, 1997
Sikkim			
Jeluk	-	-	Bates & Harrison, 1997
Lachen	27º 46	88º 36	Bates & Harrison, 1997
Laching	27º 42	88º 48	Bates & Harrison, 1997
Sedonchen	27º 15	88º 48	Bates & Harrison, 1997
West Bengal			
Gairibas	27º 02	88º 15	Bates & Harrison, 1997
Ghum	27º 02	88º 20	Bates & Harrison, 1997
Kolkata	22º 35	88º 21	Bates & Harrison, 1997
Maharashtra			
Pune (?)	18º 31	73º 51	Dry Tropical forests, Pune corporation limits.

Distribution in South Asia	Lat.	Long.	Notes/Sources
			Habitat alterration Kranti, K.D. & Yardi, V.S, 1998-2001
Uttaranchal			
Dehra Dun	30º 19	78º 03	Bates & Harrison, 1997
Deori	29º 36	79º 40	Named as *darjelingensis* in Wroughton, 1914 Bates & Harrison, 1997
Mussoorie	30º 26	78º 04	Bates & Harrison, 1997
Phurkia	30º 12	80º 03	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Akyab	20º 09	92º 55	Bates & Harrison, 1997
NEPAL			
Kathmandu Valley	27º 42	85º 12	type locality of muricola Bates & Harrison, 1997
Kontoum	-	-	Bates & Harrison, 1997
Langtang	28º 14	85º 36	Bates & Harrison, 1997
Those	27º 36	86º 05	Bates & Harrison, 1997
PAKISTAN			
NWFP			
Karakar Pass	34º 26	72º 13	Bates & Harrison, 1997
Shogran	34º 37	73º 28	Bates & Harrison, 1997
Punjab			
Dunga Gali	34º 03	77º 22	Bates & Harrison, 1997
Gharial	33º 55	73º 27	Bates & Harrison, 1997
Murree	33º 55	73º 26	Bates & Harrison, 1997
SRI LANKA			
No exact location	-	-	Doubtful record in Blandford, 1888-91 Bates & Harrison, 1997

Myotis mystacinus (Kuhl, 1819)

VULNERABLE in South Asia

Synonyms: *Vespertilio mystacinus* Kuhl, 1819
Vespertilio pallidiventris Hodgson, 1844
Vespertilio nipalensis Dobson, 1871
Myotis meinertzhageni Thomas, 1926

Common name: Whiskered Bat

Family: Vespertilionidae

Habit: Insectivorous (mainly Lepidoptera)

Habitat: Desert, semidesert, warm tropical lowland, montane forest.

Niche: 20-3015m.

Distribution
Global: India, Pakistan, Afghanistan and most of paleoarctic regions

South Asia:
India: Himachal Pradesh, Jammu & Kashmir, Meghalaya, West Bengal
Nepal
Pakistan: NWFP, Punjab

Afghanistan

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km. Estimated based on 10 km foraging radius and > 20 locations.

Locations/subpopulations: >20 / not known. Fragmented.

Habitat status: < 10% decrease in area in the past 10 years due to habitat alteration. Decrease in quality due to habitat alteration.

Data source: Literature, Field study; Inferred

Threats
Threats to the taxon: Habitat loss, human interference. The influence on the population well understood, not reversible and have not ceased to be a threat.

Data source: Literature, Field study; Inferred; range of opinion

Population
Generation time: 4-6 years

Mature individuals: < 1000

Population trend: < 10% decline in the population likely in the next 5 years.

Data source: Literature; inferred.

Recent Field Studies
V.S. Korad and K. Yardi in Pune, 1998-2001, Faunistic survey

Red List 2001 Status derived in the workshop

Ver. 3.1: VULNERABLE D1

Very few numbers estimated to exist in South Asia, few localities and continuing decline in numbers. Recent Afghanistan war could have fragmented the South Asian populations from the rest, hence categorized as Vulnerable.

National Status

India: Vulnerable	D1
Nepal: Vulnerable	D1
Pakistan: Vulnerable	D1

Uncertainty
Assessed based on inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments
Assuming 20 locations and 50 individuals. Based on studies in Europe. Assuming Afghanistan locations are threatened due to war. Records/Collections (BNHS, 1922-24 in Himachal Pradesh, Sikkim; ZSI, 1916 in Darjeeling). Restricted distribution.

Sources
Bates & Harrison, 1997; Dobson, 1871; Kuhl, 1819; Hodgson, 1844; Hutson *et al*., 2001; Thomas, 1926

Compilers
S. Mistry, K.R. Senacha, C. Srinivasulu

Reviewers
Rest of the participants

Distribution in South Asia and Afghanistan based on literature.

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Kabul	34º 30	69º 10	Bates & Harrison, 1997
Kunduz	36º 47	68º 51	Bates & Harrison, 1997
Maimana	35º 54	64º 43	Bates & Harrison, 1997
Mazar-i-Sharif	36º 43	67º 05	Bates & Harrison, 1997
INDIA			
Himachal Pradesh			
Chirot	32º 40	77º 10	named as muricola in Lindsay, 1927ii Bates & Harrison, 1997
Jammu & Kashmir			
Junction of Nubra-Shyok rivers	-	-	type locality of *meinertzhageni* Bates & Harrison, 1997
Rambon	33º 15	75º 18	Bates & Harrison, 1997
Shikargarh	33º 44	75º 11	Bates & Harrison, 1997
Sirguffara	-	-	Bates & Harrison, 1997
Meghalaya			
Cherrapunji	25º 16	91º 42	Bates & Harrison, 1997
Mawphlang	25º 25	92º 13	Bates & Harrison, 1997
West Bengal			
Choka	27º 30	88º 20	Bates & Harrison, 1997
Darjeeling	27º 02	88º 20	Bates & Harrison, 1997
Hasimara	26º 52	89º 48	named as *muricola* in Wroughton, 1917a Bates & Harrison, 1997
NEPAL			
Kathmandu	27º 42	85º 12	type locality of nipalensis Bates & Harrison, 1997
PAKISTAN			
NWFP			
Dir	35º 12	71º 52	Bates & Harrison, 1997
Shogran	34º 37	73º 28	Bates & Harrison, 1997
Kaghan Valley (lower)	37º 47	73º 32	Bates & Harrison, 1997
Punjab			
Dunga Gali	34º 03	77º 22	Bates & Harrison, 1997
Murree Hills, Punjab,	33º 55	73º 26	Bates & Harrison, 1997

Myotis sicarius Thomas, 1915 — VULNERABLE

Common names: Mandelli's Mouse-eared Bat

Family: Vespertilionidae

Habit: Riverbank, valley

Habitat: Hilly forests

Niche: 1350m.

Distribution
Global: Endemic to South Asia (India, Nepal)

South Asia:
India: Sikkim, West Bengal
Nepal

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: 11-500 sq km.

Locations/subpopulations: 6-7 / not known. Contiguous.

Habitat status: < 10% decrease in area likely in the next 5 years due to habitat alterations and deforestation around Annapurna Conservation area (Nepal).

Data source: Literature; Inferred.

Threats
Threats to the taxon: Habitat loss, deforestation, human interference

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Data source: Museum record

Red List 2001 Status derived in the workshop

Ver. 3.1: VULNERABLE B2ab(iii)

Highly restricted in distribution with continuing decline in habitat predicted, which could affect the population in future.

National Status
India: Endangered B2ab(iii)
Nepal: Vulnerable B2ab(iii)

Uncertainty
Assessed based on evidence, inference, precaution and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Vulnerable A2c; D2
Microchiroptera Action Plan (Global): Vulnerable A2c; D2
CITES: Not listed

Known presence in Protected Areas
Nepal: Annapurna Conservation area

Recommendations
Research: Survey

Management: Monitoring

Comments
Endemic to Indian subcontinent. No fluctuation because four locations have been known since 1960 and there is no indication of increase or decrease. Additional information on distribution reported by Shrestha based on indirect information.

Sources
Bates & Harrison, 1997; Hutson *et al*., 2001; Shrestha, 1997; Thomas, 1915

Compilers
S. Mistry, M. Muni, K.R. Senacha, T.K. Shrestha, K.S. Sreepada, C. Srinivasulu

Reviewers
Rest of the participants

Recent Field Studies
Shrestha, T.K. in Annapurna Conservation area, Nepal, 1997-99. Mammals of Nepal

Distribution in South Asia based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Sikkim			
Rongli	27º 17	88º 45	type locality of *sicarius* Bates & Harrison, 1997
West Bengal			
Pashok	27º 04	88º 24	Bates & Harrison, 1997
NEPAL			
Banss Bahari	27º 48	84º 57	Bates & Harrison, 1997
Godavari	27º 34	85º 24	Bates & Harrison, 1997
Annapurna Conservation area	-	-	Indirect information, Eco survey in Gandaki zone Deforestation Shrestha, 1999

Myotis siligorensis (Horsfield, 1855)

NEAR THREATENED in South Asia

Synonyms: *Vespertilio siligorensis* Horsfield, 1855
?*Verpertilio darjilingensis* Horsfield, 1855

Common names: Himalayan Whiskered Bat, Siliguri Bat

Family: Vespertilionidae

Habit: Insectivorous, colonial (small groups).

Habitat: Montane temperate forests.

Niche: Caves. 14-2717m.

Distribution
Global: India, Myanmar, China, Vietnam, Indonesia to Borneo

South Asia:
India: Meghalaya, Sikkim, Uttaranchal, West Bengal
Nepal

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: About 10 / not known. Fragmented.

Habitat status: < 10% decrease in area in the last 5 due to habitat destruction. Decrease in quality due to habitat destruction.

Data source: Literature, indirect information; inferred.

Threats
Threats to the taxon: Human interference. The influence on the population well understood, not reversible and have not ceased to be a threat.

Data source: Literature, indirect information; inferred.

Population
Generation time: 4-7 years

Mature individuals: > 10,000

Population trend: > 10,000. There is decline in the population in the past. <10% decline likely in the next 5 years.

Data source: Field study, literature; observed; range of opinion

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Change in habitat quality is a major cause of concern for this species.

National Status
India: Near Threatened
Nepal: Near Threatened

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments
Korad lists this species from Pune (?). According to Korad change in habitat approx. 80% primarily due to human interference. Population trends based on 7 individuals per colony at 11 locations. This estimate maybe highly conservative and not representative of a true population. Mistry and Sreepada strongly disagree with the status because it is based upon unreliable population estimate.

Sources
Bates & Harrison, 1997; Horsfield, 1855; Hutson *et al*., 2001

Compilers
S. Mistry, M. Muni, K.R. Senacha, T.K. Shrestha, K.S. Sreepada, C. Srinivasulu

Reviewers
Rest of the participants

Recent Field Studies
V.S. Korad and Kranti, Pune, 1998-2000

Distribution in South Asia and Myanmar based on literature and field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Meghalaya			
Konshnong	25º 30	92º 01	Bates & Harrison, 1997
Sikkim			
Bakkim	27º 30	88º 30	Bates & Harrison, 1997
Uttaranchal			
Dwali	29º 36	79º 40	Bates & Harrison, 1997
Dogalbita	30º 22	79º 19	Bates & Harrison, 1997
Mussoorie	30º 26	78º 04	Bates & Harrison, 1997
West Bengal			
Siliguri	26º 42	88º 30	type locality of *siligorensis* Bates & Harrison, 1997
Ghum	27º 02	88º 20	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Hai Bum	26º 02	95º 52	Bates & Harrison, 1997
Adung Valley	28º 10	97º 40	Bates & Harrison, 1997
NEPAL			
Kathmandu Valley	27º 42	85º 12	Bates & Harrison, 1997

Nyctalus leisleri (Kuhl, 1819)

ENDANGERED in South Asia

Synonym: *Vespertilio leisleri* Kuhl, 1819

Common names: Hairy-armed Bat, Leisler's Bat

Family: Vespertilionidae

Habit: Insectivorous, piscivore (?), riverine.

Habitat: Montane forests, riparian.

Niche: Hollow trees/1380-2370m.

Distribution
Global: Afghanistan, India, Pakistan, Palearctic east to about 80 degrees

South Asia:
India: Himachal Pradesh, Jammu & Kashmir, Uttaranchal
Pakistan: NWFP, Punjab

Afghanistan

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,001 sq km.

Locations/subpopulations: 7 / not known. Contiguous.

Habitat status: < 10% decrease in area in the last 5 years due to habitat alteration. Decrease in quality due to habitat alteration.

Data source: Literature, indirect information; inferred; range of opinion.

Threats
Threats to the taxon: Habitat loss, habitat alteration. The influence on the population well understood, not reversible and have not ceased to be a threat.

Data source: Literature, indirect information; inferred; 95% confidence.

Population
Generation time: 4-6 years

Mature individuals: <250. <10% decline in the number of mature individuals likely in the future.

Population trend: Not known

Data source: Observed, inferred

Recent Field Studies
None

Red List 2001 Status derived in the workshop

Ver. 3.1: ENDANGERED D

Very few numbers in South Asia with continuing decline observed in habitat and inferred for population.

National Status
India: Endangered D
Pakistan: Endangered D

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Lower Risk near threatened
Microchiroptera Action Plan (Global): Lower Risk near threatened
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey studies

Management: Monitoring

Comments
The genus *Nyctalus* is known to migrate. Europe colony size 60-200 and about a maximum of 40 individuals per colony, in 7 locations estimated for South Asian region. Based on small numbers of records observed over a long length at the foothills of Himalayas and Nagaland of a species with long foraging range.

Sources
Bates & Harrison, 1997; Hutson *et al*., 2001; Kuhl, 1819; Walker, 1983

Compilers
S. Mistry, M. Muni, K.R. Senacha, T.K. Shrestha, K.S. Sreepada, C. Srinivasulu

Reviewers
Rest of the participants

Distribution in South Asia and Afghanistan based on literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Kamdesh	35º 25	71º 26	Bates & Harrison, 1997
INDIA			
Himachal Pradesh			
Simla	31º 07	77º 09	Bates & Harrison, 1997
Jammu & Kashmir			
Pahlgam	34º 01	75º 25	Bates & Harrison, 1997
Uttar Pradesh			
Dogalbita	30º 22	79º 19	Bates & Harrison, 1997
Katarmal	29º 36	79º 40	possibly referable to *N. montanus* (Bhat, 1974) Bates & Harrison, 1997
PAKISTAN			
NWFP			
Kululai	35º 18	72º 35	Bates & Harrison, 1997
Yakh Tangai	34º 34	71º 57	Bates & Harrison, 1997
Punjab			
Gharial	33º 55	73º 27	Bates & Harrison, 1997

Nyctalus montanus (Barrett-Hamilton, 1906)

NEAR THREATENED in South Asia

Synonym: *Pterygistes montanus* Barrett-Hamilton, 1906

Common name: Mountain Noctule

Family: Vespertilionidae

Habit: Insectivorous, also feeds on fish near riverbanks.

Habitat: Riparian (keeps near waterside), floodplains and riverine.

Niche: Arid flood plain, rock cliff and crevices and overhanging vegetation during sunny days. 680-1692m.

Distribution
Global: Afghanistan, India, Nepal

South Asia:
India: Himachal Pradesh, Uttaranchal
Nepal

Afghanistan

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 7 / not known. Fragmented.

Habitat status: <10% decrease in area in the past 5 years due to deforestation, human activity and quarrying. Decrease in quality due to deforestation, ethno-medicine and quarry (anthropogenic activities).

Data source: Field study; observed.

Threats
Threats to the taxon: Traditional medicine, habitat loss, deforestation, quarrying and mining. Threats will result in population decline. The influence on the population well understood, not reversible and have not ceased to be a threat.

Trade: Local trade for meat and ethnomedicine.

Data source: Field study, observed.

Population
Generation time: 4-6 years

Mature individuals: Not known

Population trend: Not known

Recent Field Studies
Shrestha in Nepal, 1994

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Widely distributed but habitat and population under threat due to human interference.

National Status
India: Near Threatened
Nepal: Near Threatened

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Lower Risk near threatened
Microchiroptera Action Plan (Global): Lower Risk near threatened
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, ecology.

Management: Habitat management, monitoring

Comments
Endemic to the Indian subcontinent. WWF India - reports this species to be "not uncommon in Kashmir". Decline in population due to ill effects of pesticides, ethnomedicine and habitat alteration [Shrestha]

Sources
Bates & Harrison, 1997; Barrett-Hamilton, 1906; WWF India; Hutson *et al*., 2001; Shrestha, 1997.

Compilers
S. Mistry, M. Muni, K.R. Senacha, T.K. Shrestha, K.S. Sreepada, C. Srinivasulu

Reviewers
Rest of the participants

Distribution in South Asia and Afghanistan based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Ismael Khel	33º 20	69º 10	Bates & Harrison, 1997
Jalalabad	34º 26	70º 25	Bates & Harrison, 1997
INDIA			
Himachal Pradesh			
Chamba	32º 33	76º 10	Bates & Harrison, 1997
Uttaranchal			
Mussoorie	30º 26	78º 04	type locality of *montanus*
			Bates & Harrison, 1997
NEPAL			
Dang-Deokhuri	28º 09	82º 17	Bates & Harrison, 1997
Dhang valley	-	-	Shrestha, 1999
Rapti river	-	-	Riverine habitat Collected for Ethnomedicine Population number: >15 Shrestha, 1999

Nyctalus noctula (Schreber, 1774)

LEAST CONCERN in South Asia

Synonyms: *Vespertilio noctula* Schreber, 1774
?*Vesperugo* (N.) *plancyi* Gerbe, 1880
Vespertilio labiata Hodgson, 1835

Common names: Noctule

Family: Vespertilionidae

Habit: Insectivorous, colonial, migratory

Habitat: Buildings, temples, montane forests, oak forests

Niche: Hollow trees, cellars, old ruins, rock crevices, haunted houses, feeds over wetlands, woodlands and pastures in Europe. 577-1231m.

Distribution
Global: India, Nepal, Myanmar

South Asia:
India, Himachal Pradesh, Jammu & Kashmir, Nagaland, Sikkim, Uttaranchal, West Bengal
Nepal
Pakistan: NWFP

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 19 / not known. Contiguous.

Habitat status: < 10 decrease in area likely in the next 5 years due to habitat change. Decrease in quality due to habitat alteration.

Data source: Literature, indirect information; inferred.

Threats
Threats to the taxon: Habitat loss

Data source: Literature, indirect information; inferred.

Population
Generation time: 4-6 years

Mature individuals: > 10,000. <10% decline in the number of mature individuals likely in the next 5 years.

Population trend: Decline predicted in the next 5 years.

Data source: Literature, indirect information; inferred.

Recent Field Studies
S. Mistry in Hee Gyathang, Sikkim, 1992

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
India: Least Concern
Nepal: Least Concern
Pakistan: Least Concern

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments
Known to migrate (up to 2000 km) in Europe and Russia. Actual estimate of population 8760 based on colony size of 40 individuals in 19 locations. Habibi refers to its occurrence in Afghanistan

Sources
Bates & Harrison, 1997; Gerbe, 1880; Hodgson, 1835; Hutson *et al*., 2001; Schreber, 1774-1785; Sinha, 1999.

Compilers
S. Mistry, M. Muni, K.R. Senacha, T.K. Shrestha, K.S. Sreepada, C. Srinivasulu

Reviewers
Rest of the participants

Distribution in South Asia and Myanmar based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Himachal Pradesh			
Kangra	32º 04	76º 16	Bates & Harrison, 1997
Mandi	31º 43	76º 55	Bates & Harrison, 1997
Jammu & Kashmir			
Pandrittan	34º 08	74º 53	Bates & Harrison, 1997
Pompour	-	-	Bates & Harrison, 1997
Punch	33º 46	74º 08	Bates & Harrison, 1997
Nagaland			
Mokokchung	26º 20	94º 30	Bates & Harrison, 1997
Sikkim			
Hee Gyathang	-	-	Montane forest S. Mistry, 1992 Bates & Harrison, 1997
Lingtam	-	-	Bates & Harrison, 1997
Uttaranchal			
Gwaldam	30º 04	79º 33	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
West Bengal			
Sangser	27º 04	88º 30	Bates & Harrison, 1997
Tong Song	27º 04	88º 24	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Chin Hills (60 mi West)	23º 40	94º 15	Bates & Harrison, 1997
Mahtum	26º 06	97º 58	Bates & Harrison, 1997
Tamanthe	25º 20	95º 18	Bates & Harrison, 1997
NEPAL			
Kathmandu Valley	27º 42	85º 12	type locality of *labiata* Bates & Harrison, 1997
Godavari	27º 34	85º 24	Bates & Harrison, 1997
Gari	-	-	Bates & Harrison, 1997
Nuwakot	28º 09	83º 52	Bates & Harrison, 1997
PAKISTAN			
NWFP			
Kohat	33º 34	71º 26	Bates & Harrison, 1997

Otomops wroughtoni (Thomas, 1913)

CRITICALLY ENDANGERED in South Asia

Synonyms: *Nyctinomus wroughtoni* Thomas, 1913

Common names: Wroughton's Free-tailed Bat

Family: Molossidae

Habit: Cave dweller, insectivorous, diurnal (?).

Habitat: Natural caves; Tropical rainforest; natural caves.

Niche: Narrow cracks and deep hollows in roof. 800m.

Distribution
Global: India, Cambodia

South Asia:
India: Karnataka, Meghalaya

Extent of Occurrence: < 5,000 sq km.

Area of Occupancy: < 10 sq km.

Locations/subpopulations: 2 / 2. Fragmented.

Habitat status: >10% decrease in area in the last 5 years. Decrease in quality due to roost disturbance

Data source: Census/monitoring, field study, indirect information; observed; 95% confidence

Threats
Threats to the taxon: Human interference, research collections. The influence on the population well understood, not reversible and have not ceased to be a threat.

Data source: Census/monitoring, field study, indirect information; observed.

Population
Generation time: 4-6 years

Mature individuals: < 250

Population trend: Stable. <10% decline in the population likely in the future.

Data source: Census monitoring, field study, literature; inferred; 95% confidence.

Red List 2001 Status derived in the workshop

Ver. 3.1: CRITICALLY ENDANGERED B2ab(iii)

Highly restricted area with roost disturbance as a threat to the species.

1997 C.A.M.P. (Ver. 2.3): Critically Endangered

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Critically Endangered B1+2c
Microchiroptera Action Plan (Global): Critically Endangered B1+2c
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, limiting factor research, basic ecology. PHVA.

Management: Monitoring, public awareness

Captive breeding: Information not available with this group.

Comments
Species easy to identify. Only one specimen was collected from Meghalaya using mist net. The population might be larger. Recorded at Barapede cave, Karnataka, South India; one record in northeastern India and one record in Cambodia. Meghalaya specimen needs authentication. Genetic research is currently being conducted to determine whether the SW, NE Indian populations are related and how these are related to the specimen recently collected from Combodia. Probably Barpede and Meghalaya specimens belong to two different populations. At Barapede, construction activities can submerge foraging areas and other roosting sites. Main threat is loss of roost site and disturbance at the roost. No loss of roost site was observed (M.S. Pradhan). Single population in need of special attention. If any activity detrimental to the location occurs it may wipe out the entire population of the species. More collections from the area recently. Barpede population as per A. Thabah's study last summer (2001). Population can decline due to habitat destruction in future. If any activity detrimental to one location occurs it may wipeout the entire population of the species. Collection for the purpose of biochemical, genetical, cytological, histological, physiological studies etc. research has to be discouraged for next 5-10 years since the population is very small and stable and is occurring in limited habitat.

Sources
Bates & Harrison, 1997; Brosset, 1962; Hutson *et al*., 2001; Thomas, 1913.

Compilers
D.P.S. Doss, V. Elangovan, A.M. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, K. Nathar, P. Padmanabhan, M.S. Pradhan, Y.S. Priya, P.J.E. Pandaranayaka, Y.P. Sinha, K.D. Yardi

Reviewers
Rest of the participants

Recent Field Studies
P.J.J. Bates, *et al.,* 1992, Barapede Caves, Talawadi, Belgaum, Karnataka
R. Krishnan, Barepede caves, Karnataka
A. Thabah, Meghalaya, 2001
S. Mistry & Parab, Barapede, July 2001, Population monitoring of *Otomops*
M. Muni, Barapede caves, Belgaum, 1992, Survey of bats
Ramakrishna and M.S. Pradhan in Barapade cave, March 2002. Status survey of *O. wroughtonii* in and around Barpade cave.

Distribution in South Asia based on literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Karnataka			
Barapede cave	15º 25	74º 22	Barapede cave is located 0.5 km from Talewadi near Belgaum. Specimen collection, proposed construction of dam and mining activities, which will impact the habitat, flooding if the dam is constructed; roost disturbance. There has been much collection of specimens recently. Population estimate: 40-50 Topal & Ramakrishna, 1980; Y.P. Sinha, 1992 - roost disturbance M. Muni and P.J.J. Bates, 1992 Bates & Harrison, 1997; Ramakrishna & M.S. Pradhan, 2002;
Meghalaya			
Siju cave	-	-	Caves A. Thabah, pers. obs.

Otonycteris hemprichii Peters, 1859

NEAR THREATENED in South Asia

Synonyms: *Otonycteris cinereus* Satunin, 1919

Common name: Hemiprich's Long-eared Bat

Family: Vespertilionidae

Habitat: Steppe Mountain, Upland desert, dry, deciduous woodland

Niche: Rock crevices. Upto 2700m.

Distribution
Global: India, Pakistan, Afghanistan

South Asia:
India: Jammu & Kashmir, Himachal Pradesh
Pakistan

Afghanistan

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 9 / many.

Habitat status: Habitat loss, change in quality of habitat.

Data source: Indirect information; Inferred

Threats
Threats to the taxon: Habitat loss, human interference

Population
Generation time: 4-6 years

Mature individuals: Not known

Population trend: Not known

Data source: Indirect information; literature; Inferred.

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Although widespread and many locations, the species is under thrat from habitat loss. Mature individuals are thought to be less than 2500, but there is no justification.

National Status
India: Near Threatened
Pakistan: Near Threatened

Uncertainty
Assessed based on inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Not Evaluated
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments
Widespread species in an abundant habitat that is not threatened

Sources
Bates & Harrison, 1997; Hutson *et al*., 2001, Peters, 1859, Satunin, 1919

Compilers
S. Mistry, M. Muni, K.R. Senacha, T.K. Shrestha, K.S. Sreepada, C. Srinivasulu

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia and Afghanistan based on literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Maimana	35º 54	64º 43	Bates & Harrison, 1997
Mazar-i-Sharif	36º 43	67º 05	Bates & Harrison, 1997
Nauabad - Bagrami	34º 30	69º 10	Bates & Harrison, 1997
INDIA			
Jammu & Kashmir			
Srinagar	34º 08	74º 50	Bates & Harrison, 1997
Baderwah	-	-	Bates & Harrison, 1997
Himachal Pradesh			
Nagrota	32º 03	76º 24	Bates & Harrison, 1997
PAKISTAN			
Chitral (9.6km south of)	-	-	Bates & Harrison, 1997
Gilgit	35º 54	74º 20	Bates & Harrison, 1997
Gupis Valley	36º 13	73º 27	Bates & Harrison, 1997

Philetor brachypterus (Temminck, 1840) — VULNERABLE in South Asia

Synonyms: *Philetor rohui* Thomas, 1902
Eptesicus verecundus Chasen, 1940

Common names: Rohu's Bat

Family: Vespertilionidae

Habit: Forest dweller, insectivore

Habitat: Montane forest

Niche: Hollow trees including coconut palms. 585-1846m.

Distribution
Global: Indonesia, Nepal, New British island, New Guinea, Philippines, Western Malaysia

South Asia:
India: Sikkim
Nepal

Extent of Occurrence: 5,001-20,000 sq km.

Area of Occupancy: 501-2,000 sq km.

Locations/subpopulations: 3 / 3. Contiguous.

Habitat status: < 10% decrease in area in the past 10 years due to human interference. Decrease in quality due to human interference.

Data source: Indirect information; suspected.

Threats
Threats to the taxon: Habitat loss, deforestation. The influence on the population not understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: Not known

Population trend: <10% decline in population likely in the next 10 years.

Data source: Indirect information; inferred, predicted.

Recent Field Studies
S. Mistry, Sikkim, India, 1992, Survey

Red List 2001 Status derived in the workshop

Ver. 3.1: VULNERABLE B1ab(iii)+2ab(iii)

Restricted in distribution with threats to habitat due to deforestation. Habitat quality has decreased and population likely to decline in future.

National Status
India: Endangered B1ab(iii)+2ab(iii)
Nepal: Vulnerable B1ab(iii)+2ab(iii)

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, ecological research.

Management: Habitat management, monitoring, public awareness.

Captive breeding: Techniques not known at all.

Comments
Synonyms cited in Bates & Harrison, 1997 is erroneous. Only 3 sites. Deforestation throughout much of Nepal. Probably very small population since despite many surveys in the Himalayas only 3 specimens have ever been collected.

Sources
Bates & Harrison, 1997; Chasen, 1940; Hutson *et al*., 2001; Temminck, 1840; Thomas, 1902

Compilers
A.C. Girish, J.K. Immanuel, S. Kandula, V.S. Korad, G. Nair, P.T. Nathan, A. Nobel, J. Koilraj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Distribution in South Asia from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Sikkim			
Hee Gyathang	-	-	Montane forest S. Mistry, 1992
NEPAL			
Barabisse	27º 35	85º 35	Bates & Harrison, 1997
Num	27º 33	87º 17	Bates & Harrison, 1997

Pipistrellus abramus (Temminck, 1840)

DATA DEFICIENT in South Asia

Synonyms: *Vespertilio abramus* Temminck, 1840

Common names: Japanese Pipistrelle

Family: Vespertilionidae

Habit: Insectivorous, probably small colony

Habitat: Not known

Niche: 396m.

Distribution
Global: China, India, Japan, Korea, Russia, Taiwan, Vietnam

South Asia:
India: Arunachal Pradesh, Uttar Pradesh

Myanmar (Northern): North Shan

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: Not known

Locations/subpopulations: 3 / not known.

Habitat status: Not known

Data source: Literature, Museum; Observed; 95% confidence

Threats
Threats: Not known

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Red List 2001 Status derived in the workshop

Ver. 3.1: **DATA DEFICIENT**

1997 C.A.M.P. (Ver 2.3): Not Evaluated

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments
Only known from museum specimens that were later identified as *Pipistrellus abramus*. Recent specimen was collected from Allahabad.

Sources
Temminck, 1840; Das & Sinha, 1995; Hutson *et al*., 2001; Sinha, 1999; Srinivasulu & Srinivasulu, 2001

Compilers
S. Mistry, M. Muni, K.R. Senacha, T.K. Shrestha, K.S. Sreepada, C. Srinivasulu

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Arunachal Pradesh			
Rotung, Abor	-	-	Abor = Adi hills Sinha, Y.P., 1999
Uttar Pradesh			
Allahabad	25º 57	81º 50	Das & Sinha, 1995, Srinivasulu & Srinivasulu, 2001
MYANMAR (NORTHERN)			
North Shan state			
Namkam	-	-	Das & Sinha, 1995, Sinha, 1999, Srinivasulu & Srinivasulu, 2001

Pipistrellus affinis (Dobson, 1871)

NEAR THREATENED in South Asia

Synonyms: *Vesperugo (Pipistrellus) affinis* Dobson, 1871
Pipistrellus mordax Phillips, 1980

Common names: Chocolate Pipistrelle, Grizzled Pipistrelle

Family: Vespertilionidae

Habit: Insectivore, low flying, hibernates (?), emerges early

Habitat: Highlands (?)

Niche: Cracks and small holes in tree trunks, roofs of manmade buildings. 1400-2000m.

Distribution
Global: China, India, Myanmar, Nepal, Sri Lanka, Tibet

South Asia:
India: Kerala, Maharashtra, Tamil Nadu, Uttar Pradesh, West Bengal
Nepal
Sri Lanka: Central Province, Uva Province

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many. Fragmented.

Habitat status: Decrease in habitat < 10% likely in the next 10 years due to human interference. Decrease in quality

Data source: Field study, literature; inferred; 95% confidence

Threats
Threats to the taxon: Human interference. The influence on the population not well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: < 2,500. <10% decline likely in the next 10 years.

Population trend: <10% decline in the population in the past 10 years

Data source: Field study & literature; observed & inferred.

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Although widely distributed the habitat is under threat and the factors affecting the habitat have not ceased. Decline in population size can be expected since there were no recent sightings from Kerala, Meghalaya and Sri Lanka. The number of locations may be declining.

Ver 2.3: Data Deficient

National Status
India: Near Threatened
Sri Lanka: Near Threatened

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, life history, basic ecological studies.

Management: Habitat management, monitoring, public awareness

Comments
This species was not recorded by Yapa & Digana in Sri Lanka, 1996-1999, (ecological survey), Shrestha in Nepal, 1999-2001 and Padmanabhan & Madhavan in Kerala. Wide distribution, in 6 countries. The number of locations may decline and hence the population numbers. Small colonies (5-6), which leads to the current estimation on population numbers.

Sources
Bates & Harrison, 1997; Dobson, 1871; Hutson *et al*., 2001; Phillips, 1980; Sharma & Sharma, 1969.

Compilers
A.C. Girish, J.K. Immanuel, S. Kandula, V.S. Korad, G. Nair, P.T. Nathan, A. Nobel, J. Koilraj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participant

Recent Field Studies
V.S. Korad & K.D. Yardi in Pune (?) in Maharashtra, 1998-2001, Ecological study of bats in Pune.

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Kerala			
Wynaad	11º 45	76º 02	Bates & Harrison, 1997
Maharashtra			
Nandal	-	-	Pathak & Sharma, 1969
Nanded	19º 11	77º 21	Bates & Harrison, 1997
Pune (?)	18º 31	73º 51	Old stoney buildings and crevices Human interference; loss of habitat Korad & Yardi, 1998-2001
Tamil Nadu			
Kotagiri	11º 21	76º 54	Bates & Harrison, 1997
Uttar Pradesh			
Kumaon	30º 03	79º 17	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
West Bengal			
Gopaldhara	26º 59	88º 17	Bates & Harrison, 1997
Kolkata	22º 35	88º 21	Bates & Harrison, 1997
Kurseong	26º 54	88º 21	Bates & Harrison, 1997
SRI LANKA			
Central Province			
Nuwara Eliya	06º 58	80º 46	Bates & Harrison, 1997
Uva Province			
Haputale (west)	06º 46	80º 58	Bates & Harrison, 1997
NEPAL			
Najarkot	27º 42	85º 20	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Bhamo	24º 15	97º 15	type loc. of *affinis* Bates & Harrison, 1997

Pipistrellus cadornae Thomas, 1916

NEAR THREATENED in South Asia

Common names: Cadornae's Pipistrelle, Thomas's Pipistrelle

Family: Vespertilionidae

Habit: Insectivorous

Habitat: Urban area near river, mountain valley, hills

Niche: Crevices in old buildings.

Distribution
Global: India, Myanmar, Thailand, Vietnam

South Asia:
India: Maharashtra (?), West Bengal

Myanmar (Northern)

Extent of Occurrence: < 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 2 / 3. Fragmented.

Habitat status: Not known

Data source: Field study, literature; inferred.

Threats
Threats to the taxon: Human interference, building renovation in Pune threats in the past.

Population
Generation time: 4-6 years

Mature individuals: Not known

Population trend: Not known

Red List 2001 Status derived in the workshop

Ver. 3.1: **NEAR THREATENED**

It is present only in 2 fragmented locations. Since threats are not properly known, as a precaution this is categorized as Near Threatened.

1997 C.A.M.P. (Ver. 2.3): Data Deficient

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Lower Risk near threatened
Microchiroptera Action Plan (Global): Lower Risk near threatened
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, life history

Management: Habitat management, monitoring

Comments
Pune report needs to be confirmed. Fairly widespread geographical range. Rate of predation is high in Pipistrelles. Colony size in Pune 6 individuals only existing up to date information. Probably a forest dwelling species with a threat of habitat loss. There are chances of getting more colonies if proper survey is carried out in Pune [Korad & Yardi].

Sources
Bates & Harrison, 1997; Hutson *et al*., 2001; Thomas, 1916

Compilers
P. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
Korad, V.S. and Yardi, K.D., Karve's Mahilashram Hingane (?) , Pune, Maharashtra, India, 1999-2000, Ecological study and faunistic survey of bats in Pune city.

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Maharashtra			
Karve's Mahilashram Hingane	18º 31	73º 51	Crevices of old building, urban area near river Renovation of building may disturb colony Korad, V.S. & K.D.Yardi, 1999

Distribution in South Asia	Lat.	Long.	Notes/Sources
West Bengal			
Pashok	27º 04	88º 24	type locality of *cadornae* Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Htingnan	26º 36	97º 53	Bates & Harrison, 1997
Ningma	26º 36	97º 45	Bates & Harrison, 1997
Tasa Hku	-	-	Bates & Harrison, 1997

Pipistrellus ceylonicus (Kelaart, 1852) — LEAST CONCERN in South Asia

Synonyms: *Scotophilus ceylonicus* Kelaart, 1852
Pipistrellus ceylonicus subcanus Thomas, 1915
Pipistrellus chrysothrix Wroughton, 1899
Vesperugo indicus Dobson, 1878

Common names: Bengali: *Kelaarter Chamchika*; English: Kelaart's Pipistrelle

Family: Vespertilionidae

Habitat: Tropical thorn to highlands

Niche: Tree holes, cracks in walls, wells, temples, roller blinds. 2153m.

Distribution
Global: Bangladesh, China, India, Myanmar, Pakistan, Sri Lanka, Vietnam, northern Borneo

South Asia:
Bangladesh
India: Andhra Pradesh, Bihar, Goa, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamil Nadu, West Bengal
Pakistan
Sri Lanka: Central Province, Eastern Province, Uva Province, Western Province

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km

Area of Occupancy: > 2000 sq km

Locations/subpopulations: Many

Habitat status: Not known

Data source: Literature; inferred.

Threats
Threats to the taxon: Exploitation, hunting, hunting for medicine. The influence on the population well understood, not reversible and have not ceased to be a threat.

Trade:

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Trends not known.

Data source: Literature; inferred, suspected

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

Widely distributed species, many locations, well adapted to changes and no influence of threats on the population identified.

National Status
Bangladesh: Least Concern
India: Least Concern
Pakistan: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments
Many populations located in large number of sites in India and Sri Lanka. Although threats have been sighted / identified, many researchers think that there will be no influence on the population considering their huge numbers.

Sources
Bates & Harrison, 1997; Dobson, 1878; Harshey & Chandra, 2001; Hutson *et al*., 2001; Kelaart, 1852. 1853; Khan, 2001; Nagulu *et al.,* 2000; Rao *et al.,* 2000; Srinivasulu & Nagulu, 2002
Thomas, 1915; Wroughton, 1899

Compilers
A.C. Girish, J.K. Immanuel, S. Kandula, V.S. Korad, G. Nair, P.T. Nathan, A. Nobel, J. Koilraj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
Bates *et al.,* Rajkot, 1992 BNHS, many locations, 1901-1924 ZSI, many locations, 1978-80
W. Yapa & P.C.M.B. Bandara. Sri Lanka. 1996-1999. Ecological survey
C. Srinivasulu in Andhra Pradesh, 1995 onwards, Documentation of Chiropteran diversity in Andhra Pradesh

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
no exact location	-	-	Bates & Harrison, 1997
Widespread			Khan, 2001
INDIA			
Andhra Pradesh			
Andra Pradesh (throughout)	-	-	Southern tropical dry deciduous forest Habitat loss C. Srinivasulu, 1995 onwards
Visakhapatnam	17º 42	83º 24	Bates & Harrison, 1997
Bihar			
Chota Nagpur	23º 12	84º 14	Bates & Harrison, 1997
Dhanbad	23º 47	86º 32	Bates & Harrison, 1997
Luia	22º 29	85º 15	Bates & Harrison, 1997
Goa			
Mol	15º 20	74º 15	Bates & Harrison, 1997
Gujarat			
Ahmedabad	23º 03	72º 40	Bates & Harrison, 1997
Anand	22º 34	73º 01	Bates & Harrison, 1997
Baroda	22º 19	73º 14	Bates & Harrison, 1997
Bhuj	23º 12	69º 54	Bates & Harrison, 1997
Broach	21º 40	73º 02	Bates & Harrison, 1997
Bulsar	20º 36	73º 03	Bates & Harrison, 1997
Charwa	23º 12	69º 54	Bates & Harrison, 1997
Junagadh	21º 31	70º 28	Bates & Harrison, 1997
Keshod	21º 17	71º 32	Bates & Harrison, 1997
Khirasara	22º 18	70º 53	Bates & Harrison, 1997
Mheskatri	21º 10	72º 54	type locality of *chrysothrix* Bates & Harrison, 1997
Rajkot	22º 18	70º 56	Bates & Harrison, 1997
Rajpipla	21º 49	73º 36	Bates & Harrison, 1997
Sasan	21º 00	70º 40	Bates & Harrison, 1997
Talala	21º 00	70º 39	Bates & Harrison, 1997
Yalala	21º 31	70º 28	type locality of *subcanus* Bates & Harrison, 1997
Karnataka			
Astoli	15º 26	74º 30	Bates & Harrison, 1997
Bangalore	12º 58	77º 35	Bates & Harrison, 1997
Bellary	15º 11	76º 54	Bates & Harrison, 1997
Dharwar	15º 30	75º 04	Bates & Harrison, 1997
Gadag	15º 26	75º 42	Bates & Harrison, 1997
Haleri	12º 31	75º 40	Bates & Harrison, 1997
Honawar	14º 19	74º 27	Bates & Harrison, 1997
Jellopur	15º 00	74º 45	Bates & Harrison, 1997
Kadakola	12º 18	76º 37	Holes & crevices of old buildings Sreepada K.S., 1987-93
Kyasanur	-	-	Holes & crevices of old buildings Habitat destruction Bhat and Sreenivasan, 1990
Mangalore	12º 54	74º 51	type locality of *indicus* Bates & Harrison, 1997
Mercara	12º 29	75º 46	Bates & Harrison, 1997
Seringapatnam	12º 25	76º 41	Bates & Harrison, 1997
Sirsi	14º 40	74º 51	Bates & Harrison, 1997
Sivasamudram	12º 16	77º 08	Bates & Harrison, 1997
Srimangala	12º 01	76º 00	Bates & Harrison, 1997
Vijayanagar	15º 20	76º 28	Bates & Harrison, 1997
Wotekolli	12º 00	76º 00	Bates & Harrison, 1997
Kerala			
Thrissur	10º 32	76º 14	Bates & Harrison, 1997
Wynaad	11º 45	76º 02	Bates & Harrison, 1997
Madhya Pradesh			
Jabalpur	-	-	Harshey & Chandra, 2001
Mandu	22º 22	75º 24	Bates & Harrison, 1997
Maharashtra			
Ajanta	20º 30	75º 48	Bates & Harrison, 1997
Andheri	19º 07	72º 50	Bates & Harrison, 1997
Aurangabad	19º 52	75º 22	Bates & Harrison, 1997
Bandra	19º 04	72º 58	Bates & Harrison, 1997
Belgaon	-	-	B & H, 1997
Bombay	18º 56	72º 51	Bates & Harrison, 1997
Chikalda	21º 29	77º 12	Bates & Harrison, 1997
Helwak	17º 23	73º 47	Bates & Harrison, 1997
Junnar	19º 15	73º 58	Bates & Harrison, 1997
Karla	18º 48	73º 30	Bates & Harrison, 1997
Lanje	-	-	Bates & Harrison, 1997
Lonavla	18º 45	73º 27	Bates & Harrison, 1997
Nagpur	21º 10	79º 12	Bates & Harrison, 1997
Nanded	19º 11	77º 21	Bates & Harrison, 1997
Nasik	20º 00	73º 52	Bates & Harrison, 1997
Panchgani	17º 56	73º 49	Bates & Harrison, 1997
Pune	18º 31	73º 51	Crevices in old buildings Habitat loss & human interference Korad & Yardi, 1998-2000 Bates & Harrison, 1997
Satara	17º 43	74º 05	Bates & Harrison, 1997
Thana	19º 14	73º 02	Bates & Harrison, 1997
Orissa			
Koraput	18º 48	82º 41	Bates & Harrison, 1997
Sambalpur	21º 28	84º 04	Bates & Harrison, 1997
Sundargarh	22º 04	84º 08	Bates & Harrison, 1997
Rajasthan			
Mount Abu	24º 41	72º 50	Bates & Harrison, 1997
Tamil Nadu			
Nilgiri Hills	11º 28	76º 42	Bates & Harrison, 1997
West Bengal			
Kolkata	25º 00	93º 00	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Pyaunggaung	22º 38	97º 22	Bates & Harrison, 1997
PAKISTAN			
Karachi	24º 51	67º 02	Bates & Harrison, 1997
Khanewal	30º 18	76º 51	Bates & Harrison, 1997
Landhi	24º 51	67º 16	Bates & Harrison, 1997
Lyallpur	31º 25	73º 07	Bates & Harrison, 1997
Malir	24º 59	67º 13	Bates & Harrison, 1997
Thatta	24º 45	67º 56	Bates & Harrison, 1997
SRI LANKA			
Central Province			
Dambulla	07º 51	80º 40	Bates & Harrison, 1997
Dikoya	06º 52	80º 36	Bates & Harrison, 1997
Kandy	07º 17	80º 40	Bates & Harrison, 1997
Madulkele	07º 22	80º 42	Bates & Harrison, 1997
Nuwara Eliya	06º 58	80º 46	Bates & Harrison, 1997
Rattota	07º 31	80º 41	Bates & Harrison, 1997
Eastern Province			
Trincomalee	08º 34	81º 13	type locality of *ceylonicus* Bates & Harrison, 1997
Uva Province			
Bandaraawela	06º 50	81º 00	Bates & Harrison, 1997
Haputale	06º 46	80º 58	Bates & Harrison, 1997
Horton Plains	06º 50	80º 47	Tree holes Hunting Yapa & Bandara, 1996-2000 Bates & Harrison, 1997
Namunukula	06º 55	81º 07	Bates & Harrison, 1997
Ohiya	06º 50	80º 50	Bates & Harrison, 1997
Passara	06º 58	81º 09	Bates & Harrison, 1997
Western Province			
Kalutara	06º 35	79º 59	Bates & Harrison, 1997
Unknown province			
Talawakele	-	-	Highlands, cracks & crevices Hunting Yapa & Digana, 1996-2000

Pipistrellus coromandra (Gray, 1838)

LEAST CONCERN in South Asia

Synonyms: *Scotophilus coromandra* Gray, 1838
Myotis parvipes Blyth, 1853
Scotophilus coromandelianus Blyth, 1863
Vespertilio coromandelicus Blyth, 1851
?*Vesperugo blythii* Wagner, 1855
?*Vesperugo micropus* Peters, 1872

Common names: Bengali: *Khudey Chamchika*; English: Coromandel Pipistrelle, Indian Pipistrelle

Family: Vespertilionidae

Habitat: Widely distributed in moist habitats

Niche: Crevices, ceilings, chimneys, tree-holes, under barks, behind signboards, among tiles of huts; 185-2769m.

Distribution
Global: Afghanistan, China, India, Bangladesh, Pakistan, Sri Lanka, Thailand, Vietnam

South Asia:
Bangladesh: Throughout
India: Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Goa, Gujarat, Jammu & Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Meghalaya, Nagaland, Nicobar Islands, Orissa, Sikkim, Tamil Nadu, Tripura, Uttaranchal, Uttar Pradesh, West Bengal
Nepal
Sri Lanka: Central Province, North Central Province, North Western Province, Northern Province, Southern Province, Uva Province

Afghanistan

Extent of Occurrence: > 20,001 sq km

Area of Occupancy: > 2001 sq km

Locations/subpopulations: Many

Habitat status: Not known

Data source: Literature, field studies; Inferred, observed, estimated.

Threats
Threats to the taxon: Not known

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Not known

Data source: Literature, indirect information; inferred.

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
Bangladesh: Least Concern
India: Least Concern
Nepal: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Kanha National Park, Madhya Pradesh

Recommendations
Research: Survey

Management: Monitoring

Comments
BNHS, Many locations, 1907-55. Possibly the most common bat in Bangladesh (Khan, 2001).

Sources
Bates & Harrison, 1997; Blyth, 1851, 1853, 1863; Gray, 1838; Harshey & Chandra, 2001; Hutson *et al*., 2001; Khan, 2001; Peters, 1872; Wagner, 1855.

Compilers
P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, H. Raghuram, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Recent Field Studies
Sinha, Bihar, 1979-81; Surat, 1962
C. Srinivasulu, throughout Andhra Pradesh, 1995 onwards, documentation of Chiropteran diversity
Korad and Yardi, Pune (?), Maharashtra, 1998-2001, ecological study

Distribution in South Asia and Afghanistan from literature and recent field studies

Distribution in South Asia	Lat°	Long°	Notes/Sources
AFGHANISTAN			
Dari-i-Nur	34° 45	70° 30	Bates & Harrison, 1997
Jalalabad	34° 26	70° 25	Bates & Harrison, 1997
BANGLADESH			
no exact location	-	-	Bates & Harrison, 1997
Widespread			Khan, 2001
INDIA			
Andhra Pradesh			
Throughout Andhra Pradesh	-	-	Found in human settlement areas. Habitat loss and fragmentation, hunting for medicine, pesticides and pollution Srinivasulu, C., 1995-onwards
Arunachal Pradesh			
Dreyi	-	-	Bates & Harrison, 1997
Assam			
Golaghat	26° 30	93° 57	Bates & Harrison, 1997
Sadiya	27° 49	95° 38	Bates & Harrison, 1997
Palasbari	26° 07	91° 30	Bates & Harrison, 1997
Rongjuli	-	-	Museum specimen Azad Ali
Bihar			
Aurangabad	24° 46	84° 23	Bates & Harrison, 1997
Bhagalpur	25° 14	86° 59	Bates & Harrison, 1997
Bhojpur	25° 34	84° 40	Bates & Harrison, 1997
Champaran	27° 06	84° 29	Bates & Harrison, 1997
Gaya	24° 48	85° 00	Bates & Harrison, 1997
Giridih	24° 10	86° 20	Bates & Harrison, 1997
Gopalganj	26° 28	84° 26	Bates & Harrison, 1997
Hazaribagh	24° 00	85° 23	Bates & Harrison, 1997
Katihar	25° 33	87° 34	Bates & Harrison, 1997
Madhubani	26° 21	86° 05	Bates & Harrison, 1997
Munger	24° 57	86° 14	Bates & Harrison, 1997
Muzaffarpur	26° 07	85° 23	Bates & Harrison, 1997
Patna	25° 37	85° 12	Bates & Harrison, 1997
Purnea	25° 47	87° 28	Bates & Harrison, 1997
Ranchi	23° 22	85° 20	Bates & Harrison, 1997
Saharsa	25° 54	86° 36	Bates & Harrison, 1997
Samastipur	25° 52	85° 47	Bates & Harrison, 1997
Vaishali	25° 49	85° 25	Bates & Harrison, 1997
Goa			
Molem	15° 20	74° 15	Bates & Harrison, 1997
Gujarat			
Deogad	21° 22	73° 25	Bates & Harrison, 1997
Keshod	21° 17	71° 32	Bates & Harrison, 1997
Lunwa	-	-	Bates & Harrison, 1997
Mheskatri	21° 10	72° 54	Bates & Harrison, 1997
Surat	21° 10	72° 54	Bates & Harrison, 1997
Jammu & Kashmir			
Rambon	33° 15	75° 18	Bates & Harrison, 1997
Shar	33° 44	75° 11	Bates & Harrison, 1997
Srinagar	34° 08	74° 50	Bates & Harrison, 1997
Jharkhand			
Palamau	23° 53	84° 17	Bates & Harrison, 1997
Pargana	-	-	Bates & Harrison, 1997
Santal Pargana	24° 17	87° 15	Bates & Harrison, 1997
Singhbhum	23° 30	85° 50	Bates & Harrison, 1997
Karnataka			
Bangalore	12° 58	77° 35	Bates & Harrison, 1997
Bellary	15° 11	76° 54	Bates & Harrison, 1997
Dharwar	15° 30	75° 04	Bates & Harrison, 1997
Hampi	15° 20	76° 25	Bates & Harrison, 1997
Hawsbhavi	14° 38	75° 22	Bates & Harrison, 1997
Samasgi	14° 40	75° 10	Bates & Harrison, 1997
Sivasamudram	12° 16	77° 08	Bates & Harrison, 1997
Srimangala	12° 01	76° 00	Bates & Harrison, 1997
Vijayanagar	15° 20	76° 28	Bates & Harrison, 1997
Madhya Pradesh			
Balaghat	-	-	Harshey & Chandra, 2001
Jabalpur	-	-	Harshey & Chandra, 2001
Kanha National Park	-	-	Harshey & Chandra, 2001
Mandla	-	-	Harshey & Chandra, 2001
Sohagpur	22° 43	78° 14	Bates & Harrison, 1997
Maharashtra			
Bandra	19° 04	72° 58	Bates & Harrison, 1997
Mumbai	18° 56	72° 51	Bates & Harrison, 1997
Pareli	19° 14	73° 02	Bates & Harrison, 1997
Phonda	-	-	Bates & Harrison, 1997
Pune	18° 31	73° 51	Old stony buildings. Loss of habitat Korad, V.S. and Yardi, K.D. 1998-2001.
Ratnagiri	17° 00	73° 20	Bates & Harrison, 1997
Tamankud	-	-	Bates & Harrison, 1997
Meghalaya			
Cherrapunji	25° 16	91° 42	Bates & Harrison, 1997
Konshnong	25° 30	92° 01	Bates & Harrison, 1997
Nagaland			
Koia	25° 35	94° 30	Bates & Harrison, 1997
Takubama	25° 37	94° 32	Bates & Harrison, 1997
Nicobar Islands			
Car Nicobar	9° 12	92° 46	Bates & Harrison, 1997
Orissa			
Baleshwar	21° 31	86° 59	Bates & Harrison, 1997
Ganjam	23° 45	91° 50	Bates & Harrison, 1997
Sundargarh	22° 04	84° 08	Bates & Harrison, 1997
Sikkim			
Mangpu	-	-	Bates & Harrison, 1997
Rongli	27° 17	88° 45	Bates & Harrison, 1997
Tamil Nadu			
Pondicherry	11° 59	79° 50	type locality of *coromandra* Bates & Harrison, 1997
Samaya Malai	09° 55	78° 07	Bates & Harrison, 1997
Upper Manalaar	09° 50	77° 24	Bates & Harrison, 1997
Tripura			
Ganganagar	23° 45	91° 50	Bates & Harrison, 1997
Uttaranchal			
Dhakuri	30° 00	79° 56	Bates & Harrison, 1997
Lwarkhet	29° 36	79° 40	Bates & Harrison, 1997
Mussoorie	30° 26	78° 04	Type locality of *parvipes* Bates & Harrison, 1997
Ramnagar	29° 23	79° 07	Bates & Harrison, 1997
Uttar Pradesh			
Mirzapur	27° 41	79° 33	Bates & Harrison, 1997
Philibhit	28° 37	79° 48	Bates & Harrison, 1997
West Bengal			
Falta	22° 18	88° 08	Bates & Harrison, 1997
Gopaldhara	26° 59	88° 17	Bates & Harrison, 1997
Haldibari	26° 19	88° 53	Bates & Harrison, 1997
Hasimara	26° 52	89° 48	Bates & Harrison, 1997
Jalpaiguri	26° 30	88° 50	Bates & Harrison, 1997
Kolkata	22° 35	88° 21	Bates & Harrison, 1997
Mathur	-	-	Bates & Harrison, 1997
Pashok	27° 04	88° 24	Bates & Harrison, 1997
Pedong	27° 02	88° 20	Bates & Harrison, 1997
Salbani	22° 25	87° 24	Bates & Harrison, 1997
Siliguri	26° 42	88° 30	Bates & Harrison, 1997
Sujapur	-	-	Bates & Harrison, 1997
NEPAL			
Hazaria	26° 51	85° 20	Bates & Harrison, 1997
Bairia	27° 00	85° 23	Bates & Harrison, 1997

Distribution in South Asia	Latº	Longº	Notes/Sources
Bairaglia	26º 45	85º 20	Bates & Harrison, 1997
Barabisse	27º 35	85º 35	Bates & Harrison, 1997
SRI LANKA			
Central Province			
Kumbalgamuwa	07º 08	80º 50	Bates & Harrison, 1997
Northern Province			
Cheddikulam	08º 40	80º 18	Bates & Harrison, 1997
Kankesanturai	09º 48	80º 03	Bates & Harrison, 1997
North Central Province			
Manampitiya	07º 51	81º 07	Bates & Harrison, 1997
North Western Province			
Kurenegala	36º 47	68º 51	Coconut plantation, degraded forest lands and urban areas Yapa & Diganaa, 1996-2000
Southern Province			
Nakiadeniya	06º 08	80º 20	Bates & Harrison, 1997
Uva Province			
Bibile	07º 09	81º 14	Bates & Harrison, 1997

Distribution in South Asia	Latº	Longº	Notes/Sources
Passara	06º 58	81º 09	Bates & Harrison, 1997
Namunukula	06º 55	81º 07	Bates & Harrison, 1997
Western Province			
Colombo	06º 55	79º 52	Coconut plantation degraded forestlands and urban areas W. Yapa and Bandara, 1996-2000
Unknown province			
Monoragala	06º 55	79º 52	Coconut plantation degraded forestlands and urban areas W. Yapa and Bandara, 1996-2000
Kegalle	06º 55	79º 52	Coconut plantation degraded forestlands and urban areas W. Yapa and Bandara, 1996-2000

Pipistrellus dormeri (Dobson, 1875)

LEAST CONCERN

Synonyms: *Scotozous dormeri* Dobson, 1875
Scotozous dormeri caurinus Thomas, 1915

Common names: Bengali: *Dormerer Chamchika*; English: Dormer's Bat

Family: Vespertilionidae

Habit: Occurs in small colonies, insectivorous, nocturnal

Habitat: Near/within human habitation.

Niche: Crevices, holes in buildings and trees, under roof tiles. 2000 m.

Distribution
Global: Bangladesh, Bhutan, India, Pakistan

South Asia:
Bangladesh: Western and northern parts.
Bhutan: Duars
India: Andhra Pradesh, Assam, Bihar, Goa, Gujarat, Haryana, Jammu & Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Nagaland, Orissa, Punjab, Rajasthan, Tamil Nadu, Tripura, Uttaranchal, Uttar Pradesh, West Bengal
Pakistan: Punjab, Sind

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000sq km.

Locations/subpopulations: Many / not known. Contiguous.

Habitat status: Stable

Data source: Field study, literature, museum; observed.

Threats
Threats to the taxon: Chemical pesticides. The influence on the population well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: It is increasing.

Data source: Field study, indirect information; inferred.

Red List 2001 Status derived in the workshop

Ver. 3.1: **LEAST CONCERN**

National Status
Bangladesh: Least Concern
Bhutan: Data Deficient
India: Least Concern
Pakistan: Near Threatened

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Satpura National Park, Madhya Pradesh

Recommendations
Research: Survey, life history, basic ecology, effect of pesticides.

Management: Public awareness

Comments
Though it is recorded mostly near human habitation in one case it is observed in dry deciduous forest near Hyderabad. Only one museum record in eastern India (Guwahati, Assam, India). In Madurai the population is declining whereas in Rajasthan and Bihar it is widely distributed with increase in population based on field observation; prolific breeder. Since many colonies / population and locations are spread all over India except NE area, the assessment is justified. This species basically depends on agricultural insect pests.

Sources
Bates & Harrison, 1997; Dobson, 1875; Harshey & Chandra, 2001; Hutson *et al*., 2001; Khan, 2001; Thomas, 1915

Compilers
P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, H. Raghuram, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Recent Field Studies
P.T. Nathan, Madurai, 1985; Balasingh, Tirunelveli, 1990-1997.
Korad, V.S. and Yardi, K.D., Pune, Maharashtra, India, 1999, Survey
Srinivasulu, C., 1995 onwards, Chiropteran diversity of Andhra Pradesh
J. Vanitharani and Jeyapraba, Palayamkottai, 2000-02, Survey in Tirunelveli and role of bats in the ecosystem

Distribution in South Asia from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
Steamer Ghats			Khan, 2001
Rajshahi			Khan, 2001
Dinajpur			Khan, 2001
BHUTAN			
Duars			BNHS collections
INDIA			
Andhra Pradesh			
Balapalli	13º 50	79º 15	Bates & Harrison, 1997
Nallamala Hills	-	-	C. Srinivasulu, 1995 onwards
Assam			
Guwahati	26º 10	91º 45	Museum specimen Azad Ali
Bihar			
Bhojpur	25º 34	84º 40	Bates & Harrison, 1997
Champaran	27º 06	84º 29	Bates & Harrison, 1997
Gaya	24º 48	85º 00	Bates & Harrison, 1997 BNHS collections
Giridih	24º 10	86º 20	Bates & Harrison, 1997
Hazaribagh	24º 00	85º 23	Bates & Harrison, 1997
Muzaffarpur	26º 07	85º 23	Bates & Harrison, 1997
Patna	25º 37	85º 12	Bates & Harrison, 1997
Rohtas	24º 40	83º 59	Bates & Harrison, 1997
Samastipur	25º 52	85º 47	Bates & Harrison, 1997
Singar	24º 48	85º 00	BNHS collections
Siwan	26º 14	84º 21	Bates & Harrison, 1997
Sohagpur	22º 43	78º 14	BNHS collections
Vaishali	25º 49	85º 25	Bates & Harrison, 1997
Goa			
Margao	15º 15	73º 59	Bates & Harrison, 1997
Gujarat			
Anand	22º 34	73º 01	Bates & Harrison, 1997
Balsar	-	-	BNHS collections
Bansda	20º 47	73º 25	Bates & Harrison, 1997
Bhuj	23º 12	69º 54	BNHS collections; Bates & Harrison, 1997
Bulsar	20º 36	73º 03	Bates & Harrison, 1997
Fata Talab	21º 40	73º 02	Bates & Harrison, 1997
Junagadh	21º 31	70º 28	type loc. of *caurinus* Bates & Harrison, 1997
Keshod	21º 17	71º 32	Bates & Harrison, 1997
Lunwa	-	-	Bates & Harrison, 1997
Mandvi	21º 16	73º 22	Bates & Harrison, 1997
Palanpur	24º 12	72º 29	BNHS collections
Palanpur	24º 12	72º 29	Bates & Harrison, 1997
Patal	21º 24	73º 16	Bates & Harrison, 1997
Rajpipla	21º 49	73º 36	Bates & Harrison, 1997
Sasan	21º 00	70º 40	BNHS collections; Bates & Harrison, 1997
Silvassa	20º 12	73º 11	Bates & Harrison, 1997
Sukal Tirath	-	-	Bates & Harrison, 1997
Usked	21º 16	73º 20	Bates & Harrison, 1997
Vedtial	-	-	Bates & Harrison, 1997
Haryana			
near Chandigarh	-	-	Bates & Harrison, 1997
Ambala	-	-	Bates & Harrison, 1997
Jammu & Kashmir			
Jhajjar Kotli	32º 55	75º 54	Bates & Harrison, 1997
Jharkhand			
Santal Pargana	24º 17	87º 15	Bates & Harrison, 1997
Singhbhum	23º 30	85º 50	Bates & Harrison, 1997
Karnataka			
Bellary Hills	15º 11	76º 54	type loc. of dormeri Bates & Harrison, 1997
Dharwar	15º 30	75º 04	Bates & Harrison, 1997
Gadag	15º 26	75º 42	BNHS collections
Hawsbhavi	14º 38	75º 22	Bates & Harrison, 1997
Mysore (University Campus)	12º 18	76º 37	Tree hole Sreepada K.S., 1990
Vijayanagar	15º 20	76º 28	BNHS collections; Bates & Harrison, 1997
Kerala			
Venginessery	10º 32	76º 14	Bates & Harrison, 1997
Kerala	-	-	Tree hole, holes in coconut tree, underneath roofs of houses, crevices A. Madhavan, 1992-95
Madhya Pradesh			
Bhopal	23º 17	77º 28	Bates & Harrison, 1997
Hoshangabad	22º 44	77º 45	Bates & Harrison, 1997 Harshey & Chandra, 2001
Jabalpur	23º 10	79º 59	Bates & Harrison, 1997; Harshey & Chandra, 2001
Mundra	23º 50	78º 44	Bates & Harrison, 1997
Satpura National Park	-	-	Harshey & Chandra, 2001
Sohagpur	22º 43	78º 14	Bates & Harrison, 1997
Maharashtra			
Ajanta	20º 30	75º 48	BNHS collections Bates & Harrison, 1997
Bassina Taluka	19º 14	73º 02	Bates & Harrison, 1997
Bombay	18º 56	72º 51	Bates & Harrison, 1997
Chanda	19º 58	79º 21	Bates & Harrison, 1997
Chikalda	21º 29	77º 12	Bates & Harrison, 1997
Fardapur	-	-	BNHS collections
Nanded	19º 11	77º 21	Bates & Harrison, 1997
Nimiaghat	23º 56	86º 07	BNHS collections
Pune (?)	18º 31	73º 51	Found in crevices of building Habitat loss V.S. Korad & K.D. Yardi, 1999 BNHS collections
Meghalaya			
Meghalaya	-	-	Y.P. Sinha
Nagaland			
Nagaland	23º 45	91º 30	T.P. Bhattacharya
Orissa			
Bolangir	20º 41	83º 30	Bates & Harrison, 1997
Ganjam	23º 45	91º 50	Bates & Harrison, 1997
Koira	21º 50	85º 12	BNHS collections
Sambalpur	21º 28	84º 04	Bates & Harrison, 1997
Sundargarh	22º 04	84º 08	Bates & Harrison, 1997
Punjab			
Ferozepore	30º 55	74º 38	Bates & Harrison, 1997
Mo	30º 49	75º 13	Bates & Harrison, 1997
Nabha	30º 22	76º 12	Bates & Harrison, 1997
Rajasthan			
Ajmer	26º 29	74º 40	Bates & Harrison, 1997
Alwar	27º 32	76º 35	Bates & Harrison, 1997
Banswara	23º 32	74º 28	Bates & Harrison, 1997
Bharatpur	27º 14	77º 28	Bates & Harrison, 1997
Bundi	25º 28	75º 42	Bates & Harrison, 1997
Dungarpur	23º 53	73º 48	Bates & Harrison, 1997
Jhalawar	24º 32	76º 12	Bates & Harrison, 1997
Jodhpur	26º 18	73º 08	Bates & Harrison, 1997
Kota	25º 11	75º 58	Bates & Harrison, 1997
Sawai Mahopur	26º 00	76º 28	Bates & Harrison, 1997
Tonk	25º 52	75º 50	Bates & Harrison, 1997
Tamil Nadu			
Madurai	09º 55	78º 07	Crevices P.T. Nathan, 1997-99
Mukkudal	21º 48	80º 16	House J. Vanitharani and J. Selwyn, 2000-2002
Murappanadu	08º 44	77º 42	Temple

Distribution in South Asia	Lat.	Long.	Notes/Sources
			J. Vanitharani & J. Selwyn, 2000-2002
Palayamkottai	8º 44	77º 42	House crevices, Tropical plains J. Vanitharani & J. Selwyn, 2000-2002
Salem	11º 38	78º 08	Bates & Harrison, 1997
Tripura			
Tripura	23º 45	91º 30	T.P. Bhattacharya
Uttaranchal			
Garhwal	-	-	BNHS collections
Uttar Pradesh			
Khamaria	27º 40	79º 32	Bates & Harrison, 1997
West Bengal			
Barddhaman	23º 15	87º 52	Bates & Harrison, 1997
Bhutan Duars	26º 45	89º 25	BNHS collections
Birbhum	23º 54	87º 32	Bates & Harrison, 1997
Hugli	22º 52	88º 21	Bates & Harrison, 1997
Jalpaiguri	26º 30	88º 50	Bates & Harrison, 1997
Kolkata	22º 35	88º 21	Bates & Harrison, 1997
Maldah	-	-	Bates & Harrison, 1997
Medinipur	22º 25	87º 24	Bates & Harrison, 1997
North 24-Parganas	-	-	Bates & Harrison, 1997
PAKISTAN			
Punjab			
Sialkot	32º 30	74º 32	Bates & Harrison, 1997
Sind			
Shikarpur	27º 58	68º 42	Bates & Harrison, 1997

*Pipistrellus javanicus (*Gray, 1838)

LEAST CONCERN in South Asia

Synonyms: *Scotophilus javanicus* Gray, 1838
Pipistrellus babu Thomas, 1915
Pipistrellus camortae Miller, 1902
Pipistrellus peguensis Sinha, 1969

Common names: Javan Pipistrelle

Family: Vespertilionidae

Habit: In old buildings, small colonies

Habitat: Tropical zone, pine forest

Niche: Old buildings in urban areas. Upto 2400m.

Distribution
Global: Afghanistan, Bangladesh, India, Indonesia, Japan, Korea, Myanmar, Nepal, New Guinea, Pakistan, Philippines, perhaps Australia

South Asia:
Bangladesh
India: Andaman & Nicobar Islands, Assam, Himachal Pradesh, Madhya Pradesh, Maharashtra, Manipur, Nagaland, Sikkim, Uttaranchal, West Bengal
Nepal
Pakistan: NWFP, Punjab

Afghanistan
Myanmar

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many / not known.

Habitat status: < 10% decrease in area in the past 10 years. < 10% decline likely in the next 10 years due to destruction of habitat. Decrease in quality due to destruction of habitat and human interference.

Data source: Field study, literature; observed.

Threats
Threats to the taxon: Human interference. The influence on the population well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: <10% decline in the next 10 years.

Data source: Field study, literature; observed, inferred.

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
Bangladesh: Least Concern
India: Least Concern
Nepal: Least Concern
Pakistan: Least Concern

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Kanha National Park, Madhya Pradesh

Recommendations
Research: Survey, life history, ecological studies specific to the taxon.

Management: Habitat management, monitoring public awareness.

Comments
Though in small colonies of 5-6 numbers it is widely distributed. The population at present is stable.

Sources
Bates & Harrison, 1997; Hutson *et al*., 2001; Miller, 1902; Thomas, 1915; Sinha, 1969; Wilson & Reeder, 1993

Compilers
A.C. Girish, J.K. Immanuel, S. Kandula, V.S. Korad, G. Nair, P.T. Nathan, A. Nobel, J. Koilraj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
Korad and Yardi (1998-2001) Pune city, Ecological study and faunistic survey of bates in Pune corporation limits (?)

Distribution in South Asia, Afghanistan and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Jalalabad	34º 26	70º 25	Bates & Harrison, 1997
Kalat-us-Seraj	34º 40	70º 18	Bates & Harrison, 1997
BANGLADESH			
Boalkhali Thana	-	-	Bates & Harrison, 1997
Luskerpore	24º 20	91º 30	Bates & Harrison, 1997
Purba Gomdandi	22º 23	91º 55	Bates & Harrison, 1997
INDIA			
Andaman & Nicobar Islands			
Camorta Island	8º 08	93º 42	Type locality of *camortae* Bates & Harrison, 1997
Car Nicobar	9º 12	92º 46	Bates & Harrison, 1997
Port Blair	11º 40	92º 44	Probable locality according to Das, 1990. Bates & Harrison, 1997
Assam			
Rajapara	26º 30	92º 00	Bates & Harrison, 1997
Palasbari	26º 07	91º 30	Bates & Harrison, 1997
Margherita	27º 17	95º 40	Bates & Harrison, 1997
Himachal Pradesh			
Simla	31º 07	77º 09	Bates & Harrison, 1997
Madhya Pradesh			
Balaghat	-	-	Harshey & Chandra, 2001
Kanha National Park	-	-	Harshey & Chandra, 2001
Mandla	-	-	Harshey & Chandra, 2001
Sabalgarh	26º 15	77º 24	Bates & Harrison, 1997
Sukna	-	-	Bates & Harrison, 1997
Supkhar	21º 48	80º 16	Bates & Harrison, 1997
Maharashtra			
Panchgani	17º 56	73º 49	Bates & Harrison, 1997
Pune	18º 31	73º 51	Urban areas, old buildings habitat destruction Korad V.S. & Yardi K.D., 1998-2000
Manipur			
no exact location	-	-	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Nagaland			
Takubama	25º 37	94º 32	Bates & Harrison, 1997
Sikkim			
Rongli	27º 17	88º 45	Bates & Harrison, 1997
Uttaranchal			
Dhakuri	30º 00	79º 56	Bates & Harrison, 1997
Mussoorie	30º 26	78º 04	Bates & Harrison, 1997
Ramnagar	29º 23	79º 07	Bates & Harrison, 1997
Srinagar	30º 12	78º 47	Bates & Harrison, 1997
Sukhidhang	29º 36	79º 40	Bates & Harrison, 1997
West Bengal			
Darjeeling	27º 02	88º 20	Bates & Harrison, 1997
Jalpaiguri	26º 30	88º 50	Bates & Harrison, 1997
Nimbong	27º 04	88º 25	Bates & Harrison, 1997
Pashok	27º 04	88º 24	Bates & Harrison, 1997
NORTHERN MYANMAR			
Dalu	26º 20	96º 10	Bates & Harrison, 1997
Pegu	17º 18	96º 31	Type loc. of *peguensis* Bates & Harrison, 1997
NEPAL			
Bouzini	27º 42	85º 13	Bates & Harrison, 1997
Godavari	27º 34	85º 24	Bates & Harrison, 1997
Kakani	-	-	Bates & Harrison, 1997
Kathmandu	27º 42	85º 12	Bates & Harrison, 1997
Najarkot	27º 42	85º 20	Bates & Harrison, 1997
Rasuwa	-	-	Bates & Harrison, 1997
Sipuri	-	-	Bates & Harrison, 1997
PAKISTAN			
NWFP			
Karakar Pass	34º 26	72º 13	Bates & Harrison, 1997
Punjab			
Gharial	33º 55	73º 27	Bates & Harrison, 1997
Murree	33º 55	73º 26	Type locality of *babu* Bates & Harrison, 1997

Synonyms: *Vespertilio kuhli* Kuhl, 1819
Pipistrellus lepidus Blyth, 1845
Vespertilio (Pipistrellus) leucotis Dobson, 1872

Common names: Kuhl's Pipistrelle

Family: Vespertilionidae

Habit: Open desert

Habitat: Open forests, human dwellings

Niche: Thatched roof of houses. 615-769m.

Distribution
Global: Afghanistan, India, Pakistan

South Asia:
India: Assam, Maharashtra, Meghalaya, West Bengal
Pakistan: Baluchistan, Punjab, Sind

Afghanistan

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000sq km.

Locations/subpopulations: Many. Fragmented.

Habitat status: Not known

Data source: Field study; observed.

Threats
Threats to the taxon: Alien invasive species, habitat loss, habitat destruction. The influence on the population well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Not known

Data source: Literature; inferred.

Recent Field Studies
Pune, Korad and Yardi, 1998-2000, Biodiversity survey (?)

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
India: Least Concern
Pakistan: Least Concern

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, life history, ecology.

Management: Habitat management, monitoring

Captive breeding: Techniques not known at all.

Comments
Possibility of more colonies in Pune district (Korad and Yardi). Very wide spread distribution. A very common bat in Pakistan. Abundant within its distribution range.

Sources
Bates & Harrison, 1997; Blyth, 1845; Dobson, 1872; Hutson *et al*., 2001; Kuhl, 1890

Compilers
A. Ali, P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Distribution in South Asia and Afghanistan from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Jalalabad	34º 26	70º 25	Bates & Harrison, 1997
Kandahar	31º 36	65º 47	Type locality of *lepidus* Bates & Harrison, 1997
Qala Bist	31º 28	64º 21	Bates & Harrison, 1997
INDIA			
Assam			
Cachar district	25º 00	93º 00	Bates & Harrison, 1997
Maharashtra			
Pune (St. Hilda's Girls School)	18º 31	73º 51	Korad & Yardi, 1998-2000 Building in urban area Habitat destruction
Meghalaya			
Cherrapunji	25º 16	91º 42	Bates & Harrison, 1997
West Bengal			
Kolkata	22º 35	88º 21	Bates & Harrison, 1997
PAKISTAN			
Baluchistan			
Darzi Chach	29º 41	65º 37	Bates & Harrison, 1997
Panjgur	26º 56	64º 06	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Punjab			
Lyallpur	31º 25	73º 07	Bates & Harrison, 1997
Multan	30º 11	71º 26	Bates & Harrison, 1997
Muzaffargarh	30º 04	71º 12	Bates & Harrison, 1997
Rajanpur	29º 06	70º 17	Type locality of leucotis Bates & Harrison, 1997
Sind			
Chak	27º 44	68º 52	Bates & Harrison, 1997
Gambat	27º 19	68º 32	Bates & Harrison, 1997
Hyderabad	25º 24	68º 22	Bates & Harrison, 1997
Kashmor	28º 25	69º 35	Bates & Harrison, 1997
Mirpur	28º 12	68º 48	Bates & Harrison, 1997
Mirpur Sakro	24º 32	67º 38	Bates & Harrison, 1997
Pithoro	25º 32	68º 21	Bates & Harrison, 1997
Sukkur	27º 42	68º 52	Bates & Harrison, 1997

Pipistrellus paterculus Thomas, 1915

LEAST CONCERN in South Asia

Common names: Mount Popa Pipistrelle, Paternal Pipistrelle

Family: Vespertilionidae

Habit: Colonial

Habitat: Bamboo forests, agricultural land

Niche: Tree holes, thatched roofs, banana plantations. 308-615m in Myanmar

Distribution
Global: India, Myanmar to southwest China, Thailand

South Asia:
India: Assam, Bihar, Jammu & Kashmir, Manipur, Nagaland

Myanmar

Extent of Occurrence: Not known

Area of Occupancy: Not known

Locations/subpopulations: 20 / many

Habitat status: No change

Data source: Indirect information; inferred.

Threats
Threats to the taxon: Habitat loss, deforestation, human interference. The influence on the population well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: <10% decline in the last 10 years. <10% decline likely in the next 10 years.

Data source: Field study; observed; 95% confidence

Recent Field Studies
Sinha, Bihar, 1983.

Red List 2001 Status derived in the workshop

Ver. 3.1: **LEAST CONCERN**

Widely distributed and known from many locations.

1997 C.A.M.P. (Ver. 2.3): Data Deficient

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Lower Risk near threatened
Microchiroptera Action Plan (Global): Lower Risk near threatened
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments
Future research may show that this bat is less common than currently thought and NT may be a more suitable category. Despite some fieldwork within the known range of this species in Myanmar no specimen has been collected.

Sources
Bates & Harrison, 1997; Hutson *et al*., 2001; Thomas, 1915

Compilers
A. Ali, P.J.J. Bates, Y.P. Sinha, K.M. Swe, A. Thabah

Reviewers
Rest of the participants

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Assam			
Palasbari	26º 07	91º 30	Bates & Harrison, 1997
Rajapara	26º 30	92º 00	Bates & Harrison, 1997
Bihar			
Buhnar	26º 10	85º 54	Bates & Harrison, 1997
Jammu & Kashmir			
Poonch Valley	33º 43	74º 54	Bates & Harrison, 1997
Manipur			
Aimoli	-	-	Bates & Harrison, 1997
Nagaland			
Takubama	25º 37	94º 32	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Hkamti	26º 01	95º 45	Bates & Harrison, 1997
Homalin	24º 55	95º 01	Bates & Harrison, 1997
Kyouk Myoung	22º 36	95º 55	named *mimus* in Wroughton, 1915a.Bates & Harrison, 1997
Mandal	21º 57	96º 04	Bates & Harrison, 1997
Maymyo	22º 05	96º 33	Bates & Harrison, 1997
Mount Popa	20º 56	95º 16	Type loc. of *paterculus* Bates & Harrison, 1997
Nam Tisang Valley	-	-	Bates & Harrison, 1997
Ningma	26º 36	97º 45	Bates & Harrison, 1997
Pyaunggaung	22º 38	97º 22	named coromandra in Ryley, 1914b. Bates & Harrison, 1997
Rangoon	16º 47	96º 10	Bates & Harrison, 1997
Sumka Uma	25º 57	97º 49	Bates & Harrison, 1997
Sumprabum	26º 33	97º 34	Bates & Harrison, 1997
Tamanthe	25º 20	95º 18	Bates & Harrison, 1997
Tatkon	23º 50	94º 30	Bates & Harrison, 1997

Pipistrellus pipistrellus (Schreber, 1774)

LEAST CONCERN in South Asia

Synonyms: *Vespertilio pipistrellus* Schreber, 1774
Pipistrellus aladdin Thomas, 1905
Pipistrellus bactrianus Satunin, 1905

Common names: Common Pipistrelle

Family: Vespertilionidae

Habitat: Buildings, near human settlements

Niche: Wall crevices, clefts or rocks or any dry protected hole, caves. 461-2462m.

Distribution
Global: India, Pakistan, Afghanistan, Myanmar, Japan, Taiwan

South Asia:
India: Assam, Jammu & Kashmir, Maharashtra, Tamil Nadu
Pakistan

Afghanistan
Myanmar

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many / not known.

Habitat status: Stable

Data source: Indirect information, field studies; inferred, observed.

Threats
Threats to the taxon: Habitat loss.

Population
Generation time: 4-6 years

Mature individuals: > 10,000. <5% likely to decline in the future.

Population trend: Not known

Data source: Field studies, indirect information; observed, inferred.

Recent Field Studies
G.H. Koli in Thane, 2001
J. Vanitharani in Tirunelveli, 1991
A. Ali in Assam, 1998-2001

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

Widely distributed and found in many locations with few threats.

National Status
India: Least Concern
Pakistan: Least Concern

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Sources
Bates & Harrison, 1997; Hutson *et al*., 2001; Satunin, 1905; Schreber, 1774-1785; Thomas, 1905;

Compilers
S. Mistry, M. Muni, K.R. Senacha, T.K. Shrestha, K.S. Sreepada, C. Srinivasulu

Reviewers
Rest of the participants

Distribution in South Asia, Afghanistan and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Baghlan	36º 11	68º 44	Bates & Harrison, 1997
Balk	36º 46	66º 50	Bates & Harrison, 1997
Baschgaltal	-	-	Bates & Harrison, 1997
Baschgar Valley	35º 10	70º 58	Bates & Harrison, 1997
Herat	34º 20	62º 10	Bates & Harrison, 1997
Jalalabad	34º 26	70º 25	Bates & Harrison, 1997
Kabul	34º 30	69º 10	Bates & Harrison, 1997
Kamdesh	35º 25	71º 26	Bates & Harrison, 1997
Kunduz	36º 47	68º 51	Bates & Harrison, 1997
Maimana	35º 54	64º 43	Bates & Harrison, 1997
Mazar-i-Sharif	36º 43	67º 05	Bates & Harrison, 1997
Taliqan	34º 46	69º 29	Bates & Harrison, 1997
INDIA			
Assam			
Bangara	-	-	Diseases, Predation, Fire Azad Ali, 1998-2001
Dhubri	-	-	Diseases, Predation, Fire Azad Ali, 1998-2001
Jalukbari	-	-	Diseases, Predation, Fire Azad Ali, 1998-2001
Kamarkuchi	-	-	Diseases, Predation, Fire Azad Ali, 1998-2001
Nalbari	-	-	Diseases, Predation, Fire Azad Ali, 1998-2001
Rajapara	26º 30	92º 00	Bates & Harrison, 1997
Srimantapur	-	-	Diseases, Predation, Fire Azad Ali, 1998-2001
Jammu & Kashmir			
Pandrittan	34º 08	74º 53	Bates & Harrison, 1997
Srinagar	34º 08	74º 50	Bates & Harrison, 1997
Maharashtra			
Murbad	-	-	Building crevices Habitat loss Koli, 2001
Tamil Nadu			
Tirunelveli	08º 44	72º 42	Buildings and crevices J. Vanitharani, 2001
MYANMAR (NORTHERN)			
Sumka Uma	25º 57	97º 49	Bates & Harrison, 1997
PAKISTAN			
Dir	35º 12	71º 52	Bates & Harrison, 1997
Gilgit	35º 54	74º 20	Bates & Harrison, 1997
Kululai	35º 18	72º 35	Bates & Harrison, 1997
Chitral	35º 50	71º 47	Bates & Harrison, 1997

Pipistrellus savii (Bonaparte, 1837)

VULNERABLE in South Asia

Synonyms: *Vespertilio savii* Bonaparte, 1837
?*Pipistrellus austenianus* Dobson, 1871

Common names: Bengali: *Savir Chamchika*; English: Savi's Pipistrelle

Family: Vespertilionidae

Habit: Insectivorous

Habitat: Mountain deciduous forest.

Niche: Caves, hollow trees, building crevices. 403-2585m.

Distribution
Global: Afghanistan, Africa, Arabia, India, Bangladesh, Iran, Japan, Korea, Myanmar

South Asia:
Bangladesh: Northeastern
India: Maharashtra, Meghalaya

Afghanistan
Myanmar

Extent of Occurrence: < 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 2. Fragmented

Habitat status: Not known

Data source: Field study, literature; suspected.

Threats
Threats to the taxon: Habitat loss and change in quality of habitat.

Population
Generation time: 4-6 years

Mature individuals: <2,500

Population trend: Not known

Data source: Museum record; literature; suspected; subjective

Red List 2001 Status derived in the workshop

Ver. 3.1: VULNERABLE B1ab(iii)

Although restricted in mature individuals, the status is based on restricted extent of cocurance and change in quality of habitat.

National Status
Bangladesh: Endangered B1ab(iii); D1
India: Vulnerable B1ab(iii)

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, life history, ecology

Management: Habitat management, monitoring

Captive breeding: Techniques not known at all.

Comments
Pune report needs to be confirmed. Wide distribution. Specimens from India and Myanmar are provisionally referred to as P. *savii austenianus* (Corbet & Hill, 1992). More colonies in Pune district likely. Mature individuals - guesstimate based on widespread distribution and limited number of locations. Several new records suggest that this species may be under recorded in past surveys rather than rare in nature.

Sources
Bates & Harrison, 1997; Bonaparte, 1836-1841; Dobson, 1871; Corbet & Hill, 1992; Hutson *et al*., 2001; Khan, 2001

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
Korad & Yardi, Hilda's Girl's school, Pune city (?), India, Ecological study and faunistic study of bats in Pune Corporation limits, 1998-2000.

Distribution in South Asia, Afghanistan and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Bamiyan	34º 50	67º 37	Bates & Harrison, 1997
Maimana	35º 54	64º 43	Bates & Harrison, 1997
Kamdesh	35º 25	71º 26	Bates & Harrison, 1997
BANGLADESH			
Northeastern forests			Khan, 2001
INDIA			
Maharashtra			
Pune (Hilda's girl's high school)	18º 31	73º 51	Building, urban area Habitat destruction Korad and Yardi, 1998-2000
Meghalaya			
Cherrapunji	25º 16	91º 42	Type locality of *austenianus* Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Maymyo	22º 05	96º 33	Bates & Harrison, 1997
Shan state	-	-	Coniferous forest. No threats. Bates & Harrison, 1997

Pipistrellus tenuis (Temminck, 1840) — NEAR THREATENED in South Asia

Synonyms: *Vespertilio tenuis* Temminck, 1840
Pipistrellus mimus Wroughton, 1899
Pipistrellus mimus glaucillus Wroughton, 1912
Pipistrellus principulus Thomas, 1915

Common names: Indian Pygmy Bat, Least Pipistrelle

Habit: Solitary, colonial

Habitat: Crevices in buildings and rocks, wooden structures.

Niche: Crevices. 108-769m in India

Distribution
Global: Afghanistan, India, Pakistan, Bangladesh, Nepal, Sri Lanka to Vietnam, Thailand

South Asia:
Bangladesh
India: Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Orissa, Rajasthan, Tamil Nadu, Tripura, Uttaranchal, Uttar Pradesh, West Bengal
Pakistan: Nwfp, Punjab, Sind
Nepal
Sri Lanka: Central Province, North Western Province, Sabartagamuwa Province, Southern Province, Uva Province, Western Province

Afghanistan
Myanmar

Extent of Occurrence: > 20,000 sq km

Area of Occupancy: > 2,000 sq km

Locations/subpopulations: Many / not known.

Habitat status: Stable

Data source: Field study; Observed, inferred.

Threats
Threats to the taxon: Habitat loss. The influence on the population well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Stable

Data source: Field study; observed.

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
Bangladesh: Least Concern
India: Least Concern
Nepal: Least Concern
Pakistan: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Satpura National Park, Madhya Pradesh

Recommendations
Research: Survey

Management: Monitoring

Comments
Population abundant.

Sources
Bates & Harrison, 1997; Harshey & Chandra, 2001; Hutson *et al*., 2001; Khan, 2001; Temminck, 1840; Thomas, 1915; Wroughton, 1899; Wroughton, 1912.

Compilers
A.C. Girish, J.K. Immanuel, S. Kandula, V.S. Korad, G. Nair, P.T. Nathan, A. Nobel, J. Koilraj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
Sinha, Bihar, 1984, 1986, Gujarat, 1981, Rajasthan, 1980;
Issac S.S. and Marimuthu G. Madurai, 1989-95. Behvioural ecology
Vanitharani, J., Tirunelveli. 1992-1996; Ectoparasites of bats
Prabha, G. & J. Vanitharani, Tirunelveli. 2000-onwards; Survey of bats in Tirunelveli district, their role in the ecosystem.
Srinivasulu C., in Andhra Pradesh, 1995-onwards

Distribution in South Asia, Afghanistan and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Kala-i-Shahi	34º 30	70º 40	Bates & Harrison, 1997
BANGLADESH			
Habiganj	24º 22	91º 25	Bates & Harrison, 1997
Southwestern			Khan, 2001
INDIA			
Andhra Pradesh			
Andhra Pradesh	-	-	Throughout Andhra Pradesh it is found around human settlement areas; Loss of habitat Srinivasulu C., 1995-onwards
Koduru	13º 58	79º 14	Bates & Harrison, 1997
Thummalabyu	14º 11	79º 09	Bates & Harrison, 1997
Assam			
Angarakhata	26º 37	90º 30	Bates & Harrison, 1997
Gauhati	26º 10	91º 45	type loc. of *principulus* Bates & Harrison, 1997
Golaghat	26º 30	93º 57	Bates & Harrison, 1997
Palasbari	26º 07	91º 30	Bates & Harrison, 1997
Rajapara	26º 30	92º 00	Bates & Harrison, 1997
Bihar			
Begusarai	25º 25	86º 08	Bates & Harrison, 1997
Bhagalpur	25º 14	86º 59	Bates & Harrison, 1997
Bhojpur	25º 34	84º 40	Bates & Harrison, 1997
Champaran	27º 06	84º 29	Bates & Harrison, 1997
Darbhanga	26º 10	85º 54	Bates & Harrison, 1997
Gaya	24º 48	85º 00	Bates & Harrison, 1997
Madhubani	26º 21	86º 05	Bates & Harrison, 1997
Muzaffarpur	26º 07	85º 23	Bates & Harrison, 1997
Patna	25º 37	85º 12	Bates & Harrison, 1997
Rohtas	24º 40	83º 59	Bates & Harrison, 1997
Saharsa	25º 54	86º 36	Bates & Harrison, 1997
Sitamarhi	26º 36	85º 30	Bates & Harrison, 1997
Vaishali	25º 49	85º 25	Bates & Harrison, 1997
Gujarat			
Anand	22º 34	73º 01	Bates & Harrison, 1997
Bagdu	-	-	Bates & Harrison, 1997
Deogad	21º 22	73º 25	Bates & Harrison, 1997
Junagadh	21º 31	70º 28	Bates & Harrison, 1997
Keshod	21º 17	71º 32	Bates & Harrison, 1997
Lunwa	-	-	Bates & Harrison, 1997
Mheskatri	21º 10	72º 54	Type loc. of *mimus* Bates & Harrison, 1997
Palanpur	24º 12	72º 29	Bates & Harrison, 1997
Sasan	21º 00	70º 40	Bates & Harrison, 1997
Surat	21º 10	72º 54	Bates & Harrison, 1997
Vedtial	-	-	Bates & Harrison, 1997
Waghai	20º 46	73º 29	Bates & Harrison, 1997
Haryana			
Chandigarh	30º 43	76º 47	Bates & Harrison, 1997
Himachal Pradesh			
Kulu	31º 59	77º 06	Bates & Harrison, 1997
Jharkhand			
Dhandbad	23º 47	86º 32	Bates & Harrison, 1997
Hazaribagh	24º 00	85º 23	Bates & Harrison, 1997
Ranchi	23º 22	85º 20	Bates & Harrison, 1997
Santal Pargana	24º 17	87º 15	Bates & Harrison, 1997
Singhbum	23º 30	85º 50	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Karnataka			
Astoli	15º 26	74º 30	Bates & Harrison, 1997
Bangalore	12º 58	77º 35	Bates & Harrison, 1997
Barchi	15º 25	74º 35	Bates & Harrison, 1997
Bellary	15º 11	76º 54	Bates & Harrison, 1997
Dharwar	15º 30	75º 04	Bates & Harrison, 1997
Gadag	15º 26	75º 42	Bates & Harrison, 1997
Honawar	14º 19	74º 27	Bates & Harrison, 1997
Kardibetta Forest	14º 08	75º 20	Bates & Harrison, 1997
Kutta	-	-	Bates & Harrison, 1997
Mysore	12º 18	76º 37	Bates & Harrison, 1997
Potoli	15º 09	74º 44	Bates & Harrison, 1997
Kerala			
Ernakulam	10º 00	76º 16	Bates & Harrison, 1997
Thrissur	10º 32	76º 14	Bates & Harrison, 1997
Madhya Pradesh			
Bori	-	-	Bates & Harrison, 1997
Guna	24º 40	77º 19	Bates & Harrison, 1997
Hoshangabad	22º 44	77º 45	Bates & Harrison, 1997 Harshey & Chandra, 2001
Jabalpur	-	-	Harshey & Chandra, 2001
Khapa	-	-	Bates & Harrison, 1997
Mundra	23º 50	78º 44	Bates & Harrison, 1997
Satpura National Park	-	-	Harshey & Chandra, 2001
Sohagpur	22º 43	78º 14	Bates & Harrison, 1997
Maharashtra			
Bhodwad	21º 01	75º 50	Bates & Harrison, 1997
Bombay	18º 56	72º 51	Bates & Harrison, 1997
Chanda	19º 58	79º 21	Bates & Harrison, 1997
Chikalda	21º 29	77º 12	Bates & Harrison, 1997
Chinchpali	19º 57	79º 22	Bates & Harrison, 1997
Karnala	18º 59	73º 28	Bates & Harrison, 1997
Nanded	19º 11	77º 21	Bates & Harrison, 1997
Poona	18º 34	73º 58	Bates & Harrison, 1997
Pune	18º 31	73º 51	Found in old stoney buildings and tree holes; threats are: loss of habitat Korad V.S. & Yardi K.D., 1998-2001
Ratnagiri	17º 00	73º 20	Bates & Harrison, 1997
Srimangala	12º 01	76º 00	Bates & Harrison, 1997
Vijayanagar	15º 20	76º 28	Bates & Harrison, 1997
Meghalaya			
Chekrima	25º 35	94º 30	Bates & Harrison, 1997
Laitkynsao	25º 48	91º 58	Bates & Harrison, 1997
Phulbari	25º 55	90º 03	Bates & Harrison, 1997
Orissa			
Ganjam	23º 45	91º 50	Bates & Harrison, 1997
Keonjhar	22º 01	86º 21	Bates & Harrison, 1997
Mayurbhanj	21º 52	86º 48	Bates & Harrison, 1997
Puri	19º 50	85º 15	Bates & Harrison, 1997
Sambalpur	21º 28	84º 04	Bates & Harrison, 1997
Sundargarh	22º 04	84º 08	Bates & Harrison, 1997
Rajasthan			
Ajmer	26º 29	74º 40	Bates & Harrison, 1997
Banswara	23º 32	74º 28	Bates & Harrison, 1997
Barmer	25º 43	71º 25	Bates & Harrison, 1997
Bundi	25º 28	75º 42	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Dungarpur	23º 53	73º 48	Bates & Harrison, 1997
Jaipur	26º 53	75º 50	Bates & Harrison, 1997
Jhalawar	24º 32	76º 12	Bates & Harrison, 1997
Jhunjhunu	28º 05	75º 30	Bates & Harrison, 1997
Jodhpur	26º 18	73º 08	Bates & Harrison, 1997
Kota	25º 11	75º 58	Bates & Harrison, 1997
Nagaur	27º 12	73º 48	Bates & Harrison, 1997
Pali	25º 46	73º 26	Bates & Harrison, 1997
Sikar	27º 33	75º 12	Bates & Harrison, 1997
Sirohi	24º 53	72º 58	Bates & Harrison, 1997
Tonk	25º 52	75º 50	Bates & Harrison, 1997
Tamil Nadu			
Samaya Malai	09º 55	78º 07	Bates & Harrison, 1997
Tirthamalai	12º 06	78º 36	Bates & Harrison, 1997
Chettiri Range	-	-	Bates & Harrison, 1997
Kurumbapatti	-	-	Bates & Harrison, 1997
Madurai	09º 55	78º 07	J. Habersetzer [1978] found it in tree holes; Human disturbance S. Suthakar Isaac & G. Marimuthu [1990-1994] found in crevices in a building; threats are: hot weather, disturbance from other animals (squirrels and lizards) Bates & Harrison, 1997
Tirunelveli district	08º 44	72º 42	crevices of houses and temples J. Vanitharani, 1992-onwards
Tripura			
Ambassa	23º 55	91º 50	Bates & Harrison, 1997
Kanchanpur	23º 50	91º 50	Bates & Harrison, 1997
Haldwani	29º 13	79º 29	Bates & Harrison, 1997
Kaladungi	29º 13	79º 29	Bates & Harrison, 1997
Neergam	30º 06	78º 16	Bates & Harrison, 1997
Ramnagar	29º 23	79º 07	Bates & Harrison, 1997
Sitabani	29º 21	79º 08	Bates & Harrison, 1997
Uttar Pradesh			
Dela	28º 58	79º 07	Bates & Harrison, 1997
Jerna	28º 45	79º 07	Bates & Harrison, 1997
Philibhit	28º 37	79º 48	Bates & Harrison, 1997
Satyanarayan	-	-	Bates & Harrison, 1997
Varanasi	25º 20	83º 00	Bates & Harrison, 1997
West Bengal			
Barddhaman	23º 15	87º 52	Bates & Harrison, 1997
Darjeeling	27º 02	88º 20	Bates & Harrison, 1997
Haora	-	-	Bates & Harrison, 1997
Hugli	22º 52	88º 21	Bates & Harrison, 1997
Jalpaiguri	26º 30	88º 50	Bates & Harrison, 1997
Koch Bihar	26º 17	89º 40	Bates & Harrison, 1997
Kolkata	25º 00	93º 00	Bates & Harrison, 1997
Maldah	-	-	Bates & Harrison, 1997
Medinipur	22º 25	87º 24	Bates & Harrison, 1997
Murshidabad	24º 11	88º 19	Bates & Harrison, 1997
Nadia	23º 24	88º 23	Bates & Harrison, 1997
North 24-Parganas	-	-	Bates & Harrison, 1997
Puruliya	23º 20	86º 24	Bates & Harrison, 1997
South 24-Parganas	22º 22	88º 25	Bates & Harrison, 1997
West Dinajpur	25º 38	88º 44	Bates & Harrison, 1997
PAKISTAN			
NWFP			
Chitral	35º 50	71º 47	Bates & Harrison, 1997
Malakand	34º 34	71º 57	Bates & Harrison, 1997
Punjab			
Bhattu Hissar	-	-	Bates & Harrison, 1997
Chaklala	33º 40	73º 08	Bates & Harrison, 1997
Chakri	32º 47	73º 28	Bates & Harrison, 1997
Khanewal	30º 18	76º 51	Bates & Harrison, 1997
Multan	30º 11	71º 26	type loc. of *glaucillus* Bates & Harrison, 1997
Sheikhupura	31º 43	73º 59	Bates & Harrison, 1997
Sind			
Gambat	27º 19	68º 32	Bates & Harrison, 1997
Karachi	24º 51	67º 02	Bates & Harrison, 1997
Malir	24º 59	67º 13	Bates & Harrison, 1997
Sukkur	27º 42	68º 52	Bates & Harrison, 1997
NEPAL			
Bairia	27º 00	85º 23	Bates & Harrison, 1997
Banke	27º 57	81º 47	Bates & Harrison, 1997
Hazaria	26º 51	85º 20	Bates & Harrison, 1997
SRI LANKA			
Central Province			
Kandy	07º 17	80º 40	Bates & Harrison, 1997
Peradeniya	07º 15	80º 40	Bates & Harrison, 1997
Rattota	07º 31	80º 41	Bates & Harrison, 1997
North Western Province			
Kurenegala	07º 28	80º 23	Bates & Harrison, 1997
Sabaragamuwa Province			
Labugama	06º 55	80º 11	Bates & Harrison, 1997
Southern Province			
Hambantota	06º 07	81º 07	Bates & Harrison, 1997
Ranna	06º 05	80º 52	Bates & Harrison, 1997
Uva Province			
Namunukula	06º 55	81º 07	Bates & Harrison, 1997
Western Province			
Anasigalla	06º 29	80º 03	Bates & Harrison, 1997
Colombo	06º 55	79º 52	Bates & Harrison, 1997
Kalutara	06º 35	79º 59	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Dalu	26º 20	96º 10	Bates & Harrison, 1997
Homalin	24º 55	95º 01	Bates & Harrison, 1997
Kabaw Valley	24º 00	94º 15	Bates & Harrison, 1997
Maungkan	25º 12	95º 02	Records from Manalay and Mount Popa (=*mimus* in Wroughton, 1915a) are referred to *P. paterculus*. Bates & Harrison, 1997
Nanyaseik	25º 32	96º 36	Bates & Harrison, 1997
Phawzaw	-	-	Bates & Harrison, 1997
Pyaunggaung	22º 38	97º 22	Bates & Harrison, 1997

Plecotus auritus (Linnaeus, 1758)

NEAR THREATENED in South Asia

Synonyms: *Vespertilio auritus* Linnaeus, 1758
?*Plecotus homochrous* Hodgson, 1847
?*Plecotus puck* Barrett-Hamilton, 1907

Common names: Brown long-eared Bat

Family: Vespertilionidae

Habit: Insectivorous

Habitat: Alpine forests

Niche: Deserted huts, hollow tree trunks, caves. 2308-3540m.

Distribution
Global: India, Ireland, Nepal, Norway, Japan, Pakistan, Spain to Russia.

South Asia:
India: Himachal Pradesh, Jammu & Kashmir, Sikkim, Uttaranchal, West Bengal
Nepal
Pakistan: Northern Areas, Punjab

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 12. Contiguous.

Habitat status: Change in quality of habitat due to mining, felling, human interference.

Data source: Literature; inferred.

Threats
Threats to the taxon: Habitat loss, deforestation. The influence on the population well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: < 2,500

Population trend: Not known

Data source: Indirect information; inferred.

Recent Field Studies
Srikumar in North Sikkim, ZSI North Sikkim 1992-94
S. Mistry, N. Sikkim, 1992
Shreshta, T.K., Makalu Barun NP, Rara NP, Nepal, 1997

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Wide spread distribution with a small number of locations and possible threat to habitat.

National Status
India: Near Threatened
Nepal: Near Threatened
Pakistan: Near Threatened

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
Nepal: Makalu Barun National Park, Rara National Park.

Recommendations
Research: Survey

Management: Monitoring

Captive breeding: Techniques not known at all.

Comments
The endemic subspecies is *P. auritus homochrous.*

Sources
Barrett-Hamilton, 1907; Bates & Harrison, 1997; Linnaeus, 1758; Hodgson, 1847; Hutson *et al*., 2001; Shrestha, 1997

Compilers
A. Ali, P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Distribution in South Asia from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Himachal Pradesh			
Ratanadi	31º 14	77º 33	Bates & Harrison, 1997
Jammu & Kashmir			
Pahlgam	34º 01	75º 25	Bates & Harrison, 1997
Sikkim			
North Sikkim	-	-	Mistry, 1992 Coniferous forest
Uttaranchal			
Phurkia	30º 12	80º 03	Bates & Harrison, 1997
Martoli	30º 20	80º 14	Bates & Harrison, 1997
Milam	30º 30	80º 12	Bates & Harrison, 1997
West Bengal			
Darjeeling	27º 02	88º 20	Type locality of *homochrous*, see Taxonomic remarks Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
NEPAL			
Jomson	28º 49	83º 42	Bates & Harrison, 1997
Makalu Barun National Park	-	-	Shreshta T.K., 1997 Montane forest and pine oak forest
Rara National Park	29º 34	82º 05	Shreshta T.K., 1997 Montane forest and coniferous forest
PAKISTAN			
Northern Areas			
Gilgit	35º 54	74º 20	Bates & Harrison, 1997
Punjab			
Murree	33º 55	73º 26	Type locality of *puck* Bates & Harrison, 1997

Plecotus austriacus (Fischer, 1829)

NEAR THREATENED in South Asia

Synonyms: *Vespertilio auritus austriacus* Fischer, 1829
Plecotus wardi Thomas, 1911,

Common names: Common Long-eared Bat, Grey Long-eared Bat

Family: Vespertilionidae

Habit: Insectivorous, colonial

Habitat: Montane moist mixed conferous and deciduous forest

Niche: Crevices of tunnels, forts, dilapidated buildings, caves. 1450-3600m.

Distribution
Global: Afghanistan, Austria, England, India, Nepal, Pakistan, Senegal to Mongolia to West China

South Asia:
India: Jammu & Kashmir
Nepal
Pakistan: Northern Areas, NWFP

Afghanistan

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 11. Contiguous.

Habitat status: < 10% decrease in area in the last 5 years due to habitat destruction. Decrease in quality due to habitat destruction.

Data source: Literature; inferred, observed.

Threats
Threats to the taxon: Not known

Population
Generation time: 4-6 years

Mature individuals: < 2,500

Population trend: Not known

Data source: Museum record, literature; inferred, observed

Recent Field Studies
None

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Widespread but few localities in South Asia and decline in population inferred due to loss of habitat.

National Status
India: Near Threatened
Nepal: Near Threatened
Pakistan: Near Threatened

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments
Specimens from Indian subcontinent and Afghanistan are provisionally referred to as *Plecotus austriacus wardi* (Bates & Harrison, 1997). No population information is known. On conservative estimate of 40 individuals in 17 locations the population could be 680. Wide distribution from Afghan to Jammu & Kashmir. Status based on habitat loss in its distributional range.

Sources
Bates & Harrison, 1997; Fischer, 1829; Hutson *et al*., 2001; Thomas, 1911

Compilers
S. Mistry, M. Muni, K.R. Senacha, T.K. Shrestha, K.S. Sreepada, C. Srinivasulu, Y.P. Sinha, K.M. Swe, A. Thabah

Reviewers
Rest of the participants

Distribution in South Asia and Afghanistan from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Bamiyan	34º 50	67º 37	Bates & Harrison, 1997
Firindjal	35º 00	68º 29	Bates & Harrison, 1997
Kabul	34º 30	69º 10	Bates & Harrison, 1997
Kabul (75 km west)	-	-	Bates & Harrison, 1997
Kala-e-Safad	-	-	Bates & Harrison, 1997
Samotch-e-Nayak	-	-	Bates & Harrison, 1997
INDIA			
Jammu & Kashmir			
Leh	34º 09	77º 35	Type locality of *wardi* Bates & Harrison, 1997
Pandrittan	34º 08	74º 53	Bates & Harrison, 1997
Pundurhak	-	-	Bates & Harrison, 1997
Sardallu	-	-	Bates & Harrison, 1997
Srinagar	34º 08	74º 50	Bates & Harrison, 1997
Tral	34º 00	78º 48	Bates & Harrison, 1997
NEPAL			
Ringmo	-	-	Bates & Harrison, 1997
PAKISTAN			
Northern areas			
Rattoo	35º 55	74º 20	Bates & Harrison, 1997
NWFP			
Battakundi	34º 56	73º 46	B & H, 1997
Sharan	34º 43	73º 28	Bates & Harrison, 1997
Shogran	34º 37	73º 28	Bates & Harrison, 1997

Pteropus faunulus Miller, 1902

ENDANGERED

Common names: Nicobar Flying Fox

Family: Pteropodidae

Habit: Frugivorous

Habitat: Tropical evergreen forest, dense forest tracts

Niche: Up to 200m

Distribution
Global: Endemic to South Asia (India)

South Asia:
India: Andaman & Nicobar Islands

Extent of Occurrence: < 500 sq km.

Area of Occupancy: 11-500 sq km.

Locations/subpopulations: 3. Fragmented.

Habitat status: < 10% decrease in area in the last 5-10 years. No change expected in future. Change in quality of habitat.

Data source: Literature, museum; inferred.

Threats
Threats to the taxon: Habitat loss. The influence on the population not well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: Not known

Population trend: Not known

Red List 2001 Status derived in the workshop

Ver. 3.1: ENDANGERED B1ab(iii) + 2ab(iii)

Restricted distribution, threats to habitat and a few fragmented locations justifies this species to be categorized as Endangered.

1997 C.A.M.P. (Ver. 2.3): Vulnerable B1+2cd

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Vulnerabl B1+2c
Old World Fruit Bats Action Plan: No data: limited distribution
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, taxonomic research, ecological studies, PHVA.

Management: Habitat management, monitoring, public awareness

Captive breeding: Initiate *ex situ.* Program within 3 years. Techniques known for this taxon or similar taxon.

Comments
It is possible that locals hunt this bat for meat since it is a fruit bat [Bates]. It is a priority species for survey to determine if viable populations exist. The species appears to be threatened in the wild. It is a suitable candidate for captive breeding. Such breeding programs have worked well with other flying fox species. Car Nicobar specimens are slightly different in colour. So the mixing of this population with the other populations is not known. Needs more studies for more information. Endemic to India. Known from three small (localities) islands. All information is inferred from three dead specimens. Found in three islands. No new information.

Sources
Bates & Harrison, 1997; Mickleburgh *et al.,* 1992; Miller, 1902

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Andaman & Nicobar Islands			
Car Nicobar	09º 12	92º 46	Type locality of *faunulus* Endemic to the Nicobar Islands
Camorta	08º 08	93º 42	Endemic to the Nicobar Islands
Nankauri	07º 59	93º 22	Endemic to the Nicobar Islands

Pteropus giganteus Brünnich, 1782

LEAST CONCERN in South Asia

Synonyms: *Vespertilio gigantea* Brünnich, 1782
Pteropus ariel G. Allen, 1908
Pteropus assamensis MacClelland, 1839
Pteropus edwardsi I. Geoffroy, 1828
Pteropus kelaarti Gray, 1870
Pteropus leucocephalus Hodgson, 1835
Pteropus medius Temminck, 1825
Pteropus rubricollis Ogliby, 1840

Common names: Bengali: *Champa Badur*; English: Indian Flying Fox

Family: Pteropodidae

Habit: Frugivorous, colonial

Habitat: Tropical, subtropical forest, agricultural areas, scrub

Niche: Tall trees. 80-2000m.

Migration: Local migration

Distribution
Global: Bangladesh, India, Maldives, Myanmar, Nepal, Pakistan, Sri Lanka

South Asia:
Bangladesh
India: Andaman and Nicobar Islands, Andhra Pradesh, Assam, Bihar, Chhattisgarh, Goa, Gujarat, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Orissa, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh, West Bengal
Maldives
Nepal
Pakistan: Punjab, Sind
Sri Lanka: Central Province, Eastern Province, Gampaha, Northern Province, North Central Province, Southern Province, Sabaragamuwa Province, Uva Province, Western Province

Myanmar

Extent of Occurrence: > 20,000 sq km

Area of Occupancy: > 2,000 sq km

Locations/subpopulations: Many.

Habitat status: Stable?

Data source: Field studies, indirect information; Observed, inferred.

Threats
Threats to the taxon: Exploitation, hunting, habitat loss. The influence on the population well understood, not reversible and have not ceased to be a threat.

Recent Field Studies
Shreshta, Nepal, 1997
Agoramoorthy, Tamil Nadu, India, 1996-2000, survey
Korad and Yardi, Pune, 1998-2001, Survey
J. Vanitharani, Tirunelveli, 1998-2000
G.H. Koli, Thane, Maharashtra, 1998
Shukkur, E.A.A., Calicut, 1980-2001
Singaravelan, Cumbum valley and Srivilliputhur, 1999

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Not known

Data source: Indirect information; Inferred.

Red List 2001 Status derived in the workshop

Ver. 3.1: **LEAST CONCERN**

National Status
Bangladesh: Endangered A2acd
India: Least Concern
Maldives: Least Concern
Nepal: Least Concern
Pakistan: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Old World Fruit Bats Action Plan: Not threatened
CITES: Not listed

Known presence in Protected Areas
India: Point Calimere Wildlife Sanctuary, Tamil Nadu; Palamau Tiger Reserve, Hazaribagh Wildlife Sanctuary, Jharkhand; Kawal Wildlife Sanctuary, Andhra Pradesh; Molem National Park, Goa; Kanha National Park, Madhya Pradesh; Chilka (Nalaban) Wildlife Sanctuary, Orissa; Indravati National Park, Chhattisgarh

Recommendations
Research: Survey

Management: Monitoring

Comments
Population of *P. giganteus maris in* Maldives is small and declining. Widespread in Bangladesh (Bates & Harrison, 1997). Common over most of the cultivated parts of the island, especially over the coastal belt from Colombo to Matara. Altitude above 615m. (Bates & Harrison, 1997). Atleast 80% of roosting trees have been felled since 1970 in Bangladesh (Khan, 2001), so there could be a decline in population of at least more than 50%.

Sources
Allen, 1908; Bates & Harrison, 1997; Brünnich, 1782; Geoffroy, 1828; Gray, 1870; Harshey & Chandra, 2001; Mickleburgh *et al.,* 1992; Hodgson, 1835; Ogilby, 1840; Temminck, 1824-27

Compilers
A.C. Girish, J.K. Immanuel, S. Kandula, V.S. Korad, G. Nair, P.T. Nathan, A. Nobel, J. Koilraj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Yapa & Digana, Sri Lanka, 1996
Girish, A.C. and Chakravarthy, A.K., Uppinagadi, Kido and Crettalli in Karnataka, 1999-2000
B. Srinivasulu & C. Srinivasulu, Andhra Pradesh, 1995 onwards
C. Srinivasulu in Dindi Reservoir, 1995 onwards
A. Ali, Assam, 1996 onwards
Senacha, K.L. and Purohit, Jodhpur, Rajasthan, 1998-2000
Ganjure and Joshi, D.S., Ahmednagar, Maharashtra, 2000
Hutson *et al.,* Maldives, 1994
Sreepada & Ravi Shankar, Kotakar, Karnataka, 2000

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
Barisal	22º 41	90º 20	Bates & Harrison, 1997
Shamgunj	24º 45	90º 23	Bates & Harrison, 1997
Madhupur	-	-	Bates & Harrison, 1997
Sunderbans			Khan, 2001
INDIA			
Andaman and Nicobar Islands			
North Andaman island	-	-	Bates & Harrison, 1997
Andra Pradesh			
Balapalli	13º 50	79º 15	Bates & Harrison, 1997
Cuddapah	14º 30	78º 50	Bates & Harrison, 1997
Cumbum	15º 36	79º 07	Bates & Harrison, 1997
Dindi Reservoir	-	-	Tropical dry deciduous forest Loss of habitat, hunting C. Srinivasulu, 1994 onwards
Hyderabad			Tropical dry deciduous forest Loss of habitat, hunting C. Srinivasulu, 1994 onwards
Kawal Wildlife Sanctuary	-	-	Tropical dry deciduous forest Loss of habitat, hunting C. Srinivasulu, 1994 onwards
Mahadevpur range	-	-	Tropical dry deciduous forest Loss of habitat, hunting C. Srinivasulu, 1994 onwards
Palkonda hills	13º 50	79º 00	Bates & Harrison, 1997
Assam			
Barpeta	-	-	Manmade forest Loss of habitat, hunting A. Ali, 1996 onwards
Cachar	25º 00	93º 00	Bates & Harrison, 1997
Dhubri	-	-	Manmade forest Loss of habitat, hunting A. Ali, 1996 onwards
Doom Dooma	27º 33	95º 33	Bates & Harrison, 1997
Kamrup	26º 25	91º 30	Manmade forest Loss of habitat, hunting A. Ali, 1996 onwards
Nalbari	-	-	Manmade forest Loss of habitat, hunting A. Ali, 1996 onwards
Palasbari	26º 07	91º 30	Bates & Harrison, 1997
Bihar			
Begusarai	25º 25	86º 08	Bates & Harrison, 1997
Bhagalpur	25º 14	86º 59	Bates & Harrison, 1997
Champaran	27º 06	84º 29	Bates & Harrison, 1997
Darbhanga	26º 10	85º 54	Bates & Harrison, 1997
Katihar	25º 33	87º 34	Bates & Harrison, 1997
Madhubani	26º 21	86º 05	Bates & Harrison, 1997
Muzaffarpur	26º 07	85º 23	Bates & Harrison, 1997
Patna	25º 37	85º 12	Bates & Harrison, 1997
Purnea	25º 47	87º 28	Bates & Harrison, 1997
Saharsa	25º 54	86º 36	Bates & Harrison, 1997
Samastipur	25º 52	85º 47	Bates & Harrison, 1997
Sitamarhi	26º 36	85º 30	Bates & Harrison, 1997
Siwan	26º 14	84º 21	Bates & Harrison, 1997
Chhattisgarh			
Bastar	-	-	Harshey & Chandra, 2001
Indravati National Park	-	-	Harshey & Chandra, 2001
Goa			
Molem	15º 20	74º 15	Bates & Harrison, 1997
Gujarat			
Baradia	21º 00	70º 39	Bates & Harrison, 1997
Baroda	22º 19	73º 14	Bates & Harrison, 1997
Bhuj	23º 12	69º 54	Bates & Harrison, 1997
Charwa	23º 12	69º 54	Bates & Harrison, 1997
Danta	24º 13	72º 50	Bates & Harrison, 1997
Deesa	24º 14	72º 13	Bates & Harrison, 1997
Himatnagar	23º 38	73º 02	Bates & Harrison, 1997
Junagadh	21º 31	70º 28	Bates & Harrison, 1997
Palanpur	24º 12	72º 29	Bates & Harrison, 1997
Rajkot	22º 19	73º 15	Bates & Harrison, 1997
Silvassa	20º 12	73º 11	Bates & Harrison, 1997
Sultanabad	-	-	Bates & Harrison, 1997
Surat	21º 10	72º 54	Bates & Harrison, 1997
Himachal Pradesh			
Gopalpur	32º 04	76º 16	Bates & Harrison, 1997
Kotla	31º 43	77º 16	Bates & Harrison, 1997
Kulu	31º 59	77º 06	Bates & Harrison, 1997
Jammu & Kashmir			
Jhajjar Kotli	32º 55	75º 54	Bates & Harrison, 1997
Jharkhand			
Giridih	24º 10	86º 20	Bates & Harrison, 1997
Hazaribagh	24º 00	85º 23	Bates & Harrison, 1997
Palamau	23º 53	84º 17	Bates & Harrison, 1997
Ranchi	23º 22	85º 20	Bates & Harrison, 1997
Santal Pargana	24º 17	87º 15	Bates & Harrison, 1997
Singhbhum	23º 30	85º 50	Bates & Harrison, 1997
Karnataka			
Avatgi	15º 30	74º 50	Bates & Harrison, 1997
Crettal	11º 56	72º 14	Trees Human interference Girish & Chakravarthy, 1999-2000
Devikop	15º 12	75º 05	Bates & Harrison, 1997
Hawsbhavi	14º 38	75º 22	Bates & Harrison, 1997
Honkan	14º 30	75º 10	Bates & Harrison, 1997
Hunsur	-	-	Roadside Hunted for medicine & food Molur & Daniel, 2000
Kido	12º 27	74º 35	Trees Human interference Girish & Chakravarthy, 1999-2000
Kolar	13º 09	78º 10	Bates & Harrison, 1997
Kotekar	-	-	Bamboo Sreepada and Ravi Shankar, 2000
Seringapatnam	12º 25	76º 41	Bates & Harrison, 1997
Uppinagadi	12º 24	74º 51	Trees Human interference Girish & Chakravarthy, 1999-2000
Vijayanagar	15º 20	76º 28	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Kerala			
Calicut	-	-	Banyan tree Loss of habitat Shukkur, 1980-2001
Chalay	-	-	Bates & Harrison, 1997
Mudavarum	09º 00	77º 00	Bates & Harrison, 1997
Trivandrum	08º 41	76º 57	Bates & Harrison, 1997
Madhya Pradesh			
Agar	23º 44	76º 01	Bates & Harrison, 1997
Agar Malwa	-	-	Bates & Harrison, 1997
Balaghat	21º 48	80º 16	Bates & Harrison, 1997 Harshey & Chandra, 2001
Bhind	26º 33	78º 47	Bates & Harrison, 1997
Chachora	-	-	Bates & Harrison, 1997
Guna	24º 40	77º 19	Bates & Harrison, 1997
Gwalior	26º 12	78º 09	Bates & Harrison, 1997
Jabalpur	23º 10	79º 59	Bates & Harrison, 1997 Harshey & Chandra, 2001
Kanha National Park	-	-	Harshey & Chandra, 2001
Mandla	-	-	Harshey & Chandra, 2001
Morar	26º 15	80º 14	Bates & Harrison, 1997
Mukhi	21º 48	80º 16	Bates & Harrison, 1997
Narsinghar	24º 00	79º 29	Bates & Harrison, 1997
Narsighpur	-	-	Harshey & Chandra, 2001
Ouda	21º 48	80º 16	Bates & Harrison, 1997
Sabalgarh	26º 15	77º 24	Bates & Harrison, 1997
Sehore	23º 12	77º 08	Bates & Harrison, 1997
Shahdol	-	-	Harshey & Chandra, 2001
Sheopore	25º 41	76º 42	Bates & Harrison, 1997
Sohagpur	22º 43	78º 14	Bates & Harrison, 1997
Sonawanee	21º 48	80º 16	Bates & Harrison, 1997
Supkhar	21º 48	80º 16	Bates & Harrison, 1997
Umaria	-	-	Harshey & Chandra, 2001
Maharashtra			
Ahmednagar	23º 03	72º 40	Tall trees Habitat loss Ganjure & Joshi, 2000 Bates & Harrison, 1997
Amraoti	20º 58	77º 50	Bates & Harrison, 1997
Asirgarh	21º 31	76º 22	Bates & Harrison, 1997
Belapur	19º 36	74º 40	Bates & Harrison, 1997
Bombay	18º 56	72º 51	Bates & Harrison, 1997
Chanda	19º 58	79º 21	Bates & Harrison, 1997
Kalyan	19º 17	73º 11	Bates & Harrison, 1997
Malad	19º 13	72º 58	Bates & Harrison, 1997
Nagpur	21º 10	79º 12	Bates & Harrison, 1997
Patan	17º 24	73º 57	Bates & Harrison, 1997
Pili Sipna Valley	21º 44	77º 12	Bates & Harrison, 1997
Poona	18º 34	73º 58	Bates & Harrison, 1997
Pune	18º 31	73º 51	Tall trees Renovation of bridges Korad and Yardi, 1998-2001.
Satara	17º 43	74º 05	Bates & Harrison, 1997
Siwal	-	-	Bates & Harrison, 1997
Thana	19º 14	73º 02	Bates & Harrison, 1997
Thane	-	-	Tall trees Hunting G.H. Koli, 1998
Manipur			
Kochim-kooleh	-	-	Bates & Harrison, 1997
Meghalaya			
Maeryngkeung	-	-	Bates & Harrison, 1997
Mawphlang	25º 25	92º 13	Bates & Harrison, 1997
Shillong	25º 34	91º 53	Bates & Harrison, 1997
Orissa			
Barkuda island	-	-	Bates & Harrison, 1997
Chilka Lake	19º 55	85º 30	Bates & Harrison, 1997
Kasipur	19º 02	82º 46	Bates & Harrison, 1997
Koira	21º 50	85º 12	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Lathar	-	-	Bates & Harrison, 1997
Madanpur	23º 31	88º 40	Bates & Harrison, 1997
Narasinghpur	20º 28	85º 08	Bates & Harrison, 1997
Rampur	-	-	Bates & Harrison, 1997
Punjab			
Gurdaspur	32º 04	75º 28	Bates & Harrison, 1997
Rajasthan			
Ajmer	26º 29	74º 40	Bates & Harrison, 1997
Bansara	-	-	Bates & Harrison, 1997
Dungarpur	23º 53	73º 48	Bates & Harrison, 1997
Jaipur	26º 53	75º 50	Bates & Harrison, 1997
Jhalawar	24º 32	76º 12	Bates & Harrison, 1997
Jhunjhunu	28º 05	75º 30	Bates & Harrison, 1997
Jodhpur	26º 18	73º 08	Trees Habitat loss Senacha & Purohit, 1998-2000 Bates & Harrison, 1997
Pali	25º 46	73º 26	Bates & Harrison, 1997
Sirohi	24º 53	72º 58	Bates & Harrison, 1997
Udaipur	27º 40	75º 32	Bates & Harrison, 1997
Sikkim			
Gangtok	27º 20	88º 39	Bates & Harrison, 1997
Tamil Nadu			
Coimbatore	11º 02	76º 59	Tropical and subtropical forest Deforestation, road construction, loss of cover G. Agoramoorthy, 1996-2000 ZOO office staff
Cumbum Valley	09º 44	77º 19	Horticulture field and scrub jungle Loss of habitat Singaravelan, 1999
Kanyakumari	08º 05	77º 35	Tropical and subtropical forest Deforestation, road construction, loss of cover G. Agoramoorthy
Keelarajakularaman	-	-	Bates & Harrison, 1997
Madras	13º 05	80º 18	Bates & Harrison, 1997
Madurai	09º 55	78º 07	Tropical and subtropical forest Deforestation, road construction, loss of cover G. Agoramoorthy, 1996-2000
Nagai	-	-	Tropical and subtropical forest Deforestation, road construction, loss of cover G. Agoramoorthy, 1996-2000
Nilgiri Hills	11º 28	76º 42	Tropical and subtropical forest Deforestation, road construction, loss of cover G. Agoramoorthy, 1996-2000
Point Calimere WLS	15º 00	74º 00	Akash Deep Baruah; Bates & Harrison, 1997
Ramanathapuram	09º 23	78º 53	Bates & Harrison, 1997
Ramnad	-	-	Tropical and subtropical forest Deforestation, road construction, loss of cover G. Agoramoorthy, 1996-2000
Salem	11º 38	78º 08	Bates & Harrison, 1997
South Arcot	-	-	Tropical and subtropical forest Deforestation, road construction, loss of cover G. Agoramoorthy, 1996-2000
Sri Vaikundam	08º 40	77º 56	Bates & Harrison, 1997
Srivilliputhur	-	-	Horticulture field and scrub jungle Loss of habitat Singaravelan, 1999
Thanjavur	-	-	Tropical and subtropical forest Deforestation, road construction, loss of cover

Distribution in South Asia	Lat.	Long.	Notes/Sources
			G. Agoramoorthy, 1996-2000
Thiruchirapalli	10º 50	78º 43	Tropical and subtropical forest Deforestation, road construction, loss of cover G. Agoramoorthy, 1996-2000
Tirunelveli	08º 44	72º 42	Tropical plains Hunting J. Vanitharani, 1999
Tripura			
Amarpur	23º 31	91º 31	Bates & Harrison, 1997
Uttar Pradesh			
Allahabad	25º 57	81º 50	Bates & Harrison, 1997
Farrukhabad	-	-	Bates & Harrison, 1997
Lucknow	26º 50	80º 54	Bates & Harrison, 1997
Mirzapur	27º 41	79º 33	Bates & Harrison, 1997
Philibhit	28º 37	79º 48	Bates & Harrison, 1997
Varanasi	25º 20	83º 00	Bates & Harrison, 1997
West Bengal			
Bankura	23º 14	87º 05	Bates & Harrison, 1997
Barddhaman	23º 15	87º 52	Bates & Harrison, 1997
Burdwan	23º 15	87º 52	Bates & Harrison, 1997
Haimara	-	-	Bates & Harrison, 1997
Hugli	22º 52	88º 21	Bates & Harrison, 1997
Jalpaiguri	26º 30	88º 50	Bates & Harrison, 1997
Koch	26º 17	89º 40	Bates & Harrison, 1997
Nadia	30º 22	76º 12	Bates & Harrison, 1997
North 24-Parganas	-	-	Bates & Harrison, 1997
Salbani	22º 25	87º 24	Bates & Harrison, 1997
Siliguri	26º 42	88º 30	Bates & Harrison, 1997
West Dinajpur	25º 38	88º 44	Bates & Harrison, 1997
MALDIVES			
Addu	00º 18	73º 32	Bates & Harrison, 1997
Ari Atoll	03º 40	73º 10	Bates & Harrison, 1997
Haddunmati Atol	01º 45	73º 28	Bates & Harrison, 1997
Mulaku Atol	02º 15	73º 28	Bates & Harrison, 1997
Nilandu South	02º 15	73º 18	Bates & Harrison, 1997
North and South Male,	-	-	Bates & Harrison, 1997
Thirty Islands	-	-	Tall tress on low lying islands Persecution of small populations A.M. Hutson, Homles & Morris, 1994
MYANMAR (NORTHERN)			
Pegu	17º 18	96º 31	Bates & Harrison, 1997
Toungoo, Shan State	18º 57	96º 26	Bates & Harrison, 1997
NEPAL			
Baglung	28º 16	83º 35	Tropical & subtropical forest Deforestation, road construction, loss of cover Shreshta, 1997
Chitwan National Park	-	-	Tropical & subtropical forest Deforestation, road construction, loss of cover Shrestha, 1997
Dharan	-	-	Tropical & subtropical forest Deforestation, road construction, loss of cover
Japa	-	-	Bates & Harrison, 1997
Kathmandu	27º 42	85º 12	Tropical & subtropical forest Deforestation, road construction, loss of cover Bates & Harrison, 1997 Shrestha, 1997
Nepal Gunj	-	-	Tropical & subtropical forest Deforestation, road construction, loss of cover Shrestha, 1997
Pokhara	28º 14	83º 58	Tropical & subtropical forest Deforestation, road

Distribution in South Asia	Lat.	Long.	Notes/Sources
Thiruchirapalli	10º 50	78º 43	Tropical and subtropical forest Deforestation, road construction, loss of cover G. Agoramoorthy, 1996-2000
Tirunelveli	08º 44	72º 42	Tropical plains Hunting J. Vanitharani, 1999
Tripura			
Amarpur	23º 31	91º 31	Bates & Harrison, 1997
Uttar Pradesh			
Allahabad	25º 57	81º 50	Bates & Harrison, 1997
Farrukhabad	-	-	Bates & Harrison, 1997
Lucknow	26º 50	80º 54	Bates & Harrison, 1997
Mirzapur	27º 41	79º 33	Bates & Harrison, 1997
Philibhit	28º 37	79º 48	Bates & Harrison, 1997
Varanasi	25º 20	83º 00	Bates & Harrison, 1997
West Bengal			
Bankura	23º 14	87º 05	Bates & Harrison, 1997
Barddhaman	23º 15	87º 52	Bates & Harrison, 1997
Burdwan	23º 15	87º 52	Bates & Harrison, 1997
Haimara	-	-	Bates & Harrison, 1997
Hugli	22º 52	88º 21	Bates & Harrison, 1997
Jalpaiguri	26º 30	88º 50	Bates & Harrison, 1997
Koch	26º 17	89º 40	Bates & Harrison, 1997
Nadia	30º 22	76º 12	Bates & Harrison, 1997
North 24-Parganas	-	-	Bates & Harrison, 1997
Salbani	22º 25	87º 24	Bates & Harrison, 1997
Siliguri	26º 42	88º 30	Bates & Harrison, 1997
West Dinajpur	25º 38	88º 44	Bates & Harrison, 1997
MALDIVES			
Addu	00º 18	73º 32	Bates & Harrison, 1997
Ari Atoll	03º 40	73º 10	Bates & Harrison, 1997
Haddunmati Atol	01º 45	73º 28	Bates & Harrison, 1997
Mulaku Atol	02º 15	73º 28	Bates & Harrison, 1997
Nilandu South	02º 15	73º 18	Bates & Harrison, 1997
North and South Male,	-	-	Bates & Harrison, 1997
Thirty Islands	-	-	Tall tress on low lying islands Persecution of small populations A.M. Hutson, Homles & Morris, 1994
MYANMAR (NORTHERN)			
Pegu	17º 18	96º 31	Bates & Harrison, 1997
Toungoo, Shan State	18º 57	96º 26	Bates & Harrison, 1997
NEPAL			
Baglung	28º 16	83º 35	Tropical & subtropical forest Deforestation, road construction, loss of cover Shreshta, 1997
Chitwan National Park	-	-	Tropical & subtropical forest Deforestation, road construction, loss of cover Shrestha, 1997
Dharan	-	-	Tropical & subtropical forest Deforestation, road construction, loss of cover
Japa	-	-	Bates & Harrison, 1997
Kathmandu	27º 42	85º 12	Tropical & subtropical forest Deforestation, road construction, loss of cover Bates & Harrison, 1997 Shrestha, 1997
Nepal Gunj	-	-	Tropical & subtropical forest Deforestation, road construction, loss of cover Shrestha, 1997
Pokhara	28º 14	83º 58	

Distribution in South Asia	Lat.	Long.	Notes/Sources
			construction, loss of cover Shrestha, 1997
PAKISTAN			
Punjab			
Lahore	31º 34	74º 22	Bates & Harrison, 1997
Marala	32º 40	74º 29	Bates & Harrison, 1997
Renala Khurd	30º 53	73º 34	Bates & Harrison, 1997
Saidpur	33º 44	73º 07	Bates & Harrison, 1997
Sialkot	32º 30	74º 32	Bates & Harrison, 1997
Sind			
Jacobabad	28º 17	68º 26	Bates & Harrison, 1997
Karachi	24º 51	67º 02	Bates & Harrison, 1997
Shahpur	26º 35	67º 58	Bates & Harrison, 1997
SRI LANKA			
Central Province			
Kandy	07º 17	80º 40	Bates & Harrison, 1997
Lower Dikoya Valley	06º 50	80º 36	Bates & Harrison, 1997
Nawalapitiya	07º 03	80º 32	Bates & Harrison, 1997
Nuwara Eliya	06º 58	80º 46	Yapa and Bandara, 1996-2000
Peradeniya	07º 15	80º 40	Bates & Harrison, 1997
Kegalle	-	-	Yapa & Digana, 1996-2000
Eastern Province			
Valaichenai	07º 54	81º 32	Bates & Harrison, 1997
Gampaha			
Kandy	07º 17	80º 40	Yapa and Bandara, 1996-2000
Northern Province			
Cheddikulam	08º 40	80º 18	Bates & Harrison, 1997
North Central Province			
Anuradhapura	08º 20	80º 25	Yapa and Bandara, 1996-2000 Bates & Harrison, 1997
Polonnaruwa	07º 56	81º 02	Yapa and Bandara, 1996-2000
Sabaragamuwa Province			
Rathnapura	-	-	Yapa & Digana, 1996-2000
Warakapola	07º 13	80º 14	personal observation (Bates & Harrison, 1997)
Southern Province			
Galle	06º 01	80º 13	Yapa & Digana, 1996-2000
Matara	-	-	Yapa & Digana, 1996-2000
Uva Province			
Bandarawela	06º 50	81º 00	Bates & Harrison, 1997
Passara	06º 58	81º 09	Bates & Harrison, 1997
Western Province			
Anasigalla	06º 29	80º 03	Bates & Harrison, 1997
Barberyn island	06º 26	79º 55	Bates & Harrison, 1997
Bulathsinghala	06º 39	80º 13	Bates & Harrison, 1997
Colombo	06º 55	79º 52	Bates & Harrison, 1997
Dehiwala	06º 52	79º 52	Bates & Harrison, 1997
Hanwella	06º 54	80º 05	Bates & Harrison, 1997
Horana	06º 42	80º 04	Bates & Harrison, 1997
Matugama	06º 32	80º 05	Bates & Harrison, 1997
Mawanela	07º 15	80º 26	Personal observation (Bates & Harrison, 1997)

Pteropus hypomelanus Temminck, 1853

ENDANGERED in South Asia

Synonyms: *Pteropus geminorum* Miller, 1903
Pteropus hypomelanus maris Allen, 1936
Pteropus satyrus Andersen, 1908

Common names: Island Flying Fox

Family: Pteropodidae

Habit: Frugivorous, nectarivorous, colonial

Habitat: Tall trees, coconut, palms, orchards

Niche: Tall trees. Sea level

Distribution
Global: India, Indonesia, Maldives, New Guinea, Philippines, Solomon Islands, Thailand, Vietnam,

South Asia:
India: Andaman & Nicobar Islands
Maldives

Extent of Occurrence: 101-5,000 sq km.

Area of Occupancy: 11-500 sq km.

Locations/subpopulations: 4. Fragmented.

Habitat status: >10% decrease in area in the past 10 years due to tourism, agriculture and deforestation. Decrease in quality due to tourism, agriculture and deforestation.

Data source: Literature; inferred; hypothetical

Threats
Threats to the taxon: Habitat loss in general and persecution in Maldives. The influence on the population well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: Not known

Population trend: Not known

Data source: Indirect information; Inferred.

Red List 2001 Status derived in the workshop

Ver. 3.1: **ENDANGERED** **B1ab(iii) + 2ab(iii)**

Restricted distribution with threats to habitat.

National Status

India: Endangered	B1ab(iii), B2ab(iii)
Maldives: Critically Endangered	B1ab(iii), B2ab(iii)

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Old World Fruit Bats Action Plan: Not threatened
CITES: Appendix II (India)

Known presence in Protected Areas
India: Barren Island Wildlife Sanctuary (Andaman & Nicobar Islands)

Recommendations
Research: Survey, behavioral studies.

Management: Habitat management, monitoring, public awareness

Comments
Two endemic subspecies *P.h. maris* from Maldives and *P.h. geminorum* from Andamans and Southern Myanmar. There is a possibility of the third endemic subspecies *P.h. satyrus* on Narcondam and Barren Islands in Andamans. Restricted to small islands. Maldives original type specimen only was collected in 1930s. No recent data from South Asian range.

Sources
Allen, 1936; Andersen, 1908; Bates & Harrison, 1997; Mickleburgh *et al.,* 1992; Miller, 1903; Temminck, 1853

Compilers
P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, H. Raghuram, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Andaman & Nicobar Islands			
Barren Island	12º 18	93º 49	Bates & Harrison, 1997
Narcondam	13º 29	94º 13	Type locality of *satyrus* Bates & Harrison, 1997
Nicobar Islands	-	-	Tall trees Mickleburg *et al.,* 1992

Distribution in South Asia	Lat.	Long.	Notes/Sources
MALDIVES			
Heratara	-	-	Type locality of *maris* Bates & Harrison, 1997
Maldives	-	-	Not found in 1993 during two weeks survey by Hutson, 1993

Pteropus melanotus Blyth, 1863

VULNERABLE in South Asia

Synonyms: Pteropus edulis Blyth, 1846
Pteropus nicobaricus Fitzinger, 1861
Pteropus nicobaricus Zelebor, 1869
Pteropus tytleri Dobson, 1874
Pteropus nicobaricus Zelebor, 1869
Pteropus tytleri Dobson, 1874
Pteropus tytleri Mason, 1908

Common names: Blyth's Flying Fox

Family: Pteropodidae

Habit: Frugivorous, colonial in 1000's, and fearless

Habitat: Mangroves

Niche: Sea level

Distribution
Global: Enggano & Niasi Islands of Western Sumatra and Christmas Islands, Java, India

South Asia:
India: Andaman & Nicobar Islands

Extent of Occurrence: 5,001-20,000 sq km.

Area of Occupancy: 501-2,000 sq km.

Locations/subpopulations: 7 / not known. Contiguous.

Habitat status: Decrease in area due to tourism.

Data source: Field studies, indirect information; Observed, inferred.

Threats
Threats to the taxon: Habitat loss. The influence on the population well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: Not known

Population trend: Not known

Data source: Indirect information; inferred

Recent Field Studies
Mickleburg *et al.,* Christmas Island, 1992, Survey

Red List 2001 Status derived in the workshop

Ver. 3.1: VULNERABLE B1ab(iii) + 2ab(iii)

Restricted distribution and threats to area and quality.

1997 C.A.M.P. (Ver. 2.3): Data Deficient

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Old World Fruit Bats Action Plan: Not threatened
CITES: Appendix II

Known presence in Protected Areas
None

Recommendations
Research: Survey, life history, basic ecology

Management: Habitat management, monitoring public awareness

Comments
Population on Andaman & Nicobar is regarded as separate subspecies. *P.m. melanotus* - Nicobar; *P.m. satyrus* - North Andaman Islands; *P.m. tytleri* - South Andamans.

Sources
Bates & Harrison, 1997; Blyth, 1863; Dobson, 1876; Fitzginger, 1861; Mason, 1908; Mickleburgh *et al.,* 1992; Saha, 1980; Zelebor, 1869

Compilers
P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, H. Raghuram, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Distribution in South Asia from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Andaman & Nicobar Islands			
Campbell Bay	07º 00	93º 45	Saha, 1980 in Bates & Harrison, 1997
Car Nicobar	09º 12	92º 46	Bates & Harrison, 1997
Port Blair	11º 40	92º 44	Bates & Harrison, 1997
Rutland Island	11º 30	92º 30	Type locality of *tytleri*

Distribution in South Asia	Lat.	Long.	Notes/Sources
			Bates & Harrison, 1997
Sentinel Island	-	-	Bates & Harrison, 1997
Tillanchang	08º 29	93º 39	Bates & Harrison, 1997
Trinkut	08º 07	93º 37	Bates & Harrison, 1997

Pteropus vampyrus Linnaeus, 1758

ENDANGERED in South Asia

Synonyms: *Pteropus vampyrus malaccensis* Andersen, 1908

Common names: Large Flying Fox

Family: Pteropodidae

Habit: Frugivorous, gregarious, roosts in large colonies.

Habitat: Forest with large trees

Niche: Large trees.

Global: Borneo, Java, India, Indochina, Malay Peninsula, Philippines, southern Myanmar, Sumatra

South Asia:
India: Andaman & Nicobar Islands, Maharashtra (?)

Migration: Found to show seasonal migration in Nicobar Islands (Mason, 1908).

Extent of Occurrence: 101-5,000 sq km.

Area of Occupancy: 11-500 sq km.

Locations/subpopulations: 3. Fragmented.

Habitat status: >10% decrease in area due to tourism, agriculture and deforestation. Decrease in quality due to tourism, agriculture and deforestation.

Data source: Field study; observed, inferred; subjective.

Threats
Threats to the taxon: Habitat loss and persecution. The influence on the population well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: Not known

Population trend: Not known

Data source: Museum record

Red List 2001 Status derived in the workshop

Ver. 3.1: ENDANGERED B1ab(iii)+2ab(iii)

Restricted distribution, few fragmented locations and threats to habitat.

Indian C.A.M.P. (Ver. 2.3): Data Deficient

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Old World Fruit Bats Action Plan: Not threatened
CITES: Appendix II

Known presence in Protected Areas
None

Recommendations
Research: Survey, basic ecology, taxonomic studies

Management: Monitoring, habitat management

Comments
As per literature the species is found to occur in Andaman and Nicobar Islands only. However recent report from Pune needs to be reassessed. Current studies on mainland India suggest that this species may have a wide distribution than the previous record if identification is validated. Corbet and Hill (1992) suggest that *Pteropus giganteus* may prove to be con-specific with *Pteropus vampyrus* if so, *P. vampyrus* is a prior name according to Bates and Harrison (1997). Recent mainland record not yet published. Other records from Andaman & Nicobar Islands are possibly migrants rather than indegenous population (Mason, 1908; Hill, 1967). Mason (1908) suggested that this species is a seasonal migrant in the area.

Sources
Andersen, 1908; Bates & Harrison, 1997; Linnaeus, 1758; Mason, 1908; Mickleburgh *et al.,* 1992

Compilers
P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, H. Raghuram, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Recent Field Studies
V.S. Korad and K.D. Yardi, Pune (?), Maharashtra, 1999-2000, Survey

Distribution in South Asia from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Andaman & Nicobar Islands			
no exact locality	-	-	Bates & Harrison, 1997
Car Nicobar	9º 12	92º 46	Bates & Harrison, 1997
Nicobar Islands (seasonal migrant)	-	-	These records require confirmation Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Maharashtra			
Pune (?)	18º 31	73º 51	Roosting site in fields on 4-5 trees on outskirts of dry deciduous forest patch with a perrenial stream passing by. V.S. Korad & K.D. Yardi, 1999-2000

Rhinolophus affinis Horsfield, 1823

LEAST CONCERN in South Asia

Synonyms: *Rhinolophus affinis himalayanus* Andersen, 19005
Rhinolophus andamanensis Dobson, 1872

Common names: Intermediate Horse-shoe Bat

Family: Rhinolophidae

Habit: Colonial

Habitat: Caves

Niche: Orchards, agricultural land, degraded habitats. 290-1910m.

Distribution
Global: Bangladesh, China, India, Nepal, Sri Lanka, Southeast Asia

South Asia:
Bangladesh
Bhutan
India: Andaman & Nicobar Islands, Arunachal Pradesh, Meghalaya, Nagaland, Uttaranchal, Uttar Pradesh, Tamil Nadu, West Bengal
Nepal
Sri Lanka

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 32.

Habitat status: Decrease in area by > 20 % due to deforestation. Decrease in quality due to deforestation.

Data source:

Threats
Threats to the taxon: Human interference, habitat loss. The influence on the population well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Not known

Data source: Field studies, indirect information; Observed, inferred.

Recent Field Studies
Bates and Muni, Haldwani and Mussorie, 1993

Red List 2001 Status derived in the workshop

Ver. 3.1: **LEAST CONCERN**

Widely distributed bat with ability to adapt to changing habitats.

National Status
Bangladesh: Data Deficient
Bhutan: Least Concern
India: Least Concern
Nepal: Least Concern
Sri Lanka: Data Deficient

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments
The species is doing well in disturbed habitats. BNHS, Darjeeling, 1920. Common bat in man-made habitat.

Sources
Andersen, 1905; Bates & Harrison, 1997; Dobson, 1872; Horsfield, 1821-24; Hutson *et al*., 2001

Compilers
A. Ali, P.J.J. Bates, Y.P Sinha, A. Thabah, K.M. Swe

Reviewers
Rest of the participants

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
Sylhet	24º 53	91º 51	Bates & Harrison, 1997
BHUTAN			
Gedu	27º 30	89º 30	Bates & Harrison, 1997
INDIA			
Andaman & Nicobar Islands			
Interview Island	12º 57	92º 35	Bates & Harrison, 1997
South Andaman	-	-	type locality of andamanensis Bates & Harrison, 1997
Arunachal Pradesh			
Miao	27º 39	96º 15	Bates & Harrison, 1997
Meghalaya			
Cherrapunji	25º 16	91º 42	Bates & Harrison, 1997
Konshnong	25º 30	92º 01	Bates & Harrison, 1997
Laitkynsao	25º 48	91º 58	Bates & Harrison, 1997
Mawphlang	25º 25	92º 13	Bates & Harrison, 1997
Shangpung	25º 30	92º 02	Bates & Harrison, 1997
Syndai	25º 30	92º 00	Bates & Harrison, 1997
Nagaland			
Takubama	25º 37	94º 32	Bates & Harrison, 1997
Uttaranchal			
Mussorie	30º 26	78º 04	type locality of himalayanus large cave, degraded habitat, orchards Muni & Bates, 1993 Orchards Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Uttaranchal			
Bilaspur	28º 53	79º 16	Bates & Harrison, 1997
Kaladungi	29º 13	79º 29	Bates & Harrison, 1997
Tamil Nadu			
no exact locality	-	-	Bates & Harrison, 1997
West Bengal			
Darjeeling	27º 02	88º 20	Bates & Harrison, 1997
Hasimara	26º 52	89º 48	Bates & Harrison, 1997
Pashok	27º 04	88º 24	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Hai Bum	26º 02	95º 52	Bates & Harrison, 1997
Hisweht	23º 42	94º 29	Bates & Harrison, 1997
Nam Tamai Valley	27º 42	97º 54	Bates & Harrison, 1997
Pegu	17º 18	96º 31	Bates & Harrison, 1997
Toungoo	-	-	Bates & Harrison, 1997
NEPAL			
Barabisse	27º 35	85º 35	Bates & Harrison, 1997
Bimalnager	27º 45	84º 29	Bates & Harrison, 1997
Bouzini	27º 42	85º 13	Bates & Harrison, 1997
Dulegounda	27º 45	84º 29	Bates & Harrison, 1997
Kathmandu	27º 42	85º 12	Bates & Harrison, 1997
Shebu	-	-	Bates & Harrison, 1997
Syangja	28º 49	83º 42	Bates & Harrison, 1997
SRI LANKA			
no exact locality	-	-	doubtful record by Blyth, 1863 (in: Sinha, 1973); Bates & Harrison, 1997

Rhinolophus beddomei Andersen, 1905 — NEAR THREATENED

Synonyms: *Rhinolophus beddomei sobrinus* Andersen, 1918

Common names: Lesser Woolly Horseshoe Bat

Family: Rhinolophidae

Habit: Solitary, in pairs or occasionally in small groups

Habitat: Forests, hollow areas, caves, dungeons, rarely in houses

Niche: Hollow trees, small caves, over-hanging ledge, dungeons, old barracks, houses, tunnels, deserted wells. 43-1077m

Distribution
Global: Endemic to South Asia (India, Sri Lanka)

South Asia:
India: Andhra Pradesh, Karnataka, Kerala, Maharashtra
Sri Lanka: Central Province, Northwestern Province, Sabaragamuwa Province, Southern Province, Western Province

Extent of Occurrence: > 20,000 sq km

Area of Occupancy: > 2,000 sq km

Locations/subpopulations: 16 / not known. Fragmented.

Habitat status: > 20% decrease in area due to deforestation. Decrease in quality due to forest degradation

Data source: Literature, field study; observed, inferred.

Threats
Threats to the taxon: Habitat loss, deforestation. The influence on the population well understood, reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: < 10,000

Population trend: Population likely to decrease due to habitat destruction.

Data source: Indirect information, field study; observed.

Red List 2001 Status derived in the workshop

Ver. 3.1: **NEAR THREATENED**

Although widely distributed, low-density population and forest dependency suggest that this species is vulnerable to habitat destruction.

National Status
India: Near Threatened
Sri Lanka: Near Threatened

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Lower Risk near threatened
Microchiroptera Action Plan (Global): Lower Risk near threatened
CITES: Not listed

Known presence in Protected Areas
India: Chinnar Wildlife Sanctuary, Kerala, Nagarjuna Sagar Srisailam Tiger Reserve, Gundla Brahmeshwaram Wildlife Sanctuary (Andhra Pradesh)

Recommendations
Research: Survey, taxonomic research, basic ecology, habitat requirements

Management: Monitoring, habitat management, public awareness

Comments
Endemic to the Indian subcontinent. The species was earlier referred to as *Rhinolophus luctus beddomei* (Brosset, 1962) from Western Ghats. Distinct subspecies in Sri Lanka *R. beddomei sobrinus* based on smaller size. Habitat loss > 20%. Srinivasulu's report from Tummalabhailu is based on museum specimen at BMNH collected during the British period. Gundla Brahmeshwaram record is based on a gravid female specimen collected in 2002. Recently a gravid female was collected in Gundla Brahmeshwaram Wildlife Sanctuary, Andhra Pradesh (pers. comm.)

Sources
Bates & Harrison, 1997; Andersen, 1905; Andersen, 1918; Brosset, 1962; Hutson *et al*., 2001; Madhavan, 1998; Sathasivam, 2000; Topal & Csorba, 1992

Compilers
P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, H. Raghuram, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Recent Field Studies
Bates in Sinharaja forest, 1994, Survey recorded
Sampath in Peak Wilderness, 1996
Srinivasulu in Nallamala Hills – Nagarjuna Sagar Srisailam Tiger Reserve and Gundla Brahmeshwaram WLS, 1999 onwards

Distribution in South Asia from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Andhra Pradesh			
Gundla Brahmeshwaram WLS			Srinivasulu, April 2002
Thummalabylu	14º 11	79º 09	Nallamala hills, Eastern Ghats Southern tropical dry deciduous forest Srinivasulu, 1999-2000 Bates & Harrison, 1997
Karnataka			
Halepalya Village	-	-	Bates & Harrison, 1997
Haleri	12º 31	75º 40	Bates & Harrison, 1997
Sirsi	14º 40	74º 51	Bates & Harrison, 1997
Kerala			
Chinnar Wildlife Sanctuary	-	-	Dry deciduous forest (C. Srinivasulu, referring Sathasivam's published data)
Kottekadu	-	-	Madhavan, 1993 Wells in human habitation
Palghat	10º 46	76º 42	Bates & Harrison, 1997
Pallipuram	-	-	Madhavan, 1993 Wells in human habitation
Paralam	10º 3	76º 4	Madhavan, 1993 Wells in human habitation
Tellicherry	11º 44	75º 29	Bates & Harrison, 1997
Trichur	10º 32	76º 14	Bates & Harrison, 1997
Venginissery	10º 32	76º 14	Madhavan, 1993 Wells in human habitation
Wynaad	11º 45	76º 02	type loc. of beddomei Bates & Harrison, 1997
Maharashtra			
Bedsar	18º 50	73º 30	Bates & Harrison, 1997
Bhaja	18º 42	73º 30	Bates & Harrison, 1997
Karla	18º 48	73º 30	Bates & Harrison, 1997
Khandala	18º 45	73º 25	Bates & Harrison, 1997
Ramgad	-	-	Bates & Harrison, 1997
SRI LANKA			
Central Province			
Medamahanuwera	07º 16	80º 48	Bates & Harrison, 1997
Rattota	07º 31	80º 41	Bates & Harrison, 1997
Northwestern Province			
Kala Oya	08º 12	80º 04	type loc. of *sobrinus* Bates & Harrison, 1997
Sabaragamuwa Province			
Pitakele	06º 24	80º 34	Bates & Harrison, 1997
Southern Province			
Yala	06º 22	81º 30	Bates & Harrison, 1997
Galle district	06º 01	80º 13	Bates & Harrison, 1997
Mapalagama	06º 15	80º 16	Bates & Harrison, 1997
Western Province			
Kalutara	06º 35	79º 59	Bates & Harrison, 1997

Rhinolophus blasii Peters, 1866

NEAR THREATENED in South Asia

Synonyms: *Rhinolophus blasii meyeroemi* Felten, 1977
Rhinolophus clivosus Blasius, 1857

Common names: Blasius' Horseshoe Bat

Family: Rhinolophidae

Habit: Insectivorous

Habitat: Caves, old buildings, gardens.

Niche: Caves, crevices

Distribution
Global: South, East and North Africa, Arabia, Southern Europe, Transcaucasia, Afghanistan, Pakistan

South Asia:
Pakistan: Punjab

Afghanistan

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 6 / not known. Contiguous

Habitat status: Not known

Data source: Literature; inferred; minimum

Threats
Threats to the taxon: Accidental mortality, roost disturbance. The influence on the population well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: < 10,000

Population trend: Not known

Data source: Literature; suspected, inferred.

Recent Field Studies
None

Distribution in South Asia and Afghanistan from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Kabul Province	34º 30	69º 10	Bates & Harrison, 1997
Kandahar and Maimana	31º 36	65º 47	Bates & Harrison, 1997
Laghman Province	34º 38	70º 18	Bates & Harrison, 1997
Parwan Province	35º 00	68º 30	Bates & Harrison, 1997
PAKISTAN			
Punjab			
Lahore	31º 34	74º 22	Bates & Harrison, 1997

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Based on precaution due to threats.

Uncertainty
Assessed based on inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Lower Risk near threatened
Microchiroptera Action Plan (Global): Lower Risk near threatened
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, life history, basic ecology

Management: Monitoring, habitat management

Comments
Specimen from Pakistan is referred to *R. blasii meyeroemi* (Corbet & Hill, 1992). Widespread geographical distribution. Disturbance of roosts is a future threat. Population number based on information reported from Iran and number of localities in South Asia.

Sources
Bates & Harrison, 1997; Blassius, 1857; Corbet & Hill, 1992; Felten, 1977; Hutson *et al*., 2001; Peters, 1866;

Compilers
P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, H. Raghuram, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Rhinolophus cognatus Andersen, 1906

VULNERABLE

Synonyms: *Rhinolophus famulus* Andersen, 1918

Common names: Andaman Horseshoe Bat

Family: Rhinolophidae

Habit: Probably insectivorous like other *Rhinolophus* sp.

Habitat: Tropical rain forests, mangrove swamps

Niche: Not known

Distribution
Global: Endemic to South Asia (India)

South Asia:
India: Restricted to Andaman & Nicobar Islands

Extent of Occurrence: 101-5,000 sq km.

Area of Occupancy: 11-500 sq km.

Locations/subpopulations: 3 / at least 2. Fragmented.

Habitat status: Not known

Data source: Literature; inferred.

Threats
Threats to the taxon: Not known

Population
Generation time: 4-6 years

Mature individuals: Not known

Population trend: Not known

Red List 2001 Status derived in the workshop

Ver. 3.1: VULNERABLE D2

Restricted distribution but no threats observed. Hence assessed as Vulnerable as a precaution.

1997 C.A.M.P. (Ver. 2.3): Data Deficient

Uncertainty
Assessed with 95% confidence based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Vulnerable A2c, D2
Microchiroptera Action Plan (Global): Vulnerable A2c, D2
CITES: Not listed

Known presence in Protected Areas
India: Narcondam Island Wildlife Sanctuary (Andaman & Narcondam Island)

Recommendations
Research: Survey, genetic research, life history, limiting factor research, PHVA

Management: Monitoring, habitat management, habitat assessment

Comments
Endemic to the Indian subcontinent. Two subspecies are recognized: i) *R.c. cognatus* (South Andaman) and ii*) R.c. famulus* (North Central Andaman & Narcondam Island) - [Bates & Harrison, 1997]. Not recorded from Nicobar Islands. Extensive monitoring and habitat assessment is required. Given the limited distribution, known captures and lack of any knowledge of this species; this should be a priority taxon for population monitoring. There is no recent data on population status of this species, so nothing is known on decline or fluctuations. Based on the fact that since 1906 this species has been reported from Adaman & Nicobar Islands, it is presumed that no fluctuation in their locations might have occurred. There is no recent data on this species, so nothing is known on habitat status. However tourism development may affect the species. The small population size and limited genetic diversity may lead to problems of inbreeding. Cave dwelling species typically face more stochastis trends, but nothing is known for sure in this species. EOO 600 sq km based on the minimum convex polygon between known localities PHVA is essential considering the small and endemic nature of the species.

Sources
Andersen, 1906; Andersen, 1918; Bates & Harrison, 1997; Hutson *et al*., 2001; Majupuria, 1990; Sinha, 1973

Compilers
M.A. Ali, Immanuel J.K., V.S. Korad, A. Noble, P.T.Nathan, S. Mistry, M. Singaravelan, C. Srinivasulu

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Andaman & Nicobar Islands			
Port Blair	11º 40	92º 44	Type locality of *cognatus*; recorded by Y.P. Sinha, 1973. Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
North Central Andaman Island	13º 10	92º 58	No exact location; type loc. of *famulus* Bates & Harrison, 1997
Narcondam Island	13º 29	94º 13	Bates & Harrison, 1997

Rhinolophus ferrumequinum (Schreber, 1774) VULNERABLE

Synonyms: *Vespertilio ferrum-equinum* Shreber, 1774
Rhinolophus tragatus Hodgson, 1835
Rhinolophus brevitarsus Blyth, 1863
Rhinolophus ferrum-equinum proximus Andersen, 1905
Rhinolophus ferrum-equinum regulus Andersen, 1905

Common name: Greater Horseshoe Bat

Family: Rhinolophidae

Habitat: Montane forests, Terai regions

Niche: Cave, ruins

Distribution
Global: Endemic to South Asia

South Asia:
India: Uttar Pradesh
Nepal
Pakistan

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: < 2,000 sq km.

Locations/subpopulations: 3+ / Not known.

Habitat status: Habitat loss and change in quality of habitat.

Data source: Literature.

Threats
Threats to the taxon: Habitat loss, roost disturbance. The influence on the population not understood, threats not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: > 10,000. Mature individuals declined in the past by <10% in the last 10 years and likely to decline by <10% in the next 10 years.

Population trend: Not known

Data source: Indirect information; Inferred.

Recent Field Studies
None

Red List 2001 Status derived in the workshop

Ver. 3.1: VULNERABLE B2ab(iii)

Restricted area and change in quality of habitat.

1997 C.A.M.P. (Ver. 2.3): Vulnerable B1+2c; D2

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Lower Risk near threatened
Microchiroptera Action Plan (Global): Lower Risk near threatened
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments
Disturbance of roosting sites is a future threat.

Sources
Bates & Harrison, 1997; Hutson *et al*., 2001

Compilers
S. Mistry, M. Muni, K.R. Senacha, T.K. Shrestha, K.S. Sreepada, C. Srinivasulu

Reviewers
Rest of the participants

Distribution in South Asia from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Arunachal Pradesh			
Dening			Bates & Harrison, 1997
Himachal Pradesh			
Chamba			Bates & Harrison, 1997
Manali			Bates & Harrison, 1997
Simla			Bates & Harrison, 1997
Jammu & Kashmir			
Bumzov cave			Bates & Harrison, 1997
Punch			Bates & Harrison, 1997
Shar			Bates & Harrison, 1997
Shikargarh			Bates & Harrison, 1997
Udhampur			Bates & Harrison, 1997
Nagaland			
Aichisagami			Bates & Harrison, 1997
Sikkim			Bates & Harrison, 1997
Ringin			Bates & Harrison, 1997
Rongli			Bates & Harrison, 1997
Uttaranchal			
Almora			Bates & Harrison, 1997
Katarmal			Bates & Harrison, 1997
Mussourie	30º 26	78º 04	Degraded habitat, large cave

Distribution in South Asia	Lat.	Long.	Notes/Sources
			Bates & Harrison, 1997
West Bengal			
Darjeeling			Bates & Harrison, 1997
NEPAL			
Annigera			Bates & Harrison, 1997
Ghorepani			Bates & Harrison, 1997
Kathmandu Valley			Bates & Harrison, 1997
Langtang			Bates & Harrison, 1997
Najarkot			Bates & Harrison, 1997
Num			Bates & Harrison, 1997
Ramechhap			Bates & Harrison, 1997
PAKISTAN			
Baluchistan			
Kalat			Bates & Harrison, 1997
Nushki			Bates & Harrison, 1997
Quetta			Bates & Harrison, 1997
Northern areas			
Gilgit			Bates & Harrison, 1997
NWFP			
Abbotabad			Bates & Harrison, 1997
Karakar Pass			Bates & Harrison, 1997
Kululai			Bates & Harrison, 1997

Rhinolophus hipposideros (Bechstein, 1800) — VULNERABLE in South Asia

Synonyms: *Vespertilio hipposideros* Bechstein, 1800
Rhinolophus midas Andersen, 1905

Common names: Lesser Horseshoe bat

Family: Rhinolophidae

Habit: Colonial

Habitat: Warm valleys

Niche: Caves, ruined buildings, outhouses / 1230-1850m.

Distribution
Global: Afghanistan, Africa, India, Morocco, North Arabia, Pakistan, Western Europe

South Asia:
India: Jammu & Kashmir
Pakistan

Afghanistan

Extent of Occurrence: < 20,000 sq km.

Area of Occupancy: < 2,000 sq km.

Locations/subpopulations: 2. Contiguous.

Habitat status: Habitat loss, change in quality of habitat.

Threats
Threats to the taxon: Habitat destruction, roost disturbance.

Population
Generation time: 4-6 years

Mature individuals: < 10,000. Mature individuals declined in the past by <10% in the last 10 years and likely to decline by <10% in the next 10 years.

Population trend: Not known

Data source: Museum record

Recent Field Studies
None

Distribution in South Asia and Afghanisatn from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Jalabad	34º 26	70º 25	Bates & Harrison, 1997
Qalat	32º 05	66º 53	Bates & Harrison, 1997
INDIA			
Jammu & Kashmir			
Bumzov cave	-	-	Bates & Harrison, 1997
PAKISTAN			
Gilgit	35º 54	74º 20	Bates & Harrison, 1997

Red List 2001 Status derived in the workshop

Ver. 3.1: VULNERABLE B1ab(iii)+2ab(iii)

Restricted distribution, threats to habitat and quality.

National Status
India: Vulnerable
Pakistan: Vulnerable

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Vulnerable A2c
Microchiroptera Action Plan (Global): Vulnerable A2c
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments
No new information

Sources
Andersen, 1905; Bechstein, 1799, 1800; Bates & Harrison, 1997; Hutson *et al*., 2001

Compilers
P.J.J. Bates, M.A. Ali, A. Thabah, K.M. Swe

Reviewers
Rest of the participants

Rhinolophus lepidus Blyth, 1844

LEAST CONCERN in South Asia

Synonyms: *Rhinolophus monticola* Andersen, 1905

Common names: Bengali: *Chhoto Ghorakhuri Chamchika*; English: Blyth's Horseshoe Bat

Family: Rhinolophidae

Habit: Solitary, colonial

Habitat: Forests

Niche: Caves, ruins, dungeons, tunnels, subterranean soils, old houses, ruined temples. Up to 2388m.

Distribution
Global: Afghanistan, Bangladesh, India, Nepal, northern Myanmar, Pakistan, Southeast Asia

South Asia:
Bangladesh
India: Andhra Pradesh, Assam, Bihar, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Nagaland, New Delhi, Orissa, Rajasthan, Tamil Nadu, Uttaranchal, Uttar Pradesh, West Bengal
Nepal
Pakistan

Afghanistan
Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many. Fragmented.

Habitat status: Not known

Data source: Field studies, literature; Observed, inferred.

Threats
Threats to the taxon: Human interference, tourism. The influence on the population well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Not known

Data source: Field study

Recent Field Studies
Sinha in Bihar, 1982;
M. Muni in Indore, 1992: ZSI, Pune, collection
H.R. Bhat in Kamalashik, Dakshina Kannada dist., India

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
Bangladesh: Least Concern
India: Least Concern
Nepal: Near Threatened
Pakistan: Near threatened

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Ranathambore National Park, Rajasthan; Karnala Bird Sanctuary Maharashtra; Satpura National Park, Madhya Pradesh

Recommendations
Research: Survey

Management: Monitoring

Comments

Sources
Andersen, 1905; Bates & Harrison, 1997; Blyth, 1844; Harshey & Chandra, 2001; Hutson *et al*., 2001

Compilers
A.C. Girish, Immanuel, J.K., S. Kandula, V.S. Korad, C.D. Koya, G. Nair, P.T. Nathan, A. Nobel, J.K. Raj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Distribution in South Asia, Afghanistan and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Firindjal	35º 00	68º 29	Bates & Harrison, 1997
Jalalabad	34º 26	70º 25	Bates & Harrison, 1997
Kabul	34º 30	69º 10	Bates & Harrison, 1997
Maimana	35º 54	64º 43	Bates & Harrison, 1997
Qalat	32º 05	66º 53	Bates & Harrison, 1997
BANGLADESH			
Widely distributed			Khan, 2001
INDIA			
Andhra Pradesh			
Palkonda Hills	13º 50	79º 00	Bates & Harrison, 1997
Koduru	13º 58	79º 14	Bates & Harrison, 1997
Visakapatanam	17º 42	83º 24	Bates & Harrison, 1997
Assam			
Sibsagar	26º 58	94º 39	Bates & Harrison, 1997
Bihar			
Singar	24º 48	85º 00	Bates & Harrison, 1997
Nimiaghat	23º 56	86º 07	Bates & Harrison, 1997
Guia	-	-	Bates & Harrison, 1997
Madhubani	26º 21	86º 05	Bates & Harrison, 1997
Munger	24º 57	86º 14	Bates & Harrison, 1997
Manharpur	-	-	Bates & Harrison, 1997
Jharkhand			
Luia	22º 29	85º 15	Bates & Harrison, 1997
Karnataka			
Honawar	14º 19	74º 27	Caves habitat disturbance K.S. Sreepada, 1999
Kamalashik	-	-	Caves Habitat disturbance Bhat, 1972-73
Mooroor	-	-	Narayanan Naidu, 1992
Jog Falls	14º 12	74º 41	Bates & Harrison, 1997
Gersoppa	14º 12	74º 42	Bates & Harrison, 1997
Kyasanur	-	-	Caves Associated with other species of bats. Bhat &Srinivasan, 1990
Kerala			
Thrissur	10º 32	76º 14	Caves (Subterranean habitats - 7.2), Irrigation canal A. Madhavan, 1997
Silent Valley	10º 46	76º 42	Bates & Harrison, 1997
Madhya Pradesh			
Balaghat Forest	21º 48	80º 16	Bates & Harrison, 1997
Hoshangabad	-	-	Harshey & Chandra, 2001
Jabalpur	23º 10	79º 59	Bates & Harrison, 1997
Mandu	22º 22	75º 24	Bates & Harrison, 1997
Narsingarh	24º 00	79º 29	Bates & Harrison, 1997
Satpura National Park	-	-	Harshey & Chandra, 2001
Sohagpur	22º 43	78º 14	Bates & Harrison, 1997
Maharashtra			
Helwak	17º 23	73º 47	Bates & Harrison, 1997
Kanheri	19º 13	72º 59	Bates & Harrison, 1997
Nasik	20º 00	73º 52	Bates & Harrison, 1997
Karnala	18º 59	73º 28	Bates & Harrison, 1997
Khandala	18º 45	73º 25	Bates & Harrison, 1997
Lonavla	18º 45	73º 27	Bates & Harrison, 1997
Lohogad	19º 02	73º 40	Bates & Harrison, 1997
Panchgani	17º 56	73º 49	Bates & Harrison, 1997
Mahabaleshwar	17º 56	73º 42	Bates & Harrison, 1997
Ratnagiri	17º 00	73º 20	Bates & Harrison, 1997
Khopoli	18º 25	73º 08	Bates & Harrison, 1997
Meghalaya			
Syndai	25º 30	92º 00	Bates & Harrison, 1997
Konshnong	25º 30	92º 01	Bates & Harrison, 1997
Shangpong	25º 30	92º 02	Bates & Harrison, 1997
Nagaland			
Wokha	-	-	Bamboo forest ZSI group, 1996
New Delhi			
New Delhi	28º 37	77º 13	Bates & Harrison, 1997
Orissa			
Khandagiri	20º 20	85º 50	Bates & Harrison, 1997
Mohana	19º 30	84º 38	Bates & Harrison, 1997
Koira	21º 50	85º 12	Bates & Harrison, 1997
Daitari	20º 50	86º 25	Bates & Harrison, 1997
Rajasthan			
Jalmahal	-	-	Old buildings Habitat disturbance Senecha K.R., January 2002.
Devikund	-	-	Old buildings Habitat disturbance Senecha K.R., January 2002.
Sagar village	-	-	Old buildings Habitat disturbance Senecha K.R., January 2002.
Jodhpur	26º 18	73º 08	Bates & Harrison, 1997
Ranthambhore	26º 04	76º 32	Bates & Harrison, 1997
Sikar Burz	25º 23	75º 47	Bates & Harrison, 1997
Bikaner	28º 01	73º 22	Bates & Harrison, 1997
Tamil Nadu			
Salem	11º 38	78º 08	Bates & Harrison, 1997
Uttaranchal			
Mussoorie	30º 26	78º 04	Bates & Harrison, 1997
Khati	30º 04	79º 55	Bates & Harrison, 1997
Almora	29º 36	79º 40	Bates & Harrison, 1997
Ranibagh	29º 22	79º 26	Bates & Harrison, 1997
Uttar Pradesh			
Philibhit	28º 37	79º 48	Bates & Harrison, 1997
West Bengal			
Kolkata	22º 35	88º 21	Type locality of R. lepidus Bates & Harrison, 1997
Darjeeling	27º 02	88º 20	Bates & Harrison, 1997
Midnapur	22º 25	87º 24	Bates & Harrison, 1997
Barkalikapur	22º 15	88º 25	Bates & Harrison, 1997
Salbani	22º 25	87º 24	Bates & Harrison, 1997
Gurup	23º 15	87º 52	Bates & Harrison, 1997
Falta	22º 18	88º 08	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Bagar	-	-	Caves Tourism K.M. Swe, 2000-2001
Kindat	23º 42	94º 29	Bates & Harrison, 1997
Mandalay	21º 57	96º 04	Buildings Threat: Tourism K.M. Swe, 2000-2001
Nam Tamai Valley	27º 42	97º 54	Bates & Harrison, 1997
Nyaungoo	-	-	Caves Tourism K.M. Swe, 2000-2001
Pagan	21º 07	94º 53	Bates & Harrison, 1997
Rakhine	-	-	Buildings Tourism K.M. Swe, 2000-2001
NEPAL			
Ilam	27º 01	87º 59	Bates & Harrison, 1997
Sindhu	28º 03	85º 33	Bates & Harrison, 1997
PAKISTAN			
Abbotabad	34º 08	73º 12	Bates & Harrison, 1997

Rhinolophus luctus Temminck, 1835

NEAR THREATENED in South Asia

Synonyms: *Rhinolophus perniger* Hodgson, 1843

Common names: Bengali: *Woolwala Chamchika*; English: Woolly Horseshoe Bat

Family: Rhinolophidae

Habit: In pairs or solitary, low density, insectivorous

Habitat: Large caves in forests, rocky outcrops, semievergreen forest.

Niche: Rocks. 923m in Meghalaya

Distribution
Global: India, Bangladesh, southern China, Nepal, northern Myanmar, southeast Asia.

South Asia:
Bangladesh
India: Assam, Karnataka, Kerala, Meghalaya, Madhya Pradesh, Nagaland, Uttaranchal, West Bengal
Nepal

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km

Area of Occupancy: > 2,000 sq km

Locations/subpopulations: Many. Fragmented.

Habitat status: < 10% decrease in area in the past 5 years due to deforestation. Decrease in quality due to deforestation.

Data source: Literature, indirect information; inferred.

Threats
Threats to the taxon: Habitat loss, deforestation. The influence on the population well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: < 10,000

Population trend: Not known

Data source:

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Low population size (may be <10, 000) and a predicted decline of 10% due to habitat destruction.

National Status
Bangladesh: Near Threatened
India: Near Threatened
Nepal: Near Threatened

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Satpora National Park (Madhya Pradesh)

Recommendations
Research: Survey, taxonomic research

Management: Monitoring, habitat management

Comments
Very difficult to predict, population size of low density and solitary species.

Sources
Bates & Harrison, 1997; Bhat & Sreenivasan, 1990; Hodgson, 1843; Hutson *et al*., 2001; Khan, 2001; Naidu & Gururaj, 1984; Sinha, 1973; Temminck, 1835.

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
Madhavan in Parallam, Pallipuram, Venginissery, Kottekad, Thrissur district, India, 1991-1994.
D. Phukan in Dhaknokhana, Gogamukh, Jonai, Assam, India, 1990, 2001, Survey.
K.S. Sreepada & H.R. Bhat in Kalase, Sagar, Shimoga, 1993, Survey.

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
Northeastern (Sylhet)			Khan, 2001
Southeastern (Chittagong)			Khan, 2001
INDIA			
Assam			
Dhakhuakhana	-	-	Habitat loss, hunting for medicine D. Phukan, 1986, 1990, 2001.
Dhemaji	27º 20	95º 00	D. Phukan
Gogamukh	-	-	Habitat loss, hunting for medicine D. Phukan, 1986, 1990, 2001.
Gunjong	25º 01	92º 45	Bates & Harrison, 1997
Jonai	-	-	Habitat loss and hunting for medicine are threats to the species. D. Phukan, 1986, 1990, 2001.
Lakhimpur	27º 20	95º 00	D. Phukan
Karnataka			
Ikkeri	-	-	Naidu & Gururaj, 1986 Should be treated as *R. beddomei* (Topa & Csorba, 1992).
Kalase	16º 37	76º 45	H.R. Bhat, 1990; Sreepada, 1992. Collected in mist net.
Sagar	16º 37	76º 45	H.R. Bhat, 1990; Sreepada, 1992. Collected in mist net. Naidu & Gururaj, 1986 should be treated as *R. beddomei* (Topa & Csorba, 1992).
Shimoga	16º 37	76º 45	Collected in mist net. H.R. Bhat, 1990; Sreepada K.S., 1992.

Distribution in South Asia	Lat.	Long.	Notes/Sources
Kerala			
Thrissur	10º 32	76º 14	Survey of small mammals in Kerala. Padmanabhan P. 2000
Meghalaya			
Khasi hills	25º 34	91º 53	Bates & Harrison, 1997
Mawphlang	25º 34	91º 53	Bates & Harrison, 1997
Mawryngkneng	25º 34	91º 53	Bates & Harrison, 1997
Konshnong	25º 34	91º 53	Bates & Harrison, 1997
Madhya Pradesh			
Panchmarhi	22º 29	78º 26	Bates & Harrison, 1997
Nagaland			
Khezabama	26º 01	94º 30	Bates & Harrison, 1997
Uttaranchal			
Mussoori	30º 26	78º 04	Bates & Harrison, 1997
West Bengal			
Darjeeling	22º 35	88º 21	Bates & Harrison, 1997
Kolkata	22º 35	88º 21	Bates & Harrison, 1997
Singla	22º 35	88º 21	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Gokteik	22º 38	97º 24	Chin hills, Myanmar Bates & Harrison, 1997
Kindat	22º 38	97º 24	Chin hills, Myanmar Bates & Harrison, 1997
Nam Tamai Valley	22º 38	97º 24	Chin hills, Myanmar Bates & Harrison, 1997
Taron Valley	22º 38	97º 24	Chin hills, Myanmar Bates & Harrison, 1997
NEPAL			
Chalna-khel	27º 42	85º 14	Bates & Harrison, 1997
Banss Baharl	27º 42	85º 14	Bates & Harrison, 1997
Bouzini	27º 42	85º 14	Bates & Harrison, 1997
Num	27º 42	85º 14	Bates & Harrison, 1997

Rhinolophus macrotis Blyth, 1844

NEAR THREATENED in South Asia

Synonyms: *Rhinolophus episcopus* Allen, 1923
Rhinolophus macrotis topali Csorba & Bates, 1995

Common names: Big-eared Horse-shoe Bat

Family: Rhinolophidae

Habit: Insectivorous, flies out during early twilight hours

Habitat: Caves, mines, forests

Niche: Caves. 1692m

Distribution
Global: India, Laos, Malaysia, Nepal, Pakistan, Philippines, southern China, Vietnam, West Sumatra

South Asia:
India: Arunachal Pradesh, Meghalaya, Uttaranchal, West Bengal
Pakistan: Punjab
Nepal

Extent of Occurrence: > 20,000 sq km

Area of Occupancy: > 2,000 sq km

Locations/subpopulations: About 10. Contiguous.

Habitat status: < 10% decrease in area in the past due to pollution, deforestation, pesticide and tourism. Decrease in quality due to pollution and human interference.

Data source: Field study, indirect information, literature; observed, inferred.

Threats
Threats to the taxon: Habitat loss, deforestation, pollution, chemical, pesticides. The influence on the population well understood, not reversible and have not ceased to be a threat.

Trade: Local trade for medicines

Population
Generation time: 4-6 years

Mature individuals: < 10,000

Population trend: > 10% decline in the population in the past 10 years.

Data source: Indirect information; informal sightings; literature; inferred.

Recent Field Studies
Shrestha in Kathmandu hills, 1997, Survey

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Widely distributed but few locations known and affected by threats. Also in trade. Small number of localities, small colony size, observed and projected habitat damage and disturbance.

National Status
India: Near Threatened
Nepal: Near Threatened
Pakistan: Near Threatened

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring, habitat management, public awareness

Comments
Specimens from Pakistan are referred to as *Rhinolophus macrotis topali* and from rest of the Indian subcontinent as *Rhinolophus macrotis macrotis.* Decline based on data from Nepal. < 10 locations. Small colony size. Human disturbance and habitat damage evident from Nepal. Same applies to Mussouri in India where tourism is increasing.

Sources
Allen, 1923; Bates & Harrison, 1997; Blyth, 1844; Csorba, & Bates, 1995; Hutson *et al*., 2001; Shrestha, 1997

Compilers
P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, H. Raghuram, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Distribution in South Asia from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Arunachal Pradesh			
40 miles east Miao	-	-	Bates & Harrison, 1997
Meghalaya			
Cherrapunji	25º 16	91º 42	Bates & Harrison, 1997
Uttaranchal			
Musoorie	30º 26	78º 04	Bates & Harrison, 1997
West Bengal			
Lopchu	27º 02	88º 19	Bates & Harrison, 1997
PAKISTAN			
Punjab			
near Abbotabad	-	-	Bates & Harrison, 1997
NEPAL			
Batule Chour	28º 14	83º 58	Bates & Harrison, 1997
Dulegounda	27º 45	84º 29	Bates & Harrison, 1997
Hills near Kathmandu	-	-	Dense forests, caves Pesticides Shreshta, 1997
Kathmandu Valley	27º 42	85º 12	Bates & Harrison, 1997
Kerabari	-	-	Bates & Harrison, 1997
Syangja	28º 49	83º 42	Bates & Harrison, 1997

Rhinolophus mitratus Blyth, 1844 — VULNERABLE

Common names: Mitred Horseshoe Bat

Family: Rhinolophidae

Habit: Not known

Habitat: Not known

Niche: Not known. ca. 300m.

Distribution
Global: Endemic to South Asia (India)

South Asia:
India: Jharkhand

Extent of Occurrence: < 100 sq km.

Area of Occupancy: < 100 sq km.

Locations/subpopulations: 1

Habitat status: Not known

Data source: Literature; inferred.

Threats
Threats to the taxon: Not known

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Data source: Museum record; inferred

Red List 2001 Status derived in the workshop

Ver. 3.1: **VULNERABLE** **D2**

Found in only one location and assessed based on precaution.

1997 C.A.M.P. (Ver. 2.3): Vulnerable D2

Uncertainty
Assessed based on inference, precaution and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Data Deficient
Microchiroptera Action Plan (Global): Data Deficient
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, genetic research, taxonomic research, ecological studies, PHVA

Management: Monitoring, habitat management, public awareness

Comments
Known only from holotype. Description based on Sinha, 1973.
Sinha examined the specimen at ZSI. It has a strange distribution, which cannot be explained zoogeographically. This suggests that 1. It has a larger distribution 2. That the original specimen was mislabelled or probably came from somewhere else (since many specimens came from England, Ghana, India etc.) 3. Possibly misidentified [Bates]. Y.P. Sinha collected *Scotophilus kuhli, Taphozous longimanus, Pipistrellus mimus, P. coromandra* from Chaibasa in 1980. However he was not able to collect or glimpse *R. mitratus*.

Sources
Bates & Harrison, 1997; Blyth, 1844; Hutson *et al*., 2001; Sinha, 1973; Sinha, 1986

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Jharkhand			
Chaibassa	22º 31	85º 50	Only known from one specimen collected Bates & Harrison, 1997

Rhinolophus pearsonii Horsfield, 1851

LEAST CONCERN in South Asia

Common names: Bengali: *Pearsoner Gorakhuri Chamchika*; English: Pearson's Horse-shoe Bat

Family: Rhinolophidae

Habit: Colonial

Habitat: Montane forest, tropical valleys, bamboo forests

Niche: Caves, banana plantations (between leaves). 610-3077m.

Distribution
Global: Bhutan, China, India, Nepal, northern Myanmar, Southeast Asia, Tibet

South Asia:
Bangladesh
Bhutan
India: Meghalaya, Sikkim, Uttar Pradesh, West Bengal
Nepal

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 20 / not known

Habitat status: Habitat loss, change in quality of habitat.

Threats
Threats to the taxon: Human interference, habitat loss, habitat destruction. The influence on the population not understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Mature individuals likely to decline by <5% in the future.

Data source: Literature, museum; Inferred.

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
Bangladesh: Near Threatened
Bhutan: Near Threatened
India: Least Concern
Nepal: Least Concern

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments

Sources
Bates & Harrison, 1997; Hill 1986; Horsfield, 1851; Hutson *et al*., 2001; Khan, 2001; Sinha, 1999

Compilers
S. Mistry, M. Muni, K.R. Senacha, T.K. Shrestha, K.S. Sreepada, C. Srinivasulu

Reviewers
Rest of the participants

Recent Field Studies
Sinha, Meghalaya, 1992, Phambong WLS, Sikkim, 1988 - ZSI faunistic surveys
Bhattacherya in Manipur 1995
Agarwal *et al.* in West Bengal 1992
A Thabah, East Khasi hills, Meghalaya, India, 2001. ZSI faunistic surveys (one specimen collected).

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
no exact locality			Khan, 2001
BHUTAN			
Phuntsholing	26º 52	89º 30	Bates & Harrison, 1997
INDIA			
Meghalaya			
Cherrapunji	25º 16	91º 42	Bates & Harrison, 1997
East Khasi hills	25º 20	91º 55	Human disturbance and predation A. Thabah, 2001
Garo Hils	25º 32	90º 15	Bates & Harrison, 1997
Konshnong	25º 30	92º 01	Bates & Harrison, 1997
Sikkim			
Chungtung	27º 38	88º 35	Bates & Harrison, 1997
Phambong Lho Wildlife Sanctuary	-	-	Sinha, 1988
Uttar Pradesh			
Lwarkhet	29º 36	79º 40	Bates & Harrison, 1997
Mussoorie	30º 26	78º 04	Bates & Harrison, 1997
Narkota	30º 08	78º 48	Bates & Harrison, 1997
West Bengal			
Darjeeling	27º 02	88º 20	Type locality of *R. pearsoni* Bates & Harrison, 1997
Pashok	27º 04	88º 24	Bates & Harrison, 1997
Lopchu	27º 02	88º 19	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Taho	19º 30	97º 12	Bates & Harrison, 1997
Tasu Bun	26º 01	96º 12	Bates & Harrison, 1997
NEPAL			
Bimalnagar	27º 45	84º 29	Bates & Harrison, 1997
Num	27º 33	87º 17	Bates & Harrison, 1997
Parchung	28º 01	85º 12	Bates & Harrison, 1997
Sundarijal	-	-	Bates & Harrison, 1997

Rhinolophus pusillus Temminck, 1834

LEAST CONCERN in South Asia

Synonyms: *Rhinolophus blythii* Andersen, 1918
Rhinolophus gracilis Andersen, 1905
Rhinolophus minor Horsfield, 1823

Common names: Least Horseshoe Bat

Family: Rhinolophidae

Habit: Colonial

Habitat: Cave dweller, humid uplands, hills & valleys, coastal areas

Niche: Caves. 2000m

Distribution
Global: India, Nepal, Northern Myanmar, South-east Asia

South Asia:
India: Andhra Pradesh, Arunachal Pradesh, Assam, Karnataka, Kerala, Meghalaya, Sikkim, Uttar Pradesh, West Bengal
Nepal

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: About 20.

Habitat status: Not known

Data source: Literature; Inferred.

Threats
Threats to the taxon: Human interference was a threat in the past. The influence on the population well understood, not reversible and have ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Not known

Data source: Field study

Recent Field Studies
Sinha, Y.P., Meghalaya, 1973, Survey (ZSI).
Agrawal *et al.,* West Bengal, 1992, Survey (ZSI).

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

No threats to this wide-spread species.

National Status
India: Least Concern
Nepal: Least Concern

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Phamong Lho Wildlife Sanctuary (Sikkim)

Recommendations
Research: Survey

Management: Monitoring

Sources
Andersen, 1905, 1918; Bates & Harrison, 1997; Horsfield, 1821-24; Hutson *et al*., 2001; Temminck, 1834

Compilers
A.C. Girish, Immanuel, J.K., S. Kandula, V.S. Korad, C.D. Koya, G. Nair, P.T. Nathan, A. Nobel, J.K. Raj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Andhra Pradesh			
Visakhapatanam	17º 42	83º 24	Bates & Harrison, 1997
Arunachal Pradesh			
73km ESE Miao	-	-	Bates & Harrison, 1997
Assam			
Golaghat	26º 30	93º 57	Bates & Harrison, 1997
Karnataka			
Lingasugur	15º 11	76º 54	Bates & Harrison, 1997
Kerala			
Malabar coast	10º 00	76º 15	Bates & Harrison, 1997
Meghalaya			
Siju Cave	25º 32	75º 47	Bates & Harrison, 1997
Shangpung	25º 30	92º 02	Bates & Harrison, 1997
Cherrapunji	25º 16	91º 42	Bates & Harrison, 1997
Sikkim			
No exact location	-	-	Bates & Harrison, 1997
Uttaranchal			
Mussoorie	30º 26	78º 04	Bates & Harrison, 1997
Almora	29º 36	79º 40	Bates & Harrison, 1997
West Bengal			
Sangser	27º 04	88º 30	Bates & Harrison, 1997
Pashok	27º 04	88º 24	Bates & Harrison, 1997
Nimbong	27º 04	88º 25	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Hai Bum	26º 02	95º 52	Bates & Harrison, 1997
NEPAL			
No exact locality	-	-	Cross reference from 'Mammals of Nepal' Verheugt, 1995
Kathmandu Valley	27º 42	85º 12	Bates & Harrison, 1997
Nagerjunban	27º 46	87º 12	Bates & Harrison, 1997
Bimalnagar	27º 45	84º 29	Bates & Harrison, 1997
Pokhara	28º 14	83º 58	Bates & Harrison, 1997
Soondarijal	27º 48	85º 15	Bates & Harrison, 1997

Rhinolophus rouxii Temminck, 1835

NEAR THREATENED in South Asia

Synonyms: *Rhinolophus cinerascens* Kelaart, 1852
Rhinolophus fulvidus Blyth, 1851
Rhinolophus petersii Dobson, 1872
Rhinolophus rammanika Kelaart, 1852
Rhinolophus rubidus Kelaart, 1850

Common names: Rufous Horseshoe Bat

Family: Rhinolophidae

Habit: Colonial

Niche: Caves, areas with relatively high rainfall, hollow trees, wells, temples. 1370m.

Distribution
Global: India, Nepal, Nothern Myanmar, Sri Lanka

South Asia:
India: Andhra Pradesh, Arunachal Pradesh, Chhattisgarh, Goa, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Mizoram, Nagaland, Orissa, Pondicherry, Sikkim, Tamil Nadu, Uttaranchal, West Bengal
Nepal
Sri Lanka: Central Province, Eastern Province, North Central Province, Uva Province, Western Province

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many

Habitat status: Not known

Data source:

Threats
Threats to the taxon: Human interference, alien invasive species, competition from fruit bats, habitat loss. The influence on the population not understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: > 10,000, Mature individuals declined in the past by <10% in the last 10 years and is likely to decline in by <10% in the next 10 years.

Population trend: Not known

Data source: Field study

Recent Field Studies
Ghosh in West Bengal 1985
Mukherjee in West Bengal 1982
Agarwal in Goa 1973
Subbaraj in Mysore 1977
Marimuthu in Mysore 1984
Sripathi & Schuller in Mysore 1997
Bates *et al*. in Karnataka and Robber's Cave, Maharashtra, 1992
Sripathi & Marimuthu in Yercaud, 1992
Madhavan in Ernakulam, 1993
Y. P. Sinha in Teroi, Mizoram, 1993; Lungsan, 1997
Yapa & Digana in Sri Lanka many caves and mines, 1996-2000

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Caves are threatened due to tourism and there is a suspected decline in population numbers.

National Status
India: Near Threatened
Nepal: Near Threatened
Sri Lanka: Near Threatened

Uncertainty
Assessed based on evidence, precaution and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Dandeli Wildlife Sanctuary, Karnataka; Karnala Wildlife Sanctuary Maharashtra; Indravati National Park, Chhattisgarh; Kanha National Park, Madhya Pradesh

Recommendations
Research: Survey

Management: Monitoring

Comments

Sources
Andersen, 1905; Bates & Harrison, 1997; Blyth, 1851; Dobson, 1872; Harshey & Chandra, 2001; Hutson *et al*., 2001; Kelaart, 1850; Kelaart, 1852, 1853; Temminck, 1835

Compilers
A.C. Girish, Immanuel, J.K., S. Kandula, V.S. Korad, C.D. Koya, G. Nair, P.T. Nathan, A. Nobel, J.K. Raj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Andhra Pradesh			
Balapalli range	13º 50	79º 15	Bates & Harrison, 1997
Cuddapah	14º 30	78º 50	Bates & Harrison, 1997
Visakapatanam	17º 42	83º 24	Bates & Harrison, 1997
Arunachal Pradesh			
Siki	27º 46	93º 37	Bates & Harrison, 1997
Chhattisgarh			
Bastar	19º 00	81º 00	Bates & Harrison, 1997 Harshey & Chandra, 2001
Indravati National Park	-	-	Harshey & Chandra, 2001
Goa			
Anmode	-	-	Bates & Harrison, 1997
Canacona	15º 01	74º 04	Bates & Harrison, 1997
Colva	15º 50	73º 57	Bates & Harrison, 1997
Poinguinam	15º 00	74º 00	Bates & Harrison, 1997
Himachal Pradesh			
Solan	30º 54	77º 06	Bates & Harrison, 1997
Karnataka			
Bangalore	12º 58	77º 35	Bates & Harrison, 1997
Barchi	15º 25	74º 35	Bates & Harrison, 1997
Dandeli	15º 18	74º 45	Bates & Harrison, 1997
Devikop	15º 12	75º 05	Bates & Harrison, 1997
Gersoppa	14º 12	74º 42	Bates & Harrison, 1997
Hulekal	14º 42	74º 46	Bates & Harrison, 1997
Jog Falls	14º 12	74º 41	Bates & Harrison, 1997
Mysore	12º 25	76º 41	found in gunhouses Sripathi & G. Schuller, 1998
Potoli	15º 09	74º 44	Bates & Harrison, 1997
Seringapatnam	12º 25	76º 41	Bates & Harrison, 1997; found in gunhouses Sripathi & G. Schuller, 1998
Sirsi	14º 40	74º 51	Bates & Harrison, 1997
Talewadi	15º 25	74º 22	Bates & Harrison, 1997
Yellapur	14º 59	74º 46	Bates & Harrison, 1997
Kerala			
Ernakulam	10º 00	76º 16	Irrigation canals and wells Human interference Madhavan, 1993; Bates & Harrison, 1997
Silent Valley	10º 46	76º 42	Bates & Harrison, 1997
Tellicherry	11º 44	75º 29	Bates & Harrison, 1997
Trichur	10º 32	76º 14	Irrigation canals and wells Human interference Madhavan A., 1993
Madhya Pradesh			
Balaghat	-	-	Harshey & Chandra, 2001
Jabalpur	-	-	Harshey & Chandra, 2001
Kanha National Park	-	-	Harshey & Chandra, 2001
Mandla	-	-	Harshey & Chandra, 2001
Maharashtra			
Asgani	17º 38	73º 26	Bates & Harrison, 1997
Bassein	19º 21	72º 52	Bates & Harrison, 1997
Bhaja caves	18º 42	73º 30	Bates & Harrison, 1997
Borivili	19º 14	72º 57	Bates & Harrison, 1997
Kanheri caves	19º 13	72º 59	Bates & Harrison, 1997
Karnala	18º 59	73º 28	Bates & Harrison, 1997
Khandala	18º 45	73º 25	Bates & Harrison, 1997
Lohogad Fort	19º 02	73º 40	Bates & Harrison, 1997
Mahabaleswar	17º 56	73º 42	Caves G. Schuller & Sripathi, 1978 and 1992; Bates & Harrison, 1997
Pune	18º 31	73º 51	Bates & Harrison, 1997
Robbers Cave	-	-	Caves Bates, 1993
Sangameshwar	17º 10	73º 30	Bates & Harrison, 1997
Savantvadi	15º 55	73º 52	Bates & Harrison, 1997
Vihar Lake	18º 56	72º 51	Bates & Harrison, 1997
Meghalaya			
Cherrapunji	25º 16	91º 42	Bates & Harrison, 1997
Mawphlang	25º 25	92º 13	Bates & Harrison, 1997
Mizoram			
Lungsan	-	-	Y. P. Sinha, 1997
Teroi	-	-	Y. P. Sinha, 1993
Nagaland			
Takubama	25º 37	94º 32	Bates & Harrison, 1997
Orissa			
Harisankar	20º 42	83º 30	Bates & Harrison, 1997
Jharsiguda	21º 56	84º 04	Bates & Harrison, 1997
Joshipur	22º 01	86º 21	Bates & Harrison, 1997
Kotagarh	20º 30	84º 18	Bates & Harrison, 1997
Salurdam	-	-	Bates & Harrison, 1997
Udayagiri	20º 06	84º 32	Bates & Harrison, 1997
Sikkim			
Tashiding	27º 46	88º 37	Bates & Harrison, 1997
Tamil Nadu			
Palni hills	10º 18	77º 31	Bates & Harrison, 1997
Shevroy hills	11º 46	78º 11	Bates & Harrison, 1997
Yercaud	-	-	Caves Sripathi & Marimuthu, 1992
Uttaranchal			
Dhakuri	30º 00	79º 56	Bates & Harrison, 1997
Mussoorie	30º 26	78º 04	Bates & Harrison, 1997
West Bengal			
Ajodhya Hills	23º 20	86º 24	Bates & Harrison, 1997
Darjeeling	27º 02	88º 20	Bates & Harrison, 1997
Kolkata	22º 35	88º 21	Type locality of R. rouxi Bates & Harrison, 1997
Nimbong	27º 04	88º 25	Bates & Harrison, 1997
Pahok	-	-	Bates & Harrison, 1997
Pondicherry			
Pondicherry	11º 59	79º 50	Type locality of R. rouxi Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Toungoo	-	-	Bates & Harrison, 1997
NEPAL			
Godavari	27º 34	85º 24	Bates & Harrison, 1997
Num	27º 33	87º 17	Bates & Harrison, 1997
Parchung	28º 01	85º 12	Bates & Harrison, 1997
Pulchowki	27º 42	85º 12	Bates & Harrison, 1997
Sipuri	-	-	Bates & Harrison, 1997
Tankot	-	-	Bates & Harrison, 1997
SRI LANKA			
No exact locality	-	-	Found in many locations in caves and mines Human interference Yapa & Digana, 1996-2000
Central Province			
Amanapoora hill	07º 15	80º 32	Bates & Harrison, 1997
Bogawantalawa	06º 48	80º 41	Bates & Harrison, 1997
Kandy	07º 17	80º 40	Bates & Harrison, 1997
Mousakande	07º 32	80º 42	Bates & Harrison, 1997
Pallama	07º 32	80º 39	Bates & Harrison, 1997
Sirigiria	-	-	Bates & Harrison, 1997
Eastern Province			
Fort Frederick	08º 34	81º 13	Bates & Harrison, 1997
Maha Oya	07º 31	81º 22	Bates & Harrison, 1997
North Central Province			
near Rajagivilena	-	-	Sri Lanka Bates & Harrison, 1997
Galkulama	08º 16	80º 31	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Kaduganava	07º 15	80º 32	Bates & Harrison, 1997
Uva Province			
Dammeria	06º 57	81º 09	Bates & Harrison, 1997
Gampaha	-	-	Bates & Harrison, 1997
Haputale	06º 46	80º 58	Bates & Harrison, 1997
Inginiyagala	07º 16	81º 30	Bates & Harrison, 1997
Lunugalla	07º 05	81º 13	Bates & Harrison, 1997
Passara	06º 58	81º 09	Bates & Harrison, 1997
Wellawaya	06º 44	81º 07	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Western Province			
Aggalkaurda	06º 35	79º 59	Bates & Harrison, 1997
Anasigala	06º 29	80º 03	Bates & Harrison, 1997
Dalkeith	06º 33	80º 09	Bates & Harrison, 1997
Matugama	06º 32	80º 05	Bates & Harrison, 1997
Papoda	06º 44	80º 26	Bates & Harrison, 1997
Ruwanwella	07º 02	80º 15	Bates & Harrison, 1997
Wavulpane	06º 25	80º 40	Bates & Harrison, 1997
Weddagala	06º 26	80º 26	Bates & Harrison, 1997

Rhinolophus sinicus (Andersen, 1905)

LEAST CONCERN in South Asia

Synonyms: *Rhinolophus rouxii sinicus* Andersen, 1905

Common name: Andersen's Rufous Horseshoe Bat

Family: Rhinolophidae

Habit: Insectivorous, forest dweller with rainfall, colonial (1-100 individuals)

Habitat: Montane forests.

Niche: Humid caves, tunnels, wells, hollow trees, temples, houses. 500-2769m

Distribution of the Taxon
Global: China, India, Nepal

South Asia:
India: Arunachal Pradesh, Himachal Pradesh, Sikkim, Nagaland, West Bengal, Uttaranchal, Meghalaya
Nepal

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 20. Contiguous

Habitat status: Decrease in area < 10% likely in the next 5 years due to habitat alteration. Decrease in quality due to human activities.

Threats:
Threats to the taxon: Habitat loss and habitat alterations. Threats influencing the status of the taxa are not understood, not reversible and have not ceased to be a threat.

Data source: Indirect information; Inferred; range of opinion

Population
Generation time: 4-6 years

Mature individuals: > 10,000. Mature individuals likely to decline in the future by <5% in the future.

Population trends: Not known

Data source: Literature; estimated and minimum/maximum, based on its wide distribution and large colony size.

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
India: Least Concern
Nepal: Least Concern

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments:
Rhinolophus sinicus was upgraded to species level from *Rhinolophus rouxii sinicus* by Nikki Thomas basing on mtDNA analysis (Srinivasulu; Bates). Srinivasulu & Srinivasulu, 2001 and Thomas, 2000 describe its upgradation from subspecies level of *Rhinolophus rouxii sinicus* to *Rhinolophus sinicus.*

Sources
Hutson *et al*., 2001; Thomas 2000, Srinivasulu & Srinivasulu, 2001

Compilers
S. Mistry, M. Muni, K.R. Senacha, T.K. Shrestha, K.S. Sreepada, C. Srinivasulu, K.M. Swe

Reviewers
Rest of the participants

Recent Field Studies
Nikki M. Thomas in its range in the Himalayas, India, 1999-2000, Rhinolophids of Africa and Asia.

Distribution in South Asia from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Arunachal Pradesh			
Siki	27º 46	93º 37	Bates & Harrison, 1997
Himachal Pradesh			
Solon	30º 54	77º 06	Bates & Harrison, 1997
Uttaranchal			
Dhakuri	30º 00	79º 56	Bates & Harrison, 1997
Mussorie	30º 26	78º 04	Bates & Harrison, 1997
West Bengal			
Ajodhya	23º 20	86º 24	
Darjeeling	27º 02	88º 20	
Nimbong	27º 04	88º 25	
Pashok	27º 04	88º 24	
Sikkim			
Tashiding	27º 46	88º 37	
Nagaland			
Takubama	25º 37	94º 32	
Meghalaya			
Cherrapunji	25º 16	91º 42	
Mawphlang	25º 25	92º 13	
NEPAL			
Godavari	27º 34	85º 24	
Num	27º 33	87º 17	
Parchung	28º 01	85º 12	
Pulchowki	27º 42	85º 12	
Sipuri	-	-	
Thankot	27º 42	85º 17	

Rhinolophus subbadius Blyth, 1844

VULNERABLE in South Asia

Synonyms: *Rhinolophus garoensis* Dobson, 1872

Common names: Bengali: *Sadharan Gorakhuri Chamchika*; English: Chestnut Horseshoe Bat, Little Nepalese Horse-shoe bat

Family: Rhinolophidae

Habit: Insectivorous

Habitat: Caves, dense jungles, bamboo forest

Niche: 1231m.

Distribution
Global: China, Bangladesh, India, Nepal, Vietnam

South Asia:
Bangladesh: Sylhet, Moulvi Bazar District
India: Arunachal Pradesh, Meghalaya
Nepal

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: < 2,000 sq km.

Locations/subpopulations: 6.

Habitat status: Habitat loss, change in quality of habitat.

Data source: Literature; Inferred.

Threats
Threats to the taxon: Habitat loss, deforestation, human interference, mining might also be a threat. The influence on the population not well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: < 10,000. Mature individuals declined in the past by <10% in the last 10 years and likely to decline in the future by <10% in the next 10 years.

Population trend: Decline in the past suspected and future decline predicted.

Data source: Museum record

Red List 2001 Status derived in the workshop

Ver. 3.1: VULNERABLE B2ab(iii)

Restricted area of occupancy and threats to habitat, which has an impact on population trend.

National Status

Bangladesh: Vulnerable	B2ab(iii)
India: Vulnerable	B2ab(iii)
Nepal: Endangered	B2ab(iii)

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Data Deficient
Microchiroptera Action Plan (Global): Data Deficient
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments
Sinha, 1973 worked on the museum collections. Taxonomic status of this species not clear.

Sources
Bates & Harrison, 1997; Blyth, 1844; Dobson, 1872; Das *et al.,*1995; Hutson *et al*., 2001; Khan, 2001; Shreshta, 1997

Compilers
A. Ali, P.J.J. Bates, Y.P. Sinha, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
Shreshtra in Pokhra Valley, Nepal, 1997, field study.

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
Sylhet			Khan, 2001
Moulvi Bazar			Khan, 2001
INDIA			
Arunachal Pradesh			
Khalaktang	27º 30	92º 21	Bates & Harrison, 1997
Meghalaya			
Cherrapunji	25º 16	91º 42	Bates & Harrison, 1997
Garo hills	25º 32	90º 15	Bates & Harrison, 1997.
Mawphlang	25º 25	92º 13	Bates & Harrison, 1997
Siju Cave	25º 32	75º 47	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Nam Tamai valley	27º 42	97º 54	Bates & Harrison, 1997
NEPAL			
Kathmandu	27º 42	85º 12	Bates & Harrison, 1997
Pokhra valley	28º 14	83º 58	Subtropical forest Deforestation and mining Shreshta, 1997

Rhinolophus trifoliatus Temminck, 1834

VULNERABLE in South Asia

Common names: Trefoil Horseshoe Bat

Family: Rhinolophidae

Habit: Insectivorous

Habitat: Dense evergreen jungle.

Niche: Thick foliage with dense evergreen jungle

Distribution
Global: Borneo, India, Java, Myanmar, Thailand

South Asia:
India: Assam, West Bengal, Eastern coast of India

Extent of Occurrence: < 20,000 sq km.

Area of Occupancy: < 2,000 sq km.

Locations/subpopulations: 3 / 3. Fragmented.

Habitat status: Decline in habitat due to logging, tourism, fragmentation.

Data source: Indirect information, Literature; Suspected; inferred.

Threats
Threats to the taxon: Habitat loss. The influence on the population not well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: Not known

Population trend: Not known

Data source: Museum record

Red List 2001 Status derived in the workshop

Ver. 3.1: VULNERABLE B1ab(iii)+2ab(iii)

Restricted distribution, few fragmented locations and threats to habitat and quality.

1997 C.A.M.P. (Ver. 2.3): Data Deficient

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, ecology

Management: Monitoring, habitat management

Captive breeding: Techniques not known at all.

Comments
Widespread distribution but no data on whether the species has a contigous or fragmented distribution. Limited number of locations, no recent records despite some surveys in its current range. It is known to live in dense evergreen forest a habitat type that is under threat in North eastern India and Myanmar.

Sources
Bates & Harrison, 1997; Hutson *et al*., 2001; Sinha, 1973; Temminck, 1834

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Assam			
Sibsagar	26º 58	94º 39	Sinha Y.P., 1973
West Bengal			
Darjeeling	27º 02	88º 20	Sinha Y.P., 1973
Eastern coast of India	-	-	Blanford (1888-91) stated this location, but gave no details Bates & Harrison, 1997

Rhinolophus yunanensis Dobson, 1872

VULNERABLE in South Asia

Common names: Asian Horseshoe Bat, Dobson's Horse-shoe Bat

Family: Rhinolophidae

Habitat: Dense hill jungles, bamboo jungles

Niche: 1600m.

Distribution
Global: China, India, northern Myanmar, Thailand

South Asia:
India: Arunachal Pradesh, Mizoram

Myanmar (Northern)

Extent of Occurrence: < 20,000 sq km.

Area of Occupancy: < 2,000 sq km. Literature; inferred.

Locations/subpopulations: 3. Fragmented.

Habitat status: Habitat loss due to logging, fragmentation and illegal encroachments.

Data source: Literature, indirect information; Observed, inferred.

Threats
Threats to the taxon: Habitat loss.

Population
Generation time: 4-6 years

Mature individuals: < 2,500

Population trend: Not known

Data source: Literature, indirect information; Inferred

Red List 2001 Status derived in the workshop

Ver. 3.1: VULNERABLE B1ab(iii)+2ab(iii)

Only a few locations in South Asia and loss of habitat can deplete numbers in this specialized bat.

1997 C.A.M.P. (Ver. 2.3): Data Deficient

Uncertainty
Assessed based on evidence, inference, precaution and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Lower Risk near threatened
Microchiroptera Action Plan (Global): Lower Risk near threatened
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, ecological studies, taxonomy.

Management: Monitoring

Captive breeding: Techniques not known at all.

Comments
Widespread distribution in Myanmar. Conservative estimate of population. It is a little known species but with extensive range in Myanmar. Revision in taxonomy suggested (Sinha).

Sources
Bates & Harrison, 1997; Dobson, 1872; Hutson *et al*., 2001

Compilers
A. Ali, Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia and Myanmar from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Arunachal Pradesh			
Dening	28º 00	96º 17	Bates & Harrison, 1997
Mizoram			
Tipai Mukhi	24º 14	93º 30	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Kajihtu	26º 18	97º 50	Bates & Harrison, 1997
Karen hills	19º 30	97º 12	Bates & Harrison, 1997
Mahtum	26º 06	97º 58	Bates & Harrison, 1997
Nam Tamai Valley	27º 42	97º 54	Bates & Harrison, 1997

Rhinopoma hardwickii Gray, 1831

LEAST CONCERN in South Asia

Common names: Bengali: *Chhoto Indur-lenji Badur*; English: Lesser Mouse-tailed Bat

Family: Rhinopomatidae

Habit: Colonial

Habitat: Wide crevices, temple

Niche: Old ruins, tunnels, buildings, dark sites in crevices. Up to 108m.

Distribution
Global: Afghanistan, Arabia, Bangladesh, India, Iran Myanmar, Morroco, Mauritania to East Africa, Niger, Pakistan

South Asia:
Bangladesh: Southwestern
India: Andhra Pradesh, Bihar, Gujarat, Jharkhand, Karnataka, Madhya Pradesh, New Delhi, Orissa, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal
Pakistan: NWFP, Punjab, Sind

Afghanistan

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many

Habitat status: Stable

Data source: Literature, Indirect information; Inferred.

Threats
Threats to the taxon: Habitat loss, pollution, chemical, pesticides.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Not known

Data source: Field study, museum record; Inferred.

Recent Field Studies
Sinha, Gujarat, 1970;, Rajasthan, 1972, Bihar, 1978-79;
Usman, Madurai, 1978-81;
Bates *et al.,* Tamil Nadu, Gujarat, 1992;
M.S. Pradhan, Tadoba National Park, Maharashtra, 1996
G. Marimuthu, Madurai, India, 1992-93, Population study
C. Srinivasulu, Hyderabad, India, since 1995, Biodiversity

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
Bangladesh: Least Concern
India: Least Concern
Pakistan: Least Concern

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Kanha National Park, Madhya Pradesh.

Recommendations
Research: Survey

Management: Monitoring

Comments
Widely distributed.

Sources
Bates & Harrison, 1997; Gray, 1831; Harshey & Chandra, 2001; Hutson *et al*., 2001

Compilers
P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, H. Raghuram, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Distribution in South Asia and Afghanisatn from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Between Darunta and Bisut	-	-	Bates & Harrison, 1997
Cha Waki Sarkani	-	-	Bates & Harrison, 1997
Hadda	-	-	Bates & Harrison, 1997
Jalalabad	34º 26	70º 25	Bates & Harrison, 1997
Katar	-	-	Bates & Harrison, 1997
Nurgul	-	-	Bates & Harrison, 1997
Tschambel/Dewagall	-	-	Bates & Harrison, 1997
Tut-Tangai	-	-	Bates & Harrison, 1997
BANGLADESH			
Southwestern			Khan, 2001
Sunderbans			Khan, 2001
INDIA			
Andhra Pradesh			
Hyderabad	25º 24	68º 22	Old houses Pollution, pesticides, loss of (roosting) habitats C. Srinivasulu, 1995 onwards
Koduru	13º 58	79º 14	Bates & Harrison, 1997
Palkonda Hills	13º 50	79º 00	Bates & Harrison, 1997
Bihar			
Bhojpur	25º 34	84º 40	Bates & Harrison, 1997
Gaya	24º 48	85º 00	Bates & Harrison, 1997
Munger	24º 57	86º 14	Bates & Harrison, 1997
Gujarat			
Ahmedabad	23º 03	72º 40	Bates & Harrison, 1997
Anand	22º 34	73º 01	Bates & Harrison, 1997
Bhuj	23º 12	69º 54	Bates & Harrison, 1997
Danta	24º 13	72º 50	Bates & Harrison, 1997
Junagadh	21º 31	70º 28	Bates & Harrison, 1997
Lunwa	-	-	Bates & Harrison, 1997
Palanpur	24º 12	72º 29	Bates & Harrison, 1997
Rajkot	22º 18	70º 56	Bates & Harrison, 1997
Vankaneer	22º 37	70º 56	Bates & Harrison, 1997
Vedtial	-	-	Bates & Harrison, 1997
Jharkhand			
Giridih	-	-	Bates & Harrison, 1997
Karnataka			
Badami	15º 58	75º 45	Bates & Harrison, 1997
Chitradurga	-	-	K.S. Sreepada
Gadag	15º 26	75º 42	Bates & Harrison, 1997
Pattadkal	16º 00	75º 47	Bates & Harrison, 1997
Vijaynagar	15º 20	76º 28	Bates & Harrison, 1997
Madhya Pradesh			
Balaghat	-	-	Harshey & Chandra, 2001
Ghatigaon	26º 03	77º 56	Bates & Harrison, 1997
Gwalior	26º 12	78º 09	Bates & Harrison, 1997; Harshey & Chandra, 2001
Jabalpur	23º 10	79º 59	Bates & Harrison, 1997; Harshey & Chandra, 2001
Kanha National Park	-	-	Harshey & Chandra, 2001
Mandla	-	-	Harshey & Chandra, 2001
Morar	26º 15	80º 14	Bates & Harrison, 1997
Narsingarh	24º 00	79º 29	Bates & Harrison, 1997
Orcha	25º 21	78º 38	Bates & Harrison, 1997
New Delhi			
New Delhi	28º 37	77º 13	Bates & Harrison, 1997
Orissa			
Bhubaneswar	20º 13	85º 50	Bates & Harrison, 1997
Udayagiri	20º 06	84º 32	Bates & Harrison, 1997
Rajasthan			
Ajmer	26º 29	74º 40	Bates & Harrison, 1997
Bundi	25º 28	75º 42	Bates & Harrison, 1997
Dungarpur	23º 53	73º 48	Bates & Harrison, 1997
Jaipur	26º 53	75º 50	Bates & Harrison, 1997
Jhalawar	24º 32	76º 12	Bates & Harrison, 1997
Jhunjhunu	28º 05	75º 30	Bates & Harrison, 1997
Jodhpur	26º 18	73º 08	Bates & Harrison, 1997
Nagaur	27º 12	73º 48	Bates & Harrison, 1997
Nasirabad	26º 16	74º 42	Bates & Harrison, 1997
Tamil Nadu			
Dharmapuri range	12º 11	78º 07	Bates & Harrison, 1997
Kanavi Katha Bootham	-	-	Bates & Harrison, 1997
'Madras'	-	-	Probably district not city Bates & Harrison, 1997
Madurai	09º 58	78º 10	Tunnel in a building (MKU Campus) Hot weather, disturbance by squirrels G. Marimuthu, 1992-93 Bates & Harrison, 1997
Marungoor	-	-	Bates & Harrison, 1997
Pannian Malai	09º 55	78º 02	Caves, crevices Human interference K. Usman, J. Habersetzer, 1978-81; 1978-79 Bates & Harrison, 1997
Uttar Pradesh			
Agra	27º 09	78º 00	Bates & Harrison, 1997
Allahabad	25º 57	81º 50	Bates & Harrison, 1997
Fatehpur Sikri	27º 06	77º 39	Bates & Harrison, 1997
Giridih	24º 10	86º 20	Bates & Harrison, 1997
Pratabgarh	25º 34	81º 59	Bates & Harrison, 1997
Rohtas	24º 40	83º 59	Bates & Harrison, 1997
West Bengal			
Kolkata	22º 35	88º 21	Bates & Harrison, 1997
PAKISTAN			
NWFP			
Amb	34º 18	72º 51	Bates & Harrison, 1997
Punjab			
Ara	-	-	Bates & Harrison, 1997
Chitti Dil	-	-	Bates & Harrison, 1997
Rohtas	32º 58	73º 36	Bates & Harrison, 1997
Sakesar	32º 33	71º 57	Bates & Harrison, 1997
Sind			
Karachi	24º 51	67º 02	Bates & Harrison, 1997
Karchat Hills	25º 46	67º 44	Bates & Harrison, 1997
Landhi	24º 51	67º 16	Bates & Harrison, 1997

Rhinopoma microphyllum (Brünnich, 1782)

LEAST CONCERN in South Asia

Synonyms: *Vespertilio microphyllus* Brunnich, 1782
Rhinopoma microphyllum kinneari Wroughton, 1912

Common names: Bengali: *Indur-lenji Chamchika*; English: Greater Mouse-tailed Bat

Family: Rhinopomatidae

Habit: Colonial.

Habitat: Desert regions.

Niche: Old ruins, buildings, tunnels, caves; up to 100m.

Distribution
Global: Afghanistan, Arabia, Bangladesh, India, Iran, North Africa, Pakistan, Sumatra, Thailand

South Asia:
Bangladesh: Northern, eastern and southeastern
India: Andhra Pradesh, Bihar, Gujarat, Madhya Pradesh, Maharashtra, New Delhi, Orissa, Rajasthan, Tamil Nadu, Uttar Pradesh
Pakistan: Baluchistan, NWFP, Punjab, Sind

Afghanistan

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many

Habitat status: Stable

Data source: Literature, field studies; Oberved, inferred.

Threats
Threats to the taxon: Human interference, habitat loss.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Not known

Data source: Literature, field studies; Oberved, inferred

Recent Field Studies
Sinha, Rajasthan, 1972-74, Gujarat, 1976
Senacha, Rajasthan, 2001 till date.

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
Bangladesh: Least Concern
India: Least Concern
Pakistan: Least Concern

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, genetic research; taxonomic research

Management: Monitoring

Comments
The population in some parts of Rajasthan is increasing (Sinha). Over growth of *Prosopis juliflora* at the entrance of the tunnels in which this bat occurs is a possibly affecting the population in Rajasthan (Senacha).

Sources
Bates & Harrison, 1997; Brunnich, 1782; Harshey & Chandra, 2001; Hutson *et al*., 2001; Khan, 2001; Wroughton, 1912

Compilers
A.C. Girish, J.K. Immanuel, S. Kandula, V.S. Korad, C.D. Koya, G. Nair, P.T. Nathan, A. Nobel, J.K. Raj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Distribution in South Asia and Afghanistan from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Chak naur	-	-	Bates & Harrison, 1997
Chak wki sarkani	-	-	Bates & Harrison, 1997
Chamchir cave	-	-	Bates & Harrison, 1997
Dilaram	32º 11	62º 27	Bates & Harrison, 1997
Guerechk	31º 50	64º 35	Bates & Harrison, 1997
Hadda	-	-	Bates & Harrison, 1997
Jalalabad	34º 26	70º 25	Bates & Harrison, 1997
Kala Bnot	-	-	Bates & Harrison, 1997
Khyber Pass	34º 06	71º 05	Bates & Harrison, 1997
Konarha Provinces	-	-	Bates & Harrison, 1997
Kvadjar Largar	-	-	Bates & Harrison, 1997
Maung Loei	-	-	Bates & Harrison, 1997
Moulmai cave	-	-	Bates & Harrison, 1997
near Kandahar	-	-	Bates & Harrison, 1997
Sarban-Qala	-	-	Bates & Harrison, 1997
BANGLADESH			
Northern			Khan, 2001
Eastern			Khan, 2001
Southeastern			Khan, 2001
INDIA			
Andhra Pradesh			
Palkonda	13º 50	79º 00	Bates & Harrison, 1997
Bihar			
Gajhundi	-	-	Bates & Harrison, 1997
Gujarat			
Anand	22º 34	73º 01	Bates & Harrison, 1997
Baroda	22º 19	73º 14	Bates & Harrison, 1997
Bhuj	23º 12	69º 54	Bates & Harrison, 1997
Broach	21º 40	73º 02	Bates & Harrison, 1997
Bundi	25º 28	75º 42	Bates & Harrison, 1997
Junagadh	21º 31	70º 28	Bates & Harrison, 1997
Madhya Pradesh			
Asirgarh	21º 31	76º 22	Bates & Harrison, 1997
Burhanpur	21º 58	76º 08	Bates & Harrison, 1997
Gwalior	26º 12	78º 09	Bates & Harrison, 1997
Nimar (West & East)	-	-	Bates & Harrison, 1997; Harshey & Chandra, 2001
Morar	26º 15	80º 14	Bates & Harrison, 1997
Orcha	25º 21	78º 38	Bates & Harrison, 1997
Sanchi	23º 28	77º 42	Bates & Harrison, 1997
Maharashtra			
Bhamer	21º 04	74º 20	Bates & Harrison, 1997
Bombay	18º 56	72º 51	Bates & Harrison, 1997
Nagpur	21º 10	79º 12	Bates & Harrison, 1997
Songir	21º 02	74º 51	Bates & Harrison, 1997
Usmanabad	-	-	Bates & Harrison, 1997
New Delhi			
New Delhi	28º 37	77º 13	Bates & Harrison, 1997
Orissa			
Bhubaneshwar	20º 13	85º 50	Bates & Harrison, 1997
Rajasthan			
Ajmer	26º 29	74º 40	Bates & Harrison, 1997
Aligarh	25º 58	76º 09	Bates & Harrison, 1997
Barmer	25º 43	71º 25	Bates & Harrison, 1997
Bhimbharak	26º 09	73º 08	Semi desert Human interference Senacha, K.R. 2001
Bundi	25º 28	75º 42	Bates & Harrison, 1997
Dungarpur	23º 53	73º 48	Bates & Harrison, 1997
Jaisalmer	26º 52	70º 55	Bates & Harrison, 1997
Jhalawar	24º 32	76º 12	Bates & Harrison, 1997
Jhunjhunu	28º 05	75º 30	Bates & Harrison, 1997
Jodhpur	26º 18	73º 08	Semi desert Human interference Senacha K.R., 2001 Bates & Harrison, 1997
Mandore tunnel and garden	-	-	Semi desert Human interference, interference due ot overgrowth of *Prosopis juliflora* at tunnel entrance. Senacha, K.R. 2001
Mehrangarh fort	-	-	Semi desert Human interference Senacha, K.R. 2001
Nagaur	27º 12	73º 48	Bates & Harrison, 1997
Pali	25º 46	73º 26	Bates & Harrison, 1997
Sawai Madhopur	26º 00	76º 28	Bates & Harrison, 1997
Shrinathaji Kee haweli	-	-	Semi desert Human interference Senacha, K.R. 2001
Sirohi	24º 53	72º 58	Bates & Harrison, 1997
Tonk	25º 52	75º 50	Bates & Harrison, 1997
Udaipur	27º 40	75º 32	Bates & Harrison, 1997
University press	-	-	Semi desert Human interference Senacha, K.R. 2001
Tamil Nadu			
'Madras'	-	-	Doubtful record. Possibly refers to district Bates & Harrison, 1997
Uttar Pradesh			
Agra	27º 09	78º 00	Bates & Harrison, 1997
Fatehpur Sikri	27º 06	77º 39	Bates & Harrison, 1997
PAKISTAN			
Baluchistan			
Las Bela	-	-	Bates & Harrison, 1997
Sadikabad	28º 18	70º 02	Bates & Harrison, 1997
Qutabpur	29º 54	71º 47	Bates & Harrison, 1997
NWFP			
Amb	34º 18	72º 51	Bates & Harrison, 1997
Malakand Hills	34º 34	71º 57	Bates & Harrison, 1997
Punjab			
Ara	-	-	Bates & Harrison, 1997
Gujrat	32º 34	74º 04	Bates & Harrison, 1997
Jhelum	32º 57	73º 44	Bates & Harrison, 1997
Mailsi	29º 42	72º 12	Bates & Harrison, 1997
Multan	30º 11	71º 26	Bates & Harrison, 1997
Rohtas	32º 58	73º 36	Bates & Harrison, 1997
Sakesar	32º 33	71º 57	Bates & Harrison, 1997
Sind			
Gambat	27º 19	68º 32	Bates & Harrison, 1997
Hyderabad	25º 24	68º 22	Bates & Harrison, 1997
Karachi	24º 51	67º 02	Bates & Harrison, 1997
Karchat Hills	25º 46	67º 44	Bates & Harrison, 1997
Sukkur	27º 42	68º 52	Bates & Harrison, 1997

Rhinopoma muscatellum Thomas, 1903 NT

Synonyms: *Rhinopoma muscatellum seianum* Thomas, 1913

Common names: Small mouse-tailed Bat

Family: Rhinopomatidae

Habit: Insectivorous, small colonies, deserted buildings

Habitat: Dry deserts

Niche: Underground caverns, deserted buildings. 700-1100 m.

Distribution
Global: Afghanistan, India, Iran, Pakistan, Oman, UAE

South Asia:
India: Rajasthan
Pakistan

Afghanistan

Extent of Occurrence: < 5000 sq km.

Area of Occupancy: < 2,000 sq km.

Locations/subpopulations: 4. Contiguous.

Habitat status: No change.

Data source: Literature; inferred.

Threats
Threats to the taxon: None

Population
Generation time: 4-6 years

Mature individuals: < 2,500

Population trend: Not known

Data source: Literature; inferred.

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Status based on the 4 locations reported in South Asia. The Afghan population may be affected due to war.

National Status
India: Near Threatened
Pakistan: Near Threatened

Uncertainty
Assessed based on evidence, inference, precaution and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments
Indian record of Genji specimen reported by Von Cackenbergag and de Vree 1994 needs detailed study. Population number based on limited number of colonies. Colonies of several hundreds were recorded from a locality. Occurs in small colonies and forages across large distances.

Sources
Bates & Harrison, 1997; Hutson *et al*., 2001; Thomas, 1903, 1913; Von Cackenberghe & de Vree, 1994

Compilers
P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, H. Raghuram, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia and Afghanistan from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Dilaram	32º 11	62º 27	48 km west of Dilaram Bates & Harrison, 1997
Kandahar	31º 36	65º 47	19.2 km southwest of Kandahar Bates & Harrison, 1997
INDIA			
Rajasthan			
Genji	23º 42	73º 46	Doubtful record restricted to Coromandal Coast by Van Cackenberghe and de Vries, (1994) but possibly Genji in Rajasthan Bates & Harrison, 1997
PAKISTAN			
Baluchistan			
Sibi	29º 33	67º 54	Bates & Harrison, 1997
Uzhda Ridge	-	-	AMNH: Van Cackenberge & de Vree, 1994 Bates & Harrison, 1997

Rousettus aegyptiacus (E. Geoffroy, 1810) — VULNERABLE in South Asia

Synonyms: *Pteropus aegypticus* E. Geoffroy, 1810
*Rousettus arabic*us Anderson & de Winton, 1902

Common names: Egyptian Fruit Bat

Family: Pteropodidae

Habit: Frugivorous, gregarious

Habitat: Desert / semi arid tracts

Niche: Natural caves, underground irrigation tunnels, open wells, mosques, underside ceilings of tombs. 985m.

Distribution
Global: Africa, Arabia, Iran, middle east, Pakistan, Turkey

South Asia:
Pakistan: Baluchistan, Sind

Extent of Occurrence: 5,001-20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 6 / Not known. Contiguous.

Habitat status: Decrease in area < 10% in the last 5 years due to habitat alterations. Decrease in quality due to habitat due to alteration

Data source: Literature; Inferred.

Threats
Threats to the taxon: Not known.

Population
Generation time: 4-6 years

Mature individuals: < 250

Population trend: Not known

Data source: Literature; estimated; range of opinion.

Red List 2001 Status derived in the workshop

Ver. 3.1: VULNERABLE B1ab(iii); D1

Restricted number of mature individuals, restricted distribution in Pakistan with threats and no known localities in neighbouring Afghanistan.

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Old World Fruit Bats Action Plan: Not Threatened
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments
Taxonomic relationship of *R. aegyptiacus* and *R. leschenaulti* deserves further review. Actual population estimate 240 based on limited distribution and small colony size (approximately 40 individuals) compared to *Rousettus lescenaulti*.

Sources
Anderson, &. De Winton, 1902; Bates & Harrison, 1997; Geoffroy, 1810; Mickleburgh *et al.,* 1992; Roberts, 1977

Compilers
S. Mistry, C. Srinivasulu, K.M. Swe, A. Thabah, Y.P. Sinha

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
PAKISTAN			
Baluchistan			
Lak Bidok	25º 12	66º 45	Bates & Harrison, 1997
Panjg	26º 56	64º 06	Bates & Harrison, 1997
Sind			
Karachi	24º 51	67º 02	Bates & Harrison, 1997
Kiotatta	-	-	Bates & Harrison, 1997
Makli hills	24º 46	67º 57	Bates & Harrison, 1997
Malir	24º 59	67º 13	Bates & Harrison, 1997

Rousettus leschenaulti (Desmarest, 1820) — LEAST CONCERN in South Asia

Synonyms: *Pteropus leschenaulti* Desmarest, 1820
Cynonycteris infuscata Peters, 1873
Cynopterous marginatus, Gray, 1843
Cynopterus affinis Gray, 1843
Eleutherura fusca Gray, 1870
Pteropus pyrivorus Hodgson, 1835
Pteropus seminudus Kelaart, 1850

Common names: Bengali: *Kola Badur*; English: Fulvous Fruit Bat

Family: Pteropodidae

Habit: Colonial

Habitat: Arid area to hot humid forests.

Niche: Caves, wells, man made constructions. Up to 1600m.

Distribution
Global: Bhutan, India, Myanmar, Nepal, Pakistan, Southeast Asia, southern China, Sri Lanka, Vietnam

South Asia:
Bangladesh
Bhutan
India: Andhra Pradesh, Arunachal Pradesh, Bihar, Chhattisgarh, Goa, Gujarat, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Orissa, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttaranchal, Uttar Pradesh, West Bengal
Nepal
Pakistan: NWFP, Punjab, Sind
Sri Lanka: Central Province, North Central Province, North Western Province, Sabaragamuwa Province, Southern Province, Uva Province, Western Province

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many.

Habitat status: Not known

Data source: Field studies, literature; Observed, inferred.

Threats
Threats to the taxon: Exploitation, hunting, tourism.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Not known

Data source: Field study, museum, literature, informal sightings; Observed, inferred

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
Bangladesh: Least Concern
Bhutan: Near Threatened
India: Least Concern
Nepal: Near Threatened
Pakistan: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Old World Fruit Bats Action Plan: Not Threatened
CITES: Not listed

Known presence in Protected Areas
India: Namdapha Biosphere Reserve, Arunachal Pradesh; Nagarhole Wildlife Sanctuary, Karnataka; Sambalpur Wildlife Sanctuary, Orissa; Indravati National Park, Chhattisgarh; Kanha National Park, Madhya Pradesh

Recommendations
Research: Survey

Management: Monitoring

Comments
Colonies as much as 10,000 (Marimuthu). Hunted for meat at Garo hills in Meghalaya (Y.P. Sinha).

Sources
Bates & Harrison, 1997; Desmarest, 1820; Gray, 1870; Harshey & Chandra, 2001; Hodgson, 1835; Kelaart, 1850; Khan, 2001; Mickleburgh *et al.,* 1992; Peters, 1873.

Compilers
A.C. Girish, Immanuel, J.K., S. Kandula, V.S. Korad, C.D. Koya, G. Nair, P.T. Nathan, A. Nobel, J.K. Raj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies

Sinha in Rajasthan, 1980, 81, Gujarat, 1981, Bihar, 1986, Garo hills, 1990-94
Marimuthu in Cheranmahadevi, Tirunelveli, 1993
Bates *et al.,* in Aurangabad, Ellora, Mandoor, Mahabaleswar, 1992.
E.A. A. Shukkur in Kadalundy, Kerala, 1980-2001, Ecology
J. Vanitharani & Marimuthu, Thirnelveli District, Tamil Nadu, 1991-1998, Flight mechanism, bodyweight change and ectoparasites.
J. Prabha & J. Vanitharani, Thirnelveli District, 2000-onwards, Survey of bats in Thirnelveli District and their role in the ecosystem.
H. Raghuram in Thirupulankundram Kambam, 2000-2002, Ecology and Behaviour.
K. Immanuel, J. Balasingh & D.P. Suvamidors in Chammadri, 1997-2000, Population estimation, roost habitat, feeding and parasites.
D.S. Joshi in Mahabaleshwar, 2001, Field study.
Yapa & Digana in Sri Lanka, 1996 onwards, Survey
C. Srinivasulu & B. Srinivasulu in Golconda fort, Hyderabad, 1995 onwards, Population monitoring
B. Srinivasulu & C. Srinivasulu in Hyderabad city environs, 1997 onwards, Monitoring the effects of control netting in grape orchards

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
Chakma Village, southeastern forest			Khan, 2001
Cox's Bazaar	21º 25	90º 20	Bates & Harrison, 1997
Ghazni, Shirpur District			Khan, 2001
Kudum Cave, Whykeong Forest Office	21º 6' 88"	92º 11' 66"	Khan, 2001
Sylhet			Khan, 2001
Sunderbans			Khan, 2001
BHUTAN			
Panjurmane	27º 10	90º 30	Bates & Harrison, 1997
INDIA			
Andhra Pradesh			
Golconda Fort	-	-	Roof of the fort Human interference. C. Srinivasulu & B. Srinivasulu
Hyderabad city environs	-	-	B. Srinivasulu & C. Srinivasulu
Koduru	13º 58	79º 14	Bates & Harrison, 1997
Visakapatanam	17º 42	83º 24	Bates & Harrison, 1997
Arunachal Pradesh			
Namdapha	27º 39	96º 30	Bates & Harrison, 1997
Sei Josa	27º 10	92º 50	Bates & Harrison, 1997
Bihar			
Aurangabad	24º 46	84º 23	Bates & Harrison, 1997
Hazaribag	24º 00	85º 23	Bates & Harrison, 1997
Patna	25º 37	85º 12	Bates & Harrison, 1997
Chhattisgarh			
Bastar	-	-	Harshey & Chandra, 2001
Indravati National Park	-	-	Harshey & Chandra, 2001
Singhbum	23º 30	85º 50	Bates & Harrison, 1997
Goa			
Margao	15º 15	73º 59	Bates & Harrison, 1997
Poinguinan	15º 00	74º 00	Bates & Harrison, 1997
Vaddam Bardez	-	-	Bates & Harrison, 1997
Gujarat			
Baroda	22º 19	73º 14	Bates & Harrison, 1997
Broach	21º 40	73º 02	Bates & Harrison, 1997
Mehmadabad	22º 51	72º 46	Bates & Harrison, 1997
Himachal Pradesh			
Kangra	32º 04	76º 16	Bates & Harrison, 1997
Kulu	31º 59	77º 06	Bates & Harrison, 1997
Mandi	31º 43	76º 55	Bates & Harrison, 1997
Jammu & Kashmir			
Jhajjar Kotli	32º 55	75º 54	Bates & Harrison, 1997
Karnataka			
Belgaum	15º 54	74º 36	Bates & Harrison, 1997
Gersoppa	14º 12	74º 42	Bates & Harrison, 1997
Hampi	15º 20	76º 25	Bates & Harrison, 1997
Krishnapur	15º 20	74º 22	Bates & Harrison, 1997
Muroor	14º 26	74º 29	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Nagarhole	11º 58	76º 01	Bates & Harrison, 1997
Virajpet	12º 12	75º 46	Bates & Harrison, 1997
Kerala			
Ernakulam	10º 00	76º 16	Bates & Harrison, 1997
Kadalundy	-	-	Dilapidated brick-factory building Human interference, loss of habitat, poisoning and stoning. E.A. Abdul Shukkur, 1998-2001
Mylandy	-	-	Bates & Harrison, 1997
Silent Valley	10º 46	76º 42	Bates & Harrison, 1997
Suchundrum	-	-	Bates & Harrison, 1997
Terur	-	-	Bates & Harrison, 1997
Trivandrum	08º 41	76º 57	Bates & Harrison, 1997
Madhya Pradesh			
Balaghat	-	-	Harshey & Chandra, 2001
Jabalpur	-	-	Harshey & Chandra, 2001
Kanha National Park	-	-	Harshey & Chandra, 2001
Lamataghat	23º 10	79º 59	Bates & Harrison, 1997
Mandla	-	-	Harshey & Chandra, 2001
Mandu	22º 22	75º 24	Bates & Harrison, 1997
Tanakpur	29º 04	80º 06	Bates & Harrison, 1997
Umaria	-	-	Harshey & Chandra, 2001
Maharashtra			
Alibag	18º 38	72º 55	Bates & Harrison, 1997
Aurangabad	19º 52	75º 22	Bates & Harrison, 1997
Chikalda	21º 29	77º 12	Bates & Harrison, 1997
Elephanta	18º 54	72º 58	Bates & Harrison, 1997
Ellora	20º 04	75º 15	Bates & Harrison, 1997
Ghatmatha	17º 43	73º 42	Bates & Harrison, 1997
Jogeshwari	19º 12	72º 58	Bates & Harrison, 1997
Kandri	21º 27	79º 24	Bates & Harrison, 1997
Kanheri	19º 13	72º 59	Bates & Harrison, 1997
Khandala	18º 45	73º 25	Bates & Harrison, 1997
Mahabaleshwar	17º 56	73º 42	Open space in old building. Climate, disease Joshi, 2001; Bates & Harrison, 1997
Mansar	21º 27	79º 24	Bates & Harrison, 1997
Marathwada	-	-	Bates & Harrison, 1997
Poona	18º 34	73º 58	Bates & Harrison, 1997
Ratnagiri	17º 00	73º 20	Bates & Harrison, 1997
Satara	17º 43	74º 05	Bates & Harrison, 1997
Meghalaya			
East Garo Hills	25º 37	90º 29	Bates & Harrison, 1997
East Khasi Hills	25º 20	91º 55	Bates & Harrison, 1997
Jaintia Hills	25º 26	93º 14	Bates & Harrison, 1997
South Garo Hills	25º 32	90º 14	Bates & Harrison, 1997
Orissa			
Cuttack	20º 26	85º 56	Bates & Harrison, 1997
Keonjhar	22º 01	86º 21	Bates & Harrison, 1997
Puri	19º 50	85º 15	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Sambalpur	21º 28	84º 04	Bates & Harrison, 1997
Sundergarh	22º 04	84º 08	Bates & Harrison, 1997
Rajasthan			
Jodhpur	26º 18	73º 08	Bates & Harrison, 1997
Gagaron Ka Kila	-	-	Bates & Harrison, 1997
Nasirabad	26º 16	74º 42	Bates & Harrison, 1997
Sikkim			
17km WSW Mangam	-	-	Bates & Harrison, 1997
Tamil Nadu			
Cheranmahadevi	8º 44	74º 42	Temples and church towers Temple renovation J. Vanitharani, 1999-2002
Cumbum	09º 44	77º 19	wells Raghuram & Gopukumar, 2000-2002
Madras	13º 05	80º 18	Bates & Harrison, 1997
Morappanadu	-	-	Church tower no threat
Nanganeri	-	-	temple
Palayamkottai	8º 44	77º 42	Temples and caves Human interference P.T. Nathan 1991-2002, J. Vanitharani, 1999-2002.
Senbagamanallur	-	-	temple
Sri Vaikundam	08º 40	77º 56	temple
Suruli Hills	-	-	Plains and horticultural lands N. Singaravelan 2000-2002
Theni	-	-	Wells Raghuram & Gopukumar, 2000-2002
Thirukkurgudi	-	-	temple
Thirupparangundram	9º 58	78º 10	Temples Human interference, hunting (for medicine), powelines, pathogens, predation, fire and hurricanes. Raghuram & Gopukumar, 2000-2002
Vannathiparai	09º 44	77º 19	Bates & Harrison, 1997
Venkatachalam	-	-	Wells Raghuram & Gopukumar, 2000-2002
Zakampatti	-	-	Bates & Harrison, 1997
Tripura			
Kanchanpur	23º 50	91º 50	Bates & Harrison, 1997
Uttaranchal			
Dehra Dun	30º 19	78º 03	Bates & Harrison, 1997
Kaladungi	29º 13	79º 29	Bates & Harrison, 1997
Naini Tal	29º 22	76º 26	Bates & Harrison, 1997
Pauri	30º 08	78º 48	Bates & Harrison, 1997
Pithoragarh	29º 35	80º 12	Bates & Harrison, 1997
Uttar Pradesh			
Almora	29º 36	79º 40	Bates & Harrison, 1997
Chunar	25º 08	82º 54	Bates & Harrison, 1997
West Bengal			
Bankura	23º 14	87º 05	Bates & Harrison, 1997
Darjeeling	27º 02	88º 20	Bates & Harrison, 1997
Hugli	22º 52	88º 21	Bates & Harrison, 1997
Jalpaiguri	26º 30	88º 50	Bates & Harrison, 1997
Kolkata	22º 35	88º 21	Bates & Harrison, 1997
Medinipur	22º 25	87º 24	Bates & Harrison, 1997
South 24-parganas	22º 22	88º 25	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
MYANMAR (NORTHERN)			
Mingun	22º 00	95º 58	Bates & Harrison, 1997
Moulmein	16º 30	97º 39	Bates & Harrison, 1997
Pagan	21º 07	94º 53	Bates & Harrison, 1997
Pegu	17º 18	96º 31	Bates & Harrison, 1997
NEPAL			
Boitari	28º 01	84º 37	Bates & Harrison, 1997
Kathmandu	27º 42	85º 12	Bates & Harrison, 1997
PAKISTAN			
NWFP			
Malakand	34º 34	71º 57	Bates & Harrison, 1997
Punjab			
Lahore	31º 34	74º 22	Bates & Harrison, 1997
Muzzaffarabad	34º 22	73º 28	Bates & Harrison, 1997
Sialkot	32º 30	74º 32	Bates & Harrison, 1997
Sind			
Karachi	24º 51	67º 02	Bates & Harrison, 1997
Malir	24º 59	67º 13	Bates & Harrison, 1997
SRI LANKA			
Central Province			
Gammaduwa	07º 32	80º 41	Bates & Harrison, 1997
Kandy	07º 17	80º 40	Bates & Harrison, 1997
Matale	07º 28	80º 37	Bates & Harrison, 1997
Pallama	07º 32	80º 39	Bates & Harrison, 1997
Peradeniya	07º 15	80º 40	Bates & Harrison, 1997
Pundaluoya	07º 01	80º 43	Bates & Harrison, 1997
Urugala	07º 17	81º 00	Bates & Harrison, 1997
North Central Province			
Anuradhapura	08º 20	80º 25	Caves, buildings and mines Yapa & Digana, 1996-2000 Bates & Harrison, 1997
Galkulama	-	-	Bates & Harrison, 1997
North Western Province			
Kalpitiya	07º 27	80º 03	Bates & Harrison, 1997
Kurnegala district			Caves, buildings and mines Yapa & Digana, 1996-2000
Sabaragamuwa Province			
Bogala	7º 57	80º 15	Bates & Harrison, 1997
Pagoda	06º 44	80º 26	Bates & Harrison, 1997
Rathnapara district			Caves, buildings and mines Yapa & Digana, 1996-2000
Southern Province			
Hambantota	06º 07	81º 07	Bates & Harrison, 1997
Mapalagama	06º 15	80º 16	Bates & Harrison, 1997
Uva Province			
Badulla district			Caves, buildings and mines Yapa & Digana, 1996-2000
Koslanda	06º 45	81º 00	Bates & Harrison, 1997
Passara	06º 58	81º 09	Bates & Harrison, 1997
Western Province			
Bulathsinghala	06º 39	80º 13	Bates & Harrison, 1997
Colombo	06º 55	79º 52	Caves, buildings and mines Yapa & Digana, 1996-2000 Bates & Harrison, 1997
Mount Laviniya	06º 50	79º 52	Bates & Harrison, 1997

Scotoecus pallidus (Dobson, 1876) — NEAR THREATENED

Synonyms: *Scotophilus pallidus* Dobson, 1876
?*Vespertilio noctulinus* I. Geoffroy, 1831

Common names: Desert Yellow Bat

Family: Vespertilionidae

Habit: Crevices of buildings, tree holes, insectivorous

Habitat: Dry tropical woods, urban areas, buildings, scrub vegetation

Niche: Crevices of deserted buildings, tree holes. Up to 2500m.

Distribution
Global: Endemic to South Asia (India, Bangladesh, Pakistan)

South Asia:
India: Bihar, Himachal Pradesh, Jharkhand, Maharashtra, Uttar Pradesh, West Bengal
Pakistan: Punjab, Sind

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: > 20. Fragmented.

Habitat status: Loss of habitat, change in quality of habitat.

Data source: Field study, literature; Observed, inferred

Threats
Threats to the taxon: Human interference, alien invasive species, habitat loss. The influence on the population well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Not known

Data source: Indirect information; inferred; hypothetical

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Known in relatively few sites and is prone to threats.

National Status
India: Near Threatened
Pakistan: Near Threatened

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, life history, ecological studies

Management: Monitoring, habitat management, public awareness

Comments
This endemic bat appears at the moment to require no specific conservation or management. Recorded for the first time in western India. Pune records need to be taxonomically verified.
Population numbers based on the number of locations and roosting sites. Around 10 individuals present in a colony. Because of urbanization, breaking down of old buildings and sometimes large trees there is every likelihood of decline in population in western India (Pune). The status was derived considering the number of mature individuals, fragmented population and probable threats. It is the only species of the genus in the region.

Sources
Bates & Harrison, 1997; Dobson, 1876; Geoffroy, 1831; Hutson *et al*., 2001; Korad and Yardi (In prep.); Sinha, 1986; Wilson and Reeder, 1993

Compilers
D.P.S. Doss, V. Elangovan, A.M. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, K. Nathar, P. Patiath, P.J.E. Pandaranayaka, M.S. Pradhan, Y.S. Priya, Y.P. Sinha, K.D. Yardi

Reviewers
Rest of the participants

Recent Field Studies
ZSI, Punjab 1922, U.P.
V.S. Korad, K.D. Yardi, Pune, Maharashtra, 1999, Faunistic survey of bats from Pune UGC, minor project to Fergusson College, Pune

Distribution in South Asia from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Bihar			
Bhagalpur	25º 14	86º 59	Crevices from deserted buildings in towns and villages Bates & Harrison, 1997
Darbhanga	26º 10	85º 54	Crevices from deserted buildings in towns and villages
Muzaffarpur	26º 07	85º 23	Urban areas (11.5) Crevices from deserted buildings in towns and villages Loss of habitat, Human interference
Himachal Pradesh			
Kulu Valley	31º 59	77º 06	Bates & Harrison, 1997
Jharkhand			
Santal Pargana	24º 13	87º 40	Urban areas (11.5) Crevices from deserted buildings in towns and villages Loss of habitat, Human interference
Maharashtra			
Pune (?)	18º 31	73º 51	Tree holes
			Loss of habitat, deforestation Korad, V. S. & Yardi, K. D.
Uttar Pradesh			
Lucknow	26º 50	80º 54	Bates & Harrison, 1997
West Bengal			
Kolkata	22º 35	88º 21	
PAKISTAN			
Punjab			
Mian Mir	31º 34	74º 22	type loc. of *pallidus*
Muzaffargarh	30º 04	71º 12	
Sialkot	32º 30	74º 32	
Sind			
Kashmor	28º 25	69º 35	
Khaipur Nathan Shah	27º 06	68º 44	
Mirpur	28º 12	68º 48	
Naundero	27º 40	68º 21	
near Shikarpur	-	-	

Scotomanes ornatus (Blyth, 1851)

LEAST CONCERN in South Asia

Synonyms: *Nycticejus ornatus* Blyth, 1851
?Nycticejus emarginatus Dobson, 1851
Nycticejus nivicolus Hodgson in Horsfield, 1855
Scotomanes ornatus imbrensis Thomas, 1921

Common names: Harlequin Bat

Family: Vespertilionidae

Habitat: Warm valleys

Distribution
Global: China, India, Bangladesh, Myanmar, Thailand, Vietnam

South Asia:
Bangladesh
India: Arunachal Pradesh, Manipur, Meghalaya, Nagaland, Sikkim, West Bengal
Nepal

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many.

Habitat status: Habitat loss

Data source: Literature; inferred.

Threats
Threats to the taxon: Habitat loss

Population
Generation time: 4-6 years

Mature individuals: < 2,500

Population trend: Not known

Data source: Field study, museum record

Recent Field Studies
BNHS, West Bengal, Assam 1915-20; ZSI, West Bengal 1863
Nath in Kashmir 1987

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

Population size cannot be determined; the number of localities and its fairly widespread distribution suggests that at the moment this species is not threatened.

National Status
Bangladesh: Near Threatened
India: Least Concern
Nepal: Near Threatened

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Lower Risk near threatened
Microchiroptera Action Plan (Global): Lower Risk near threatened
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, ecology

Management: Monitoring, habitat management

Captive breeding: Techniques not known at all.

Comments
Previously a synonym of *S. emarginatus*, it is considered to be a separate species. Locations and subpopulations based on fairly extensive distribution in northeastern India and Myanmar. It is widespread but apparently not a common species.

Sources
Bates & Harrison, 1997; Blyth, 1851; Dobson, 1871; Horsfield, 1855; Hutson *et al*., 2001; Khan, 2001; Thomas, 1921

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewer
Rest of the participants

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
Sylhet, northeastern forest			Khan, 2001
INDIA			
Arunachal Pradesh			
Dening	28º 00	96º 17	Bates & Harrison, 1997
Assam			
Assam			BNHS collections
Manipur			
16 miles north Imphal	-	-	Bates & Harrison, 1997
Meghalaya			
Cherrapunji	25º 16	91º 42	Bates & Harrison, 1997
Daragiri	25º 30	90º 20	Bates & Harrison, 1997
Jowai	25º 26	92º 14	Bates & Harrison, 1997
Konshnong	25º 30	92º 01	Bates & Harrison, 1997
Nagaland			
Head Iril Valley	-	-	Bates & Harrison, 1997
Kohima	25º 42	94º 15	Bates & Harrison, 1997
Sikkim			
Sikkim	-	-	Bates & Harrison, 1997
West Bengal			
Pashok	27º 04	88º 24	Bates & Harrison, 1997
Singla	27º 02	88º 19	Bates & Harrison, 1997
Sivok	26º 50	88º 32	Bates & Harrison, 1997
Tong Song	27º 04	88º 24	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Mahtum	26º 06	97º 58	Bates & Harrison, 1997
Nam Tamai Valley	27º 42	97º 54	Bates & Harrison, 1997
Sumka Uma	25º 57	97º 49	Bates & Harrison, 1997
NEPAL			
Sankhuwasabha	27º 33	87º 17	Bates & Harrison, 1997

Scotophilus heathii Horsfield, 1831

LEAST CONCERN in South Asia

Synonyms: *Nycticejus luteus* Blyth, 1851
Scotophilus flaveolus Horsfield, 1851
Vespertilio belangeri Geoffroy, 1834

Common names: Bengali: *Bora Rongila Chamchika*; English: Asiatic Greater Yellow House Bat, Common Yellow Bat

Family: Vespertilionidae

Habit: Colonial

Niche: Crevices, tree holes, hollows, leaf stems, under leaves

Distribution
Global: Afganistan, Bangladesh, China, India, Nepal, Myanmar, Sri Lanka, Vietnam

South Asia:
Bangladesh
India: Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Meghalaya, Orissa, Nagaland, Punjab, Rajasthan, Tamil Nadu, Uttaranchal, Uttar Pradesh, West Bengal
Nepal
Pakistan: NWFP, Punjab
Sri Lanka: Central Province, Northern Province, North Western Province, Uva Province, Western Province, Southern Province

Afghanistan
Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many.

Habitat status: Habitat loss

Data source: Literature, field studies; Observed, inferred.

Threats
Threats to the taxon: Habitat loss

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Not known

Data source: Field study

Recent Field Studies
Hebersetzer, Madurai 1978
Sinha, Rajasthan 1970-73, Assam, 1988, Bihar, 1996
Balasingh, Tirunelveli 1992
Yapa & Digana, Sri Lanka, 1996-99. Ecological survey

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
Bangladesh: Near Threatened
India: Least Concern
Nepal: Least Concern
Pakistan: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments

Sources
Bates & Harrison, 1997; Blyth, 1851; Geoffroy, 1831-1834; Harshey & Chandra, 2001; Horsfield, 1831; Horsfield, 1851; Hutson *et al*., 2001; Khan, 2001

Compilers
A.C. Girish, Immanuel, J.K., S. Kandula, V.S. Korad, G. Nair, P.T. Nathan, A. Nobel, J.K. Raj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Distribution in South Asia, Afghanistan and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Jalalabad	34º 26	70º 25	Bates & Harrison, 1997
Laghman	34º 38	70º 18	Bates & Harrison, 1997
BANGLADESH			
Sylhet	24º 53	91º 51	Bates & Harrison, 1997
No exact locality			Khan, 2001
INDIA			
Andhra Pradesh			
Balapalli	13º 50	79º 15	Bates & Harrison, 1997
Koduru	13º 58	79º 14	Bates & Harrison, 1997
Macherla	16º 29	79º 25	Bates & Harrison, 1997
Nagarjuna sagar	16º 35	79º 17	Bates & Harrison, 1997
Assam			
Darangar	-	-	Bates & Harrison, 1997
Golaghat	26º 30	93º 57	Bates & Harrison, 1997
Guwahati	26º 10	91º 45	Bates & Harrison, 1997
Kaliani	-	-	Bates & Harrison, 1997
Loskor (?)	25º 10	93º 05	Bates & Harrison, 1997
Maranpur	-	-	Bates & Harrison, 1997
Margherita	27º 17	95º 40	Bates & Harrison, 1997
Palasbari	26º 07	91º 30	Bates & Harrison, 1997
Rajapara	26º 30	92º 00	Bates & Harrison, 1997
Bihar			
Champaran	27º 06	84º 29	Bates & Harrison, 1997
Darbhanga	26º 10	85º 54	Bates & Harrison, 1997
Hazaribag	24º 00	85º 23	Bates & Harrison, 1997
Koch Bihar	26º 17	89º 40	Bates & Harrison, 1997
Maldah	-	-	Bates & Harrison, 1997
Muzaffarpur	26º 07	85º 23	Bates & Harrison, 1997
Nadia	30º 22	76º 12	Bates & Harrison, 1997
Patna	25º 37	85º 12	Bates & Harrison, 1997
Purnea	25º 47	87º 28	Bates & Harrison, 1997
Rohtas	24º 40	83º 59	Bates & Harrison, 1997
Saharsa	25º 54	86º 36	Bates & Harrison, 1997
Vaishali	25º 49	85º 25	Bates & Harrison, 1997
West Dinajpur	25º 38	88º 44	Bates & Harrison, 1997
Gujarat			
Ahmedabad	23º 03	72º 40	Bates & Harrison, 1997
Anand	22º 34	73º 01	Bates & Harrison, 1997
Bhuj	23º 12	69º 54	Bates & Harrison, 1997
Bulsar	20º 36	73º 03	Bates & Harrison, 1997
Danta	24º 13	72º 50	Bates & Harrison, 1997
Deesa	24º 14	72º 13	Bates & Harrison, 1997
Fata Talab	21º 40	73º 02	Bates & Harrison, 1997
Kirti Mandir	22º 19	73º 14	Bates & Harrison, 1997
Lunwa	-	-	Bates & Harrison, 1997
Mandvi	21º 16	73º 22	Bates & Harrison, 1997
Mehmadabad	22º 51	72º 46	Bates & Harrison, 1997
Palanpur	24º 12	72º 29	Bates & Harrison, 1997
Petlad	22º 29	72º 48	Bates & Harrison, 1997
Rajpipla	21º 49	73º 36	Bates & Harrison, 1997
Silvassa	20º 12	73º 11	Bates & Harrison, 1997
Surat	21º 10	72º 54	Bates & Harrison, 1997
Haryana			
Chandigarh & surrounding villages	30º 43	76º 47	Bates & Harrison, 1997
Lalru	30º 42	76º 48	Bates & Harrison, 1997
Karnataka			
Bangalore	12º 58	77º 35	Bates & Harrison, 1997
Belgaum	15º 54	74º 36	Bates & Harrison, 1997
Dharwar	15º 30	75º 04	Bates & Harrison, 1997
Hubli	15º 20	75º 12	Bates & Harrison, 1997
Kadakola	12º 18	76º 37	Sreepada, '87-'93
Kolar (?)	13º 09	78º 10	Bates & Harrison, 1997
Malgi	14º 40	75º 05	Bates & Harrison, 1997
Samasgi	14º 40	75º 10	Bates & Harrison, 1997
Sirsi (?)	14º 40	74º 51	Bates & Harrison, 1997
Jarkhand			
Giridih	24º 10	86º 20	Bates & Harrison, 1997
Gumla	-	-	Hollow trees Sinha Y.P., 2000
Katihar	25º 33	87º 34	Bates & Harrison, 1997
Medinipur	22º 25	87º 24	Bates & Harrison, 1997
Santal Parganas	24º 17	87º 15	Bates & Harrison, 1997
Singhbhum	23º 30	85º 50	Bates & Harrison, 1997
Kerala			
Cochin	09º 56	76º 15	Bates & Harrison, 1997
Thrissur	10º 32	76º 14	Plantation trees and netted houses Madhavan A. 1993; Bates & Harrison, 1997
Trivandrum	08º 41	76º 57	Bates & Harrison, 1997
Madhya Pradesh			
Jabalpur	-	-	Harshey & Chandra, 2001
Sehore	23º 12	77º 08	Bates & Harrison, 1997
Maharashtra			
Allapalli	-	-	Bates & Harrison, 1997
Andheri	19º 07	72º 50	Bates & Harrison, 1997
Bandra	19º 04	72º 58	Bates & Harrison, 1997
Chanda	19º 58	79º 21	Bates & Harrison, 1997
Dhulia	20º 52	74º 50	Bates & Harrison, 1997
Elephanta Caves	18º 54	72º 58	Bates & Harrison, 1997
Nagpur	21º 10	79º 12	Bates & Harrison, 1997
Panchgani	17º 56	73º 49	Bates & Harrison, 1997
Poona	18º 34	73º 58	Bates & Harrison, 1997
Thana	19º 14	73º 02	Bates & Harrison, 1997
Meghalaya			
Tura	25º 32	90º 14	Bates & Harrison, 1997
Orissa			
Baleshwar	21º 31	86º 59	Bates & Harrison, 1997
Cuttack	20º 26	85º 56	Bates & Harrison, 1997
Puri	19º 50	85º 15	Bates & Harrison, 1997
Sambalpur	21º 28	84º 04	Bates & Harrison, 1997
Nagaland			
Zounhebota	-	-	ZSI collection [Azad Ali, 1999]
Punjab			
Ferozepore	30º 55	74º 38	Bates & Harrison, 1997
Moga	30º 49	75º 13	Bates & Harrison, 1997
Nabha	30º 22	76º 12	Bates & Harrison, 1997
Rajasthan			
Ajmer	26º 29	74º 40	Bates & Harrison, 1997
Alwar	27º 32	76º 35	Bates & Harrison, 1997
Banswara	23º 32	74º 28	Bates & Harrison, 1997
Bharatpur	27º 14	77º 28	Bates & Harrison, 1997
Bundi	25º 28	75º 42	Bates & Harrison, 1997
Dungarpur	23º 53	73º 48	Bates & Harrison, 1997
Jhunjhunu	28º 05	75º 30	Bates & Harrison, 1997
Jodhpur	26º 18	73º 08	Bates & Harrison, 1997
Kota	25º 11	75º 58	Bates & Harrison, 1997
Sawai Madhopur	26º 00	76º 28	Bates & Harrison, 1997
Tamil Nadu			
Coimbatore	11º 02	76º 59	Bates & Harrison, 1997
Madras	13º 05	80º 18	type locality of S. heathi Bates & Harrison, 1997
near Pondicherry	-	-	Bates & Harrison, 1997
Nilgiri Hills	11º 28	76º 42	Bates & Harrison, 1997
Salem	11º 38	78º 08	Bates & Harrison, 1997
Shevroy hills	11º 46	78º 11	Bates & Harrison, 1997
Tirunelveli	08º 44	72º 42	Palm trees N. Gopukumar, 2000
Trichinopoly	10º 50	78º 46	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Uttaranchal			
Haldwani	29º 13	79º 29	Bates & Harrison, 1997
Kaladungi	29º 13	79º 29	Bates & Harrison, 1997
Ramnagar	29º 23	79º 07	Bates & Harrison, 1997
Uttar Pradesh			
Allahabad	25º 57	81º 50	Bates & Harrison, 1997
Banaras	25º 20	83º 00	Bates & Harrison, 1997
Bareilly	28º 22	79º 24	Bates & Harrison, 1997
Khamaria	27º 40	79º 32	Bates & Harrison, 1997
Meerut	29º 00	77º 42	Bates & Harrison, 1997
Mirzapur	27º 41	79º 33	Bates & Harrison, 1997
Philibhit	28º 37	79º 48	Bates & Harrison, 1997
Varanasi	25º 20	83º 00	Sreepada, '87-'93
West Bengal			
Barddhaman	23º 15	87º 52	Bates & Harrison, 1997
Jalpaiguri	26º 30	88º 50	Bates & Harrison, 1997
PAKISTAN			
NWFP			
Islamabad City	33º 44	75º 11	Bates & Harrison, 1997
Kohat	33º 34	71º 26	Bates & Harrison, 1997
Punjab			
Bhattu Hissar	-	-	Bates & Harrison, 1997
Chak	27º 44	68º 52	Bates & Harrison, 1997
Dadu	26º 44	67º 47	Bates & Harrison, 1997
Jacobabad (?)	28º 17	68º 26	Bates & Harrison, 1997
Jatti	24º 22	68º 17	Bates & Harrison, 1997
Karachi	24º 51	67º 02	Bates & Harrison, 1997
Kashmor	28º 25	69º 35	Bates & Harrison, 1997
Lahore	31º 34	74º 22	Bates & Harrison, 1997
Landhi	24º 51	67º 16	Bates & Harrison, 1997
Malir	24º 59	67º 13	Bates & Harrison, 1997
Mirpur Sakro (?)	24º 32	67º 38	Bates & Harrison, 1997
Multan	30º 11	71º 26	Bates & Harrison, 1997
Sanghoi	23º 30	72º 30	Bates & Harrison, 1997
Sialkot	32º 30	74º 32	Bates & Harrison, 1997
Sukkur	27º 42	68º 52	Bates & Harrison, 1997
Tori	28º 09	69º 05	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Hkamti	26º 01	95º 45	Bates & Harrison, 1997
Homalin	24º 55	95º 01	Bates & Harrison, 1997
Hsipaw	22º 38	97º 22	Bates & Harrison, 1997
Kayi-Yangon	-	-	Tall trees (especially palms) in many types of habitats Some predation but abundant population K. M. Swe & Bates, '1999-2001
Kin	22º 45	94º 45	Bates & Harrison, 1997
Kindat	23º 42	94º 29	Bates & Harrison, 1997
Kyouk Myoung	22º 36	95º 55	Bates & Harrison, 1997
Mandalay	21º 57	96º 04	Bates & Harrison, 1997
Mardalay Sranis	-	-	Tall trees (especially palms) in many types of habitats Some predation but abundant population K. M. Swe & Bates, 1999-2001
Maungkan	25º 12	95º 02	Bates & Harrison, 1997
Mon	-	-	Tall trees (especially palms) in many types of habitats Some predation but abundant population K. M. Swe & Bates, '1999-2001
Monywa	22º 05	95º 12	Bates & Harrison, 1997
Mount Popa	20º 56	95º 16	Bates & Harrison, 1997
Pegu	17º 18	96º 31	Bates & Harrison, 1997
Rakhine	-	-	Tall trees (especially palms) in many types of habitats Some predation but abundant population K. M. Swe & Bates, '1999-2001
Singkaling Hkamti	26º 00	95º 41	Bates & Harrison, 1997
Thanatpink	17º 17	96º 35	Bates & Harrison, 1997
NEPAL			
Banke	27º 57	81º 47	Bates & Harrison, 1997
Bhojbawanpur	28º 05	81º 45	Bates & Harrison, 1997
Darakhuti	-	-	Bates & Harrison, 1997
Dung-Deokhuri	-	-	Bates & Harrison, 1997
Raxaul-Birghanj	27º 00	84º 57	Bates & Harrison, 1997
SRI LANKA			
No exact locality	-	-	ecological survey Yapa & Digana, 1996-'99
Central Province			
Colombo	06º 55	79º 52	Bates & Harrison, 1997
Dehiwala	06º 52	79º 52	Bates & Harrison, 1997
Gammaduwa	07º 32	80º 41	Bates & Harrison, 1997
Kalutara	06º 35	79º 59	Bates & Harrison, 1997
Kandy	07º 17	80º 40	Bates & Harrison, 1997
Rattota	07º 31	80º 41	Bates & Harrison, 1997
Northern Province			
Elephant pass	09º 30	80º 25	Bates & Harrison, 1997
North Western Province			
Kurenegala	07º 28	80º 23	Bates & Harrison, 1997
Uva Province			
Medagama	07º 02	81º 17	Bates & Harrison, 1997
Western Province			
Paiyagalla	06º 33	79º 59	Bates & Harrison, 1997
Southern Province			
Bentota	06º 25	80º 00	Bates & Harrison, 1997
Galle	06º 01	80º 13	Bates & Harrison, 1997

Synonyms: *Scotophilus fulvus* Gray, 1843,
Scotophilus wroughtoni Thomas, 1897
Vespertilio temminckii Horsfield, 1824

Common names: Bengali: *Chhoto Holdi Chamchika*; English: Asiatic Lesser Yellow House Bat

Family: Vespertilionidae

Habit: Solitary and colonial, arboreal

Habitat: Open and dry plains

Niche: Houses, caves, trees, buildings

Distribution
Global: Afganistan, Bangladesh, India, Indonesia, Northern Myanmar, Pakistan, Philippines, Sri Lanka, Taiwan, Western Malaysia

South Asia:
Bangladesh
India: Andaman & Nicobar Islands, Andhra Pradesh, Bihar, Gujarat, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Orissa, Rajasthan, Tamil Nadu, Tripura, Uttaranchal, Uttar Pradesh, West Bengal
Nepal
Pakistan: Punjab, Sind
Sri Lanka: Central Province, Eastern Province, North Central Province, Uva Province

Afghanistan
Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many.

Habitat status: change in quality.

Data source: Literature, field studies; Inferred, observed.

Threats
Threats to the taxon: Human interference. Threats do not affect the population significantly.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Not known

Data source: Field study, indirect information; Inferred

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
Bangladesh: Least Concern
India: Least Concern
Nepal: Near Threatened
Pakistan: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Satpura National Park, Madhya Pradesh.

Recommendations
Research: Survey

Management: Monitoring

Comments

Sources
Bates & Harrison, 1997; Gray, 1843; Harshey & Chandra, 2001; Horsfield, 1821-24; Hutson *et al*., 2001; Khan, 2001; Leach, 1821; Thomas, 1897

Compilers
A.C. Girish, Immanuel, J.K., S. Kandula, V.S. Korad, C.D. Koya, G. Nair, P.T. Nathan, A. Nobel, J.K. Raj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
V.S. Korad & K.D. Yardi in Pune, 1999-2000, Ecological study and faunistic survey of bats in Pune.

Distribution in South Asia, Afghanistan and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Afghanistan	-	-	Bates & Harrison, 1997
BANGLADESH			
Jahazmara Ghat, Hatia Island			Khan, 2001
South Sylhet	24º 15	91º 30	Bates & Harrison, 1997
St. Martin's Coral Island			Khan, 2001
Sunderbans			Khan, 2001
INDIA			
Andaman & Nicobar Islands			
Nicobar Islands	-	-	Bates & Harrison, 1997
Andhra Pradesh			
Balapalli	13º 50	79º 15	Bates & Harrison, 1997
Koduru	13º 58	79º 14	Bates & Harrison, 1997
Thummalabylu	14º 11	79º 09	Bates & Harrison, 1997
Bihar			
Bhojpur	25º 34	84º 40	Bates & Harrison, 1997
Gaya	24º 48	85º 00	Bates & Harrison, 1997
Hazaribag	24º 00	85º 23	Bates & Harrison, 1997
Katihar	25º 33	87º 34	Bates & Harrison, 1997
Munger	24º 57	86º 14	Bates & Harrison, 1997
Muzaffarpur	26º 07	85º 23	Bates & Harrison, 1997
Patna	25º 37	85º 12	Bates & Harrison, 1997
Purnea	25º 47	87º 28	Bates & Harrison, 1997
Vaishali	25º 49	85º 25	Bates & Harrison, 1997
Gujarat			
Bulsar	20º 36	73º 03	Bates & Harrison, 1997
Deogad	21º 22	73º 25	Bates & Harrison, 1997
Jamankua	21º 28	73º 22	Bates & Harrison, 1997
Junagadh	21º 31	70º 28	Bates & Harrison, 1997
Kim	21º 30	73º 00	Bates & Harrison, 1997
Lunwa	-	-	Bates & Harrison, 1997
Mandvi	21º 16	73º 22	Bates & Harrison, 1997
Mheskatri	21º 10	72º 54	Bates & Harrison, 1997
Nawapur	-	-	Bates & Harrison, 1997
Palanpur	24º 12	72º 29	Bates & Harrison, 1997
Patal	06º 58	81º 09	Bates & Harrison, 1997
Surat	21º 10	72º 54	Bates & Harrison, 1997
Talala	21º 00	70º 39	Bates & Harrison, 1997
Waghai	20º 46	73º 29	Bates & Harrison, 1997
Walzhar	20º 42	73º 10	Bates & Harrison, 1997
Jharkhand	23º 53	84º 17	Bates & Harrison, 1997
Palamau	23º 53	84º 17	Bates & Harrison, 1997
Santal Pargana	24º 17	87º 15	Bates & Harrison, 1997
Singhbhum	23º 30	85º 50	Bates & Harrison, 1997
Karnataka			
Astoli	15º 26	74º 30	Bates & Harrison, 1997
Bangalore	12º 58	77º 35	Bates & Harrison, 1997
Belgaum	15º 54	74º 36	Bates & Harrison, 1997
Dharwar	15º 30	75º 04	Bates & Harrison, 1997
Haleri	12º 31	75º 40	Bates & Harrison, 1997
Helwak	17º 23	73º 47	Bates & Harrison, 1997
Hulekal	14º 42	74º 46	Bates & Harrison, 1997
Kolar	23º 09	78º 10	Bates & Harrison, 1997
Mettupalayam	-	-	Bates & Harrison, 1997
Mysore	12º 18	76º 37	Sreepada K.S., 1999
Samasgi	14º 40	75º 10	Bates & Harrison, 1997
Seringapatnam	12º 25	76º 41	Bates & Harrison, 1997
Sirsi	14º 40	74º 51	Bates & Harrison, 1997
Kerala			
Palghat	8º 44	77º 42	Bates & Harrison, 1997
Madhya Pradesh			
Agar Malwa	-	-	Bates & Harrison, 1997
Damoh	23º 50	79º 30	Bates & Harrison, 1997
Guna	24º 40	77º 19	Bates & Harrison, 1997
Gwalior	26º 12	78º 09	Bates & Harrison, 1997; Harshey & Chandra, 2001
Hoshangabad	22º 44	77º 45	Bates & Harrison, 1997; Harshey & Chandra, 2001
Jabalpur	-	-	Harshey & Chandra, 2001
Sabalgarh	26º 15	77º 24	Bates & Harrison, 1997
Sohagpur	22º 43	78º 14	Bates & Harrison, 1997
Satpura National Park	-	-	Harshey & Chandra, 2001
Maharashtra			
Ajanta	20º 30	75º 48	Bates & Harrison, 1997
Aurangabad	19º 52	75º 22	Bates & Harrison, 1997
Bhowad	-	-	Bates & Harrison, 1997
Bombay	18º 56	72º 51	Bates & Harrison, 1997
Chanda	19º 58	79º 21	Bates & Harrison, 1997
Nagpur	21º 10	79º 12	Bates & Harrison, 1997
Panchagani	17º 56	73º 49	Bates & Harrison, 1997
Poona	18º 34	73º 58	Bates & Harrison, 1997; V.S. Korad & K.D. Yardi, 1999-2000
Saila	21º 25	74º 02	Bates & Harrison, 1997
Satara	17º 43	74º 05	Bates & Harrison, 1997
Sultanpur	21º 38	74º 04	Bates & Harrison, 1997
Meghalaya			
Garo Hills	25º 32	90º 15	Bates & Harrison, 1997
Orissa			
Baleshwar	21º 31	86º 59	Bates & Harrison, 1997
Dhenkanal	20º 40	85º 39	Bates & Harrison, 1997
Ganjam	23º 45	91º 50	Bates & Harrison, 1997
Mayurbhanj	21º 52	86º 48	Bates & Harrison, 1997
Phulbani	20º 30	84º 18	Bates & Harrison, 1997
Puri	19º 50	85º 15	Bates & Harrison, 1997
Rajasthan			
Bharatpur	27º 14	77º 28	Bates & Harrison, 1997
Tamil Nadu			
High Wavy Mountains	09º 50	77º 26	Bates & Harrison, 1997
Kotagiri	11º 21	76º 54	Bates & Harrison, 1997
Tripura			
Agartala	23º 50	91º 23	Bates & Harrison, 1997
Uttaranchal			
Ramnagar	29º 23	79º 07	Bates & Harrison, 1997
Uttar Pradesh			
Philibhit	28º 37	79º 48	Bates & Harrison, 1997
Varanasi	25º 20	83º 00	Sreepada, 1999
West Bengal			
Bankura	23º 14	87º 05	Bates & Harrison, 1997
Barddhaman	23º 15	87º 52	Bates & Harrison, 1997
Darjeeling	27º 02	88º 20	Bates & Harrison, 1997
Haora	-	-	Bates & Harrison, 1997
Hugli	22º 52	88º 21	Bates & Harrison, 1997
Jalpaiguri	26º 30	88º 50	Bates & Harrison, 1997
Koch Bihar	26º 17	89º 40	Bates & Harrison, 1997
Kolkata	22º 35	88º 21	Bates & Harrison, 1997
Maldah	-	-	Bates & Harrison, 1997
Medinipur	22º 25	87º 24	Bates & Harrison, 1997
Murshidabad	24º 11	88º 19	Bates & Harrison, 1997
Nadia	30º 22	76º 12	Bates & Harrison, 1997
North 24 Parganas	-	-	Bates & Harrison, 1997
Puruliya	23º 20	86º 24	Bates & Harrison, 1997
South 24 Parganas	22º 22	88º 25	Bates & Harrison, 1997
West Dinajpur	25º 38	88º 44	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Homalin	24º 55	95º 01	Bates & Harrison, 1997
Mandalay	21º 57	96º 04	Bates & Harrison, 1997
Maudaba	-	-	Swe, 2002
Mingun	22º 00	95º 58	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Mon	-	-	Swe, 2002
Nyaung Oo	-	-	Swe, 2002
Pagan	21º 07	94º 53	Bates & Harrison, 1997
Pegu	17º 18	96º 31	Bates & Harrison, 1997
Rakhine	-	-	Swe, 2002
Viayah	-	-	Swe, 2002
Yangon	-	-	Swe, 2002
NEPAL			
Raxaul-Birghanj	27º 00	84º 57	Johnson et al., 1980. was cited in T.K. Shrestha, 1997
PAKISTAN			
Punjab			
Bhattu Hissar	-	-	Bates & Harrison, 1997
Chaklala	33º 40	73º 08	Bates & Harrison, 1997
Chakri	32º 47	73º 28	Bates & Harrison, 1997
Sanghoi	23º 30	72º 30	Bates & Harrison, 1997
Toupi	-	-	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Sind			
Karachi	24º 51	67º 02	Bates & Harrison, 1997
Kirthar National Park	26º 30	67º 30	Bates & Harrison, 1997
Mirpur Sakro	24º 32	67º 38	Bates & Harrison, 1997
Nawabshah	26º 15	68º 26	Bates & Harrison, 1997
SRI LANKA			
Central Province			
Kumbalgamuwa	07º 08	80º 50	Bates & Harrison, 1997
Yakura	07º 49	81º 02	Bates & Harrison, 1997
Eastern Province			
Trincomalee	08º 34	81º 13	Bates & Harrison, 1997
North Central Province			
Anuradhapura	08º 20	80º 25	Bates & Harrison, 1997
Cheddikulam	08º 40	80º 18	Bates & Harrison, 1997
Uva Province			
Bibile	07º 09	81º 14	Bates & Harrison, 1997

Sphaerias blanfordi (Thomas, 1891)

NEAR THREATENED in South Asia

Synonyms: *Cynopterus blanfordi* Thomas, 1891

Common names: Blanford's Fruit Bat

Family: Pteropodidae

Habit: Arboreal

Habitat: Bamboo forests

Niche: 308-2710m.

Distribution
Global: Bhutan, India, Myanmar, Nepal

South Asia:
Bhutan
India: Arunachal Pradesh, Mizoram, Uttaranchal, West Bengal
Nepal

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km

Locations/subpopulations: 11 / 3. Fragmented.

Habitat status: Declining due to harvest, habitat loss.

Data source: Literature, field study; inferred.

Threats
Threats to the taxon: Habitat loss, harvest of bamboo

Population
Generation time: 4-6 years

Mature individuals: < 10,000

Population trend: Not known

Data source: Field study

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Although widely distributed, bamboo forests are under pressure for commercial harvest. Hence the species may suffer population decline in future, if not already declining.

National Status
Bhutan: Near Threatened
India: Near Threatened
Nepal: Near Threatened

Uncertainty
Assessed based on evidence, inference, precaution and on the consensus of field biologists.

Other status
Old World Fruit Bats Action Plan: No data
CITES: Not listed

Known presence in Protected Areas
India: Phambong Lho Wildlife Sanctuary (Sikkim); Namdapha National Park (Assam)

Recommendations
Research: Survey, ecological studies

Management: Monitoring, public awareness

Comments
Widespread distribution in the Himalayan foothills. Recently collected in reasonable numbers in Sikkim.

Sources
Bates & Harrison, 1997; Mickleburgh *et al.,* 1992; Thomas, 1891

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
Sinha Y.P. in Sikkim 1988; Aizwal, 1993, 1995

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
BHUTAN			
Ganglakha	27º 20	89º 20	Bates & Harrison, 1997
INDIA			
Arunachal Pradesh			
Miao	27º 39	96º 15	Bates & Harrison, 1997
Namdapha	27º 39	96º 15	Bates & Harrison, 1997
Mizoram			
Aizwal			Bamboo forest. No threats. Sinha, 1988, 1993, 1995.
Lunglei			Bamboo forest. No threats. Sinha, 1988, 1993, 1995.

Distribution in South Asia	Lat.	Long.	Notes/Sources
Uttaranchal			
Almora	29º 36	79º 40	Bates & Harrison, 1997
Chamoli	30º 22	79º 19	Bates & Harrison, 1997
Pithogarh	30º 05	80º 12	Bates & Harrison, 1997
West Bengal			
Darjeeling	27º 02	88º 20	Bates & Harrison, 1997
Goomti	27º 02	88º 20	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Leito	-	-	Bates & Harrison, 1997
Nam Tamai Valley	-	-	Bates & Harrison, 1997
NEPAL			
Eastern Nepal	-	-	Bates & Harrison, 1997

Tadarida aegyptiaca (E. Geoffroy, 1818)

LEAST CONCERN in South Asia

Synonyms: *Nyctinomus aegyptiacus* E. Geoffroy, 1818
Dysopes geoffroyi Temminck, 1826
Nyctinomus tragata Dobson, 1874
Tadarida gossei Wroughton, 1919
Tadarida sindica Wroughton, 1919
Tadarida thomasi Wroughton, 1919

Common names: Bengali: *Lomba-leji Chamchika*; English: Egyptian Free-tailed Bat

Family: Molossidae

Habit: Colonial

Habitat: Open dry habitats

Niche: Crevices, cracks, narrow spaces, plains

Distribution
Global: Afganistan, Egypt, Bangladesh, India, Oman, Pakistan, Saudi Arabia, Sri Lanka, West Africa, Yemen

South Asia:
Bangladesh
India: Andhra Pradesh, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu, West Bengal
Pakistan: Punjab, Sind
Sri Lanka: Central Province, Uva Province

Afghanistan

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km

Locations/subpopulations: Many

Habitat status: Not known

Data source: Literature, indirect information; Inferred.

Threats
Threats to the taxon: Human interference.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Not known

Data source: Indirect information; Inferred.

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
Bangladesh: Near Threatened
India: Least Concern
Pakistan: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Sources
Hutson *et al*., 2001; Khan, 2001; Nagulu *et al.,* 2000; Rao *et al.,* 2000

Compilers
A.C. Girish, J.K. Immanuel, S. Kandula, V.S. Korad, G. Nair, P.T. Nathan, A. Nobel, J.K. Raj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
J. Vanitharani, Krishnapuram, Tirunelveli, 2000-2002. Survey of bats of Tirunelveli district on their role in the ecosystem
C. Srinivasulu in Andhra Pradesh, 1995 onwards, Documentation of Chiropteran diversity in Andhra Pradesh
C. Srinivasulu & B. Srinivasulu in Hyderabad city environs, Documentation of Mammalian diversity in and around Hyderabad diversity

Distribution in South Asia and Afghanistan from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Kabul	34º 30	69º 10	Bates & Harrison, 1997
BANGLADESH			
no exact locality			Khan, 2001
INDIA			
Andhra Pradesh			
Hyderabad	25º 24	68º 22	Scrub jungle and temples and old buildings habitat destruction Srinivasulu, 1995-2002
Gujarat			
Anand	22º 34	73º 01	Bates & Harrison, 1997
Bhuj	23º 12	69º 54	Bates & Harrison, 1997
Rajkot	22º 18	70º 56	Bates & Harrison, 1997
Vankaneer	22º 37	70º 56	Bates & Harrison, 1997
Karnataka			
Dharwar	15º 30	75º 04	Bates & Harrison, 1997
Kolar	23º 09	78º 10	Bates & Harrison, 1997
Kerala			
Malabar	10º 00	76º 15	Bates & Harrison, 1997
Madhya Pradesh			
Asirgarh	21º 31	76º 22	Bates & Harrison, 1997
Burhanpur	21º 58	76º 08	Bates & Harrison, 1997
Jashpur	21º 16	81º 42	Bates & Harrison, 1997
Khandwar	21º 49	76º 23	Bates & Harrison, 1997
Mandu	22º 22	75º 24	Bates & Harrison, 1997
Maharashtra			
Aurangabad	19º 52	75º 22	Bates & Harrison, 1997
Pune	18º 31	73º 51	On the wall behind shelters in old buildings. Renovation of buildings, habitat destruction Korad V.S & Yardi K.D., 1998-2001, Pradhan, 2001 Bates & Harrison, 1997
Rajasthan			
Ajmer	26º 29	74º 40	Bates & Harrison, 1997
Alwar	27º 32	76º 35	Bates & Harrison, 1997
Banswara	23º 32	74º 28	Bates & Harrison, 1997
Dundi	-	-	Bates & Harrison, 1997
Dungarpur	23º 53	73º 48	Bates & Harrison, 1997
Jhalawar	24º 32	76º 12	Bates & Harrison, 1997
Jodhpur	26º 18	73º 08	Bates & Harrison, 1997
Kota	25º 11	75º 58	Bates & Harrison, 1997
Sawai Madhapur	26º 00	76º 28	Bates & Harrison, 1997
Sirohi	24º 53	72º 58	Bates & Harrison, 1997
Tonk	25º 52	75º 50	Bates & Harrison, 1997
Tamil Nadu			
Krishnapuram	8º 44	77º 42	Temple and crevices Renovation of temples J. Vanitharani & J. Selwyn, 2000-2002.
Madurai	09º 55	78º 07	crevices ectoparasites Sripathi K., 1978 Bates & Harrison, 1997
West Bengal			
Kolkata	22º 35	88º 21	Bates & Harrison, 1997
PAKISTAN			
Punjab			
Rajanpur	29º 06	70º 17	Bates & Harrison, 1997
Sind			
Bubak	26º 25	67º 44	Bates & Harrison, 1997
Kashmor	28º 25	69º 35	Bates & Harrison, 1997
Landhi	24º 51	67º 16	Bates & Harrison, 1997
Sukkur	27º 42	68º 52	Bates & Harrison, 1997
Tori	28º 09	69º 05	Bates & Harrison, 1997
SRI LANKA			
Central Province			
Mousakande	07º 32	80º 42	Bates & Harrison, 1997
Uva Province			
Galapitakande	-	-	Bates & Harrison, 1997
Namunukula	06º 55	81º 07	Bates & Harrison, 1997

Tadarida plicata (Buchannan, 1800)

LEAST CONCERN in South Asia

Synonyms: *Vespertilio plicatus* Buchannan, 1800
Chaerephon plicata insularis Phillips, 1932

Common names: Wrinkle-lipped Free-tailed Bat

Family: Molossidae

Habit: Colonial

Habitat: Spaces behind the old wooden boxes on wall, crevice in rocks

Niche: Crevices in temples, caves, deserted buildings. Up to 923m.

Distribution
Global: India, Myanmar, Sri Lanka

South Asia:
India: Goa, Karnataka, Madhya Pradesh, Maharashtra, Meghalaya, Punjab, Rajasthan, Uttar Pradesh, West Bengal, Tamil Nadu
Sri Lanka: Central Province, Western Province

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many. Fragmented.

Habitat status: Stable in area

Data source: Field study, literature; Observed, inferred.

Threats
Threats to the taxon: Habitat loss, mining. The influence on the population well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Stable in the past. Future trends not known.

Data source: Field study, literature; inferred, observed.

Red List 2001 Status derived in the workshop

Ver. 3.1: **LEAST CONCERN**

National Status
India: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Microchiroptera Action Plan (Global): Not Evaluated
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, ecological studies

Management: Monitoring, habitat management, public awareness

Comments
There is a smaller, darker subspecies (*T.p. insularis*) recognized in Sri Lanka. Sri Lanka & Myanmar populations appear to be stable at present. Mining activities currently taking place in Myanmar have not yet affected populations. Small number of very large colonies are known from Myanmar. The situation elsewhere in the region is not currently known. Destruction of one large roost (300,000) in Myanmar through the extraction of limestone by cement industries could have a significant impact on the abundance of this species in this region. Currently known from a wide distribution with a reasonable number of localities. However, the destruction of one or two cave sites which are the roosts of many thousands of individuals will have a severe impact on the overall population size

Sources
Bates & Harrison, 1997; Buchannan, 1800; Phillips, 1932

Compilers
A.C. Girish, Immanuel, J.K., S. Kandula, V.S. Korad, C.D. Koya, G. Nair, P.T. Nathan, A. Nobel, J.K. Raj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
Bates in Sri Lanka & Myanmar, 1994-2001, bat surveys
Korad, V.S. and Yardi K.D. in Pune, Maharashtra, India, 1998-2001
Sreepada, K.S. in Therhalli, Karnataka, 1993

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Goa			
Molem	15º 20	74º 15	Bates & Harrison, 1997
Karnataka			
Therhalli	-	-	Forests (1) Sreepada, 1993
Madhya Pradesh			
Khandwa	21º 49	76º 23	Bates & Harrison, 1997
Maharashtra			
Karla	18º 48	73º 30	Bates & Harrison, 1997
Pune	18º 31	73º 51	Old buildings Destruction of habitat Korad
Meghalaya			
Tura	25º 32	90º 14	Bates & Harrison, 1997
Punjab			
Ludhiana	30º 56	75º 52	Bates & Harrison, 1997
Rajasthan			
Mount Abu	24º 41	72º 50	Bates & Harrison, 1997
Rajasthan			Museum specimen Dr. Sinha, 1980
Uttar Pradesh			
Allahabad	25º 57	81º 50	Bates & Harrison, 1997
Agra	27º 09	78º 00	Bates & Harrison, 1997
West Bengal			
Kolkata	22º 35	88º 21	Bates & Harrison, 1997
Puttahaut	-	-	Bates & Harrison, 1997
Tamil Nadu			
near Madras	-	-	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Hpa-an	-	-	Large limestone cave, paddy-forest; Potentially cement mining Bates, 1999
Moulmein	16º 30	97º 39	Bates & Harrison, 1997
SRI LANKA			
Central Province			
Kumbalgamuwa	07º 08	80º 50	Bates & Harrison, 1997
Western Province			
Bulathsinghala	06º 39	80º 13	Rock faces and forest; no threats Bates & Harrison, 1997

Tadarida teniotis (Rafinesque, 1814) — NOT EVALUATED

Synonyms: *Cephalotes teniotis* Rafinesque, 1814
Dysopes rupelii Temminck, 1826
Nyctinomus insignis Blyth, 1862

Common names: European Free-tailed Bat

Habit: Solitary or colonial

Habitat: Arid areas

Niche: Crevices or in the roofs of cliffs

Distribution
Global: Afghanistan, India, France, Morocco, Portugal, to South China, Taiwan

South Asia:
India: West Bengal

Afghanistan

Extent of Occurrence: < 100 sq km.

Area of Occupancy: < 10 sq km.

Locations/subpopulations: 2 / not known. Fragmented.

Habitat status: Not known

Data source:

Threats
Threats to the taxon:

Population
Generation time: 4-6 years

Mature individuals: Not known

Population trend: Not known

Data source:

Recent Field Studies
None

Distribution in South Asia and Afghanistan from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Kabul	34º 30	69º 10	Bates & Harrison, 1997
INDIA			
West Bengal			
Kurseong	26º 54	88º 21	Bates & Harrison, 1997

Red List 2001 Status derived in the workshop

Ver. 3.1: NOT EVALUATED

The occurrence of this species in India is thought to be a vagrant. It is known that vagrants of the species have been found elsewhere (in Africa), many miles from its known range.

1997 C.A.M.P. (Ver. 2.3): Not Evaluated

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research:

Management:

Comments
Occasional vagrant to the region. Populations only in Afghanistan and not in other parts of south Asia. Apparently a rare migrant, only known to date from one locality form in India (Bates & Harrison, 1997).

Sources
Bates & Harrison, 1997; Blyth, E. 1862; Rafinesque, C.S. 1814; Temminck, C.J. 1824-27

Compilers
A. Ali, P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Taphozous longimanus Hardwicke, 1825

LEAST CONCERN in South Asia

Synonyms: *Taphozous brevicaudus* Blyth, 1841
Taphozous cantori Blyth, 1842
Taphozous fulvidus Blyth, 1841

Common names: Bengali: *Tholeyjukta Chamchika*; English: Long-winged Tomb Bat

Family: Emballonuridae

Habit: Colonial

Habitat: Wide range of climatic tolerance

Niche: Old ruins, caves, treeholes. Up to 1200m.

Distribution
Global: India, Bangladesh, Myanmar, Nepal, Sri Lanka

South Asia:
Bangladesh
India: Andhra Pradesh, Bihar, Gujarat, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamil Nadu, Tripura, Uttar Pradesh, West Bengal
Nepal
Sri Lanka: Northern Province, Eastern Province, Uva Province, Western Province

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many. Fragmented.

Habitat status: Not known

Data source:

Threats
Threats to the taxon: Human interference.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Not known

Data source: Field study, museum record

Recent Field Studies
Bates e*t al,* Elephant Island 1992;
Agarwal *et al,* Midnapore, West Bengal, 1992.
D.S.Joshi, Ahmednagar, India, December 2001, Population dynamics.
J. Vanitharani, Murappanadu VOC distr, TN, India, 1994, Survey
K.M. Swe, Mon & Nyaungoo in Myanmar, 2000-2001

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
Bangladesh: Least Concern
India: Least Concern
Nepal: Data Deficient
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Hazaribagh Wildlife Sanctuary, Jharkhand; Kanha National Park, Madhya Pradesh.

Recommendations
Research: Survey, genetic research, taxonomic research, life history

Management: Monitoring

Comments
This species was not recorded by Yapa & Digana during their survey between 1996-2000 in Sri Lanka. Widely distributed in Bangladesh – common (Khan, 2001).

Sources
Bates & Harrison, 1997; Blyth, 1841; Blyth, 1842; Harshey & Chandra, 2001; Hardwicke, 1825; Hutson *et al*., 2001, Khan, 2001

Compilers
P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, H. Raghuram, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
no exact locality			Khan, 2001
INDIA			
Andhra Pradesh			
Balapalli Range	13º 50	79º 15	Bates & Harrison, 1997
Palkonda hills	13º 50	79º 00	Bates & Harrison, 1997
Bihar			
Begusarai	25º 25	86º 08	Bates & Harrison, 1997
Bhojpur	25º 34	84º 40	Bates & Harrison, 1997
Champaran	27º 06	84º 29	Bates & Harrison, 1997
Chapra	25º 46	84º 44	Bates & Harrison, 1997
Darbhanga	26º 10	85º 54	Bates & Harrison, 1997
Inampur	-	-	Bates & Harrison, 1997
Nimiaghat	23º 56	86º 07	Bates & Harrison, 1997
Patna	25º 37	85º 12	Bates & Harrison, 1997
Purmea	25º 47	87º 28	Bates & Harrison, 1997
Saran	24º 29	86º 19	Bates & Harrison, 1997
Sharsa	-	-	Bates & Harrison, 1997
Vaishali	25º 49	85º 25	Bates & Harrison, 1997
Gujarat			
Ahmedabad	23º 03	72º 40	Bates & Harrison, 1997
Anand	22º 34	73º 01	Bates & Harrison, 1997
Baroda	22º 19	73º 14	Bates & Harrison, 1997
Broach	21º 40	73º 02	Bates & Harrison, 1997
Bulsar	20º 36	73º 03	Bates & Harrison, 1997
Deogad	21º 22	73º 25	Bates & Harrison, 1997
Lunwa	-	-	Bates & Harrison, 1997
Mandra	21º 16	73º 22	Bates & Harrison, 1997
Mandvi	21º 16	73º 22	Bates & Harrison, 1997
Mehmadabad	22º 51	72º 46	Bates & Harrison, 1997
Palanpur	24º 12	72º 29	Bates & Harrison, 1997
Jharkhand			
Giridih	24º 10	86º 20	Bates & Harrison, 1997
Hazaribagh	24º 00	85º 23	Bates & Harrison, 1997
Singhbhum	23º 30	85º 50	Bates & Harrison, 1997
Karnataka			
Dharwar	15º 30	75º 04	Bates & Harrison, 1997
Kolar	23º 09	78º 10	Bates & Harrison, 1997
Mangalagangotri	12º 54	74º 51	K.S. Sreepada, 1990
Sagar	16º 37	76º 45	Bates & Harrison, 1997
Sirsi	14º 40	74º 51	Bates & Harrison, 1997
Vijaynagar	15º 20	76º 28	Bates & Harrison, 1997
Kerala			
Ernakulam	10º 00	76º 16	Open country A. Madhavan, 1993 Bates & Harrison, 1997
Madhya Pradesh			
Balaghat	-	-	Harshey & Chandra, 2001
Binaganj	24º 03	77º 00	Bates & Harrison, 1997
Gwalior	26º 12	78º 09	Bates & Harrison, 1997
Hoshangabad	22º 44	77º 45	Bates & Harrison, 1997
Jabalpur	23º 10	79º 59	Bates & Harrison, 1997; Harshey & Chandra, 2001
Kanha National Park	-	-	Harshey & Chandra, 2001
Mandla	-	-	Harshey & Chandra, 2001
Sohagpur	22º 43	78º 14	Bates & Harrison, 1997
Maharashtra			
Ahmednagar	19º 08	74º 48	Cracks/ crevices in rocks, buildings Human disturbance D. S. Joshi, December 2001
Amravathi	-	-	Bates & Harrison, 1997
Arnala	19º 52	72º 42	Bates & Harrison, 1997
Bandra	19º 04	72º 58	Bates & Harrison, 1997
Bombay	18º 56	72º 51	Bates & Harrison, 1997
Chanda	19º 58	79º 21	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Elephanta	18º 54	72º 58	Bates & Harrison, 1997
Khandala	18º 45	73º 25	Bates & Harrison, 1997
Khed	17º 44	73º 25	Bates & Harrison, 1997
Malvan	16º 05	73º 30	Bates & Harrison, 1997
Nagpur	21º 10	79º 12	Bates & Harrison, 1997
Panchgani	17º 56	73º 49	Bates & Harrison, 1997
Ratnagiri	17º 00	73º 20	Bates & Harrison, 1997
Orissa			
Konark	19º 52	86º 12	Bates & Harrison, 1997
Rajasthan			
Kota	25º 11	75º 58	Bates & Harrison, 1997
Nasirabad	26º 16	74º 42	Bates & Harrison, 1997
Tamil Nadu			
Cumbum	09º 44	77º 19	Bates & Harrison, 1997
Madras	13º 05	80º 18	Bates & Harrison, 1997
Murappanadu	08º 44	77º 42	Temple crevices Human disturbances J. Vanitharani, 1994
Tirthamalai	12º 06	78º 36	Bates & Harrison, 1997
Travancore	09º 00	77º 00	Bates & Harrison, 1997
Tripura			
Agartala	23º 50	91º 23	Bates & Harrison, 1997
Uttar Pradesh			
Varanasi	25º 20	83º 00	Bates & Harrison, 1997
West Bengal			
Darjeeling	27º 02	88º 20	Bates & Harrison, 1997
Ganespur	-	-	Bates & Harrison, 1997
Kolkata	22º 35	88º 21	Bates & Harrison, 1997
Krishna Nagar	23º 22	88º 32	Bates & Harrison, 1997
Midnapur	22º 25	87º 24	Agarwal et al., 1992; Bates & Harrison, 1997
Nadia	30º 22	76º 12	Bates & Harrison, 1997
Salbani	22º 25	87º 24	Bates & Harrison, 1997
South 24-Parganas	22º 22	88º 25	Bates & Harrison, 1997
Varddhaman	21º 59	72º 54	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Kin	22º 45	94º 45	Bates & Harrison, 1997
Kisi	22º 05	95º 12	Bates & Harrison, 1997
Mandalay	21º 57	96º 04	Bates & Harrison, 1997
Mon Nyaung oo	-	-	Cave, tree Swe, 2000-2001
Monywa	22º 05	95º 12	Bates & Harrison, 1997
Pagan	21º 07	94º 53	Bates & Harrison, 1997
Pegu	17º 18	96º 31	Bates & Harrison, 1997
Rangoon	16º 47	96º 10	Bates & Harrison, 1997
Sitpinzeik	17º 22	96º 31	Bates & Harrison, 1997
Tatkon	23º 50	94º 30	Bates & Harrison, 1997
Toungoo	-	-	Bates & Harrison, 1997
Yin	22º 45	94º 46	Bates & Harrison, 1997
NEPAL			
no exact locality	-	-	Bates & Harrison, 1997
SRI LANKA			
Northern Province			
Cheddikulam	08º 40	80º 18	Bates & Harrison, 1997
Eastern Province			
Kantalai Tank	08º 22	81º 00	Bates & Harrison, 1997
Trincomalee	08º 34	81º 13	Bates & Harrison, 1997
Uva Province			
Medagama	07º 02	81º 17	Bates & Harrison, 1997
Western Province			
Anasigala	06º 29	80º 03	Bates & Harrison, 1997
Colombo	06º 55	79º 52	Bates & Harrison, 1997
Matugama	06º 32	80º 05	Bates & Harrison, 1997

Taphozous melanopogon Temminck, 1841

LEAST CONCERN in South Asia

Synonyms: *Taphozous bicolor* Temminck, 1841

Common names: Bengali: *Darijukta*; English: Black-bearded Tomb Bat

Family: Emballonuridae

Habit: Colonial

Niche: Caves, old mines, tunnels, temples. Up to 200m.

Distribution
Global: India, Myanmar, Sri Lanka

South Asia:
Bangladesh
India: Andaman & Nicobar Islands, Andhra Pradesh, Bihar, Chhattisgarh, Goa, Gujarat, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Karnataka, Kerala, Tamil Nadu
Sri Lanka: Central Province, North Central Province, North Western Province, Sabaragamuwa Province, Western Province

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many.

Habitat status: Loss of habitat, change in quality of habitat.

Data source: Indirect information, literature; Inferred

Threats
Threats to the taxon: Hunting, human interference.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Not known

Data source: Field study, museum record

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
Bangladesh: Least Concern
India: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Red List of Threatened Species (2000): Not Evaluated
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Kanha National Park, Satpura National Park, Madhya Pradesh.

Recommendations
Research: Survey, life history

Management: Monitoring, husbandry

Comments

Sources
Bates & Harrison, 1997; Harshey & Chandra, 2001; Hutson *et al*., 2001; Khan, 2001; Temminck, 1841

Compilers
A.C. Girish, Immanuel, J.K., S. Kandula, V.S. Korad, C.D. Koya, G. Nair, P.T. Nathan, A. Nobel, J.K. Raj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
Sinha in Gujarat 1976, Madurai, 1978, Rajasthan, 1981
Bates *et al* in Maharashtra 1992;
J. Vanitharani in Tirunelveli 1992-96;
M.K. Chandrasekharan & R. Subbaraj inMadurai 1977-1990; ZRS, Pune collection.
J. Vanitharani; Srivaikundam, India. 1991-98. Wing morphology and ectoparasites, bodyweight cycles.
J. Prabha & J. Vanitharani in Shenbagaramanallur. 2000 onwards. Bat survey.
S. Kandula in Ellora caves. 2002-January. Tourism.
J.K. Immanuel & D.P. Doss in Krishnapuram, Vittilapuram, Palayamkottai. 1998-2001. Temple-survey.
Yapa & Digana. Sri Lanka. 1996-1999. Survey
Madhavan in Kochi & Trichur, Kerala, 1993-2002
C. Srinivasulu at Hyderabad city environs, Andhra Pradesh, 1995 onwards

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
no exact locality			Khan, 2001
INDIA			
Andaman & Nicobar islands			
Mandapahar	11º 50	92º 50	Bates & Harrison, 1997
Taramangalam	-	-	Sreepada K.S., 1987-1993
Andhra Pradesh			
Balapalli range	13º 50	79º 15	Bates & Harrison, 1997
Hyderabad	25º 24	68º 22	Golkonda fort and other old buildings Human habitation and tourism Srinivasulu, C, 1995 onward
Secundrabad	17º 27	78º 27	Bates & Harrison, 1997
Bihar			
Patna	25º 37	85º 12	Temples, old buildings; Human habitation Sinha Y.P., 1977-81 Bates & Harrison, 1997
Chhattisgarh			
Jashpur	21º 16	81º 42	Bates & Harrison, 1997
Goa			
Colva	15º 50	73º 57	Bates & Harrison, 1997
Gujarat			
Bansda	20º 47	73º 25	Bates & Harrison, 1997
Gurudeshwar	21º 40	73º 02	Bates & Harrison, 1997
Mandla	-	-	Bates & Harrison, 1997
Karnataka			
Badami	15º 58	75º 45	Bates & Harrison, 1997
Jog	14º 12	74º 41	Bates & Harrison, 1997
Kyasanur	-	-	Rock clefts, temples human interference; habitat destruction Bhat & Srinivasan, '90
Pattadkal	16º 00	75º 47	Bates & Harrison, 1997
Vijaynagar	15º 20	76º 28	Bates & Harrison, 1997
Kerala			
Bimalnagari	-	-	Bates & Harrison, 1997
Ernakulam	10º 00	76º 16	Bates & Harrison, 1997
Kochi	-	-	Churchtower and schoolbuilding Human interference Madhavan, 1993-2002
Madhya Pradesh			
Asirgarh	21º 31	76º 22	Bates & Harrison, 1997
Betul	-	-	Harshey & Chandra, 2001
Burhanpur	21º 58	76º 08	Bates & Harrison, 1997
Chhindwara	-	-	Harshey & Chandra, 2001
Hoshangabad	-	-	Harshey & Chandra, 2001
Jabalpur	23º 10	79º 59	Bates & Harrison, 1997; Harshey & Chandra, 2001
Kanha National Park	-	-	Harshey & Chandra, 2001
Lumataghat	-	-	Bates & Harrison, 1997
Mandu	22º 22	75º 24	Bates & Harrison, 1997
Mundra	23º 50	78º 44	Bates & Harrison, 1997
Narsingarh	24º 00	79º 29	Bates & Harrison, 1997
Orcha	25º 21	78º 38	Bates & Harrison, 1997
Richhai	-	-	Bates & Harrison, 1997
Satpura National Park	-	-	Harshey & Chandra, 2001
Maharashtra			
Ajanta	20º 30	75º 48	Bates & Harrison, 1997
Alibag	18º 38	72º 55	Bates & Harrison, 1997
Aurangabad	19º 52	75º 22	Bates & Harrison, 1997
Chilkalda	21º 29	77º 12	Bates & Harrison, 1997
Daulatabad	19º 57	75º 18	Bates & Harrison, 1997
Ellora	20º 04	75º 15	Bates & Harrison, 1997
Helwak	17º 23	73º 47	Bates & Harrison, 1997
Kanheri	19º 13	72º 59	Bates & Harrison, 1997
Nagpur	21º 10	79º 12	Bates & Harrison, 1997
Narnala	21º 16	77º 06	Bates & Harrison, 1997
Pittalkora	20º 19	75º 10	Bates & Harrison, 1997
Rajapur	16º 38	73º 32	Bates & Harrison, 1997
Raysen	-	-	Bates & Harrison, 1997
Orissa			
Bhubaneshwar	20º 13	85º 50	Bates & Harrison, 1997
Cuttack	20º 26	85º 56	Bates & Harrison, 1997
Konark	19º 52	86º 12	Bates & Harrison, 1997
Rajasthan			
Udaipur	27º 40	75º 32	Bates & Harrison, 1997
Tamil Nadu			
Cape Comorin	08º 05	77º 35	Bates & Harrison, 1997
Keela kuyil Kudu	09º 52	78º 09	Bates & Harrison, 1997
Madurai	09º 55	78º 07	Caves human interference R. Subbaraj, 1975-78 Koodalur Perumal temple Human interference Raghuram & Marimuthu, 2000-till date Bhat & Srinivasan, '90
Nagarcoil	08º 11	77º 30	Bates & Harrison, 1997
Palayamkoltai	8º 44	77º 42	Temple Human interference J. Vanil tharani, 1991-till date
Shendagaramanallur	-	-	Temple Human interference J. Vanitharani, 1991 onwards
Sri Vaikundam	08º 40	77º 56	Temple Human interference J. Vanitharani, 1991 onwards
Suchundrum	-	-	Bates & Harrison, 1997
Thirupparangundram	9º 58	78º 10	Temple Human interference Raghuram & Marimuthu, 2000-till date
Thiruvedagam	9º 58	78º 10	Temple Human interference J. Balasingh, '90
Vittilapuram	-	-	Temple Human interference J. Vanitharani, 1991 onwards
MYANMAR (NORTHERN)			
Mingun	22º 00	95º 58	Bates & Harrison, 1997
Pagan	21º 07	94º 53	Bates & Harrison, 1997
SRI LANKA			
Central Province			
Sigiriya	07º 57	80º 46	Bates & Harrison, 1997
North Central Province			
Galapitigala	08º 02	80º 45	Bates & Harrison, 1997
Rajagivilena	08º 21	80º 30	Bates & Harrison, 1997
North Western Province			
Narramale	07º 25	80º 13	Bates & Harrison, 1997
Sabaragamuwa Province			
Bulathsinhala pitiya	-	-	Bates & Harrison, 1997
near Bulikolapitiya	-	-	Bates & Harrison, 1997
Paiheirgala	-	-	Bates & Harrison, 1997
Western Province			
Bulathsinghala	06º 39	80º 13	Bates & Harrison, 1997
Matugama	06º 32	80º 05	Bates & Harrison, 1997
Paiyagala	06º 33	79º 59	Bates & Harrison, 1997

Taphozous nudiventris Cretzschmer, 1830-31 — LEAST CONCERN in South Asia

Synonyms: *Taphozous kachhensis* Dobson, 1872

Common names: Naked-rumped Tomb Bat

Family: Emballonuridae

Habitat: Temperate, tropical and arid regions.

Niche: Crevices of rocks, houses, tunnels, forts

Distribution
Global: Afghanistan, India, Pakistan

South Asia:
India: Bihar, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, New Delhi, Rajasthan, Sikkim, Uttar Pradesh, Tamil Nadu, West Bengal
Pakistan: Punjab, Sind

Afghanistan
Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 57.

Habitat status: Not known

Data source: Literature, indirect information; Inferred

Threats
Threats to the taxon: Habitat loss.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Not known

Data source: Literature, indirect information; Inferred

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
India: Least Concern
Pakistan: Least Concern

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Kanha National Park, Madhya Pradesh.

Recommendations
Research: Survey

Management: Monitoring

Comments
Habitat loss due to urbanisation and ignorancy of government with regard to maintenance of historical buildings like forts.

Sources
Bates & Harrison, 1997; Cretzschmer, 1830-31, Dobson, 1872, Harshey & Chandra, 2001; Hutson *et al*., 2001

Compilers
S. Mistry, M. Muni, K.R. Senacha, T.K. Shrestha, K.S. Sreepada, C. Srinivasulu

Reviewers
Rest of the participants

Recent Field Studies
Senacha K. R. and Purohit A.K. in Jodhpur & Jaisalmer, 2001, Ecology and demographic changes among bats of Thar desert with special reference to Jodhpur, Jaisalmer and Bikenar. Maharashtra,
Joshi in Tondali dam area & Khallachi, Thane dist., Maharashtra, April 2001
H.R. Bhat in Chitradurga, Karnataka, 1971-1989

Distribution in South Asia, Afghanistan and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Jalalabad	34º 26	70º 25	Bates & Harrison, 1997
Kandahar	31º 36	65º 47	Bates & Harrison, 1997
near Kabul river	-	-	Bates & Harrison, 1997
INDIA			
Bihar			
Bodh Gaya	24º 48	85º 00	Bates & Harrison, 1997
Sasaram	24º 58	84º 01	Bates & Harrison, 1997
Gujarat			
Ahmedabad	23º 03	72º 40	Bates & Harrison, 1997
Anand	22º 34	73º 01	Bates & Harrison, 1997
Baroda	22º 19	73º 14	Bates & Harrison, 1997
Bhuj	23º 12	69º 54	Bates & Harrison, 1997
Bochasam	22º 25	72º 51	Bates & Harrison, 1997
Broach	21º 40	73º 02	Bates & Harrison, 1997
Deesa	24º 14	72º 13	Bates & Harrison, 1997
Junagadh	21º 31	70º 28	Bates & Harrison, 1997
Keshod	21º 17	71º 32	Bates & Harrison, 1997
Rajkot	22º 18	70º 56	Bates & Harrison, 1997
Vankaneer	22º 37	70º 56	Bates & Harrison, 1997
Vedtial	-	-	Bates & Harrison, 1997
Karnataka			
Aihole	-	-	Wet evergreen forest Loss of habitat H.R. Bhat, 1971-1989
Badami	15º 58	75º 45	Bates & Harrison, 1997
Pattadkal	16º 00	75º 47	Wet evergreen forest Loss of habitat Sreepada et al, 1971-1989; Bates & Harrison, 1997
Sirsi	14º 40	74º 51	Bates & Harrison, 1997
Sivasamudram	12º 16	77º 08	Bates & Harrison, 1997
Vijaynagar	15º 20	76º 28	Bates & Harrison, 1997
Madhya Pradesh			
Gwalior	26º 12	78º 09	Bates & Harrison, 1997; Harshey & Chandra, 2001
Jabalpur	-	-	Harshey & Chandra, 2001
Kanha National Park	-	-	Harshey & Chandra, 2001
Khajurao	24º 52	79º 55	Bates & Harrison, 1997
Madan Mahal	-	-	Bates & Harrison, 1997
Morar	26º 15	80º 14	Bates & Harrison, 1997
Richhai	-	-	Bates & Harrison, 1997
Sabalgarh	26º 15	77º 24	Bates & Harrison, 1997
Sanchi	23º 28	77º 42	Bates & Harrison, 1997
Maharashtra			
Ajanta	20º 30	75º 48	Bates & Harrison, 1997
Aurangabad	19º 52	75º 22	Bates & Harrison, 1997
Ellora	20º 04	75º 15	Bates & Harrison, 1997
Khallachi, Thane	-	-	Hilly tropical Loss of habitat D.S. Joshi, 2001
Tondali, Thane	-	-	Hilly tropical Loss of habitat D.S. Joshi, 2001
New Delhi			
New Delhi	28º 37	77º 13	Bates & Harrison, 1997

Distribution in South Asia	Lat.	Long.	Notes/Sources
Rajasthan			
Ajmer	26º 29	74º 40	Bates & Harrison, 1997
Banswara	23º 32	74º 28	Bates & Harrison, 1997
Bundi	25º 28	75º 42	Bates & Harrison, 1997
Dungarpur	23º 53	73º 48	Bates & Harrison, 1997
Jaipur	26º 53	75º 50	Arid, semi arid regions Loss of habitat due to urbanization and ignorance of the government to maintain the historical forts, renovation and tourism in some parts. Senacha K.R., 2001
Annapurna Bandav, Rajmahal palace, Sonar fort, Jaisalmer; Rajaman; Amarsagar garden, Amarsagar village, Jaisalmer; Mander deval, Mandov garden, Jodhpur, Rajasthan (4 locations)			Arid, semi arid regions Loss of habitat due to urbanization and ignorance of the government to maintain the historical forts, renovation and tourism in some parts. Senacha K.R., 2001
Jhalawar	24º 32	76º 12	Bates & Harrison, 1997
Jodhpur	26º 18	73º 08	Bates & Harrison, 1997
Kota	25º 11	75º 58	Bates & Harrison, 1997
Pali	25º 46	73º 26	Bates & Harrison, 1997
Sawai Madhopur	26º 00	76º 28	Bates & Harrison, 1997
Sirohi	24º 53	72º 58	Bates & Harrison, 1997
Tonk	25º 52	75º 50	Bates & Harrison, 1997
Sikkim			
Sikkim	-	-	Bates & Harrison, 1997
Uttar Pradesh			
Agra	27º 09	78º 00	Bates & Harrison, 1997
Chunar	25º 08	82º 54	Bates & Harrison, 1997
Fatehpur Sikri	27º 06	77º 39	Bates & Harrison, 1997
Tamil Nadu			
Madurai	09º 55	78º 07	Bates & Harrison, 1997
West Bengal			
Kolkata	22º 35	88º 21	Bates & Harrison, 1997
Sivok	26º 50	88º 32	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Pagan	21º 07	94º 53	Bates & Harrison, 1997
PAKISTAN			
Punjab			
Jhelum	32º 57	73º 44	Bates & Harrison, 1997
Rohtas	32º 58	73º 36	Bates & Harrison, 1997
Sind			
Kashmor	28º 25	69º 35	Bates & Harrison, 1997
Kot Diji	27º 21	68º 42	Bates & Harrison, 1997
Tori	28º 09	69º 05	Bates & Harrison, 1997
Sadikabad	28º 18	70º 02	Bates & Harrison, 1997

Taphozous perforatus E. Geoffroy, 1818

LEAST CONCERN

Common names: Egyptian Tomb Bat

Family: Emballonuridae

Habit: Colonial.

Niche: Caves, old ruins, buildings, wells, tunnels. 200m.

Distribution
Global: India, Pakistan

South Asia:
India: Gujarat, Madhya Pradesh, Rajasthan
Pakistan: Sind

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: Many.

Habitat status: change in quality of habitat.

Threats
Threats to the taxon: Human interference, habitat loss.

Population
Generation time: 4-6 years

Mature individuals: > 10,000

Population trend: Not known

Data source: Field study, museum record

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status
India: Least Concern
Pakistan: Least Concern

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments

Sources
Bates & Harrison, 1997; Geoffroy, 1818; Harshey & Chandra, 2001; Hutson *et al*., 2001

Compilers
A.C. Girish, Immanuel, J.K., S. Kandula, V.S. Korad, C.D. Koya, G. Nair, P.T. Nathan, A. Nobel, J.K. Raj, R. Rajashekar, K. Seedikkoya, T.K. Shrestha, E.A.A. Shukkur, D.P. Swamidoss, W. Yapa

Reviewers
Rest of the participants

Recent Field Studies
Sinha, Gujarat, 1981, Rajasthan, 1980; Bates *et al.,* Ahmedabad, 1992

Distribution in South Asia from literature and recent field sightings

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Gujarat			
Gujarat	-	-	large wells in urban areas (11.5) Bates & Muni, 1993
Bhuj	23º 12	69º 54	Bates & Harrison, 1997
Rajkot	22º 18	70º 56	Bates & Harrison, 1997
Ahmedabad	23º 03	72º 40	Bates & Harrison, 1997
Bochasam	22º 25	72º 51	Bates & Harrison, 1997
Chaklasi	22º 44	73º 01	Bates & Harrison, 1997
Mehmadabad	22º 51	72º 46	Bates & Harrison, 1997
Rajpipla	21º 49	73º 36	Bates & Harrison, 1997
Madhya Pradesh			
Jabalpur	23º 10	79º 59	Bates & Harrison, 1997; Harshey & Chandra, 2001
Rajasthan			
Jodhpur	26º 18	73º 08	Bates & Harrison, 1997
Dunjarpur	23º 53	73º 48	Bates & Harrison, 1997
Barmer	25º 43	71º 25	Bates & Harrison, 1997
Jaisalmer	26º 53	75º 50	Bates & Harrison, 1997
Jalawar	-	-	Bates & Harrison, 1997
PAKISTAN			
Sind			
Jatti	24º 22	68º 17	Bates & Harrison, 1997

Taphozous saccolaimus Temminck, 1838

LEAST CONCERN in South Asia

Synonym: *Taphozous crassus* Blyth 1844
Taphozous pulcher Blyth, 1844

Common names: Bengali: *Jhalor-leji Chamchika*; English: Pouch-bearing Bat

Family: Emballonuridae

Habit: Insectivorous

Habitat: Mainly from hollows of decayed trunks of jaggary palm.

Niche: Up to 1200 m.

Distribution
Global: Australia, Bangladesh, India, Sri Lanka, Southeast Asia to Solomon Island

South Asia:
Bangladesh
India: Andaman & Nicobar Islands, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Orissa, Uttar Pradesh, West Bengal
Sri Lanka: North Central Province, Western Province, Uva Province

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: 2,000 sq km.

Locations/subpopulations: > 20 / Not known. Fragmented

Habitat status: Decline in habitat due to logging and change in quality due to human interference.

Data source: Field study; observed, inferred.

Threats
Threats to the taxon: No threats.

Population
Generation time: 4-6 years

Mature individuals: < 10,000

Population trend: Not known

Data source: Literature; inferred; hypothetical.

Recent Field Studies
None

Red List 2001 Status derived in the workshop

Ver. 3.1: LEAST CONCERN

National Status:
Bangladesh: Least Concern
India: Least Concern
Sri Lanka: Least Concern

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Microchiroptera Action Plan (Global): Not Evaluated
CITES: Not listed

Known presence in Protected Areas
India: Campbell Bay National Park, Andaman & Nicbar Island; Kanha National Park, Madhya Pradesh

Recommendations
Research: Survey, basic ecology

Management: Monitoring, habitat research

Comments
Flies rapidly at high attitude. Very widespread species. Isolated population in Nicobar Island and Mirzapur in Uttar Pradesh. Small colonies but widespread and scattered localities. Most common of all Sheath-tailed bats, distributed all over the country (Khan, 2001).

Sources
Bates & Harrison, 1997; Blyth, 1844; Temminck, 1838

Compilers
P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, H. Raghuram, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Distribution in South Asia from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
widely distributed	-	-	Khan, 2001
no exact location	-	-	Bates & Harrison, 1997
INDIA			
Andaman & Nicobar islands			
Campbell Bay	07º 00	93º 45	Bates & Harrison, 1997
Gujarat			
Anand	22º 34	73º 01	Bates & Harrison, 1997
Karnataka			
Gersoppa	14º 12	74º 42	Bates & Harrison, 1997
Jellopur	15º 00	74º 45	Bates & Harrison, 1997
Kadakola	12º 18	76º 37	Bates & Harrison, 1997
Mangi	-	-	Bates & Harrison, 1997
Sirsi	14º 40	74º 51	Bates & Harrison, 1997
Kerala			
Ernakulam	10º 00	76º 16	Bates & Harrison, 1997
Kottegudu	10º 32	76º 14	Palm trees A. Madhavan, 1993
Pallipuram	10º 32	76º 14	Palm trees A. Madhavan, 1993
Paralam	10º 32	76º 14	A. Madhavan, 1993
Silent Valley	10º 46	76º 42	Tropical evergreen forest, ZSI Survey, P.K. Das, 1991
Venginisseri	10º 32	76º 14	Palm trees A. Madhavan, 1993
Madhya Pradesh			
Balaghat	-	-	Harshey & Chandra, 2001
Kanha National Park	-	-	Harshey & Chandra, 2001
Mandla	-	-	Harshey & Chandra, 2001
Maharashtra			
Bombay	18º 56	72º 51	Bates & Harrison, 1997
Meghalaya			
Phulbari	25º 55	90º 03	Bates & Harrison, 1997
Orissa			
Koira	21º 50	85º 12	Bates & Harrison, 1997
Uttar Pradesh			
Mirzapur	27º 41	79º 33	Bates & Harrison, 1997
West Bengal			
Chandra	22º 26	87º 21	Bates & Harrison, 1997
Churpurni	-	-	Bates & Harrison, 1997
SRI LANKA			
North Central Province			
Polonnaruwa	07º 56	81º 02	Bates & Harrison, 1997
Western Province			
Anasigalla	06º 29	80º 03	Bates & Harrison, 1997
Colombo	06º 55	79º 52	Bates & Harrison, 1997
Dehiwala	06º 52	79º 52	Bates & Harrison, 1997
Gangodawila	-	-	Bates & Harrison, 1997
Paiyagalla	06º 33	79º 59	Bates & Harrison, 1997
Uva Province			
Dammeria	06º 57	81º 09	Bates & Harrison, 1997
Passara hills	06º 58	81º 09	Bates & Harrison, 1997

Taphozous theobaldi Dobson, 1872

VULNERABLE in South Asia

Synonyms: *Taphozous theobaldi secatus* Thomas, 1915

Common names: Theobald's Bat

Family: Emballonuridae

Habit: Insectivorous, occurs in big colonies

Habitat: Ruins temples, dry scrubland, cave dweller

Niche: Up to 1200m

Distribution
Global: India and South East Asia

South Asia:
India: Karnataka, Kerala, Madhya Pradesh, Maharashtra

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km

Locations/subpopulations: 6 / Not known. Fragmented.

Habitat status: Not known

Data source: Field study, literature; observed, inferred

Threats
Threats to the taxon: Human interference, cave disturbance.

Population
Generation time: 4-6 years

Mature individuals: < 10,000

Population trend: >30% decline in the last 10 years.

Data source: Field study, observed.

Red List 2001 Status derived in the workshop

Ver. 3.1: VULNERABLE A2a

Of the six locations having 7,000 bats, one location was burnt which resulted at least 3,000 bats killed.

1997 C.A.M.P. (Ver. 2.3): Data deficient

Uncertainty
Assessed based on evidence and on the consensus of field biologists.

Other status
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
India: Silent Valley National Park, Kerala; Bhimshankar Wildlife Sanctuary, Maharashtra

Recommendations
Research: Survey

Management: Monitoring, public awareness

Comments
There are 6 known localities of its occurrence. Burning of bat roosting site at Ahmednagar, Maharashtra. (about 3000 bats). Average locality number taken is 1000 and 6 locations (Number in four colonies - 1000, 400, 100, 3000 recorded)

Sources
Bates & Harrison, 1997; Dobson, 1872; Harshey & Chandra, 2001; Hutson *et al*., 2001; Thomas, 1915.

Compilers
P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, H. Raghuram, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Recent Field Studies
D.S. Joshi, Ahmednagar, Survey and monitoring for 7 years

Distribution in South Asia and Myanmar from literature and recent field studies

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Karnataka			
Krishnapur	15º 20	74º 22	Bates & Harrison, 1997
Yana	-	-	Degraded forest ? (H.R. Bhat & M.A. Sreenivasan, 1990)
Kerala			
Silent Valley National Park			
Madhya Pradesh			
Asirgarh	21º 31	76º 22	Bates & Harrison, 1997
East Nimar	-	-	Harshey & Chandra, 2001
Jabalpur	-	-	Harshey & Chandra, 2001
West Nimar	-	-	Harshey & Chandra, 2001
Richhai	-	-	Bates & Harrison, 1997
Maharashtra			
Bhimashankar	-	-	Evergreen forest G.H. Koli & D.S. Joshi, 2000
Dashmi Gavan	-	-	Scrubland old darga muslim prayer place Colony burnt about 3000 bats died G.H. Koli & D.S. Joshi, 2001
MYANMAR (NORTHERN)			
Kajin state	-	-	Caves K. M. Swe, 1999

Triaenops persicus Dobson, 1871

VULNERABLE in South Asia

Common names: Persian Trident Bat

Family: Hipposideridae

Habit: Insectivorous

Niche: Loose bark of Date Palm and space between palm trees, underground channels, crevices and cliffs.

Distribution
Global: Africa, Iran, Pakistan, South Arabia

South Asia:
Pakistan: Sind

Extent of Occurrence: < 100 sq km.

Area of Occupancy: < 100 sq km.

Locations/subpopulations: 1 / not known.

Habitat status: Not known.

Data source: Literature; Observed.

Threats
Threats to the taxon: Not known

Population
Generation time: 4-6 years

Mature individuals: Not known

Population trend: Not known

Data source: Indirect information; Inferred

Recent Field Studies
None

Distribution in South Asia from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
PAKISTAN			
Sind			
Gharo	24º 44	67º 36	Bates & Harrison, 1997

Red List 2001 Status derived in the workshop

Ver. 3.1: VULNERABLE D2

Since the Pakistan population is isolated from the rest of the population, because of its restricted distribution, the status is accorded out of precaution.

Uncertainty
Assessed based on evidence, inference, precaution and on the consensus of field biologists.

Other status
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey

Management: Monitoring

Comments

Sources
Bates & Harrison, 1997; Dobson, 1871; Hutson *et al*., 2001

Compilers
S. Mistry, M.S. Pradhan, Y.P. Sinha, C. Srinivasulu, A. Thabah, K.M. Swe

Reviewers
Rest of the participants

Tylonycteris pachypus (Temminck, 1840)

LEAST CONCERN in South Asia

Synonyms: *Vespertilio pachypus* Temminck, 1840
T*ylonycteris rubidus* Thomas, 1915
Scotophilus fulvidus Blyth, 1859
Tylonycteris aurex Thomas, 1915

Common names: Bamboo Bat, Club-footed Bat, Flat-headed Bat

Family: Vespertilionidae

Habit: Solitary to small colonies (10-20)

Habitat: Tropical forests, bamboo forest

Niche: Bamboo forests. 462-1262m.

Distribution
Global: Bangladesh, India, Myanmar

South Asia:
Bangladesh
India: Andaman & Nicobar Islands, Karnataka, Kerala, Manipur, Meghalaya, Mizoram, Sikkim, West Bengal

Myanmar (Northern)

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 33 / many.

Habitat status: Loss of habitat and change in quality of habitat.

Data source: Indirect information; Inferred.

Threats
Threats to the taxon: Human interference, habitat loss. The influence on the population well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: > 10,000. Mature individuals declined in the past by <10% in the last 10 years and likely to decline by <10% in the next 10 years.

Population trend: Not known

Data source: Literature

Recent Field Studies
None

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

The habitat is under threat due to deforestation and human interference for commerce. Threats are affecting the population of the species and are likely to continue into the future.

National Status
Bangladesh: Near Threatened
India: Near Threatened

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, genetic research, taxonomic research

Management: Monitoring

Comments
Abundant locations and habitat. Not currently threatened.

Sources
Bates & Harrison, 1997; Blyth, 1859; Temminck, 1840

Compilers
P.J.J. Bates, P.C.M.B. Digana, S. Kandula, G. Nair, R. Rajashekar, E.A.A. Shukkur, A. Thabah, W. Yapa

Reviewers
Rest of the participants

Distribution in South Asia and Myanmar from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
BANGLADESH			
Luskerpore Valley	24º 20	91º 30	Bates & Harrison, 1997
INDIA			
Andaman & Nicobar Islands			
Wimberleyganj	11º 50	92º 45	Bates & Harrison, 1997
Karnataka			
Astoli	15º 26	74º 30	Bates & Harrison, 1997
Belgaum	15º 54	74º 36	Bates & Harrison, 1997
Dharwar	15º 30	75º 04	Bates & Harrison, 1997
Haleri	12º 31	75º 40	Bates & Harrison, 1997
Honkan	14º 30	75º 10	Bates & Harrison, 1997
Hulekal	14º 42	74º 46	Bates & Harrison, 1997
Kardibetta forest	14º 08	75º 20	Bates & Harrison, 1997
Sagar	16º 37	76º 45	Bates & Harrison, 1997
Samasgi	14º 40	75º 10	Bates & Harrison, 1997
Sirsi	14º 40	74º 51	Bates & Harrison, 1997
Srimangala	12º 01	76º 00	Bates & Harrison, 1997
Kerala			
Thrissur	10º 32	76º 14	Bates & Harrison, 1997
Manipur			
Manipur	-	-	Bates & Harrison, 1997
Meghalaya			
Cherrapunji	25º 16	91º 42	Bates & Harrison, 1997
Kherapara	25º 28	90º 13	Bates & Harrison, 1997
Sanapahar	-	-	Bates & Harrison, 1997
Mizoram			
Sangao	23º 30	93º 00	Bates & Harrison, 1997
Sikkim			
Sikkim	-	-	Bates & Harrison, 1997
West Bengal			
Darjeeling	27º 02	88º 20	Bates & Harrison, 1997
Kalimpong	27º 02	88º 34	Bates & Harrison, 1997
Nimbong	27º 04	88º 25	Bates & Harrison, 1997
Pashok	27º 04	88º 24	Bates & Harrison, 1997
Sangser	27º 04	88º 30	Bates & Harrison, 1997
Sivok	26º 50	88º 32	Bates & Harrison, 1997
MYANMAR (NORTHERN)			
Dawe	17º 55	96º 40	Bates & Harrison, 1997
Hkamti	17º 55	96º 40	Bates & Harrison, 1997
Htingnan	26º 36	97º 53	Bates & Harrison, 1997
Kindat	23º 42	94º 29	Bates & Harrison, 1997
Pyaunggaung	22º 38	97º 22	Bates & Harrison, 1997
Se 'en	-	-	Bates & Harrison, 1997
Tatkon	23º 50	94º 30	Bates & Harrison, 1997

Tylonycteris robustula Thomas, 1915

NOT EVALUATED

Common names: Greater Flat-headed Bat

Habit: Solitary or colonial

Habitat: Arid areas

Niche: Crevices or in the roofs of cliffs

Distribution
Global: Northeast India, to Myanmar, Thailand, Malaysia, Indonesia and the Philippines

South Asia:
India: Mizoram

Northern Myanmar

Extent of Occurrence: Not known

Area of Occupancy: Not known

Locations/subpopulations: Not known

Habitat status: Not known

Threats
Threats to the taxon: Not known

Population
Generation time: Not known

Mature individuals: Not known

Population trend: Not known

Red List 2001 Status derived in the workshop

Ver. 3.1: NOT EVALUATED

1997 C.A.M.P. (Ver. 2.3): Not Evaluated

Uncertainty
Assessed based on evidence, inference and on the consensus of field biologists.

Other status
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
Not known

Recommendations
Research:

Management:

Comments

Sources
Bates & Harrison, 1997; Thomas, 1915

Compilers

Reviewers
Rest of the participants

Recent Field Studies
None

Distribution in South Asia and Myanmar from literature

Distribution in South Asia	Lat.	Long.	Notes/Sources
INDIA			
Mizoram			
Sangao	23º 30	93º 00	Bates & Harrison, 1997
NORTHERN MYANMAR			
Htingnan	26º 36	97º 53	Bates & Harrison, 1997

Vespertilio murinus Linnaeus, 1758

NEAR THREATENED in South Asia

Common names: Particoloured Bat

Family: Vespertilionidae

Habit: Insectivorous, males roost alone, females small colony

Habitat: Attics of houses, hollow trees, behind loose bark, urban areas

Niche: Crevices. 20-40m.

Distribution
Global: Afghanistan, Pakistan. Sweden, Western Europe to Eastern Siberia

South Asia:
Pakistan: Northern areas

Afghanistan

Extent of Occurrence: > 20,000 sq km.

Area of Occupancy: > 2,000 sq km.

Locations/subpopulations: 1.

Habitat status: Habitat loss, change in quality due to war.

Data source: Literature, indirect information; Inferred.

Threats
Threats to the taxon: Exploitation, accidental mortality, war. The influence on the population well understood, not reversible and have not ceased to be a threat.

Population
Generation time: 4-6 years

Mature individuals: Not known

Population trend: Not known

Data source: Indirect information; Inferred.

Recent Field Studies
None

Red List 2001 Status derived in the workshop

Ver. 3.1: NEAR THREATENED

Uncertainty
Assessed based on inference and on the consensus of field biologists.

Other status
Microchiroptera Action Plan (Global): Lower Risk least concern
CITES: Not listed

Known presence in Protected Areas
None

Recommendations
Research: Survey, life history, basic ecology

Management: Monitoring, habitat management, public awareness

Comments
Widespread species in Afghanistan & Pakistan. No information on populations, habitat, trends or threats.

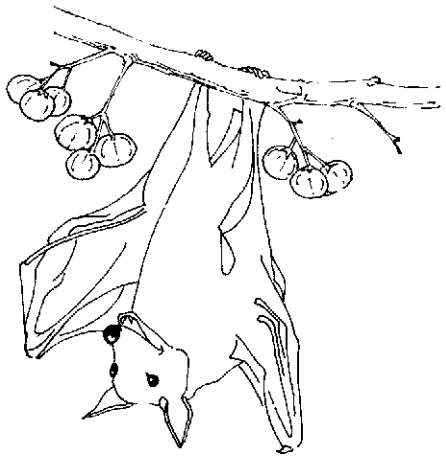
Sources
Bates & Harrison, 1997; Hutson *et al*., 2001; Linnaeus, 1758.

Compilers
P.M.C.B. Digana, V. Elangovan, A. Hutson, D.S. Joshi, G.H. Koli, A. Madhavan, G. Marimuthu, K. Nathar, H. Raghuram, E. Pandaranayaka, P. Patiath, M.S. Pradhan, Y.S. Priya, J. Vanitharani, K.D. Yardi

Reviewers
Rest of the participants

Distribution in South Asia and Afghanistan from literature

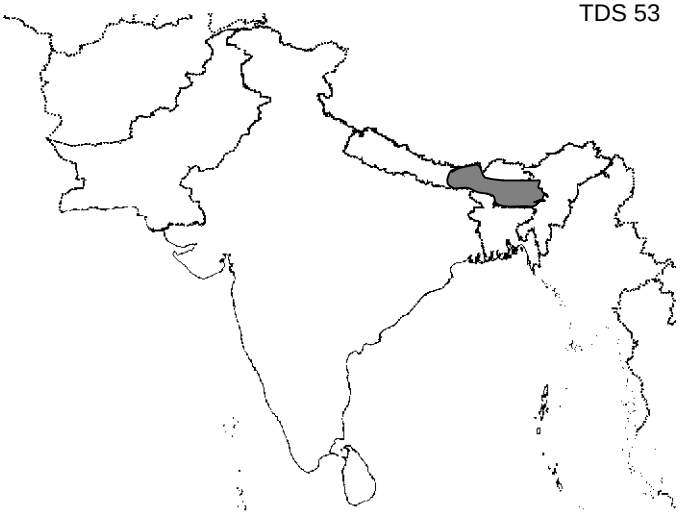
Distribution in South Asia	Lat.	Long.	Notes/Sources
AFGHANISTAN			
Maimana	35º 54	64º 43	25 miles east of Maimana Bates & Harrison, 1997
Jalalabad (south)	34º 26	76º 25	Bates & Harrison, 1997
PAKISTAN			
Northern areas			
Gilgit	35º 54	74º 20	Bates & Harrison, 1997



Maps

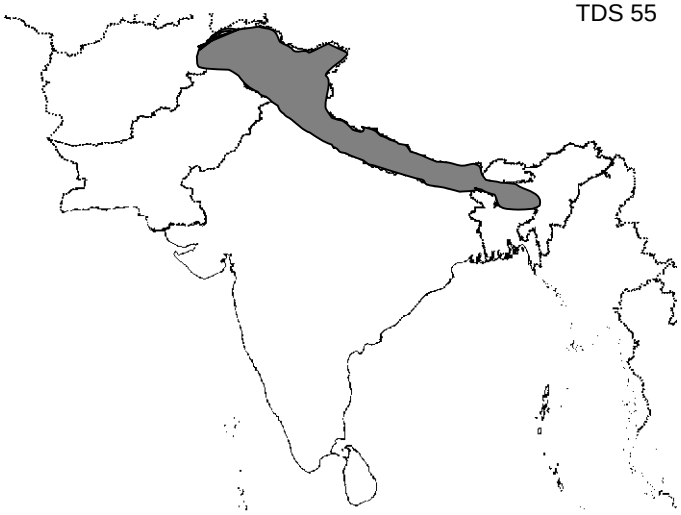
1. *Areilulus circumdatus* (Temminck, 1840)

TDS 53



2. *Barbastella leucomelas* (Cretzschmar, 1830/31)

TDS 55



3. *Coelops frithii* Blyth, 1848

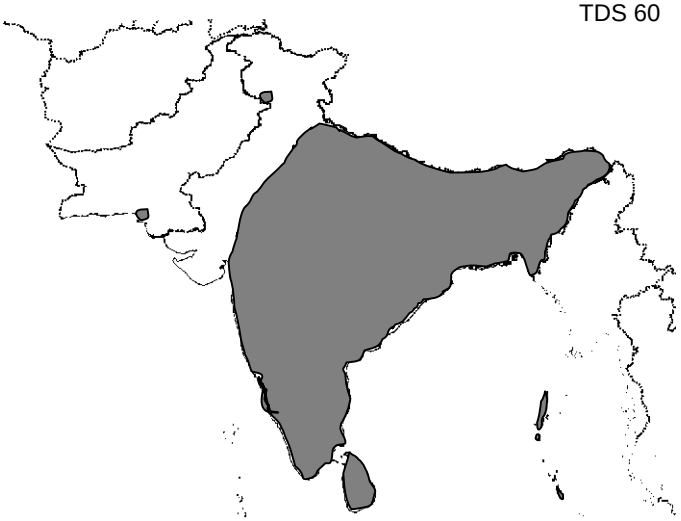
TDS 57

4. *Cynopterus brachyotis* (Müller, 1838)

TDS 58

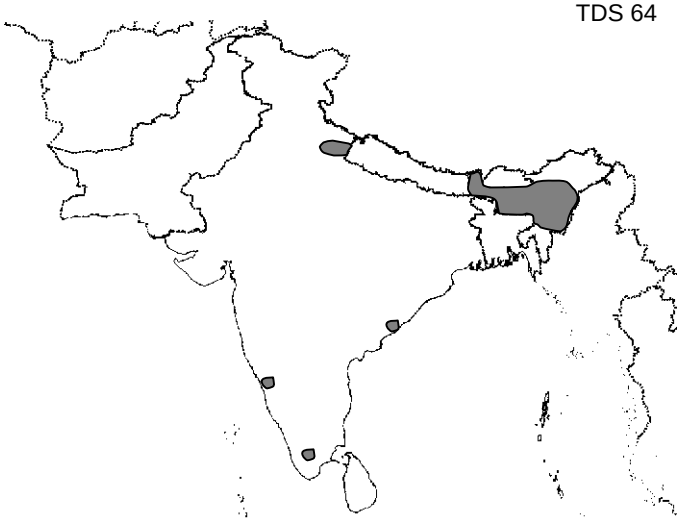
5. *Cynopterus sphinx* (Vahl, 1797)

TDS 60



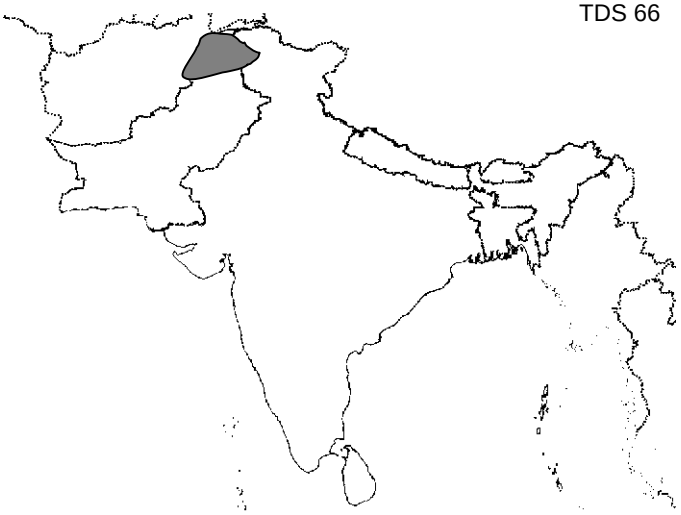
6. *Eonycteris spelaea* (Dobson, 1871)

TDS 64



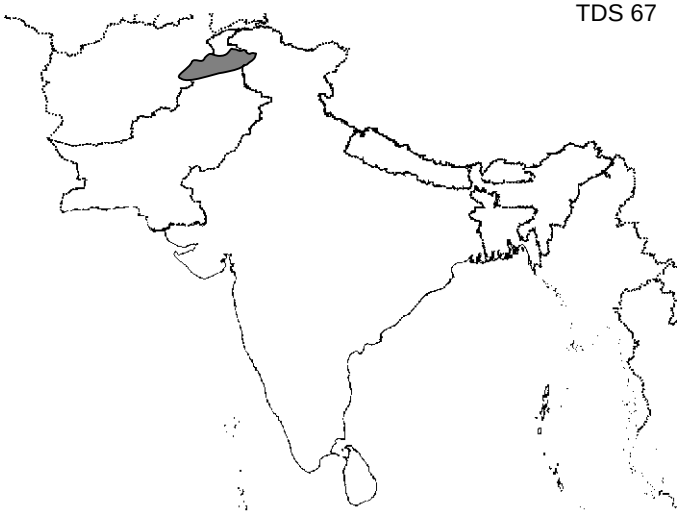
7. *Eptesicus bottae* (Peters, 1869)

TDS 66



8. *Eptesicus gobiensis* Bobrinskii, 1926

TDS 67



9. *Eptesicus nasutus* (Dobson, 1877)

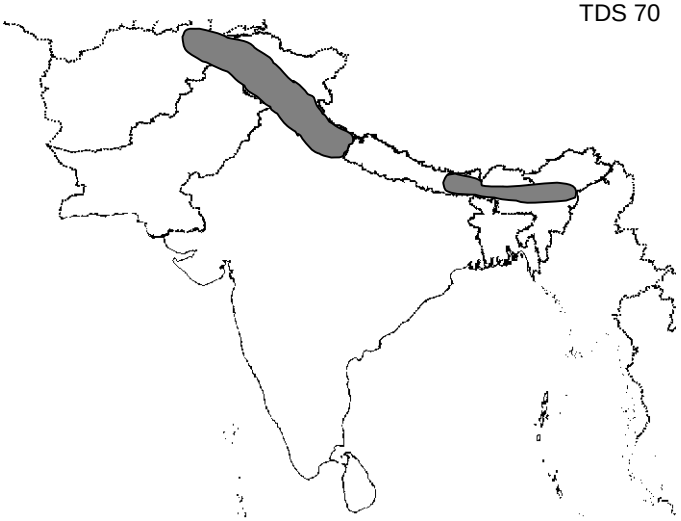
TDS 68

10. *Eptesicus pachyotis* (Dobson, 1871)

TDS 69

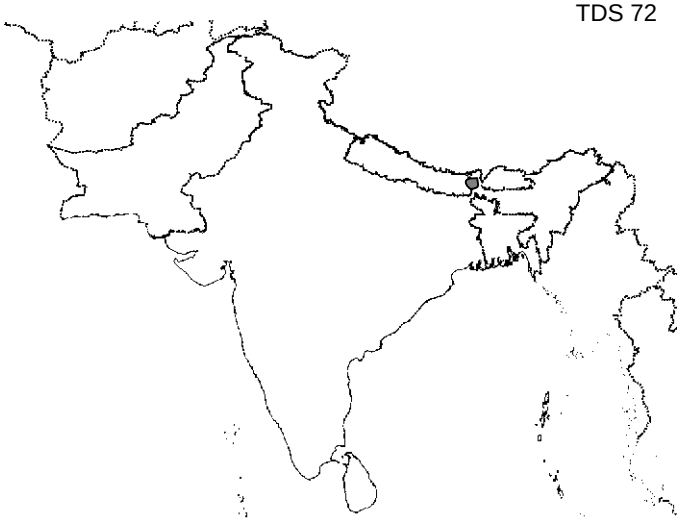
11. *Eptesicus serotinus* (Schreber, 1774)

TDS 70



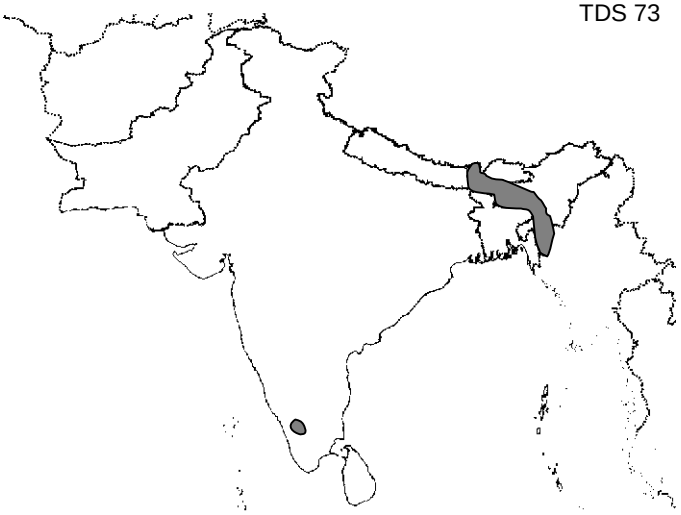
12. *Eptesicus tatei* Ellerman & Morrison-Scott, 1951

TDS 72



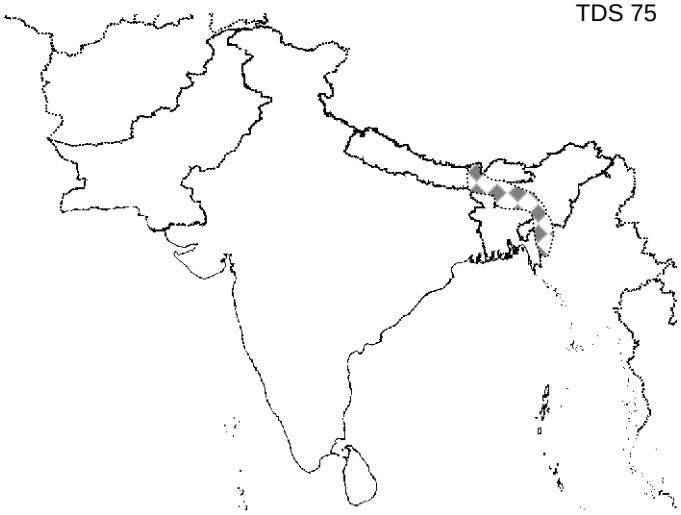
13. *Harpiocephalus harpia* (Temminck, 1840)

TDS 73



14. *Harpiocephalus mordax* Thomas, 1923

TDS 75



15. *Hesperoptenus tickelli* (Blyth, 1851)

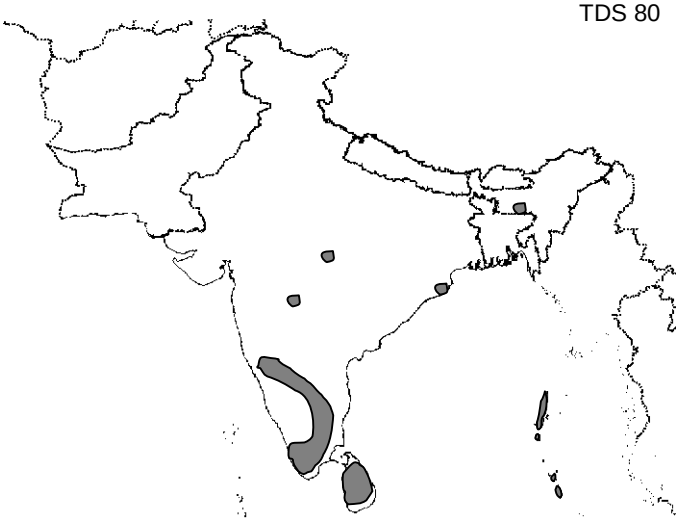
TDS 76

16. *Hipposideros armiger* (Hodgson, 1835)

TDS 78

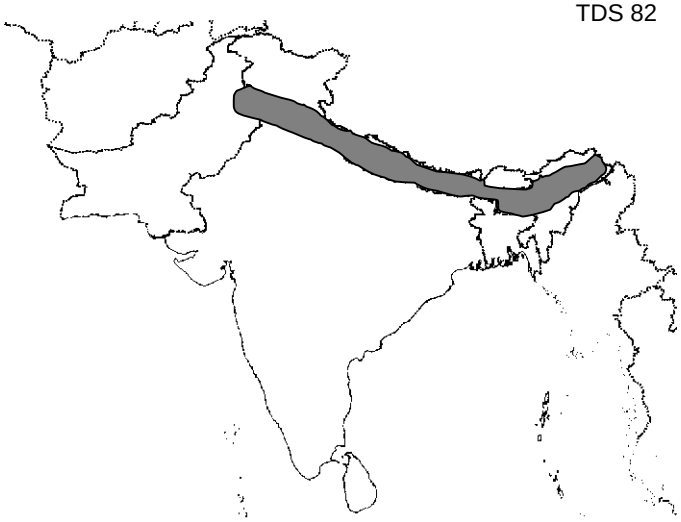
17. *Hipposideros ater Templeton*, 1848

TDS 80



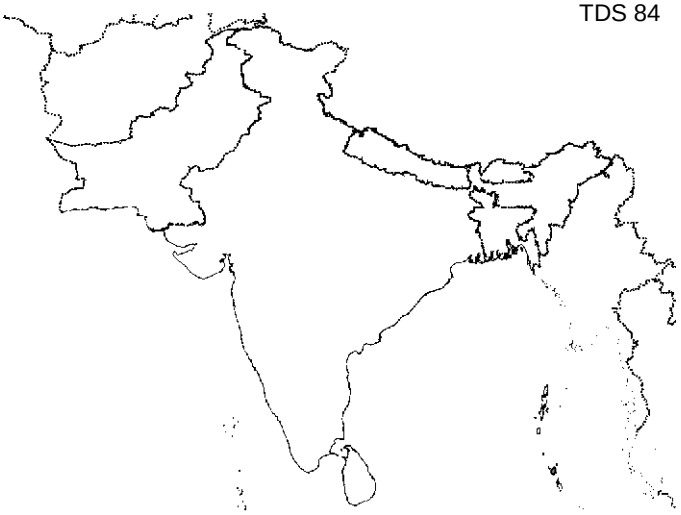
18. *Hipposideros cineraceus* Blyth, 1853

TDS 82



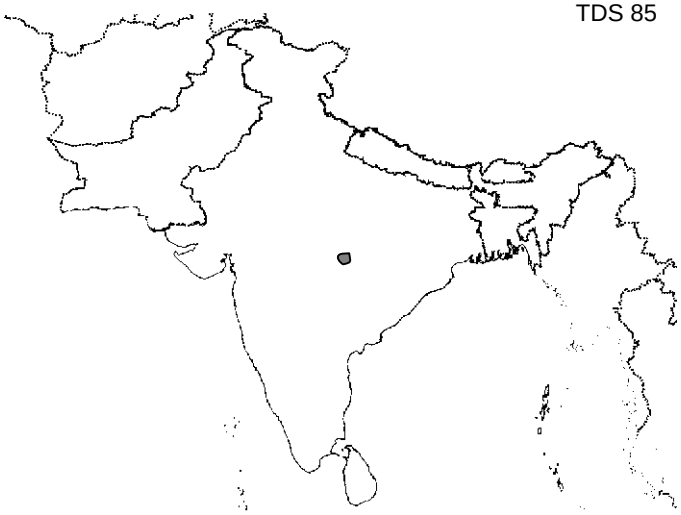
19. *Hipposideros diadema* (E. Geoffroy, 1813)

TDS 84



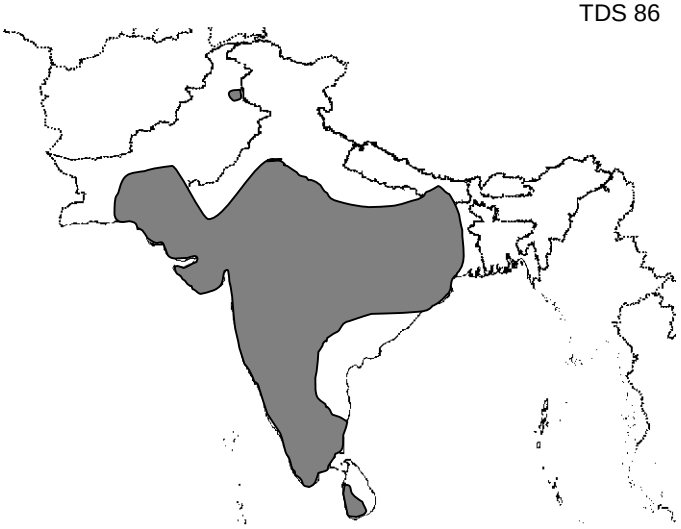
20. *Hipposideros durgadasi* (Khajuria, 1970)

TDS 85



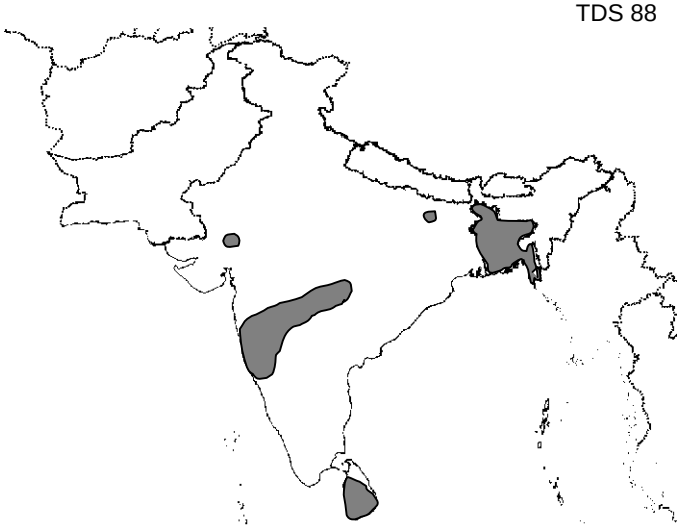
21. *Hipposideros fulvus* Gray, 1838

TDS 86



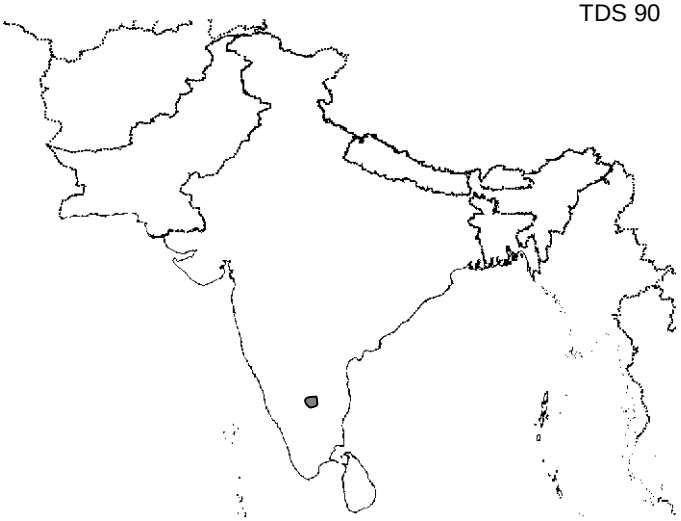
22. *Hipposideros galeritus* Cantor, 1846

TDS 88



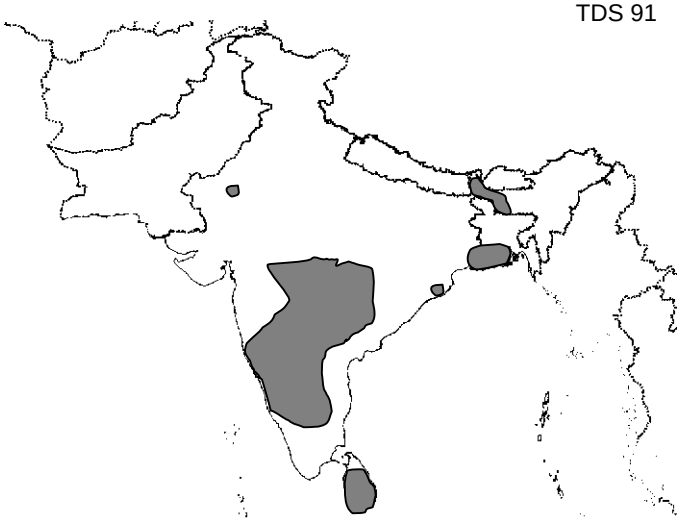
23. *Hipposideros hypophyllus* Kock & Bhat, 1994

TDS 90



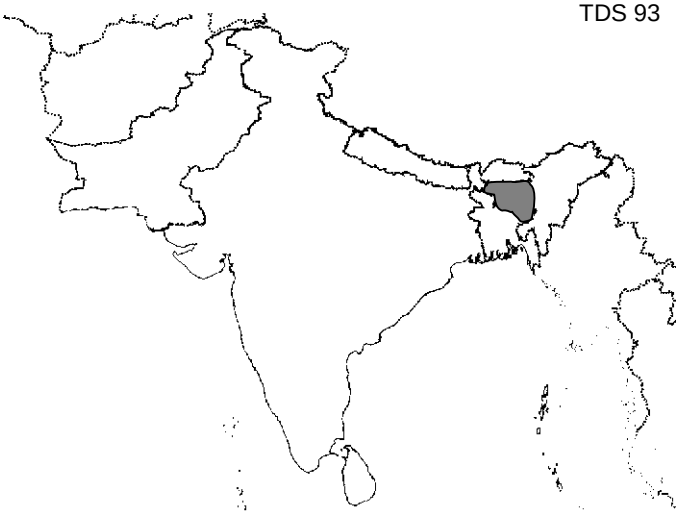
24. *Hipposideros lankadiva* Kelaart, 1850

TDS 91



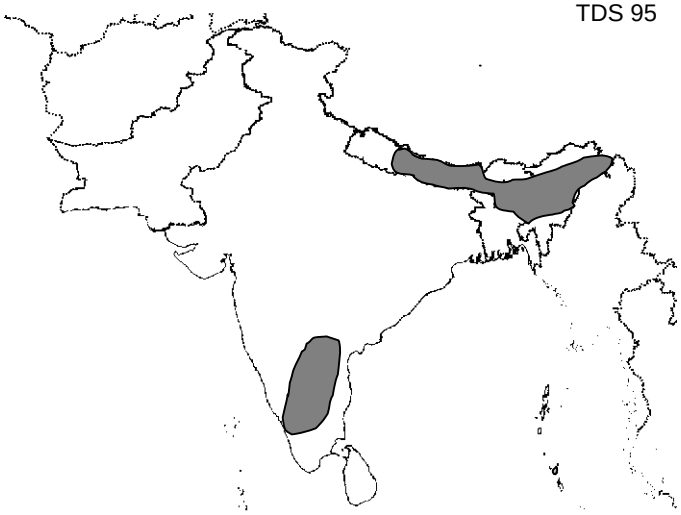
25. *Hipposideros larvatus* (Horsfield, 1823)

TDS 93



26. *Hipposideros pomona* Andersen, 1918

TDS 95



27. *Hipposideros speoris* (Schneider, 1800)

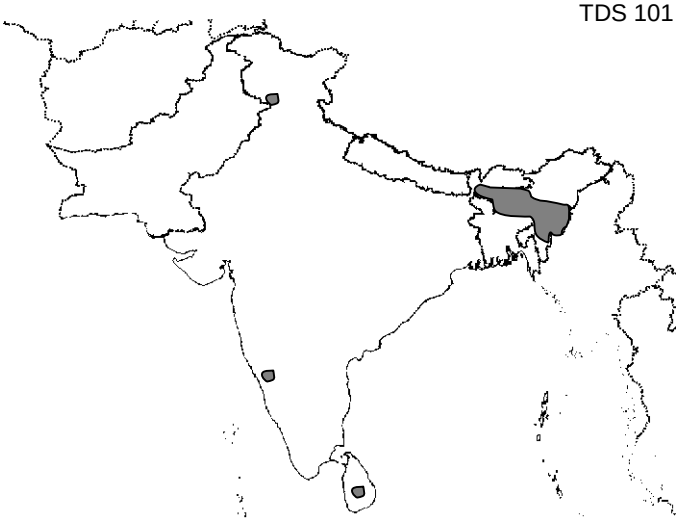
TDS 97

28. *Ia io* Thomas, 1902

TDS 100

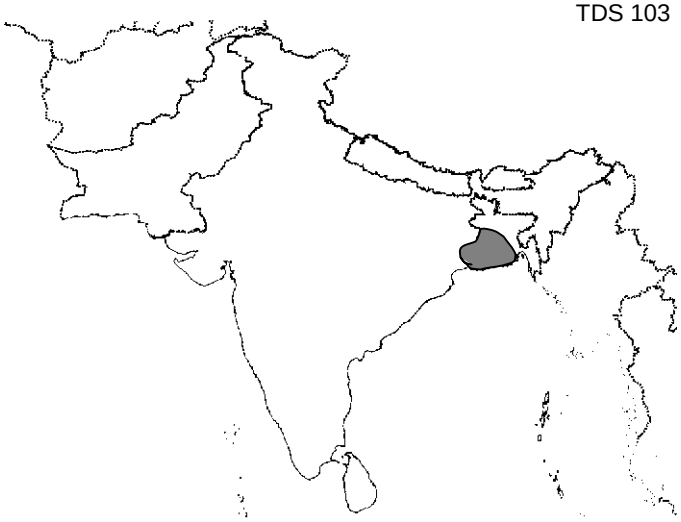
29. *Kerivoula hardwickii* (Horsfield, 1824)

TDS 101



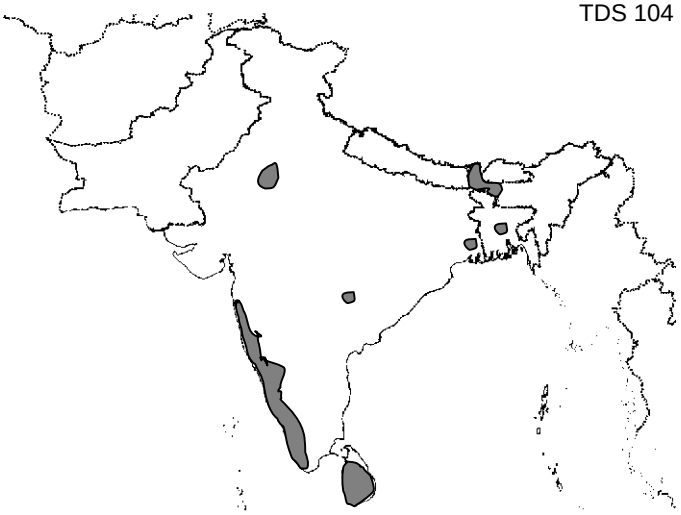
30. *Kerivoula papillosa* Temminck, 1840

TDS 103



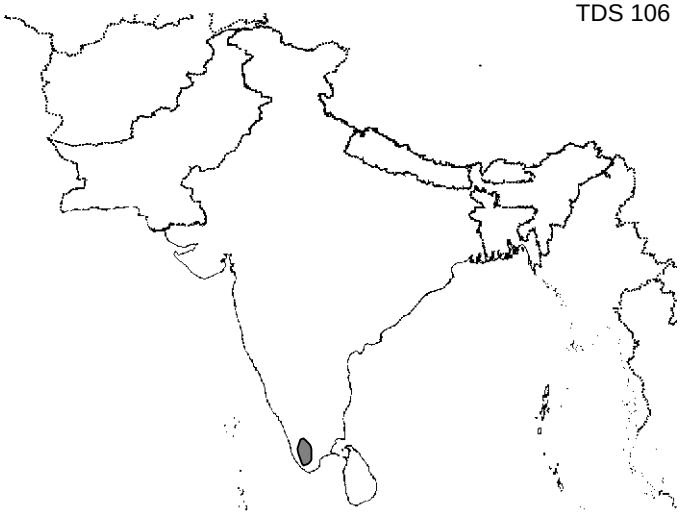
31. *Kerivoula picta* (Pallas, 1767)

TDS 104



32. *Latidens salimalii* Thonglongya, 1972

TDS 106



33. *Macroglossus sobrinus* (K. Andersen, 1911)

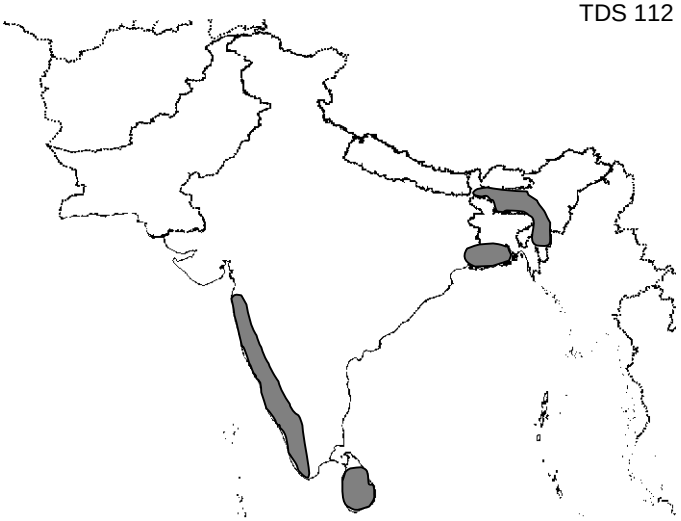
TDS 108

4. *Megaderma lyra* E. Geoffroy, 1810

TDS 109

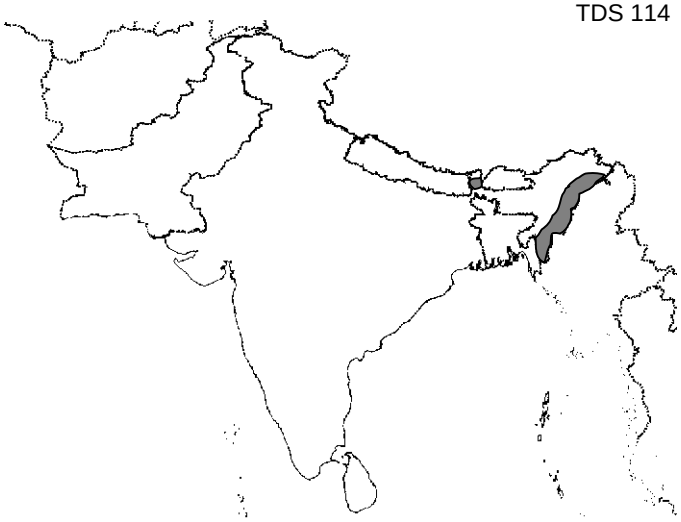
35. *Megaderma spasma* (Linnaeus, 1758)

TDS 112



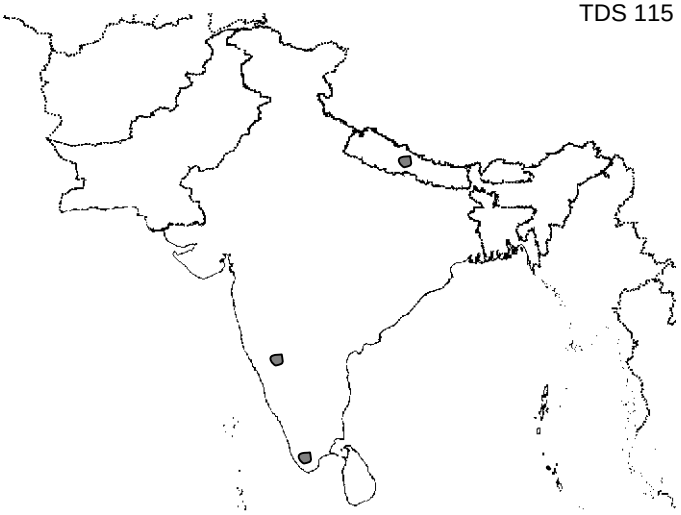
36. *Megaerops niphanae* Yenbutra & Felten, 1983

TDS 114



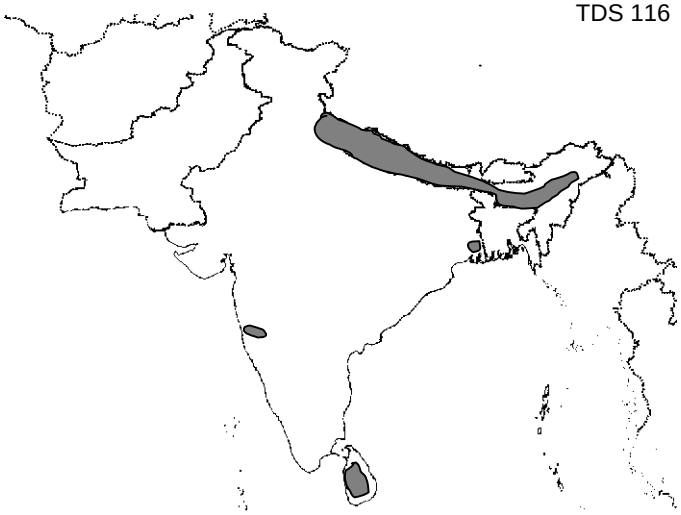
37. *Miniopterus pusillus* Dobson, 1876

TDS 115



38. *Miniopterus schreibersii* (Kuhl, 1819)

TDS 116



39. *Murina aurata* (Milne-Edwards, 1872)

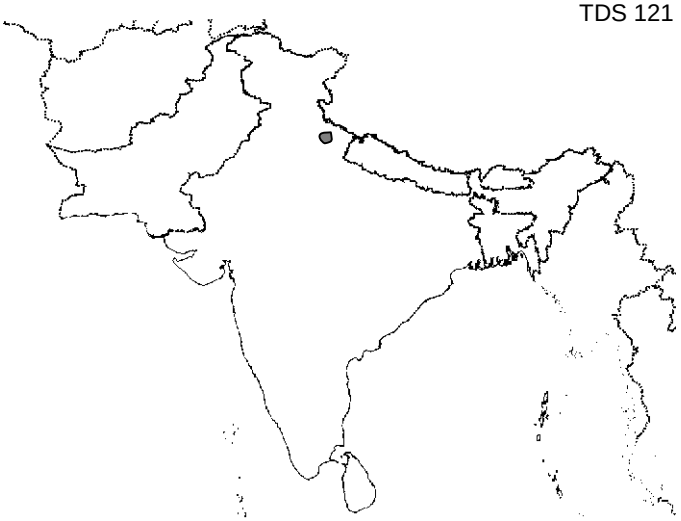
TDS 118

40. *Murina cyclotis* Dobson, 1872

TDS 119

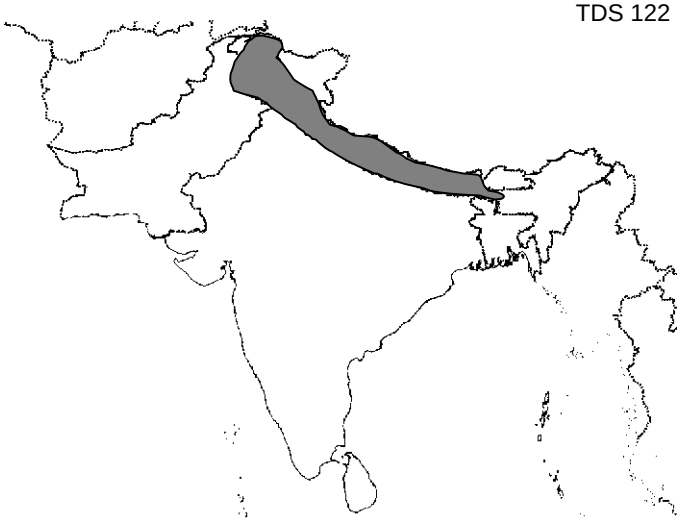
41. *Murina grisea* Peters, 1872

TDS 121



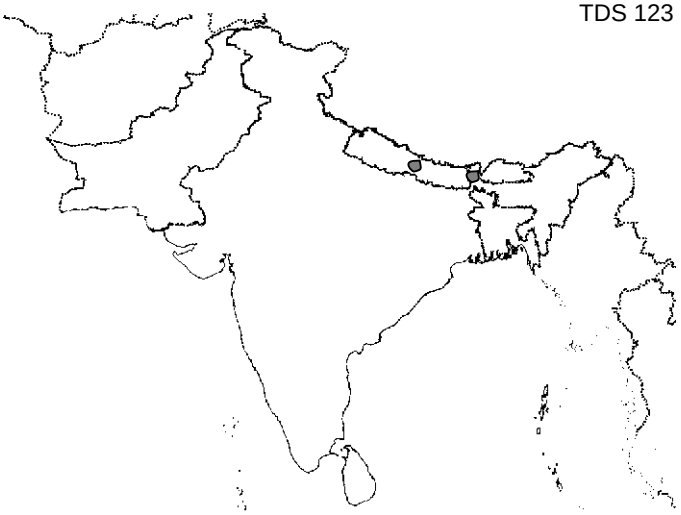
42. *Murina huttoni* (Peters, 1872)

TDS 122



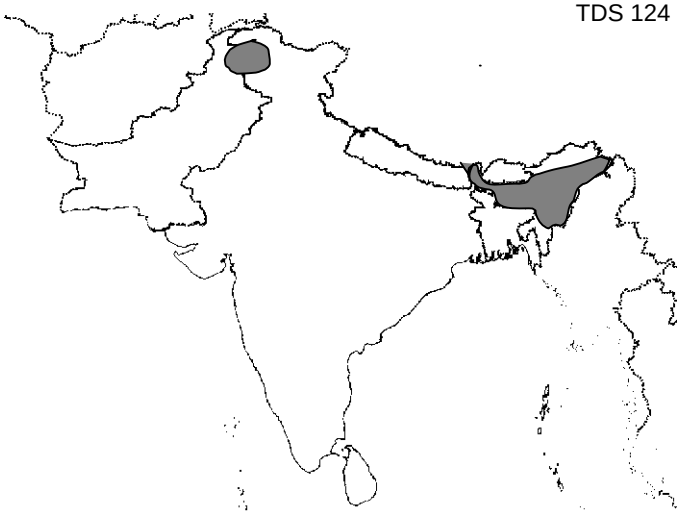
43. *Murina leucogaster* (Milne-Edwards, 1872)

TDS 123



44. *Murina tubularis* (Scully, 1881)

TDS 124



45. *Myotis annectans* (Dobson, 1871)

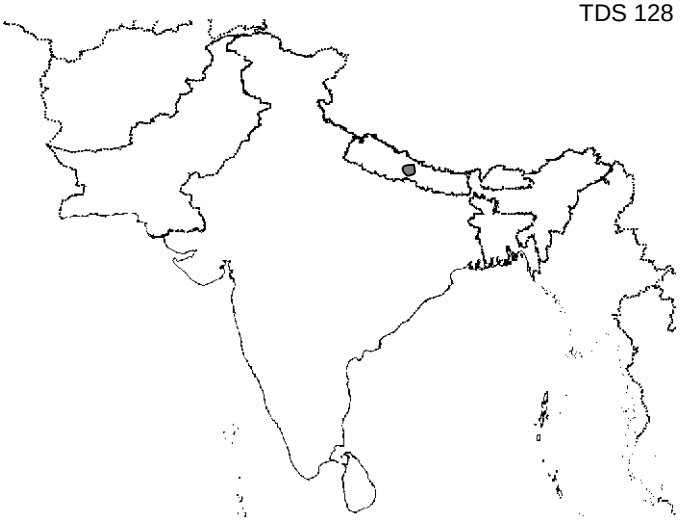
TDS 125

46. *Myotis blythii* (Tomes, 1857)

TDS 126

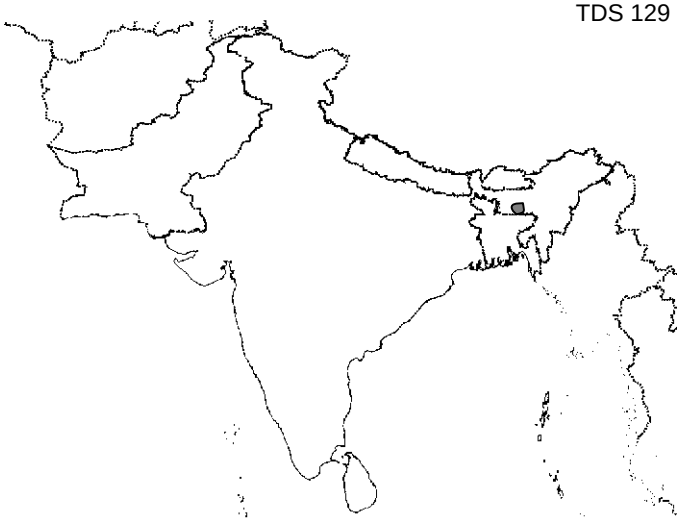
47. *Myotis csorbai* Topal, 1997

TDS 128



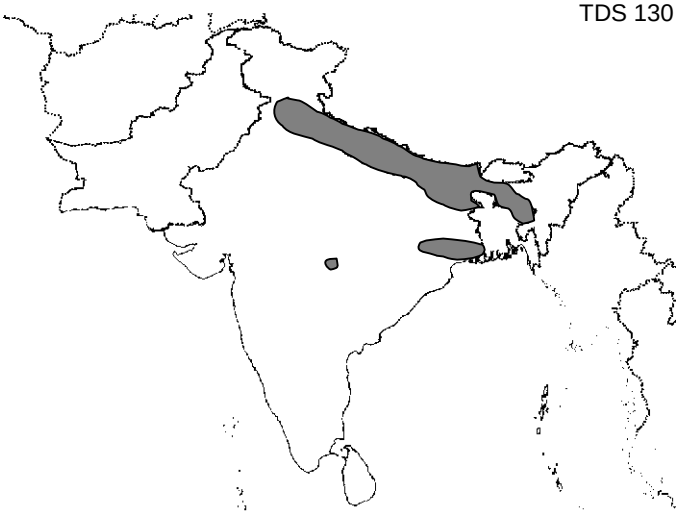
48. *Myotis daubentonii* (Kuhl, 1819)

TDS 129



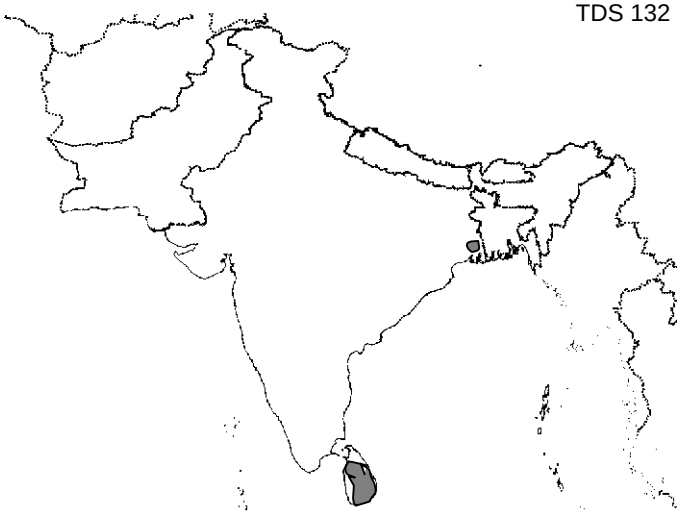
49. *Myotis formosus* (Hodgson, 1835)

TDS 130



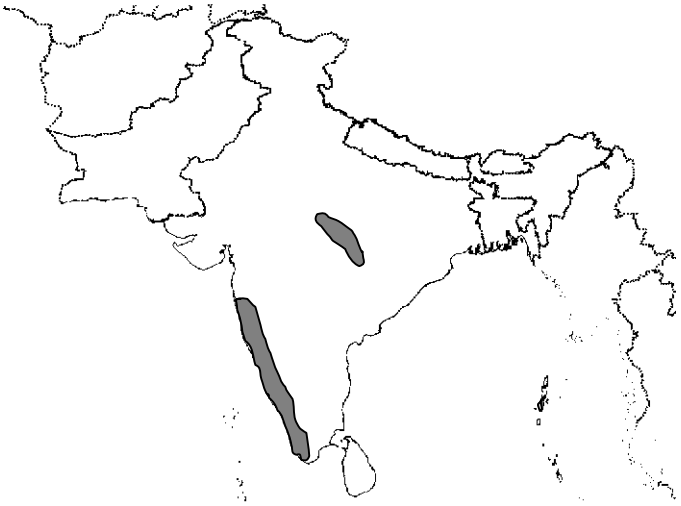
50. *Myotis hasseltii* (Temminck, 1840)

TDS 132



51. *Myotis horsfieldii* (Temminck, 1840)

TDS 133

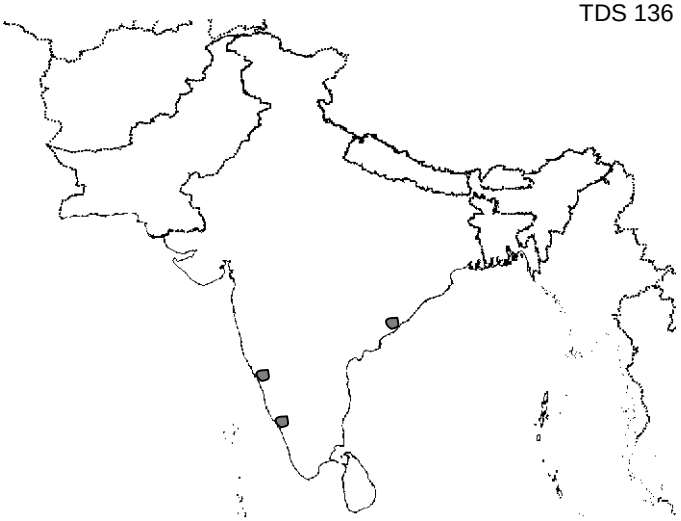


52. *Myotis longipes* (Dobson, 1873)

TDS 134

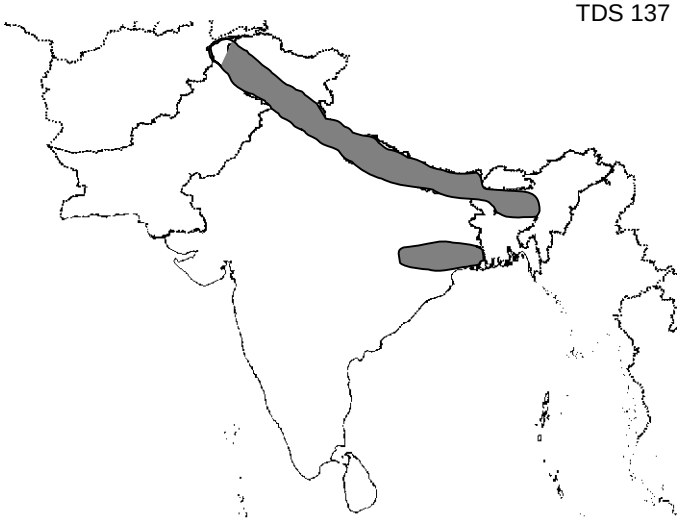
53. *Myotis montivagus* (Dobson, 1874)

TDS 136



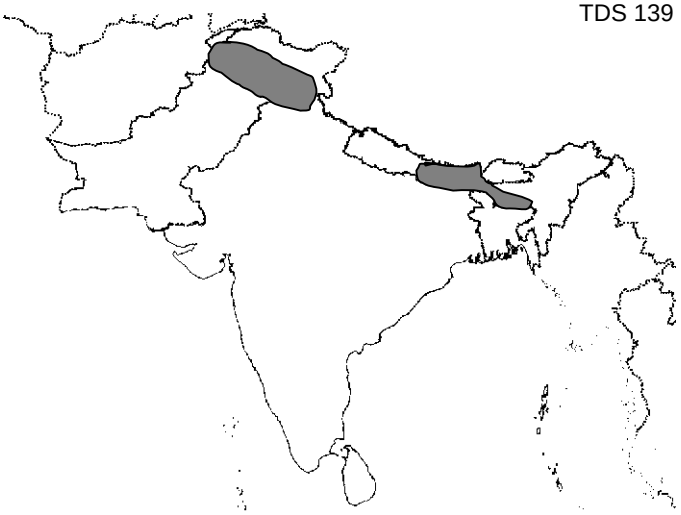
54. *Myotis muricola* (Gray, 1846)

TDS 137



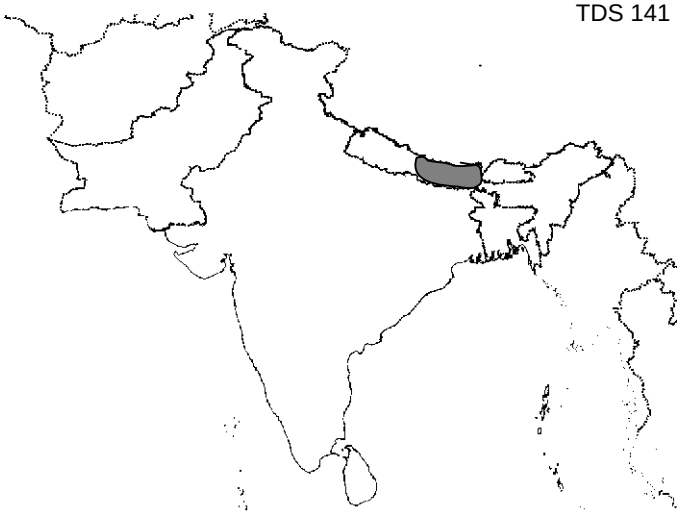
55. *Myotis mystacinus* (Kuhl, 1819)

TDS 139



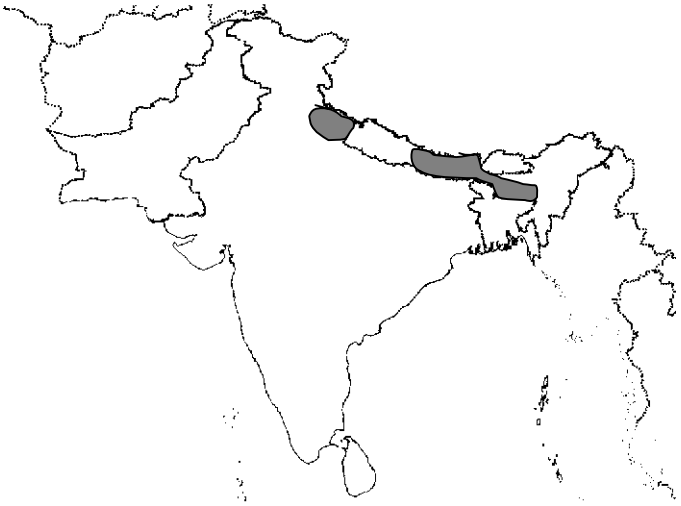
56. *Myotis sicarius* Thomas, 1915

TDS 141



57. *Myotis siligorensis* (Horsfield, 1855)

TDS 142

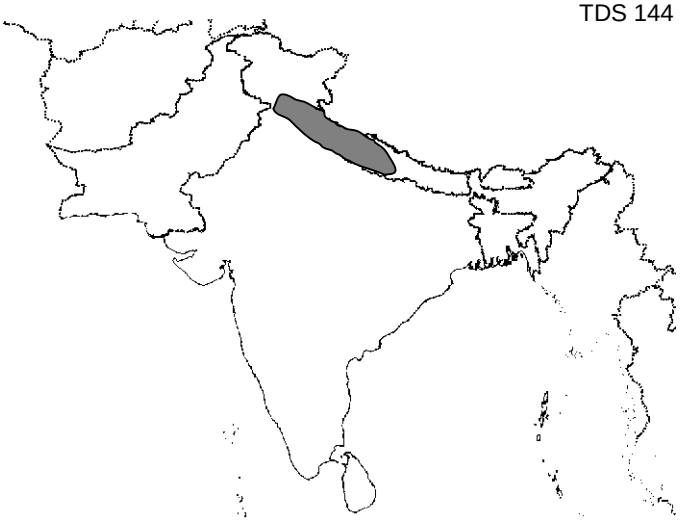


58. *Nyctalus leisleri* (Kuhl, 1819)

TDS 143

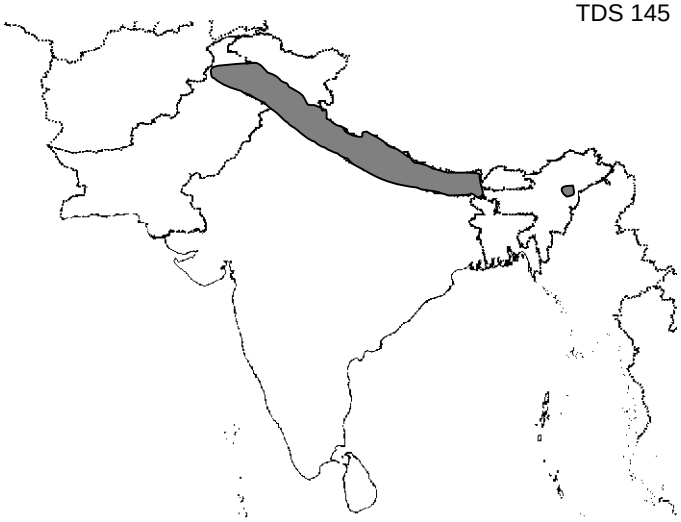
59. *Nyctalus montanus* (Barrett-Hamilton, 1906)

TDS 144



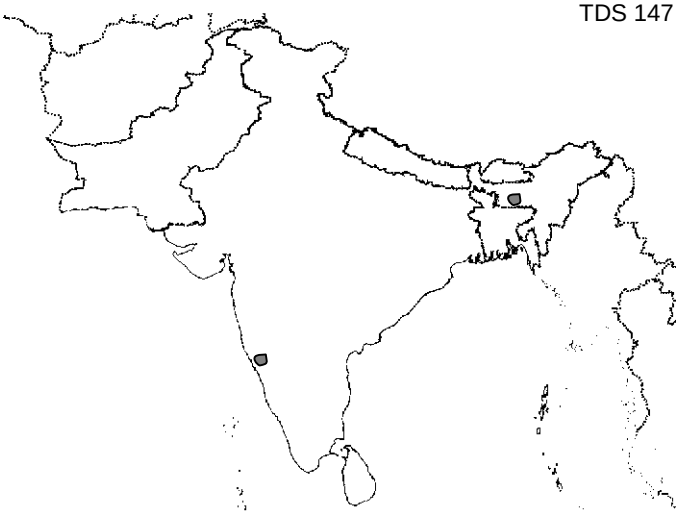
60. *Nyctalus noctula* (Schreber, 1774)

TDS 145



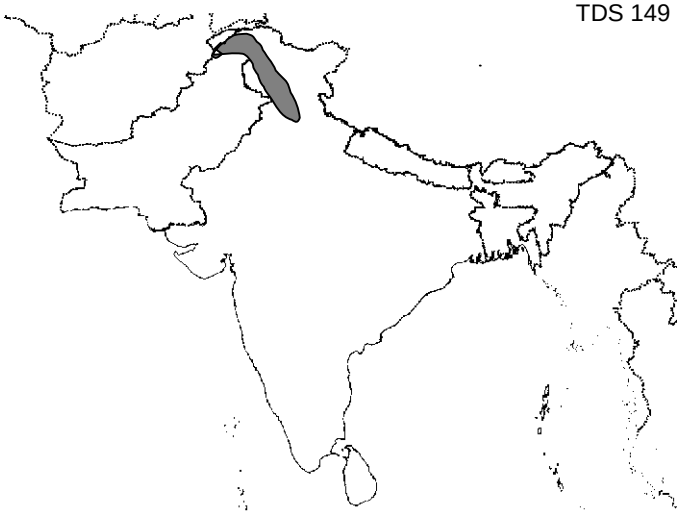
61. *Otomops wroughtonii* (Thomas, 1913)

TDS 147



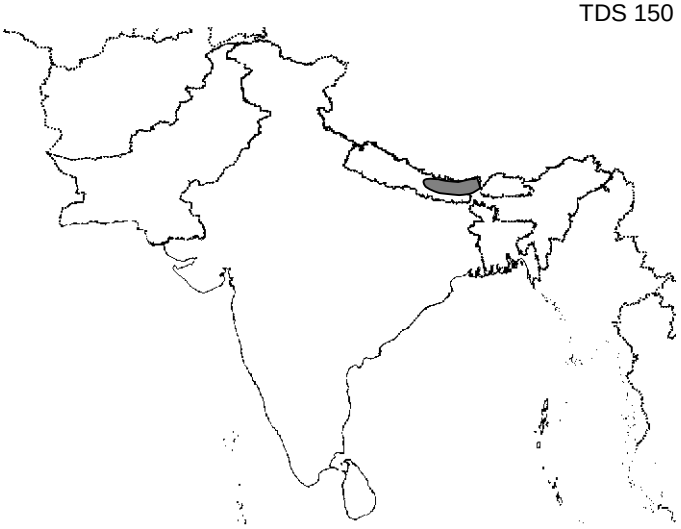
62. *Otonycteris hemiprichii* Peters, 1859

TDS 149



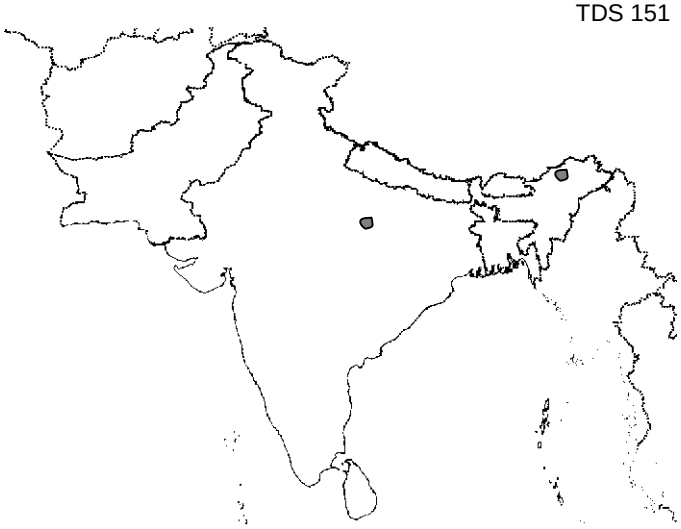
63. *Philetor brachypterus* (Temminck, 1840)

TDS 150



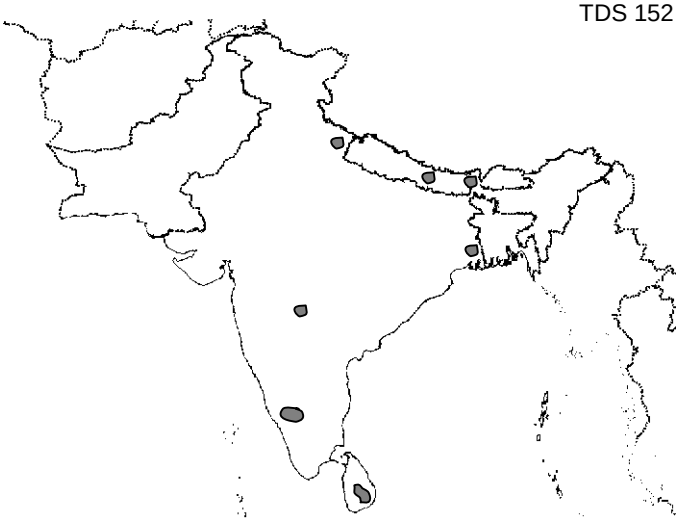
64. *Pipistrellus abramus* (Temminck, 1840)

TDS 151



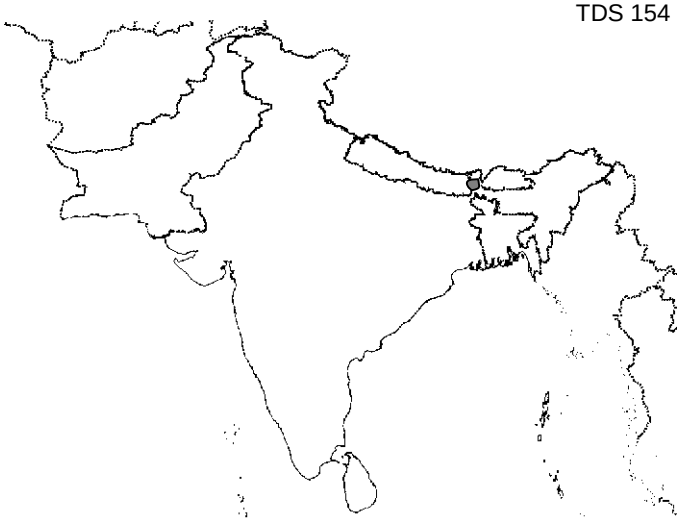
65. *Pipistrellus affinis* (Dobson, 1871)

TDS 152



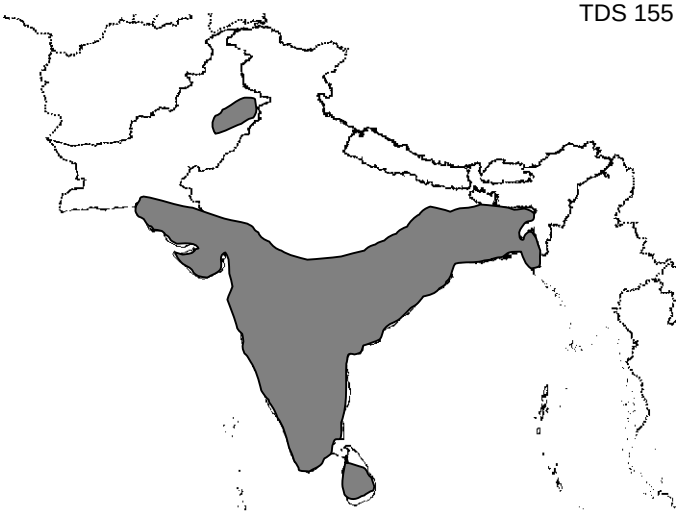
66. *Pipistrellus cadorne* Thomas, 1916

TDS 154



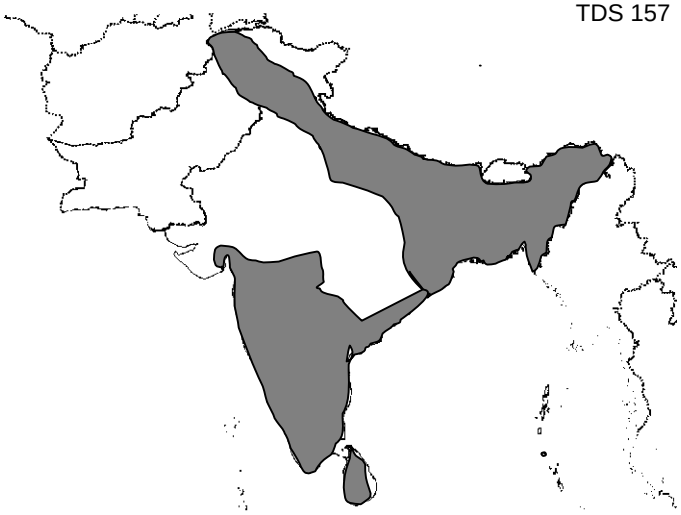
67. *Pipistrellus ceylonicus* (Kelaart, 1852)

TDS 155



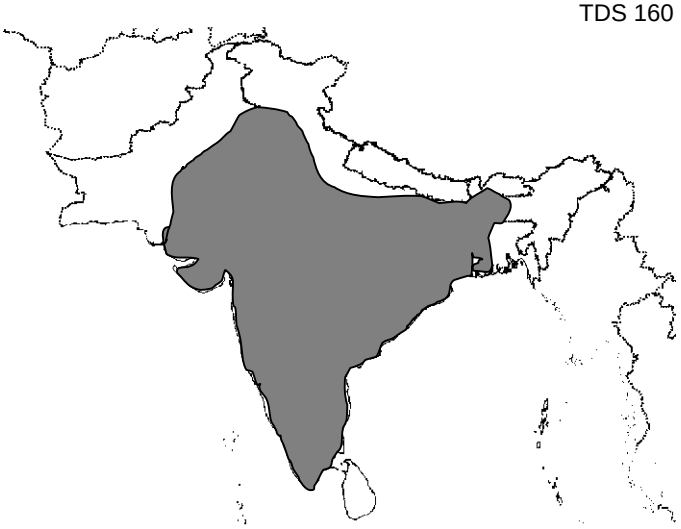
68. *Pipistrellus coromandra* (Gray, 1838)

TDS 157



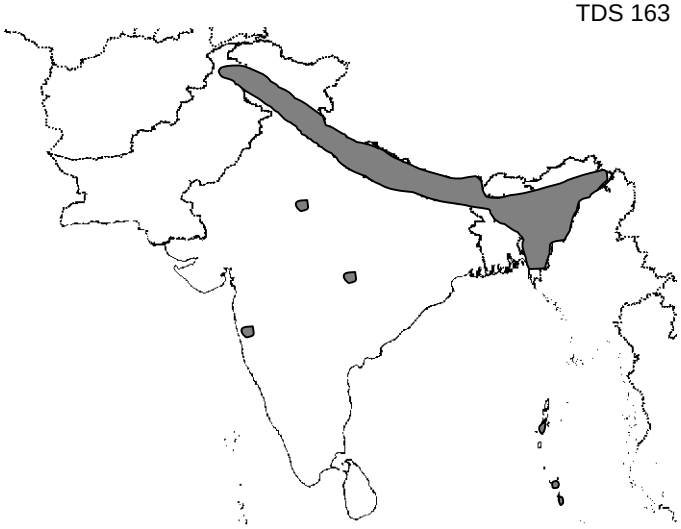
69. *Pipistrellus dormeri* (Dobson, 1875)

TDS 160



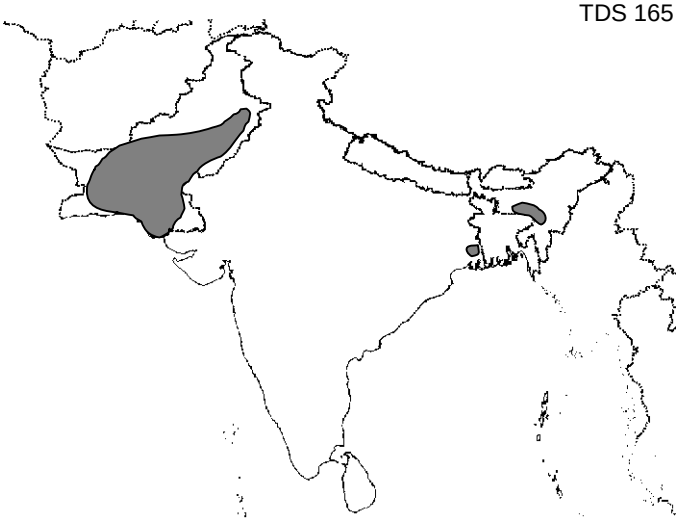
70. *Pipistrellus javanicus* (Gray, 1838)

TDS 163



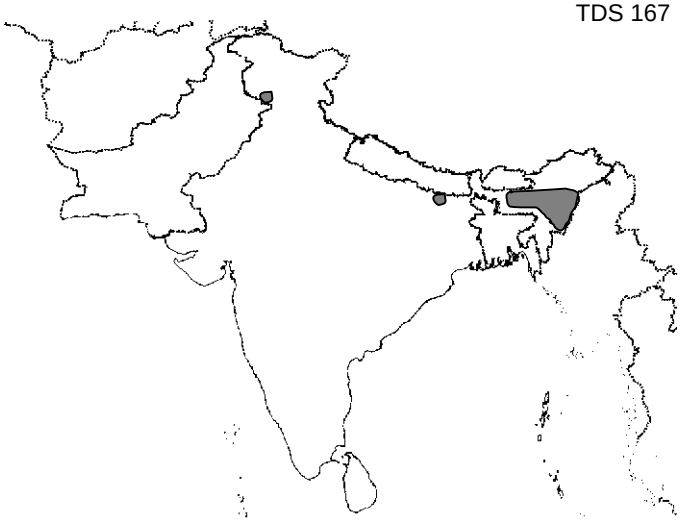
71. *Pipistrellus kuhlii* (Kuhl, 1819)

TDS 165



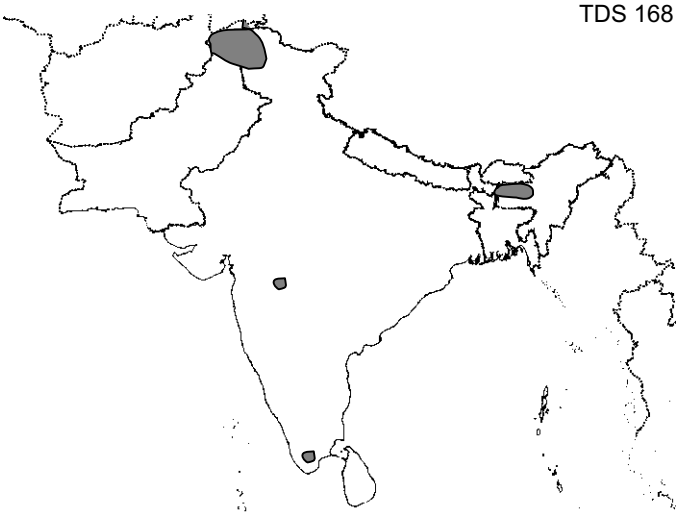
72. *Pipistrellus paterculus* Thomas, 1915

TDS 167



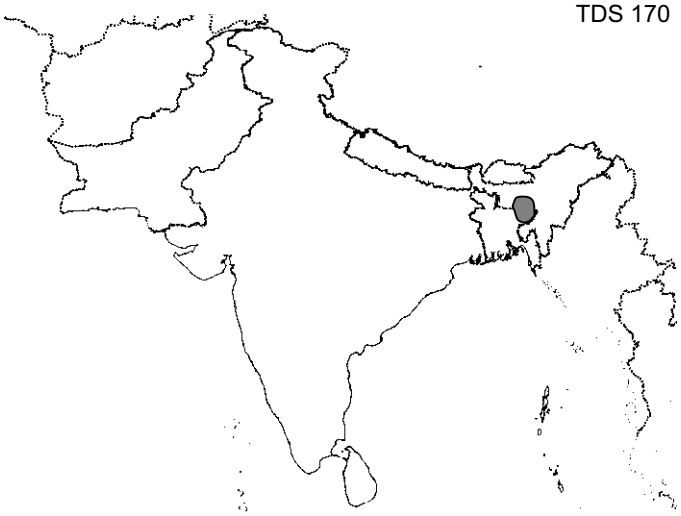
73. *Pipistrellus pipistrellus* (Schreber, 1774)

TDS 168



74. *Pipistrellus savii* (Bonaparte, 1837)

TDS 170



75. *Pipistrellus tenuis* (Temminck, 1840)

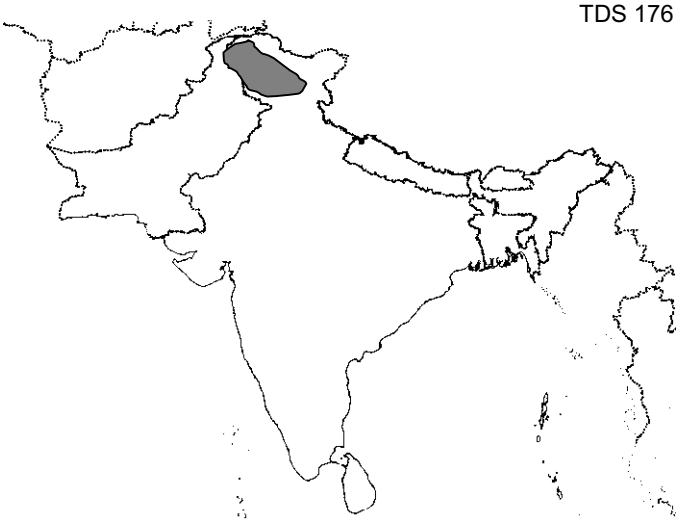
TDS 171

76. *Plecotus auritus* (Linnaeus, 1758)

TDS 174

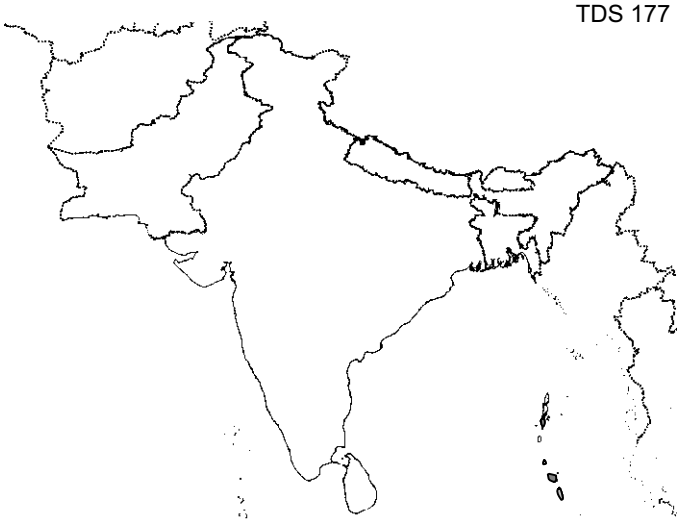
77. *Plecotus austriacus* (Fischer, 1829)

TDS 176



78. *Pteropus faunulus* (Miller, 1902)

TDS 177

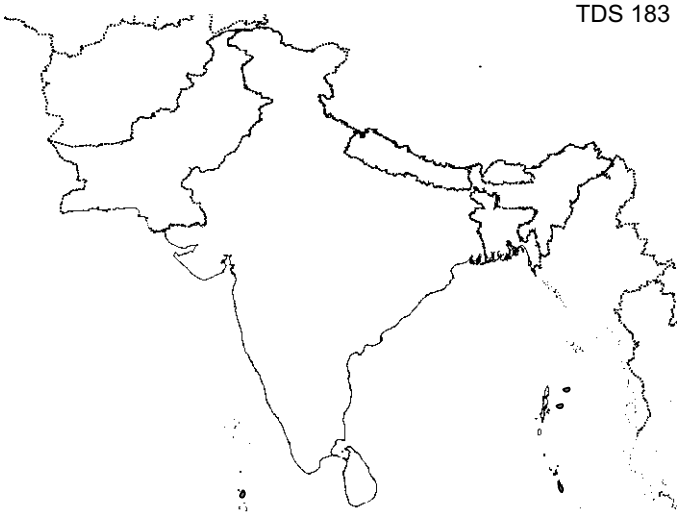


79. *Pteropus giganteus* (Brünnich, 1782)

TDS 178

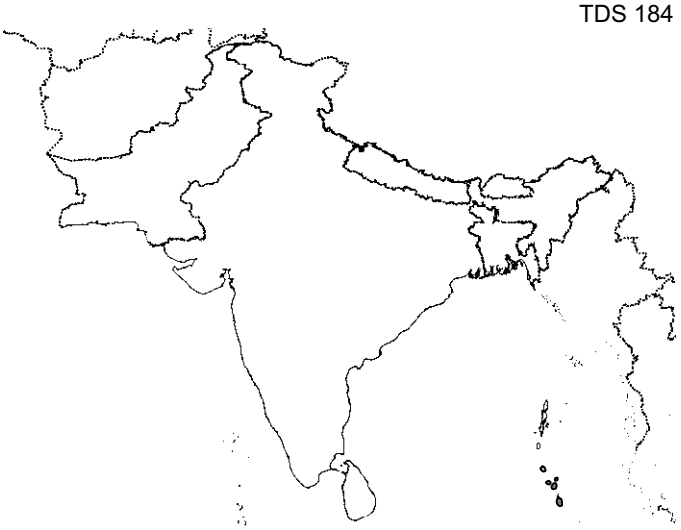
80. *Pteropus hypomelanus* Temminck, 1853

TDS 183



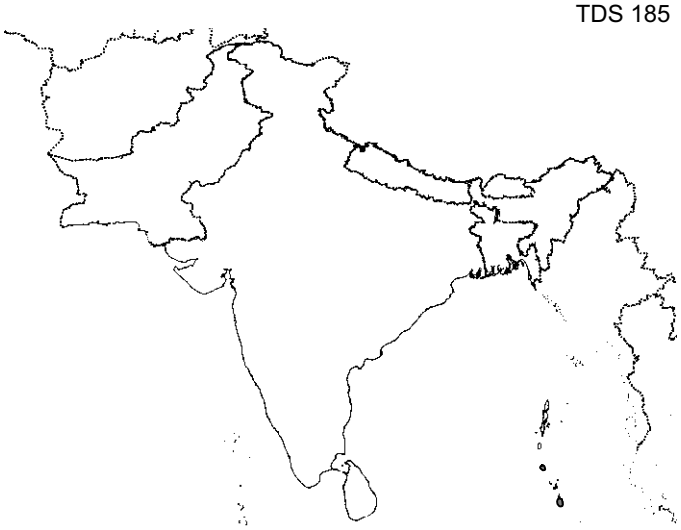
81. *Pteropus melanotus* Blyth, 1863

TDS 184



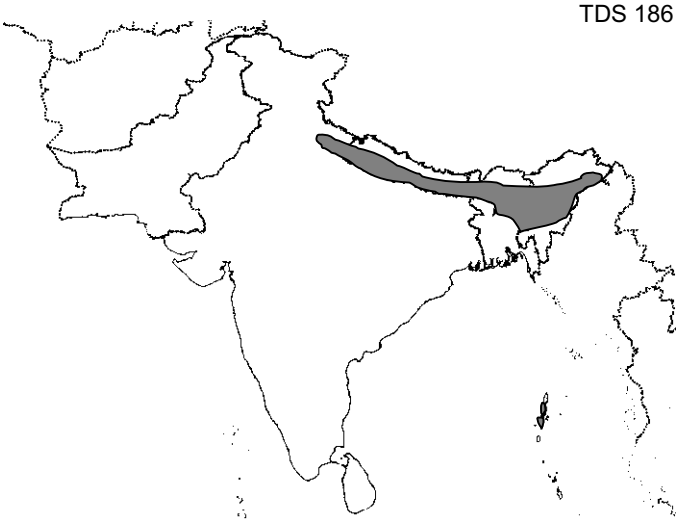
82. *Pteropus vampyrus* Linnaeus, 1758

TDS 185



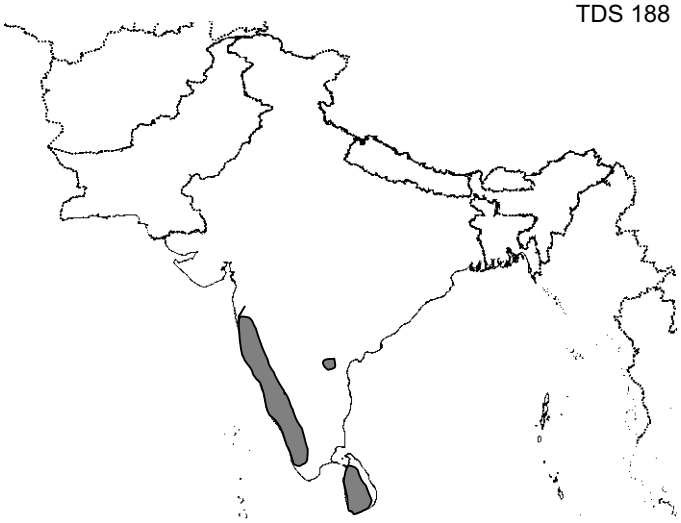
83. *Rhinolophus affinis* Horsfield, 1823

TDS 186



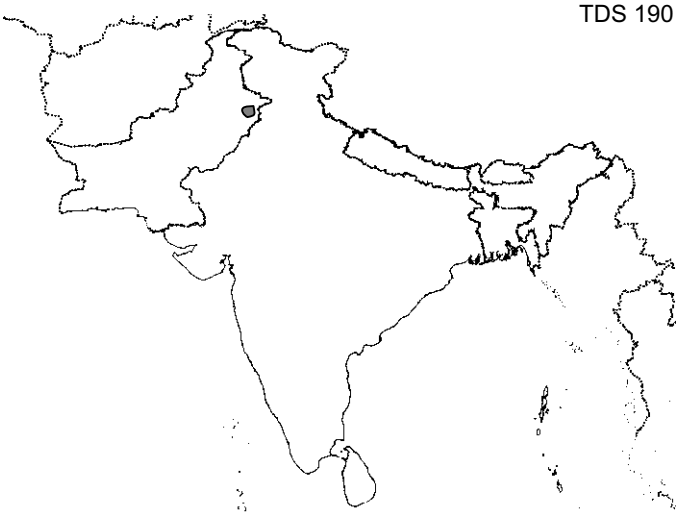
84. *Rhinolophus beddomei* Andersen, 1905

TDS 188



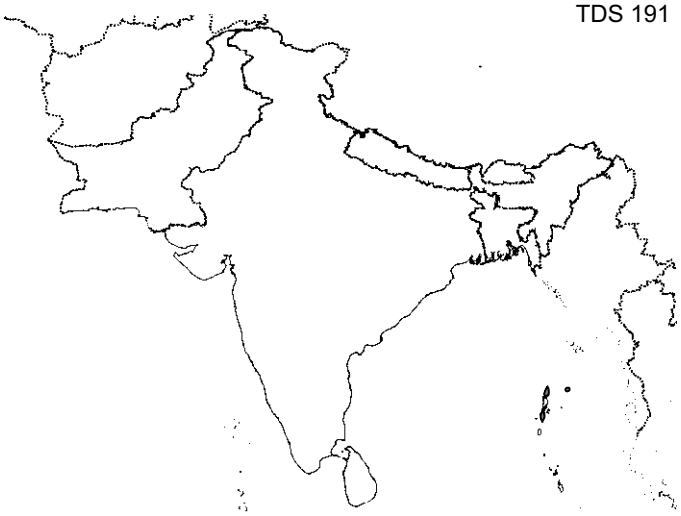
85. *Rhinolophus blasii* Peters, 1866

TDS 190



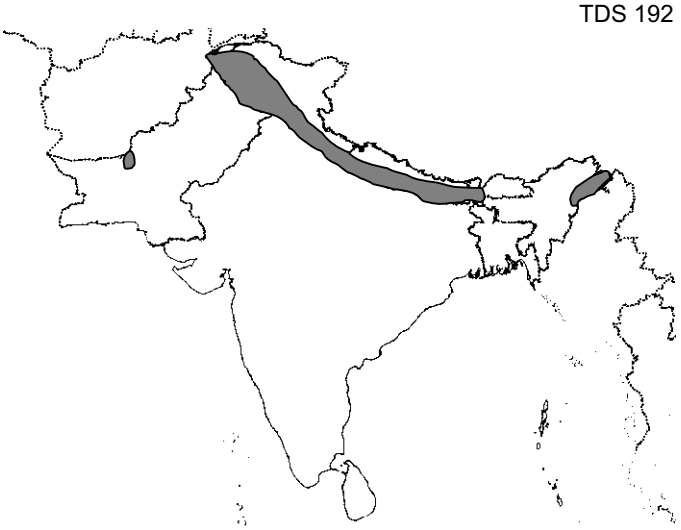
86. *Rhinolophus cognatus* Andersen, 1906

TDS 191



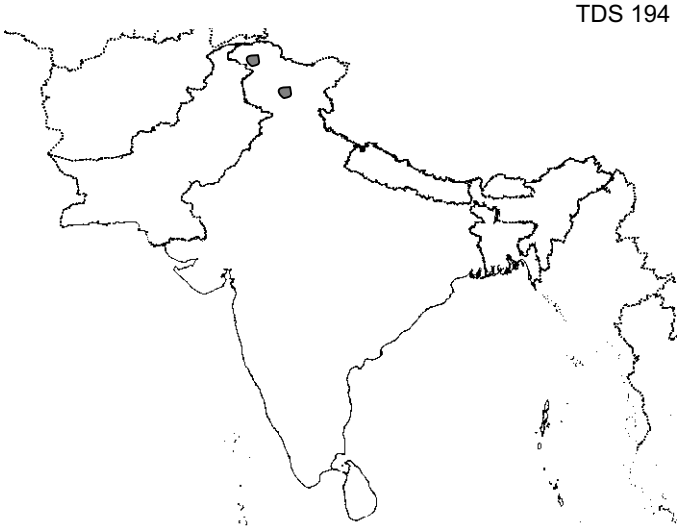
87. *Rhinolophus ferrumequinum* (Schreber, 1774)

TDS 192



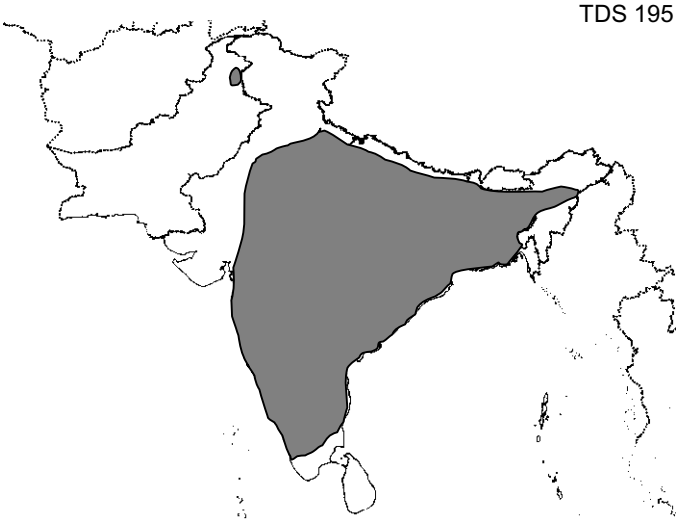
88. *Rhinolophus hipposideros* (Bechstein, 1800)

TDS 194



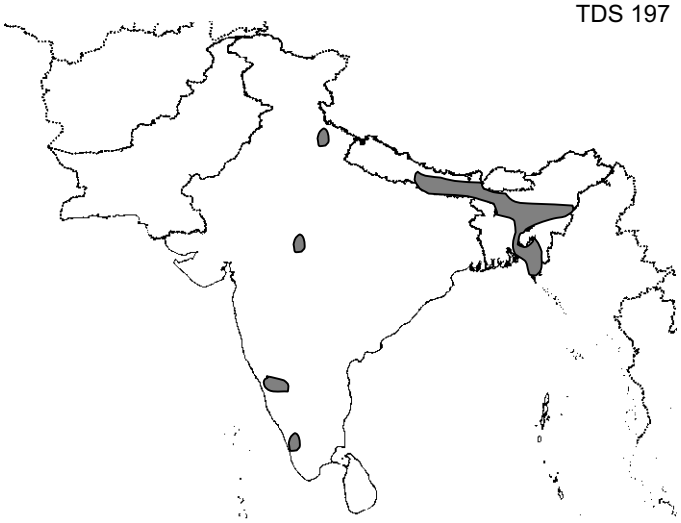
89. *Rhinolophus lepidus* Blyth, 1844

TDS 195



90. *Rhinolophus luctus* Temminck, 1835

TDS 197

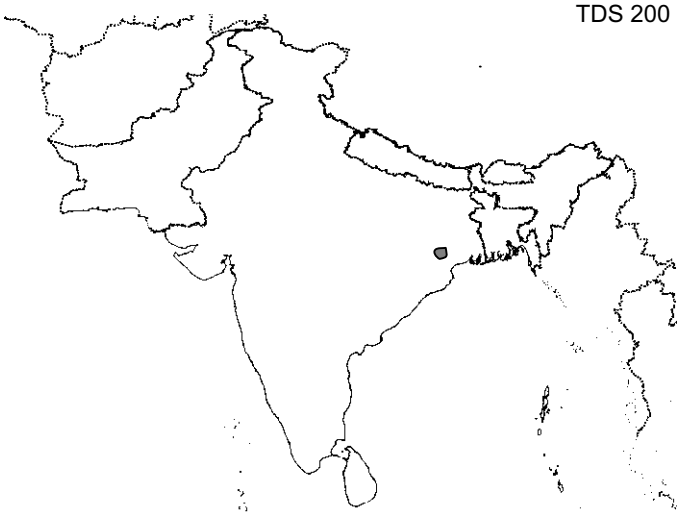


91. *Rhinolophus macrotis* Blyth, 1844

TDS 199

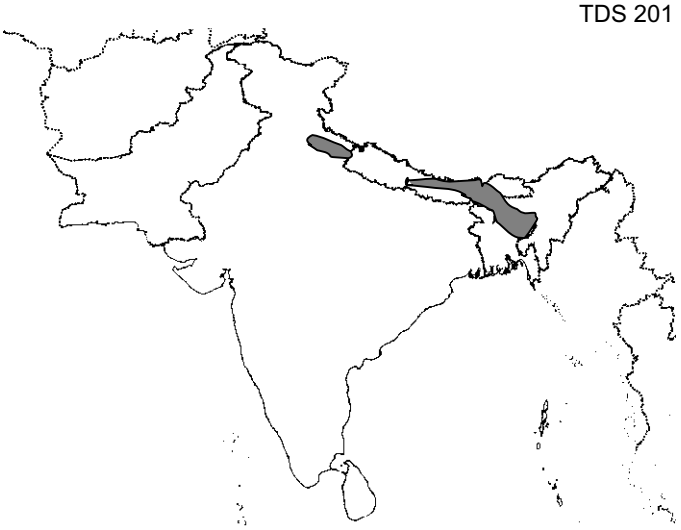
92. *Rhinolophus mitratus* Blyth, 1844

TDS 200



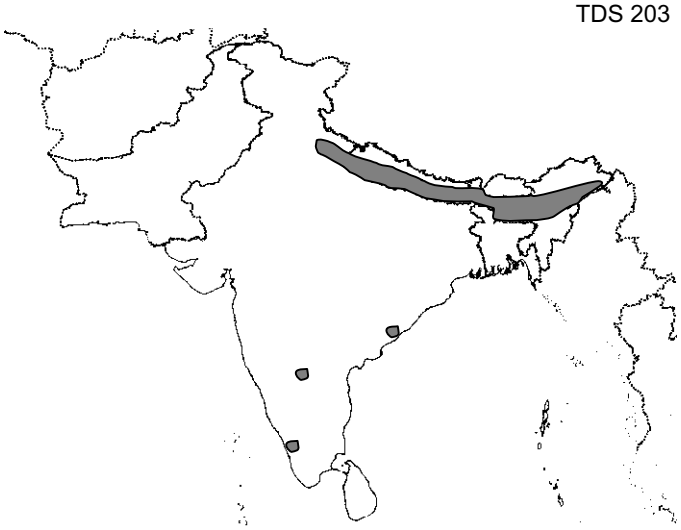
93. *Rhinolophus pearsonii* Horsfield, 1851

TDS 201



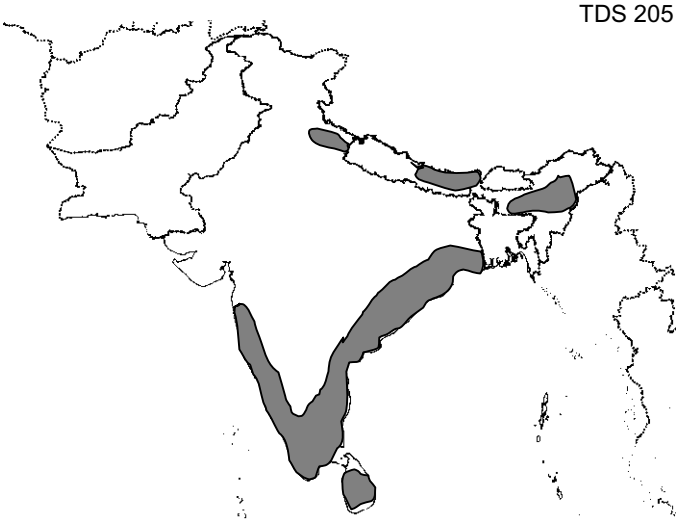
94. *Rhinolophus pusillus* Temminck, 1834

TDS 203



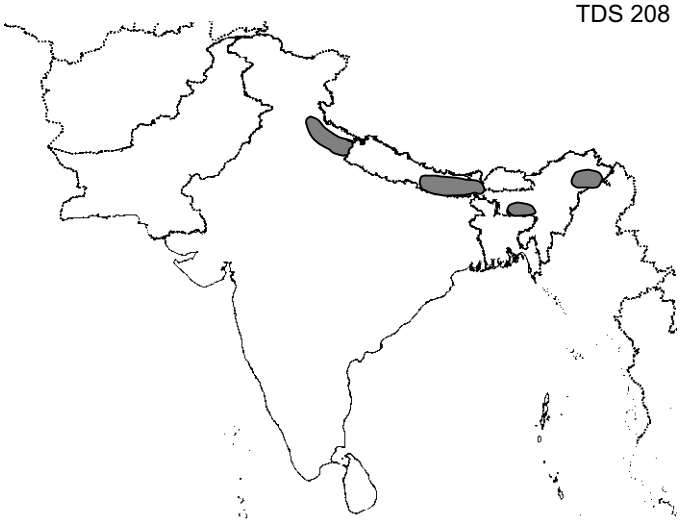
95. *Rhinolophus rouxii* Temminck, 1835

TDS 205



96. *Rhinolophus sinicus* (Andersen, 1905)

TDS 208

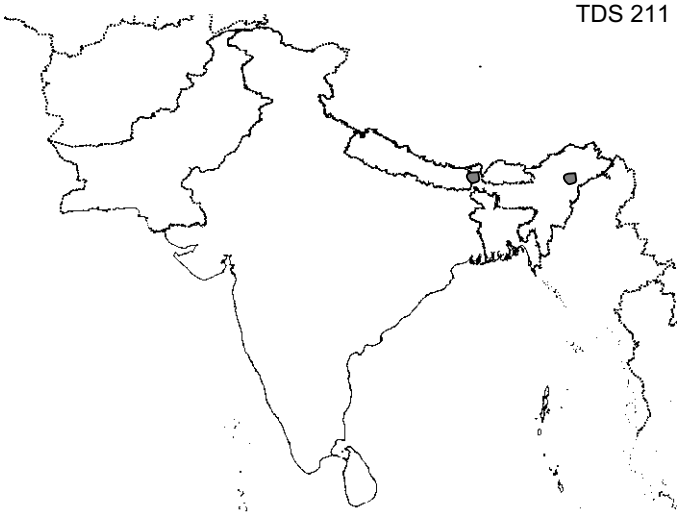


97. *Rhinolophus subbadius* Blyth, 1844

TDS 210

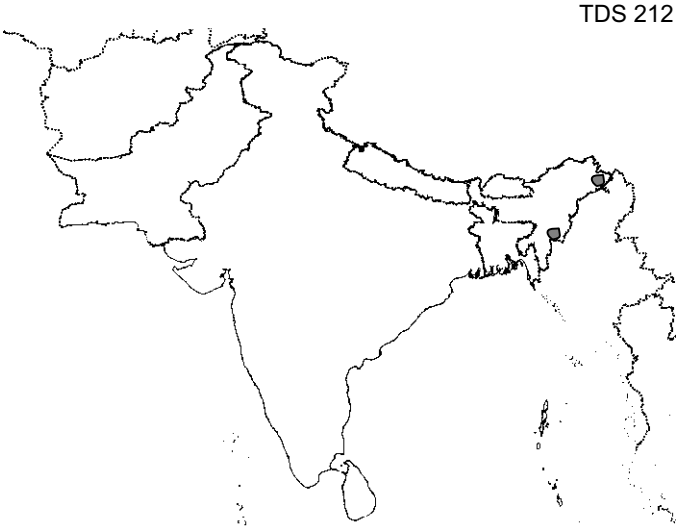
98. *Rhinolophus trifoliatus* Temminck, 1834

TDS 211



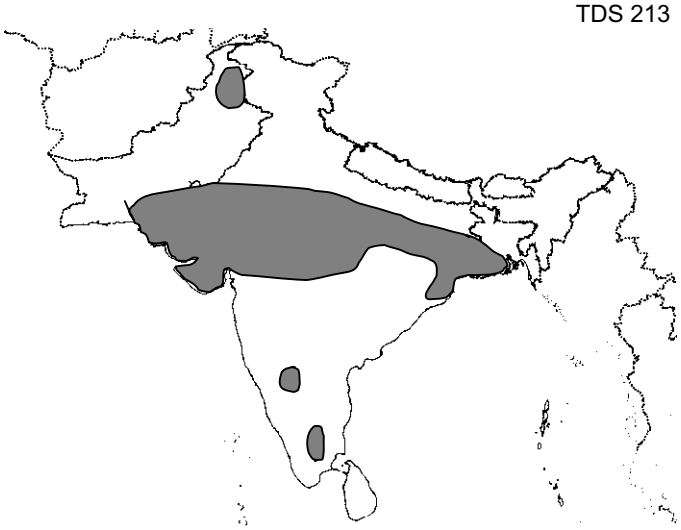
99. *Rhinolophus yunanensis* Dobson, 1872

TDS 212



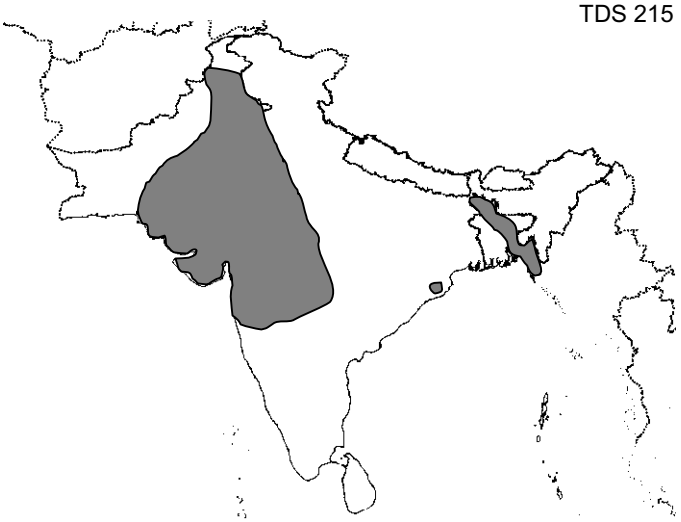
100. *Rhinopoma hardwickii* Gray, 1831

TDS 213



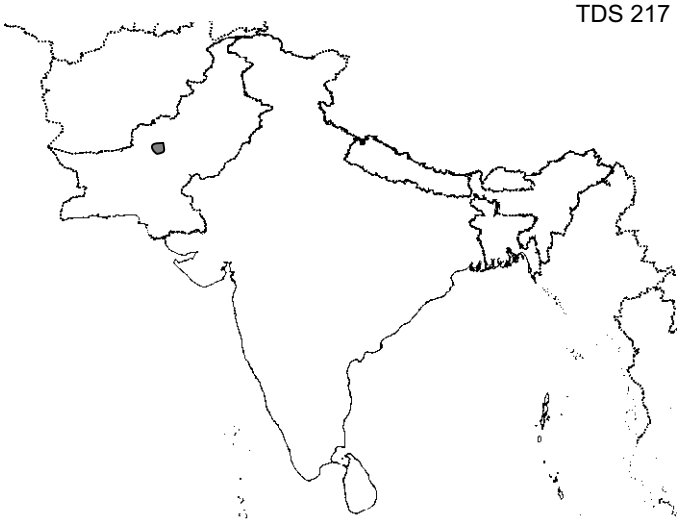
101. *Rhinopoma microphyllum* (Brünnich, 1782)

TDS 215



102. *Rhinopoma muscatellum* Thomas, 1903

TDS 217

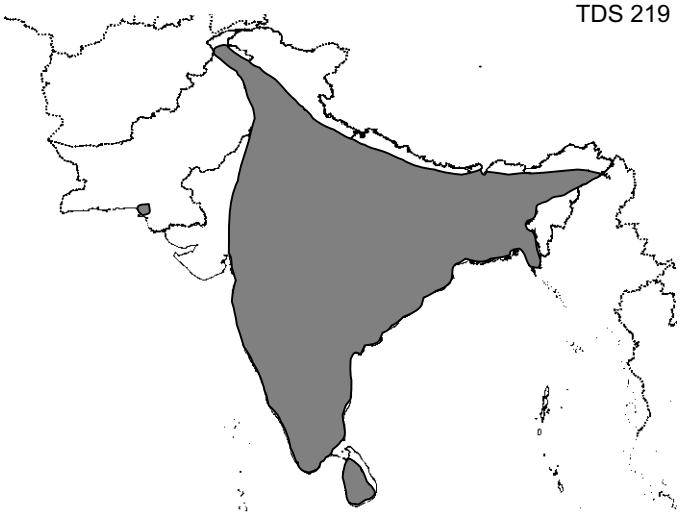


103. *Rousettus aegyptiacus* (E. Geoffroy, 1810)

TDS 218

104. *Rousettus leschenaulti* (Desmarest, 1820)

TDS 219



105. *Scotoecus pallidus* (Dobson, 1876)

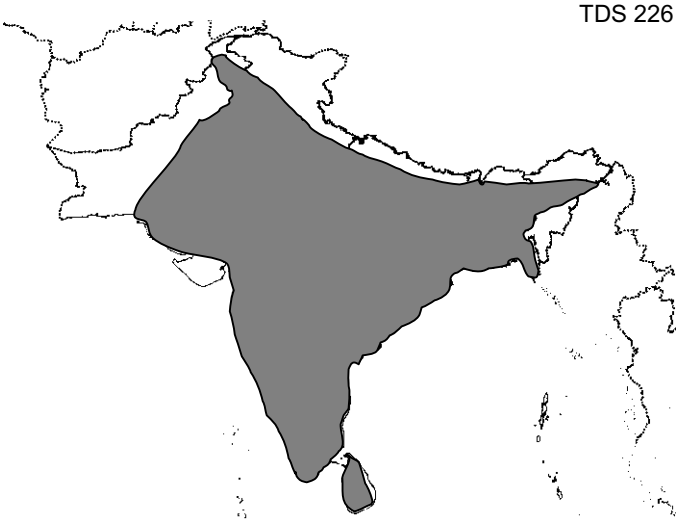
TDS 222

106. *Scotomanes ornatus* (Blyth, 1851)

TDS 224

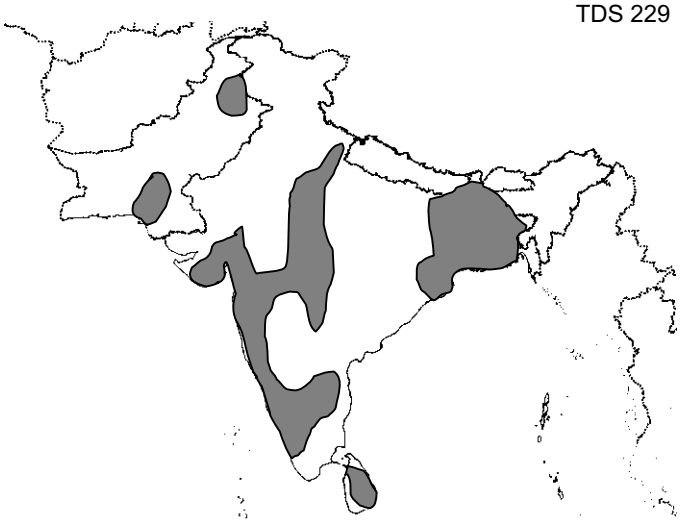
107. *Scotophilus heathii* Horsfield, 1831

TDS 226



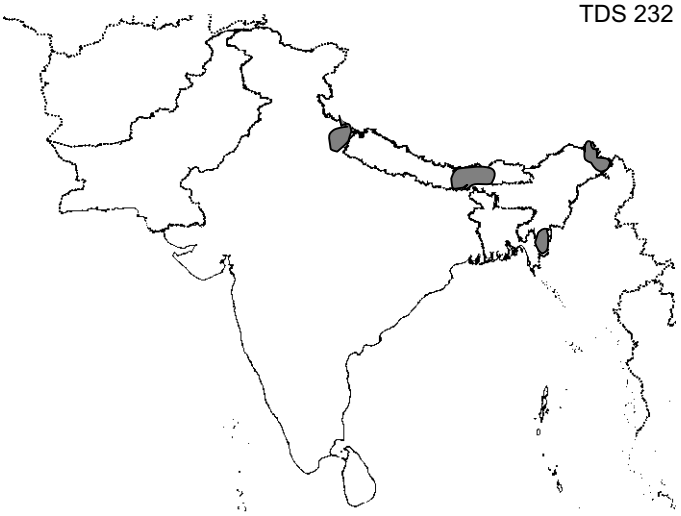
108. *Scotophilus kuhlii* Leach, 1821

TDS 229



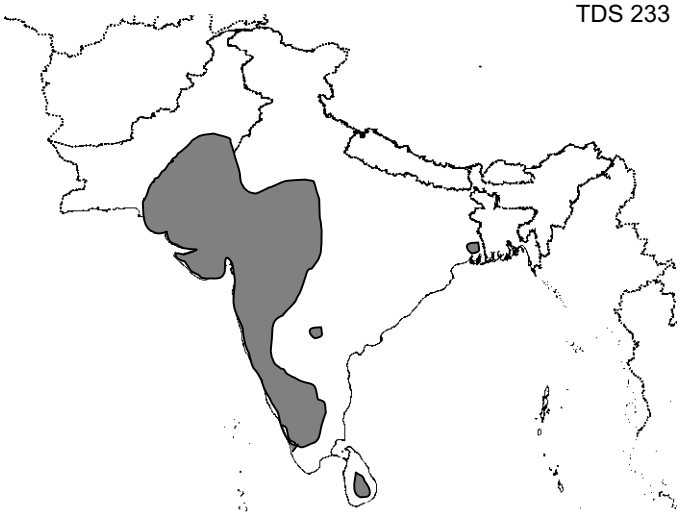
109. *Sphaerias blanfordi* (Thomas, 1891)

TDS 232



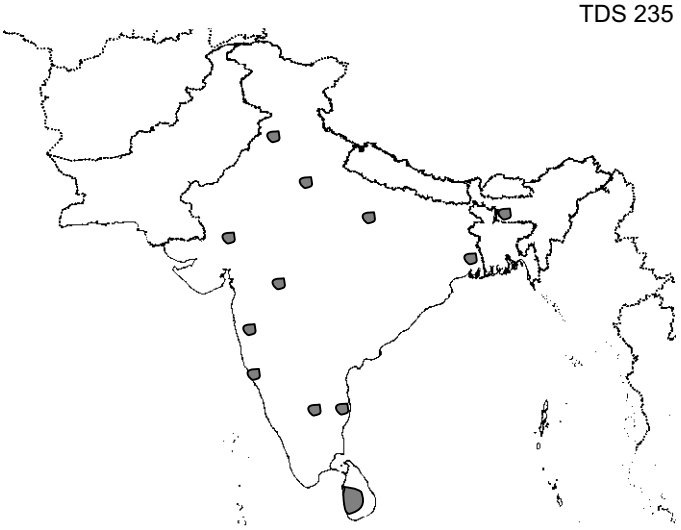
110. *Tadarida aegyptiaca* (E. Geoffroy, 1818)

TDS 233



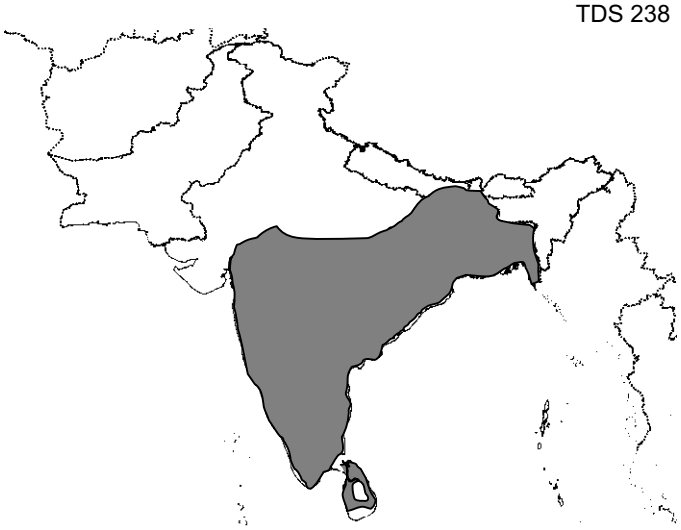
111. *Tadarida plicata* (Buchannan, 1800)

TDS 235



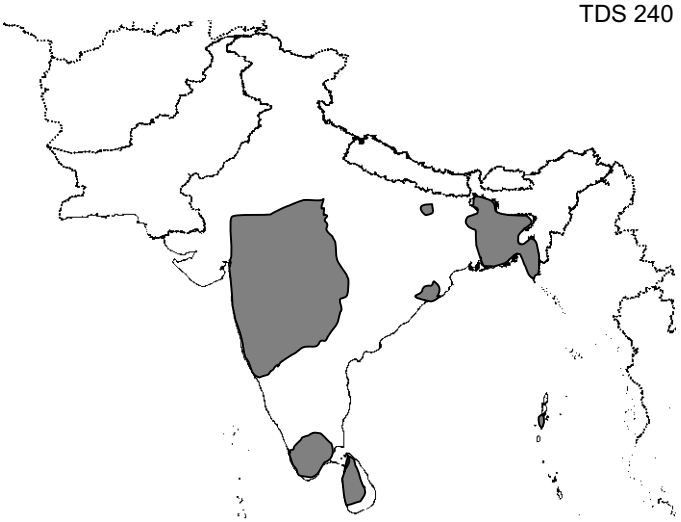
112. *Taphozous longimanus* Hardwicke, 1825

TDS 238



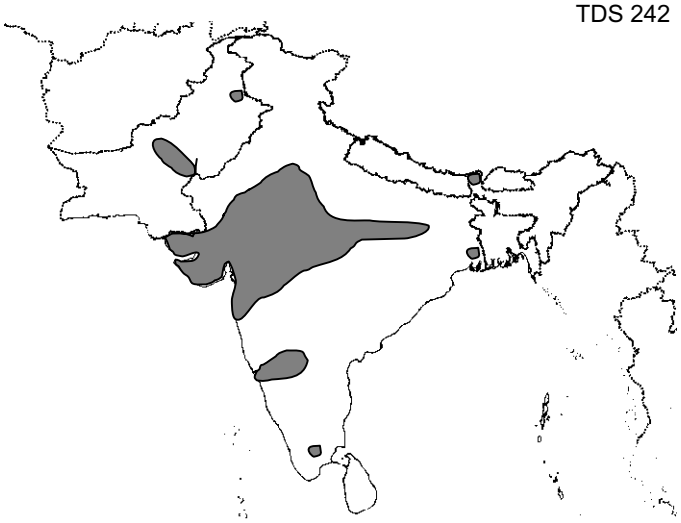
113. *Taphozous melanopogon* Temminck, 1841

TDS 240



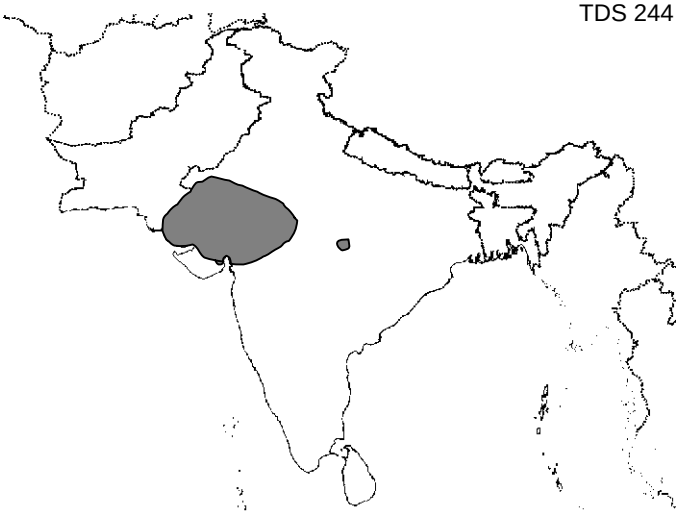
114. *Taphozous nudiventris* Cretzschmer, 1830/31

TDS 242



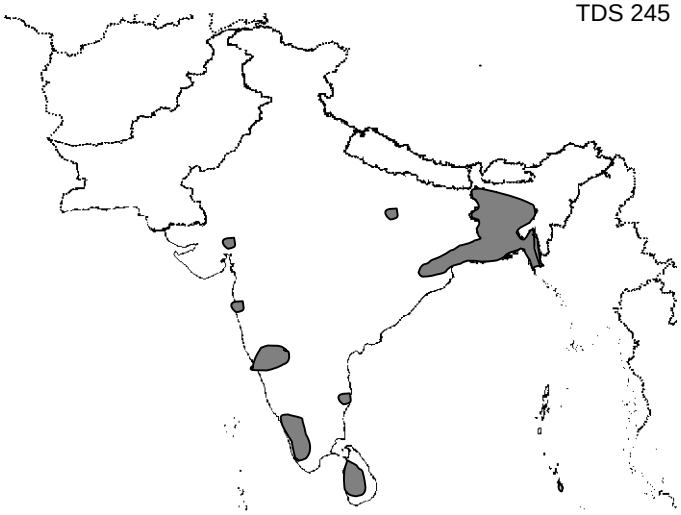
115. *Taphozous perforatus* E. Geoffroy, 1818

TDS 244



116. *Taphozous saccolaimus* Temminck, 1838

TDS 245



117. *Taphozous theobaldi* Dobson, 1872

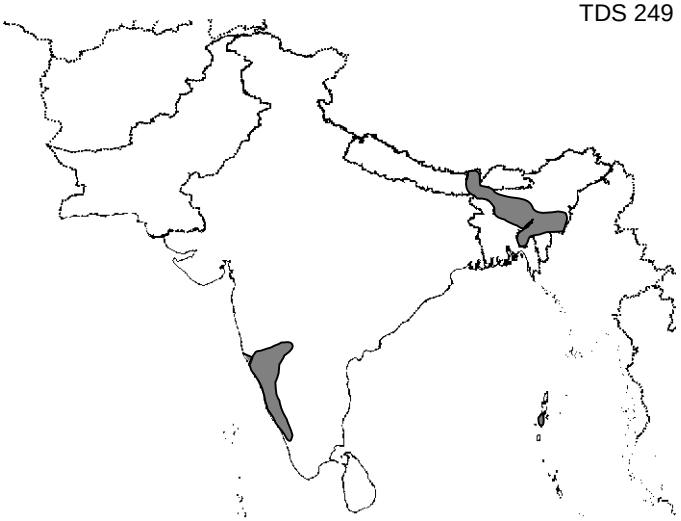
TDS 247

118. *Triaenops persicus* Dobson, 1871

TDS 248

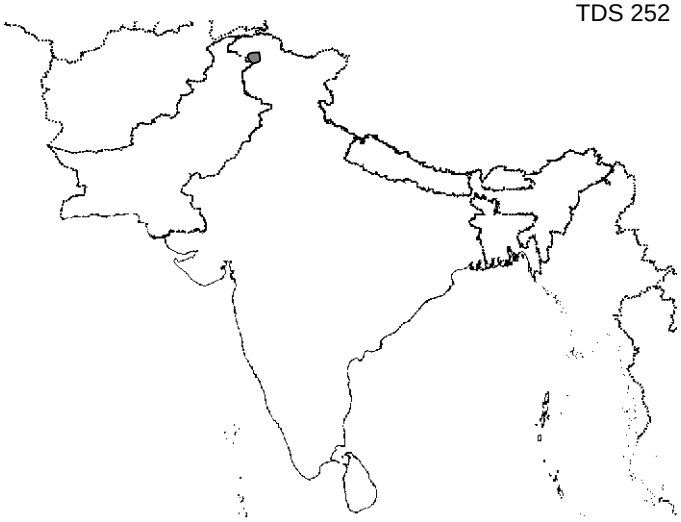
119. *Tylonycteris pachypus* (Temminck, 1840)

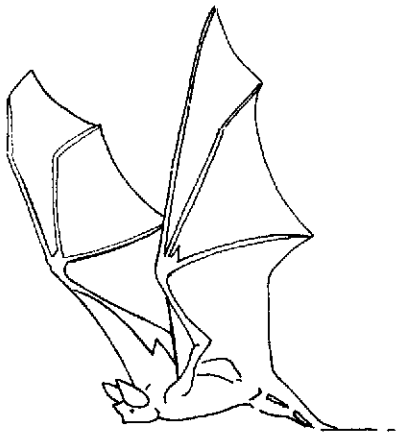
TDS 249



120. *Vespertilio murinus* Linnaeus, 1758

TDS 252





Appendices

Appendix I

IUCN Red List Categories and Criteria Version 3.1

Prepared by the IUCN Species Survival Commission
As approved by the 51st meeting of the IUCN Council Gland, Switzerland
9 February 2000, IUCN – The World Conservation Union, 2001

The Red List Categories and Criteria, Version 3.1 are available at:
http://www.iucn.org/themes/ssc/red-lists.htm1

THE CATEGORIES

A representation of the relationships between the categories is shown in Figure 1 of the Report.

EXTINCT (EX)
A taxon is Extinct when there is no reasonable doubt that the last individual has died. A taxon is presumed Extinct when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.

EXTINCT IN THE WILD (EW)
A taxon is Extinct in the Wild when it is known only to survive in cultivation, in captivity or as a naturalized population (or populations) well outside the past range. A taxon is presumed Extinct in the Wild when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.

CRITICALLY ENDANGERED (CR)
A taxon is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered (see Section V), and it is therefore considered to be facing an extremely high risk of extinction in the wild.

ENDANGERED (EN)
A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered (see Section V), and it is therefore considered to be facing a very high risk of extinction in the wild.

VULNERABLE (VU)
A taxon is Vulnerable when the best available evidence indicates that it meets any of the criteria A to E for Vulnerable (see Section V), and it is therefore considered to be facing a high risk of extinction in the wild.
Note: As in previous IUCN categories, the abbreviation of each category (in parenthesis) follows the English denominations when translated into other languages (see Annex 2).

NEAR THREATENED (NT)
A taxon is Near Threatened when it has been evaluated against the criteria but does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying for or is likely to qualify for a threatened category in the near future.

LEAST CONCERN (LC)
A taxon is Least Concern when it has been evaluated against the criteria and does not qualify for Critically

Endangered, Endangered, Vulnerable or Near Threatened. Widespread and abundant taxa are included in this category.

DATA DEFICIENT (DD)
A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution are lacking. Data Deficient is therefore not a category of threat. Listing of taxa in this category indicates that more information is required and acknowledges the possibility that future research will show that threatened classification is appropriate. It is important to make positive use of whatever data are available.

In many cases great care should be exercised in choosing between DD and a threatened status. If the range of a taxon is suspected to be relatively circumscribed, and a considerable period of time has elapsed since the last record of the taxon, threatened status may well be justified**.**

NOT EVALUATED (NE)
A taxon is Not Evaluated when it is has not yet been evaluated against the criteria.

THE CRITERIA FOR CRITICALLY ENDANGERED, ENDANGERED AND VULNERABLE

CRITICALLY ENDANGERED (CR)
A taxon is Critically Endangered when the best available evidence indicates that it meets any of the following criteria (A to E), and it is therefore considered to be facing an extremely high risk of extinction in the wild:

A. Reduction in population size based on any of the following:

1. An observed, estimated, inferred or suspected population size reduction of > or =90% over the last 10 years or three generations, whichever is the longer, where the causes of the reduction are clearly reversible AND understood AND ceased, based on (and specifying) any of the following:
(a) direct observation
(b) an index of abundance appropriate to the taxon
(c) a decline in area of occupancy, extent of occurrence and/or quality of habitat
(d) actual or potential levels of exploitation
(e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.

2. An observed, estimated, inferred or suspected population size reduction of > or = 80% over the last 10 years or three generations, whichever is the longer**,** where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible**,** based on (and specifying) any of (a) to (e) under A1.

3. A population size reduction of > or =80%, projected or suspected to be met within the next 10 years or three generations, whichever is the longer (up to a maximum of 100 years), based on (and specifying) any of (b) to (e) under A1.

4. An observed, estimated, inferred, projected or suspected population size reduction of > or = 80% over any 10 year or three generation period, whichever is longer (up to a maximum of 100 years in the future), where the time period must include both the past and the future, and where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.

B. Geographic range in the form of either B1 (extent of occurrence) OR B2 (area of occupancy) OR both:

1. Extent of occurrence estimated to be less than 100 km^2, and estimates indicating at least two of a–c:
a. Severely fragmented or known to exist at only a single location.
b. Continuing decline, observed, inferred or projected, in any of the following:
(i) extent of occurrence
(ii) area of occupancy

(iii) area, extent and/or quality of habitat
(iv) number of locations or subpopulations
(v) number of mature individuals.
c. Extreme fluctuations in any of the following:
(i) extent of occurrence
(ii) area of occupancy
(iii) number of locations or subpopulations
(iv) number of mature individuals.

2. Area of occupancy estimated to be less than 10 km^2, and estimates indicating at least two of a–c:
a. Severely fragmented or known to exist at only a single location.
b. Continuing decline, observed, inferred or projected, in any of the following:
(i) extent of occurrence
(ii) area of occupancy
(iii) area, extent and/or quality of habitat
(iv) number of locations or subpopulations
(v) number of mature individuals.
c. Extreme fluctuations in any of the following:
(i) extent of occurrence
(ii) area of occupancy
(iii) number of locations or subpopulations
(iv) number of mature individuals.

C. Population size estimated to number fewer than 250 mature individuals and either:
1. An estimated continuing decline of at least 25% within three years or one generation, whichever is longer, (up to a maximum of 100 years in the future) OR
2. A continuing decline, observed, projected, or inferred, in numbers of mature individuals AND at least one of the following (a–b):
a. Population structure in the form of one of the following:
(i) no subpopulation estimated to contain more than 50 mature individuals, OR
(ii) at least 90% of mature individuals in one subpopulation.
b. Extreme fluctuations in number of mature individuals.

D. Population size estimated to number fewer than 50 mature individuals.

E. Quantitative analysis showing the probability of extinction in the wild is at least 50% within 10 years or three generations, whichever is the longer (up to a maximum of 100 years).

ENDANGERED (EN)
A taxon is Endangered when the best available evidence indicates that it meets any of the following criteria (A to E), and it is therefore considered to be facing a very high risk of extinction in the wild:

A. Reduction in population size based on any of the following:

1. An observed, estimated, inferred or suspected population size reduction of > or = 70% over the last 10 years or three generations, whichever is the longer, where the causes of the reduction are clearly reversible AND understood AND ceased, based on (and specifying) any of the following:
(a) direct observation
(b) an index of abundance appropriate to the taxon
(c) a decline in area of occupancy, extent of occurrence and/or quality of habitat
(d) actual or potential levels of exploitation
(e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.

2. An observed, estimated, inferred or suspected population size reduction of > or = 50% over the last 10 years or three generations, whichever is the longer**,** where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.

3. A population size reduction of > or = 50%, projected or suspected to be met within the next 10 years or three generations, whichever is the longer (up to a maximum of 100 years), based on (and specifying) any of (b) to (e) under A1.

4. An observed, estimated, inferred, projected or suspected population size reduction of > or = 50% over any 10 year or three generation period, whichever is longer (up to a maximum of 100 years in the future), where the time period must include both the past and the future, and where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.

B. Geographic range in the form of either B1 (extent of occurrence) OR B2 (area of occupancy) OR both:

1. Extent of occurrence estimated to be less than 5000 km^2, and estimates indicating at least two of a–c:
a. Severely fragmented or known to exist at no more than five locations.
b. Continuing decline, observed, inferred or projected, in any of the following:
(i) extent of occurrence
(ii) area of occupancy
(iii) area, extent and/or quality of habitat (iv) number of locations or subpopulations
(v) number of mature individuals.
c. Extreme fluctuations in any of the following:
(i) extent of occurrence
(ii) area of occupancy
(iii) number of locations or subpopulations
(iv) number of mature individuals.

2. Area of occupancy estimated to be less than 500 km^2, and estimates indicating at least two of a–c:
a. Severely fragmented or known to exist at no more than five locations.
b. Continuing decline, observed, inferred or projected, in any of the following:
(i) extent of occurrence
(ii) area of occupancy
(iii) area, extent and/or quality of habitat
(iv) number of locations or subpopulations
(v) number of mature individuals.
c. Extreme fluctuations in any of the following:
(i) extent of occurrence
(ii) area of occupancy
(iii) number of locations or subpopulations
(iv) number of mature individuals.

C. Population size estimated to number fewer than 2500 mature individuals and either:
1. An estimated continuing decline of at least 20% within five years or two generations, whichever is longer, (up to a maximum of 100 years in the future) OR
2. A continuing decline, observed, projected, or inferred, in numbers of mature individuals AND at least one of the following (a–b):
a. Population structure in the form of one of the following:
(i) no subpopulation estimated to contain more than 250 mature individuals, OR
(ii) at least 95% of mature individuals in one subpopulation.
b. Extreme fluctuations in number of mature individuals.

D. Population size estimated to number fewer than 250 mature individuals.
E. Quantitative analysis showing the probability of extinction in the wild is at least 20% within 20 years or five generations, whichever is the longer (up to a maximum of 100 years).

VULNERABLE (VU)
A taxon is Vulnerable when the best available evidence indicates that it meets any of the following criteria (A to E), and it is therefore considered to be facing a high risk of extinction in the wild:

A. Reduction in population size based on any of the following:

1. An observed, estimated, inferred or suspected population size reduction of > or = 50% over the last 10 years or three generations, whichever is the longer, where the causes of the reduction are: clearly reversible AND understood AND ceased, based on (and specifying) any of the following:
(a) direct observation
(b) an index of abundance appropriate to the taxon
(c) a decline in area of occupancy, extent of occurrence and/or quality of habitat
(d) actual or potential levels of exploitation
(e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.

2. An observed, estimated, inferred or suspected population size reduction of > or = 30% over the last 10 years or three generations, whichever is the longer**,** where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible**,** based on (and specifying) any of (a) to (e) under A1.

3. A population size reduction of > or = 30%, projected or suspected to be met within the next 10 years or three generations, whichever is the longer (up to a maximum of 100 years), based on (and specifying) any of (b) to (e) under A1.

4. An observed, estimated, inferred, projected or suspected population size reduction of > or = 30% over any 10 year or three generation period, whichever is longer (up to a maximum of 100 years in the future), where the time period must include both

the past and the future, and where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.

B. Geographic range in the form of either B1 (extent of occurrence) OR B2 (area of occupancy) OR both:
1. Extent of occurrence estimated to be less than 20,000 km^2, and estimates indicating at least two of a–c:
a. Severely fragmented or known to exist at no more than 10 locations. b. Continuing decline, observed, inferred or projected, in any of the following:
(i) extent of occurrence
(ii) area of occupancy
(iii) area, extent and/or quality of habitat
(iv) number of locations or subpopulations
(v) number of mature individuals.
c. Extreme fluctuations in any of the following:
(i) extent of occurrence
(ii) area of occupancy
(iii) number of locations or subpopulations
(iv) number of mature individuals.

2. Area of occupancy estimated to be less than 2000 km^2, and estimates indicating at least two of a–c:
a. Severely fragmented or known to exist at no more than 10 locations.
b. Continuing decline, observed, inferred or projected, in any of the following:
(i) extent of occurrence
(ii) area of occupancy
(iii) area, extent and/or quality of habitat
(iv) number of locations or subpopulations
(v) number of mature individuals.
c. Extreme fluctuations in any of the following:
(i) extent of occurrence
(ii) area of occupancy
(iii) number of locations or subpopulations
(iv) number of mature individuals.

C. Population size estimated to number fewer than 10,000 mature individuals and either:
1. An estimated continuing decline of at least 10% within 10 years or three generations, whichever is longer, (up to a maximum of 100 years in the future) OR
2. A continuing decline, observed, projected, or inferred, in numbers of mature individuals AND at least one of the following (a–b): a. Population structure in the form of one of the following:
(i) no subpopulation estimated to contain more than 1000 mature individuals, OR
(ii) all mature individuals are in one subpopulation.
b. Extreme fluctuations in number of mature individuals.

D. Population very small or restricted in the form of either of the following:
1. Population size estimated to number fewer than 1000 mature individuals.
2. Population with a very restricted area of occupancy (typically less than 20 km^2) or number of locations (typically five or fewer) such that it is prone to the effects of human activities or stochastic events within a very short time period in an uncertain future, and is thus capable of becoming Critically Endangered or even Extinct in a very short time period.

E. Quantitative analysis showing the probability of extinction in the wild is at least 10% within 100 years.

Appendix II

Synonyms

No	Scientific name Family	Synonyms
1.	*Cynopterus brachyotis* (Müller, 1838) Pteropodidae	*Cynopterus altitudinis* *Cynopterus andamanensis* *Cynopterus archipelagus* *Cynopterus brachysoma* *Cynopterus ceylonensis* *Cynopterus concolor* *Cynopterus hoffeti* *Cynopterus insularum* *Cynopterus javanicus* *Cynopterus luzoniensis* *Cynopterus minor* *Cynopterus minutus*
2.	*Cynopterus sphinx* (Vahl, 1797) Pteropodidae	*Cynopterus babi* *Cynopterus pagensis* *Cynopterus scherzeri* *Cynopterus serasani*
3.	*Eonycteris spelaea* (Dobson, 1871) Pteropodidae	*Eonycteris glandifera* *Eonycteris rosenbergi*
4.	*Eptesicus bottae* (Peters, 1869) Vespertilionidae	*Eptesicus anatolicus* *Eptesicus hingstoni* *Eptesicus innesi* *Eptesicus omanensis* *Eptesicus taftanimontis*
5.	*Eptesicus nasutus* (Dobson, 1877) Vespertilionidae	*Eptesicus batinensis* *Eptesicus matschei* *Eptesicus pellucens* *Eptesicus walli*
6.	*Eptesicus serotinus* (Schreber, 1774) Vespertilionidae	*Eptesicus albescens* *Eptesicus andersoni* *Eptesicus boscai* *Eptesicus brachydigitatis* *Eptesicus horikawai* *Eptesicus incisivus* *Eptesicus insularis* *Eptesicus intermedius* *Eptesicus isabellinus* *Eptesicus meridionalis* *Eptesicus mirza* *Eptesicus okenii* *Eptesicus pachyomus* *Eptesicus pallens* *Eptesicus pashtonus* *Eptesicus rufescens* *Eptesicus shiraziensis* *Eptesicus sodalis* *Eptesicus transylvanicus* *Eptesicus turcomanicus* *Eptesicus typus* *Eptesicus wiedii*
7.	*Harpiocephalus harpia* (Temminck, 1840) Vespertilionidae	*Harpiocephalus pearsonii* *Harpiocephalus rufulus*
8.	*Hesperoptenus tickelli* (Blyth, 1851) Vespertilionidae	*Hesperoptenus isabellinus*

No	Scientific name Family	Synonyms
9.	*Hipposideros ater* Templeton, 1848 Hipposideridae	*Hipposideros albaniensis* *Hipposideros antricola* *Hipposideros aruensis* *Hipposideros gilberti* *Hipposideros saevus*
10.	*Hipposideros fulvus* Gray, 1838 Hipposideridae	*Hipposideros aurita* *Hipposideros fulgens* *Hipposideros murinus* *Hipposideros pallidus*
11.	*Hipposideros galeritus* Cantor, 1846 Hipposideridae	*Hipposideros brachyotis* *Hipposideros insolens* *Hipposideros longicauda*
12.	*Hipposideros larvatus* (Horsfield, 1823) Hipposideridae	*Hipposideros alongensis* *Hipposideros barbensis* *Hipposideros deformis* *Hipposideros insignis* *Hipposideros neglectus* *Hipposideros poutensis* *Hipposideros sumbae* *Hipposideros vulgaris*
13.	*Hipposideros pomona* Andersen, 1918 Hipposideridae	*Hipposideros sinensis*
14.	*Megaderma spasma* Linnaeus, 1758 Megadermatidae	*Megaderma abditum* *Megaderma crimatae* *Megaderma celebensis* *Megaderma ceylonense* *Megaderma kinabalu* *Megaderma lasiae* *Mgaderma majus* *Megaderma medium* *Megaderma minus* *Megaderma naisense* *Megaderma natunae* *Megaderma pangandarana* *Megaderma siumatis* *Megaderma trifolium*
15.	*Myotis mystacinus* (Kuhl, 1819) Vespertilionidae	*Myotis meinertzhageni*
16.	*Pipistrellus javanicus (*Gray, 1838) Vespertilionidae	*Pipistrellus abramus* *Pipistrellus akokomuli* *Pipistrellus bancanus* *Pipistrellus camortae* *Pipistrellus irretitus* *Pipistrellus meyeni* *Pipistrellus pumiloides*
17.	*Tadarida plicata* (Buchannan, 1800) Molossidae	*Chaerophon adustus* *Chaerophon bengalensis* *Chaerophon dilatatus* *Chaerophon insularis* *Chaerophon luzonus* *Chaerophon murinus* *Chaerophon tenuis*

Appendix III

Subspecies of South Asian Chiropterans

No.	Subspecies
1.	*Asellia tridens murraiana*
2.	*Barbastella leucomelas darjeelingensis* (Hodgson)
3.	*Cynopterus brachyotis brachyotis* (Müller)
4.	*Cynopterus brachyotis ceylonicus*
5.	*Cynopterus sphinx sphinx* (Vahl)
6.	*Cynopterus sphinx gangeticus* (Anderson)
7.	*Cynopterus sphinx angulatus*
8.	*Cynopterus sphinx scherzeri*
9.	*Eonycteris spelaea spelaea*
10.	*Eptesicus bottae ognevi*
11.	*Eptesicus gobiensis kashgaricus*
12.	*Eptesicus gobiensis centralasiaticus*
13.	*Eptesicus nasutus nasutus*
14.	*Eptecicus pachyotis pachyotis*
15.	*Eptesicus serotinus pachyomus* (Tomes)
16.	*Eptesicus serotinus pashtonus*
17.	*Hesperoptenus tickelli tickelli*
18.	*Hipposideros armiger armiger*
19.	*Hipposideros ater ater* Templeton
20.	*Hipposideros ater nicobariculae*
21.	*Hipposideros cineraceus cineraceus* Blyth
22.	*Hipposideros diadema nicobarensis*
23.	*Hipposideros durgadasi durgadasi*
24.	*Hipposideros fulvus fulvus*
25.	*Hipposideros fulvus pallidus*
26.	*Hipposideros galeritus brachyotis*
27.	*Hipposideros hypophyllus hypophyllus*
28.	*Hipposideros lankadiva lankadiva*
29.	*Hipposideros larvatus leptophyllus* (Dobson)
30.	*Hipposideros larvatus grandis*
31.	*Hipposideros pomona pomona*
32.	*Hipposideros pomona gentilis* Anderson
33.	*Hipposideros speoris speoris*
34.	*Ia io io*
35.	*Kerivoula hardwickii depressa*
36.	*Kerivoula picta picta* (Hill, 1965)
37.	*Latidens salimalii salimalii*
38.	*Marcoglossus sobrinus sobrinus* Anderson
39.	*Megaderma lyra lyra Goeffroey*
40.	*Megaderma spasma horsfieldi*
41.	*Megarops niphanae niphanae*
42.	*Miniopterus schreibersi fuliginosus* (Hodgson)
43.	*Miniopterus pusillus pusillus*
44.	*Murina aurata aurata*
45.	*Murina cyclotis cyclotis* Dobson
46.	*Murina huttoni huttonii* (Peters)
47.	*Murina leucogaster leucogaster*
48.	*Murina tubinaris tubinaris*
49.	*Myotis annectans annectans*
50.	*Myotis annectans primula*
51.	*Myotis blythii blythii*
52.	*Myotis daubentoni laniger*
53.	*Myotis formosus formosus* (Hodgson)
54.	*Myotis formosus auratus*
55.	*Myotis hasseltii hasseltii*

No.	Subspecies
56.	*Myotis horsfieldii peshwa*
57.	*Myotis horsfieldii dryas*
58.	*Myotis longipes longipes*
59.	*Myotis montivagus montivagus*
60.	*Myotis montivagus peytoni*
61.	*Myotis muricola muricola*
62.	*Myotis muricola caliginosus*
63.	*Myotis mystacinus nipalensis* (Tomes)
64.	*Myotis sicarius sicarius*
65.	*Myotis siligorensis siligorensis* (Horsfield)
66.	*Nyctalus leisleri leisleri*
67.	*Nyctalus noctula labiatus* (Hodgson)
68.	*Nyctalus noctula plancyi*
69.	*Otonycteris hemprichii cinereus*
70.	*Pipistrellus ceylonicus ceylonicus*
71.	*Pipistrellus ceylonicus indicus*
72.	*Pipistrellus circumdatus circumdatus*
73.	*Pipistrellus coromandra coromandra* (Gray)
74.	*Pipistrellus dormeri dormeri*
75.	*Pipistrellus javanicus babu*
76.	*Pipistrellus javanicus camortae*
77.	*Pipistrellus kuhlii lepidus*
78.	*Pipistrellus paterculus paterculus*
79.	*Pipistrellus pipistrellus aladdin*
80.	*Pipistrellus pipistrellus bactrianus*
81.	*Pipistrellus savii austenianus*
82.	*Pipistrellus tenuis mimus*
83.	*Plecotus auritus homochrous*
84.	*Pteropus faunulus faunulus*
85.	*Pteropus giganteus giganteus*
86.	*Pteropus giganteus leucocephalus*
87.	*Pteropus giganteus ariel*
88.	*Pteropus hypomelanus maris*
89.	*Pteropus hypomelanus germinorum*
90.	*Pteropus melanotus melanotus*
91.	*Pteropus melanotus tytleri*
92.	*Pteropus vampyrus malaccensis*
93.	*Pteropus vampyrus vampyrus*
94.	*Rhinolophus affinis affinis*
95.	*Rhinolophus affinis himalayanus* Anderson
96.	*Rhinolophus beddomei sobrinus*
97.	*Rhinolophus blasii meyeroemi*
98.	*Rhinolophus cognatus cognatus*
99.	*Rhinolophus cognatus famulus*
100.	*Rhinolophus ferrumequinum tragatus* Hodgson
101.	*Rhinolophus ferrumequinum proximus*
102.	*Rhinolophus hipposideros midas*
103.	*Rhinolophus lepidus monticola*
104.	*Rhinolophus luctus perniger*
105.	*Rhinolophus macrotis macrotis*
106.	*Rhinolophus macrotis topali*
107.	*Rhinolophus pearsonii pearsonii* Horsfield
108.	*Rhinolophus pusillus gracilis*
109.	*Rhinolophus pusillus blythi* Anderson
110.	*Rhinolophus rouxi rouxi* Temminck

No.	Subspecies
111.	*Rhinolophus rouxi sinicus*
112.	*Rhinolophus rouxi rubidus*
113.	*Rhinolophus trifoliatus trifoliatus*
114.	*Rhinolophus yunanensis yunanensis*
115.	*Rhinopoma hardwickii hardwickii*
116.	*Rhinopoma microphyllum microphyllum*
117.	*Rhinopoma microphyllum kinneari*
118.	*Rhinopoma muscatellum seianum*
119.	*Rousettus aegyptiacus arabicus*
120.	*Rousettus leschenaulti seminudus*
121.	*Rousettus leschenaulti leschenaulti* (Desmarest)
122.	*Scotoecus pallidus pallidus*
123.	*Scotophilus heathii heathii* (Horsfield)
124.	*Scotophilus kuhlii wroughtonii*
125.	*Sphaerias blanfordi blanfordi*

No.	Subspecies
126.	*Tadarida plicata plicata* (Buchanan)
127.	*Tadarida plicata insularis*
128.	*Tadarida teniotis* subspecies
129.	*Taphozous longimanus longimanus* Hardwicke
130.	*Taphozous melanopogan melanopogan*
131.	*Taphozous nudiventris kachchensis* Dobson,1872
132.	*Taphozous perforatus perforatus*
133.	*Taphozous saccolaimus saccolaimus*
134.	*Taphozous theobaldi secatus*
135.	*Triaenops persicus persicus*
136.	*Tylonycteris pachypus aurex*
137.	*Tylonycteris pachypus fulvidus* (Blyth)
138.	*Tylonycteris robustula robustula*
139.	*Vespertilio murinus murinus*

Appendix IV

Endemic bats of Myanmar assessed

	Species	Family	Status	Criteria
	Craseonycteris thonglongyai Hill, 1974	Vespertilionidae	Critically Endangered	C2a(i,ii)
	Emballonura monticola Temminck, 1838	Emballonuridae	Data Deficient	
	Eudiscopus denticulus (Osgood, 1932)	Vespertilionidae	Endangered	B1a
	Glischropus tylophus (Dobson, 1875)	Vespertilionidae	Data Deficient	
	Hesperoptenus blandfordi (Dobson, 1877)	Vespertilionidae	Data Deficient	
	Miniopterus magnater	Vespertilionidae	Vulnerable	C1+2a
	Pipistrellus anthonyi Tate, 1942	Vespertilionidae	Data Deficient	
	Pipistrellus joffrei Thomas, 1915	Vespertilionidae	Data Deficient	
	Pipistrellus lophurus Thomas, 1915	Vespertilionidae	Data Deficient	

Appendix V

Special Issue Working Groups and Personal Commitments

In assessing and categorizing 130 species of Chiroptera of South Asia, a number of special issues emerged with respect to bats and their conservation. Participants divided into working groups to discuss the following issues: Conservation priorities and field surveys, Legislation and Policy, Chiroptera Taxonomy, Temple Bats and Chiroptera Education and Public Awareness.

The recommendations were given in the form of a verbal report in a plenary session of all participants with further contributions and clarifications from the entire workshop. These were incorporatd into the written version which was handed in to the organizers. Draft recommendations were included in were included in the Draft Report. Participants will have an opportunity to comment and correct these reports. Therefore, this edited version of the recommendations also must be considered as a Draft.

Recommendations

A. Field surveys and conservation priorities

Working group members: *J.C. Daniel, Manoj Muni, A.C. Girish, A. Thabah, P. Padmanabhan, A.R. Binu Priya*

1. It is recommended that areas where bats were found.earlier should be resurveyed.
2. Unknown and unsurveyed localities should be surveyed on priority basis.
3. The 8 species categorized as Data Deficient by the Workshop should be surveyed or resurveyed on priority basis.
4. The application of proper scientific field techniques for field studies should be given more importance.
5. Steps should be taken to motivate more people to study bats in association with wildlife monitoring.
6. The science of population dynamics should be utilized more systematically in the study of Chiroptera.
7. Training for the identification of bat species must be undertaken prior to field studies.
8. Environmental Impact Assessment (EIA) should include Chiroptera.
9. The study of pollination and seed dispersal by Chiroptera in different ecosystems will help improve image of this neglected and misunderstood taxon group.
10. The effect of pesticides and their impact on bats should be studied in detail.
11. Monitoring of priority species of chiroptera their habitats should be undertaken so that population trends can be ascertained.
12. Species such as *Otomops wroughtoni* known from a single population but presently recorded from other localities should be studied in detail for other records on their population in other areas.
13. CCINSA should encourage bat research activities, finding funding avenues and using the newsletter to make known current studies so avoid duplication of effort can be avoided.
14. Priority of studies on bats should be on conservation aspects.

B. Legislation and policy

Working group members: *A.M. Hutson, Azad Ali, N. Gopukumar, Singaravelan, P. Thiruchenthil Nathan, K. Seedikkoya, Augustine Noble, R. Rajashekar, Hanneke de Boer, B.A. Daniel.*

1. The removal of fruit bats from Schedule V (Vermin category) of Indian Wildlife (Protection) Act, 1972, 1991 should be ensured.
2. Legislation should extend to other species and include prevention of disturbance, selling, bartering bats and parts of bats as well as killing, etc.
3. Medicinal use of bats (*Pteropus giganteus) should be controlled.*
4. Legislation should to protect the key roosting sites of endemic species should be considered.

5. Plans, strategies, policies, of all South Asian countries should incorporate the interests of Chiroptera.
6. Migratory bat species should be identified and the development of international agreement for their conservation through the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) should be investigated.
7. Important habitats of bats like caves, tree holes and forest areas should be identified as well as vulnerable and primary bat roosting sites, trees and caves in which large number of bats are roosting.
8. Engineers should consult the bat conservation specialists before venturing into the renovation of building and temples to prevent the indiscriminate killing of bats.
9. Chiroptera specialists should coordinate with NGOs involved in wildlife conservation activities to discuss various broad conservation issues related to bat conservation.
10. Legislation should be formulated to control the indiscriminate use of pesticides, which harm food animals (insects), bats and humans as well through biological magnification.

C. Bat Taxonomy

Working group members: *Y.P. Sinha, M.S. Pradhan, C. Srinivasulu, V.S. Korad, K.S. Sreepada, Wipula Yapa, K. Padma Priya, Sanjay Molur, Sally Walker, Paul Bates*.

1. Geographic limitation and Taxonomy -- a) Zoogeographic regions should be used rather than regional or national as it is more scientific, while taking into consideration that legislation is formulated nationally.
b) Scientists should be careful not to hastily christen the taxon basing on political boundaries when new taxon or variety is found.

2. Taxonomic facilities – a) Every country has one or more agencies for bat identification and taxon reference collection; one needs to identify such countries and tap resources from them. "New" species should be compared with the taxonomic information available and sent to the most appropriate museum. b. A taxonomic key for easy identification should be developed for Bats of South Asia. The keys should have illustrations (as far as possible). Bates' matrix can be used to develop field identification guide. c) Taxonomically significant bats and evaluated species should be deposited in regional and national Natural History Museums

3. Capacity Building – a) As taxonomic experts are in declining in number, capacity building in Chiropteran studies within the region should be taken up with more emphasis on taxonomic and systematic research for Chiroptera. b) Taxonomy training workshops should be conducted as well as ongoing university courses. c) Prepare simple taxonomic kits including appropriate keys for youngsters to encourage their interest

4. Subspecies and Conservation -- Subspecies should be designated as an appropriate taxonomic unit where there is a distinct island (insular) race or a disjunct geographically and taxonomically well-defined population.

D. Temples, Tourism and Bats

Working group members: *G. Marimuthu, Tej Kumar Shrestha, E.A.A. Shukkur, A. Madhavan, Kulam Nathar, Juliet Vanitharani, E. Yuvana Satya Priya, Dilip Joshi*

1. A permanent poster (board) can be prepared on positive aspects of bats to be kept in temples where people assemble
2. Discuss the need to protect bats with temple authorities individually.
3. Lobby the Ministry of Environment and Forests to remove the bats from the "Vermin" or Schedule V Category.
4. Discuss protection of bats with local forest officials (DFO/Chief Conservator of Forests) and request their help in addressing the temple authorities to protect bats.

5. Slide projections in the cinema theatres could promote the positive aspects of bats and their harmlessness in temples. Other media coverage such as radio, television and newspapers can be used.

Chiroptera Education Working Group

Working group members: *Kranti Yardi (facilitator), Hanneke de Boer (recorder), Kalu Ram Senacha, Sally Walker, A.R.Binu Priya.*

Summary: Bats have a negative public image as a harmful nuisance, instead of a force for good. One way to change public opinion is to tackle negative attitudes with a variety of educational activities, items and projects targeted towards different age, economic, professional and societal groups.

Items suggested

- Education packet for school children of different age groups
- Common sheet – generic bat template which could be in local language
- Conservation educational film on bats of South Asia to be developed with international assistance
- Letters in the form of a special appeal after this workshop (official looking) from CSG or CSG South Asia: just a few pertinent points on one page to State forest divisions, department, etc.

Actions required for making educational material

- Collect a list of local "taboos" as opposed to facts about bats and make a detailed scientific sheet on it, e.g. negative and untrue things about bats as opposed to positive and true things about bats.
- Collect information on utility of bats with reference to local people, such as that bats aid in increasing soil fertility, etc.
- When bat colonies are recorded in national parks and sanctuaries, these should be mentioned as one of the wild animals of the sanctuary.
- Involving specialists in contributing to the census of national parks and sanctuaries of the forest department
- CCINSA / CSG SA members should contribute photographs for use in educational material to be prepared for use of all.

Reaching wider audience

- Feature articles about bats to the local newspapers
- Developing a poster in national, local language and also a template which can be filled in local language to be used in temples, world heritage sites
- Grass root bat clubs; with associated educational material
- Promoting a bio-diversity section at primary level of education
- Zoo Outreach Organization Programmes should provide bat packets for special events (wildlife week, environment day, biodiversity day, animal welfare fortnightly) targeting students and other groups

Target groups:

a. schools -- Primary and secondary level, Intermediate level, Graduate level
b. forest officers
d. policy makers (Ministry both Central and State, Forest and Environment officials, Village Panchayat officials, etc.)
e. local people, both rural and urban
f. archeology department
g. temple authority?
h. zoo directors

i. school teachers
j. tourists at archeological sites, NPs and sanctuaries

Messages and activities related to conservation that can be used for education

- Bat colonies identified in school, if any other school can visit the same
- Take the children to nature trails to show bat roosting sites – like children go for bird watching – give information and activities regarding bats
- Encourage good zoos to exhibit bats for education, in appropriate enclosures keeping in mind the welfare of animals

Techniques that could be used in school education: masks, bat friendship bands, craft items, hand and other types of puppets, information on folders having bat shapebat, stickers and labels, small greeting cards, bat badges, small projects on bats, photographs which can be collected from bat-researchers, generic brochure with South Asia as focus

Report on Ajanth-Ellora Caves, Tourism and Bats
Dr. Dilip Joshi, Ahmednagar

Ajantha caves are sealed off to protect old paintings from bats, which leads to loss of habitat. This situation should be studied to ascertain whether the bats find difficulty in resettling.

Ellora caves get a constant influx of tourists which leads to disturbance to Bats. Appropriate signage and information could feature bats as an additional attraction and warn against disturbing the animals.

Baravi Dam was recently constructed which resulted in 16 villages being submerged under water leading to drowning of many bats. Advance steps should be taken to resettle the animals to the extent possible before such actions are taken.

Personal Commitments made by participants

Elangovan:	I will make a detailed study of *Cynopterus sphinx*
Manoj:	I will help with expansion of CCINSA network action.
T. Nathan:	I will adopt orphaned bats
Binu:	I will help create awareness among children
Noble:	I will teach villagers the good things about bats
Shukkur:	I will talk about bats on radio and TV and in schools
Rajashekhar:	I will study *C. sphinx* and start a Friends of the Bats Club
Hannekke:	I will learn more about bats
Daniel:	I will help in preparing education materials about bats
Sanjay:	I will get the Report out EARLY and do mapping of bats in South Asia.
Azad Ali:	I will conduct awareness camps regarding *Pteropus giganteus*
Singaravelan:	I will continue studies on pollination by bats
Tony:	I will donate some educational materials on bats for CCINSA
Digana:	I will raise awareness about bats to villagers
Gopukumar:	I will write about bats for popular publications
Joshi:	I will study Bat diversity in lunar crater
Marimuthu:	I will insure the removal bats from vermin status
Swe:	I will continue studies of Myanmar bats including the study of caves
Madhavan:	I will assess the sexual maturity of *Rousettus leschenaultii*

Koli:	I will educate children and start a bat club
Patiath:	I will study pollination and seed dispersal by bats in a forest ecosystem.
Kumaran:	I will write an article for the press and coordinate the import of bat detectors.
Shrestha:	I will continue exploration of caves, caverns in Nepal and study the Rhinolophus
Girish:	I will promote conservation of fruit bats in Western ghats.
Kranti:	I will expose Taboos on bats and write Newspaper articles.
Senacha:	I will write popular articles at Jodhpur which will be important to local people
Yapa:	I will develop a model for a bat box appropriate for this environment and prepare training.
Pradhan:	I will work against illegal trade of bats and educate youngsters.
Sinha:	I will help with identification of bats.
Sreepada:	I will educate scientists and other people about bats
Sreenivasulu:	I will talk more about bats to the forest department.
Korad:	I will continue surveying bats, write in newspaper
Adora:	I will educate locals in Meghalaya
Daniel, J.C.	I will make available the BNHS collections for study
Paul Bates	I will put together a south/SE Asia education package - targeted towards schools and communities adjacent to important and vulnerable roosting sites.
Sally:	I will develop bat education packets for zoos and bat clubs; feature bats in an all India zoo programme, and create a structure for bat clubs via CCINSA

Appendix VI

South Asian Chiroptera Education Project

The Chiroptera Conservation Assessment and Management Plan (CAMP) Workshop, funded by Chester Zoo, Bat Conservation International, Columbus Zoo and Metro-Toronto Zoo generated much specific information about Chiroptera of South Asia as well as enthusiasm among participants for educating people -- from the public of all ages to policy makers -- about Chiroptera which are disliked or simply ignored in this region.

In a plenary exercise at the end of the workshop, participants made personal commitments to do "something extra" for bats. Almost half the participants committed to get involved in education, either directly or indirectly. Also, recommendations from different working groups highlighted the need for public education about bats, on specific issues.

Zoo Outreach Organisation, well experienced in public education in South and Southeast Asia, and a collaborator in the workshop committed to assist the Chiroptera Conservation and Information Network of South Asia (CCINSA) to follow up on these recommendations and commitments. Z.O.O. designed a Bat Education Programme, which aimed to enhance interest and tolerance of Chiroptera as well as encouraging appreciation of these lesser-loved but useful and charming creatures. The main targets of the Education Programme will be institutions and organizations that are already involved in public education and have a captive audience, and a new initiative of "bat clubs". The main implementers of the education project will be the bat biologists themselves. Who better?

Bat biologists have much to share with the public about bats because they study them and love them. Bat biologists are busy being biologists and do not have time to develop kits, handouts, packets and posters, reports brought out by bat biologists are for a different audience. Z.O.O. thought that if the biologists were supplied with materials, they would use them along with their enthusiasm and knowledge of bats to spread the message of conservation for Chiroptera. So, a selection of items have been (or will be) developed for the use of bat biologists as well as traditional educators – zoos, conservation NGO's, school teachers, etc.

Z.O.O. has raised part of the funds for this project from some of the same organizations that funded the Chiroptera C.A.M.P. – Chester Zoo and Bat Conservation International. Fauna and Flora International has also provided assistance. Other organizations who have supported bat work in the past will also be invited to contribute to this noble effort. Bats have no political or social support in South Asia – no legislation protects them and few people love them. That situation has to change and education can make it happen.

In the short time since the bat CAMP, the Bat Education Programme has been designed, funded and initiated in a small way. The Reports below describe the materials, which are being produced and distributed to potential and actual bat educators and give examples of what bat biologists and enthusiasts have done even in these early days of the Bat Education Programme.

Materials and Methods

1. Bat Programme Kits

Bat Programme Kits have been designed for use by organizations, institutions and individuals already engaged in teaching. The provision of such kits on species and issues on special days (Wildlife Week, Animal Welfare Fortnightly, Tree Day, Environment Day, etc.) to zoos, natural history museums, conservation organizations, animal welfare groups and officials wildlife divisions has proven to be a very successful and low cost

means of educating large numbers of people as well as the teaching organizations themselves. The current methodology has evolved over nearly 18 years of experience by Zoo Outreach Organisation and improves with each programme.

The Programme Kit will include (but is not limited to) the following items:

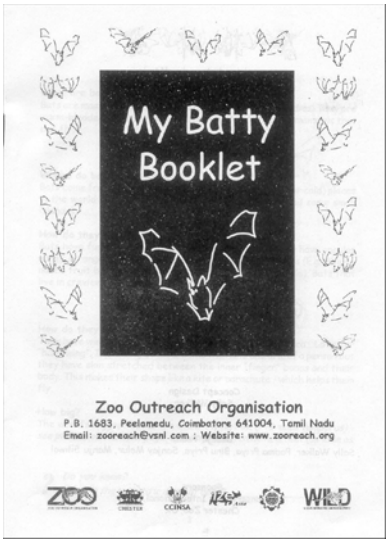
Guidelines book –instructions for organizing a programme, pertinent information on bats for use in creating slogans, running quiz competitions, giving lectures, debate, press releases, etc.; instructions for using the items in packets provided in the kit; suggested games and other activities.

T-shirts – to use for games, prizes or simply give-aways as part of the programme.

Packets for participants – these packets are designed and printed in a very simple, inexpensive format. (This format is not merely to save money. It has been demonstrated that expensively produced, 4-colour, glossy materials tend to send up "saved for an occasion" such as giving to VIPs and their kids, in closets where many of them end up being consumed by termites).

The packets contain a variety of items but nearly always the following:

- Small booklet – facts about bats with few activities
- Mask – theme related (2 fruit bats and 2 insect bats).
- Wrist bracelet – for a commitment exercise
- Certificate of participation in the programme
- Sticker
- Small folder
- Handout – information on bats



There are many other items which can be included depending on resources available, such as themed flags for rallys and parades, caps, pins, postcards, games, models, etc.

Methodology: These programmes are organized by writing to known organizations inviting them to apply for a Programme Kit. They are required to give a small proposal which should include their plan for a programme, target audience, etc. This proposal is used to decide whether the request is genuine and viable. The organizations are required to pay postage of the materials only and agree to write a report, send photographs and

generate publicity. We summarise their report in our publications and also use these reports to generate more funds for additional programmes. We can also evaluate them for future invitations.

This programme component has been funded by Chester Zoo, Bat Conservation International and Flora and Fauna International.

2. Bat Club Kits

This is a new initiative originally inspired by a similar activity by Bat Conservation International. The idea of bat clubs was proposed in the CCINSA Newsletter in 2001and later at the CAMP Workshop.

It is proposed to offer Bat Club starter kits initially only to CCINSA members. A member who wants to start a bat club should commit himself to following through with his group for a minimum period of 3 years. He should raise his own funding for activities but CCINSA would provide him with a specified number of t-shirts, caps, pins, packets, and other items appropriate for such groups.

Kits will contain the following:

Bat Club Guidelines booklet: this booklet will describe an "ideal" bat club giving suggestions for how to start, activities, projects, etc.

Programme Guidelines: Similar to the Guidelines from the Bat Programme Kit but designed for long-term work with a group.

Certificate of Bat Club association with CCINSA

CCINSA Bat Club logo which can be adapted for specific clubs by supplying its name.

For members – different items for members of different age groups
Bat Club bracelets
Bat Club pins
Bat Club banners
Bat Club identity card
Bat booklet – aims of CCINSA bat clubs, pledge, facts, etc.

T-shirts – a specific number for the Bat Club organizer to use for prizes, for rewarding for extra work, for identifying programme guides, supervisors or mentors, etc.

Methodology

CCINSA members would be invited to start a bat club, beginning with those who made an educational commitment at the CAMP. They would be asked to give a proposal with their ideas of what their groups would do, the target audience (school kids, adults, etc.), objectives, and their own methodology for starting and providing continuity.

This component of the programme has not been funded as yet.

3. Summary Report of CAMP Workshop

The Report of the South Asia Chiroptera CAMP workshop is too long for easy consumption by the general public. An important component of the proposed education programme is an attractive, illustrated 20-24 page booklet for circulation to policy makers, teachers, politicians, foresters and laypersons. It will be useful for the Bat Programmes as well as for the Bat Clubs in addition to general awareness. In the booklet will be

illustrations of some of the bats, a layman's explanation of the IUCN Red List Categories and Criteria, a list of the 123 bats of South Asia, their status and the reasons and a short description of some of their characters. Selected tables of threats, distribution and maps will be included.

This programme component has been funded by Chester Zoo, Bat Conservation International and Flora and Fauna International.

4. Colour poster of some bats of South Asia

To date there has not been a colour poster featuring Chiroptera of South Asia. A poster will be designed featuring some of the more dramatic and attractive species of bats of South Asia. A small amount of text conveying the ecological importance of bats will be included.

This component of the programme has not been funded as yet.

Model proposal for "Just Bats about Bats" materials for Wildlife Week

Name: Kranti D. Yardi
Institution Name: Cummins Nature Club
Pune 411 052
Email: ykranti@hotmail.com

Proposal – description of programme –use back of page if necessary

Date: 2.10.2002 – Take a group of 50 students in Snake Park Nigdi – Pune. Age group: 13-14 years

Date: 4.10.2003 – Bat walk – Taking 90 students of age group 9 years to 12 years at a Bat roosting site in Kothrud, Pune.
5.10.2002 – Bat Walk – 40 students at another roosting site in Aundh. Age group – 12-13 years
Programme – 9.30 to 11.30 at site
Observations – 9.30 to 10. a.m.
11 to 11.30 am information& interactive session
11 to 11.30 games on wildlife
Distribution of packets/session related to packet

Visit – to Rajiv Gandhi Zoo – Katraj Pune
No. of Students : 95
Age group: 13 to 15 years
Time: 9 a.m. to 2 p.m.
Programme: 9 a.m. to 9.30 am – description
9.30 a.m. to 11.30 a.m. – Introduction to animals at Zoo also includes Snake Park
11.30 to 12.00 – Interactive session
12.00 to 12.30 – Lunch break
12.30 to 1.30 – Handling of injured animals (Talk by an expert in the zoo)
1.30 to 2 p.m. – What can we do? Distribution of packets and discuss about post session in the school.

Each of this programme will have a post session in the school.

One more school programme yet to be finalized.

Appendix VII

Participants

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G. Marimuthu

Kulam Nathar

M.S. Pradhan

Shahroukh Mistry

Augustine Noble

E. Yuvana Satiya Priya

Manoj Muni

P. Padmanabhan

H. Raghuram

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E.AA. Shukkur

Khin Maung Swe

Kalu Ram Senacha

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Hanneke de Boer

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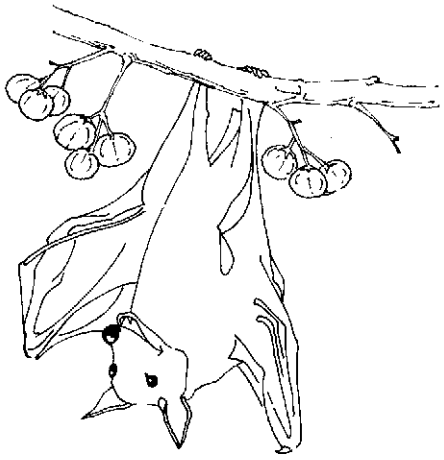

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