CONSERVATION ASSESSMENT AND MANAGEMENT PLAN FOR THE PRIMATES OF INDONESIA

Taman Safari
15-19 January 2001

FINAL REPORT

July 2001

Co-hosted By:
Conservation International Indonesia
Taman Safari Indonesia
Ditjen PKA
PSBK-FMIPA-UI
APAPI

In collaboration with:
CBSG Indonesia
The Conservation Breeding Specialist Group (SSC/IUCN)

A contribution of the IUCN/SSC Conservation Breeding Specialist Group.

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Thank You!
August 2001

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Section 1

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EXECUTIVE SUMMARY

Introduction

Indonesia contains among the most diverse array of primates on earth. The country's primates representing 5 families, 9 genera, and more than 40 species, 24 of which are Indonesian endemics. The species are distributed across the country, from north of Kalimantan to southern Java, and from Mentawai islands on the western coast of Sumatera to Bacan Island North Maluku. From evolutionary perspective, Indonesia possesses every type of primates, from primitive "living fossil" such as tarsiers through the very advanced apes such as orangutans.

Extremely high levels of endemicity characterized Indonesia's diverse primates. For instance, the major islands of Java, Kalimantan and Sumatera have at least three endemic species each. In some islands, all the primates are endemic, for instance, Sulawesi and the small island group of Mentawai Sulawesi equals Madagascar in terms of primate endemicity. Although the island comprises only 5% of all primate diversity in the world, the eight or so Macaque species and maybe as many as fourteen species of tarsier are found no where else.

As has been pattern anywhere, human population growth and economic development have also caused substantial loss of Indonesia's biological diversity. With deforestation rates of 2%, Indonesia has lost over 60 % of its forest cover. As forest dwellers, primates are most threatened with forest disturbance, removal, and conversion. During the last 10 years, Indonesian and international primatologists have increased the effort to monitor the status of primates population in situ and ex situ. Entering the new millennium, the number of primate species assigned critical status has increased considerably.

As a first step to holistically conserve the primate diversity of Indonesia, we have taken the initiative to pull together our expertise and formulate strategies in a participatory manner. This initiative takes the form of a workshop called the **Conservation Assessment and Management Plan (CAMP) for the Primates of Indonesia**. The workshop was held in Safari Garden Hotel, Cisarua, from 15 to 19 January 2001, with the assistance from CBSG-IUCN. This 5-day workshop was well attended by 72 participants, coming from diverse and relevant backgrounds, such as scientists, field primatologists, conservationists, park managers, wildlife traders and entrepreneurs.

The CAMP Process

Effective conservation action is best built upon critical examination and use of available biological information, but also very much depends upon the actions of humans living within the range of the threatened species. Motivation for organising and participating in a CAMP workshop comes from fear of loss as well as a hope for the recovery of a particular group of species. At the beginning of each CAMP workshop, there is agreement among the participants that the general desired outcome is survival of the species. Learning and sharing of information is at the heart of the CAMP workshop process which takes a broad based look at the life history, population history and status of each species being evaluated and assesses the threats that may put the species at risk.

Workshop participants evaluate status of threat of all taxa in a broad group (in this case, the primates of Indonesia), country, or geographic region, using the IUCN Red List criteria to assign categories. Based on threat status, CAMPs provide a rational and comprehensive way to determine priorities for conservation needs and actions - both *in situ* and *ex situ* - and for information gathering. Participants develop the assessments of risks and formulate recommendations for action using a systematically designed Taxon Data Sheet (see Sections 2-6 of this document). This sheet facilitates recording of detailed information about each taxon, including data on the status of populations, their habitat in the wild and recommendations for intensive conservation action. An accompanying computerized CAMP data entry program aides the collection of information, facilitates production of the report and allows information for all CAMP workshops to be accessed and queried by any interested parties.

Summary tables and the Taxon Data Sheets for each of the 56 Indonesian primates evaluated are presented in section 2-6 of this report. Seventy-seven percent of the species and subspecies evaluated were assigned threat categories according to the IUCN Red List criteria. Four (7%) were classified as Critically Endangered, 24 (43%) as Endangered and 15 (27%) as Vulnerable. Table 1 contains a summary of IUCN categories and key recommendations made for each of the taxa evaluated. Table 2 lists the primary threats for each taxa.

Complimentary to the data collection process is a communication process, or deliberation, that takes place during a CAMP. In the case of this workshop, participants worked together to identify the key issues affecting the conservation of primates in 4 particular regions of Indonesia: Sulawesi, Kalimantan, Sumatra, and Java, Bali and Lesser Sunda. During the CAMP process, participants work in small groups to discuss key identified issues. Each working group was asked to:

- Identify and amplify the most important issues;
- Developed recommendations and strategies to address the key issues; and
- Specify the action steps necessary to implement each of the recommendations.

Each group then produces a report on their topic, which is included in the CAMP document resulting from the meeting. A successful CAMP workshop depends on determining an outcome where all participants, coming to the workshop with different interests and needs, "win" in developing a management strategy for the group of species in question. Local solutions take priority. Workshop report recommendations are developed by, and are the property of, the local participants.

Each group presented the results of their work in daily plenary sessions to make sure that everyone had an opportunity to contribute to the work of the other groups and to assure that issues were carefully reviewed and discussed by all workshop participants. The workshop emphasized the rapid decline of Indonesia's natural forests, and the impact of this decline on the country's increasingly endangered primates. Specific recommendations have been developed accordingly, including measures to step up protection of wild populations by attempting community agreements. Regional working group reports can be found in section 7 of this document.

Indonesian Primate CAMP

Table 1

Scientific Name	IUCN Category	IUCN Criteria	PHVA Recom.	Captive Program Recom.	Captive Program Exists	Wild Pop. Mgt Rec.	Monitoring Recom.
Pongo abelii	EN	A4, B1a+b	Y	Y	Y	Y	Y
Pongo pygmaeus	EN	A4,B1a+b	Y	Y	Y	Y	Y
Nasalis larvatus	EN	A2,B1b	Y	Y	Y	Y	Y
Presbytis comata	EN	A4,B1a+b	Y	Y	Y	Y	Y
Presbytis femoralis			PENDING	Y	Y	NO	NO
Presbytis fredericae	EN	A1c	NO	NO	NO	Y	Y
Presbytis frontata	EN	B1b	Y	Y	NO	Y	Y
Presbytis hosei	EN	B2ab,C1	NO	NO	NO	Y	Y
Presbytis melalophos	EN	C1c	Y	NO	Y	Y	Y
Presbytis potenziani	VU	A1c, 2c	NO	NO	NO	Y	Y
Presbytis rubicunda	VU	C1	NO	NO	NO	Y	NO
Presbytis siamensis natunae	EN	C1	NO	Y	NO	NO	Y
Presbytis thomasi			NO	NO	NO	Y	NO
Simias concolor siberu	EN	A1cd, 2c	Y	Y	NO	Y	Y
Simias concolor sipora	EN	A1cd, 2c	NO	Y	NO	Y	Y
Trachypithecus cristatus vigilans	CR	B1+2, C1	NO	Y	NO	Y	Y
Trachypitheus auratus			Y	Y	Y	Y	Y
Tarsius bancanus bancanus	LC		PENDING	NO	Y	Y	Y
Tarsius bancanus borneanus	LC		PENDING	NO	NO	Y	Y
Tarsius bancanus natunensis	VU	C2aii	NO	NO	NO	Y	Y
Tarsius bancanus saltator	EN	B2a,b	PENDING	NO	NO	Y	Y
Tarsius dianae	LC		PENDING	NO	NO	Y	Y
Tarsius pelengensis	EN	B1a,b	PENDING	Y	NO	Y	Y
Tarsius pumilus			PENDING	Y	NO	NO	NO
Tarsius sangirensis	EN	B1a,b,c	PENDING	Y	NO	Y	Y
Tarsius sp 1	LC		PENDING	Y	Y	Y	Y
Tarsius sp 2	NT		PENDING	Y	NO	Y	Y
Tarsius sp 3	NT		PENDING	Y	NO	Y	Y
Tarsius sp 4	NT		PENDING	Y	NO	Y	Y
Tarsius sp 5	NT		PENDING	Y	NO	Y	Y
Tarsius sp 6	EN	B1a,b	NO	Y	NO	Y	Y
Tarsius sp 7	EN	B1a,b	PENDING	Y	NO	Y	Y
Tarsius sp 8	EN	B1a,b	PENDING	Y	NO	Y	Y
Tarsius sp 9	VU	B1a,b	PENDING	Y	NO	Y	Y
Tarsius spectrum	VU	B1a,b	NO	Y	Y	Y	Y
Hylobates agilis agilis	VU	C2ai, C1	PENDING	NO	Y	Y	Y
Hylobates agilis albibarbis	VU	C1	PENDING	NO	NO	Y	Y
Hylobates klosii	EN	A2, B1b	Y	Y	Y	Y	Y
Hylobates lar vestitus	VU	B1ab, C1	Y	Y	NO	Y	Y
Hylobates moloch	CR	A2	Y	Y	Y	Y	Y
Hylobates muelleri	EN	A1a, B1	Y	Y	Y	Y	Y
Symphalangus syndactylus syndactylus	VU	A2, A3	PENDING	NO	Y	Y	Y
Macaca togeanus	EN	B2a	Y	NO	NO	Y	Y
Macaca brunnescens	VU	B1a, C1	Y	Y	Y	Y	Y
Macaca fascicularis fascicularis	LC		NO	Y	Y	Y	Y
Macaca fascicularis fusca	EN	B2a	Y	NO	NO	Y	Y

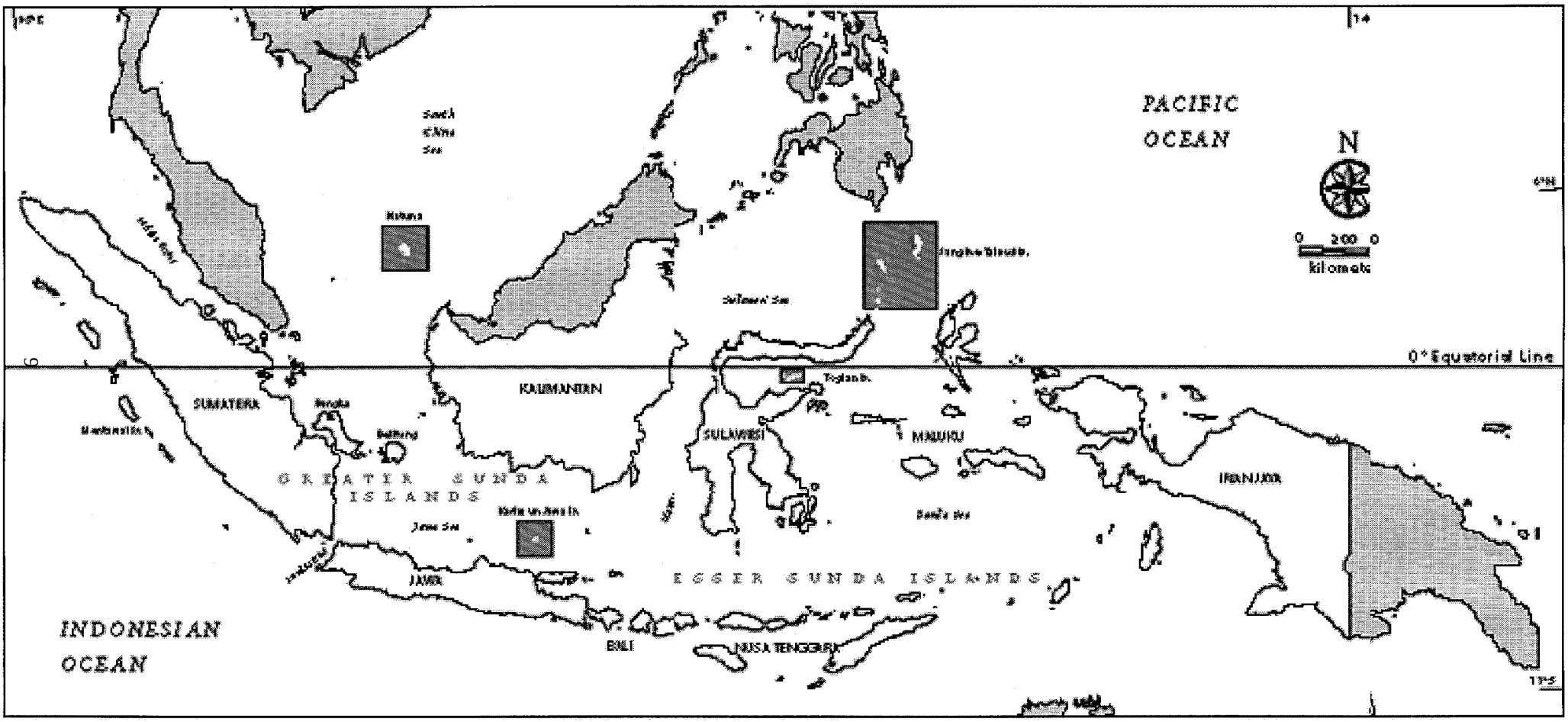
Macaca fascicularis karimunjawae	VU	A4, B2	NO	NO	NO	Y	Y
Macaca hecki	EN	B1a	NO	NO	Y	Y	Y
Macaca maura	EN	B2a	Y	Y	NO	Y	Y
Macaca nemestrina nemestrina	VU	B2a	Y	Y	NO	Y	Y
Macaca nigra	EN	A3	Y	Y	Y	Y	Y
Macaca nigrescens	VU	A1a	Y	NO	NO	Y	Y
Macaca ochreata	VU	B1a	NO	Y	NO	Y	Y
Macaca pagensis pagensis	CR	B2a	Y	Y	NO	Y	Y
Macaca pagensis siberu	CR	B2a	Y	NO	NO	Y	Y
Macaca tonkeana	VU	A2,B1a,B2a	NO	Y	NO	Y	Y
Totals	**CR 4** **EN 24** **VU 15**		**Y 21** **Pend. 19**	**36**	**19**	**53**	**52**

Indonesian Primate CAMP

Table 2 Primary Threats

Scientific Name	Habitat Loss	Habitat Frag.	Harvest Food/Hunt	Fire	Trade	Pesti-cides	Harvest Timber	Predation By Exotics	Genetic Probs.	Habitat Loss Exotics	Human Inter-ference	Planta-tions	Drought	Pollution	Inter-spec. Comp.	Volcanic Eruption	Habitat Loss Logging	Disease	Climate Change
Pongo abelii	x	x		x					x										x
Pongo pygmaeus	x			x	x							x	x						
Nasalis larvatus	x	x	x	x										x					
Presbytis comata	x	x		x							x				x				
Presbytis femoralis	x	x	x		x		x												
Presbytis fredericae	x	x	x	x												x			
Presbytis frontata	x	x	x				x			x									
Presbytis hosei	x		x				x												
Presbytis melalophos	x	x	x																
Presbytis potenziani	x	x	x	x					x										
Presbytis rubicunda	x		x	x	x		x												
Presbytis siamensis natunae	x	x		x	x												x		
Presbytis thomasi	x	x	x				x		x										
Simias concolor siberu	x	x	x				x			x									
Simias concolor sipora	x	x	x				x												
Trachypithecus cristatus vigilans	x	x					x		x									x	
Trachypitheus auratus	x										x								
Tarsius bancanus bancanus	x	x		x		x													
Tarsius bancanus borneanus	x	x		x		x													
Tarsius bancanus natunensis	x	x																	
Tarsius bancanus saltator	x	x																	
Tarsius dianae	x	x		x	x	x													
Tarsius pelengensis	x	x			x	x		x											
Tarsius pumilus																			
Tarsius sangirensis	x	x			x	x		x											
Tarsius sp 1	x	x			x	x		x											
Tarsius sp 2	x	x			x	x		x											
Tarsius sp 3	x	x				x		x											
Tarsius sp 4	x	x				x		x											
Tarsius sp 5	x	x				x		x											
Tarsius sp 6	x	x				x		x											
Tarsius sp 7	x	x																	
Tarsius sp 8	x	x																	
Tarsius sp 9	x	x																	
Tarsius spectrum	x	x																	
Hylobates agilis agilis	x	x																	
Hylobates agilis albibarbis	x			x															
Hylobates klosii	x																		
Hylobates lar vestitus	x																		
Hylobates moloch		x																	
Hylobates muelleri	x																		

Symphalangus syndactylus syndactylus	x	x																	
Macaca togeanus	x	x																	
Macaca brunnescens	x	x	x																
Macaca fascicularis fascicularis	x	x	x																
Macaca fascicularis fusca	x	x	x																
Macaca fascicularis karimunjawae	x	x					x												
Macaca hecki	x	x	x		x														
Macaca maura	x	x	x																
Macaca nemestrina nemestrina	x	x	x																
Macaca nigra	x	x	x		x														
Macaca nigrescens	x	x	x																
Macaca ochreata	x	x	x																
Macaca pagensis pagensis	x	x	x																
Macaca pagensis siberu	x	x	x																
Macaca tonkeana	x	x	x																
Totals	54	47	23	12	11	11	9	8	4	2	2	1	1	1	1	1	1	1	1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NUSA TENGGARA
INDONESIAN
OCEAN

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Section 2

ORANGUTAN:

Taxon Data Summaries, Data Sheets and Distribution Maps

Summary Table - Indonesia

Scientific name	*Common name*	*Distribution*	*Area of occupancy*	*Global population*	*Previous IUCN*	*Assigned IUCN*	*IUCN Criteria*	*CITES Append*	*ProtectedArea*
Pongo abelii	Orangutan	Indonesia/Sumatera	11-500 sq km	3,000-5,000*wild/*captive	Endangered	EN	A4, B1a and b	Appendix 1	Leuser National Park
Pongo pygmaeus	Orangutan	Indonesia and Malaysia	> 2,001 sq km	10,000-12,000	Endangered	EN	A4, B1a and b	Appendix I	W (Bentung Kerihun, Sentarum, Bukit Baka/Raya, Gn. Palung, NR. Gunung Niyut), C (TN. Tanjung Putting, SM. Lamandau), E (TN. Kutai, Gn. Meratus), Serawak

Indonesian Primate CAMP

Pongo abelii — Orangutan

Taxonomy

1. Scientific Name / Ambiguities

	Authority	Date
Pongo abelii	Lesson	1827
Pongo pygmaeus abelii	Lesson	1827

FAMILY: Pongidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Mawas	Aceh, North Sumatra
Orangutan	English
Orangutan Sumatra	Indonesia

In some areas of Southern Sumatera, Mawas is not only for orangutan, but also for another species of primate, such as long tail macaque, gibbon and siamang. Only in Northern area of Sumatera, Mawas is for orangutan.

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical Rain Forest/Primer, Secondary, Dipterocarp Forest. - NICHE: Swamp-Low Land-High Land/ up to 1,500 meters. - HISTORICAL DISTRIBUTION: Indo China-Indo Malay-Sumatera-Java-Borneo. - CURRENT COUNTRIES: Indonesia/Sumatera. - GEOGRAPHIC EXTENT: North Sumatera-around and at The Gunung Leuser National Park. - MIGRATION REGIONS: Northern-Western of Aceh, Southern-Western of Aceh, Singkil (concentrate in Western part of Aceh), Sembabala/Eastern of Border of Aceh and North Sumatera-Western of Aceh.

3.-4. Occurrence and Occupancy in _around area study/sighting

OCCURRENCE AREA: > 20,000 sq km. - OCCURRENCE NOTES: 20,000-25,000 sq km.

OCCUPANCY AREA: 11-500 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: 4-5.

6. Habitat status:

Fragmented. - NOTES ON FRAGMENTATION: by habitat loss.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 21% to 50%.- DURING HOW MANY YEARS? 10. - PREDICTED DECLINE IN HABITAT: 21% to 50%. - PREDICTED DURATION OF DECLINE: 5. - PRIMARY CAUSE OF CHANGE: Loss of habitat.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - logging, fire, forest conversion (plantation and human settlement)

7. Threats:

	now	future		pop decline
HUMAN INTERFERENCE				
habitat fragmentation	Y	Y	3 / their range decrease, food decrease, genetic problems	Y
habitat loss due to plantation	Y	Y	2	Y
hunting	Y	Y	4	
instability politics	Y	Y	7/ no monitoring and research can be done	Y
loss of habitat	Y	Y	1	Y
pesticides		Y	11/ when their loss their habitat, they go to the plantation, they can get killed by the pesticides	Y
poisoning	Y	Y	9	Y
pollution		Y	8	Y
powerlines	Y	Y	10	Y
trade for market	Y	Y	5 / hunting for trade, to have one baby they must kill the mother	Y
trade of parts	Y	Y	6	Y
NATURAL/INDUCED				
behavior changes			5	
climate change	Y	Y	1 / fruit seasonality change, draught	Y
disease	Y	Y	3 / from hunters	Y
genetic problems*		Y	2/captive: hybridization	Y
interspecific competition		Y	6	Y
nutritional disorders		Y	4	Y
soil changes		Y	7	Y
CATASTROPHIC				
drought		Y	4	
el nino	Y	Y	2	
fire	Y	Y	1	
landslide		Y	3	

8. Trade:

Trade described as local; domestic; commercial; international

Parts in Trade: Live animal
Skull
Taxidermy models

Effects: population decrease
(form of trade is live animal)

9. Population (global) 3,000-5,000*wild/*captive

Subpopulations Greater Gunung Leuser 9200; Gunung Leuser NP 3450

Mature < 2,500

Avg age parents 13-17 years

10. Population trends Declining

Past Decline % 21% to 50% Period 10 years

Future decline of 21% to 50% is predicted for a period of 5-10 years

Other possible populations: Singkil (?), Sembabala (??), West Takengon (?).

11. Data Source

DATA SOURCE/QUALITY: census monitoring; indirect information; field study; informal sightings; literature; -

12. Recent Field Studies

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35. Rudi HP, Gn. Leuser NP, 1999, Social behavior
36. Merril M, Gn. Leuser NP, 1999, Culture behavior
37. Van Adrichem B, Gn. Leuser NP, 1999, Mother-offspring relatioship
38. Thorpe S, Gn. Leuser NP, 1999, Locomotion behavior
39. Utami SS, Gn. Leuser NP, 1999, Mother-offspring relationship/Seasonality movement
40. Maryati Y, Gn. Leuser NP, 1999, Mother-offspring relationship
41. Foitova I, Gn. Leuser NP, 1999-2000, Parasite
42. Fox EA, Gn. Leuser NP,2000-2004, Female behavior
43. Goossens B and Utami SS, Gn. Leuser NP, 2000, Genetic population

13. Status

IUCN CATEGORY (Global): Endangered

IUCN CATEGORY (National): Protected Animal

CITES: Appendix 1. - NATL WILDLIFE LEGISLATION: PP No. 7/1999, UU No. 5/1990, SK. Mentri Kehutanan 10 Juni 1991 No. 301/Kpts-II/1991. - NATL REDBOOK DATA: None. - INTL REDBOOK DATA: Vulnerable. - OTHER LEGISLATION: None. - PROTECTED AREA: Leuser National Park. - PROTECTED PLAN: None. - NOTES ON STATUS: Working group recommended that Sumatran orangutan catagories as Critical endangered, due to habitat loss. Especially, the density is falling from 5 indiv/km (1995) to 3 ind/km, however many of the areas have density less than 3 ind/km, because of forest fragmented very fast for last four years (starting in 1997)..

RED LIST CATEGORY: Endangered

IUCN-BASIS: A4, B1a and b

14. Research Recommended

Survey Studies; Genetic Research; life history; limiting factor research; epidemiology; trade; PHVA is recommended.

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; genome resource; limiting factor; work in local communities;

16. Captive Breeding / Cultivation Recommendations

education; research; husbandry;preservation of live genome;

17. Facilities: Zoo

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	22	8	7	37

COORDINATED SPECIES MANAGEMENT PROGRAM exists in: Studbook : America (AZA), Europe (EAZA), SEAZA : Taiwan. SPECIES MANAGEMENT RECOMMENDED FOR RANGE COUNTRIES: Indonesia

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: No ex situ program recommended.

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques known for this taxon or similar taxon.

20. GENERAL COMMENTS: most offsprings are male

21. SOURCES: Rijksen, H and Meijaard, E : Our Vanishing Relative, Tropenbos and Kluwer Academic Publishers, 1999.

Yeager, C (Ed.) : WWF Orangutan Action Plan, 1999.

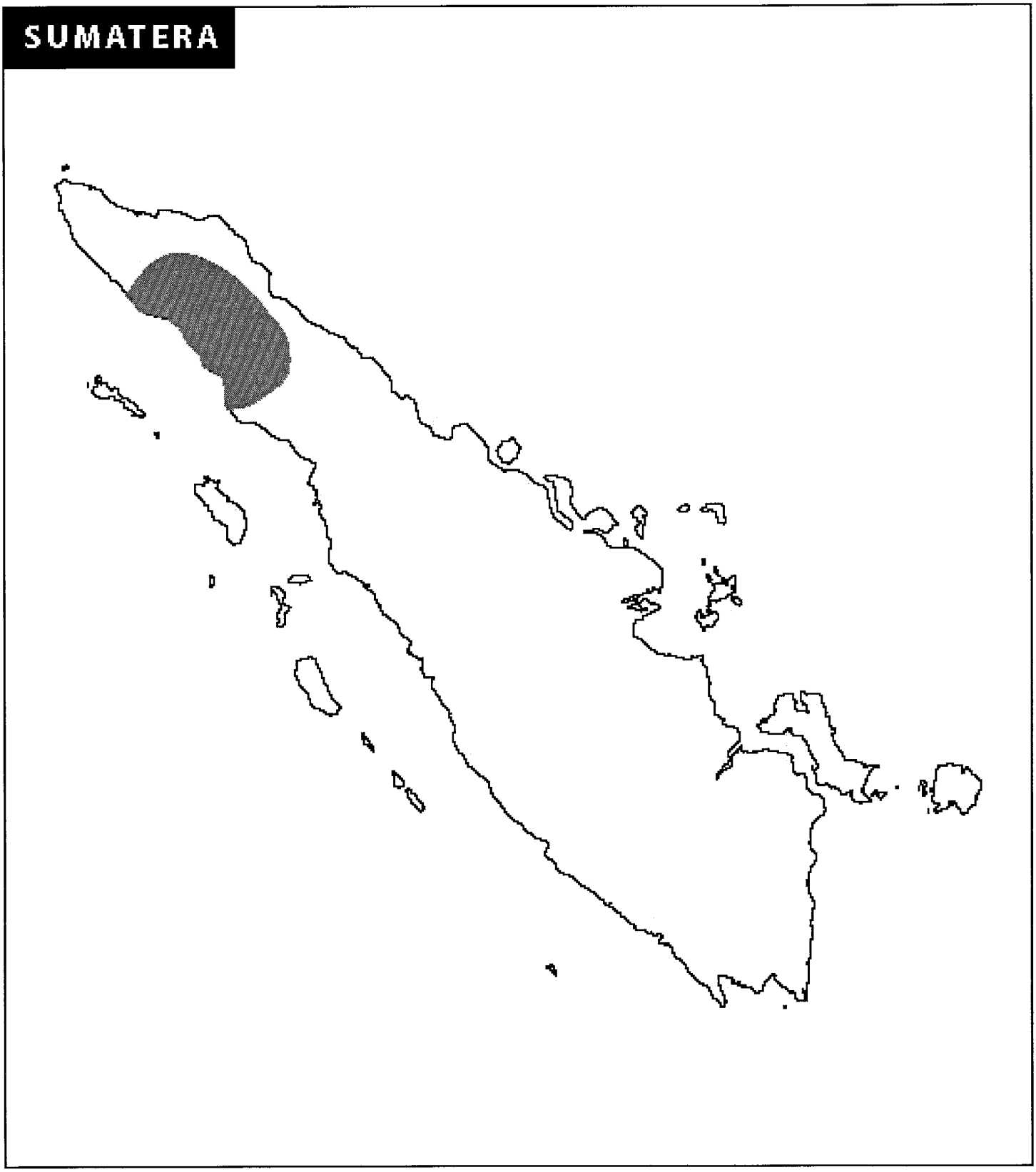
van Schaik, C.P, Azwar, Priyatna, D. : Population Estimates And Habitat Preferences of Orangutan Based on Line Transec of Nest. In R. D. Nadler, B. Galdikas, L. Sheeran and N. Rosen (Eds.) The Neglected Ape, New York Plenum, p. 129-147, 1995.

Wich, S., Utami, S. S. and Singleton, I. : Survey for Orangutans in North Sumatera, Riau and West Sumatera, unpublished report, 2000.

Buij, R. : Population Estimates and Seasonal Movements in the Sumatera Orangutan, unpublish report, 2000.

Orangutan Population and Habitat Viability Assessment Workshop, CBSG, 1993.

22. COMPILERS: Dr. Sri Suci Utami, Dra. Aschta Boestani, MSc., Drs. Tatang Mitra Setia, MS., Dr. Norman Rosen, Drs. Abu Hanifah Lubis, Drs. Christian Nahot Simanjuntak, drh. Sutarman, Ir. Triyo Santoso, MSc., Ir. Wahyu Suyana, Vincent Hartono Gepak, Ir. Wisnu Nurcahyo, Drs. Chairul Saleh, Ir. Kurung, Ir. Tamen Sitorus, MSc



Pongo abelli

Indonesian Primate CAMP

Pongo pygmaeus — Orangutan

Taxonomy

1. Scientific Name / Ambiguities	Authority	Date
Pongo pygmaeus	Linnaeus	1760
Pongo pygmaeus pygmaeus	Linnaeus	1760

FAMILY: Pongidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Orangutan — Indonesia

2. Distribution of the Taxon Indonesia and Malaysia

- HABITAT: Tropical Rain Forests. - NICHE: Swamp-Low Land/up to 1,000 meters. - HISTORICAL DISTRIBUTION: Indo China Peninsula-Malay Peninsula-Sumatera-Java-Borneo. - CURRENT COUNTRIES: Indonesia and Malaysia. - GEOGRAPHIC EXTENT: West, Central, East Kalimantan (Indonesia), Sabah and Serawak (Malaysia). - MIGRATION REGIONS: West Kalimantan (Kapuas Hulu, Bukit Baka/Bukit Raya, Gunung Palung, Sambas, Mempawah, Kapuas Swamp), Central (Tanjung Putting, Lamandau, Kota Waringin Timur, TLG/Kapuas, Barito Selatan/Buntok), East Kalimantan (Kutai Region, Gn. Meratus*, Sebuku-Sembakung, Segah, Berau), Sarawah (Lanjak Entimau, Batang Lupar), Sabah (Ulu Kalumpang, Tabin, Melanhking, Kinabatangan, Trus Madi, Ulu Tungud, Bidu-Bidu Hills, Sugut South-North, Lingkabau, Kinabalu region, Crocker Range, Kulamba, Pin region, Tenegang-Kretam Region, Sepilok).

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: > 20,000 sq km. - OCCURRENCE NOTES: 42,000 km sq.

OCCUPANCY AREA: > 2,001 sq km. - OCCUPANCY NOTES: 5,650 km sq.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: 9.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 21% to 50%.- DURING HOW MANY YEARS? 10. - PREDICTED DECLINE IN HABITAT: 21% to 50%. - PREDICTED DURATION OF DECLINE: 5. - PRIMARY CAUSE OF CHANGE: Habitat Loss.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Forest Fires, Drought, Logging, Plantation and Mining

7. Threats:	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y	Y	3
harvest for food	Y	Y	4
loss of habitat	Y	Y	1
pesticides		Y	9
poisoning	Y	Y	7
pollution	Y	Y	8
road kills	Y	Y	11
shifting cultivation	Y	Y	5
tourism	Y	Y	10
trade for market or medicine	Y	Y	2
trade of parts	Y	Y	6
NATURAL/INDUCED			
climate	Y	Y	6
disease	Y	Y	5
genetic problems	Y	Y	4
hybridization		Y	8
mining	Y	Y	2
nutritional disorders	Y	Y	7
plantation	Y	Y	1
CATASTROPHIC			
drought	Y	Y	2
el nino	Y	Y	3
forest fires	Y	Y	1
landslide	Y	Y	4

forest fires: orangutans trapped in patchy forest who have not future, pests of agriculture
central kalimantan ; 1 million padi files, priority are focusing to set up the study site and conserving low land in first place

8. Trade:

Trade described as local; domestic; commercial; international

Parts in Trade: Live animal
Meat
Skull
Taxidermy models

Effects: decline in population

9. Population (global) 10,000-12,000

Subpopulations	W-1,000/C-3-4,000, E-3,000, M-2-3,000
Mature	< 10,000
Avg age parents	13-17 years

10. Population trends Declining

Past Decline % 21% to 50% Period 10 years

Future decline of 21% to 50% is predicted for a period of 5 years

11. Data Source

DATA SOURCE/QUALITY: census monitoring; indirect information; field study; informal sightings; literature; hearsay & belief -

12. Recent Field Studies

1. Dr. Suzuki, TN. Kutai East Kalimantan, Socioecology

2. Harvard University Grup, TN. Gunung Palung

3. Dr. Birute Galdikas, Tanjung Putting National Park, Central Kalimantan, Behaviour and Ecology

4. The Orangutan Reintroduction Project, East Kalimantan, Health Management, Ex-captive Behaviour, Habitat Assesment, Ecology

5. Dr. Anne Russon, Wanariset Samboja, East Kalimantan, Sosial Behaviour

6. E. Grundman, Wanariset Samboja, East Kalimantan, Nest Behaviour

7. Ir. Adi Susilo, Kutai National Park, Impact of Forest Fires on Orangutan

8. Aschta Nita Boestani, Wanariset Samboja, East Kalimantan, Habitat Assesment

9. Elizabeth Yapp, Gunung Palung National Pak, West Kalimantan, Feeding

10. Robert Ferdinan, Tanjung Putting National Park, Central Kalimantan, Male Ex-rehabilitate and rehabilitate Behaviour

11. Reniastoetie Djojoasmoro, Tanjung Putting National Park, Central Kalimantan, Endo Parasite in Ex-rehabitate, rehabilitate and wild population

12. Yularso, Tanjung Putting National Park, Central Kalimantan, Mother-Off Spring Carying Behaviour

13. Togu Simorangkir, Tanjung Putting National Park, Central Kalimantan, Home.Range

14. Untung, Tanjung Putting National Park, Central Kalimantan, Daily Activity

15. Helga Peters, Wanariset Samboja, East Kalimantan, Ex-captivity Behaviour

16. Gabriela Frederikson, Wanariset Samboja, East Kalimantan, Sosial Activity

17. Duma F. Pangabean, Wanariset Samboja, East Kalimantan, Parasite on Ex-captivity

18. Handayani, Wanariset Samboja, East Kalimantan, Seed Dispersal

19. Yanni, Wanariset Samboja, East Kalimantan, Orangutan Food Trees Distribution

13. Status

IUCN CATEGORY (Global): Endangered

IUCN CATEGORY (National): Protected Animal

CITES: Appendix I. - NATL WILDLIFE LEGISLATION: PP No. 7/1999, UU No. 5/1990, SK. Mentri Kehutanan 10 Juni 1991 No. 301/Kpts-II/1991. - NATL REDBOOK DATA: None. - INTL REDBOOK DATA: Vulnerable. - OTHER LEGISLATION: None. - PROTECTED AREA: W (Bentung Kerihun, Sentarum, Bukit Baka/Raya, Gn. Palung, NR. Gunung Niyut), C (TN. Tanjung Putting, SM. Lamandau), E (TN. Kutai, Gn. Meratus), Serawak. - PROTECTED PLAN: None. - NOTES ON STATUS: Working group recommended that Kalimantan orangutan be catagorized as Critical endangered, due to habitat loss caused by increasing deforestation rate for last 5 years (fire, logging, forest conversion)..

RED LIST CATEGORY: Endangered

IUCN-BASIS: A4, B1a and b

14. Research Recommended

Survey Studies; Genetic Research; life history; limiting factor research; epidemiology; trade; PHVA is recommended.

15. Management Recommendations

habitat management; wild population mangaement; monitoring; public awareness; genome resource; limiting factor; work in local communities; Captive Breeding on Zoo

16. Captive Breeding / Cultivation Recommendations

17. Facilities: Zoo

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	35	17	7	59

COORDINATED SPECIES MANAGEMENT PROGRAM exists in: Stuud Book America and Europe
SEAS Taiwan. SPECIES MANAGEMENT RECOMMENDED FOR RANGE COUNTRIES: Indonesia

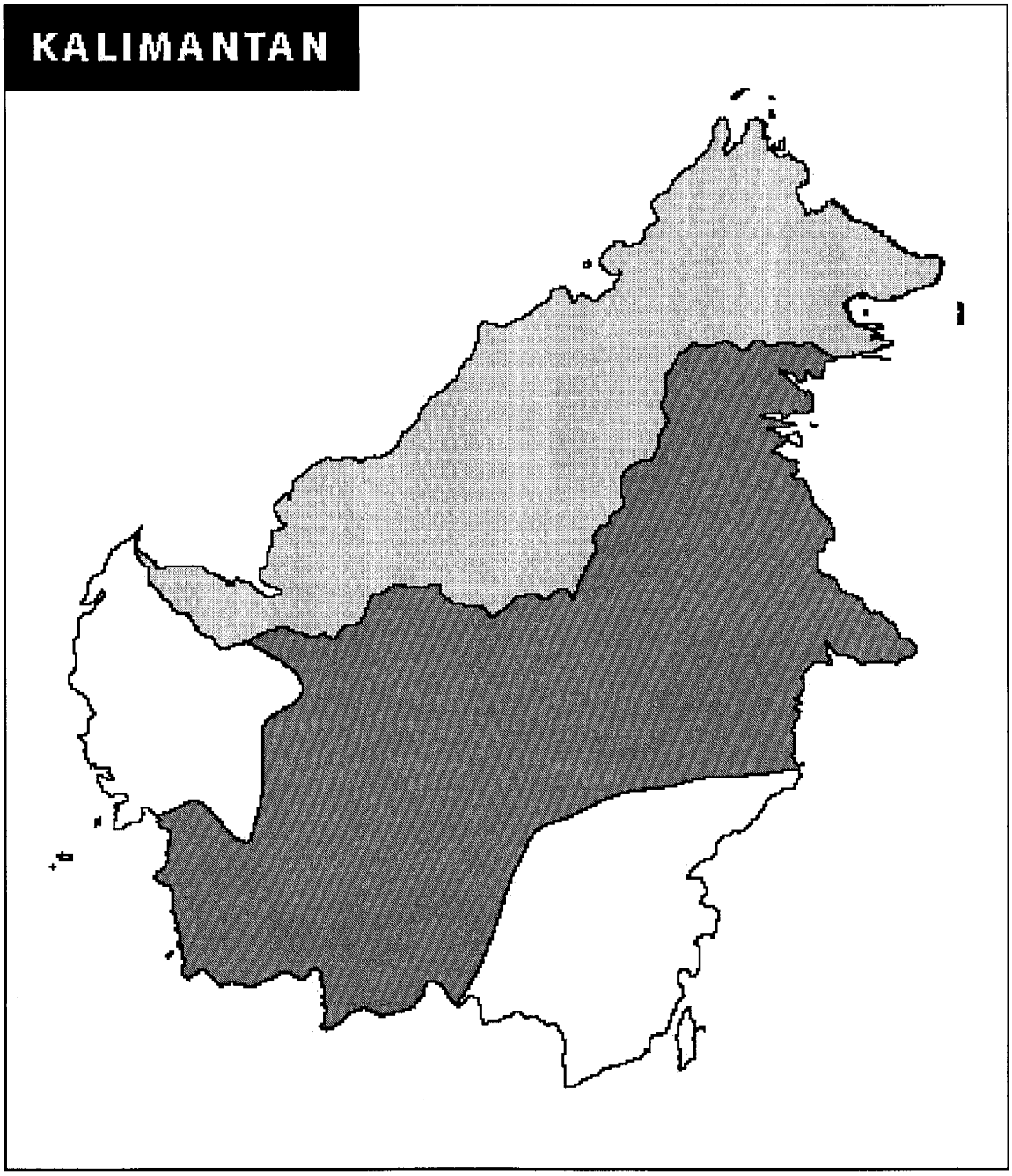
18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: No ex situ program recommended.

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques known for this taxon or similar taxon.

20. GENERAL COMMENTS: captive breeding in zoo
stuud book for indonesian zoo

21. SOURCES: Rijksen, H and Meijaard, E : Our Vanishing Relative, Tropenbos and Kluwer Academic Publishers, 1999.
Yeager, C (Ed.) : WWF Orangutan Action Plan, 1999.
van Schaik, C.P, Azwar, Priyatna, D. : Population Estimates And Habitat Preferences of Orangutan Based on Line Transec of Nest. In R. D. Nadler, B. Galdikas, L. Sheeren and N. Rosen (Eds.) The Neglected Ape, New York Plenum, p. 129-147, 1995.
Russon, A., Erman, A., Dennis, R. : The Population and Distribution of Orangutans (Pongo pygmaeus pygmaeus) in and around the Danau Sentarum Wildlife Reserve, West Kalimantan, Indonesia, unpublish report, 1998.
Boestani, A. N. : Habitat and Population Viability Analysis of Bornean Orangutan (Pongo pygmaeus pygmaeus): A Study Case in East Kalimantan, Master Thesis, Edinburgh University, 1987.

22. COMPILERS: Dr. Sri Suci Utami, Dra. Aschta Boestani, MSc., Drs. Tatang Mitra Setia, MS., Dr. Norman Rosen, Drs. Abu Hanifah Lubis, Drs. Christian Nahot Simanjuntak, drh. Sutarman, Ir. Trio Santoso, MSc., Ir. Wahyu Suyana, Vincent Hartono Gepak, Ir. Wisnu Nurcahyo, Drs. Chairul Saleh, Drs. Kurung, Ir. Tamen Sitorus, MSc.



Pongo pygemaeus

CONSERVATION ASSESSMENT AND MANAGEMENT PLAN FOR THE PRIMATES OF INDONESIA

Taman Safari
15-19 January 2001

FINAL REPORT

July 2001

Section 3

PRESBYTIS

Taxon Data Summaries, Data Sheets and Distribution Maps

Summary Table - Indonesia

Scientific name	*Common name*	*Distribution*	*Area of occupancy*	*Global population*	*Previous IUCN*	*Assigned IUCN*	*IUCN Criteria*	*CITES Append*	*ProtectedArea*
Nasalis larvatus	Bekantan Kahau	Indonesia, Malaysia and Brunei	> 2,001 sq km	15,000	Vulnerable	EN	A2, B1b	Appendix I	
Presbytis comata	Lutung Surili	Indonesia	501-2,000 sq km	500-1000	Critically endangered	EN	A4	Appendix II	Ujung Kulon, Gede Pangrango, Halimun, Salak, Situ Patenggang, Gunung Simpang
Presbytis femoralis	Kokah	Indonesia and Malaysia	Unknown	40,000	Lower risk - least concern	LC		Appendix II	Danau Pulau Besar dan Danau Bawah Sanctuary Reserve
Presbytis fredericae	Rekrekan	Indonesia	501-2,000 sq km	500-1,000	Endangered	EN	A1c	Appendix II	
Presbytis frontata	Lutung jirangan	Indonesia and Malaysia (Serawak and Sabah)	501-2,000 sq km	7,000	Data deficient	EN	B1b	Appendix II	Betung Kerihun NP
Presbytis hosei	Lutung Kalimantan	Indonesia	< 10 sq km	2,000 - 3,000	Lower risk - near threatened	EN	B2ab, C1	Appendix II	Kutai NP
Presbytis melalophos	Lutung Simpai, Chi-cha, Kera Putih	Indonesia	> 2,001 sq km	10,000	Endangered	EN	C1c	Appendix II	TNBBS, TNWK, TNKS, CA Rimbo Panti,
Presbytis potenziani	Lutung Joja	Indonesia (Sipora Island, North and South Pagai Island and Siberut Island, Mentawai)	501-2,000 sq km	25,000	Vulnerable	VU	A1c, 2c	Appendix I	Taitaibatti
Presbytis rubicunda	Lutung Merah	Indonesia and Malaysia	> 2,001 sq km	20,000 - 35,000	Data deficient	VU	C1	Appendix II	Kutai, Tanjung Puting, Gunung Palung, Betung Kerihun, Kayan Mentarang National Park

Scientific name	*Common name*	*Distribution*	*Area of occupancy*	*Global population*	*Previous IUCN*	*Assigned IUCN*	*IUCN Criteria*	*CITES Append*	*ProtectedArea*
Presbytis siamensis natunae	Lutung Kekah	Indonesia	501-2,000 sq km	200 - 600	Endangered	EN	C1	Appendix II	
Presbytis thomasi	Lutung Kedih	Indonesia	> 2,001 sq km	60,000	Lower risk - near threatened	LC		Appendix II	Leuser National Park
Simias concolor siberu	Simakobu	Indonesia	< 10 sq km	<30,000	Endangered	EN	A1cd, 2c	Appendix II	Siberut National Park
Simias concolor sipora	Simakobu	Indonesia	11-500 sq km	500 - 1,000	Endangered	EN	A1cd, 2c	Appendix I	
Trachypithecus cristatus vigilans	Lutung Kelabu	Indonesia	< 10 sq km	800 - 1,000		CR	B1 and 2, C1	Appendix II	
Trachypitheus auratus	Lutung Budeng	Indonesia	> 2,001 sq km	95,000	Lower risk - near threatened	LC		Appendix II	Meru Betiri NP, Baluran NP, Alas Purwo NP, Bali Barat NP, Halimun NP, Ujung Kulon NP, Gede Pangrango NP, Leuweung Sancang NR, Cikepuh NR, Cidaun NR and Natural Reserves

Indonesian Primate Camp

Nasalis larvatus — Bekantan Kahau

Taxonomy

1. Scientific Name / Ambiguities | Authority | Date

Nasalis larvatus | Wurmb | 1871

FAMILY: Cercopithecidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Bekantan, kahau — Indonesian
Prosboscis Monkey — English

2. Distribution of the Taxon Brunei, Indonesia, Malaysia

- HABITAT: Tropical rain forest. - NICHE: Riverine forest and mangrove. - HISTORICAL DISTRIBUTION: Unknown. - CURRENT COUNTRIES: Indonesia, Malaysia and Brunei. - GEOGRAPHIC EXTENT: Borneo, Malaysia and Brunei. - MIGRATION REGIONS: Unknown.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: > 20,000 sq km.

OCCUPANCY AREA: > 2,001 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: Unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 51% to 80%.- DURING HOW MANY YEARS? 20 years. - PREDICTED DURATION OF DECLINE: Unknown. - PRIMARY CAUSE OF CHANGE: Habitat destruction, habitat loss and fragmentation.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - logging, water pollution and minning

7. Threats:

	now	future		pop decline
HUMAN INTERFERENCE				
habitat fragmentation	Y	Y	2nd	Y
harvest for food	Y		4th	Y
harvest/hunting	Y	Y	5th	Y
loss of habitat	Y	Y	1st	Y
pollution	Y	Y	3rd	Y
NATURAL/INDUCED				
disease	Y	Y	7th	Y
Edaphic change		Y	8th	Y
nutritional disorders	Y	Y	9th	Y
CATASTROPHIC				
drought		Y	10th	Y
fire	Y	Y	6th	Y

8. Trade:

Trade described as local;

Parts in Trade: Live animal, Skin

Effects: Unknown

9. Population (global) 15,000

Subpopulations

Mature >2,500

Avg age parents 5

10. Population trends Declining

Past Decline % 51% to 80% Period 20 years

11. Data Source

DATA SOURCE/QUALITY: census monitoring; field study; -

12. Recent Field Studies

Yeager, C.P. Tanjung Putting National Park. 1990. Ecology, Behavior.
Bismark, M. Kutai National Park. 1994. Ecology, Habitat, Feeding ecology and energy requirement

13. Status

IUCN CATEGORY (Global): Vulnerable

IUCN CATEGORY (National): Protected

CITES: Appendix I. - NATL WILDLIFE LEGISLATION: Animal Protected Law PP 7/1999, UU No. 5 1990.

RED LIST CATEGORY: Endangered

IUCN-BASIS: A2, B1b

14. Research Recommended

Survey Studies; - OTHER RESEARCH: Function of the species to the forest biodiversity conservation. PHVA is recommended.

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; captive breeding / cultivation; work in local communities;

16. Captive Breeding / Cultivation Recommendations

species recovery; education; reintroduction; research;

17. Facilities: Taman Safari Indonesia, Ragunan zoo, Bandung zoo, Gembiraloka zoo, Surabaya zoo

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	23	23	5	51

SPECIES MANAGEMENT RECOMMENDED FOR RANGE COUNTRIES: America

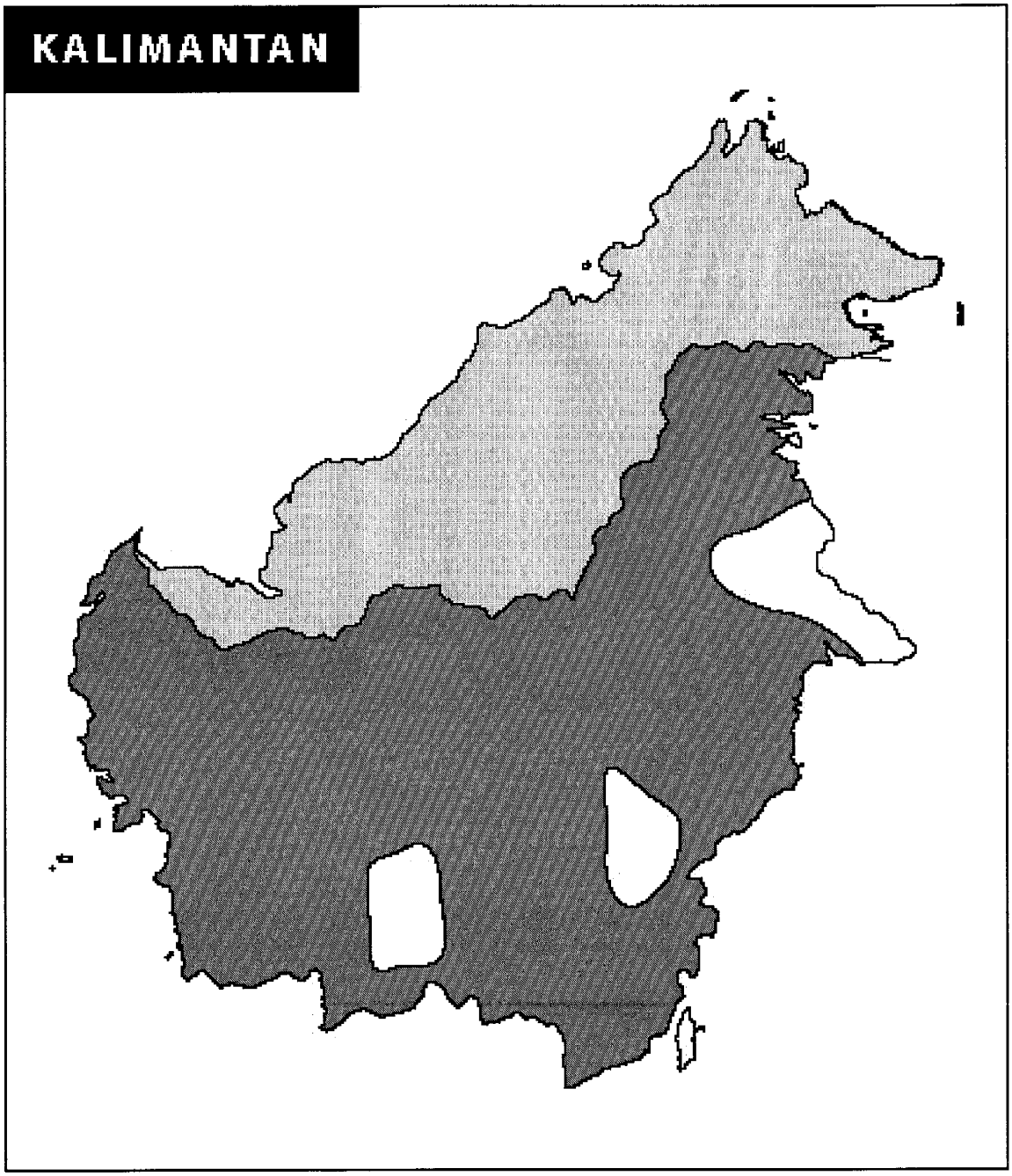
18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: Initiate captive Program.

19. TECHNIQUES TO PROPAGATE THE TAXON: Some techniques known for taxon or similar taxon.

20. GENERAL COMMENTS: Propose all riverine forest where the population living as a protection forest at least 750 metres
- Reduce effect of logging transportation or river transportation around monkey habitat

21. SOURCES: Yeager, C.P. Tanjung Puting National Park. 1990. Ecology, Behavior.
Bismark, M. Kutai National Park. 1994. Ecology, Habitat, Feeding ecology and energy requirement

22. COMPILERS: Kunkun., Bismark., Ibnu., Al Hassan., Edi S., Muniful., Rini R., Yohana., N. Jamil., Taufik., Syarmid.i, Eri M., Yanni P., Sofian., Imran., Yossa. (Working Group Presbytis/Nasalis/Simias on CAMP Workshop for The Primates of Indonesia)



Nasalis larvatus

Indonesian Primate Camp

Presbytis comata — Lutung Surili

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Presbytis comata Linn 1758

Presbytis aygula

FAMILY: Cercopithecidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Grizzled leaf monkey English
Surili Indonesian

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical rain forest. - NICHE: Lowland and hill forest up to 2000 m asl. - HISTORICAL DISTRIBUTION: Indonesia. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: West Java, Banten (Indonesia). - MIGRATION REGIONS: Sukabumi, Cianjur, Bandung, Garut, Lebak, Pandeglang, Bogor.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: > 20,000 sq km.

OCCUPANCY AREA: 501-2,000 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: Unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%.- DURING HOW MANY YEARS? 10 years. - PREDICTED DECLINE IN HABITAT: 21% to 50%. - PREDICTED DURATION OF DECLINE: 20 years. - PRIMARY CAUSE OF CHANGE: Habitat loss and habitat fragmentation.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Illegal cutting

7. Threats:	now	future		pop decline
HUMAN INTERFERENCE				
habitat fragmentation			3rd	
human interference			2nd	
loss of habitat	Y	Y	1st	
NATURAL/INDUCED				
genetic problems		Y	6th	Y
interspecific competition		Y	5th	Y
CATASTROPHIC				
fire	Y		4th	Y

8. Trade:

Trade described as local; domestic;

Parts in Trade: Live animal

Effects: decline

9. Population (global) 500-1000

Subpopulations 2 - 10
Mature < 2,500
Avg age parents 4 - 10

10. Population trends Declining

Past Decline % <20% Period 10 years

Future decline of <20% is predicted for a period of 10 years

11. Data Source

DATA SOURCE/QUALITY: census monitoring; indirect information; field study; informal sightings; literature; -

12. Recent Field Studies

Ruchiyat, Y. Observation of Presbytis aygula. Situ Patenggang West Java. 1991. Social Ecology.

Kool, K. M. Gunung Halimun. 1992. Sensus.

Tobing, I.S.L. 1999. Population and behaviour

Sugardjito et al. 1997. Distribution and density.

13. Status

IUCN CATEGORY (Global): Critically endangered

IUCN CATEGORY (National): Critically endangered

CITES: Appendix II. - NATL WILDLIFE LEGISLATION: SK Menteri Kehutanan, 10 Juni 1991, No. 301/ Kpts -II/1991, PP 7 1999, UU No.5 1990. - PROTECTED AREA: Ujung Kulon, Gede Pangrango, Halimun, Salak, Situ Patenggang, Gunung Simpang.

RED LIST CATEGORY: Endangered

IUCN-BASIS: A4

14. Research Recommended

Survey Studies; Genetic Research; life history; trade; PHVA is recommended.

15. Management Recommendations

habitat management; wild population management; monitoring; sustainable utilization; public awareness; genome resource; limiting factor; captive breeding / cultivation; work in local communities;

16. Captive Breeding / Cultivation Recommendations

species recovery; reintroduction; research;preservation of live genome;

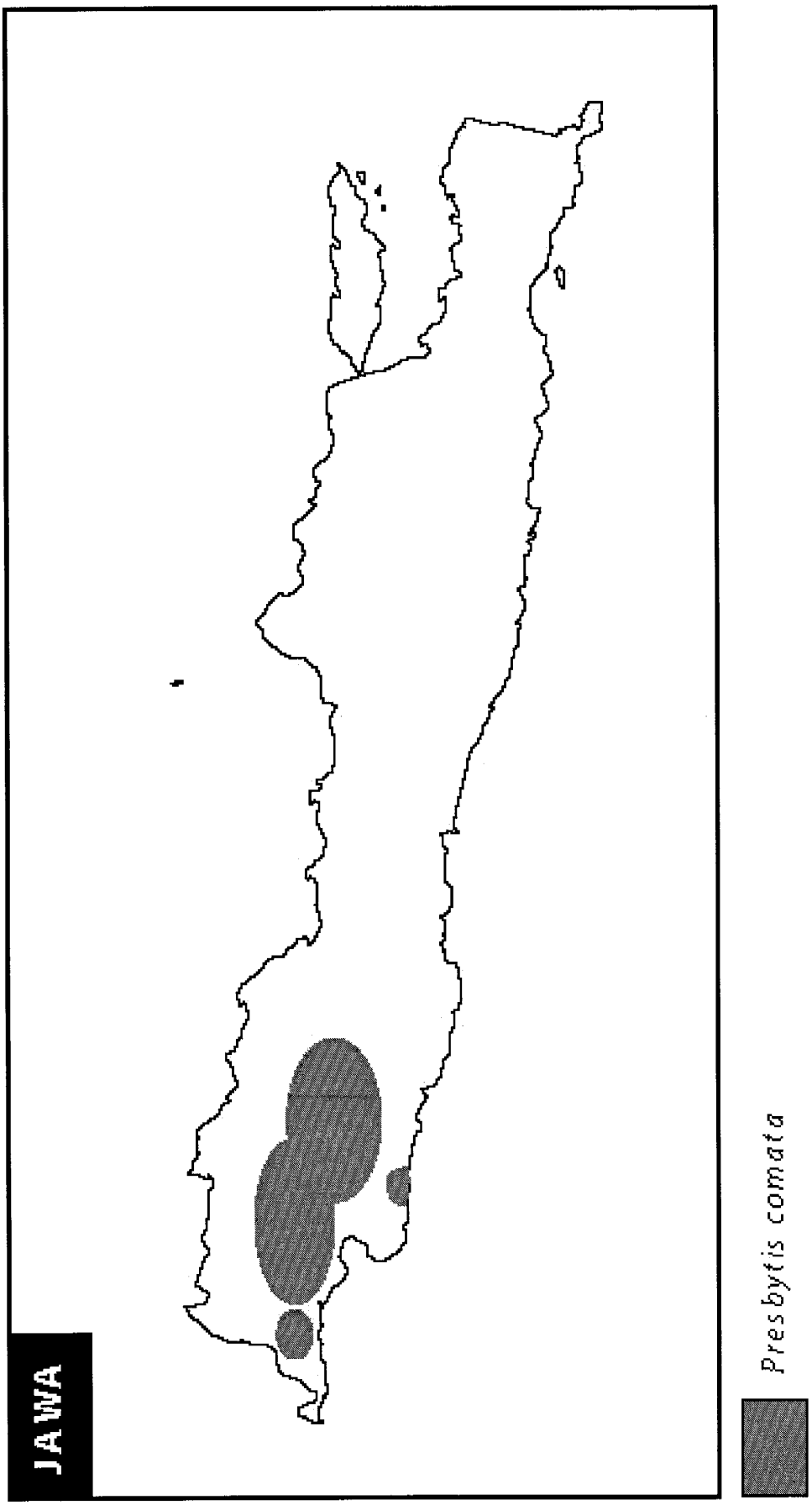
17. Facilities: Taman Safari Indonesia, Bandung Zoo, Ragunan zoo

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	10	3	0	13

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: Ongoing ex situ program intensified or increased.

21. SOURCES: Mantarinza., Supriatna J., & Sudirman. 1992. Distribution, Density and Habitat of Javan Gibbon (H. Moloch) and Silvered leaf monkey (P. federceae) in Gunung Slamet, Central Java. Supriatna, J and Wahyono, E.H. 2000. Buku Panduan Lapangan Primata Indonesia. Yayasan Obor. Jakarta. Nurjaman. 2000. Studi Perilaku Surili (P. Comata, 1758) di CA Telaga Patengan Ciwidey Bandung. Fahutan Universitas Nusa Bangsa. Bogor.

22. COMPILERS: Kunkun., Bismark., Ibnu., Al Hassan., Edi S., Muniful., Rini R., Yohana., N. Jamil., Taufik., Syarmid.i, Eri M., Yanni P., Sofian., Imran., Yossa. (Working Group Presbytis/Nasalis/Simias on CAMP Workshop for The Primates of Indonesia)


JAWA
Presbytis comata

Indonesian Primate Camp

Presbytis femoralis — Kokah

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Presbytis femoralis

FAMILY: Cercopithecidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Banded Leaf Monkey	English
Kokah	Indonesian

2. Distribution of the Taxon Indonesia

- HABITAT: Peat-swamp forest, primary and secondary forest (low-land), poor-manage rubber plantation. - NICHE: Lowland forest. - HISTORICAL DISTRIBUTION: Unknown. - CURRENT COUNTRIES: Indonesia and Malaysia. - GEOGRAPHIC EXTENT: Eastern Sumatera/Riau and Western Kalimantan (Indonesia). - MIGRATION REGIONS: Unknown.

3.-4. Occurrence and Occupancy in _around area study/sighting

OCCURRENCE AREA: > 20,000 sq km.

OCCUPANCY AREA: Unknown.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: Unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 21% to 50%.- DURING HOW MANY YEARS? 10 years. - PREDICTED DURATION OF DECLINE: Unknown. - PRIMARY CAUSE OF CHANGE: Habitat loss and habitat destruction.

CHANGES IN QUALITY: Unknown.NOTES ON QUALITY: - Land use changes

7. Threats:

	now	future		pop decline
HUMAN INTERFERENCE				
habitat fragmentation	Y	Y	4th	Y
habitat loss due to exotic plants		Y	5th	Y
harvest for timber	Y	Y	2nd	Y
harvest/hunting		Y	1st	Y
loss of habitat	Y	Y	3rd	Y
trade for market or medicine		Y	6th	Y

8. Trade:

Parts in Trade:

Effects:

9. Population (global) 40,000

Subpopulations	1000-5000
Mature	> 5000
Avg age parents	4 - 10

10. Population trends Unknown

Past Decline % Period

Future decline of is predicted for a period of

Habitat destruction, Hunting

11. Data Source

DATA SOURCE/QUALITY: field study; informal sightings; -

12. Recent Field Studies

IOE, Zamrud, August 99, Wildlife Inventory

13. Status

IUCN CATEGORY (Global): Lower risk - least concern

CITES: Appendix II. - PROTECTED AREA: Danau Pulau Besar dan Danau Bawah Sanctuary Reserve.

14. Research Recommended

- OTHER RESEARCH: Ecology. PHVA NOTES: Pending

15. Management Recommendations

limiting factor; work in local communities;

16. Captive Breeding / Cultivation Recommendations

species recovery; research;

17. Facilities: Ragunan Zoo

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	1	0	0	1

21. SOURCES: IOE. Wildlife Inventory in Danau Pulau Besar dan Pulau Bawah Sanetuary Reserve
Supriatna, J. and Wahyono EH. 2000. Buku Panduan Lapangan Indonesia. Yayasan Obor. Jakarta

22. COMPILERS: Kunkun., Bismark., Yossa., Ibnu., Al Hassan., Edi S., Muniful., Rini R., Yohana., N. Jamil., Taufik., Syarmid.i, Eri M., Yanni P., Sofian., Imran., (Working Group Presbytis/Nasalis/Simias on CAMP Workshop for The Primates of Indonesia)

Prebytis femoralis percura

Presbytis fredericae — Rekrekan

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Presbytis fredericae

FAMILY: Cercopithecidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Javan Fuscuous Leaf Monkey	English
Rekrekan	Indonesian

2. Distribution of the Taxon

- HABITAT: Tropical rain forest, montane forest. - NICHE: Hill forest 350 - 1500 m asl. - HISTORICAL DISTRIBUTION: Unknown. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Gn. Merbabu, Gn Slamet, Gn Cupu, Gn Sumbing, Gn Sundoro, Gn Merapi (Central Java, Indonesia). - MIGRATION REGIONS: Unknown.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km.

OCCUPANCY AREA: 501-2,000 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: Unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%.- DURING HOW MANY YEARS? Unknown. - PREDICTED DECLINE IN HABITAT: < 20%. - PREDICTED DURATION OF DECLINE: Unknown. - PRIMARY CAUSE OF CHANGE: habitat loss and landuse change.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - illegal cutting/logging

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y	Y	2nd
harvest/hunting	Y	Y	3rd
loss of habitat	Y	Y	1st
trade for market or medicine	Y	Y	6th
CATASTROPHIC			
fire	Y	Y	5th
volcano eruption	Y	Y	4th

8. Trade:

Trade described as local;

Parts in Trade: Live animal

Effects: decreasing number

9. Population (global) 500-1,000

Subpopulations 200-300

Mature < 250

Avg age parents 3-5

10. Population trends Declining

Past Decline % <20% Period 20 years

Future decline of <20% is predicted for a period of 50 years

11. Data Source

DATA SOURCE/QUALITY: field study; informal sightings; literature; -

12. Recent Field Studies

Martarinza, Supriatna, Sudirman. Gn. Slamet-Central of Java. 1992 Distrtibution, density and habitat.

13. Status

IUCN CATEGORY (Global): Endangered

IUCN CATEGORY (National): Protected animal

CITES: Appendix II. - NATL WILDLIFE LEGISLATION: SK Menteri Kehutanan, 10 Juni 1991 No 301/Kpts-II/1991, PP 7 1999, UU No. 5 1990.. - INTL REDBOOK DATA: Endangered.

RED LIST CATEGORY: Endangered

IUCN-BASIS: A1c

14. Research Recommended

Survey Studies; life history;

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; work in local communities;

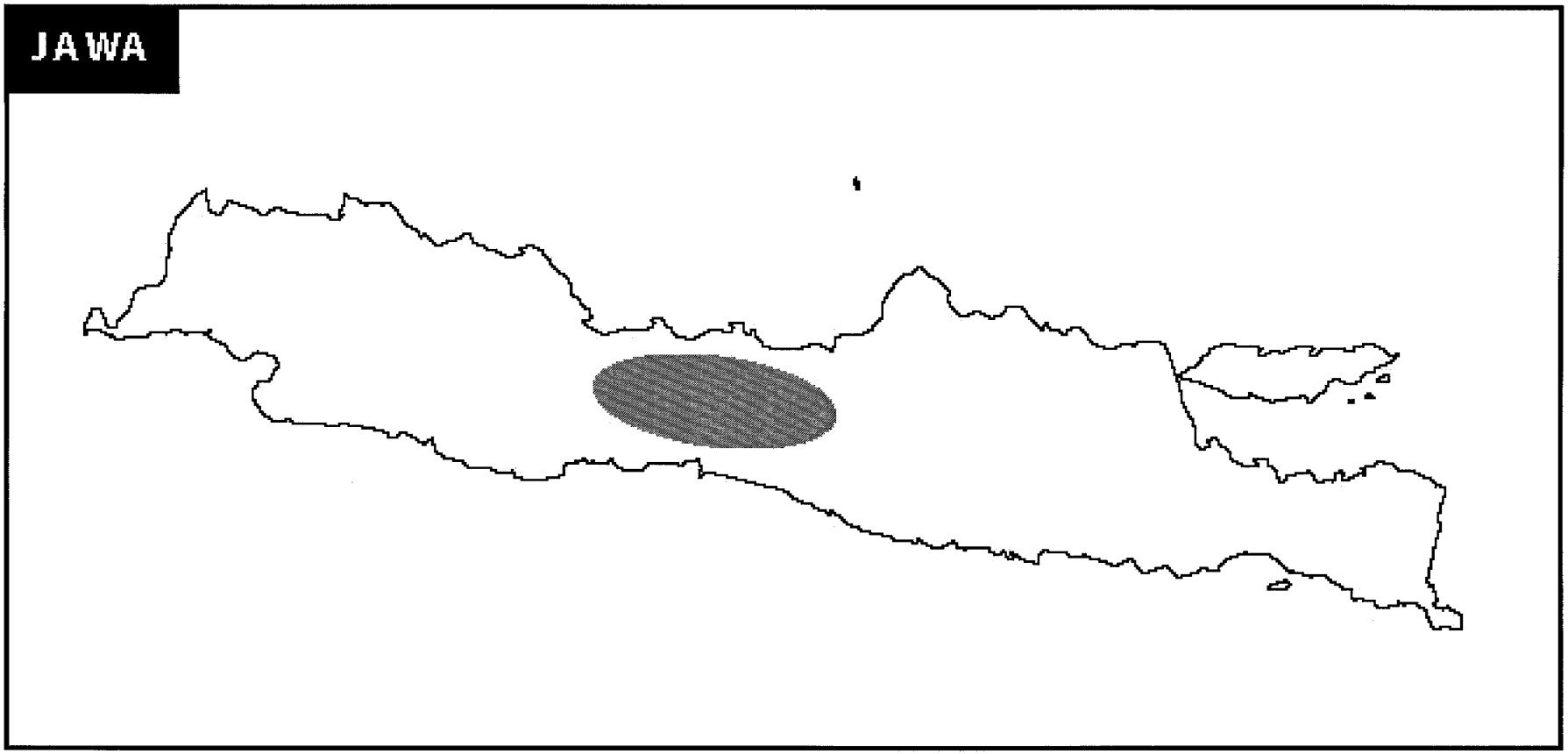
16. Captive Breeding / Cultivation Recommendations

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

21. SOURCES: Martarinza., Supriatna J., & Sudirman. 1992. Distribution, density and habitat of Javan Gibbon (H. moloch) and Silvered leaf monkey (P. federicae in Gn Slamet, Central of Java). Supriatna, J and Wahyono EH, 2000 : Buku Panduan Lapangan Primata Indonesia. Yayasan Obor, jakarta.

22. COMPILERS: Kunkun., Bismark., Ibnu., Al Hassan., Edi S., Muniful., Rini R., Yohana., N. Jamil., Taufik., Syarmid.i, Eri M., Yanni P., Sofian., Imran., Yossa. (Working Group Presbytis/Nasalis/Simias on CAMP Workshop for The Primates of Indonesia)



Presbytis fredericae

Indonesian Primate Camp

Presbytis frontata — Lutung jirangan

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Presbytis frontata

FAMILY: Cercopithecidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Buhis	Dayak (Indonesian)
Lutung Dahi Putih	Indonesian
Lutung jirangan	Indonesian
White Fronted Leaf Monkey	English

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical rain forest (Dipterocarpaceae forest). - NICHE: Lowland up to 350 m asl. - HISTORICAL DISTRIBUTION: Indonesia and Malaysia east. - CURRENT COUNTRIES: Indonesia and Malaysia (Serawak and Sabah). - GEOGRAPHIC EXTENT: Borneo. - MIGRATION REGIONS: Unknown.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 5,001 - 20,000 sq km.

OCCUPANCY AREA: 501-2,000 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: Unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 21% to 50%.- DURING HOW MANY YEARS? Unknown. - PREDICTED DURATION OF DECLINE: Unknown. - PRIMARY CAUSE OF CHANGE: Hunting and habitat loss.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Logging and fire

7. Threats:	**now**	**future**		**pop decline**
HUMAN INTERFERENCE				
habitat fragmentation	Y		2nd	Y
habitat loss due to exotic plants	Y		5th	Y
harvest for food	Y		3th	Y
harvest for timber	Y		4th	Y
loss of habitat	Y		1st	Y
NATURAL/INDUCED				
interspecific competition		Y	7th	Y
CATASTROPHIC				
fire	Y	Y	6th	

8. Trade:

Trade described as local;

Parts in Trade: Live animal
Organ

Effects: Unknown

9. Population (global) 7,000

Subpopulations 500-1000
Mature >2,500
Avg age parents 4 - 10

10. Population trends Declining

Past Decline % 21% to 50% Period 10 years

11. Data Source

DATA SOURCE/QUALITY: census monitoring; indirect information; field study; literature; hearsay & belief -

12. Recent Field Studies

Gurmaya, at al. Betung Kerihun NP. 1997. ITTO Borneo Int'l Expedition.
Sofian Iskandar dan Irvan. Hulu Sungai Barito. 1989. Primates Population Survey (Project Barito Hulu)

13. Status

IUCN CATEGORY (Global): Data deficient

IUCN CATEGORY (National): Protected

CITES: Appendix II. - NATL WILDLIFE LEGISLATION: SK Mentri Kehutanan, 10 Juni 1991, No. 301/ Kpts-II/1991, PP 7 1999, UU No. 5 1990. - PROTECTED AREA: Betung Kerihun NP.

RED LIST CATEGORY: Endangered

IUCN-BASIS: B1b

14. Research Recommended

Survey Studies; life history; trade; PHVA is recommended.

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; work in local communities;

16. Captive Breeding / Cultivation Recommendations

species recovery; reintroduction; research;

17. Facilities:

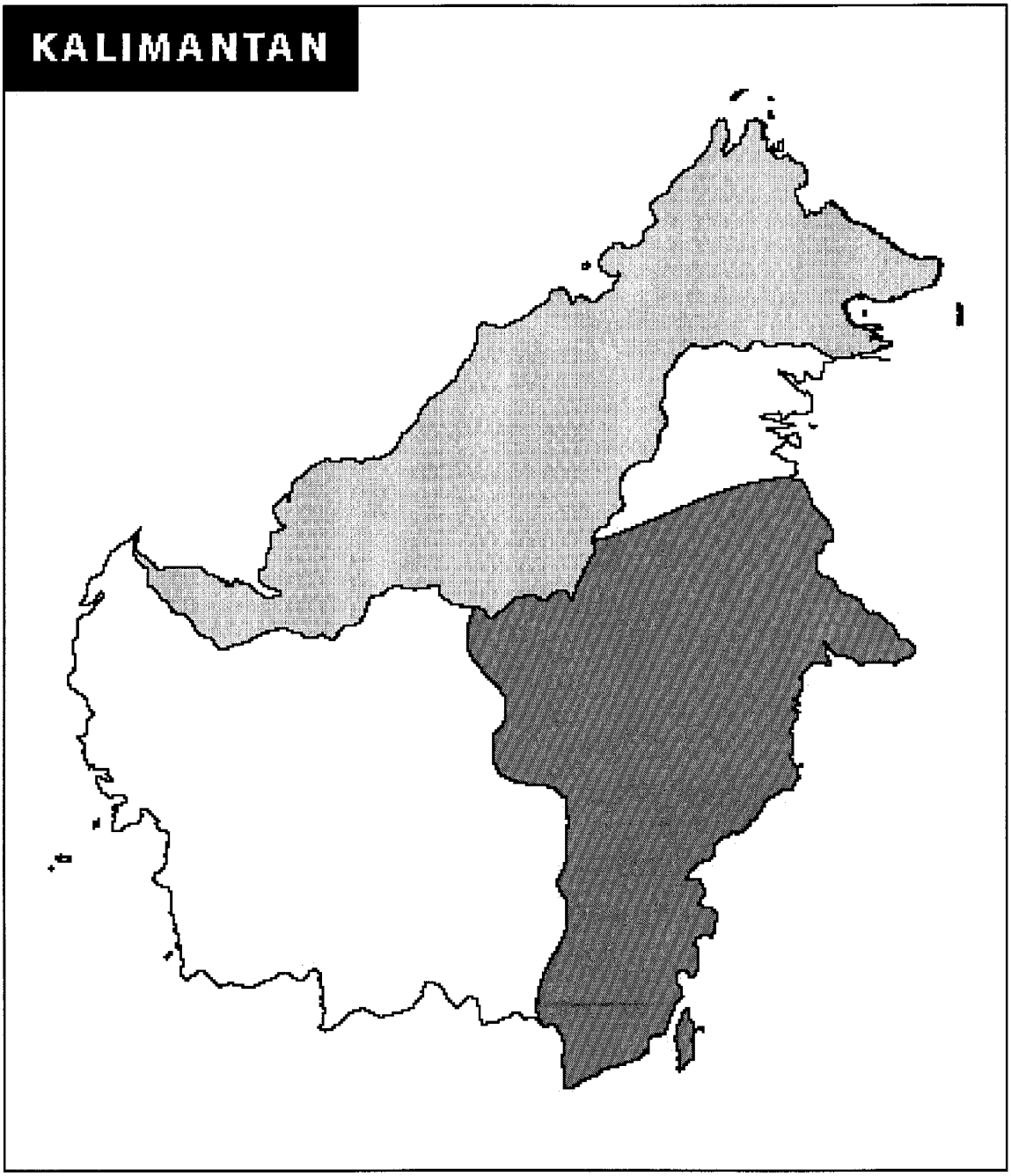
Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: Initiate ex situ program in 3 years.

20. GENERAL COMMENTS: We need to plan a population census and distribution in many kind of forest types (Outside of The conservation area)

21. SOURCES: Supriatna, J & Wahyono, E.H. 2000. Buku Panduan Lapangan Primata Indonesia. Yayasan Obor . Jakarta.

22. COMPILERS: Kunkun., Bismark., Yossa., Ibnu., Al Hassan., Edi S., Muniful., Rini R., Yohana., N. Jamil., Taufik., Syarmid.i, Eri M., Yanni P., Sofian., Imran., (Working Group Presbytis/Nasalis/Simias on CAMP Workshop for The Primates of Indonesia)



Presbytis frontata

Indonesian Primate Camp

Presbytis hosei **Lutung Kalimantan**

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Presbytis hosei

Presbytis aygula

FAMILY: Cercopithecidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Hoss Leaf Monkey	English
Lutung Banggat	Indonesian
Lutung Kalimantan	Indonesian

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical rain forest. - NICHE: Lowland forest up to mountain forest, 1500 m asl. - HISTORICAL DISTRIBUTION: Unknown. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Kalimantan (Indonesia). - MIGRATION REGIONS: Unknown.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: < 100 sq km.

OCCUPANCY AREA: < 10 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: Unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 21% to 50%.- DURING HOW MANY YEARS? 10 years. - PREDICTED DURATION OF DECLINE: Unknown. - PRIMARY CAUSE OF CHANGE: Habitat loss.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Plantation, logging, mining and fire

7. Threats:

	now	future		pop decline
HUMAN INTERFERENCE				
harvest for food	Y		3rd	Y
harvest for timber	Y	Y	1st	Y
loss of habitat	Y	Y	2nd	Y

8. Trade:

Parts in Trade: Live animal
Organ

Effects: Unknown

9. Population (global) 2,000 - 3,000

Subpopulations unknown
Mature < 2,500
Avg age parents 4 - 10

10. Population trends Declining

Past Decline % 51% to 80% Period 10 years

11. Data Source

DATA SOURCE/QUALITY: literature; -

12. Recent Field Studies

A.H. Mitchell. Northeast Kalimantan. 1994. Ecology

13. Status

IUCN CATEGORY (Global): Lower risk - near threatened

IUCN CATEGORY (National): Protected

CITES: Appendix II. - NATL WILDLIFE LEGISLATION: SK Menteri Kehutanan, 10 Juni 1991 NO. 301/Kpts-II/1991, PP 7 1999, UU No. 5 1990. - PROTECTED AREA: Kutai NP.

RED LIST CATEGORY: Endangered

IUCN-BASIS: B2ab, C1

14. Research Recommended

Survey Studies;

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness;

16. Captive Breeding / Cultivation Recommendations

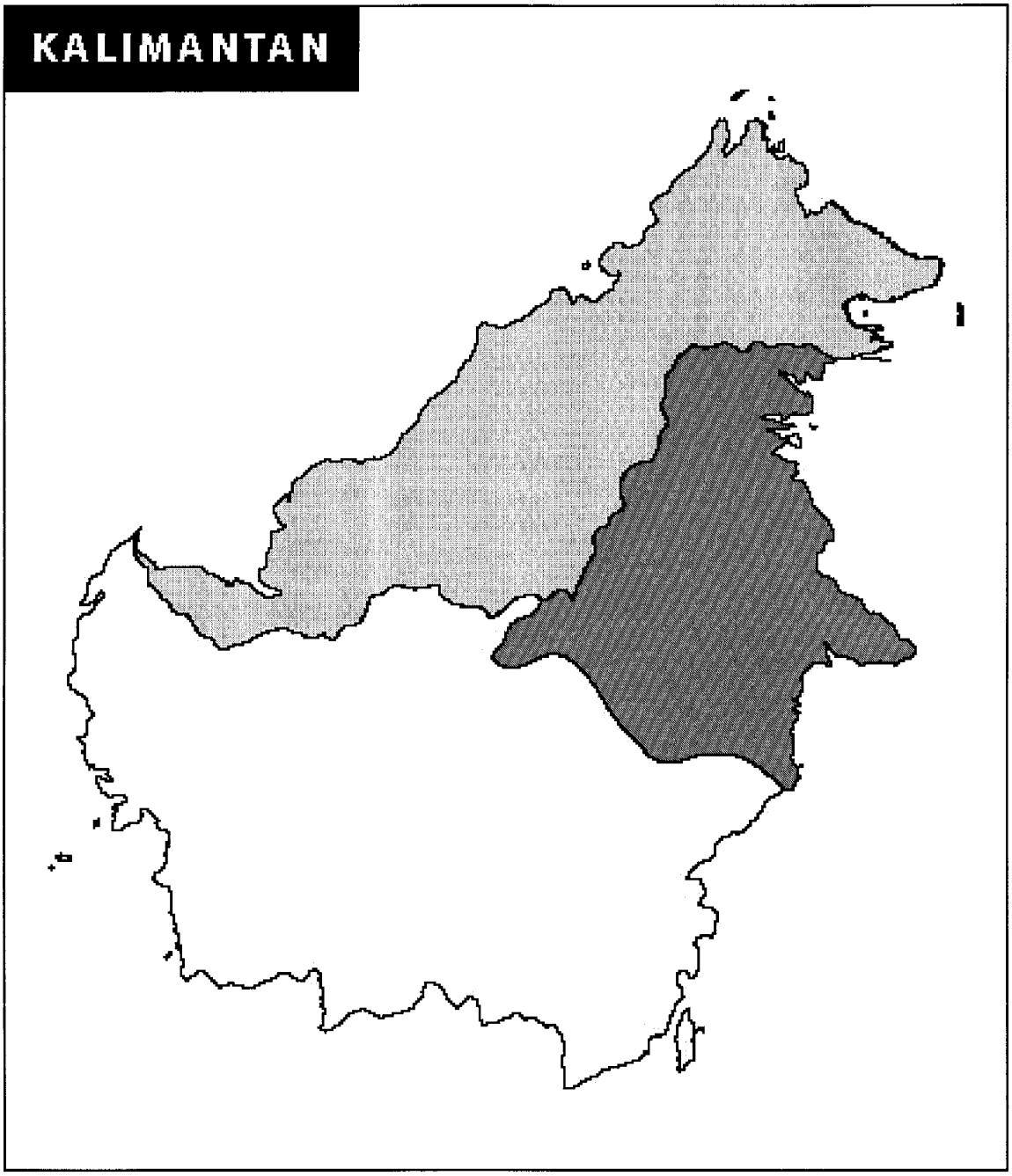
17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

21. SOURCES: Mitchell, A.H. 1994. Ecology of Hose's Langur, Presbytis hosei, in Mixed Logged and Unlogged Dipterocap Forest of Northeast Borneo. A Desertation Presented toThe Faculty of The Graduate Scholl of Yale University in Candidasy for TheDegree of Doctor of Phillosophy.

22. COMPILERS: Kunkun., Bismark., Yossa., Ibnu., Al Hassan., Edi S., Muniful., Rini R., Yohana., N. Jamil., Taufik., Syarmid.i, Eri M., Yanni P., Sofian., Imran., (Working Group Presbytis/Nasalis/Simias on CAMP Workshop for The Primates of Indonesia)



Presbytis hosei

Indonesian Primate Camp

Presbytis melalophos — **Lutung Simpai, Chi-cha, Kera Putih**

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Presbytis melalophos

FAMILY: Cercopithecidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Lutung Simpai, Chi-cha, Kera Putih	Indonesian
Mitred Leaf Monkey	English

2. Distribution of the Taxon

- HABITAT: Tropical rain forest. - NICHE: Lowland forest up to 2500 m asl (based on empirical data). - HISTORICAL DISTRIBUTION: Unknown. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Sumatera. - MIGRATION REGIONS: Unknown.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: > 20,000 sq km.

OCCUPANCY AREA: > 2,001 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: Unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 51% to 80%.- DURING HOW MANY YEARS? Unknown. - PREDICTED DURATION OF DECLINE: Unknown. - PRIMARY CAUSE OF CHANGE: Habitat loss and forest conversion.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Plantation, transmigration, fire, logging

7. Threats:	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation		2nd	
harvest for food		3rd	
loss of habitat		1st	Y

8. Trade:

Trade described as local;

Parts in Trade: Live animal, Meat

Effects: unknown

9. Population (global) 10,000

Subpopulations unknown
Mature > 2,500
Avg age parents 4 - 10

10. Population trends Declining

Past Decline % 21% to 50% Period

11. Data Source

DATA SOURCE/QUALITY: indirect information; field study; informal sightings; -

12. Recent Field Studies

Yosa Istiadi, Sumatera, 1997. Difference of body color

13. Status

IUCN CATEGORY (Global): Endangered

IUCN CATEGORY (National): Protected

CITES: Appendix II. - PROTECTED AREA: TNBBS, TNWK, TNKS, CA Rimbo Panti,.

RED LIST CATEGORY: Endangered

IUCN-BASIS: C1c

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; - OTHER RESEARCH: Conservation action. PHVA is recommended.

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; work in local communities;

16. Captive Breeding / Cultivation Recommendations

17. Facilities: KB Ragunan, KB Surabaya, Taman Safari Indonesia, Ragunan zoo, Bukit Tinggi zoo, Sriwijaya zoo, Medan zoo

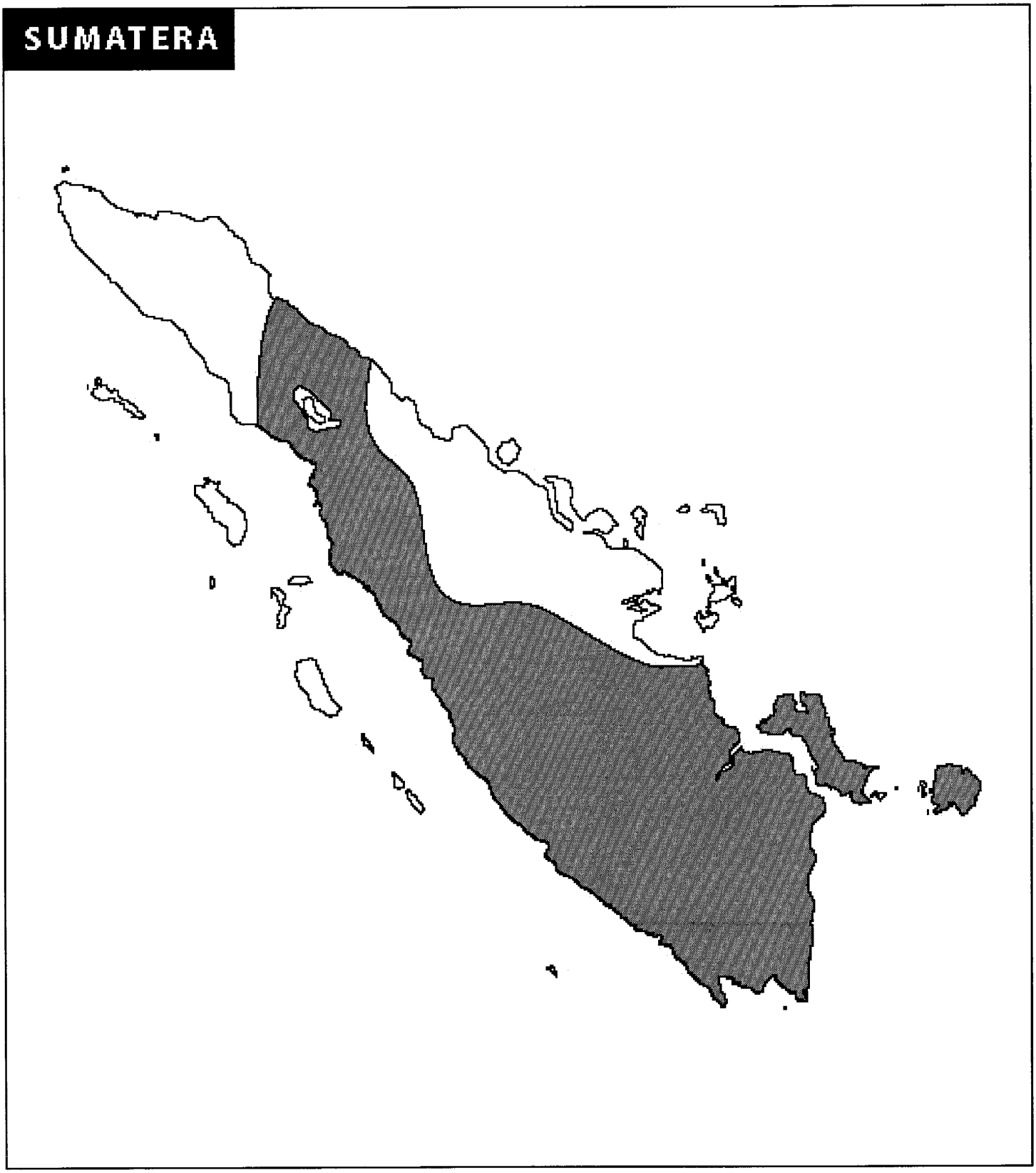
Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	16	23	4	43

20. GENERAL COMMENTS: Confuse in taxonomy, uncertain of management authority in protected and non protected areas

21. SOURCES: Istiadi. Y. 1997. Perbandingan Variasi Warna Tubuh dan Karakteristik Populasi Simpai (Presbytis melalophos) Pada Beberapa Sub-Jenis Berdasarkan Perbedaan Geografis Satwa Sumatera. Program Studi Biologi Program Pasca Sarjana Universitas Indonesia.

Supriatna. J. dan E. Hendras W. 2000. Panduan Lapangan Primata Indonesia. Yayasan Obor. Jakarta.

22. COMPILERS: Kunkun., Bismark., Yossa., Ibnu., Al Hassan., Edi S., Muniful., Rini R., Yohana., N. Jamil., Taufik., Syarmid.i, Eri M., Yanni P., Sofian., Imran., (Working Group Presbytis/Nasalis/Simias on CAMP Workshop for The Primates of Indonesia)



Presbytis melalophos

Indonesian Primate Camp

Presbytis potenziani — Lutung Joja

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Presbytis potenziani

FAMILY: Cercopithecidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Ataipei-pei
Joja
Mentawai Leaf monkey
Indonesian (Pagai)
Indonesian (Siberut Lan
English

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical rain forest. - NICHE: Lowland forest, swamp forest and hill forest. - HISTORICAL DISTRIBUTION: Endemic at Mentawai (Indonesia). - CURRENT COUNTRIES: Indonesia (Sipora Island, North and South Pagai Island and Siberut Island, Mentawai). - GEOGRAPHIC EXTENT: Mentawai Islands, West Sumatera (Indonesia). - MIGRATION REGIONS: Unknown.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 5,001 - 20,000 sq km.

OCCUPANCY AREA: 501-2,000 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: Unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 21% to 50%.- DURING HOW MANY YEARS? 30 years. - PREDICTED DURATION OF DECLINE: Unknown. - PRIMARY CAUSE OF CHANGE: Habitat fragmentation, habitat loss.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Plantation, logging, fire

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y	2nd	Y
harvest for food	Y	3rd	Y
harvest/hunting	Y	4th	Y
loss of habitat	Y	1st	Y
NATURAL/INDUCED			
genetic problems	Y	6th	Y
CATASTROPHIC			
fire	Y	5th	Y

8. Trade:

Parts in Trade: unknown

Effects: unknown

9. Population (global) 25,000

Subpopulations unknown
Mature < 10,000
Avg age parents 4 - 10

10. Population trends Declining

Past Decline % 21% to 50% Period 30 years

11. Data Source

DATA SOURCE/QUALITY: census monitoring; indirect information; field study; informal sightings; literature; hearsay & belief -

12. Recent Field Studies

Suryadi, S., Istiadi Y., Supardiyono. Siberut NP. 1998. Ecology , hunting and ecoturism

13. Status

IUCN CATEGORY (Global): Vulnerable

IUCN CATEGORY (National): Protected

CITES: Appendix I. - NATL WILDLIFE LEGISLATION: SK Menteri Kehutanan, 10 Juni 1991, No 301/Kpts-II/1991, PP 7 1999, UU No. 5 1990. - PROTECTED AREA: Taitaibatti.

RED LIST CATEGORY: Vulnerable

IUCN-BASIS: A1c, 2c

14. Research Recommended

Survey Studies; Genetic Research;

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; work in local communities;

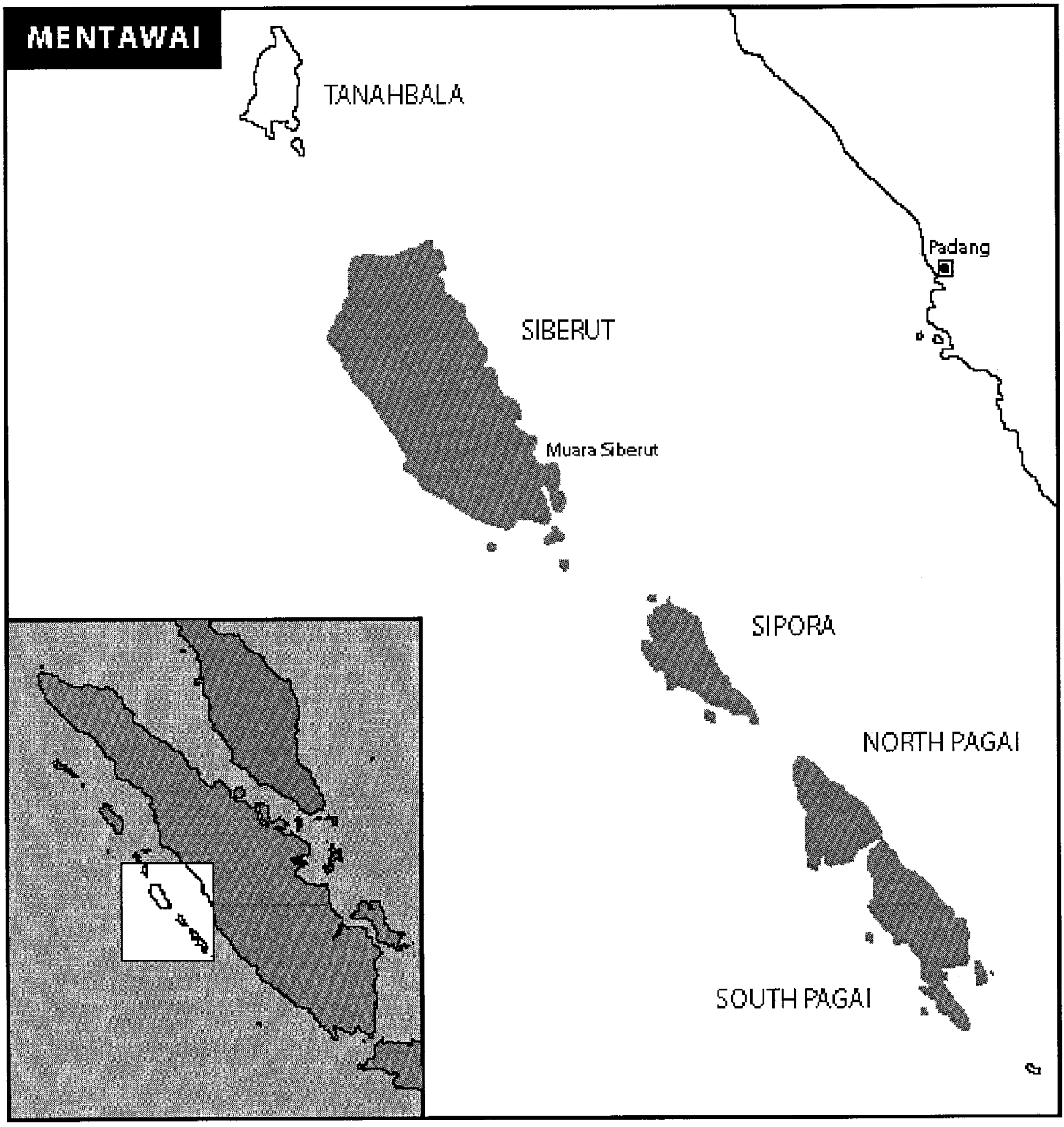
16. Captive Breeding / Cultivation Recommendations

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

21. SOURCES: Suryadi. S., Y. Istiadi & Supardiyo. Penelitian Sumber Daya Hayati Studi Ekologi Primata yang Berhubungan dengan Ekotorisme dan Perburuan Tradisional di Taman Nasional Siberut. Proyek Pengembangan Konservasi Alam Terpadu Bekerjasama dengan PSBK-UI.
Imelda, R.I. 1999. Primata Endemik di Kepulauan Mentawai. Biologica. Vol. 1. No 2. Pp. 15-18
WWF. 1980. Penyelamatan Siberut : Sebuah Rancangan Induk, Konservasi. Bogor.
Mitchell,.A.H. 1982. Siberut Nature Conservation Area, West Sumatra, Management Plant 1983-1988. WWF
Supriatna, J. and Wahyono EH, 2000 : Buku Panduan Lapangan Primata Indonesia. Yayasan Obor. Jakarta
Tobing, I.S.L. 1984. Habitat

22. COMPILERS: Kunkun., Bismark., Yossa., Ibnu., Al Hassan., Edi S., Muniful., Rini R., Yohana., N. Jamil., Taufik., Syarmid.i, Eri M., Yanni P., Sofian., Imran., (Working Group Presbytis/Nasalis/Simias on CAMP Workshop for The Primates of Indonesia)



Presbytis potenziani

Indonesian Primate Camp

Presbytis rubicunda — Lutung Merah

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Presbytis rubicunda

FAMILY: Cercopithecidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Jalur merah	Dayak
Kalahi, Pampulan	Banjar
Kalasi	Ngaju
Kelasi	Gunung Palung
Kera Merah	Karimata islands
Khallasie	Kayan
Lotong merah	Malaysian
Lutung Merah	Indonesian
Maroon Leaf Monkey	English

2. Distribution of the Taxon Indonesia
Malaysia, east

- HABITAT: Tropical rain forest. - NICHE: Lowland until hill forest, 2200 m asl. - HISTORICAL DISTRIBUTION: Unknown. - CURRENT COUNTRIES: Indonesia and Malaysia. - GEOGRAPHIC EXTENT: Kalimantan and Karimata Islands (Indonesia), Sarawak and Sabah (Malaysia). - MIGRATION REGIONS: Unknown.

3.-4. Occurrence and Occupancy in _around area study/sighting

OCCURRENCE AREA: > 20,000 sq km.

OCCUPANCY AREA: > 2,001 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: Unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 21% to 50%.- DURING HOW MANY YEARS? Unknown. - PREDICTED DURATION OF DECLINE: Unknown. - PRIMARY CAUSE OF CHANGE: Logging.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Logging, fire, convertion of landuse

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
harvest for timber	Y	Y	2nd
harvest/hunting	Y	Y	3rd
loss of habitat		Y	1st
trade for market or medicine	Y		4th
CATASTROPHIC			
fire	Y	Y	5th

8. Trade:

Trade described as local;

Parts in Trade: Live animal
Meat

Effects: Unknown

9. Population (global) 20,000 - 35,000

Subpopulations unknown
Mature > 10,000
Avg age parents 12

10. Population trends Declining

Past Decline % 21% to 50% Period

11. Data Source

DATA SOURCE/QUALITY: informal sightings; literature; hearsay & belief -

12. Recent Field Studies

Lakim. Taman Bukit Tawau. 1998. Niche Separation
Supriatna, J. Manulang, B.O. E. Soekara Tanjung Putting Nature Reserve. 1984. Diets and Densities
Supriatna, J. Tanjung Putting Nature Reserve. 1979. Activity and Locomotion.
Supriatna, J. Manulang, B.O. E. Soekara. Tanjung Putting Nature reserve. Group Compotition, Homerange and Diets

13. Status

IUCN CATEGORY (Global): Data deficient

IUCN CATEGORY (National): Protected

CITES: Appendix II. - NATL WILDLIFE LEGISLATION: SK Menteri Kehutanan, 10 Juni 1991 No. 301/Kpts-II/1991, PP 7 1999, UU No. 5 1990. - PROTECTED AREA: Kutai, Tanjung Puting, Gunung Palung, Betung Kerihun, Kayan Mentarang National Park.

RED LIST CATEGORY: Vulnerable

IUCN-BASIS: C1

14. Research Recommended

Survey Studies;

15. Management Recommendations

habitat management; wild population management; public awareness; work in local communities;

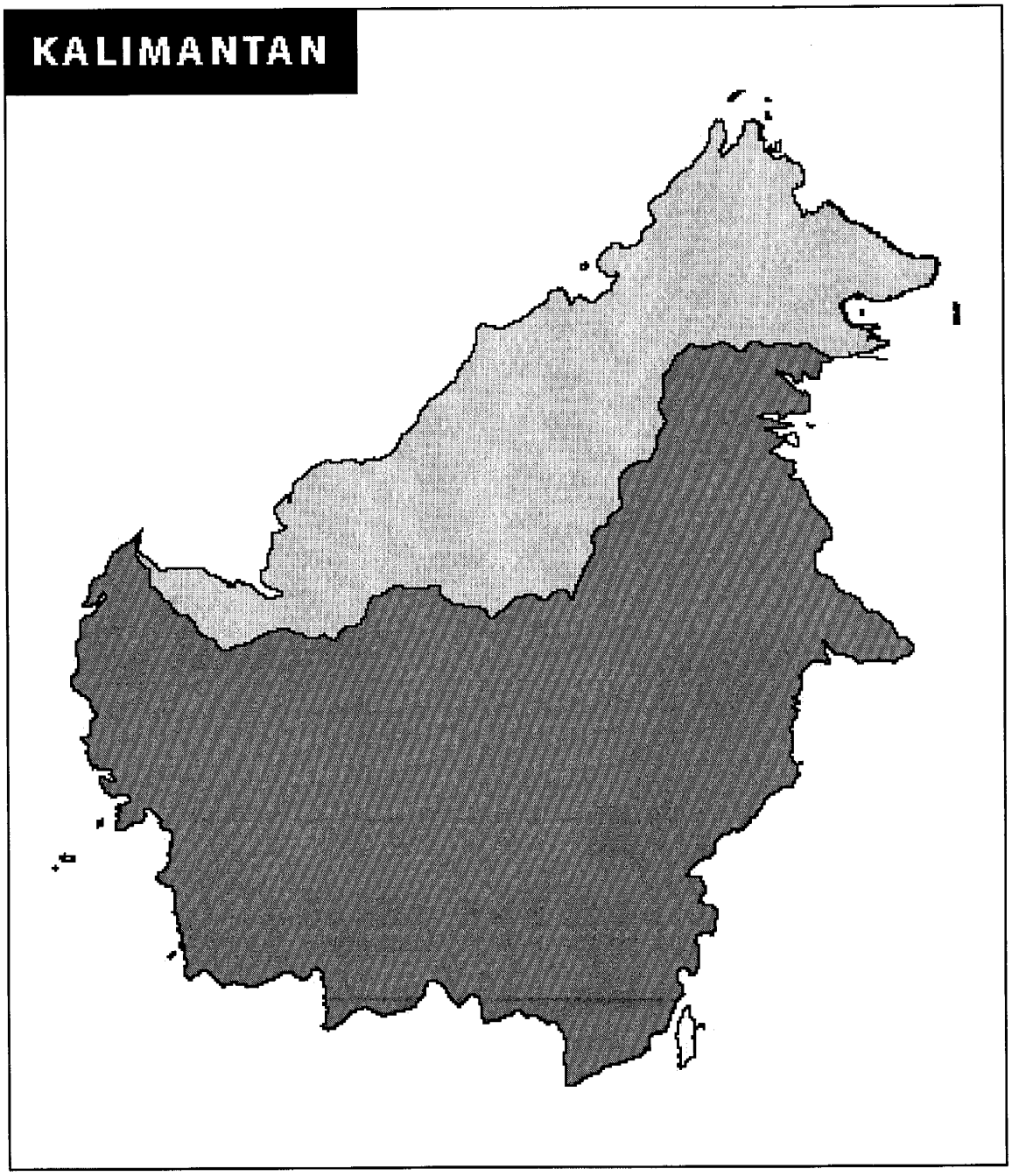
16. Captive Breeding / Cultivation Recommendations

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

21. SOURCES: Lakim. Taman Bukit Tawau. 1998. Niche Separation
Supriatna, J. Manulang, B.O. E. Soekara Tanjung Putting Nature Reserve. 1984. Diets and Densities
Supriatna, J. Tanjung Putting Nature Reserve. 1979. Activity and Locomotion.
Supriatna, J. Manulang, B.O. E. Soekara. Tanjung Putting Nature Reserve. Group Composition, Homerange and Diets

22. COMPILERS: Kunkun., Bismark., Yossa., Ibnu., Al Hassan., Edi S., Monipul., Rini R., Yohana., N. Jamil., Taufik., Syarmid.i, Eri M., Yanni P., Sofian., Imron., (Working Group Presbytis/Nasalis/Simias on CAMP Workshop for The Primates of Indonesia)



Presbytis rubicunda

Indonesian Primate Camp

Presbytis siamensis natunae — Lutung Kekah

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Presbytis siamensis natunae

Pygathrix siamensis natunae

Semnopithecus natunae

FAMILY: Cercopithecidae LEVEL: Subspecies
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Banded Leaf Monkey	English
Lutung Kekah	Indonesian

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical primary forest, secondary forest, rubber plantation. - NICHE: 0 - 650 m asl. - HISTORICAL DISTRIBUTION: Unknown. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Natuna Island, Riau (Indonesia). - MIGRATION REGIONS: Unknown.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km.

OCCUPANCY AREA: 501-2,000 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: Unknown.

6. Habitat status:

Contiguous.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 51% to 80%.- DURING HOW MANY YEARS? 10 years. - PREDICTED DECLINE IN HABITAT: 21% to 50%. - PREDICTED DURATION OF DECLINE: 10 years. - PRIMARY CAUSE OF CHANGE: Habitat loss due to land use conversion and logging.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Logging

7. Threats:

	now	future		pop decline
HUMAN INTERFERENCE				
habitat fragmentation		Y	2nd	Y
loss of habitat	Y		1st	Y
loss of habitat due to logging		Y	4th	Y
trade for market or medicine	Y		3rd	Y
CATASTROPHIC				
fire	Y		5th	Y

8. Trade:

Trade described as local;

Parts in Trade: Live animal

Effects: unknown

9. Population (global) 200 - 600

Subpopulations unknown
Mature < 500
Avg age parents 4 - 10

10. Population trends Declining

Past Decline % 21% to 50% Period

11. Data Source

DATA SOURCE/QUALITY: census monitoring; field study; literature; -

12. Recent Field Studies

Indrawan, M. and Rangkuti, F. Natuna besar. 11 - 25 September 2000. General primate and landscape conservation survey.

13. Status

IUCN CATEGORY (Global): Endangered

IUCN CATEGORY (National): Protected

CITES: Appendix II.

RED LIST CATEGORY: Endangered

IUCN-BASIS: C1

14. Research Recommended

Survey Studies; Genetic Research; trade;

15. Management Recommendations

habitat management; monitoring; public awareness; limiting factor; work in local communities;

16. Captive Breeding / Cultivation Recommendations

research;preservation of live genome;

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: Initiate ex situ program in 3 years.

21. SOURCES: Indrawan, M. and Rangkuti, F. Development Biodiversity and Conservation the Status of Banded Leaf mongkey in Natuna Besar 1 : Synopsis and result of recent surveys (to be submitted to Oryx)
Indrawan, M. and Rangkuti, F. Recent Field Observations of Banded Leaf Mongkey in Natuna Besar (to be submitted to Treubia)

22. COMPILERS: Kunkun., Bismark., Yossa., Ibnu., Al Hassan., Edi S., Muniful., Rini R., Yohana., N. Jamil., Taufik., Syarmid.i, Eri M., Yanni P., Sofian., Imran., (Working Group Presbytis/Nasalis/Simias on CAMP Workshop for The Primates of Indonesia)

Presbytis siamensis natunae

Presbytis thomasi **Lutung Kedih**

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Presbytis thomasi

FAMILY: Cercopithecidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Kedih	Indonesian
Kek-kia	Indonesian
Rungka	Indonesian
Thoma's Leaf Monkey	English

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical rain forest. - NICHE: Lowland and hill forest, up to 2200 m in Leuser National Park, edge of rubber plantation. - HISTORICAL DISTRIBUTION: Indonesia. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Sumatera (Indonesia): Aceh and North Sumatera, Southern most border Wampu river. - MIGRATION REGIONS: Unknown.

3.-4. Occurrence and Occupancy in .around area study/sighting

OCCURRENCE AREA: 5,001 - 20,000 sq km.

OCCUPANCY AREA: > 2,001 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: Unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%.- DURING HOW MANY YEARS? 20 years. - PREDICTED DECLINE IN HABITAT: 21% to 50%. - PREDICTED DURATION OF DECLINE: 10 years. - PRIMARY CAUSE OF CHANGE: Habitat loss.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Logging, plantation

7. Threats:	**now**	**future**	**pop decline**
HUMAN INTERFERENCE			
habitat fragmentation	Y	2nd	Y
harvest for timber	Y	3rd	Y
harvest/hunting	Y	4th	Y
loss of habitat	Y	1st	Y
NATURAL/INDUCED			
genetic problems	Y	5th	Y

8. Trade:

Parts in Trade: Live animal

Effects: unknown

9. Population (global) 60,000

Subpopulations +/- 5000
Mature >2,500
Avg age parents 4 - 10

10. Population trends Declining

Past Decline % <20% Period

Future decline of <20% is predicted for a period of 10 years

11. Data Source

DATA SOURCE/QUALITY: census monitoring; indirect information; field study; informal sightings; literature; -

12. Recent Field Studies

Jacqueline. Sumatera. 1992. Feeding Behavior
Sterck, E. Sumatera. 1994. Ecology.
Steinbeck, R. Sumatera. 1994. Ecology

13. Status

IUCN CATEGORY (Global): Lower risk - near threatened

IUCN CATEGORY (National): Protected

CITES: Appendix II. - NATL WILDLIFE LEGISLATION: SK Menteri Kehutanan, 10 Juni 1991, No 301/Kpts-II/1991, PP 7 1999, UU No. 5 1990. - PROTECTED AREA: Leuser National Park.

14. Research Recommended

Survey Studies; life history;

15. Management Recommendations

wild population management; public awareness;

16. Captive Breeding / Cultivation Recommendations

17. Facilities:

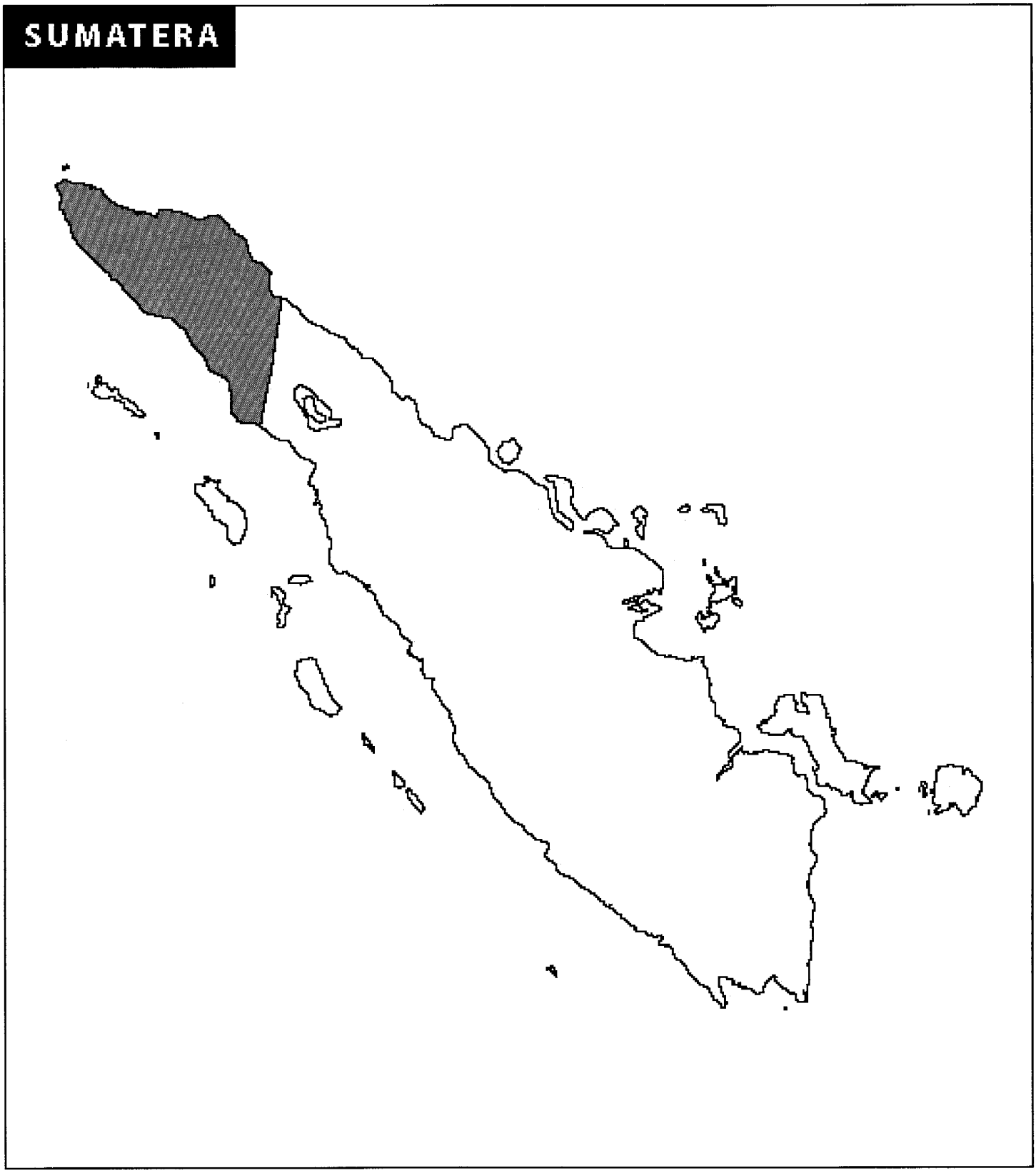
Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

20. GENERAL COMMENTS: Conservation management :
1. Basic information on population entirely recent geographical distribution and conservasional constraints, should be conducted soon
2. Habitat and population inventory of the wild thomasi at out side reserve areas

21. SOURCES: Jacqueline. Sumatera. 1992. Feeding Behavior

Mackinnon. 1987
Supriatna, J. and Wahyono EH. 2000. Buku Panduan Lapangan Indonesia. Yayasan Obor. Jakarta

22. COMPILERS: Kunkun., Bismark., Yossa., Ibnu., Al Hassan., Edi S., Muniful., Rini R., Yohana., N. Jamil., Taufik., Syarmid.i, Eri M., Yanni P., Sofian., Imran., (Working Group Presbytis/Nasalis/Simias on CAMP Workshop for The Primates of Indonesia)



Presbytis thomasi

Indonesian Primate Camp

Simias concolor siberu — Simakobu

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Simias concolor siberu

Nasalis concolor

FAMILY: Cercopithecidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Masepsep	Siberut (Indonesia)
Simabulau	Siberut (Indonesia)
Simakobu	Siberut (Indonesia)

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical rain forest. - NICHE: Lowland, swampy forest and hill forest. - HISTORICAL DISTRIBUTION: Indonesia. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: North and South Pagai Island, Siberut Island (West Sumatera Indonesia). - MIGRATION REGIONS: Unknown.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: < 100 sq km.

OCCUPANCY AREA: < 10 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: Unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 21% to 50%.- DURING HOW MANY YEARS? Unknown. - PREDICTED DECLINE IN HABITAT: 21% to 50%. - PREDICTED DURATION OF DECLINE: Unknown. - PRIMARY CAUSE OF CHANGE: Habitat loss.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Plantation, Logging

7. Threats:

	now	future		pop decline
HUMAN INTERFERENCE				
habitat fragmentation	Y		5th	Y
habitat loss due to exotic plants		Y	6th	Y
harvest for food	Y	Y	2nd	Y
harvest for timber	Y		3rd	Y
harvest/hunting	Y	Y	1st	Y
loss of habitat	Y	Y	4th	Y
trade for market or medicine	Y	Y	7th	Y
NATURAL/INDUCED				
interspecific competition	Y		8th	Y

Hunting, Logging

8. Trade:

Trade described as domestic;

Parts in Trade: Live animal

Effects: unknown

9. Population (global) <30,000

Subpopulations 200-500
Mature < 2,500
Avg age parents 4 - 10

10. Population trends Declining

Past Decline % 21% to 50% Period 10 years

11. Data Source

DATA SOURCE/QUALITY: census monitoring; indirect information; field study; informal sightings; literature; -

12. Recent Field Studies

Suryadi, dkk, Siberut, 1998, Ecology

13. Status

IUCN CATEGORY (Global): Endangered

CITES: Appendix II. - NATL WILDLIFE LEGISLATION: SK. Menteri Kehutanan, 10 Juni 1991, No 301/Kpts-II/1991, PP 7 1999, UU No. 5 1990. - PROTECTED AREA: Siberut National Park.

RED LIST CATEGORY: Endangered

IUCN-BASIS: A1cd, 2c

14. Research Recommended

Survey Studies; Genetic Research; life history; PHVA is recommended.

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; work in local communities;

16. Captive Breeding / Cultivation Recommendations

species recovery;

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

21. SOURCES: WWF. 1980. Penyelamatan Siberut: Sebuah Rancangan Induk, Konservasi. Bogor
Mitchell.A.H. 1982. Siberut Nature Conservation Area, West Sumatera, Management Plan 1983 - 1988. WWF.
Suryadi. S., Y. Istiadi & Supardoyo. Penelitian Sumberdaya Hayati Studi Ekologi Primata yang Berhubungan dengan Ekoturisme dan Perburuan Tradisional di Taman Nasional Siberut. Proyek Pengembangan Konservasi Alam.
Supriatata, J. Wahyono EH, 2000. Buku Panduan Lapangan. Primata Indonesia, Yayasan Obor, Jakarta

22. COMPILERS: Kunkun., Bismark., Ibnu., Al Hassan., Edi S., Muniful., Rini R., Yohana., N. Jamil., Taufik., Syarmid.i, Eri M., Yanni P., Sofian., Imran., Yossa. (Working Group Presbytis/Nasalis/Simias on CAMP Workshop for The Primates of Indonesia)

Indonesian Primate Camp

Simias concolor sipora — Simakobu

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Simias concolor sipora

Nasalis concolor

FAMILY: Cercopithecidae LEVEL: Subspecies
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Simakobu	Indonesian
Sipora Island pig-tailed snub-nosed monkey	English

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical rain forest. - NICHE: 500 m asl low land forest. - HISTORICAL DISTRIBUTION: Indonesia. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Sipora island, West Sumatera (Indonesia). - MIGRATION REGIONS: Unknown.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km.

OCCUPANCY AREA: 11-500 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: Unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%.- DURING HOW MANY YEARS? 5 years. - PREDICTED DURATION OF DECLINE: Unknown. - PRIMARY CAUSE OF CHANGE: Hunting, habitat loss.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Logging

7. Threats:	**now**	**future**		**pop decline**
HUMAN INTERFERENCE				
habitat fragmentation	**Y**	**Y**	3rd	**Y**
harvest for food	**Y**	**Y**	4th	**Y**
harvest for timber	**Y**	**Y**	1st	**Y**
loss of habitat	**Y**	**Y**	2nd	**Y**

8. Trade:

Trade described as domestic;

Parts in Trade: Live animal

Effects:

9. Population (global) 500 - 1,000

Subpopulations 50-100

Mature < 250

Avg age parents 4 - 10

10. Population trends Declining

Past Decline % <20% Period 10 years

11. Data Source

DATA SOURCE/QUALITY: census monitoring; field study; literature; -

12. Recent Field Studies

Sasimar Sangchantr. Sipora Island. 1998-1999. Behavior and genetic

13. Status

IUCN CATEGORY (Global): Endangered

IUCN CATEGORY (National): Protected

CITES: Appendix I.

RED LIST CATEGORY: Endangered

IUCN-BASIS: A1cd, 2c

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history;

15. Management Recommendations

habitat management; wild population management; monitoring;

16. Captive Breeding / Cultivation Recommendations

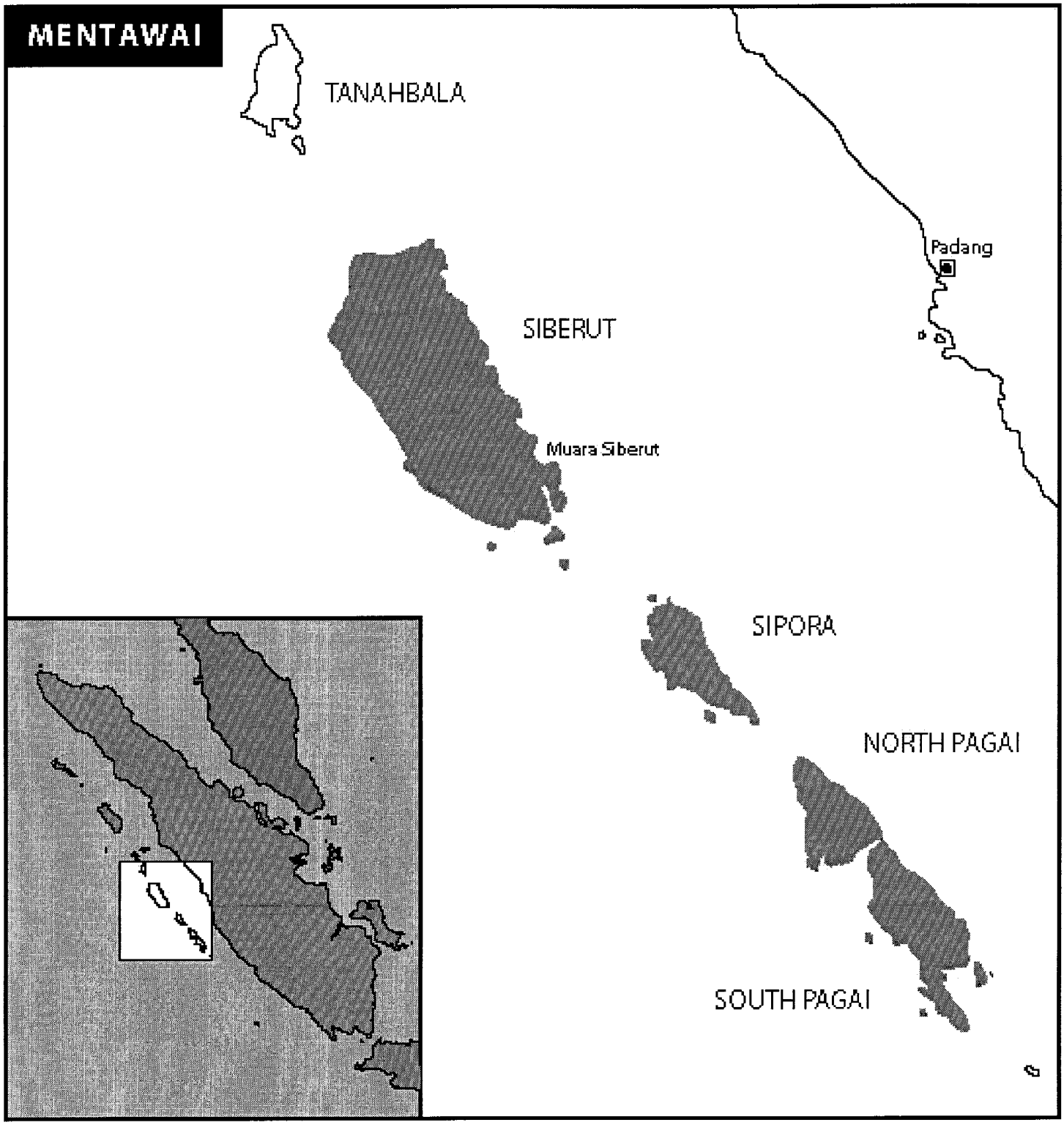
species recovery;

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

21. SOURCES: WWF. 1980. Saving Siberut
Suryadi S., Istiadi Y., Supardiyono. 1998. Studi Ekologi Primata Siberut dan Ekoturisme.

22. COMPILERS: Kunkun., Bismark., Ibnu., Al Hassan., Edi S., Muniful., Rini R., Yohana., N. Jamil., Taufik., Syarmid.i, Eri M., Yanni P., Sofian., Imran., Yossa. (Working Group Presbytis/Nasalis/Simias on CAMP Workshop for The Primates of Indonesia)



Simias concolor

Indonesian Primate Camp

Trachypithecus cristatus vigilans — Lutung Kelabu

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Trachypithecus cristatus vigilans

Presbytis cristata

FAMILY: Cercopithecidae LEVEL: Subspecies
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Lutung Kelabu	Indonesian
Silver Lutung	English

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical rain forest. - NICHE: Lowland and Hill. - HISTORICAL DISTRIBUTION: Indonesia. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Natuna Island, Riau (Indonesia). - MIGRATION REGIONS: Unknown.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: < 100 sq km.

OCCUPANCY AREA: < 10 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: Unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 21% to 50%.- DURING HOW MANY YEARS? 5 years. - PREDICTED DURATION OF DECLINE: Unknown.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Plantation, Logging

7. Threats:

	now	future		pop decline
HUMAN INTERFERENCE				
habitat fragmentation	Y	Y	3rd	Y
harvest for timber	Y	Y	2nd	Y
loss of habitat	Y	Y	1st	Y
NATURAL/INDUCED				
disease	Y	Y	5th	Y
genetic problems	Y	Y	4th	Y
nutritional disorders	Y	Y	6th	Y

8. Trade:

Trade described as local;

Parts in Trade: Live animal

Effects: unknown

9. Population (global) 800 - 1,000

Subpopulations unknown
Mature > 250
Avg age parents 8 - 12

10. Population trends Declining

Past Decline % 21% to 50% Period 5 years

Future decline of 21% to 50% is predicted for a period of 5 years

11. Data Source

DATA SOURCE/QUALITY: indirect information; informal sightings; -

12. Recent Field Studies

13. Status

CITES: Appendix II.

RED LIST CATEGORY: Critically endangered

IUCN-BASIS: B1 and 2, C1

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; limiting factor research;

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; genome resource; limiting factor; captive breeding / cultivation;

16. Captive Breeding / Cultivation Recommendations

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

21. SOURCES: Supriatna, J & Wahyono, E.H. 2000. Buku Panduan Lapangan Primata Indonesia. Yayasan Obor . Jakarta.

22. COMPILERS: Kunkun., Bismark., Yossa., Ibnu., Al Hassan., Edi S., Muniful., Rini R., Yohana., N. Jamil., Taufik., Syarmid.i, Eri M., Yanni P., Sofian., Imran., (Working Group Presbytis/Nasalis/Simias on CAMP Workshop for The Primates of Indonesia)

Trachypithecus cristatus vigilans

Indonesian Primate Camp

Trachypitheus auratus — Lutung Budeng

Taxonomy

1. Scientific Name / Ambiguities	Authority	Date
Trachypitheus auratus	E. Geoffroy	1812

FAMILY: Cercopithecidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Javan ebony langur	English
Lutung budeng	Jawa (Indonesian)
Petu, Hirengan	Bali (Indonesian)

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical rain forest. - NICHE: Lowland and hill forest. - HISTORICAL DISTRIBUTION: Indonesia. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Jawa, Bali, Lombok (Indonesia). - MIGRATION REGIONS: Unknown.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: > 20,000 sq km.

OCCUPANCY AREA: > 2,001 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: Unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%.- DURING HOW MANY YEARS? 5 years. - PREDICTED DECLINE IN HABITAT: < 20%. - PREDICTED DURATION OF DECLINE: 5 years. - PRIMARY CAUSE OF CHANGE: Habitat loss.

CHANGES IN QUALITY: Unknown.NOTES ON QUALITY: -

7. Threats:	now	future	pop decline
HUMAN INTERFERENCE			
human interference	Y	Y	2nd
loss of habitat	Y	Y	1st

8. Trade:

Trade described as local;

Parts in Trade: Live animal, Meat

Effects: unknown

9. Population (global) 95,000

Subpopulations	unknown
Mature	> 2,500
Avg age parents	4 - 10

10. Population trends Declining

Past Decline % <20% Period 10 years

Future decline of <20% is predicted for a period of 10 years

11. Data Source

DATA SOURCE/QUALITY: census monitoring; indirect information; field study; museum record; informal sightings; literature; hearsay & belief -

12. Recent Field Studies

Brandon Jones, jawa, Bali, lombok. 1995. Taxonomy
Maryanto dkk, Jawa, Bali, Lombok, 1997, Taxonomy
Ibnu Maryanto, Jawa, Bali, Lombok, 2000, Taxonomy
Tobing, I. 1999. Population and behavior

13. Status

IUCN CATEGORY (Global): Lower risk - near threatened

IUCN CATEGORY (National): Protected

CITES: Appendix II. - NATL REDBOOK DATA: January 2001. - INTL REDBOOK DATA: IUCN. - OTHER LEGISLATION: Ministry of Forestry. - PROTECTED AREA: Meru Betiri NP, Baluran NP, Alas Purwo NP, Bali Barat NP, Halimun NP, Ujung Kulon NP, Gede Pangrango NP, Leuweung Sancang NR, Cikepuh NR, Cidaun NR and Natural Reserves.

14. Research Recommended

Survey Studies; Genetic Research; epidemiology; PHVA is recommended.PHVA NOTES: Research and Management

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; genome resource; captive breeding / cultivation;

16. Captive Breeding / Cultivation Recommendations

education; research;

17. Facilities: Taman Safari Indonesia, Ragunan zoo, Bandung zoo,

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	7	7	2	16

19. TECHNIQUES TO PROPAGATE THE TAXON: Some techniques known for taxon or similar taxon.

21. SOURCES: Maryanto. 2000. Variation in the Ebony and Silver Leaf Monkey (Trachipithecus auratus and T. cristata) Dermatoglypic Markers. Journal Primatologi Indonesia, Vol. 3, No. 1 P1-P8.

Maryanto et al. 1997. Mophological Variation in the Ebony and Silver Leaf Monkey (Trachipithecus auratus and T. cristata) from Southeast Asia. Treubia, Vol. 31, 113-131.

Supriatna, J and Wahyono Eh., 2000: Buku Panduan Lapangan. Primata Indonesia, Yayasan Obor.

Tobing, I. 1999. Pengaruh Kualitas Habitat

Sugardjito, J., H. Sinaga and M. Yoneda. 1997. Survey of distribution and density of primates in Gunung Halimun National Park, West Java.

22. COMPILERS: Kunkun., Bismark., Yossa., Ibnu., Al Hassan., Edi S., Muniful., Rini R., Yohana., N. Jamil., Taufik., Syarmid.i, Eri M., Yanni P., Sofian., Imran., (Working Group Presbytis/Nasalis/Simias on CAMP Workshop for The Primates of Indonesia)

Trachyphitecus auratus

CONSERVATION ASSESSMENT AND MANAGEMENT PLAN FOR THE PRIMATES OF INDONESIA

Taman Safari
15-19 January 2001

FINAL REPORT

July 2001

Section 4

TARSIUS

Taxon Data Summaries, Data Sheets and Distribution Maps

Summary Table - Indonesia

Scientific name	*Common name*	*Distribution*	*Area of occupancy*	*Global population*	*Previous IUCN*	*Assigned IUCN*	*IUCN Criteria*	*CITES Append*	*ProtectedArea*
Tarsius bancanus bancanus	Bangka or Sumatran tarsier	Indonesia	> 2,001 sq km	340,000	Lower risk -lc	LRlc		appendix II	Way Kambas, Barisan Selatan
Tarsius bancanus borneanus	Bornean tarsier	Indonesia, Malaysia, Brunei	> 2,001 sq km	3,000,000	LR lc	LRlc		appendix II	Gunung Palung, Tanjung Puting, Kutai, Kayan Mentarang, Betung Kerihun,
Tarsius bancanus natunensis	Natuna tarsier	Indonesia	11-500 sq km	<10,000	Data deficient	VU	C2aii	appendix II	
Tarsius bancanus saltator	Belitung tarsier	Indonesia (Belitung)	11-500 sq km	24,000	Data deficient	EN	B2a,b	appendix II	none
Tarsius dianae	Diana's tarsier	Indonesia, Central Sulawesi, type locality (Kamarora, Lore Lindu National Park)	> 2,001 sq km	600,000	Lower risk - conservation dependent	LRlc		appendix II	Morowali and Lore Lindu National Park
Tarsius pelengensis	Peleng tarsier	Indonesia	11-500 sq km	15,000	Data deficient	EN	B1a,b	appendix II	none
Tarsius pumilus	Mountain Tarsier	Indonesia, known from three localities, Rano Rano (type locality) Mt Rorekatimbu, Latimojong Mtns.	> 2,001 sq km	unknown	Data deficient	DD		appendix II	Lore Lindu National Park, Latimojong Mtns Reserve
Tarsius sangirensis	Sangihe tarsier	Indonesia	11-500 sq km	3,000	Data deficient	EN	B1a,b,c	appendix II	none
Tarsius sp 1	Minahasa tarsier	Indonesia	> 2,001 sq km	300,000	not listed	LRlc		Appendix II	Tangkoko-Batuanggas-Dua Saudara Nature Reserve, Bogani Nani Wartabone National Park, and many others

Scientific name	*Common name*	*Distribution*	*Area of occupancy*	*Global population*	*Previous IUCN*	*Assigned IUCN*	*IUCN Criteria*	*CITES Append*	*ProtectedArea*
Tarsius sp 2	Gorontalo tarsier	Indonesia	> 2,001 sq km	250,000	unlisted	LRnt		Appendix II	Tanjun Panjang Reserve, Panua
Tarsius sp 3	Sejoli tarsier	Indonesia	501-2,000 sq km	50,000	unlisted	LRnt		appendix II	Tinombala Nature Reserve
Tarsius sp 4	Tinombo tarsier	Indonesia, Central Sulawesi, near the village Tinombo	501-2,000 sq km	50000	unlisted	LRnt		appendix II	Sojol Nature Reserve
Tarsius sp 5	Palu tarsier	Indonesia	> 2,001 sq km	150,000	unlisted	LRnt		appendix II	Taman Wisata 'Wera"
Tarsius sp 6	Togian tarsier	Indonesia	501-2,000 sq km	25,000	not listed	EN	B1a,b	appenidx II	none
Tarsius sp 7	Selayar tarsier	Indonesia, Selayar Island	11-500 sq km	9,000	unlisted	EN	B1a,b	appendix II	none
Tarsius sp 8	Kendari tarsier	Indonesia, lowland southeast sulawesi around Kendari	501-2,000 sq km	75,000	unlisted	EN	B1a,b	appendix II	Rawa Aopa warumokai national park
Tarsius sp 9	Buton tarsier	Indonesia, Buton, Muna, Kabaena Island	> 2,001 sq km	170,000	not listed	VU	B1a,b	appendix II	Buton utara nature reserve
Tarsius spectrum	Spectral tarsier	Indonesia, South Sulawesi	> 2,001 sq km	25,000	DD	VU	B1a,b	appendix II	Bantimurung, Pattanuang, Kareanta

Indonesian Primate Camp

Tarsius bancanus bancanus — Bangka or Sumatran tarsier

Taxonomy

1. Scientific Name / Ambiguities	Authority	Date
Tarsius bancanus bancanus	Horsfield	1824
Hypsicebus bancanus	Lesson	1840
Lemur tarsier	Raffles	1822
Tarsius spectrum	Willink	1905
Tarsius spectrum	Weber	1893

FAMILY: Tarsiidae LEVEL: Subspecies
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

krabuku	Lampung
mentiling	?
perok poear	Bangka
singapooa/singapuar	?
Western tarsier	English

Recent taxonomic research indicates that several nomenclatural errors have been made and perpetuated in tarsier taxonomy. It is likely that taxonomic revisions underway will result in major modifications to the existing taxonomy (Groves 2001).

2. Distribution of the Taxon Indonesia

- HABITAT: unknown, refer to T. bancanus borneanus (e.g. Tropical forest primary and secondary, ecotone forest, riverine forest including mangrove). - NICHE: unknown, refer to T. bancanus borneanus (e.g. substory specialist spending a majority of the time 2 m or less from the ground, sea level to 500 m. - HISTORICAL DISTRIBUTION: unknown. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: South Sumatra and Bangka.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: > 20,000 sq km. - OCCURRENCE NOTES: 68250 sq km; Estimated extent of occurrence is based on visual estimates of distribution maps in Hill 1955 and Niemitz 1984..

OCCUPANCY AREA: > 2,001 sq km. - OCCUPANCY NOTES: 6825; Estimated area of occupancy is based on visual estimates of remaining forest cover based on satellite maps provided to the compilers. Where possible, these estimates were supported by firsthand knowledge of participants..

5. Number of Locations or Subpopulations

- NO. LOCATIONS: 2.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%.- DURING HOW MANY YEARS? 5.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - overexploitation of non-timber forest products

7. Threats:	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y		Y
loss of habitat	Y		Y
pesticides	Y		Y
CATASTROPHIC			
fire	Y		

8. Trade:

Trade described as local; domestic; international

Parts in Trade: Live animal

Effects: unknown

9. Population (global) 340,000

Subpopulations unknown
Mature > 10,000
Avg age parents unknown

10. Population trends Declining

Past Decline % <20% Period 5 years

Future decline of <20% is predicted for a period of 5

With continued habitat loss, populations are predicted to decline. Estimates of tarsier densities vary greatly. Sussman (1999) cites the following tarsier population densities: T. bancanus borneanus 80/sq. km (Niemitz 1979); T. b. borneanus 15-20/sq. km (Crompton and Andau 1987); T. spectrum 30-100/sq. km (MacKinnon and MacKinnon 1980); T. spectrum 156/sq. km (Gursky 1997); T. dianae 200-500/sq. km (Stefan Merker pers. Comm.). Regardless of the value used, global population size is often large and not the primary factor that affects the conservation status of tarsier taxa. For simplicity, an estimated density of 50 animals per square kilometer was used for each tarsier taxon.

11. Data Source

DATA SOURCE/QUALITY: literature; hearsay & belief - there are no known surveys published or otherwise of this taxon.

12. Recent Field Studies

none

13. Status

IUCN CATEGORY (Global): Lower risk -lc

CITES: appendix II. - NATL WILDLIFE LEGISLATION: protected, PP 7 1999, UU No. 5 1990. - PROTECTED AREA: Way Kambas, Barisan Selatan. - PROTECTED PLAN: none. - NOTES ON STATUS: this is a best guess based upon estimated distribution and satelite maps of remaining forests.

RED LIST CATEGORY: Lower risk - least concern

IUCN-BASIS:

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history;PHVA NOTES: pending

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; work in local communities;

16. Captive Breeding / Cultivation Recommendations

basic surveys and monitoring are most important

17. Facilities: Taman Safari Indonesia

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	4	5	0	9

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

20. GENERAL COMMENTS: Tarsiers have never formed successful breeding colonies in captivity in spite of numerous efforts in North America and Europe. The conservation of all tarsier taxa, therefore, relies entirely on wild population management. All known tarsier taxa save a single subspecies exist only in Indonesia and the Philippines, countries that are currently experiencing difficulty protecting habitat. Increased efforts should be made to identify the number of species and

their distributions, as well as initiating small scale captive breeding programs in order to develop captive techniques to propagate tarsiers should this become necessary. It is recommended that small research colonies be initiated in country within the next three years. The North American Taxon Advisory group recommends bringing small research colonies to North America when suitable captive bred animals are ready.

21. SOURCES: A taxonomy of the Asian Primates. (in prep). A working document from the workshop "Primate Taxonomy for the New Millennium". (R. Mittermier, D. Melnick, J. Oates, organizers). Compiled by : D. Brandon- Jones, A. Eudey, T. Geissmann, D. J. Melnick, J.C. Morales, M. Shekelle, Caro-Beth Stewart.

Groves 2001. Getting to know the Tarsiers: Yesterday, Today, and Tomorrow. International Society of Primatologists, 14th Congress, Adelaide, Australia. January 7-12, 2001.

Hill, W. C. O. 1995. Primates: Comparative Anatomy and Taxonomy. II. Haplorhini: Tarsioidea. Edinburgh, University Press, Edinburgh.

Niemitz C. 1984. The Biology of Tarsiers. New York: Gustav Fischer Verlag.

Sussman RW. 1999. Primate Ecology and Social Structure. Needham Heights, MA, USA: Pearson Custom Publishing.

22. COMPILERS: Myron Shekelle, Center for Biodiversity and Conservation Studies, University of Indonesia
Subeno, Gajah Mada University,
Mohammed Indrawan, YABSHI
Banjar Y. Laban, "Balai" Lore Lindu National Park
Sharmy Prastiti, Taman Safari Indonesia
Yakob Muskita, University of Indonesia
Darmawan Liswanto, Titian Foundation
Ermayanti, Conservation International, Indonesia

Tarsius bacanus bacanus

Indonesian Primate Camp

Tarsius bancanus borneanus — Bornean tarsier

Taxonomy

1. Scientific Name / Ambiguities	Authority	Date
Tarsius bancanus borneanus	Elliot	1910
Tarsius spectrum	Woollard	1925
Tarsius tarsier	Lyon	1907

FAMILY: Tarsiidae LEVEL: Subspecies
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

binatang hantu	Malay
ingkat	NW Borneo
lakud	Senna
lingseng	Dyak
Sempalili	kadayan
tempiling	W Borneo
tindok rokok	Dusun
Western tarsier	English

Recent taxonomic research indicates that several nomenclatural errors have been made and perpetuated in tarsier taxonomy. It is likely that taxonomic revisions underway will result in major modifications to the existing taxonomy (Groves 2001).

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical forest primary and secondary, ecotone forest, riverine forest including mangrove. - NICHE: under story specialist mostly 2 m or less from the ground, sea level to 500 m. - HISTORICAL DISTRIBUTION: unknown. - CURRENT COUNTRIES: Indonesia, Malaysia, Brunei. - GEOGRAPHIC EXTENT: West Kalimantan, Central Kalimantan, South Kalimantan, East Kalimantan.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: > 20,000 sq km. - OCCURRENCE NOTES: Estimated extent of occurrence is based on visual estimates of distribution maps in Hill 1955 and Niemitz 1984..

OCCUPANCY AREA: > 2,001 sq km. - OCCUPANCY NOTES: 60000 sq km; Estimated area of occupancy is based on visual estimates of remaining forest cover based on satellite maps provided to the compilers. Where possible, these estimates were supported by firsthand knowledge of participants..

5. Number of Locations or Subpopulations

- NO. LOCATIONS: unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 21% to 50%.- DURING HOW MANY YEARS? 5. - PRIMARY CAUSE OF CHANGE: logging, forest conversion for agriculture, plantation, settlement, and fire.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - overexplotation of non-timber forest products (eg gaharu and rattan)

7. Threats:	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y		Y
loss of habitat	Y		Y
pesticides	Y		
CATASTROPHIC			
fire	Y		

8. Trade:

Trade described as local; domestic;

Parts in Trade: Live animal

Effects: unknown

9. Population (global) 3,000,000

Subpopulations unknown
Mature > 10,000
Avg age parents unknown

10. Population trends Declining

Past Decline % <20% Period 5 years

With continued habitat loss, populations are predicted to decline. Estimates of tarsier densities vary greatly. Sussman (1999) cites the following tarsier population densities: T. bancanus borneanus 80/sq. km (Niemitz 1979); T. b. borneanus 15-20/sq. km (Crompton and Andau 1987); T. spectrum 30-100/sq. km (MacKinnon and MacKinnon 1980); T. spectrum 156/sq. km (Gursky 1997); T. dianae 200-500/sq. km (Stefan Merker pers. Comm.). Regardless of the value used, global population size is often large and not the primary factor that affects the conservation status of tarsier taxa. For simplicity, an estimated density of 50 animals per square kilometer was used for each tarsier taxon.

11. Data Source

DATA SOURCE/QUALITY: census monitoring; informal sightings; literature; hearsay & belief - these are best-guess estimates based upon estimated distribution and satelite maps or remaining forests, supplemented by informal sightings by Darmawan Liswanto. This subspecies was censused in both Sarawak (1970's) and Sabah (1980's).

12. Recent Field Studies

none ever in the Indonesian portions of this taxon's range

13. Status

IUCN CATEGORY (Global): LR lc

CITES: appendix II. - NATL WILDLIFE LEGISLATION: protected. - PROTECTED AREA: Gunung Palung, Tanjung Puting, Kutai, Kayan Mentarang, Betung Kerihun,. - PROTECTED PLAN: none.

RED LIST CATEGORY: Lower risk - least concern

IUCN-BASIS:

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history; trade; - OTHER RESEARCH: population dynamic. PHVA NOTES: pending

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; work in local communities;

16. Captive Breeding / Cultivation Recommendations

basic surveys and monitoring are highest priorities

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

SPECIES MANAGEMENT RECOMMENDED FOR RANGE COUNTRIES: Indonesia

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

20. GENERAL COMMENTS: Tarsiers have never formed successful

breeding colonies in captivity in spite of numerous efforts in North America and Europe. The conservation of all tarsier taxa, therefore, relies entirely on wild population management. All known tarsier taxa save a single subspecies exist only in Indonesia and the Philippines, countries that are currently experiencing difficulty protecting habitat. Increased efforts should be made to identify the number of species and their distributions, as well as initiating small scale captive breeding programs in order to develop captive techniques to propagate tarsiers should this become necessary.

21. SOURCES: A taxonomy of the Asian Primates (In Prep.) A working document from the workshop "Primate Taxonomy for the New Millenium (Russel Mittermeier; Don Melnick, and John Oates organizer)" Compiled by Douglas Brandon-Jones, Ardith A. Eudey, Thomas Geissman, Don J Melnick, Juan Carlos Morales, Caro-Beth Stewart.

Hill W.C. O. 1955 Primates: Comparative Anatomy and Taxonomy II Haplorhini: Tarsioidea Edinburgh

Groves 2001. Getting to know the Tarsiers: Yesterday, Today, and Tomorrow. International Society of Primatologists, 14th Congress, Adelaide, Australia. January 7-12, 2001.

Niemitz C. 1984. The Biology of Tarsiers. New York: Gustav Fischer Verlag.

Sussman RW. 1999. Primate Ecology and Social Structure. Needham Heights, MA, USA: Pearson Custom Publishing.

22. COMPILERS: Myron Shekelle, Center for Biodiversity and Conservation Studies, University of Indonesia
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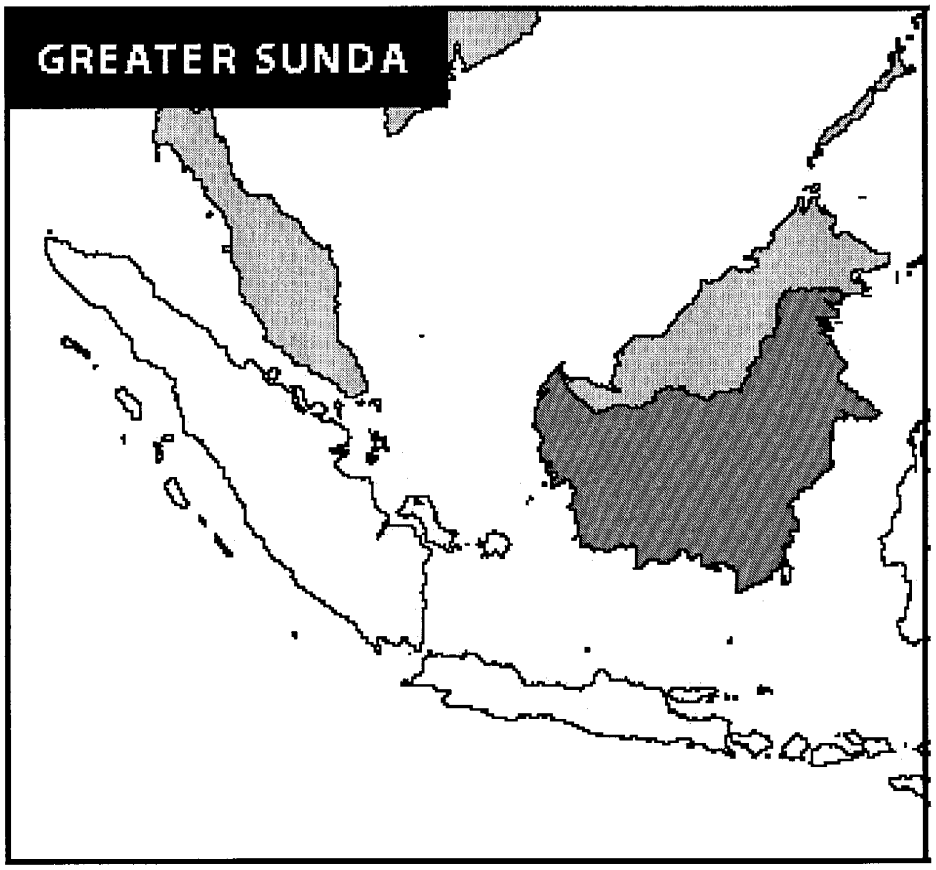
Sharmy Prastiti, Taman Safari Indonesia
Yakob Muskita, University of Indonesia
Darmawan Liswanto, Titian Foundation
Ermayanti, Conservation International, Indonesia



Tarsius bacanus borneanus

Indonesian Primate Camp

Tarsius bancanus natunensis — Natuna tarsier

Taxonomy

1. Scientific Name / Ambiguities	Authority	Date
Tarsius bancanus natunensis	Chasen	1940
Tarsius bancanus	Chasen	1835
Tarsius tarsier natunensis	Chasen	1940

FAMILY: Tarsiidae LEVEL: Subspecies
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Imbing	Serasan
Western tarsier	English

Recent taxonomic research indicates that several nomenclatural errors have been made and perpetuated in tarsier taxonomy. It is likely that taxonomic revisions underway will result in major modifications to the existing taxonomy (Groves 2001).

2. Distribution of the Taxon Indonesia
Indonesia

- HABITAT: unknown, refer to T. bancanus borneanus (e.g. Tropical forest primary and secondary, ecotone forest, riverine forest including mangrove). - NICHE: unknown, refer to T. bancanus borneanus (eg substory specialist spending a majority of the time 2 m or less from the ground, sea level to 500 m. - HISTORICAL DISTRIBUTION: unknown. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: South Natuna Island, Province Riau.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km. - OCCURRENCE NOTES: 200 sq km; Estimated extent of occurrence is based on visual estimates of distribution maps in Hill 1955 and Niemitz 1984..

OCCUPANCY AREA: 11-500 sq km. - OCCUPANCY NOTES: 200 sq km; Estimated area of occupancy is based on visual estimates of remaining forest cover based on satellite maps provided to the compilers. Where possible, these estimates were supported by firsthand knowledge of participants..

5. Number of Locations or Subpopulations

- NO. LOCATIONS: 2 (Serasan and Subu).

6. Habitat status:

Not known.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%.- DURING HOW MANY YEARS? 5 years.

CHANGES IN QUALITY: Unknown.NOTES ON QUALITY: -

7. Threats: now future pop decline

We can infer threats, such as habitat loss and fragmentation. We have very little information about Serasan, except from satelite maps that show intact forests. However, based on interviews with Serasan logging workers immigrating to Natuna looking for work, most of the forests in Serasan have been logged over.

8. Trade:

Parts in Trade: Live animal

Effects: unknown

9. Population (global) <10,000

Subpopulations	unknown
Mature	< 2,500
Avg age parents	unknown

10. Population trends Unknown

Past Decline % Period

With continued habitat loss, populations are predicted to decline. Estimates of tarsier densities vary greatly. Sussman (1999) cites the following tarsier population densities: T. bancanus borneanus 80/sq. km (Niemitz 1979); T. b. borneanus 15-20/sq. km (Crompton and Andau 1987); T. spectrum 30-100/sq. km (MacKinnon and MacKinnon 1980); T. spectrum 156/sq. km (Gursky 1997); T. dianae 200-500/sq. km (Stefan Merker pers. Comm.). Regardless of the value used, global population size is often large and not the primary factor that affects the conservation status of tarsier taxa. For simplicity, an estimated density of 50 animals per square kilometer was used for each tarsier taxon.

11. Data Source

DATA SOURCE/QUALITY: literature; - these are best-guess estimates based upon a rough estimate of the landmass of Serasan being approximately 200 sq. km., and 100% of native habitat remaining, according to satelite maps that show the forests intact

12. Recent Field Studies

none

13. Status

IUCN CATEGORY (Global): Data deficient

CITES: appendix II. - NATL WILDLIFE LEGISLATION: protected. - NOTES ON STATUS: less than 10,000 mature individuals.

RED LIST CATEGORY: Vulnerable

IUCN-BASIS: C2aii

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; trade;

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; work in local communities;

16. Captive Breeding / Cultivation Recommendations

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

20. GENERAL COMMENTS: 1. Establish long term, small to medium skill graduate research presence to under take monitoring and capacity building
2. Survey
3. Provide nature reserve to protect this population
4. Genetic research taxonomic research

Tarsiers have never formed successful breeding colonies in captivity in spite of numerous efforts in North America and Europe. The conservation of all tarsier taxa, therefore, relies entirely on wild population management. All known tarsier taxa save a single subspecies exist only in Indonesia and the Philippines, countries that are currently experiencing difficulty protecting habitat. Increased efforts should be made to identify the number of species and their distributions, as well as initiating small scale captive breeding programs

in order to develop captive techniques to propagate tarsiers should this become necessary.

21. SOURCES: A taxonomy of the Asian primates (in prep) A working document from the workshop "Primate Taxonomy for the New Millenium (Russel Mittermeier, Don Melnick, and John Oats, organizers) compiled by Douglas Brandon Jones Ardith A Eudey, Thomas Geissmann, Don J. Melnick, Juan Carlos Morales, Myron Shekelle, Caro-Beth Stewart

Chasen FN 1940 A hand list of Malaysian mammals. Bulletin of the Raffles Museum 15 I-xx 1-209

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Niemitz C. 1984. The Biology of Tarsiers. New York: Gustav Fischer Verlag.

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22. COMPILERS: Myron Shekelle, Center for Biodiversity and Conservation Studies, University of Indonesia
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Sharmy Prastiti, Taman Safari Indonesia
Yakob Muskita, University of Indonesia
Darmawan Liswanto, Titian Foundation
Ermayanti, Conservation International, Indonesia

Tarsius bacanus natunensis

Indonesian Primate Camp

Tarsius bancanus saltator — Belitung tarsier

Taxonomy

1. Scientific Name / Ambiguities	Authority	Date
Tarsius bancanus saltator	Elliot	1910
Tarsius spectrum	Jentink	1890

FAMILY: Tarsiidae LEVEL: Subspecies
ORDER: Primata
CLASS: mammalia

COMMON NAMES:

Palele	Belitung
Western tarsier	English

Recent taxonomic research indicates that several nomenclatural errors have been made and perpetuated in tarsier taxonomy. It is likely that taxonomic revisions underway will result in major modifications to the existing taxonomy (Groves 2001).

2. Distribution of the Taxon Indonesia

- HABITAT: unknown, refer to T. bancanus borneanus (e.g. Tropical forest primary and secondary, ecotone forest, riverine forest including mangrove). - NICHE: unknown, refer to T. bancanus borneanus (e.g. substory specialist spending a majority of the time 2 m or less from the ground, sea level to 500 m. - HISTORICAL DISTRIBUTION: unknown. - CURRENT COUNTRIES: Indonesia (Belitung). - GEOGRAPHIC EXTENT: Province of Bangka and Belitung.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 5,001 - 20,000 sq km. - OCCURRENCE NOTES: 6400; Estimated extent of occurrence is based on visual estimates of distribution maps in Hill 1955 and Niemitz 1984..

OCCUPANCY AREA: 11-500 sq km. - OCCUPANCY NOTES: 480; Estimated area of occupancy is based on visual estimates of remaining forest cover based on satellite maps provided to the compilers. Where possible, these estimates were supported by firsthand knowledge of participants..

5. Number of Locations or Subpopulations

- NO. LOCATIONS: unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%.- DURING HOW MANY YEARS? 5.

CHANGES IN QUALITY: Unknown.NOTES ON QUALITY: -

7. Threats:	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y	second	Y
loss of habitat	Y	first	Y

8. Trade:

Parts in Trade: Live animal

Effects: unknown

9. Population (global) 24,000

Subpopulations	unknown
Mature	< 2,500
Avg age parents	unknown

10. Population trends Declining

Past Decline % <20% Period 5 years

With continued habitat loss, populations are predicted to decline. Estimates of tarsier densities vary greatly. Sussman (1999) cites the following tarsier population densities: T. bancanus borneanus 80/sq. km (Niemitz 1979); T. b. borneanus 15-20/sq. km (Crompton and Andau 1987); T. spectrum 30-100/sq. km (MacKinnon and MacKinnon 1980); T. spectrum 156/sq. km (Gursky 1997); T. dianae 200-500/sq. km (Stefan Merker pers. Comm.). Regardless of the value used, global population size is often large and not the primary factor that affects the conservation status of tarsier taxa. For simplicity, an estimated density of 50 animals per square kilometer was used for each tarsier taxon.

11. Data Source

DATA SOURCE/QUALITY: literature; hearsay & belief - These are best-guess estimates based upon an estimated size of Belitung, 6400 sq. km. Satelite maps available to us have no information regarding Belitung. Based upon comparisons with Bangka and discussions with forestry officals, we predict habitat loss and fragmentation in Belitung to be similar to Bangka. We estimate 7.5% of the extent of occurrence is suitable for tarsiers, yielding an area of occupancy of 480 sq. km.

12. Recent Field Studies

none ever, except report by Elliot 1910

13. Status

IUCN CATEGORY (Global): Data deficient

IUCN CATEGORY (National): Data deficient

CITES: appendix II. - NATL WILDLIFE LEGISLATION: protected. - PROTECTED AREA: none. - PROTECTED PLAN: none.

RED LIST CATEGORY: Endangered

IUCN-BASIS: B2a,b

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history; limiting factor research;PHVA NOTES: pending

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; limiting factor; work in local communities;

16. Captive Breeding / Cultivation Recommendations

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

COORDINATED SPECIES MANAGEMENT PROGRAM exists in: no species management program exists for any tarsier species.

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

20. GENERAL COMMENTS: Tarsiers have never formed successful breeding colonies in captivity in spite of numerous efforts in North America and Europe. The conservation of all tarsier taxa, therefore, relies entirely on wild population management. All known tarsier taxa save a single subspecies exist only in Indonesia and the Philippines, countries that are currently experiencing difficulty protecting habitat. Increased efforts should be made to identify the number of species and their distributions, as well as initiating small scale captive breeding programs in order to develop captive techniques to propagate tarsiers should this become necessary.

21. SOURCES: A taxonomy of the Asian Primates. (in prep). A working document from the workshop "Primate Taxonomy for the New Millennium". (R. Mittermier, D. Melnick, J. Oates, organizers). Compiled by : D. Brandon- Jones, A. Eudey, T. Geissmann, D. J.

Melnick, J.C. Morales, M. Shekelle, Caro-Beth Stewart.

Elliot D.G. 1910. A Review of the Primates. Bulletin of the American Museum of Natural History. 28: 151-154.

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Hill, W. C. O. 1995. Primates: Comparative Anatomy and Taxonomy. II. Haplorhini: Tarsioidea. Edinburgh, University Press, Edinburgh.

Niemitz C. 1984. The Biology of Tarsiers. New York: Gustav Fischer Verlag.

Sussman RW. 1999. Primate Ecology and Social Structure. Needham Heights, MA, USA: Pearson Custom Publishing.

22. COMPILERS: Subeno, Gajah Mada University,
Mohammed Indrawan, YABSHI
Banjar Y. Laban, "Balai" Lore Lindu National Park
Sharmy Prastiti, Taman Safari Indonesia
Yakob Muskita, University of Indonesia
Myron Shekelle, Center for Biodiversity and Conservation Studies, University of Indonesia
Darmawan Liswanto, Titian Foundation
Ermayanti, Conservation International, Indonesia

Tarsius bacanus saltator

Indonesian Primate Camp

Tarsius dianae — Diana's tarsier

Taxonomy

1. Scientific Name / Ambiguities	Authority	Date
Tarsius dianae	Niemitz, Nietsch, Warter,	1991
Tarsius dentatus	Miller and Hollister	1921

FAMILY: Tarsiidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Diana's Tarsier English
Tangkasi

Recent taxonomic research indicates that several nomenclatural errors have been made and perpetuated in tarsier taxonomy. It is likely that taxonomic revisions underway will result in major modifications to the existing taxonomy (Groves 2001).

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical forest (Primary & Secondary), "kebun" (mixed species garden). - NICHE: Unknown, sea level to 1100-1500 m (?). - HISTORICAL DISTRIBUTION: Unknown. - CURRENT COUNTRIES: Indonesia, Central Sulawesi, type locality (Kamarora, Lore Lindu National Park). - GEOGRAPHIC EXTENT: Central Sulawesi, from Palu to Luwuk, Marantale to Lake Poso.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: > 20,000 sq km. - OCCURRENCE NOTES: 33,000; Estimated extent of occurrence is based on visual estimates of distribution maps in Hill 1955 and Niemitz 1984..

OCCUPANCY AREA: > 2,001 sq km. - OCCUPANCY NOTES: 13,200; Estimated area of occupancy is based on visual estimates of remaining forest cover based on satellite maps provided to the compilers. Where possible, these estimates were supported by firsthand knowledge of participants..

5. Number of Locations or Subpopulations

- NO. LOCATIONS: Unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%. - PREDICTED DECLINE IN HABITAT: < 20%. - PREDICTED DURATION OF DECLINE: 5. - PRIMARY CAUSE OF CHANGE: forest conversion, encroachment, logging, forest fires.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - over-exploitation of non-timber forest products

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y	second	
loss of habitat	Y	first	
pesticides	Y	third	
trade for market or medicine	Y	fourth	
NATURAL/INDUCED			
predation by exotics	Y		
CATASTROPHIC			
fire	Y		

8. Trade:

Trade described as local; domestic;

Parts in Trade: Live animal

Effects: unknown

9. Population (global) 600,000

Subpopulations Unknown
Mature Unknown
Avg age parents unknown

10. Population trends Declining

Past Decline % <20% Period 5

With continued habitat loss, populations are predicted to decline. Estimates of tarsier densities vary greatly. Sussman (1999) cites the following tarsier population densities: T. bancanus borneanus 80/sq. km (Niemitz 1979); T. b. borneanus 15-20/sq. km (Crompton and Andau 1987); T. spectrum 30-100/sq. km (MacKinnon and MacKinnon 1980); T. spectrum 156/sq. km (Gursky 1997); T. dianae 200-500/sq. km (Stefan Merker pers. Comm.). Regardless of the value used, global population size is often large and not the primary factor that affects the conservation status of tarsier taxa. For simplicity, an estimated density of 50 animals per square kilometer was used for each tarsier taxon.

11. Data Source

DATA SOURCE/QUALITY: census monitoring; field study; informal sightings; literature; - T. dianae has been censused in Lore Lindu National Park and areas surrounding the park and densities were found to be 200-500 animals per square kilometer (Stefan Merker, pers. comm.). Thus, global population estimates cold very well be much higher than we estimate here (using 50 animals per sq. km). This would not effect the conservation status, however. We use very rough estimates of the extent of occurrence of T. dianae as 33,000 sq. km. Based upon satellite maps, we estimate that approximately 40% of that area is suitable for tarsier populations. Using 50 animals per sq. km, we estimate the global population to be 660,000 animals. Global population would be 2,640,000 using the lowest estimate of Merker.

12. Recent Field Studies

Stetan Merker, Kamarora, 1998-present, Current behaviour and habitat use
Myron Shekelle, Kamarora, Marautale, 1996, taxonomy
Alexandra Nietseh, Kamarora, Kebun Kopi, Lake Poso, 1988-present, acoustics and taxonomy
Yakob Muskila, Kamarora, 1992, behavior

13. Status

IUCN CATEGORY (Global): Lower risk - conservation dependent

CITES: appendix II. - NATL WILDLIFE LEGISLATION: protected. - PROTECTED AREA: Morowali and Lore Lindu National Park. - PROTECTED PLAN: none.

RED LIST CATEGORY: Lower risk - least concern

IUCN-BASIS:

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history;PHVA NOTES: pending

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; work in local communities;

16. Captive Breeding / Cultivation Recommendations

other: integrated pest management

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

20. GENERAL COMMENTS: Tarsiers have never formed successful breeding colonies in captivity in spite of numerous efforts in North America and Europe. The conservation of all tarsier taxa, therefore, relies entirely on wild population management. All known tarsier taxa save a single subspecies exist only in Indonesia and the Philippines, countries that are currently experiencing difficulty protecting habitat. Increased efforts should be made to identify the number of species and their distributions, as well as initiating small scale captive breeding programs in order to develop captive techniques to propagate tarsiers should this become necessary.

It is recommended that small research colonies be initiated in-country within the next three years.

21. SOURCES: A taxonomy of the asian primates (In Prep.) A working document from the workshop "Primate Taxonomy for the New Millennium" (Russel Mittermeier, Don Melnick, and John Oates, organizers). Compiled by: Douglas Brandon-Jones, Ardith A. Eudey, Thomas Geissman, Don J. Melnick, Juan Carlos Morales, Myron Shekelle, Caro-Beth Stewart.

Hill, W.C.O. 1955 Primates: Comparative Anatomy and Taxonomy. II. Haplorhini: Tarsioidea. Edinburgh University Press, Edinburgh.

Groves 2001. Getting to know the Tarsiers: Yesterday, Today, and Tomorrow. International Society of Primatologists, 14th Congress, Adelaide, Australia. January 7-12, 2001.

Niemitz C. 1984. The Biology of Tarsiers. New York: Gustav Fischer Verlag.

Nietsch, A. 1999. Duet Vocalizations among different populations of Sulawesi tarsiers. International Journal of Primatology 20 (4): 567-583.

Sussman RW. 1999. Primate Ecology and Social Structure. Needham Heights, MA, USA: Pearson Custom Publishing.

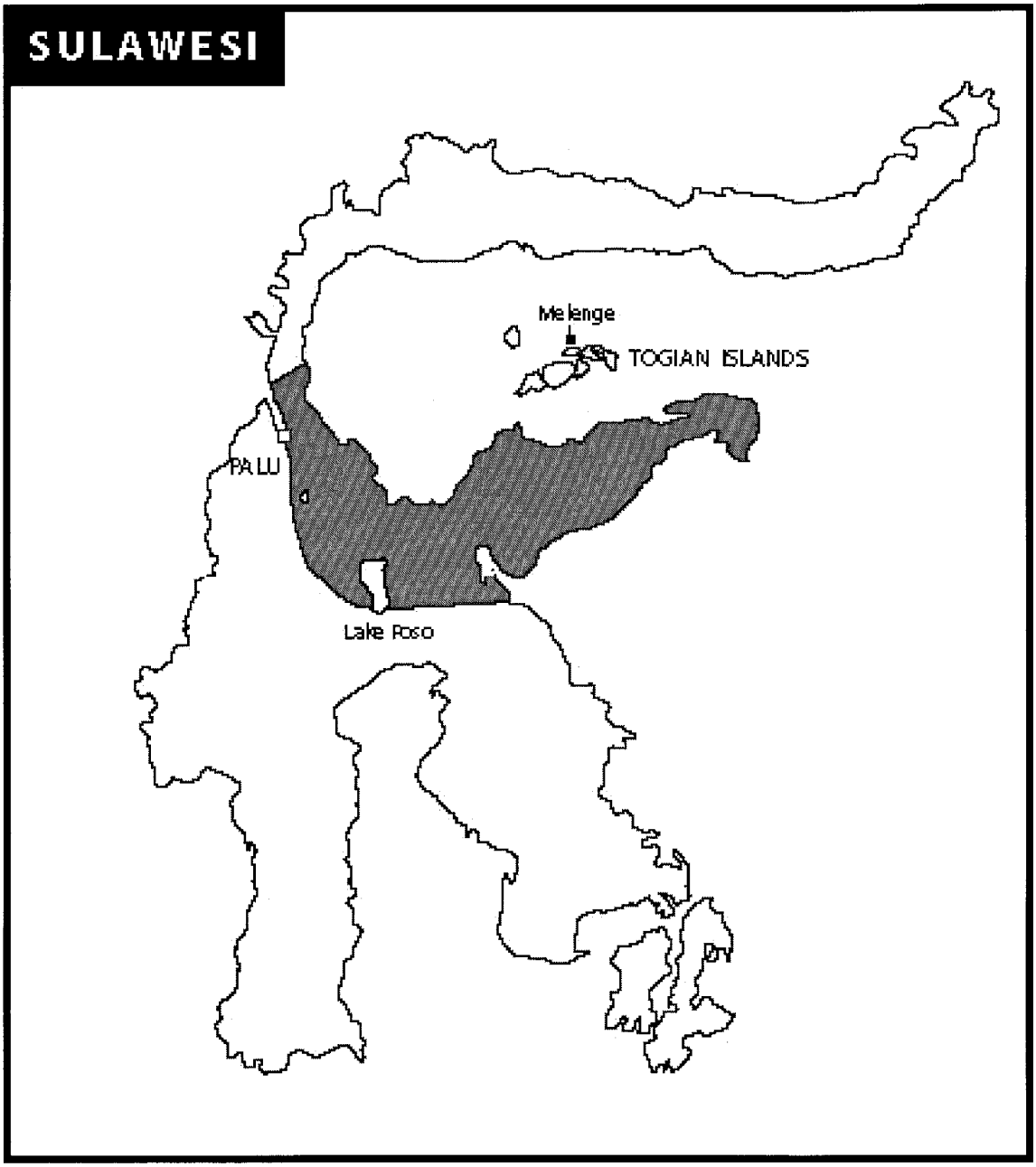
Leksono SM, Masala Y, Shekelle M. (1997) Tarsiers and agriculture: thoughts on an integrated management plan. Sulawesi Primate Newsletter 4:2 p. 11-13

Shekelle M, Leksono SM, Ichwan LLS, Masala Y. (1997) The natural history of tarsiers of North and Central Sulawesi. Sulawesi Primate Newsletter. 4(2):4-11.

Shekelle M, Morales, JC, Melnick D. (2001) Genetic and acoustic evolution among Eastern tarsiers of northern and central Sulawesi. Presentation XVII Congress of the International Primatological Society, Adelaide, Australia, 7-12 January 2001.

Tremble M, Muskita Y, Supriatna J. (1993) Field observations of Tarsius dianae at Lore Lindu National Park, Central Sulawesi, Indonesia. Tropical Biodiversity 1(2):67-76.

22. COMPILERS: Myron Shekelle, Center for Biodiversity and Conservation Studies, University of Indonesia
Subeno, Gajah Mada University,
Mohammed Indrawan, YABSHI
Banjar Y. Laban, "Balai" Lore Lindu National Park
Sharmy Prastiti, Taman Safari Indonesia
Yakob Muskita, University of Indonesia
Darmawan Liswanto, Titian Foundation
Ermayanti, Conservation International, Indonesia



Tarsius dianae

Indonesian Primate Camp

Tarsius pelengensis — Peleng tarsier

Taxonomy

1. Scientific Name / Ambiguities | Authority | Date

Tarsius pelengensis | Sody | 1949

FAMILY: Tarsiidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Peleng tarsier — English

Recent taxonomic research indicates that several nomenclatural errors have been made and perpetuated in tarsier taxonomy. It is likely that taxonomic revisions underway will result in major modifications to the existing taxonomy (Groves 2001).

2. Distribution of the Taxon Indonesia

- HABITAT: unknown, refer to T. dianae (e.g. tropical forest (primary, secondary), "kebun" mixed garden). - NICHE: unknown, refer to T. dianae (e.g. sea level to 1100-1500 m (?)). - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Peleng Island, Banggai Laut District, Central Sulawesi Province.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km. - OCCURRENCE NOTES: 3000; Estimated extent of occurrence is based on visual estimates of distribution maps in Hill 1955 and Niemitz 1984..

OCCUPANCY AREA: 11-500 sq km. - OCCUPANCY NOTES: 300; Estimated area of occupancy is based on visual estimates of remaining forest cover based on satellite maps provided to the compilers. Where possible, these estimates were supported by firsthand knowledge of participants..

5. Number of Locations or Subpopulations

- NO. LOCATIONS: unknown.

6. Habitat status:

Not known.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%.- DURING HOW MANY YEARS? 5. - PRIMARY CAUSE OF CHANGE: forest conversion, logging, transmigration settlement.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - over-exploitation of non-timber forest resources

7. Threats:

	now	future		pop decline
HUMAN INTERFERENCE				
habitat fragmentation	Y	Y	second	Y
loss of habitat	Y		first	Y
pesticides			third	Y
trade for market or medicine	Y		fourth	Y
NATURAL/INDUCED				
predation by exotics	Y			Y

8. Trade:

Parts in Trade: Live animal

Effects: Unknown

9. Population (global) 15,000

Subpopulations unknown
Mature > 2,500
Avg age parents unknown

10. Population trends Unknown

Past Decline % — Period

Future decline of <20% is predicted for a period of 5

With continued habitat loss, populations are predicted to decline. Estimates of tarsier densities vary greatly. Sussman (1999) cites the following tarsier population densities: T. bancanus borneanus 80/sq. km (Niemitz 1979); T. b. borneanus 15-20/sq. km (Crompton and Andau 1987); T. spectrum 30-100/sq. km (MacKinnon and MacKinnon 1980); T. spectrum 156/sq. km (Gursky 1997); T. dianae 200-500/sq. km (Stefan Merker pers. Comm.). Regardless of the value used, global population size is often large and not the primary factor that affects the conservation status of tarsier taxa. For simplicity, an estimated density of 50 animals per square kilometer was used for each tarsier taxon.

11. Data Source

DATA SOURCE/QUALITY: informal sightings; literature; - These are best-guess estimates based upon very rough estimates of the size of Peleng, yielding an estimated extent of occurrence of 3000 sq. km. Reference to satelite maps of remaining forests yielded a very rough estimate of 10% of Peleng as suitable habitat for tarsiers. These findings are supported by the results of general surveys that were conducted on Peleng by Mohammed Indrawan.

12. Recent Field Studies

James Burton, Peleng, Summer 2000, taxonomy, accoustic behavior

13. Status

IUCN CATEGORY (Global): Data deficient

IUCN CATEGORY (National): Data deficient

CITES: appendix II. - NATL WILDLIFE LEGISLATION: protected. - PROTECTED AREA: none. - PROTECTED PLAN: none. - NOTES ON STATUS: extent of occurrence less than 5000 sq km and severely fragmented and continuing decline.

RED LIST CATEGORY: Endangered

IUCN-BASIS: B1a,b

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history; limiting factor research; trade; - OTHER RESEARCH: integrated pest management. PHVA NOTES: pending

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; work in local communities;

16. Captive Breeding / Cultivation Recommendations

research;

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: Initiate ex situ Program within 3 years.

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

20. GENERAL COMMENTS: Tarsiers have never formed successful breeding colonies in captivity in spite of numerous efforts in North America and Europe. The conservation of all tarsier taxa, therefore, relies entirely on wild population management. All known tarsier taxa save a single subspecies exist only in Indonesia and the Philippines,

countries that are currently experiencing difficulty protecting habitat. Increased efforts should be made to identify the number of species and their distributions, as well as initiating small scale captive breeding programs in order to develop captive techniques to propagate tarsiers should this become necessary.

21. SOURCES: A taxonomy of the Asian Primates. (in prep). A working document from the workshop "Primate Taxonomy for the New Millennium". (R. Mittermier, D. Melnick, J. Oates, organizers). Compiled by : D. Brandon- Jones, A. Eudey, T. Geissmann, D. J. Melnick, J.C. Morales, M. Shekelle, Caro-Beth Stewart.

Groves 2001. Getting to know the Tarsiers: Yesterday, Today, and Tomorrow. International Society of Primatologists, 14th Congress, Adelaide, Australia. January 7-12, 2001.

Hill, W. C. O. 1995. Primates: Comparative Anatomy and Taxonomy. II. Haplorhini: Tarsioidea. Edinburgh, University Press, Edinburgh.

Niemitz C. 1984. The Biology of Tarsiers. New York: Gustav Fischer Verlag.

Sussman RW. 1999. Primate Ecology and Social Structure. Needham Heights, MA, USA: Pearson Custom Publishing.

22. COMPILERS: Myron Shekelle, Center for Biodiversity and Conservation Studies, University of Indonesia
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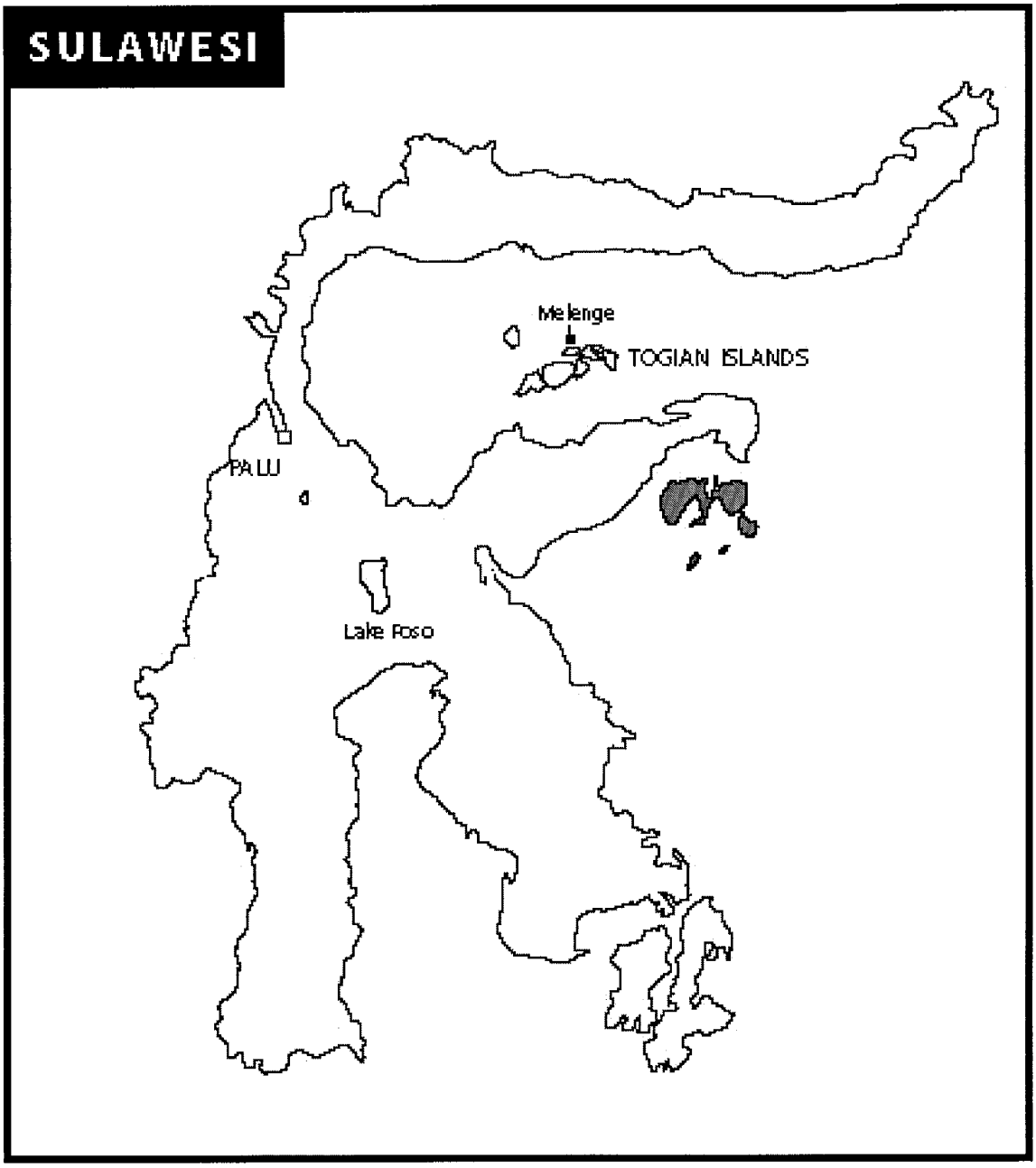
Ermayanti, Conservation International, Indonesia



Tarsius pelengensis

Indonesian Primate Camp

Tarsius pumilus — Mountain Tarsier

Taxonomy

1. Scientific Name / Ambiguities	Authority	Date
Tarsius pumilus	Miller and Hollister	1921

FAMILY: Tarsiidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Mountain Tarsier	English
Pygmy Tarsier	English

Recent taxonomic research indicates that several nomenclatural errors have been made and perpetuated in tarsier taxonomy. It is likely that taxonomic revisions underway will result in major modifications to the existing taxonomy (Groves 2001).

2. Distribution of the Taxon Indonesia

- HABITAT: montane moss forests. - NICHE: unknown, by comparison with other tarsiers, an understory specialist. - HISTORICAL DISTRIBUTION: unknown. - CURRENT COUNTRIES: Indonesia, known from three localities, Rano Rano (type locality) Mt Rorekatimbu, Latimojong Mtns.. - GEOGRAPHIC EXTENT: Central and South Sulawesi, Indonesia.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 5,001 - 20,000 sq km. - OCCURRENCE NOTES: Estimated extent of occurrence is based on visual estimates of distribution maps in Hill 1955 and Niemitz 1984..

OCCUPANCY AREA: > 2,001 sq km. - OCCUPANCY NOTES: Estimated area of occupancy is based on visual estimates of remaining forest cover based on satellite maps provided to the compilers. Where possible, these estimates were supported by firsthand knowledge of participants..

5. Number of Locations or Subpopulations

- NO. LOCATIONS: many, each mountain top in central highland region of Sulawesi is a separate population.

6. Habitat status:

Not known.

CHANGES IN QUALITY: Unknown.NOTES ON QUALITY: -

7. Threats: now future pop decline

The montane forests of Sulawesi are relatively intact and have little human use at this time.

8. Trade:

Parts in Trade:

Effects:

9. Population (global) unknown

Subpopulations unknown

Mature

Avg age parents unknown

10. Population trends Unknown

Past Decline % Period

With continued habitat loss, populations are predicted to decline.

Estimates of tarsier densities vary greatly. Sussman (1999) cites the following tarsier population densities: T. bancanus borneanus 80/sq. km (Niemitz 1979); T. b. borneanus 15-20/sq. km (Crompton and Andau 1987); T. spectrum 30-100/sq. km (MacKinnon and MacKinnon 1980); T. spectrum 156/sq. km (Gursky 1997); T. dianae 200-500/sq. km (Stefan Merker pers. Comm.). Regardless of the value used, global population size is often large and not the primary factor that affects the conservation status of tarsier taxa. For simplicity, an estimated density of 50 animals per square kilometer was used for each tarsier taxon.

11. Data Source

DATA SOURCE/QUALITY: museum record; literature; - This species is known by only three specimens in museums. Available information on montane forests of Sulawesi are that the habitat of this animal are intact.

12. Recent Field Studies

none ever

13. Status

IUCN CATEGORY (Global): Data deficient

CITES: appendix II. - NATL WILDLIFE LEGISLATION: protected. - PROTECTED AREA: Lore Lindu National Park, Latimojong Mtns Reserve. - PROTECTED PLAN: none. - NOTES ON STATUS: no data what so ever.

RED LIST CATEGORY: Data deficient

IUCN-BASIS:

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history;PHVA NOTES: pending

15. Management Recommendations

monitoring; public awareness;

16. Captive Breeding / Cultivation Recommendations

education; research;

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

20. GENERAL COMMENTS: Tarsiers have never formed successful breeding colonies in captivity in spite of numerous efforts in North America and Europe. The conservation of all tarsier taxa, therefore, relies entirely on wild population management. All known tarsier taxa save a single subspecies exist only in Indonesia and the Philippines, countries that are currently experiencing difficulty protecting habitat. Increased efforts should be made to identify the number of species and their distributions, as well as initiating small scale captive breeding programs in order to develop captive techniques to propagate tarsiers should this become necessary.

21. SOURCES: A taxonomy of the Asian Primates. (in prep). A working document from the workshop "Primate Taxonomy for the New Millennium". (R. Mittermier, D. Melnick, J. Oates, organizers). Compiled by : D. Brandon- Jones, A. Eudey, T. Geissmann, D. J. Melnick, J.C. Morales, M. Shekelle, Caro-Beth Stewart.

Groves 2001. Getting to know the Tarsiers: Yesterday, Today, and Tomorrow. International Society of Primatologists, 14th Congress, Adelaide, Australia. January 7-12, 2001.

Hill, W. C. O. 1995. Primates: Comparative Anatomy and Taxonomy. II. Haplorhini: Tarsioidea. Edinburgh, University Press, Edinburgh.

Leksono SM., Masala Y., Shekelle M. 1997. Tarsiers and agriculture: thoughts on an integrated management plan. Sulawesi Primate Newsletter 4:2 pp. 11-13.

Musser GG, Dagasto M (1987) The identity of Tarsius pumilus, a pygny species endemic to the montane mossy forests of Central Sulawesi. American Museum Novitates (2867):1-53.

Maryanto I, Yani M. (in prep)

Niemitz C. 1984. The Biology of Tarsiers. New York: Gustav Fischer Verlag.

Shekelle M., Leksono SM., Ichwan LLS., Masala Y. 1997. The natural history of tarsiers of North and Central Sulawesi. Sulawesi Primate Newsletter 4:2 pp 4-11.

Sussman RW. 1999. Primate Ecology and Social Structure. Needham Heights, MA, USA: Pearson Custom Publishing.

22. COMPILERS: Myron Shekelle, Center for Biodiversity and Conservation Studies, University of Indonesia
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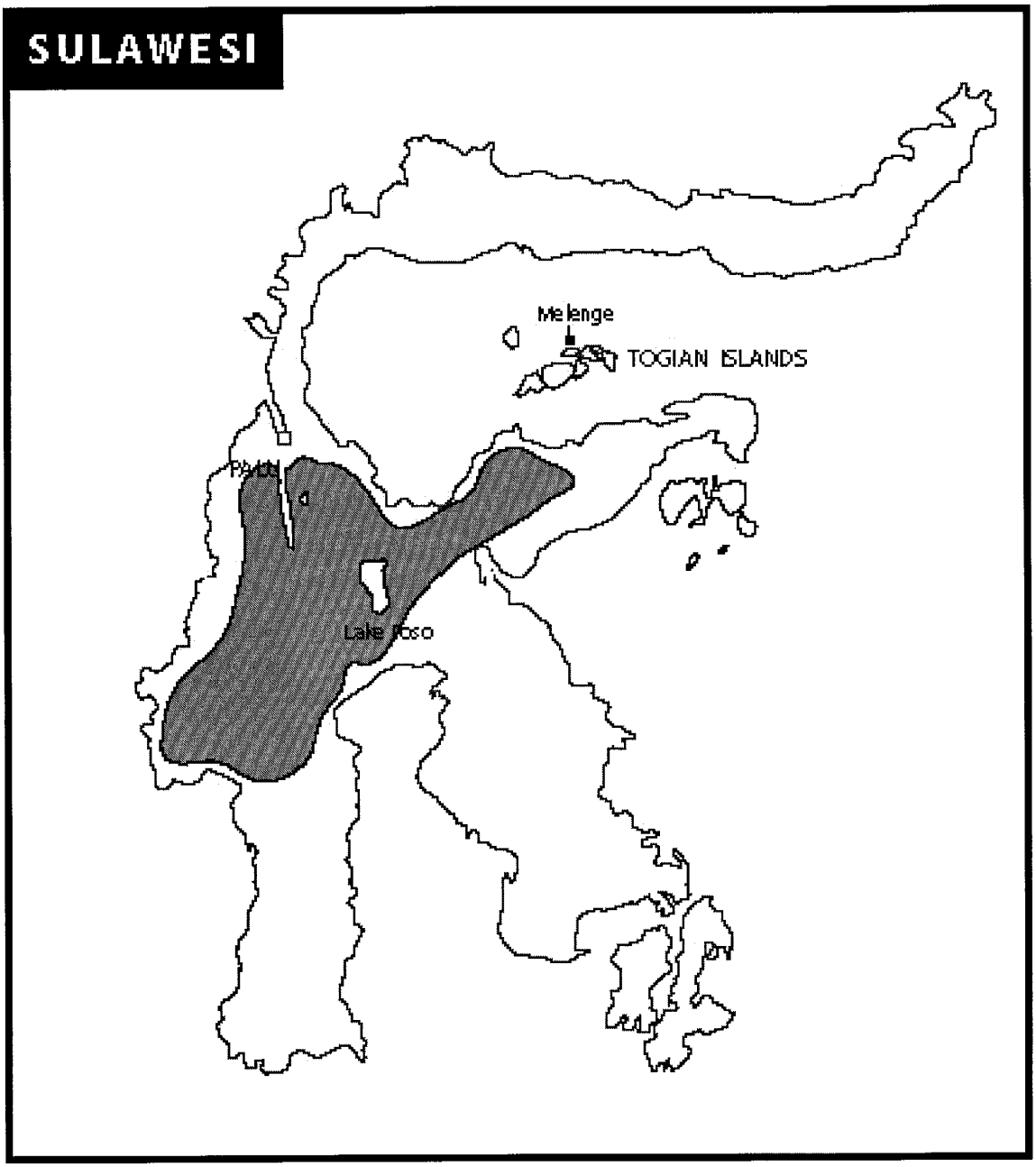
Sharmy Prastiti, Taman Safari Indonesia
Yakob Muskita, University of Indonesia
Darmawan Liswanto, Titian Foundation
Ermayanti, Conservation International, Indonesia



Tarsius pumilus

Indonesian Primate Camp

Tarsius sangirensis — Sangihe tarsier

Taxonomy

1. Scientific Name / Ambiguities | Authority | Date

Tarsius sangirensis | Meyer | 1897

FAMILY: Tarsiidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

higo
Sangihe Tarsier
senggasi/sengkasi Sangihe

Recent taxonomic research indicates that several nomenclatural errors have been made and perpetuated in tarsier taxonomy. It is likely that taxonomic revisions underway will result in major modifications to the existing taxonomy (Groves 2001).

2. Distribution of the Taxon Indonesia

- HABITAT: primary and secondary tropical forests and a variety of other habitats including mangrove and "Kebun " (mixed forest garden). - NICHE: understory specialist spending a majority of the time 4 meters or less from the ground. Sea level to mountaintops (1320 m).. - HISTORICAL DISTRIBUTION: unkown. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Sangihe-Talaud, North Sulawesi, Indonesia. - MIGRATION REGIONS: ?.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km. - OCCURRENCE NOTES: 300; Estimated extent of occurrence is based on visual estimates of distribution maps in Hill 1955 and Niemitz 1984..

OCCUPANCY AREA: 11-500 sq km. - OCCUPANCY NOTES: 60; Estimated area of occupancy is based on visual estimates of remaining forest cover based on satellite maps provided to the compilers. Where possible, these estimates were supported by firsthand knowledge of participants..

5. Number of Locations or Subpopulations

- NO. LOCATIONS: 1 (Sangir Island).

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%. - PREDICTED DURATION OF DECLINE: 1.

NOTES ON QUALITY: -

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation		Y second	Y
loss of habitat	Y	first	Y
pesticides	Y	third	Y
trade for market or medicine		fourth	
NATURAL/INDUCED			
predation by exotics	Y		
CATASTROPHIC			
volcano		Y	

Political refugees from the violence in North Maluku (e.g. Halmahera) are causing increased pressure on natural resources.

8. Trade:

Trade described as local; domestic; international

Parts in Trade: Live animal

Effects:

9. Population (global) 3,000

Subpopulations unknown
Mature < 2,500
Avg age parents unknown

10. Population trends Declining

Past Decline % <20% Period 5

Future decline of <20% is predicted for a period of

With continued habitat loss, populations are predicted to decline. Estimates of tarsier densities vary greatly. Sussman (1999) cites the following tarsier population densities: T. bancanus borneanus 80/sq. km (Niemitz 1979); T. b. borneanus 15-20/sq. km (Crompton and Andau 1987); T. spectrum 30-100/sq. km (MacKinnon and MacKinnon 1980); T. spectrum 156/sq. km (Gursky 1997); T. dianae 200-500/sq. km (Stefan Merker pers. Comm.). Regardless of the value used, global population size is often large and not the primary factor that affects the conservation status of tarsier taxa. For simplicity, an estimated density of 50 animals per square kilometer was used for each tarsier taxon.

11. Data Source

DATA SOURCE/QUALITY: field study; literature; - These are best-guess estimates based on a rough estimate of the land area of Sangihe, yielding an extent of occurrence of 300 sq. km. Published reports indicate that very little forest remains on Sangihe. We liberally estimate that 20% of Sangihe is suitable habitat for tarsiers, yielding an area of occurrence of 60 sq. km. These findings are supported by field work conducted in Sangihe by Myron Shekelle in 1995 and 1997.

12. Recent Field Studies

Myron Shekelle, Sangihe Island, December 1995, July 1997, taxonomy

13. Status

IUCN CATEGORY (Global): Data deficient

IUCN CATEGORY (National): Data deficient

CITES: appendix II. - NATL WILDLIFE LEGISLATION: protected. - PROTECTED AREA: none. - PROTECTED PLAN: none.

RED LIST CATEGORY: Endangered

IUCN-BASIS: B1a,b,c

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history; limiting factor research; trade;PHVA NOTES: 14 A pending

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; work in local communities;

16. Captive Breeding / Cultivation Recommendations

education; research;

sp

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: Initiate ex situ Program within 3 years,.

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

20. GENERAL COMMENTS: Tarsiers have never formed successful breeding colonies in captivity in spite of numerous efforts in North

America and Europe. The conservation of all tarsier taxa, therefore, relies entirely on wild population management. All known tarsier taxa save a single subspecies exist only in Indonesia and the Philippines, countries that are currently experiencing difficulty protecting habitat. Increased efforts should be made to identify the number of species and their distributions, as well as initiating small scale captive breeding programs in order to develop captive techniques to propagate tarsiers should this become necessary.

21. SOURCES: A taxonomy of the Asian Primates. (in prep). A working document from the workshop "Primate Taxonomy for the New Millennium". (R. Mittermier, D. Melnick, J. Oates, organizers). Compiled by : D. Brandon- Jones, A. Eudey, T. Geissmann, D. J. Melnick, J.C. Morales, M. Shekelle, Caro-Beth Stewart.

Groves 2001. Getting to know the Tarsiers: Yesterday, Today, and Tomorrow. International Society of Primatologists, 14th Congress, Adelaide, Australia. January 7-12, 2001.

Hill, W. C. O. 1995. Primates: Comparative Anatomy and Taxonomy. II. Haplorhini: Tarsioidea. Edinburgh, University Press, Edinburgh.

Niemitz C. 1984. The Biology of Tarsiers. New York: Gustav Fischer Verlag.

Sussman RW. 1999. Primate Ecology and Social Structure. Needham Heights, MA, USA: Pearson Custom Publishing.

Leksono SM, Masala Y, Shekelle M. (1997) Tarsiers and agriculture: thoughts on an integrated management plan. Sulawesi Primate Newsletter 4:2 p. 11-13

Shekelle, M., S.M. Leksono, L.L.S. Ichwan and Y. Masala 1997. The natural history of the tarsiers of North and Central Sulawesi. Sulawesi Primate Newsletter, 4(2):4-11.

22. COMPILERS: Myron Shekelle, Center for Biodiversity and Conservation Studies, University of Indonesia
Subeno, Gajah Mada University,
Mohammed Indrawan, YABSHI
Banjar Y. Laban, "Balai" Lore Lindu National Park
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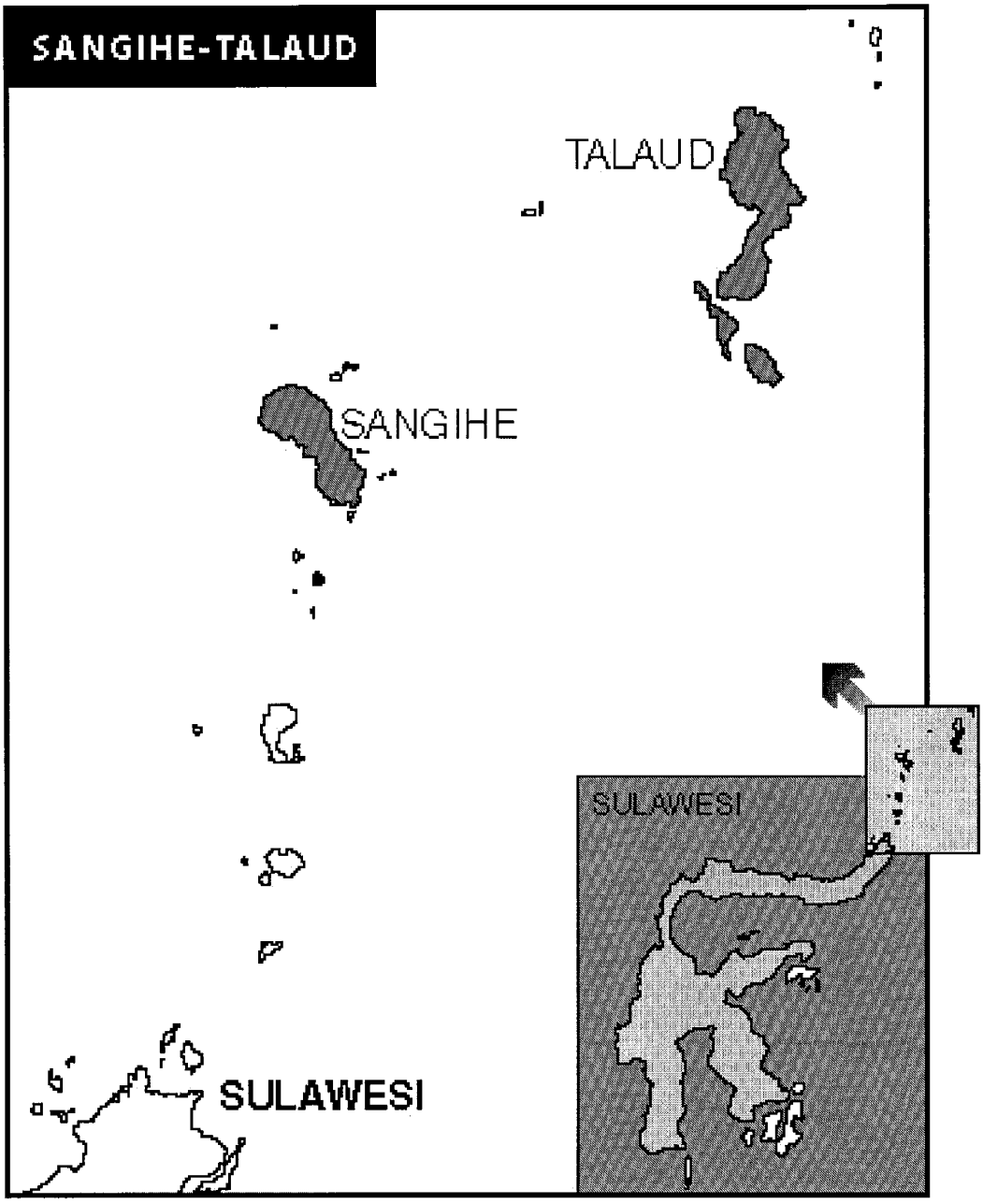


Tarsius sangirensis

Indonesian Primate Camp

Tarsius spectrum — Spectral tarsier

Taxonomy

1. Scientific Name / Ambiguities	Authority	Date
Tarsius spectrum	Pallas	1778
type locality ambiguous, Makassar?	Hill	1955

FAMILY: Tarsiidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Spectral tarsier English

Following Groves, 2001, we accept Hill's designation of Makassar as the type locality.

Recent taxonomic research indicates that several nomenclatural errors have been made and perpetuated in tarsier taxonomy. It is likely that taxonomic revisions underway will result in major modifications to the existing taxonomy (Groves 2001).

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical forests (primary and secondary), "kebun" (i.e. mixed species forest gardens), mangrove. - NICHE: understory specialist (mostly below 4 meters), sea level to 1100-1500 m (?). - HISTORICAL DISTRIBUTION: unkown. - CURRENT COUNTRIES: Indonesia, South Sulawesi. - GEOGRAPHIC EXTENT: area around Kotamadya Makassar, South Sulawesi, Indonesia.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 5,001 - 20,000 sq km. - OCCURRENCE NOTES: 5000; Estimated extent of occurrence is based on visual estimates of distribution maps in Hill 1955 and Niemitz 1984..

OCCUPANCY AREA: > 2,001 sq km. - OCCUPANCY NOTES: 500; Estimated area of occupancy is based on visual estimates of remaining forest cover based on satellite maps provided to the compilers. Where possible, these estimates were supported by firsthand knowledge of participants..

5. Number of Locations or Subpopulations

6. Habitat status:

Fragmented. - NOTES ON FRAGMENTATION: patchy forests in South Sulawesi.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%. - PRIMARY CAUSE OF CHANGE: forest conversion for agriculture, shrimp cultivation.

CHANGES IN QUALITY: Unknown.NOTES ON QUALITY: -

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y	second	
loss of habitat	Y	first	

Greatest likely threats to Eastern tarsiers are from clearing activities that remove potential nest sites, and pesticide use

8. Trade:

Parts in Trade:

Effects:

9. Population (global) 25,000

Subpopulations unknown
Mature > 10,000
Avg age parents unknown

10. Population trends Declining

Past Decline % <20% Period 5 years

Future decline of <20% is predicted for a period of 5

With continued habitat loss, populations are predicted to decline. Estimates of tarsier densities vary greatly. Sussman (1999) cites the following tarsier population densities: T. bancanus borneanus 80/sq. km (Niemitz 1979); T. b. borneanus 15-20/sq. km (Crompton and Andau 1987); T. spectrum 30-100/sq. km (MacKinnon and MacKinnon 1980); T. spectrum 156/sq. km (Gursky 1997); T. dianae 200-500/sq. km (Stefan Merker pers. Comm.). Regardless of the value used, global population size is often large and not the primary factor that affects the conservation status of tarsier taxa. For simplicity, an estimated density of 50 animals per square kilometer was used for each tarsier taxon.

11. Data Source

DATA SOURCE/QUALITY: informal sightings; literature; - Very little data from this part of Sulawesi. We assume that densities are similar to other regions of Sulawesi that have been censused.

12. Recent Field Studies

Myron Shekelle, Bantimurung (South Sulawesi), September 2000, Taxonomy
Alexandra Nietsch, Bantimurung (South Sulawesi), July 2000, Taxonomy

13. Status

IUCN CATEGORY (Global): DD

CITES: appendix II. - NATL WILDLIFE LEGISLATION: "protected". - PROTECTED AREA: Bantimurung, Pattanuang, Kareanta. - PROTECTED PLAN: none. - NOTES ON STATUS: extent of occurrence less than 20,000 km severely fragmented, continuing decline.

RED LIST CATEGORY: Vulnerable

IUCN-BASIS: B1a,b

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history; limiting factor research; trade;

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; work in local communities;

16. Captive Breeding / Cultivation Recommendations

education; research;

17. Facilities: O'Dede Bird and Water Park

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	3	3

SPECIES MANAGEMENT RECOMMENDED FOR RANGE COUNTRIES: Indonesia

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: Pending recommendations from PHVA wkshop.

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

20. GENERAL COMMENTS: Tarsiers have never formed successful breeding colonies in captivity in spite of numerous efforts in North America and Europe. The conservation of all tarsier taxa, therefore, relies entirely on wild population management. All known tarsier taxa save a single subspecies exist only in Indonesia and the Philippines,

countries that are currently experiencing difficulty protecting habitat. Increased efforts should be made to identify the number of species and their distributions, as well as initiating small scale captive breeding programs in order to develop captive techniques to propagate tarsiers should this become necessary.

21. SOURCES: A taxonomy of the Asian Primates. (in prep). A working document from the workshop "Primate Taxonomy for the New Millennium". (R. Mittermier, D. Melnick, J. Oates, organizers). Compiled by : D. Brandon- Jones, A. Eudey, T. Geissmann, D. J. Melnick, J.C. Morales, M. Shekelle, Caro-Beth Stewart.

Groves 2001. Getting to know the Tarsiers: Yesterday, Today, and Tomorrow. International Society of Primatologists, 14th Congress, Adelaide, Australia. January 7-12, 2001.

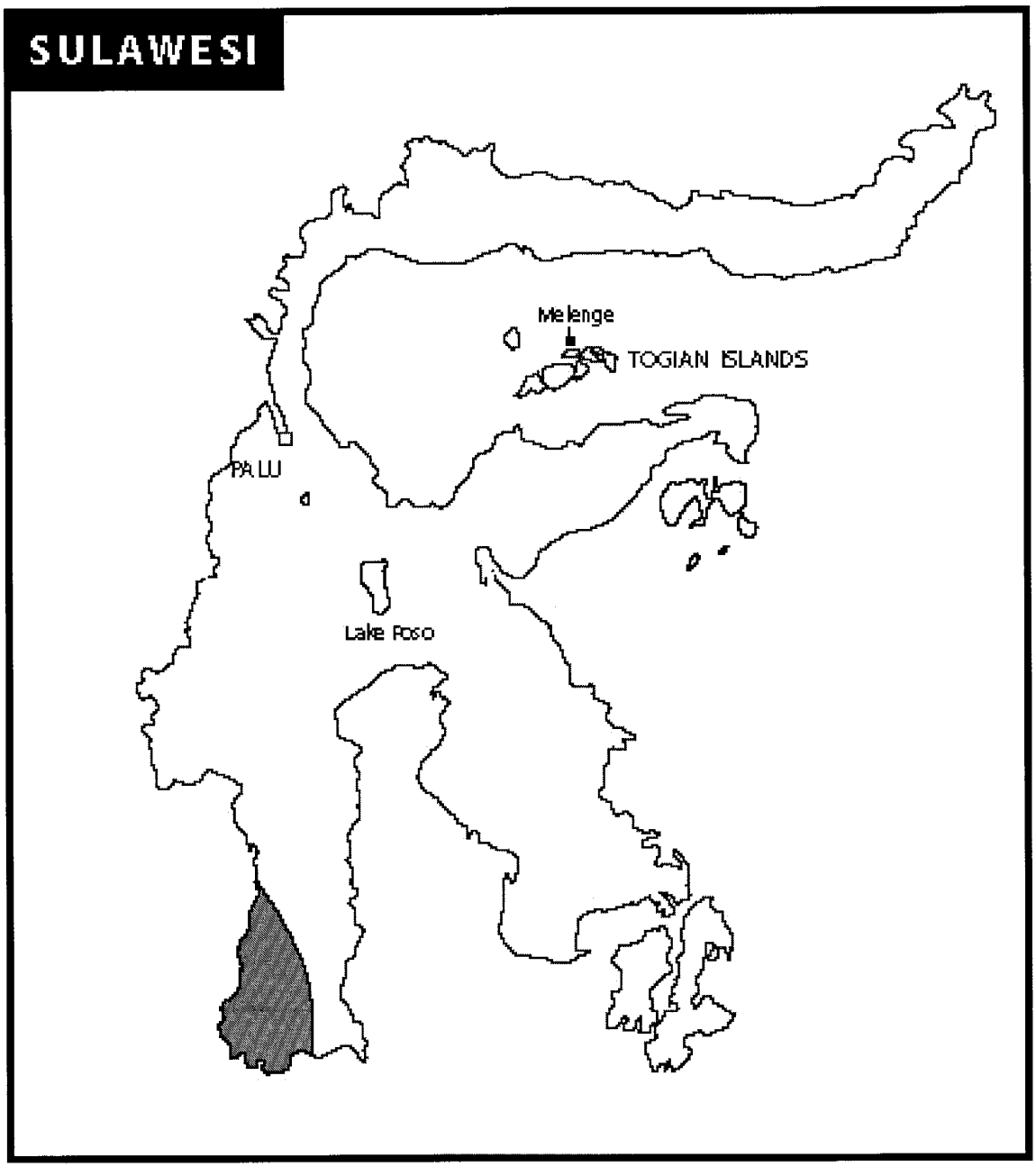
Hill, W. C. O. 1995. Primates: Comparative Anatomy and Taxonomy. II. Haplorhini: Tarsioidea. Edinburgh, University Press, Edinburgh.

Leksono, S., Masala, Y., Shekelle, M. 1997. Tarsiers and agriculture: thoughts on integrated management plan. Sulawesi Primate Newsletter 4 (2): 11 - 13.

Niemitz C. 1984. The Biology of Tarsiers. New York: Gustav Fischer Verlag.

Sussman RW. 1999. Primate Ecology and Social Structure. Needham Heights, MA, USA: Pearson Custom Publishing.

22. COMPILERS: Myron Shekelle, Center for Biodiversity and Conservation Studies, University of Indonesia
Subeno, Gajah Mada University,
Mohammed Indrawan, YABSHI
Banjar Y. Laban, "Balai" Lore Lindu National Park
Sharmy Prastiti, Taman Safari Indonesia
Yakob Muskita, University of Indonesia
Darmawan Liswanto, Titian Foundation
Ermayanti, Conservation International, Indonesia



Tarsius spectrum

Indonesian Primate Camp

Tarsius sp 1 — Minahasa tarsier

Taxonomy

1. Scientific Name / Ambiguities	Authority	Date
Tarsius sp 1		
Manado acoustic form	Shekelle et al	1997
Manado acoustic form	MacKinnon and MacKinnon	1980
Tarsius spectrum	Niemitz	1984

FAMILY: Tarsiidae LEVEL: Species
ORDER: Primates
CLASS: Mammalia

COMMON NAMES:

Manado acoustic form
Tangkasi Minahasa

Groves (2001), following Hill (1955), reserves the use of Tarsius spectrum for tarsiers from Makassar. Groves (1998, in press) finds morphometric variation between tarsiers from Minahasa and Makassar that is consistent with specific variation. MacKinnon and MacKinnon (1980) identified tarsiers from Manado to Gorontalo as having geographically-structured variation in their vocalizations that was consistent with that which would be found in a species. Shekelle et al (2001) presented results from a variety of morphologic, acoustic, biogeographic and genetic studies that were consistent with the hypothesis that tarsier acoustic groups are taxonomically distinct and recommended naming 9 new taxa of Eastern tarsiers. These taxa will be named by one or more of the following authors: Colin Groves, Alexandra Nietsch, and Myron Shekelle.

Recent taxonomic research indicates that several nomenclatural errors have been made and perpetuated in tarsier taxonomy. It is likely that taxonomic revisions underway will result in major modifications to the existing taxonomy (Groves 2001).

2. Distribution of the Taxon

Indonesia

- HABITAT: tropical forest, primary and secondary forest, kebun (mixed forest garden). - NICHE: understory specialist spending a majority of the time 4 m or less from the ground, sea level to over 1000 m. - HISTORICAL DISTRIBUTION: unknown. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: North Sulawesi and Gorontalo, Indonesia.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: > 20,000 sq km. - OCCURRENCE NOTES: 15,000; Estimated extent of occurrence is based on visual estimates of distribution maps in Hill 1955 and Niemitz 1984..

OCCUPANCY AREA: > 2,001 sq km. - OCCUPANCY NOTES: 6000; Estimated area of occupancy is based on visual estimates of remaining forest cover based on satellite maps provided to the compilers. Where possible, these estimates were supported by firsthand knowledge of participants..

5. Number of Locations or Subpopulations

- NO. LOCATIONS: unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%.- DURING HOW MANY YEARS? 5. - PRIMARY CAUSE OF CHANGE: forest conversion, logging, legal and illegal mining.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - over-exploitation of non-timber forest products

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
habitat	Y	second	Y
fragmentation			
loss of habitat	Y	first	
pesticides	Y	third	Y
trade for market or medicine	Y	fourth	
NATURAL/INDUCED			
predation by exotics	Y		
CATASTROPHIC			
fire	Y		Y

illegal gold mining is an increasing problem in the region

forest fires recnetly affected 40% of Tangkoko Nature Reserve

political refugees from North Maluku (e.g. Halmahera) are causing increased stress on natural resources

8. Trade:

Trade described as local; domestic; international

Parts in Trade: Live animal

Effects: trade in live animals for pets is a particular problem in this region

9. Population (global) 300,000

Subpopulations unknown
Mature > 10,000
Avg age parents unknown

10. Population trends Declining

Past Decline % <20% Period 5 years

Future decline of <20% is predicted for a period of

With continued habitat loss, populations are predicted to decline. Estimates of tarsier densities vary greatly. Sussman (1999) cites the following tarsier population densities: T. bancanus borneanus 80/sq. km (Niemitz 1979); T. b. borneanus 15-20/sq. km (Crompton and Andau 1987); T. spectrum 30-100/sq. km (MacKinnon and MacKinnon 1980); T. spectrum 156/sq. km (Gursky 1997); T. dianae 200-500/sq. km (Stefan Merker pers. Comm.). Regardless of the value used, global population size is often large and not the primary factor that affects the conservation status of tarsier taxa. For simplicity, an estimated density of 50 animals per square kilometer was used for each tarsier taxon.

11. Data Source

DATA SOURCE/QUALITY: census monitoring; indirect information; field study; informal sightings; literature; - Tarsiers have been censused at Tangkoko and densities range from 50-150 animals per sq. km. We offer a very rough estimate of the extent of occurrence: 15,000 sq. km. Based on satelite maps, we offer a very rough estimate that 40% of that area is suitable for tarsier populations, yielding an area of occurrence of 6000 sq. km. Using the conservative estimate of 50 animals per sq. km., and extrapolating to the area of occurrence, we estimate a global population of 300,000 animals

12. Recent Field Studies

Sharon Gurskey, Tangkoko, 1994-1999 Behaviour
Myron Shekelle, Tangkoko, 1995-1997 taxonomy
Myron Shekelle, Ratatotok, 1995-1996 taxonomy
Myron Shekelle, Molibagu, 1995-1996 taxonomy
Myron Shekelle, Suwawa, 1995-1996 taxonomy

13. Status

IUCN CATEGORY (Global): not listed

CITES: Appendix II. - NATL WILDLIFE LEGISLATION: protected. - PROTECTED AREA: Tangkoko-Batuanggas-Dua Saudara Nature

Reserve, Bogani Nani Wartabone National Park, and many others. - PROTECTED PLAN: none. - NOTES ON STATUS: widespread and abundant, many protected areas large and small.

RED LIST CATEGORY: Lower risk - least concern

IUCN-BASIS:

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history; trade; - OTHER RESEARCH: Integrated pest management. PHVA NOTES: pending

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; work in local communities;

16. Captive Breeding / Cultivation Recommendations

education; research;

Further inquiry into the illegal pet trade in this taxon is warranted

17. Facilities: Taman Safari

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	7	7

COORDINATED SPECIES MANAGEMENT PROGRAM exists in: none.

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: Initiate ex situ Program within 3 years.

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

20. GENERAL COMMENTS: Tarsiers have never formed successful breeding colonies in captivity in spite of numerous efforts in North America and Europe. The conservation of all tarsier taxa, therefore, relies entirely on wild population management. All known tarsier taxa save a single subspecies exist only in Indonesia and the Philippines, countries that are currently experiencing difficulty protecting habitat. Increased efforts should be made to identify the number of species and their distributions, as well as initiating small scale captive breeding programs in order to develop captive techniques to propagate tarsiers should this become necessary.

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Leksono SM., Masala Y., Shekelle M. 1997. Tarsiers and agriculture: thoughts on an integrated management plan. Sulawesi Primate Newsletter 4:2 pp. 11-13.

Shekelle M., Leksono SM., Ichwan LLS., Masala Y. 1997. The natural history of tarsiers of North and Central Sulawesi. Sulawesi Primate Newsletter 4:2 pp 4-11.

Shekelle M., Morales JC., Melnick D. 2001. Genetic and acoustic evolution among Eastern tarsiers of northern and centeral Sulawesi. International Society of Primatologists, 14th Congress, Adelaide Australia. January 7-12, 2001.

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Sussman RW. 1999. Primate Ecology and Social Structure. Needham Heights, MA, USA: Pearson Custom Publishing.

22. COMPILERS: Myron Shekelle, Center for Biodiversity and Conservation Studies, University of Indonesia
Subeno, Gajah Mada University,
Mohammed Indrawan, YABSHI
Banjar Y. Laban, "Balai" Lore Lindu National Park
Sharmy Prastiti, Taman Safari Indonesia
Yakob Muskita, University of Indonesia
Darmawan Liswanto, Titian Foundation
Ermayanti, Conservation International, Indonesia

Indonesian Primate Camp

Tarsius sp 2 — Gorontalo tarsier

Taxonomy

1. Scientific Name / Ambiguities	Authority	Date
Tarsius sp 2		
Gorontalo acoustic form	MacKinnon and MacKinnon	1980
Libuo acoustic form	Shekelle et al	1997
Tarsius spectrum	Niemitz	1984

FAMILY: Tarsiidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

mimito Gorontalo

Recent taxonomic research indicates that several nomenclatural errors have been made and perpetuated in tarsier taxonomy. It is likely that taxonomic revisions underway will result in major modifications to the existing taxonomy (Groves 2001).

2. Distribution of the Taxon Indonesia

- HABITAT: tropical forest, primary and secondary, "kebun" (mixed forest garden), mangrove. - NICHE: poorly known, refer to Tarsius sp 1 (I.e.understory specialist spending a majority of the time 4 m or less from the ground, sea level to over 1000 m). - HISTORICAL DISTRIBUTION: unknown. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Gorontalo, Tanjung Panjang Reserve.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 5,001 - 20,000 sq km. - OCCURRENCE NOTES: 7500; Estimated extent of occurrence is based on visual estimates of distribution maps in Hill 1955 and Niemitz 1984..

OCCUPANCY AREA: > 2,001 sq km. - OCCUPANCY NOTES: 5000; Estimated area of occupancy is based on visual estimates of remaining forest cover based on satellite maps provided to the compilers. Where possible, these estimates were supported by firsthand knowledge of participants..

5. Number of Locations or Subpopulations

- NO. LOCATIONS: unknown.

6. Habitat status:

Not known.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%.- DURING HOW MANY YEARS? 5. - PRIMARY CAUSE OF CHANGE: forest conversion, logging.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - over-explotation of non-timber forest resources

7. Threats:	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y	second	
loss of habitat	Y	first	
pesticides	Y	third	Y
trade for market or medicine	Y	fourth	Y
NATURAL/INDUCED			
predation by exotics	Y		

8. Trade:

Parts in Trade:

Effects:

9. Population (global) 250,000

Subpopulations 1
Mature > 10,000
Avg age parents unknown

10. Population trends Declining

Past Decline % <20% Period 5

Future decline of <20% is predicted for a period of 5 years

With continued habitat loss, populations are predicted to decline. Estimates of tarsier densities vary greatly. Sussman (1999) cites the following tarsier population densities: T. bancanus borneanus 80/sq. km (Niemitz 1979); T. b. borneanus 15-20/sq. km (Crompton and Andau 1987); T. spectrum 30-100/sq. km (MacKinnon and MacKinnon 1980); T. spectrum 156/sq. km (Gursky 1997); T. dianae 200-500/sq. km (Stefan Merker pers. Comm.). Regardless of the value used, global population size is often large and not the primary factor that affects the conservation status of tarsier taxa. For simplicity, an estimated density of 50 animals per square kilometer was used for each tarsier taxon.

11. Data Source

DATA SOURCE/QUALITY: field study; literature; - These are best-guess estimates based on a very rough estimate of extent of occurrence of 7,500 sq. km. Based upon satelite maps we estimate that roughly 2/3 of that area is suitable for tarsiers yielding an estimated area of occurrence of 5,000 sq. km. We use an estimate of 50 tarsiers per sq. km. based upon field studies of related taxa, yielding a global population of 250,000 animals.

12. Recent Field Studies

MacKinnon and MacKinnon, Gorontalo, Libuo/Panua, Tanjung Panjang, 1970's, ecology
Myron Shekelle, Libuo/Panua, 1995, taxonomy

13. Status

IUCN CATEGORY (Global): unlisted

CITES: Appendix II. - NATL WILDLIFE LEGISLATION: protected. - PROTECTED AREA: Tanjun Panjang Reserve, Panua. - PROTECTED PLAN: none.

RED LIST CATEGORY: Lower risk - near threatened

IUCN-BASIS:

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history; trade;PHVA NOTES: pending

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; limiting factor; work in local communities;

16. Captive Breeding / Cultivation Recommendations

education; research;

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

20. GENERAL COMMENTS: Tarsiers have never formed successful breeding colonies in captivity in spite of numerous efforts in North America and Europe. The conservation of all tarsier taxa, therefore, relies entirely on wild population management. All known tarsier taxa

save a single subspecies exist only in Indonesia and the Philippines, countries that are currently experiencing difficulty protecting habitat. Increased efforts should be made to identify the number of species and their distributions, as well as initiating small scale captive breeding programs in order to develop captive techniques to propagate tarsiers should this become necessary.

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Shekelle M., Morales JC., Melnick D. 2001. Genetic and acoustic evolution among Eastern tarsiers of northern and centeral Sulawesi. International Society of Primatologists, 14th Congress, Adelaide Australia. January 7-12, 2001.

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Banjar Y. Laban, "Balai" Lore Lindu National Park
Sharmy Prastiti, Taman Safari Indonesia
Yakob Muskita, University of Indonesia
Darmawan Liswanto, Titian Foundation
Ermayanti, Conservation International, Indonesia

Indonesian Primate Camp

Tarsius sp 3 — Sejoli tarsier

Taxonomy

1. Scientific Name / Ambiguities	Authority	Date
Tarsius sp 3		
Gorontalo acoustic form	MacKinnon and MacKinnon	1980
Sejoli Acoustic form	Shekelle et al	1997
Tarsius spectrum	Niemitz	1984

FAMILY: Tarsiidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Recent taxonomic research indicates that several nomenclatural errors have been made and perpetuated in tarsier taxonomy. It is likely that taxonomic revisions underway will result in major modifications to the existing taxonomy (Groves 2001).

2. Distribution of the Taxon Indonesia

- HABITAT: tropical forests (primary and secondary) Kebun (mixed forest garden). - NICHE: poorly known, compare with Minahasa tarsier (I.e. understory specialist mostly below 4 m sea level to over 1000 m. - HISTORICAL DISTRIBUTION: unknown. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Central Sulawesi, Gorontalo.

3.-4. Occurrence and Occupancy in_around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km. - OCCURRENCE NOTES: 2500; Estimated extent of occurrence is based on visual estimates of distribution maps in Hill 1955 and Niemitz 1984..

OCCUPANCY AREA: 501-2,000 sq km. - OCCUPANCY NOTES: 1000; Estimated area of occupancy is based on visual estimates of remaining forest cover based on satellite maps provided to the compilers. Where possible, these estimates were supported by firsthand knowledge of participants..

5. Number of Locations or Subpopulations

- NO. LOCATIONS: unknown.

6. Habitat status:

Not known.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%.- DURING HOW MANY YEARS? 5. - PRIMARY CAUSE OF CHANGE: forest conversion for agriculture, logging.

NOTES ON QUALITY: - over exploitation of non-timber forest resources

7. Threats:	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y	second	
loss of habitat	Y	first	Y
pesticides	Y	third	Y
NATURAL/INDUCED			
predation by exotics	Y		

8. Trade:

Parts in Trade:

Effects:

9. Population (global) 50,000

Subpopulations unknown
Mature > 10,000
Avg age parents unknown

10. Population trends Declining

Past Decline % <20% Period 5

With continued habitat loss, populations are predicted to decline. Estimates of tarsier densities vary greatly. Sussman (1999) cites the following tarsier population densities: T. bancanus borneanus 80/sq. km (Niemitz 1979); T. b. borneanus 15-20/sq. km (Crompton and Andau 1987); T. spectrum 30-100/sq. km (MacKinnon and MacKinnon 1980); T. spectrum 156/sq. km (Gursky 1997); T. dianae 200-500/sq. km (Stefan Merker pers. Comm.). Regardless of the value used, global population size is often large and not the primary factor that affects the conservation status of tarsier taxa. For simplicity, an estimated density of 50 animals per square kilometer was used for each tarsier taxon.

11. Data Source

DATA SOURCE/QUALITY: field study; literature; - A best-guess estimate based upon inferred distribution around Sejoli resulting in extent of occurrence of 2,500 sq. km. Satelite maps of remaining forests were used to guess the remaining habitat suitable for tarsiers at 1000 sq. km. An estimate of 50 tarsiers per sq. km. was used to estimate global population.

12. Recent Field Studies

Myron Shekelle Sejoli September 1996 Taxonomy

13. Status

IUCN CATEGORY (Global): unlisted

CITES: appendix II. - NATL WILDLIFE LEGISLATION: protected. - PROTECTED AREA: Tinombala Nature Reserve. - PROTECTED PLAN: none.

RED LIST CATEGORY: Lower risk - near threatened

IUCN-BASIS:

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history; trade;PHVA NOTES: pending

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; work in local communities; integrated pest management

16. Captive Breeding / Cultivation Recommendations

education; research;

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

20. GENERAL COMMENTS: Tarsiers have never formed successful breeding colonies in captivity in spite of numerous efforts in North America and Europe. The conservation of all tarsier taxa, therefore, relies entirely on wild population management. All known tarsier taxa save a single subspecies exist only in Indonesia and the Philippines, countries that are currently experiencing difficulty protecting habitat. Increased efforts should be made to identify the number of species and their distributions, as well as initiating small scale captive breeding programs in order to develop captive techniques to propagate tarsiers should this become necessary.

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Hill, W. C. O. 1995. Primates: Comparative Anatomy and Taxonomy. II. Haplorhini: Tarsioidea. Edinburgh, University Press, Edinburgh.

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Shekelle M., Leksono SM., Ichwan LLS., Masala Y. 1997. The natural history of tarsiers of North and Central Sulawesi. Sulawesi Primate Newsletter 4:2 pp 4-11.

Shekelle M., Morales JC., Melnick D. 2001. Genetic and acoustic evolution among Eastern tarsiers of northern and centeral Sulawesi. International Society of Primatologists, 14th Congress, Adelaide Australia. January 7-12, 2001.

Niemitz C. 1984. The Biology of Tarsiers. New York: Gustav Fischer Verlag.

Sussman RW. 1999. Primate Ecology and Social Structure. Needham Heights, MA, USA: Pearson Custom Publishing.

Shekelle et al. 1997

22. COMPILERS: Myron Shekelle, Center for Biodiversity and Conservation Studies, University of Indonesia
Subeno, Gajah Mada University,
Mohammed Indrawan, YABSHI
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Sharmy Prastiti, Taman Safari Indonesia
Yakob Muskita, University of Indonesia
Darmawan Liswanto, Titian Foundation
Ermayanti, Conservation International, Indonesia

Indonesian Primate Camp

Tarsius sp 4 — Tinombo tarsier

Taxonomy

1. Scientific Name / Ambiguities	Authority	Date
Tarsius sp 4		
Libuo acoustic form	MacKinnon and MacKinnon	1980
Tarsius spectrum		
Tinombo Acoustic form	Shekelle et al	1997

FAMILY: Tarsiidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Recent taxonomic research indicates that several nomenclatural errors have been made and perpetuated in tarsier taxonomy. It is likely that taxonomic revisions underway will result in major modifications to the existing taxonomy (Groves 2001).

2. Distribution of the Taxon

Indonesia

- HABITAT: tropical forests (primary and secondary) Kebun (mixed forest garden). - NICHE: poorly known, refer to Minahasa tarsier (I.e. understory specialist mostly below 4 m sea level to over 1000 m. - HISTORICAL DISTRIBUTION: unknown. - CURRENT COUNTRIES: Indonesia, Central Sulawesi, near the village Tinombo. - GEOGRAPHIC EXTENT: Indonesia, Central Sulawesi, Kabupaten Moutong-Parigi.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km. - OCCURRENCE NOTES: 2500; Estimated extent of occurrence is based on visual estimates of distribution maps in Hill 1955 and Niemitz 1984..

OCCUPANCY AREA: 501-2,000 sq km. - OCCUPANCY NOTES: 1000; Estimated area of occupancy is based on visual estimates of remaining forest cover based on satellite maps provided to the compilers. Where possible, these estimates were supported by firsthand knowledge of participants..

5. Number of Locations or Subpopulations

- NO. LOCATIONS: unknown.

6. Habitat status:

Not known.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%.- DURING HOW MANY YEARS? 5. - PRIMARY CAUSE OF CHANGE: forest conversion for agriculture, logging.

CHANGES IN QUALITY: Unknown.NOTES ON QUALITY: - over-exploitation of non timber forest resources

7. Threats:

	now	future		pop decline
HUMAN INTERFERENCE				
habitat fragmentation	Y		second	
loss of habitat	Y	Y	first	Y
pesticides	Y		third	Y
NATURAL/INDUCED				
predation by exotics	Y			

8. Trade:

Parts in Trade:

Effects:

9. Population (global)

50000

Subpopulations unknown
Mature > 10,000
Avg age parents unknown

10. Population trends

Declining

Past Decline % <20% Period 5

With continued habitat loss, populations are predicted to decline. Estimates of tarsier densities vary greatly. Sussman (1999) cites the following tarsier population densities: T. bancanus borneanus 80/sq. km (Niemitz 1979); T. b. borneanus 15-20/sq. km (Crompton and Andau 1987); T. spectrum 30-100/sq. km (MacKinnon and MacKinnon 1980); T. spectrum 156/sq. km (Gursky 1997); T. dianae 200-500/sq. km (Stefan Merker pers. Comm.). Regardless of the value used, global population size is often large and not the primary factor that affects the conservation status of tarsier taxa. For simplicity, an estimated density of 50 animals per square kilometer was used for each tarsier taxon.

11. Data Source

DATA SOURCE/QUALITY: field study; literature; - see Sejoli tarsier

12. Recent Field Studies

Myron Shekelle Tinombo May 1996 taxonomy

13. Status

IUCN CATEGORY (Global): unlisted

CITES: appendix II. - NATL WILDLIFE LEGISLATION: protected. - PROTECTED AREA: Sojol Nature Reserve. - PROTECTED PLAN: none. - NOTES ON STATUS: I.

RED LIST CATEGORY: Lower risk - near threatened

IUCN-BASIS:

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history; trade;PHVA NOTES: pending

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; work in local communities; integrated pest management

16. Captive Breeding / Cultivation Recommendations

education; research;

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

20. GENERAL COMMENTS: Tarsiers have never formed successful breeding colonies in captivity in spite of numerous efforts in North America and Europe. The conservation of all tarsier taxa, therefore, relies entirely on wild population management. All known tarsier taxa save a single subspecies exist only in Indonesia and the Philippines, countries that are currently experiencing difficulty protecting habitat. Increased efforts should be made to identify the number of species and their distributions, as well as initiating small scale captive breeding programs in order to develop captive techniques to propagate tarsiers should this become necessary.

21. SOURCES: A taxonomy of the Asian Primates. (in prep). A working document from the workshop "Primate Taxonomy for the New Millennium". (R. Mittermier, D. Melnick, J. Oates, organizers). Compiled by : D. Brandon- Jones, A. Eudey, T. Geissmann, D. J. Melnick, J.C. Morales, M. Shekelle, Caro-Beth Stewart.

Groves 2001. Getting to know the Tarsiers: Yesterday, Today, and Tomorrow. International Society of Primatologists, 14th Congress, Adelaide, Australia. January 7-12, 2001.

Hill, W. C. O. 1995. Primates: Comparative Anatomy and Taxonomy. II. Haplorhini: Tarsioidea. Edinburgh, University Press, Edinburgh.

Leksono SM., Masala Y., Shekelle M. 1997. Tarsiers and agriculture: thoughts on an integrated management plan. Sulawesi Primate Newsletter 4:2 pp. 11-13.

Shekelle M., Leksono SM., Ichwan LLS., Masala Y. 1997. The natural history of tarsiers of North and Central Sulawesi. Sulawesi Primate Newsletter 4:2 pp 4-11.

Shekelle M., Morales JC., Melnick D. 2001. Genetic and acoustic evolution among Eastern tarsiers of northern and centeral Sulawesi. International Society of Primatologists, 14th Congress, Adelaide Australia. January 7-12, 2001.

Niemitz C. 1984. The Biology of Tarsiers. New York: Gustav Fischer Verlag.

Sussman RW. 1999. Primate Ecology and Social Structure. Needham Heights, MA, USA: Pearson Custom Publishing.

Shekelle et al 1997

22. COMPILERS: Myron Shekelle, Center for Biodiversity and Conservation Studies, University of Indonesia
Subeno, Gajah Mada University,
Mohammed Indrawan, YABSHI
Banjar Y. Laban, "Balai" Lore Lindu National Park
Sharmy Prastiti, Taman Safari Indonesia
Yakob Muskita, University of Indonesia
Darmawan Liswanto, Titian Foundation
Ermayanti, Conservation International, Indonesia

Indonesian Primate Camp

Tarsius sp 5 — Palu tarsier

Taxonomy

1. Scientific Name / Ambiguities	Authority	Date
Tarsius sp 5		
Palu acoustic form	MacKinnon and MacKinnon	1980
Tarsius spectrum	Niemitz	1984

FAMILY: Tarsiidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Recent taxonomic research indicates that several nomenclatural errors have been made and perpetuated in tarsier taxonomy. It is likely that taxonomic revisions underway will result in major modifications to the existing taxonomy (Groves 2001).

2. Distribution of the Taxon

Indonesia

- HABITAT: tropical forest, primary and secondary Kebun (mixed garden). - NICHE: unknown history sea level to more than 1000. - HISTORICAL DISTRIBUTION: unknown. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Central Sulawesi, west of the Palu river, north of the Lariang river.

3.-4. Occurrence and Occupancy in _around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km. - OCCURRENCE NOTES: 5000; Estimated extent of occurrence is based on visual estimates of distribution maps in Hill 1955 and Niemitz 1984..

OCCUPANCY AREA: > 2,001 sq km. - OCCUPANCY NOTES: 3000; Estimated area of occupancy is based on visual estimates of remaining forest cover based on satellite maps provided to the compilers. Where possible, these estimates were supported by firsthand knowledge of participants..

5. Number of Locations or Subpopulations

- NO. LOCATIONS: unknown.

6. Habitat status:

Not known.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%.- DURING HOW MANY YEARS? 5. - PRIMARY CAUSE OF CHANGE: forest conversion, logging.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - over exploitation of non-timber forest resources

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y	second	
loss of habitat	Y	first	Y
pesticides	Y	third	Y
NATURAL/INDUCED			
predation by exotics	Y		

8. Trade:

Parts in Trade:

Effects:

9. Population (global)

150,000

Subpopulations 1
Mature > 10,000
Avg age parents unknown

10. Population trends

Declining

Past Decline % <20% Period 5

With continued habitat loss, populations are predicted to decline. Estimates of tarsier densities vary greatly. Sussman (1999) cites the following tarsier population densities: T. bancanus borneanus 80/sq. km (Niemitz 1979); T. b. borneanus 15-20/sq. km (Crompton and Andau 1987); T. spectrum 30-100/sq. km (MacKinnon and MacKinnon 1980); T. spectrum 156/sq. km (Gursky 1997); T. dianae 200-500/sq. km (Stefan Merker pers. Comm.). Regardless of the value used, global population size is often large and not the primary factor that affects the conservation status of tarsier taxa. For simplicity, an estimated density of 50 animals per square kilometer was used for each tarsier taxon.

11. Data Source

DATA SOURCE/QUALITY: literature; - Distribution inferred as west of Palu river and north of Lariang River, yielding an estimated area of occurrence of 5000 sq. km. Satelite maps of remaining forests aloow us to estimate area of occurrence as 3000 sq. km. We estimate 50 animals per sq. km.

12. Recent Field Studies

MacKinnon and MacKinnon Palu 1970's taxonomy

13. Status

IUCN CATEGORY (Global): unlisted

CITES: appendix II. - NATL WILDLIFE LEGISLATION: protected. - PROTECTED AREA: Taman Wisata 'Wera". - PROTECTED PLAN: none.

RED LIST CATEGORY: Lower risk - near threatened

IUCN-BASIS:

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history;PHVA NOTES: pending

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; limiting factor; work in local communities; Integrated pest management

16. Captive Breeding / Cultivation Recommendations

education; research;

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

20. GENERAL COMMENTS: Tarsiers have never formed successful breeding colonies in captivity in spite of numerous efforts in North America and Europe. The conservation of all tarsier taxa, therefore, relies entirely on wild population management. All known tarsier taxa save a single subspecies exist only in Indonesia and the Philippines, countries that are currently experiencing difficulty protecting habitat. Increased efforts should be made to identify the number of species and their distributions, as well as initiating small scale captive breeding programs in order to develop captive techniques to propagate tarsiers should this become necessary.

21. SOURCES: A taxonomy of the Asian Primates. (in prep). A working document from the workshop "Primate Taxonomy for the New Millennium". (R. Mittermier, D. Melnick, J. Oates, organizers). Compiled by : D. Brandon- Jones, A. Eudey, T. Geissmann, D. J. Melnick, J.C. Morales, M. Shekelle, Caro-Beth Stewart.

Groves 2001. Getting to know the Tarsiers: Yesterday, Today, and Tomorrow. International Society of Primatologists, 14th Congress, Adelaide, Australia. January 7-12, 2001.

Hill, W. C. O. 1995. Primates: Comparative Anatomy and Taxonomy. II. Haplorhini: Tarsioidea. Edinburgh, University Press, Edinburgh.

Leksono SM., Masala Y., Shekelle M. 1997. Tarsiers and agriculture: thoughts on an integrated management plan. Sulawesi Primate Newsletter 4:2 pp. 11-13.

Shekelle M., Leksono SM., Ichwan LLS., Masala Y. 1997. The natural history of tarsiers of North and Central Sulawesi. Sulawesi Primate Newsletter 4:2 pp 4-11.

Shekelle M., Morales JC., Melnick D. 2001. Genetic and acoustic evolution among Eastern tarsiers of northern and centeral Sulawesi. International Society of Primatologists, 14th Congress, Adelaide Australia. January 7-12, 2001.

Niemitz C. 1984. The Biology of Tarsiers. New York: Gustav Fischer Verlag.

Sussman RW. 1999. Primate Ecology and Social Structure. Needham Heights, MA, USA: Pearson Custom Publishing.

MacKinnon and MacKinnon 1980

22. COMPILERS: Myron Shekelle, Center for Biodiversity and Conservation Studies, University of Indonesia
Subeno, Gajah Mada University,
Mohammed Indrawan, YABSHI
Banjar Y. Laban, "Balai" Lore Lindu National Park
Sharmy Prastiti, Taman Safari Indonesia
Yakob Muskita, University of Indonesia
Darmawan Liswanto, Titian Foundation
Ermayanti, Conservation International, Indonesia

Indonesian Primate Camp

Tarsius sp 6 — Togian tarsier

Taxonomy

1. Scientific Name / Ambiguities	Authority	Date
Tarsius sp 6	-	2001
-	-	-

FAMILY: Tarsiidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Bunsing	Bobongko
Podi	Bajo
Togian tarsier	English

based on report by Shekelle, Morales, and Melncik at IPS Congress, Adelaide. Work supported by Groves 1998, Nietsch and Kopp 1998.

Recent taxonomic research indicates that several nomenclatural errors have been made and perpetuated in tarsier taxonomy. It is likely that taxonomic revisions underway will result in major modifications to the existing taxonomy (Groves 2001).

2. Distribution of the Taxon Indonesia
Indonesia

- HABITAT: Primary and secondary tropical forest, forest garden, terrain (flat to steeply sloping). - NICHE: substory specialist spendiing a majority of the time 4 meters or less from the ground sea level to top of karst formation. - HISTORICAL DISTRIBUTION: unknown. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Kecamatan Una Una and Togean, Kabupaten Poso, Central Sulawesi, Indonesia. - MIGRATION REGIONS: unknown.

3.-4. Occurrence and Occupancy in _around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km. - OCCURRENCE NOTES: Approximately 2,000 sq km; Estimated extent of occurrence is based on visual estimates of distribution maps in Hill 1955 and Niemitz 1984..

OCCUPANCY AREA: 501-2,000 sq km. - OCCUPANCY NOTES: 500 sq km; Estimated area of occupancy is based on visual estimates of remaining forest cover based on satellite maps provided to the compilers. Where possible, these estimates were supported by firsthand knowledge of participants..

5. Number of Locations or Subpopulations

- NO. LOCATIONS: 5 populations on five major islands of Togean Islands.

6. Habitat status:

Fragmented. - NOTES ON FRAGMENTATION: separate islands.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 21% to 50%.- DURING HOW MANY YEARS? 1. - PRIMARY CAUSE OF CHANGE: Logging and Forest Conversion.

CHANGES IN QUALITY: Unknown.NOTES ON QUALITY: -

7. Threats:	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation		second	
loss of habitat	Y	first	Y
pesticides		third	
NATURAL/INDUCED			
predation by exotics	Y		

political turmoil in Poso district has cancelled most field projects in this region making oversight a problem

8. Trade:

Parts in Trade:

Effects:

9. Population (global) 25,000

Subpopulations	unknown
Mature	> 10,000
Avg age parents	unknown

10. Population trends Declining

Past Decline % <20% Period 5 years

With continued habitat loss, populations are predicted to decline. Estimates of tarsier densities vary greatly. Sussman (1999) cites the following tarsier population densities: T. bancanus borneanus 80/sq. km (Niemitz 1979); T. b. borneanus 15-20/sq. km (Crompton and Andau 1987); T. spectrum 30-100/sq. km (MacKinnon and MacKinnon 1980); T. spectrum 156/sq. km (Gursky 1997); T. dianae 200-500/sq. km (Stefan Merker pers. Comm.). Regardless of the value used, global population size is often large and not the primary factor that affects the conservation status of tarsier taxa. For simplicity, an estimated density of 50 animals per square kilometer was used for each tarsier taxon.

11. Data Source

DATA SOURCE/QUALITY: field study; informal sightings; literature; - land mass of Togian islands minus Una Una was estimated as 2000 sq. km. Satelite maps and informal field sightings yield estimate of 25% of habitat suitable for tarsiers. 50 animals per sq. km. were estimated.

12. Recent Field Studies

Myron Shekelle Malenge, Batudaka, 1994, 1996 Taxonomy
Alexandra Nietsch, Batudaka 1990's, taxonomy

13. Status

IUCN CATEGORY (Global): not listed

CITES: appenidx II. - NATL WILDLIFE LEGISLATION: protected. - PROTECTED AREA: none. - PROTECTED PLAN: none.

RED LIST CATEGORY: Endangered

IUCN-BASIS: B1a,b

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history; limiting factor research;

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; limiting factor;

16. Captive Breeding / Cultivation Recommendations

education; research;

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

20. GENERAL COMMENTS: Tarsiers have never formed successful breeding colonies in captivity in spite of numerous efforts in North America and Europe. The conservation of all tarsier taxa, therefore, relies entirely on wild population management. All known tarsier taxa save a single subspecies exist only in Indonesia and the Philippines, countries that are currently experiencing difficulty protecting habitat.

Increased efforts should be made to identify the number of species and their distributions, as well as initiating small scale captive breeding programs in order to develop captive techniques to propagate tarsiers should this become necessary.

21. SOURCES: A taxonomy of the Asian Primates. (in prep). A working document from the workshop "Primate Taxonomy for the New Millennium". (R. Mittermier, D. Melnick, J. Oates, organizers). Compiled by : D. Brandon- Jones, A. Eudey, T. Geissmann, D. J. Melnick, J.C. Morales, M. Shekelle, Caro-Beth Stewart.

Groves 2001. Getting to know the Tarsiers: Yesterday, Today, and Tomorrow. International Society of Primatologists, 14th Congress, Adelaide, Australia. January 7-12, 2001.

Hill, W. C. O. 1995. Primates: Comparative Anatomy and Taxonomy. II. Haplorhini: Tarsioidea. Edinburgh, University Press, Edinburgh.

Leksono SM., Masala Y., Shekelle M. 1997. Tarsiers and agriculture: thoughts on an integrated management plan. Sulawesi Primate Newsletter 4:2 pp. 11-13.

Shekelle M., Leksono SM., Ichwan LLS., Masala Y. 1997. The natural history of tarsiers of North and Central Sulawesi. Sulawesi Primate Newsletter 4:2 pp 4-11.

Shekelle M., Morales JC., Melnick D. 2001. Genetic and acoustic evolution among Eastern tarsiers of northern and centeral Sulawesi. International Society of Primatologists, 14th Congress, Adelaide Australia. January 7-12, 2001.

Niemitz C. 1984. The Biology of Tarsiers. New York: Gustav Fischer Verlag.

Sussman RW. 1999. Primate Ecology and Social Structure. Needham Heights, MA, USA: Pearson Custom Publishing.

22. COMPILERS: Myron Shekelle, Center for Biodiversity and Conservation Studies, University of Indonesia
Subeno, Gajah Mada University,
Mohammed Indrawan, YABSHI
Banjar Y. Laban, "Balai" Lore Lindu National Park
Sharmy Prastiti, Taman Safari Indonesia
Yakob Muskita, University of Indonesia
Darmawan Liswanto, Titian Foundation
Ermayanti, Conservation International, Indonesia

Indonesian Primate Camp

Tarsius sp 7 — Selayar tarsier

Taxonomy

1. Scientific Name / Ambiguities	Authority	Date
Tarsius sp 7		
Selayar accoustic Form		
Tarsius sp	Groves	1998

FAMILY: Tarsiidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

unknown

Recent taxonomic research indicates that several nomenclatural errors have been made and perpetuated in tarsier taxonomy. It is likely that taxonomic revisions underway will result in major modifications to the existing taxonomy (Groves 2001).

2. Distribution of the Taxon

- HABITAT: unknown, refer to T. dianae (I.e. tropical forest (primary, secondary) Kebun (mixed forest garden). - NICHE: unknown (max elevation in Salayar 600 m). - HISTORICAL DISTRIBUTION: unknown. - CURRENT COUNTRIES: Indonesia, Selayar Island. - GEOGRAPHIC EXTENT: Selayar District.

3.-4. Occurrence and Occupancy in .around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km. - OCCURRENCE NOTES: 800; Estimated extent of occurrence is based on visual estimates of distribution maps in Hill 1955 and Niemitz 1984..

OCCUPANCY AREA: 11-500 sq km. - OCCUPANCY NOTES: 160 sq km; Estimated area of occupancy is based on visual estimates of remaining forest cover based on satellite maps provided to the compilers. Where possible, these estimates were supported by firsthand knowledge of participants..

5. Number of Locations or Subpopulations

- NO. LOCATIONS: unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%.- DURING HOW MANY YEARS? 5. - PRIMARY CAUSE OF CHANGE: conversion for agriculture.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - over explotation of non-timber forest resources

7. Threats:	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y	second	
loss of habitat	Y	first	Y

8. Trade:

Parts in Trade:

Effects:

9. Population (global) 9,000

Subpopulations	unknown
Mature	< 10,000
Avg age parents	unknown

10. Population trends Declining

Past Decline % <20% Period 5

With continued habitat loss, populations are predicted to decline. Estimates of tarsier densities vary greatly. Sussman (1999) cites the following tarsier population densities: T. bancanus borneanus 80/sq. km (Niemitz 1979); T. b. borneanus 15-20/sq. km (Crompton and Andau 1987); T. spectrum 30-100/sq. km (MacKinnon and MacKinnon 1980); T. spectrum 156/sq. km (Gursky 1997); T. dianae 200-500/sq. km (Stefan Merker pers. Comm.). Regardless of the value used, global population size is often large and not the primary factor that affects the conservation status of tarsier taxa. For simplicity, an estimated density of 50 animals per square kilometer was used for each tarsier taxon.

11. Data Source

DATA SOURCE/QUALITY: field study; literature; hearsay & belief - a best-guess estimate based upon a very rough estimate of the size of Selayar, yeilding an extent of occurrence as 800 sq. km. Based upon available hearsay regarding forest loss and fragmentation, we estimate only 160 sq. km. Are suitable for tarsiers. We estimate 50 animals per sq. km. Tarsiers from Selayar were surveyed by Alexandra Nietsch in July, 2000.

12. Recent Field Studies

Alexander Nietsch Selayar July 2000 taxonomic

13. Status

IUCN CATEGORY (Global): unlisted

CITES: appendix II. - NATL WILDLIFE LEGISLATION: protected. - PROTECTED AREA: none. - PROTECTED PLAN: none. - NOTES ON STATUS: extent of occurrence below (at 800 sq km) is less than 5000 sq km B1severlyfragmented, continuing decline projected in area, extent, and quality of habitat.

RED LIST CATEGORY: Endangered

IUCN-BASIS: B1a,b

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; limiting factor research; trade;PHVA NOTES: pending

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; limiting factor; integrated pest management

16. Captive Breeding / Cultivation Recommendations

education; research;

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

20. GENERAL COMMENTS: Population survey of this endangered, but practically unknown, form should be given top priority.

Tarsiers have never formed successful breeding colonies in captivity in spite of numerous efforts in North America and Europe. The conservation of all tarsier taxa, therefore, relies entirely on wild population management. All known tarsier taxa save a single subspecies exist only in Indonesia and the Philippines, countries that are currently experiencing difficulty protecting habitat. Increased efforts should be made to identify the number of species and their distributions, as well as initiating small scale captive breeding programs in order to develop captive techniques to propagate tarsiers should this become necessary.

21. SOURCES: A taxonomy of the Asian Primates. (in prep). A working document from the workshop "Primate Taxonomy for the New Millennium". (R. Mittermier, D. Melnick, J. Oates, organizers). Compiled by : D. Brandon- Jones, A. Eudey, T. Geissmann, D. J. Melnick, J.C. Morales, M. Shekelle, Caro-Beth Stewart.

Groves 2001. Getting to know the Tarsiers: Yesterday, Today, and Tomorrow. International Society of Primatologists, 14th Congress, Adelaide, Australia. January 7-12, 2001.

Hill, W. C. O. 1995. Primates: Comparative Anatomy and Taxonomy. II. Haplorhini: Tarsioidea. Edinburgh, University Press, Edinburgh.

Leksono SM., Masala Y., Shekelle M. 1997. Tarsiers and agriculture: thoughts on an integrated management plan. Sulawesi Primate Newsletter 4:2 pp. 11-13.

Shekelle M., Leksono SM., Ichwan LLS., Masala Y. 1997. The natural history of tarsiers of North and Central Sulawesi. Sulawesi Primate Newsletter 4:2 pp 4-11.

Shekelle M., Morales JC., Melnick D. 2001. Genetic and acoustic evolution among Eastern tarsiers of northern and centeral Sulawesi. International Society of Primatologists, 14th Congress, Adelaide Australia. January 7-12, 2001.

Niemitz C. 1984. The Biology of Tarsiers. New York: Gustav Fischer Verlag.

Sussman RW. 1999. Primate Ecology and Social Structure. Needham Heights, MA, USA: Pearson Custom Publishing.

Nietsch A and Burton J pers comm to M. Shekelle 2001

22. COMPILERS: Myron Shekelle, Center for Biodiversity and Conservation Studies, University of Indonesia
Subeno, Gajah Mada University,
Mohammed Indrawan, YABSHI
Banjar Y. Laban, "Balai" Lore Lindu National Park
Sharmy Prastiti, Taman Safari Indonesia
Yakob Muskita, University of Indonesia
Darmawan Liswanto, Titian Foundation
Ermayanti, Conservation International, Indonesia

Indonesian Primate Camp

Tarsius sp 8 — Kendari tarsier

Taxonomy

1. Scientific Name / Ambiguities | Authority | Date

Tarsius sp 8
Kendari acoustic form
Tarsius spectrum | Niemitz | 1984

FAMILY: Tarsiidae LEVEL: Species
ORDER: Primates
CLASS: Mammalia

COMMON NAMES:

Recent taxonomic research indicates that several nomenclatural errors have been made and perpetuated in tarsier taxonomy. It is likely that taxonomic revisions underway will result in major modifications to the existing taxonomy (Groves 2001).

2. Distribution of the Taxon Indonesia

- HABITAT: poorly known, refer to T. dianae (I.e. tropical forest in primary forest, secondary forest, kebun (mixed forest garden). - NICHE: poorly known, refer to T. dianae (I.e. understory specialist below 4 meter, sea level to over 1000 m). - HISTORICAL DISTRIBUTION: unknown. - CURRENT COUNTRIES: Indonesia, lowland southeast sulawesi around Kendari. - GEOGRAPHIC EXTENT: Kendari, province southeast sulawesi.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km. - OCCURRENCE NOTES: 5000 sq km; Estimated extent of occurrence is based on visual estimates of distribution maps in Hill 1955 and Niemitz 1984..

OCCUPANCY AREA: 501-2,000 sq km. - OCCUPANCY NOTES: 1500 sq km; Estimated area of occupancy is based on visual estimates of remaining forest cover based on satellite maps provided to the compilers. Where possible, these estimates were supported by firsthand knowledge of participants..

5. Number of Locations or Subpopulations

- NO. LOCATIONS: unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%.- DURING HOW MANY YEARS? 5. - PRIMARY CAUSE OF CHANGE: forest conversion, logging.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - over exploitation of non-timber forest resources

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y	second	
loss of habitat	Y	first	Y

8. Trade:

Parts in Trade:

Effects:

9. Population (global) 75,000

Subpopulations 6
Mature > 10,000
Avg age parents unknown

10. Population trends Declining

Past Decline % <20% Period 5

With continued habitat loss, populations are predicted to decline. Estimates of tarsier densities vary greatly. Sussman (1999) cites the following tarsier population densities: T. bancanus borneanus 80/sq. km (Niemitz 1979); T. b. borneanus 15-20/sq. km (Crompton and Andau 1987); T. spectrum 30-100/sq. km (MacKinnon and MacKinnon 1980); T. spectrum 156/sq. km (Gursky 1997); T. dianae 200-500/sq. km (Stefan Merker pers. Comm.). Regardless of the value used, global population size is often large and not the primary factor that affects the conservation status of tarsier taxa. For simplicity, an estimated density of 50 animals per square kilometer was used for each tarsier taxon.

11. Data Source

DATA SOURCE/QUALITY: field study; literature; - a best-guess estimate with an inferred distribution of lowland Southeast Sulawesi, yielding an estimated extent of occurrence of 5,000 sq. km. Satelite maps show a fragmented habitat and we estimate an area of occupancy of only 1500 sq. km. We estimate 50 tarsiers per sq. km.

12. Recent Field Studies

James Burton Kendeeri Lanowalu 2000 taxonomy

13. Status

IUCN CATEGORY (Global): unlisted

CITES: appendix II. - NATL WILDLIFE LEGISLATION: protected. - PROTECTED AREA: Rawa Aopa warumokai national park. - PROTECTED PLAN: unknown. - NOTES ON STATUS: extent of occurrence to be less than 5000 sq km with severly fragmented and declining continous.

RED LIST CATEGORY: Endangered

IUCN-BASIS: B1a,b

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history; limiting factor research; trade;PHVA NOTES: pending

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; limiting factor; work in local communities; integrated pest management

16. Captive Breeding / Cultivation Recommendations

education; research;

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

20. GENERAL COMMENTS: Tarsiers have never formed successful breeding colonies in captivity in spite of numerous efforts in North America and Europe. The conservation of all tarsier taxa, therefore, relies entirely on wild population management. All known tarsier taxa save a single subspecies exist only in Indonesia and the Philippines, countries that are currently experiencing difficulty protecting habitat. Increased efforts should be made to identify the number of species and their distributions, as well as initiating small scale captive breeding programs in order to develop captive techniques to propagate tarsiers should this become necessary.

21. SOURCES: A taxonomy of the Asian Primates. (in prep). A working document from the workshop "Primate Taxonomy for the New

Millennium". (R. Mittermier, D. Melnick, J. Oates, organizers). Compiled by : D. Brandon- Jones, A. Eudey, T. Geissmann, D. J. Melnick, J.C. Morales, M. Shekelle, Caro-Beth Stewart.

Groves 2001. Getting to know the Tarsiers: Yesterday, Today, and Tomorrow. International Society of Primatologists, 14th Congress, Adelaide, Australia. January 7-12, 2001.

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Leksono SM., Masala Y., Shekelle M. 1997. Tarsiers and agriculture: thoughts on an integrated management plan. Sulawesi Primate Newsletter 4:2 pp. 11-13.

Shekelle M., Leksono SM., Ichwan LLS., Masala Y. 1997. The natural history of tarsiers of North and Central Sulawesi. Sulawesi Primate Newsletter 4:2 pp 4-11.

Shekelle M., Morales JC., Melnick D. 2001. Genetic and acoustic evolution among Eastern tarsiers of northern and centeral Sulawesi. International Society of Primatologists, 14th Congress, Adelaide Australia. January 7-12, 2001.

Niemitz C. 1984. The Biology of Tarsiers. New York: Gustav Fischer Verlag.

Sussman RW. 1999. Primate Ecology and Social Structure. Needham Heights, MA, USA: Pearson Custom Publishing.

Nietsch and Burton pers comm. To Myron Shekelle

22. COMPILERS: Myron Shekelle, Center for Biodiversity and Conservation Studies, University of Indonesia
Subeno, Gajah Mada University,
Mohammed Indrawan, YABSHI
Banjar Y. Laban, "Balai" Lore Lindu National Park
Sharmy Prastiti, Taman Safari Indonesia
Yakob Muskita, University of Indonesia
Darmawan Liswanto, Titian Foundation
Ermayanti, Conservation International, Indonesia

Tarsius sp 9 — Buton tarsier

Taxonomy

1. Scientific Name / Ambiguities | Authority | Date

Tarsius sp 9

Tarsius spectrum | Niemitz | 1984

FAMILY: Tarsiidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Buton accoustic form

Recent taxonomic research indicates that several nomenclatural errors have been made and perpetuated in tarsier taxonomy. It is likely that taxonomic revisions underway will result in major modifications to the existing taxonomy (Groves 2001).

2. Distribution of the Taxon Indonesia

- HABITAT: tropical forest (primary and secondary) Kebun, mix garden. - NICHE: understroy specialist mostly below 4 meter from the ground sea level-unknown (highest elevation 1190 in Buton and 15 to in Kabaua). - HISTORICAL DISTRIBUTION: unknown. - CURRENT COUNTRIES: Indonesia, Buton, Muna, Kabaena Island. - GEOGRAPHIC EXTENT: Kabupaten Muna and Buton, South east Sulawesi Indonesia.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 5,001 - 20,000 sq km. - OCCURRENCE NOTES: Estimated extent of occurrence is based on visual estimates of distribution maps in Hill 1955 and Niemitz 1984..

OCCUPANCY AREA: > 2,001 sq km. - OCCUPANCY NOTES: Estimated area of occupancy is based on visual estimates of remaining forest cover based on satellite maps provided to the compilers. Where possible, these estimates were supported by firsthand knowledge of participants..

5. Number of Locations or Subpopulations

- NO. LOCATIONS: 3 (one of each island) with several subpopulation.

6. Habitat status:

Fragmented. - NOTES ON FRAGMENTATION: fragmented for Muna and Kabaena but unknown for Buton.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%.- DURING HOW MANY YEARS? 5. - PRIMARY CAUSE OF CHANGE: forest conversion for agriculture.

NOTES ON QUALITY: -

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y	second	Y
loss of habitat	Y	first	Y

8. Trade:

Parts in Trade:

Effects:

9. Population (global) 170,000

Subpopulations	3 (Buton=169,000, Muna 500-700, Kabauna 350-500)
Mature	> 10,000
Avg age parents	unknown

10. Population trends Declining

Past Decline % <20% Period 5

With continued habitat loss, populations are predicted to decline. Estimates of tarsier densities vary greatly. Sussman (1999) cites the following tarsier population densities: T. bancanus borneanus 80/sq. km (Niemitz 1979); T. b. borneanus 15-20/sq. km (Crompton and Andau 1987); T. spectrum 30-100/sq. km (MacKinnon and MacKinnon 1980); T. spectrum 156/sq. km (Gursky 1997); T. dianae 200-500/sq. km (Stefan Merker pers. Comm.). Regardless of the value used, global population size is often large and not the primary factor that affects the conservation status of tarsier taxa. For simplicity, an estimated density of 50 animals per square kilometer was used for each tarsier taxon.

11. Data Source

DATA SOURCE/QUALITY: field study; informal sightings; literature; -

12. Recent Field Studies

James Burton Buton, 2000, Taxonomic
James Burton Kerbaena, 2000, Taxonomic

13. Status

IUCN CATEGORY (Global): not listed

CITES: appendix II. - NATL WILDLIFE LEGISLATION: protected. - PROTECTED AREA: Buton utara nature reserve. - PROTECTED PLAN: none. - NOTES ON STATUS: extent of occurrence less than 20000 sq km severly fragmented and continuing decline.

RED LIST CATEGORY: Vulnerable

IUCN-BASIS: B1a,b

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history; limiting factor research; trade; - OTHER RESEARCH: population dynamic. PHVA NOTES: pending

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; limiting factor; work in local communities; integrated pest management

16. Captive Breeding / Cultivation Recommendations

education; research;

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

20. GENERAL COMMENTS: Most populations are in Buton which only has one small reserve. It is recommended to protect at least 40% of the remaining forest of Buton island
1 Research
survey, genetic, taxonomic, life history, limiting factor research, trade
2 Management
habitat management, wild population management, monitoring, public education, limiting factor management, work in local communities
3 Species Conservation program

Tarsiers have never formed successful breeding colonies in captivity in spite of numerous efforts in North America and Europe. The conservation of all tarsier taxa, therefore, relies entirely on wild population management. All known tarsier taxa save a single subspecies exist only in Indonesia and the Philippines, countries that are currently experiencing difficulty protecting habitat. Increased efforts

should be made to identify the number of species and their distributions, as well as initiating small scale captive breeding programs in order to develop captive techniques to propagate tarsiers should this become necessary.

21. SOURCES: A taxonomy of the Asian Primates. (in prep). A working document from the workshop "Primate Taxonomy for the New Millennium". (R. Mittermier, D. Melnick, J. Oates, organizers). Compiled by : D. Brandon- Jones, A. Eudey, T. Geissmann, D. J. Melnick, J.C. Morales, M. Shekelle, Caro-Beth Stewart.

Groves 2001. Getting to know the Tarsiers: Yesterday, Today, and Tomorrow. International Society of Primatologists, 14th Congress, Adelaide, Australia. January 7-12, 2001.

Hill, W. C. O. 1995. Primates: Comparative Anatomy and Taxonomy. II. Haplorhini: Tarsioidea. Edinburgh, University Press, Edinburgh.

Leksono SM., Masala Y., Shekelle M. 1997. Tarsiers and agriculture: thoughts on an integrated management plan. Sulawesi Primate Newsletter 4:2 pp. 11-13.

Shekelle M., Leksono SM., Ichwan LLS., Masala Y. 1997. The natural history of tarsiers of North and Central Sulawesi. Sulawesi Primate Newsletter 4:2 pp 4-11.

Shekelle M., Morales JC., Melnick D. 2001. Genetic and acoustic evolution among Eastern tarsiers of northern and centeral Sulawesi. International Society of Primatologists, 14th Congress, Adelaide Australia. January 7-12, 2001.

Niemitz C. 1984. The Biology of Tarsiers. New York: Gustav Fischer Verlag.

Sussman RW. 1999. Primate Ecology and Social Structure. Needham Heights, MA, USA: Pearson Custom Publishing.

Nietsch and Burton personal communication to Shekelle 2001

22. COMPILERS: Myron Shekelle, Center for Biodiversity and Conservation Studies, University of Indonesia
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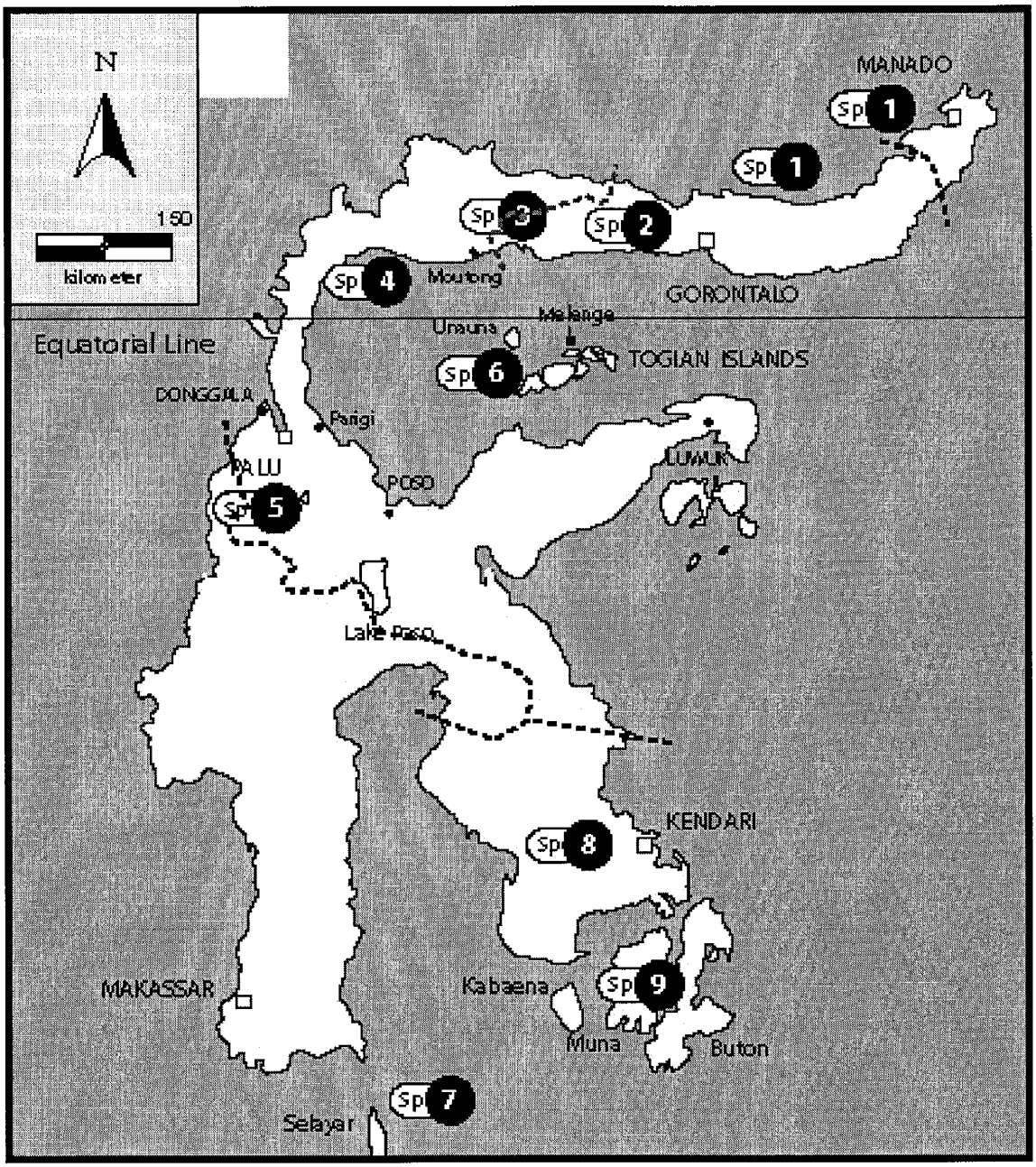
Mohammed Indrawan, YABSHI
Banjar Y. Laban, "Balai" Lore Lindu National Park
Sharmy Prastiti, Taman Safari Indonesia
Yakob Muskita, University of Indonesia
Darmawan Liswanto, Titian Foundation
Ermayanti, Conservation International, Indonesia



Sp 1-9 *Tarsius* spp.

CONSERVATION ASSESSMENT AND MANAGEMENT PLAN FOR THE PRIMATES OF INDONESIA

Taman Safari
15-19 January 2001

FINAL REPORT

July 2001

Section 5

HYLOBATES

Taxon Data Summaries, Data Sheets and Distribution Maps

Summary Table - Indonesia

Scientific name	*Common name*	*Distribution*	*Area of occupancy*	*Global population*	*Previous IUCN*	*Assigned IUCN*	*IUCN Criteria*	*CITES Append*	*ProtectedArea*
Hylobates agilis agilis	Agile gibbon; Dark handed gibbon	Indonesia	> 2,001 sq km	8,000-10,000 individuals	Lower risk - conservation dependent	VU	C2Ai, C1	I	Bukit Barisan Selatan, TNBK, TNKS, Berbak, Bukit Tiga puluh, Bukit dua belas, SM. Kerumutan
Hylobates agilis albibarbis	Agile gibbon	Indonesia	501-2,000 sq km	10,000-12,000	Lower risk - conservation dependent	VU	C1	I	Tanjung Puting NP, Bukit Baka-Bukit Raya Np, Gunung Palung NP, Barito Hulu
Hylobates Klosii	Kloss gibbon, Dwarf Siamang	Indonesia	> 2,001 sq km	7,000-10,000	Endangered	EN	A2, B1b	I	Siberut National Park
Hylobates lar vestitus	Lar gibbon	Indonesia	11-500 sq km	30,000-40,000	Lower risk - conservation dependent	VU	B1ab C1	I	Gunung Leuser NP ,Singkil, Aceh, SM Rawa, CA Rafflesia
Hylobates moloch	Javan gibbon, Silvery gibbon	Indonesia	11-500 sq km	1000-2500	Critically endangered	CR	A2	Appendix I	Ujung Kulon NP, Gunung Halimun Np, Gunung Gede Pangrango, Gunung Salak, Gunung Slamet (protected forest)
Hylobates muelleri	Mueller gibbon	Indonesia, Malaysia	> 2,001 sq km	250,000-300,000	Lower risk - conservation dependent	EN	A1a, B1	I	Kutai NP, Kayan Mentarang NP, bukit Suharto NR, Bukit Baka-Bukit Raya NP, Gunung Palung, Betung Kerihun NP, Danau Sentarum
Symphalangus syndactylus syndactylus	Siamang, Nyamang	Sumatra, Indonesia	> 2,001 sq km	60,000-200,000	Lower risk - conservation dependent	VU	A2, A3	I	TNBukit Barisan Selatan, TN Way Kambas, TN Kerinci Seblat, Berbak, Gunung Leuser, Bukit Duabelas, SM Kerumutan, SM Bukit Rimbang-Bukit Baling

Indonesian Primate Camp

Hylobates agilis agilis — Agile gibbon; Dark handed gibbon

Taxonomy

1. Scientific Name / Ambiguities

	Authority	Date
Hylobates agilis agilis	Cuvier	1821
H. rafflei	Geoffroy	1829
H. unko	Lesson	1840

FAMILY: Hylobatidae LEVEL: Subspecies
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Agile gibbon;black handed gibbon	English
Ungko, Wau wau lengan hitam	Indonesia

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical rain forest. - NICHE: Primary lowland forest, swamp forest, top to middle, secondary forest (hutan tebang pilih dipterocarpaceae). - HISTORICAL DISTRIBUTION: Indonesia. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: West Sumatra, Riau, Lampung, Bengkulu, Jambi, South Sumatra.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: > 20,000 sq km.

OCCUPANCY AREA: > 2,001 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: approximately 7.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 51% to 80%.- DURING HOW MANY YEARS? 10. - PRIMARY CAUSE OF CHANGE: illegal logging, forest fire, encroachment.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Habitat loss, Forest fire, logging, fragmentation

7. Threats:

	now	future		pop decline
HUMAN INTERFERENCE				
habitat fragmentation	Y	Y	primary threat	Y
harvest/hunting	Y	Y		Y
loss of habitat	Y		primary threat	Y
pollution	Y	Y		Y
trade for market or medicine	Y			Y
NATURAL/INDUCED				
genetic problems	Y			Y
gold mining	Y	Y		Y
hybridization		Y	between subspecies	Y
CATASTROPHIC				
drought	Y	Y		Y
el nino	Y			Y
fire	Y	Y		Y
landslide	Y	Y		Y
tsunami		Y		Y

8. Trade:

Trade described as domestic;

Parts in Trade: Live animal

Effects: Unknown

9. Population (global) 8,000-10,000 individuals

Subpopulations	100-300
Mature	< 10,000
Avg age parents	17 yr

10. Population trends Declining

Past Decline % 21% to 50% Period 10

11. Data Source

DATA SOURCE/QUALITY: census monitoring; field study; literature; -

12. Recent Field Studies

Haryo T. Wibisono survey	TNBBS	1998-2000
Haryo T. Wibisono et al 1994 survey	Lampung, Bengkulu, Jambi	
Mackinnon survey	Sumatra	1986

13. Status

IUCN CATEGORY (Global): Lower risk - conservation dependent

IUCN CATEGORY (National): Protected

CITES: I. - NATL WILDLIFE LEGISLATION: PP 7 th. 1999. - INTL REDBOOK DATA: LR. - OTHER LEGISLATION: UU no.5 th. 1990. - PROTECTED AREA: Bukit Barisan Selatan, TNBK, TNKS, Berbak, Bukit Tiga puluh, Bukit dua belas, SM. Kerumutan.

RED LIST CATEGORY: Vulnerable

IUCN-BASIS: C2Ai, C1

14. Research Recommended

Survey Studies; Genetic Research; trade;PHVA NOTES: Pending

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; genome resource; work in local communities;

16. Captive Breeding / Cultivation Recommendations

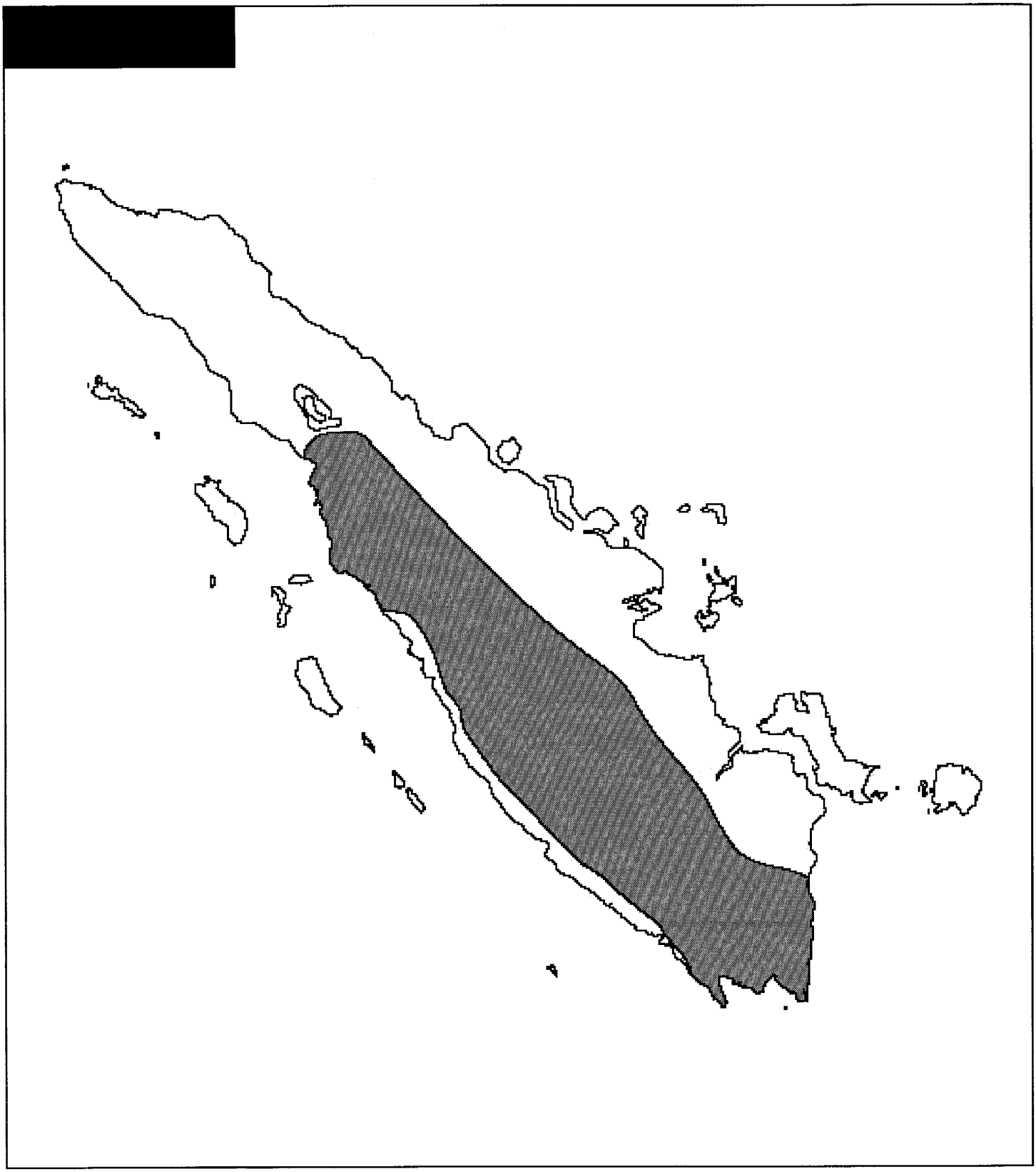
17. Facilities: Taman Safari Indonesia, Ragunan, Bandung, Bukit Tinggi, Medan zoos

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	25	25	3	53

21. SOURCES: 1. Wibisono, H.T., Tanjung, I. and Wijayanto, U. 2001. Laporan Singkat Survai distribusi Siamang (H.syndactylus), Ungko (H.agilis), Simpai (P.melalophos) dan Beruk (M. nemestrina) di TN BBS

2. Supriatna, J. dan Wahyono, E.H. 2000. Panduan Lapangan Primata Indonesia. Yay. Obor Indonesia. Jakarta

22. COMPILERS: Pusat Studi Biodiversitas & Konservasi FMIPA Universitas Indonesia,
Members of Hylobates Working Group in Indonesia Primate CAMP.



Hylobates agilis agilis

Indonesian Primate Camp

Hylobates agilis albibarbis — Agile gibbon

Taxonomy

1. Scientific Name / Ambiguities

	Authority	Date
Hylobates agilis albibarbis		
H. rafflei	Geoffroy	1829
H. unko	Lesson	1840

FAMILY: Hylobatidae LEVEL: Subspecies
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Agile gibbon	English
Wau-wau, Kelempiau, Kelawes	Indonesia

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical rain forest. - NICHE: Primary lowland forest, swamp forest (0- 1500 asl). - HISTORICAL DISTRIBUTION: Indonesia. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Kapuas river (West Kalimantan) & Barito River (Central Kalimantan).

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km.

OCCUPANCY AREA: 501-2,000 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: >10 subpopulations.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 51% to 80%.- DURING HOW MANY YEARS? 20. - PRIMARY CAUSE OF CHANGE: Habitat loss9logging, fire), fragmentation.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Habitat loss

7. Threats:

	now	future		pop decline
HUMAN INTERFERENCE				
habitat loss due to exotic plants	Y	Y		Y
harvest/hunting	Y	Y		Y
loss of habitat	Y	Y	primary threat	Y
overexploitation		Y		Y
pollution	Y	Y		Y
trade for market or medicine	Y	Y		Y
NATURAL/INDUCED				
genetic problems	Y	Y		Y
hybridization	Y	Y		Y
interspecific competition		Y		Y
CATASTROPHIC				
drought	Y	Y		Y
fire	Y	Y	primary threat	

8. Trade:

Trade described as domestic;

Parts in Trade: Live animal

Effects: domestic

9. Population (global) 10,000-12,000

Subpopulations 1,000-2,000

Mature > 2,500

Avg age parents 17

10. Population trends Declining

Past Decline % 21% to 50% Period 10

11. Data Source

DATA SOURCE/QUALITY: census monitoring; field study; informal sightings; literature; -

12. Recent Field Studies

Barito Ulu Project

13. Status

IUCN CATEGORY (Global): Lower risk - conservation dependent

IUCN CATEGORY (National): protected

CITES: I. - NATL WILDLIFE LEGISLATION: UU no.5 1990; PP 7/1999. - INTL REDBOOK DATA: LR. - OTHER LEGISLATION: SK Menhutbun no. 733.Kpts-II/1999. - PROTECTED AREA: Tanjung Puting NP, Bukit Baka-Bukit Raya Np, Gunung Palung NP, Barito Hulu.

RED LIST CATEGORY: Vulnerable

IUCN-BASIS: C1

14. Research Recommended

Survey Studies; Genetic Research;PHVA NOTES: Pending

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; genome resource; work in local communities;

16. Captive Breeding / Cultivation Recommendations

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

COORDINATED SPECIES MANAGEMENT PROGRAM exists in: No. SPECIES MANAGEMENT RECOMMENDED FOR RANGE COUNTRIES: Indonesia

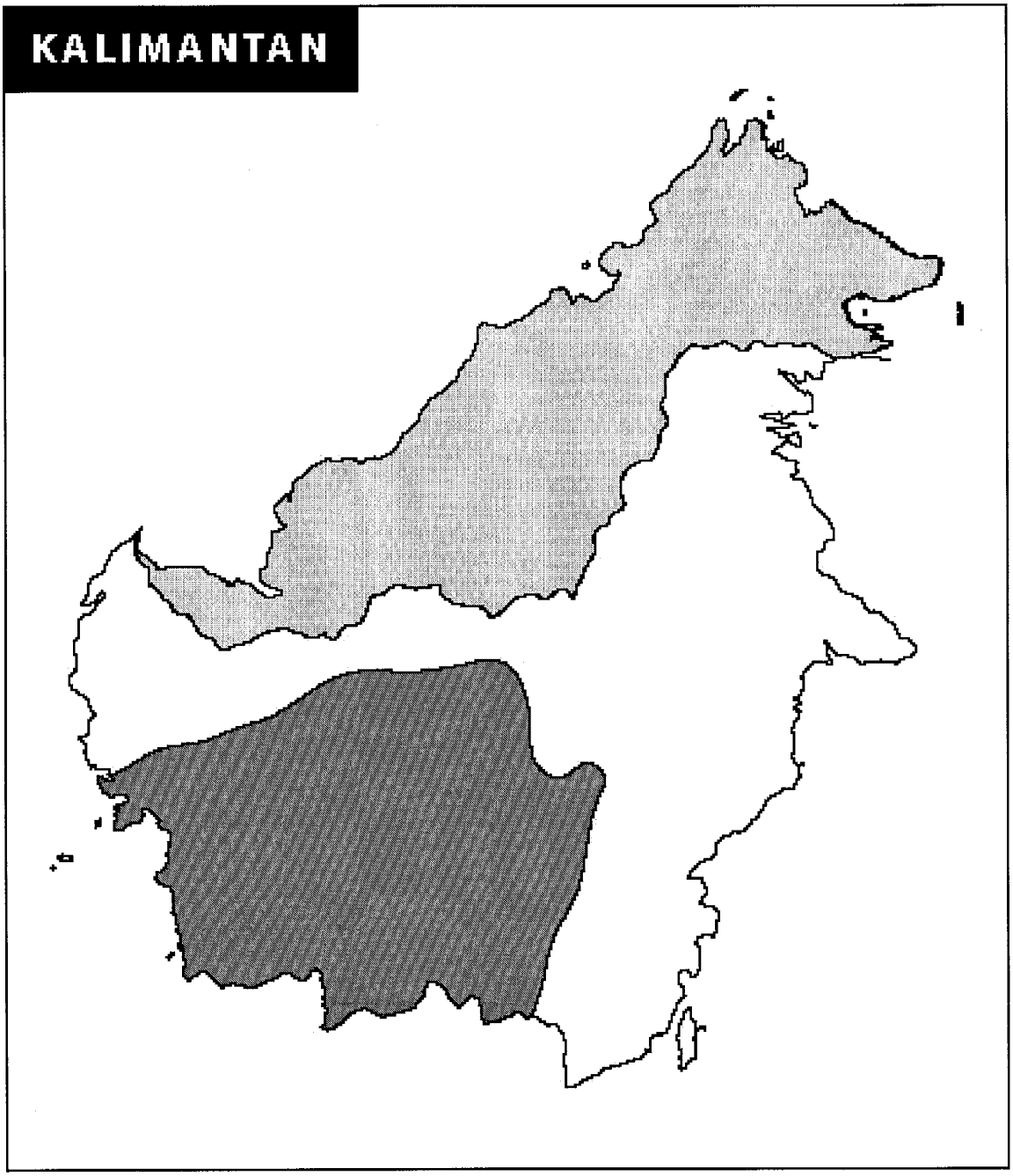
18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: No ex situ program recommended.

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

21. SOURCES: 1. Payne, J., C.M. Francais, K. Phillips and S.N. Kartikasari. 2000. Panduan Lapangan Mamalia di Kalimantan, Sabah, Sarawak, & Brunei Darussalam. Sabah Society ad WCS and WWF Malaysia

2. Supriatna, J. and E.H. Wahyono. 2001. Panduan lapangan Primata Indonesia. Yay. Obo Ind. Jakarta

22. COMPILERS: Pusat Studi Biodiversitas & Konservasi FMIPA Universitas Indonesia,
Members of Hylobates Working Group in Indonesia Primate CAMP.



Hylobates agilis albibarbis

Indonesian Primate Camp

Hylobates klosii — Kloss gibbon, Dwarf Siamang

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Hylobates klosii

FAMILY: Hylobatidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Kloss gibbon, Dwarf Siamang

2. Distribution of the Taxon Indonesia

- HABITAT: Primary & secondary forest from mangroves to hilly forests.. - NICHE: around primary and secondary forest, -90 m above ground, 0-2000 asl. - HISTORICAL DISTRIBUTION: endemic Mentawai island. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Mentawai island.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km.

OCCUPANCY AREA: > 2,001 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: unknown.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 51% to 80%.- DURING HOW MANY YEARS? 20. - PRIMARY CAUSE OF CHANGE: Habitat loss & encroachment.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Habitat loss, poaching, encroachment

7. Threats:

	now	future		pop decline
HUMAN INTERFERENCE				
habitat fragmentation	Y	Y		Y
harvest for food	Y	Y		Y
harvest/hunting	Y	Y		Y
loss of habitat	Y	Y	primary threat	Y
overexploitation		Y		Y
poisoning		Y		Y
pollution		Y		Y
NATURAL/INDUCED				
disease		Y		Y
genetic problems		Y		Y
predation	Y	Y		Y
CATASTROPHIC				
fire	Y	Y		
tsunami		Y		

8. Trade:

Trade described as local; domestic;

Parts in Trade: Live animal
Skin

Effects: unknown

9. Population (global) 7,000-10,000

Subpopulations

Mature < 10,000

Avg age parents 17

10. Population trends Declining

Past Decline % 51% to 80% Period 20

11. Data Source

DATA SOURCE/QUALITY: census monitoring; field study; informal sightings; literature; -

12. Recent Field Studies

Suryadi S., Y. Istiadi and Supardiyono, 1998. Studi ekologi primata endemic Siberut dan ekotorisme.

13. Status

IUCN CATEGORY (Global): Endangered

IUCN CATEGORY (National): Endangered (Protected Animal)

CITES: I. - NATL WILDLIFE LEGISLATION: UU no.5 1990, PP7/ 1999. - INTL REDBOOK DATA: Vulnerable. - PROTECTED AREA: Siberut National Park. - PROTECTED PLAN: Saving Siberut action plan.

RED LIST CATEGORY: Endangered

IUCN-BASIS: A2, B1b

14. Research Recommended

Survey Studies; Genetic Research; life history; - OTHER RESEARCH: Population dynamic and Habitat assessment. PHVA is recommended.

15. Management Recommendations

habitat management; wild population management; monitoring; sustainable utilization; public awareness; genome resource; captive breeding / cultivation; Cultural harvesting in relation to local community awareness (Sustainable utilization)

16. Captive Breeding / Cultivation Recommendations

education; research; husbandry;preservation of live genome;

17. Facilities: Bukit Tinggi

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	2	2

COORDINATED SPECIES MANAGEMENT PROGRAM exists in: Kloss gibbon project in West Sumatra (1975) under technical executing unit (UPT) KSDA West Sumatra. SPECIES MANAGEMENT RECOMMENDED FOR RANGE COUNTRIES: Indonesia

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: Ongoing ex situ program intensified or increased.

19. TECHNIQUES TO PROPAGATE THE TAXON: Some techniques known for taxon or similar taxon.

21. SOURCES: Whitten, A., Siberut (1980). Ecology of Kloss gibbon

22. COMPILERS: Dr. M. Bismark
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Ir. Susilo Legowo
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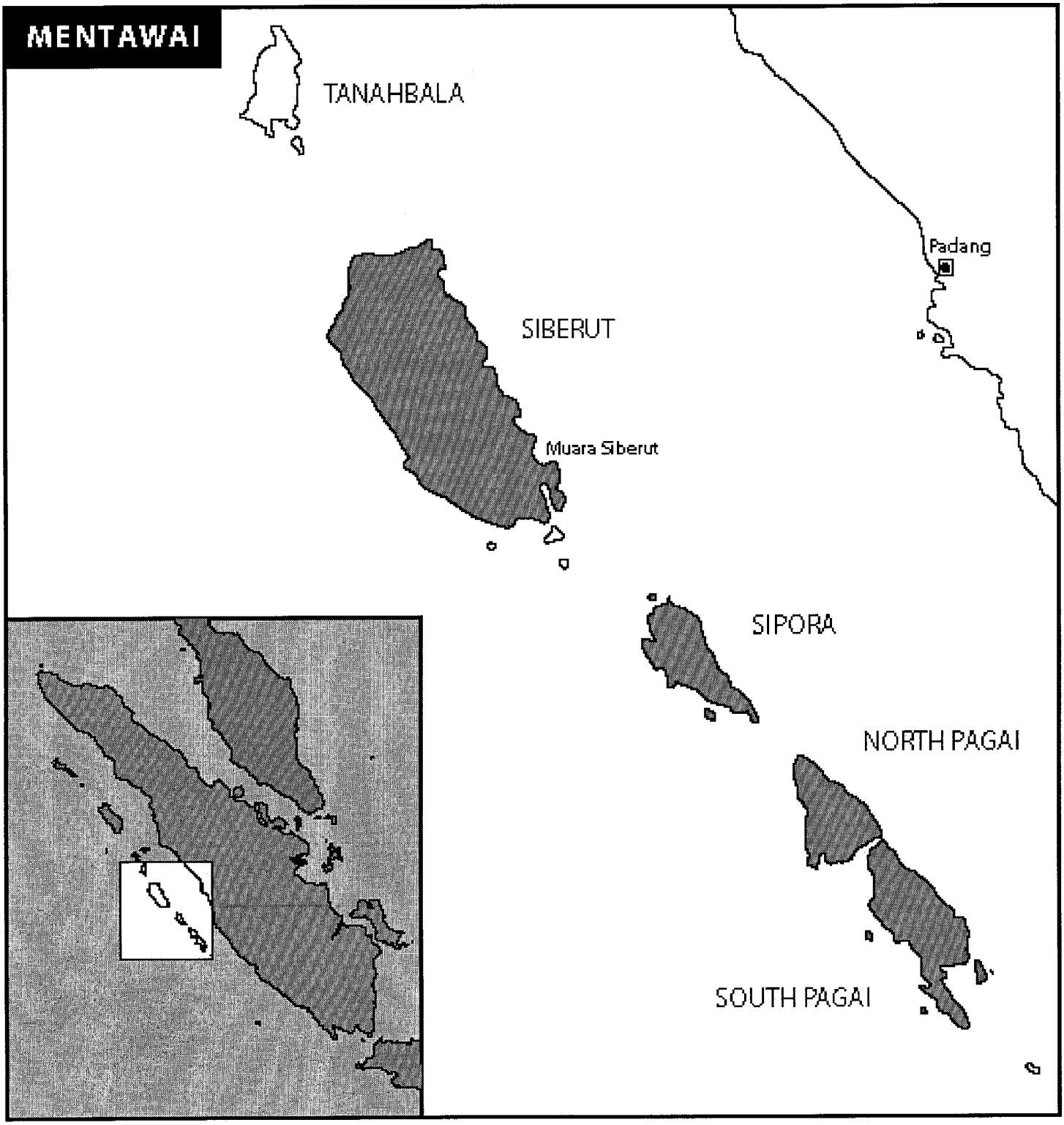


Hylobates klosii

Indonesian Primate Camp

Hylobates lar vestitus — Lar gibbon

Taxonomy

1. Scientific Name / Ambiguities	Authority	Date
Hylobates lar vestitus		2000
H. entelloides	Geoffroy	1843
Hylobates lar	Linnaeus	1771
P. variegatus	Geoffroy	1812
Phitecus varius	Latreille	1801

FAMILY: Hylobatidae LEVEL: Subspecies
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Lar gibbon; white-handed gibbon,	English
ungko lengan putih, wau-wau lengan putih	Indonesia

2. Distribution of the Taxon — Indonesia

- HABITAT: Tropical rain forest (lowland - submontane). - NICHE: Primary and secondary forest (0-2400 m a.s.l) not in mangrove or coastal forest. - HISTORICAL DISTRIBUTION: Indonesia. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Aceh& North Sumatra province. - MIGRATION REGIONS: none.

3.-4. Occurrence and Occupancy in _around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km.

OCCUPANCY AREA: 11-500 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: Approximately 6.

6. Habitat status:

Contiguous.

- RECENT CHANGE: 21% to 50%. - PRIMARY CAUSE OF CHANGE: shifting cultivication, habitat encroachment, illegal logging.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - logging, habitat encroachment

7. Threats:

	now	future		pop decline
HUMAN INTERFERENCE				
damming		Y		Y
habitat fragmentation	Y	Y		Y
habitat loss due to exotic plants	Y	Y		Y
harvest/hunting		Y		Y
loss of habitat	Y	Y	primary threat	Y
overexploitation		Y		
pesticides		Y		
powerlines		Y		
war	Y	Y		
NATURAL/INDUCED				
genetic problems		Y		Y
interspecific competition		Y		Y
predation		Y		
CATASTROPHIC				
fire		Y		
landslide	Y	Y		

8. Trade:

Trade described as domestic; international

Parts in Trade: Live animal
Taxidermy models

Effects: live animal

9. Population (global) 30,000-40,000

Subpopulations approximately 3,000
Mature > 10,000
Avg age parents 17 yr

10. Population trends — Declining

Past Decline % <20% Period 10

11. Data Source

DATA SOURCE/QUALITY: indirect information; museum record; literature; -

12. Recent Field Studies

Bloxam, C.R, Burton, J.A, Large Mammals	Bentong area- Lingga Isa	1997
Kuswandono, Long., B. and Survey	(Provinsi Aceh)	

13. Status

IUCN CATEGORY (Global): Lower risk - conservation dependent

IUCN CATEGORY (National): Lower risk - conservation dependent

CITES: I. - NATL WILDLIFE LEGISLATION: PP no 7 th 99, UU no.5 th 90. - NATL REDBOOK DATA: pending. - PROTECTED AREA: Gunung Leuser NP ,Singkil, Aceh, SM Rawa, CA Rafflesia. - PROTECTED PLAN: none.

RED LIST CATEGORY: Vulnerable

IUCN-BASIS: B1ab C1

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history; - OTHER RESEARCH: population and dynamic study, habitat assessment. PHVA is recommended.

15. Management Recommendations

habitat management; wild population management; monitoring; sustainable utilization; public awareness; limiting factor; captive breeding / cultivation; work in local communities;

16. Captive Breeding / Cultivation Recommendations

education; research; husbandry;

17. Facilities: Medan zoo

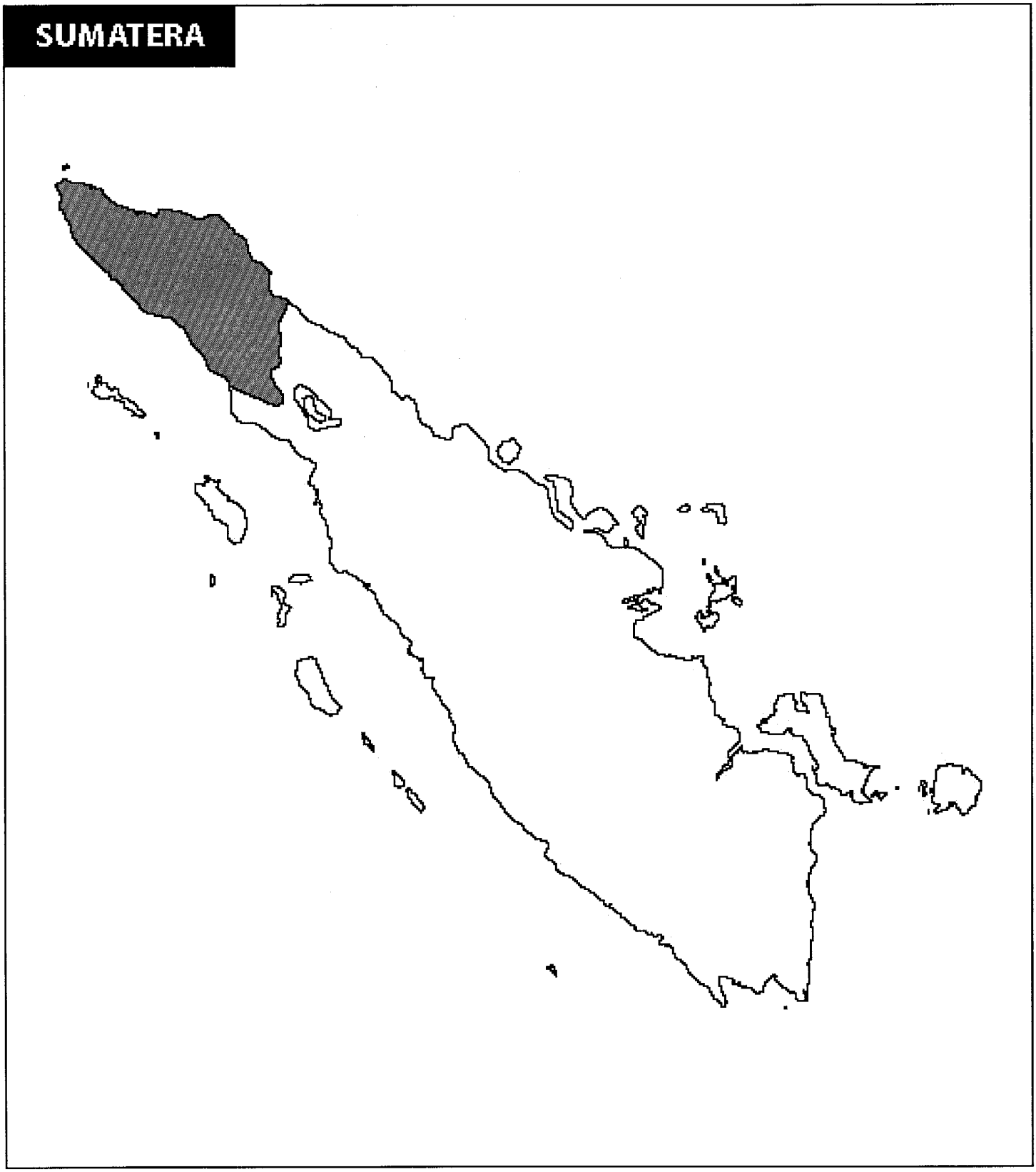
Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	1	1

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

21. SOURCES: 1. Wibisono, H.T., Tanjung, I. danWijayanto, u.2001. Laporan Singkat Survai distribusi Siamang (H.syndactylus), Ungko (H.agilis), Simpai (P.melalophos) dan Beruk (m.nemestrina) di TN BBS

2. Supriatna, J. dan Wahyono, E.H. 2000. Panduan Lapangan Primata Indonesia. Yay. Obor Indonesia. Jakarta

22. COMPILERS: Pusat Studi Biodiversitas & Konservasi FMIPA Universitas Indonesia,
Members of Hylobates Working Group in Indonesia Primate CAMP.



Hylobates lar vestitus

Indonesian Primate Camp

Hylobates moloch — Javan gibbon, Silvery gibbon

Taxonomy

1. Scientific Name / Ambiguities

	Authority	Date
Hylobates moloch	Audebert	1799
H. javanicus	Matschie	1893
H. lar pongoalsoni	Sody	1949
Simia leucisca	Schreber	1799

FAMILY: Hylobatidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Javan gibbon, Silvery gibbon	English
Owa jawa, wau wau, uwo uwo, kuweng	Indonesian

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical rain forest, lowland to submontane (1- 1600 m asl). - NICHE: Primary forest, top canopy, teak forest, mostly on lowland and hilly forest. - HISTORICAL DISTRIBUTION: Java. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: West and central Java.

3.-4. Occurrence and Occupancy in _around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km.

OCCUPANCY AREA: 11-500 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: 18 areas.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 21% to 50%.- DURING HOW MANY YEARS? 5. - PRIMARY CAUSE OF CHANGE: habitat loss, fragmentaton, logging, encroachment.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Loss of habitat, fragmentation

7. Threats:

	now	future		pop decline
HUMAN INTERFERENCE				
artificial lighting	Y	Y	UNOCAL	Y
grazing	Y	Y		Y
habitat fragmentation	Y	Y	primary threat	Y
habitat loss due to exotic animals	Y	Y		
habitat loss due to exotic plants		Y	langkap, semantung	Y
overexploitation		Y		Y
pollution	Y	Y	pongkor gold mining	Y
powerlines	Y	Y		Y
trade for market or medicine	Y	Y		Y
trampling	Y	Y		Y
NATURAL/INDUCED				
genetic problems		Y		Y
hybridization		Y		Y
interspecific competition		Y		Y
livestock				
nutritional disorders		Y		
volcano		Y		Y
CATASTROPHIC				
drought	Y	Y		Y
el nino		Y		Y
fire	Y	Y		Y
landslide	Y	Y		Y
tsunami		Y		Y

8. Trade:

Trade described as local; domestic; international

Parts in Trade: Live animal
Taxidermy models

Effects: domestic

9. Population (global) 1000-2500

Subpopulations	< 700
Mature	< 250
Avg age parents	17 yr

10. Population trends Declining

Past Decline % >80% Period 10

11. Data Source

DATA SOURCE/QUALITY: census monitoring; field study; informal sightings; literature; -

12. Recent Field Studies

Martarinza et al.	Gunung Slamet	1992	surveys
S.Suryadi & SM Leksono	Gunung Kemulan	1997	surveys
Wibisono, HT	Gunung Honje, UKNP	1994	surveys
Tobing, I.S.L.	Gunung Halimun	1999	population and behavior

13. Status

IUCN CATEGORY (Global): Critically endangered

IUCN CATEGORY (National): Critically endangered

CITES: Appendix I. - NATL WILDLIFE LEGISLATION: UU no.5. 1990, PP 7 no.99. - NATL REDBOOK DATA: Listed in Primata Indonesia. - INTL REDBOOK DATA: CR. - OTHER LEGISLATION: UU no.5 1990, SK Menteri Kehutanan no. 301Kpts-II/1991 also listed in primata Indonesia. - PROTECTED AREA: Ujung Kulon NP, Gunung Halimun Np, Gunung Gede Pangrango, Gunung Salak, Gunung Slamet (protected forest). - PROTECTED PLAN: CA. Gunung Simpang, Gunung Tilu, Javan Gibbon and Javan Langur PHVA, 1994.

RED LIST CATEGORY: Critically endangered

IUCN-BASIS: A2

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history; PHVA is recommended.PHVA NOTES: Habitat rehabilitation

15. Management Recommendations

habitat management; wild population management; monitoring; genome resource; limiting factor; captive breeding / cultivation; work in local communities;

16. Captive Breeding / Cultivation Recommendations

species recovery; education; reintroduction; research; husbandry;preservation of live genome; Reintroduction into empty forest only

17. Facilities: Taman Safari Indonesia, Ragunan, Bandung, Bukit Tinggi zoos

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	21	14	0	35

COORDINATED SPECIES MANAGEMENT PROGRAM exists in: Indonesia (PKBSI, PKS, LIPI). SPECIES MANAGEMENT RECOMMENDED FOR RANGE COUNTRIES: Indonesia

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: Ongoing ex situ program intensified or increased.

19. TECHNIQUES TO PROPAGATE THE TAXON: Information not available for this group.

21. SOURCES: Andayani, et al. 2001. Genetic viability in Javan gibbons: implications for conservation. Cons. Biol. 15 (3):770-775.

Asquith, N.M, Martarinza & R.M. Sinaga, 1995. The Javan gibbon (Hylobates moloch): status and conservation recommendation. Tropical Biodiversity 3(1):1-14.

Supriatna, J., R.Tilson, K.J. Gurmaya, J. Manansang, W.Wardojo, A.Sriyanto. A.Teare, K.Castel & U.Seal. 1994. Javan gibbon and Javan langur population and habitat viability analysis, Directorate General of Forest Protection and Nature Conservation, Department of Forestry, Indonesia.

Wibisono, H.T. 1994: Survai Populasi dan Ekologi Primata di Gunung Honje, Taman Nasional Ujung Kulon, Laporan Akhir proyek Taman Nasional Ujung Kulon, Kerjasama Pemerintah Indonesia dan Selandia Baru.

22. COMPILERS: Pusat Studi Biodiversitas & Konservasi FMIPA Universitas Indonesia,
Members of Hylobates Working Group in Indonesia Primate CAMP.

Indonesian Primate Camp

Hylobates muelleri — Mueller gibbon

Taxonomy

1. Scientific Name / Ambiguities

	Authority	Date
Hylobates muelleri		
H. cinereus	Kloss	1929
H. funereus	Geoffroy	1850

FAMILY: Hylobatidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Kelampiau	Indonesia
Kelawat	Indonesia
Mueller gibbon	English
Owa Kalimantan	Indonesia

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical Rain Forest. - NICHE: Primary and secondary forest, around logging concession or plantation, 0-1500 asl. - HISTORICAL DISTRIBUTION: Indonesia, Malaysia. - CURRENT COUNTRIES: Indonesia, Malaysia. - GEOGRAPHIC EXTENT: West, Central, and South Kalimantan.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: > 20,000 sq km.

OCCUPANCY AREA: > 2,001 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: 25 subpopulation.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 21% to 50%.- DURING HOW MANY YEARS? 10. - PRIMARY CAUSE OF CHANGE: Habitat loss.

NOTES ON QUALITY: - Illegal logging

7. Threats:

	now	future		pop decline
HUMAN INTERFERENCE				
habitat fragmentation	Y	Y		Y
harvest for food	Y	Y		Y
harvest for medicine	Y	Y		Y
harvest/hunting	Y	Y		Y
loss of habitat	Y	Y	Primary threat	Y
pollution	Y			Y
trade for market or medicine	Y			Y
trade of parts	Y			
NATURAL/INDUCED				
climate	Y			Y
disease		Y		Y
genetic problems		Y		Y
hybridization	Y			Y
interspecific competition	Y			Y
siltation	Y			Y
CATASTROPHIC				
drought	Y			Y
el nino	Y			Y
fire	Y			Y

8. Trade:

Trade described as local; domestic; commercial; international

Parts in Trade: Live animal

Effects: unknown

9. Population (global) 250,000-300,000

Subpopulations 1,000-3,000
Mature > 10,000
Avg age parents 17

10. Population trends Declining

Past Decline % 51% to 80% Period 14

11. Data Source

DATA SOURCE/QUALITY: indirect information; literature; -

12. Recent Field Studies

Mark Leighton survey	Gunung Palung	1986
Ekspedisi WWF survey	Bentuang Karimun	1990

13. Status

IUCN CATEGORY (Global): Lower risk - conservation dependent

IUCN CATEGORY (National): Lower risk - Protected

CITES: I. - NATL WILDLIFE LEGISLATION: UU no.5 1990. - NATL REDBOOK DATA: PP no 7 1999. - OTHER LEGISLATION: SK Menteri Kehutanan no. 301/Kpts-II/1991. - PROTECTED AREA: Kutai NP, Kayan Mentarang NP, bukit Suharto NR, Bukit Baka-Bukit Raya NP, Gunung Palung, Betung Kerihun NP, Danau Sentarum.

RED LIST CATEGORY: Endangered

IUCN-BASIS: A1a, B1

14. Research Recommended

Survey Studies; Genetic Research; PHVA is recommended.

15. Management Recommendations

wild population management; monitoring; sustainable utilization; public awareness; captive breeding / cultivation;

16. Captive Breeding / Cultivation Recommendations

education;

17. Facilities: TSI, Ragunan, Bandung

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	11	9	0	21

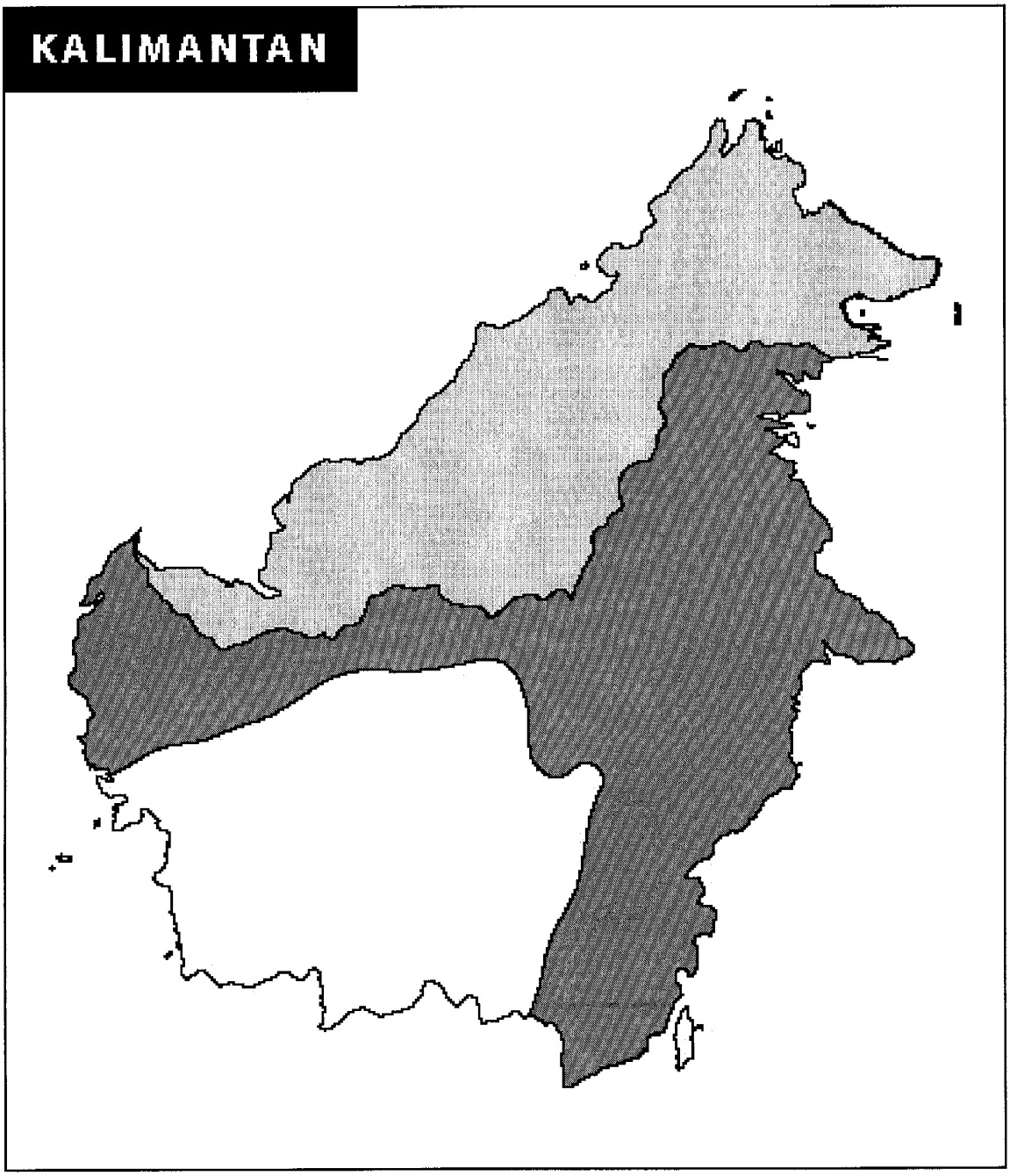
COORDINATED SPECIES MANAGEMENT PROGRAM exists in: Ditjen PKA, Indonesia. SPECIES MANAGEMENT RECOMMENDED FOR RANGE COUNTRIES: Indonesia

21. SOURCES: Corbet, G.B. & J.E. Hill 1992. The mammals of Indomalayan region. Oxford Univ. Press. Oxford: VIII+488

Supriatna, J E. Hendras. 2000. Panduan lapangan primata Indonesia. Yayasan Obor, Jakarta

Mac-Kinnon, 1986: Areas of original remainingand protected habitat of non-human primate in Indonesia

22. COMPILERS: Pusat Studi Biodiversitas & Konservasi FMIPA Universitas Indonesia,
Members of Hylobates Working Group in Indonesia Primate CAMP.



Hylobates muelleri

Indonesian Primate Camp

Symphalangus syndactylus syndactylus — Siamang, Nyamang

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Symphalangus syndactylus synda

H. syndactylus continentis

Hylobates syndactylus syndactylus

S. syndactylus continentis

FAMILY: Hylobatidae LEVEL: Subspecies
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Siamang, Nyamang

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical rain forest up to 2400 asl. - NICHE: Primary & secondary rain forest, lowland (-2400 asl), top & middle canopy, plantation. - HISTORICAL DISTRIBUTION: Sumatra, Indonesia. - CURRENT COUNTRIES: Sumatra, Indonesia. - GEOGRAPHIC EXTENT: Lampung Bengkulu, Jambi, West Sumatra, South Sumatra, Riau, Aceh, North Sumatra.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: > 20,000 sq km.

OCCUPANCY AREA: > 2,001 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: > 40.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 21% to 50%.- DURING HOW MANY YEARS? 12. - PRIMARY CAUSE OF CHANGE: habitat loss, encroachment, illegal logging, fragmentation.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Habitat loss, encroachment, illegal logging, fragmentation

7. Threats:

	now	future		pop decline
HUMAN INTERFERENCE				
habitat fragmentation	Y	Y	primary threat	Y
harvest/hunting	Y	Y		Y
loss of habitat	Y	Y	primary threat	Y
overexploitation		Y		Y
pollution	Y	Y		Y
powerlines		Y		Y
trade for market or medicine	Y	Y		Y
war	Y	Y	Aceh	
CATASTROPHIC				
drought	Y	Y		Y
fire	Y	Y		Y
landslide	Y	Y		Y
volcano		Y		Y

8. Trade:

Trade described as domestic; international

Parts in Trade: Live animal
Taxidermy models

Effects: unknown

9. Population (global) 60,000-200,000

Subpopulations 1,500 - -5,000
Mature < 10,000
Avg age parents 18

10. Population trends Declining

Past Decline % 51% to 80% Period 12

11. Data Source

DATA SOURCE/QUALITY: census monitoring; field study; literature; -

12. Recent Field Studies

Haryo T. Wibisono survey	TNBBS	1998-2000
Haryo T. Wibisono 1994 survey	Lampung, Bengkulu, Jambi	
Mackinnon survey	Sumatra	1986

13. Status

IUCN CATEGORY (Global): Lower risk - conservation dependent

IUCN CATEGORY (National): Lower risk -(Protected Animal)

CITES: I. - NATL WILDLIFE LEGISLATION: UU no.5 1990, PP 7 1999. - INTL REDBOOK DATA: LR. - OTHER LEGISLATION: Listed in Primata Indonesia. - PROTECTED AREA: TNBukit Barisan Selatan, TN Way Kambas, TN Kerinci Seblat, Berbak, Gunung Leuser, Bukit Duabelas, SM Kerumutan, SM Bukit Rimbang-Bukit Baling. - PROTECTED PLAN: None.

RED LIST CATEGORY: Vulnerable

IUCN-BASIS: A2, A3

14. Research Recommended

Survey Studies; Genetic Research;PHVA NOTES: Pending

15. Management Recommendations

habitat management; wild population management; monitoring; sustainable utilization; public awareness; work in local communities;

16. Captive Breeding / Cultivation Recommendations

17. Facilities: TSI, Ragunan, Surabaya, Bandung, Bukit Tinggi, KSKLM, Sriwijaya, Medan, Jogjakarta

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	47	32	10	89

SPECIES MANAGEMENT RECOMMENDED FOR RANGE COUNTRIES: Indonesia, Malaysia

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: No ex situ program recommended.

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques not known at all.

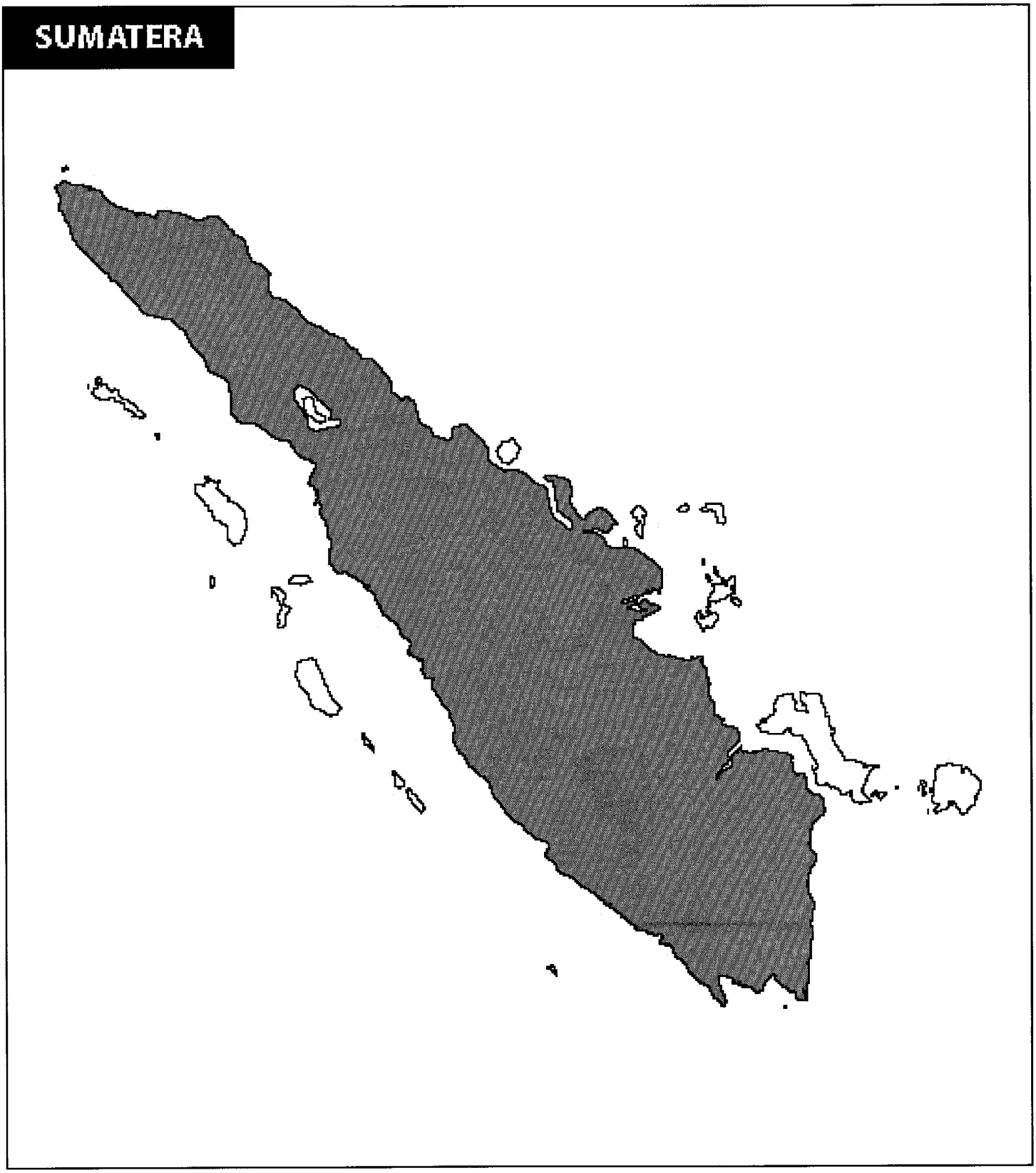
21. SOURCES: Wibisono, H.T., R.M. Sinaga, Martazina, A. Yanuar, S. Iskandar, I. Sidik, J. Supriatna. 1994 Survai Populasi Siamang (Hylobates syndactylus) dan Ungko (Hylobates agilis) di Propinsi Lampung, Bengkulu, dan Jambi, Sumatra

Wibisono, H.T., I. Tanjung, U. Wijayanto 2001. Laporan Singkat Survai distribusi Siamang (Hylobates syndactylus), Ungko (Hylobates agilis) Simpai (Presbytis melalophos) dan Beruk (Macaca Nemestrina) di TN Bukit Barisan Selatan

22. COMPILERS: Pusat Studi Biodiversitas & Konservasi FMIPA Universitas Indonesia,

Members of Hylobates Working Group in Indonesia Primate CAMP.

23. REVIEWERS: CAMP 2001



Symphalangus syndactylus syndactylus

CONSERVATION ASSESSMENT AND MANAGEMENT PLAN FOR THE PRIMATES OF INDONESIA

Taman Safari
15-19 January 2001

FINAL REPORT

July 2001

Section 6

MACACA:

Taxon Data Summaries, Data Sheets and Distribution Maps

Summary Table - Indonesia

Scientific name	*Common name*	*Distribution*	*Area of occupancy*	*Global population*	*Previous IUCN*	*Assigned IUCN*	*IUCN Criteria*	*CITES Append*	*ProtectedArea*
Macaca togeanus	Togean Macaque	Indonesia	<20,000 sq km	<10,000	Unlisted	EN	B2a	none	none
Macaca brunnescens	Buton Macaque, Brunnescens macaque	Indonesia	501-2,000 sq km	3,500-5,000	Vulnerable	VU	B1a, C1	II	Button wildlife sanctuary, Napabalano Nature reserve
Macaca fascicularis fascicularis	Longtailed macaques, Crab-eating macaques,	Indonesia, Malaysia, Philipine, Thailand, Burma, Vietnam, Laos	> 2,001 sq km	20,000,000	Lower risk - least concern	LRlc		II	All protected area in its range
Macaca fascicularis fusca	Longtailed Macaque	Indonesia	< 10 sq km	5,000 - 7,000	Endangered	EN	B2a	II	None
Macaca fascicularis karimunjawa e	Crab eating macaque	Indonesia	< 10 sq km	1,350-2,700	Vulnerable	VU	A4, B2	II	Karimun Jawa National Park
Macaca hecki	Heck's macaque	Indonesia	> 2,001 sq km	~5,000	Vulnerable	EN	B1a	Appendix II	Dumoga Bone, Lore Kalamanta, Panua Lempako, Mampie, Morowali
Macaca maura	Kera/monyet hitam dare	Indonesia	11-500 sq km	2,500-5,000	Endangered	EN	B2a	II	Karaenta and Bantimurung Nature Reserves
Macaca nemestrina nemestrina	Pigtail macaque, I	Indonesia, Thailand, China, Malaysia, Assam	> 2,001 sq km	20,000-50,000	Vulnerable	VU	B2a	II	Betung Kerihun Nat. Park, Leuser Nat. Park, Kerinci Seblat Nat. Park, E. Palung NP., Bakit Barisan Selatan, Kayan Mentarang Nat. Park,

Scientific name	*Common name*	*Distribution*	*Area of occupancy*	*Global population*	*Previous IUCN*	*Assigned IUCN*	*IUCN Criteria*	*CITES Append*	*ProtectedArea*
Macaca nigra	Sulawesi black macaque, Celebes/crested black maca	Indonesia	> 2,001 sq km	103,500	Endangered	EN	A3	II	Tangkoko and Dua Saudara Nature reserve, Gunung Ambang, Gunung Sibela
Macaca nigrescens	Gorontalo/Dumoga Bone macaque	Indonesia	< 500 sq km	4,000-5,000	Vulnerable	VU	A1a	II	Dumoga Bone
Macaca ochreata	Ochreata macaque	Indonesia	< 10 sq km	5,000-7,500	Vulnerable	VU	B1a	none	Rawa Aopa National Park, Tanjung Peropa Wildlife Sanctuary
Macaca pagensis pagensis	Bokoi/Mentawai macaque	Indonesia	501-2,000 sq km	5,000-10,000	Endangered	CR	B2a	II	
Macaca pagensis siberu	Mentawai Macaque	Indonesia	501-2,000 sq km	5,000 - 10,000	Endangered	CR	B2a	II	Siberut National park
Macaca tonkeana	Tonkean macaque	Indonesia	501-2,000 sq km	5,000-7,000	Vulnerable	VU	A2, B1a, B2a	II	Lore Lindu National Park, Morowali National Park, Tanjung Api Sanctuary

Indonesian Primate Camp

Macaca togeanus — Togean Macaque

Taxonomy

1. Scientific Name / Ambiguities	Authority	Date
Macaca togeanus	Frochlich	1996
Macaca balantakensis	Frochlich	1998

FAMILY: Cercopithecidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Monyet, Fonti	Indonesian
Togean Macaque	English
Yakis	Togean

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical rain forest, Primary and Secondary forest - lowland to upland. - NICHE: plantation, agricultural area, 0-100 asl. - HISTORICAL DISTRIBUTION: Togean Island (Malenge Island). - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Indonesia, central Sulawesi, Togean Island, Malenge Island, Eastern central Sulawesi.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: < 20,000 sq km.

OCCUPANCY AREA: <20,000 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: 2 (Togian island and Luwuk).

6. Habitat status:

Not known.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 21% to 50%.- DURING HOW MANY YEARS? 5. - PRIMARY CAUSE OF CHANGE: Forest covertion, plantation.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - habitat change

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
harvest/hunting	Y	Y	second threat
loss of habitat	Y	Y	first threat

8. Trade:

Parts in Trade:

Effects:

9. Population (global) <10,000

Subpopulations unknown
Mature unknown
Avg age parents

10. Population trends Declining

Past Decline % Period

11. Data Source
DATA SOURCE/QUALITY: informal sightings; literature; -

12. Recent Field Studies
Yabsh. 1992. Survey

13. Status

IUCN CATEGORY (Global): Unlisted

IUCN CATEGORY (National): None

CITES: none. - NATL WILDLIFE LEGISLATION: none. - NATL REDBOOK DATA: none. - INTL REDBOOK DATA: none. - OTHER LEGISLATION: national legislation number 5/1990, number 421/Kpts/Um/8/70, number 301/Kpts-II/1991. - PROTECTED AREA: none. - PROTECTED PLAN: none.

RED LIST CATEGORY: Endangered

IUCN-BASIS: B2a

14. Research Recommended

PHVA is recommended.

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; genome resource; work in local communities;

16. Captive Breeding / Cultivation Recommendations

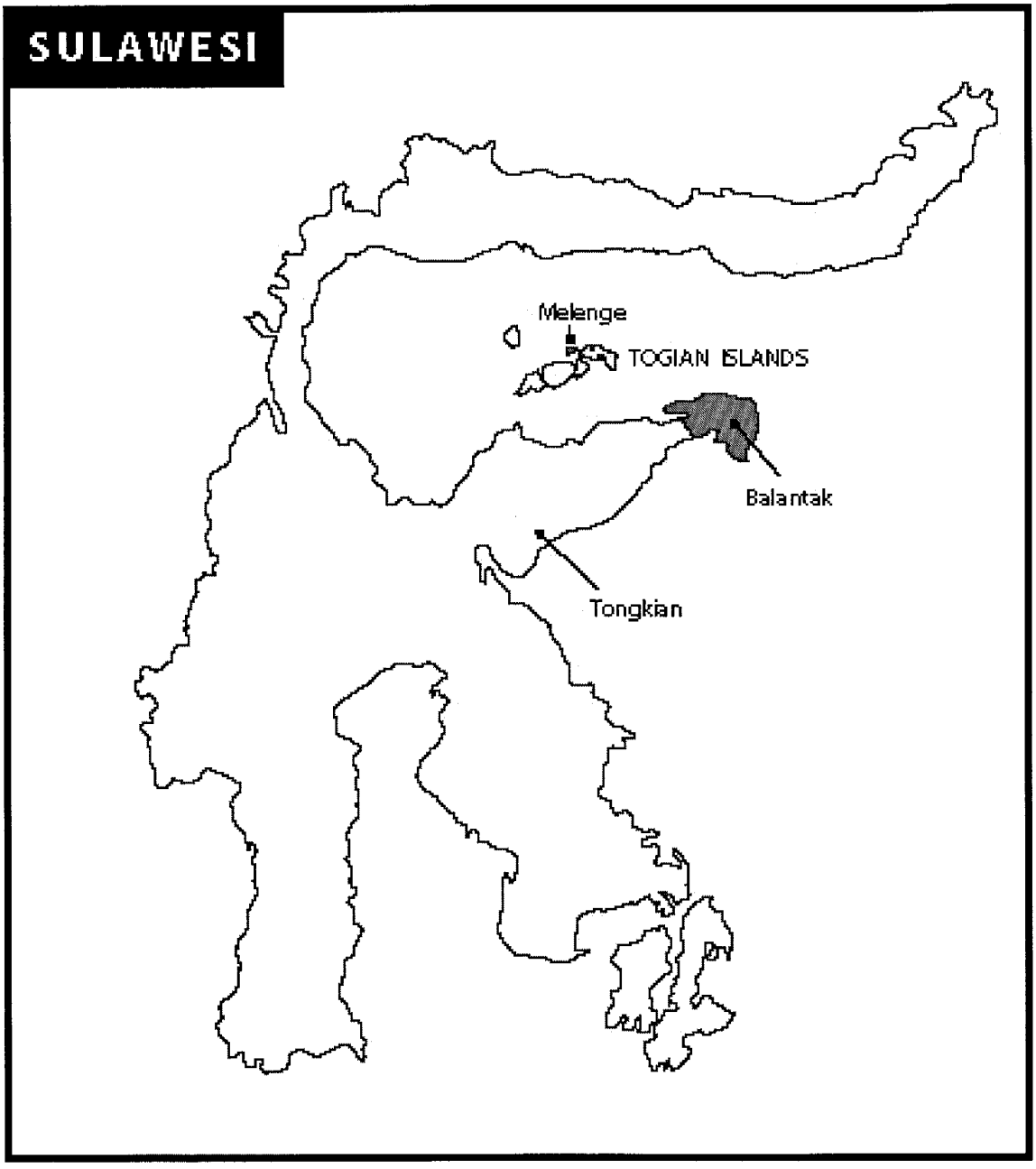
17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

20. GENERAL COMMENTS: Effort is needed to protect this island.

21. SOURCES: Jatna Supriatna, 2000, Indonesian primate field guide

22. COMPILERS: Hudiyono, Muhammad Ali Imran,Ign. Pramana Yuda, M. Bismark, Randall C.Kyes, Entang Iskandar, Sudariono Sady, Harjanto W. Sukotjo, Achmad, Djuwantoko, Haerudin R. Sadjudin, RPA Lelana



Macaca togeanus

Indonesian Primate Camp

Macaca brunnescens — Buton Macaque, Brunnescens macaque

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Macaca brunnescens

Macaca ochreata brunnescens

FAMILY: Cercopithecidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Buton Macaque, Brunnescens macaque — English
Endoke — Indonesia

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical rain forest (primary and secondary forest). - NICHE: Lowland forest/up to 200 m asl. - HISTORICAL DISTRIBUTION: Indonesia. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: South East Sulawesi, Buton and Muna island.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 5,001 - 20,000 sq km.

OCCUPANCY AREA: 501-2,000 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: 2 (Buton island, Muna island).

6. Habitat status:

Fragmented.

- RECENT CHANGE: DD.- DURING HOW MANY YEARS? DD. - PREDICTED DECLINE IN HABITAT: DD. - PREDICTED DURATION OF DECLINE: DD. - PRIMARY CAUSE OF CHANGE: Deforestation, landuse conversion.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Landuse conversion, deforestation

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y	Y	third theat
harvest/hunting	Y	Y	second threat
loss of habitat	Y	Y	first threat

8. Trade:

Parts in Trade:

Effects:

9. Population (global) 3,500-5,000

Subpopulations +/- 5000
Mature < 2,500
Avg age parents 7-10 yrs

10. Population trends Declining

Past Decline % <20% Period 10 year

Future decline of <20% is predicted for a period of 10 years

Buton island population number= >2500, Muna island population number is < 2500

11. Data Source

DATA SOURCE/QUALITY: census monitoring; indirect information; field study; informal sightings; literature; -

12. Recent Field Studies

A.H. Pramono 1990 Ecology
Dedi Supriyadi 1990 Behavior

13. Status

IUCN CATEGORY (Global): Vulnerable

CITES: II. - NATL WILDLIFE LEGISLATION: SK Mentri Pertanian No.35/Kpts/1975, PP7/1999, UU No. 5/1990.. - NATL REDBOOK DATA: none. - INTL REDBOOK DATA: none. - OTHER LEGISLATION: none. - PROTECTED AREA: Button wildlife sanctuary, Napabalano Nature reserve. - PROTECTED PLAN: none.

RED LIST CATEGORY: Vulnerable

IUCN-BASIS: B1a, C1

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history;PHVA NOTES: Recommended

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; genome resource; work in local communities;

16. Captive Breeding / Cultivation Recommendations

education; research;preservation of live genome;

17. Facilities: Ragunan zoo, Jakarta

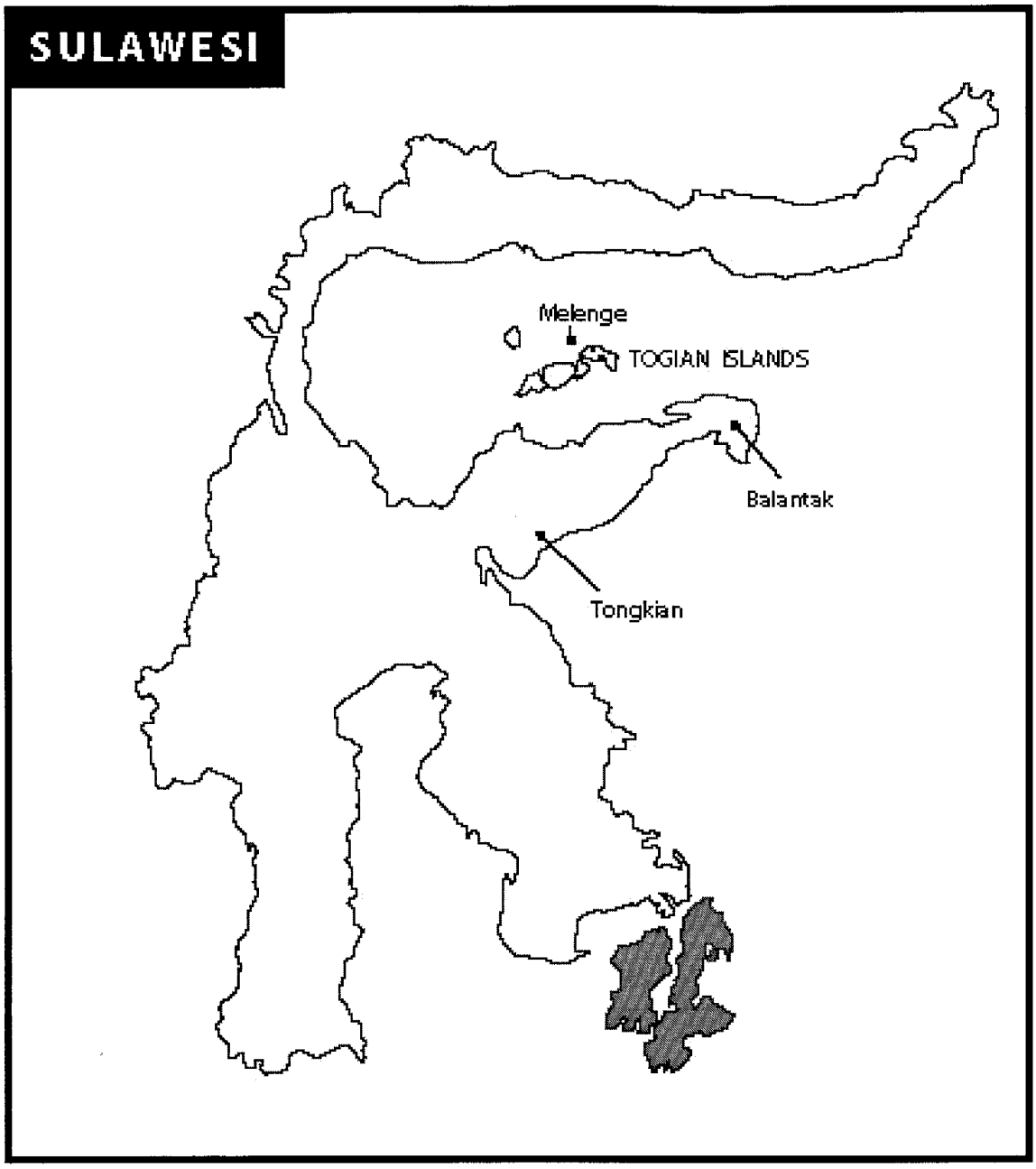
Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	3	0	3

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: Initiate ex situ program in 3 years.

19. TECHNIQUES TO PROPAGATE THE TAXON: Some techniques known for taxon or similar taxon.

21. SOURCES: Suprijatna, Jatna., Eddy Hendras, 2000 Panduan lapangan Primata Indonesia

22. COMPILERS: Hudiyono, Muhammad Ali Imran,Ign. Pramana Yuda, M. Bismark, Randall C.Kyes, Entang Iskandar, Sudariono Sady, Harjanto W. Sukotjo, Achmad, Djuwantoko, Haerudin R. Sadjudin, RPA Lelana



Macaca brunescens

Indonesian Primate Camp

Macaca fascicularis fascicularis — Longtailed macaques, Crab-eating macaques,

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Macaca fascicularis fascicularis Raffles 1823

Macaca fascicularis fusca

FAMILY: Cercopitecidae LEVEL: Subspecies
ORDER: Primate
CLASS: Mammalia

COMMON NAMES:

Longtailed macaques, Crab-eating macaques,	English
Monyet	Indonesian
Munyuk, Ketek	Javan

...

2. Distribution of the Taxon Burma
Indonesia, Philipine, Malays

- HABITAT: Primary and Secondary forest, Lowland forest. - NICHE: Plantation, primary and secondary forest, 0-1000 m asl.. - HISTORICAL DISTRIBUTION: South East Asia. - CURRENT COUNTRIES: Indonesia, Malaysia, Philipine, Thailand, Burma, Vietnam, Laos. - GEOGRAPHIC EXTENT: Malay Peninsula, Sumatera, Borneo, Java, Philippine islands, Bali,.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: > 20,000 sq km.

OCCUPANCY AREA: > 2,001 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: unknown.

6. Habitat status:

Contiguous. - NOTES ON FRAGMENTATION: Also fragmented.

- RECENT CHANGE: 21% to 25%.- DURING HOW MANY YEARS? 10 years. - PRIMARY CAUSE OF CHANGE: Deforestation, land use conversion.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: although the species can utilized disturb habitat - Deforestation
Deforestation
Deforestation

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
habitat			Y
fragmentation			
harvest/hunting			
loss of habitat	Y		Y

8. Trade:

Trade described as commercial; international

Parts in Trade: Live animal
Meat

Effects: Declining population

9. Population (global) 20,000,000

Subpopulations 100,000
Mature > 10,000
Avg age parents 10 years

10. Population trends Unknown

Past Decline % Period

11. Data Source

DATA SOURCE/QUALITY: census monitoring; indirect information; field study; informal sightings; literature; -

12. Recent Field Studies

Jatna Supriatna et al	Sumatra, West Java	1995	Population Survey
Maryanto et al	South Sumatra	1995	Population Survey
Herlan	Central Java	2000	Population Survey
Djuwantoko et al	Central Java	1993	Population survey

13. Status

IUCN CATEGORY (Global): Lower risk - least concern

IUCN CATEGORY (National): Lower risk - least concern

CITES: II. - NATL WILDLIFE LEGISLATION: Not protected. - NATL REDBOOK DATA: None. - INTL REDBOOK DATA: Lower risk-least concern. - OTHER LEGISLATION: None. - PROTECTED AREA: All protected area in its range. - PROTECTED PLAN: None.

RED LIST CATEGORY: Lower risk - least concern

IUCN-BASIS:

14. Research Recommended

Survey Studies; Genetic Research; trade;PHVA NOTES: Not necessary at the moment

15. Management Recommendations

habitat management; wild population management; monitoring; sustainable utilization; captive breeding / cultivation; work in local communities;

16. Captive Breeding / Cultivation Recommendations

education; research;

17. Facilities:

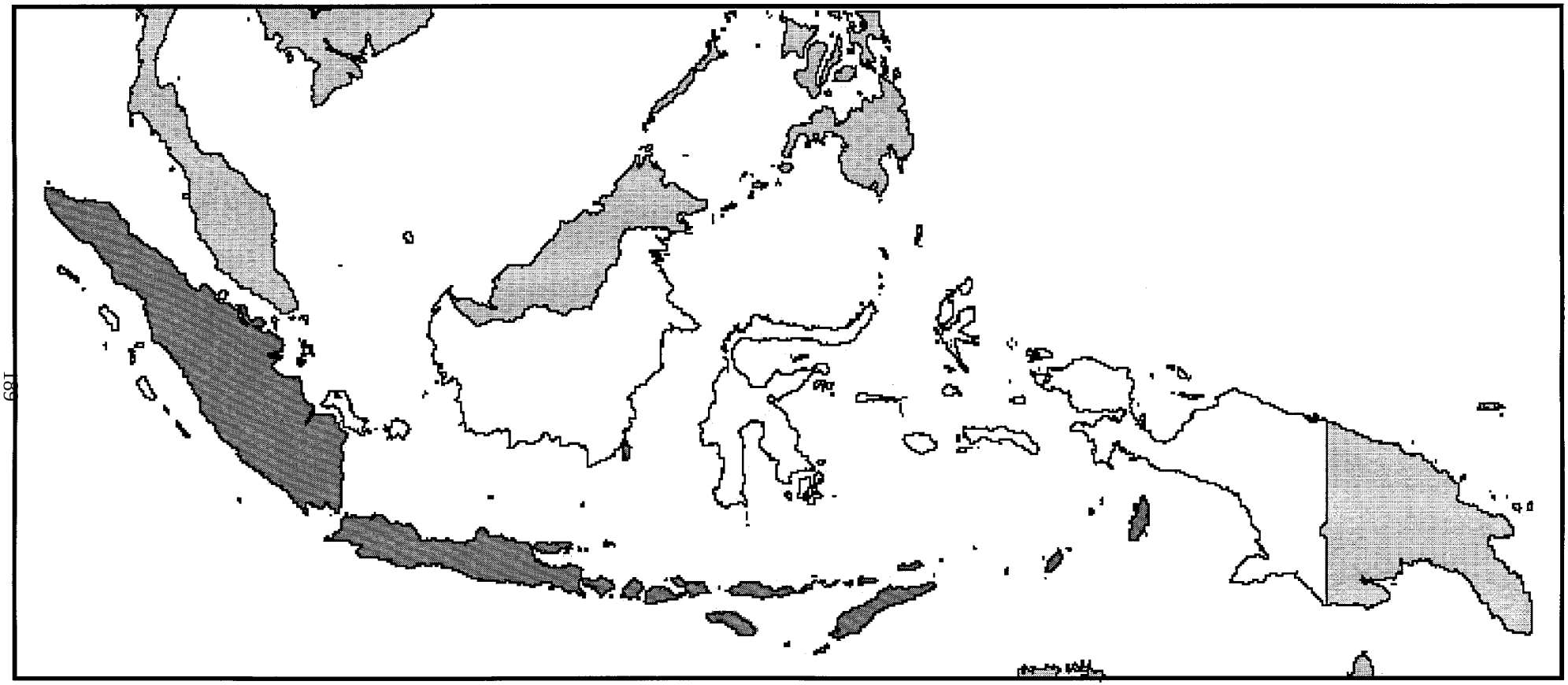
Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	30	22	22	74

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques known for this taxon or similar taxon.

20. GENERAL COMMENTS: Ongoing captive breeding program to remain the same at present.

21. SOURCES: Jatna Supriatna et al Sumatra, West Java 1995 Population Survey
Maryanto et al South Sumatra 1995 Population Survey
Herlan Central Java 2000 Population Survey
Juwantoko et al Central Java 1993 Population survey

22. COMPILERS: Hudiyono, Muhammad Ali Imran,Ign. Pramana Yuda, M. Bismark, Randall C.Kyes, Entang Iskandar, Sudariono Sady, Harjanto W. Sukotjo, Achmad, Djuwantoko, Haerudin R. Sadjudin, RPA Lelana



Macaca fascicularis

Indonesian Primate Camp

Macaca fascicularis fusca — Longtailed Macaque

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Macaca fascicularis fusca

FAMILY: Cercopithecidae LEVEL: Subspecies
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Kera	Indonesia
Longtailed Macaque	English

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical rain forest, mangrove. - NICHE: 0-200 m asl. - HISTORICAL DISTRIBUTION: Indonesia. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Aceh province.

3.-4. Occurrence and Occupancy in _around area study/sighting

OCCURRENCE AREA: < 100 sq km.

OCCUPANCY AREA: < 10 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: 500 - 700.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 21% to 50%.- DURING HOW MANY YEARS? 5 yrs. - PRIMARY CAUSE OF CHANGE: Forest conversion, fragmentation.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Forest conversion

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y	Y	Y
harvest/hunting	Y	Y	Y
loss of habitat	Y	Y	Y
loss of habitat	Y	Y	Y

8. Trade:

Parts in Trade: Live animal
Meat

Effects: live animal

9. Population (global) 5,000 - 7,000

Subpopulations
Mature < 10,000
Avg age parents 10 yrs

10. Population trends Stable

Past Decline % Period

Future decline of 51% to 80% is predicted for a period of

11. Data Source

DATA SOURCE/QUALITY: informal sightings; -

12. Recent Field Studies

Djuwantoko; 1996; Aceh; General survey

13. Status

IUCN CATEGORY (Global): Endangered

IUCN CATEGORY (National): None

CITES: II. - NATL WILDLIFE LEGISLATION: None. - NATL REDBOOK DATA: None. - INTL REDBOOK DATA: None. - OTHER LEGISLATION: None. - PROTECTED AREA: None. - PROTECTED PLAN: None.

RED LIST CATEGORY: Endangered

IUCN-BASIS: B2a

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history; limiting factor research; epidemiology; trade; PHVA is recommended.

15. Management Recommendations

habitat management; wild population management; monitoring; sustainable utilization; public awareness; genome resource; work in local communities;

16. Captive Breeding / Cultivation Recommendations

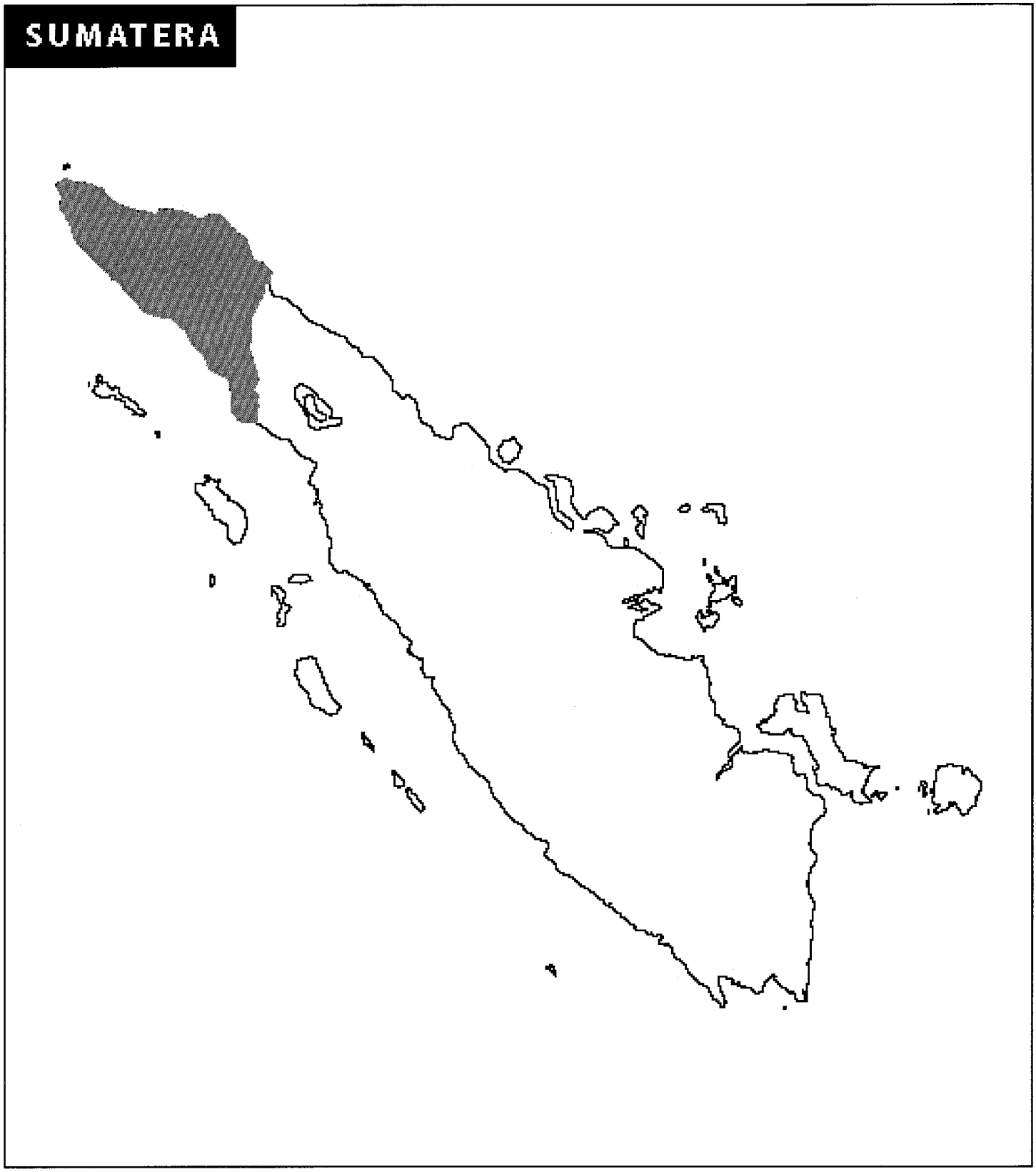
17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

20. GENERAL COMMENTS: Endemics sub species

21. SOURCES: Djuwantoko; 1996; Aceh; General survey

22. COMPILERS: Hudiyono, Muhammad Ali Imran, Ign. Pramana Yuda, M. Bismark, Randall C.Kyes, Entang Iskandar, Sudariono Sady, Harjanto W. Sukotjo, Achmad, Djuwantoko, Haerudin R. Sadjudin, RPA Lelana



Macaca fascicularis fusca

Indonesian Primate Camp

Macaca fascicularis karimunjawae — Crab eating macaque

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Macaca fascicularis karimunjawae

FAMILY: Cercopithecidae LEVEL: Subspecies
ORDER: Primate
CLASS: Mammalia

COMMON NAMES:

Crab eating macaque English

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical rain forest. - NICHE: 0-200 m asl. - HISTORICAL DISTRIBUTION: Indonesia. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Karimun Jawa island.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: < 100 sq km.

OCCUPANCY AREA: < 10 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: 1 (Karimun Jawa island).

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: < 20%.- DURING HOW MANY YEARS? 5. - PRIMARY CAUSE OF CHANGE: Fragmentation, land use conversion.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Fragmentation, land use conversion

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y	Y	
harvest for timber	Y	Y	Y
loss of habitat	Y	Y	Y

8. Trade:

Parts in Trade: Live animal

Effects: unknown

9. Population (global) 1,350-2,700

Subpopulations 5-10
Mature 650-1350
Avg age parents 10 yrs

10. Population trends Declining

Past Decline % <20% Period 5

11. Data Source

DATA SOURCE/QUALITY: informal sightings; -

12. Recent Field Studies

Imran et al; 1999; Karimun Jawa; General field observation
Pramana Yuda & Djuwantoko; 1996; Karimun Jawa; Field observation

13. Status

IUCN CATEGORY (Global): Vulnerable

IUCN CATEGORY (National): Vulnerable

CITES: II. - NATL WILDLIFE LEGISLATION: None. - NATL REDBOOK DATA: None. - INTL REDBOOK DATA: None. - OTHER LEGISLATION: None. - PROTECTED AREA: Karimun Jawa National Park. - PROTECTED PLAN: None.

RED LIST CATEGORY: Vulnerable

IUCN-BASIS: A4, B2

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history;

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; genome resource; work in local communities;

16. Captive Breeding / Cultivation Recommendations

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: No ex situ program recommended.

21. SOURCES: Imran et al; 1999; Karimun Jawa; General field observation
Pramana Yuda & Djuwantoko; 1996; Karimun Jawa; Field observation

22. COMPILERS: Muhammad Ali Imran, Randall C. Kyes, Entang Iskandar, R.P.A. Lelana, Sudaryono Sady, Harjanto W. Sukotjo, M. Bismark, Ign Pramana Yudha, Hudiyono, Achmad, Djuwantoko

Macaca fascicularis karimujawae

Indonesian Primate Camp

Macaca hecki — Heck's macaque

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Macaca hecki

FAMILY: Cercopitecidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Dige	Indonesia
Heck's macaque	English

2. Distribution of the Taxon Indonesia

- HABITAT: Lowland, hill forests, raid crops. - NICHE: 0 - 1800 asl. - HISTORICAL DISTRIBUTION: Indonesia. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Danau Limboto, Pegunungan Siweli, North Sulawesi.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: > 20,000 sq km.

OCCUPANCY AREA: > 2,001 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: 4.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 21% to 50%. - PRIMARY CAUSE OF CHANGE: Fragmentation, land use conversion.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Fragmentation, land use conversion

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation		Y	second threat
harvest for food	Y	Y	third threat
harvest/hunting	Y	Y	fifth threat
loss of habitat	Y	Y	first threat
trade of parts	Y	Y	fourth threat

8. Trade:

Trade described as local;

Parts in Trade: Live animal
Meat

Effects: Declining population

9. Population (global) ~5,000

Subpopulations 500-750
Mature 90% of total
Avg age parents 10 years

10. Population trends Declining

Past Decline % unknown Period

Northerm of South east sulawesi (500-750), Kampung Baru (500-750), Kwandang (500-750)

11. Data Source

DATA SOURCE/QUALITY: census monitoring; informal sightings; literature; -

12. Recent Field Studies

Bynum et al. 1996

13. Status

IUCN CATEGORY (Global): Vulnerable

IUCN CATEGORY (National): Vulnerable

CITES: Appendix II. - NATL WILDLIFE LEGISLATION: SK Mentan 301/1991. - NATL REDBOOK DATA: None. - INTL REDBOOK DATA: Vulnerable. - OTHER LEGISLATION: None. - PROTECTED AREA: Dumoga Bone, Lore Kalamanta, Panua Lempako, Mampie, Morowali. - PROTECTED PLAN: None.

RED LIST CATEGORY: Endangered

IUCN-BASIS: B1a

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; epidemiology; trade;

15. Management Recommendations

habitat management; wild population management; monitoring; sustainable utilization; public awareness; genome resource; work in local communities;

16. Captive Breeding / Cultivation Recommendations

17. Facilities: Ragunan Zoo

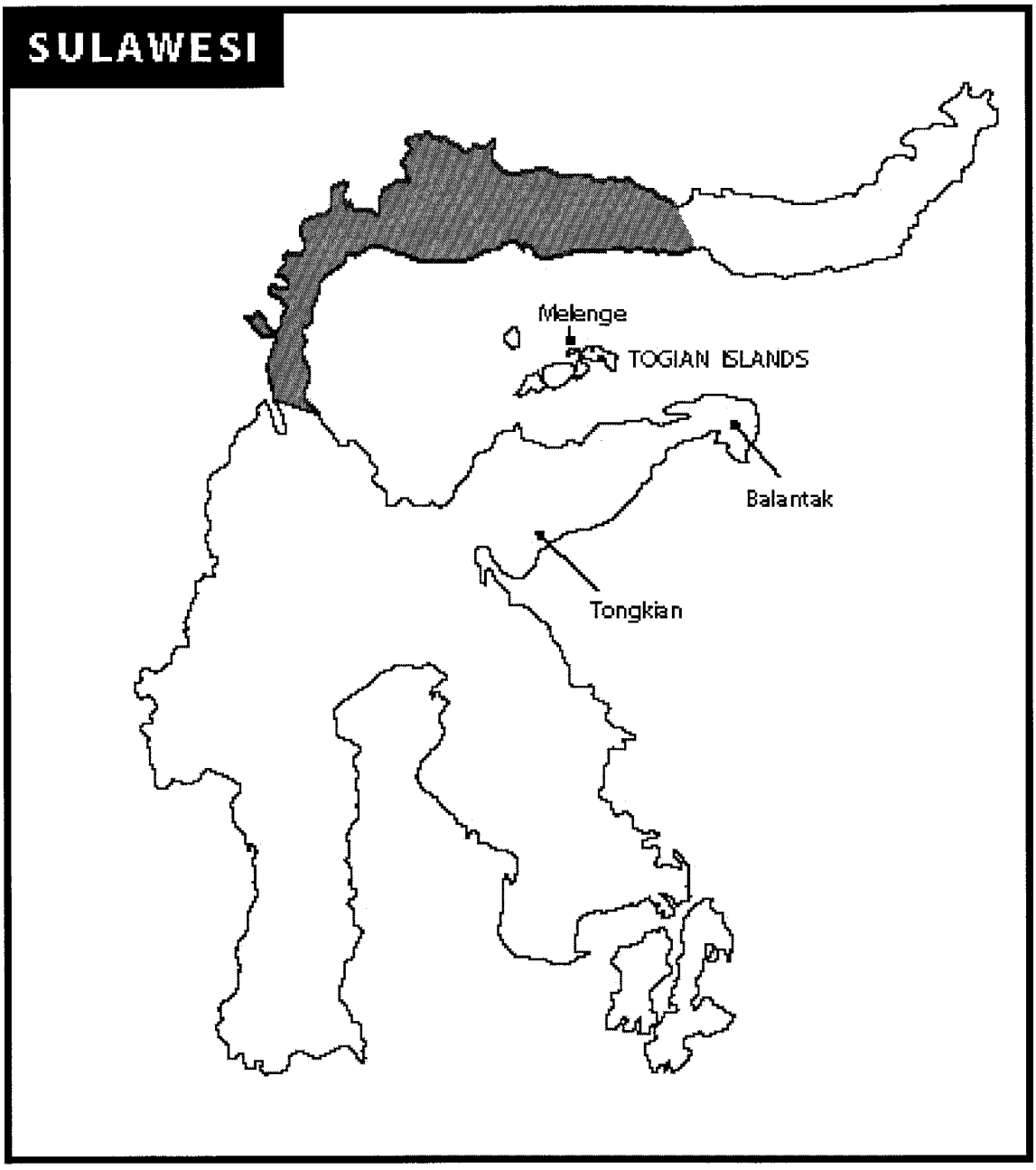
Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	3	2	0	5

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: No ex situ program recommended.

19. TECHNIQUES TO PROPAGATE THE TAXON: Information not available with this group.

21. SOURCES: Bynum et al. 1996

22. COMPILERS: Hudiyono, Muhammad Ali Imran, Ign. Pramana Yuda, M. Bismark, Randall C.Kyes, Entang Iskandar, Sudariono Sady, Harjanto W. Sukotjo, Achmad, Djuwantoko, Haerudin R. Sadjudin, RPA Lelana



Macaca hecki

Indonesian Primate Camp

Macaca maura **Kera/monyet hitam dare**

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Macaca maura

FAMILY: Cercopitecidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Dare	Indonesia
Moor Macaque	English

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical Rain forest (Primary and secondary forest), Monsoon, garden. - NICHE: 0-2000 m asl. - HISTORICAL DISTRIBUTION: Indonesia. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: South Sulawesi.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km.

OCCUPANCY AREA: 11-500 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: <10 locations.

6. Habitat status:

Fragmented. - NOTES ON FRAGMENTATION: in small pocket forest.

- RECENT CHANGE: >80%.- DURING HOW MANY YEARS? DD. - PRIMARY CAUSE OF CHANGE: Deforestation, land use conversion.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Deforestation, land use conversion

7. Threats: **now** **future** **pop decline**

HUMAN INTERFERENCE

habitat fragmentation	Y	Y	second threat
harvest/hunting	Y	Y	third threat
loss of habitat	Y	Y	first threat

8. Trade:

Trade described as local; domestic;

Parts in Trade: Live animal (pets)

Effects:

9. Population (global) 2,500-5,000

Subpopulations	50-100 group
Mature	1000-2500
Avg age parents	10 yrs

10. Population trends Declining

Past Decline % >20% Period 5 years

Future decline of >20% is predicted for a period of 5 years

11. Data Source

DATA SOURCE/QUALITY: census monitoring; indirect information; field study; informal sightings; literature; -

12. Recent Field Studies

13. Status

IUCN CATEGORY (Global): Endangered

IUCN CATEGORY (National): Endangered

CITES: II. - NATL WILDLIFE LEGISLATION: SK Mentan N0.301/1991, PP 7/1999. - NATL REDBOOK DATA: none. - INTL REDBOOK DATA: Endangered. - OTHER LEGISLATION: none. - PROTECTED AREA: Karaenta and Bantimurung Nature Reserves. - PROTECTED PLAN: none. - NOTES ON STATUS: Endangered.

RED LIST CATEGORY: Endangered

IUCN-BASIS: B2a

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history; PHVA is recommended.

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; genome resource; captive breeding / cultivation; work in local communities;

16. Captive Breeding / Cultivation Recommendations

species recovery; reintroduction; research;preservation of live genome;

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	1	0	1

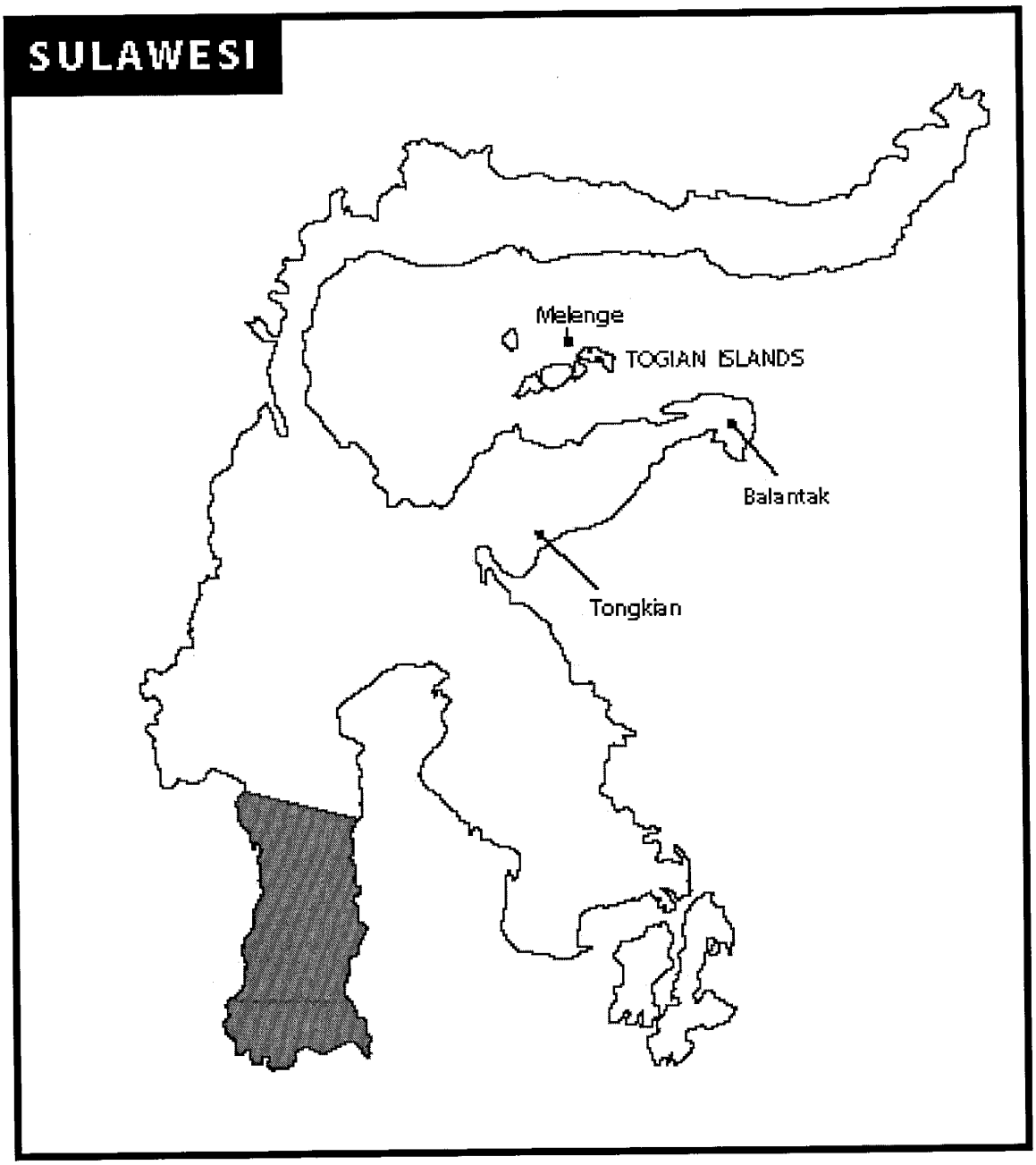
SPECIES MANAGEMENT RECOMMENDED FOR RANGE COUNTRIES: Indonesia

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: Initiate ex situ program.

19. TECHNIQUES TO PROPAGATE THE TAXON: Some techniques known for taxon or similar taxon.

21. SOURCES: Suriatna et al. 199. In: Poulation Densities. Jatna Supriatna, 2000. Primata Indonesia

22. COMPILERS: Hudiyono, Muhammad Ali Imran,Ign. Pramana Yuda, M. Bismark, Randall C.Kyes, Entang Iskandar, Sudariono Sady, Harjanto W. Sukotjo, Achmad, Djuwantoko, Haerudin R. Sadjudin, RPA Lelana



Macaca maura

Indonesian Primate Camp

Macaca nemestrina nemestrina — Pigtail macaque, I

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Macaca nemestrina nemestrina

FAMILY: Cercopithecidae LEVEL: Subspecies
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Beruk, Baruak, Bodat	Indonesia
Pigtail macaque	English

2. Distribution of the Taxon Indonesia, China, Thailand,

- HABITAT: Primary and Secondary tropical rain forest, lowland and mountain forest. - NICHE: planation, river and swamp forest, 0-1000m asl. - HISTORICAL DISTRIBUTION: parts of S.E. Asia and Asia. - CURRENT COUNTRIES: Indonesia, Thailand, China, Malaysia, Assam. - GEOGRAPHIC EXTENT: Sumatra, Kalimantan.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: > 20,000 sq km.

OCCUPANCY AREA: > 2,001 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: 2 (Sumatra and Kalimantan).

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 21% to 50%. - PRIMARY CAUSE OF CHANGE: deforestation, forest conversion, forest fire.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - deforestation, forest converstion, forest fire

7. Threats:

	now	future		pop decline
HUMAN INTERFERENCE				
habitat fragmentation	Y	Y	second threat	Y
harvest/hunting	Y	Y	third threat	Y
loss of habitat	Y	Y	first threat	Y

8. Trade:

Trade described as local; domestic; commercial; international

Parts in Trade: Live animal

Effects: unknown

9. Population (global) 20,000-50,000

Subpopulations

Mature unknown

Avg age parents 5 years

10. Population trends Declining

Past Decline % 51% to 80% Period 10 yrs

11. Data Source

DATA SOURCE/QUALITY: census monitoring; field study; informal sightings; literature; -

12. Recent Field Studies

Lisa L. Rosenblum et al., Indonesia, 1996, Mitochondrial DNA variation
Dario Maestripieri, USA, 2000, Social interaction

13. Status

IUCN CATEGORY (Global): Vulnerable

IUCN CATEGORY (National): Vulnerable

CITES: II. - NATL WILDLIFE LEGISLATION: none. - NATL REDBOOK DATA: none. - INTL REDBOOK DATA: Vulnerable. - OTHER LEGISLATION: none. - PROTECTED AREA: Betung Kerihun Nat. Park, Leuser Nat. Park, Kerinci Seblat Nat. Park, E. Palung NP., Bakit Barisan Selatan, Kayan Mentarang Nat. Park,. - PROTECTED PLAN: none.

RED LIST CATEGORY: Vulnerable

IUCN-BASIS: B2a

14. Research Recommended

Survey Studies; Genetic Research; life history; trade; PHVA is recommended.

15. Management Recommendations

habitat management; wild population management; monitoring; sustainable utilization; public awareness; genome resource; captive breeding / cultivation; work in local communities;

16. Captive Breeding / Cultivation Recommendations

species recovery; education; research;preservation of live genome;

17. Facilities: PSSP LP-IPB, Bogor, Indonesia; Univ. of Washington, Seattle, WA, USA

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

SPECIES MANAGEMENT RECOMMENDED FOR RANGE COUNTRIES: Indonesia, Malaysia, Thailand

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: Ongoing ex situ program intensified or increased.

19. TECHNIQUES TO PROPAGATE THE TAXON: Techniques known for this taxon or similar taxon.

21. SOURCES: Supriatna, J. (2000). Panduan Lapangan Primata Indonesia
Lisa L. Rosenblum et al., Indonesia, 1996, Mitochondrial DNA variation
Dario Maestripieri, USA, 2000, Social interaction

22. COMPILERS: Hudiyono, David, Sudaryono, Imran, Bismark

Macaca nemestrina

Indonesian Primate Camp

Macaca nigra — Sulawesi black macaque, Celebes/crested black maca

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Macaca nigra

FAMILY: Cercophitecidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Sulawesi black macaque, Celebes/crested blac English
Yaki Indonesia

2. Distribution of the Taxon Indonesia

- HABITAT: Lowland, hill forests, raid gardens, coastal forest. - NICHE: 0-2000 m asl. - HISTORICAL DISTRIBUTION: Indonesia. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Bacan Island (Maluku), North Sulawesi.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 5,001 - 20,000 sq km.

OCCUPANCY AREA: > 2,001 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: 6-10.

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - PRIMARY CAUSE OF CHANGE: Deforestation.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Deforestation, land use conversion

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation			second threat
harvest for food	Y	Y	fourth threat
loss of habitat	Y	Y	first threat
trade of parts	Y	Y	third threat

8. Trade:

Trade described as local;

Parts in Trade: Live animal
Meat

Effects: declining population

9. Population (global) 103,500

Subpopulations Bacan (100,000) ; Tangkoko and arounds (3,500)
Mature > 10,000
Avg age parents (10 yrs)

10. Population trends Declining

Past Decline % 21% to 50% Period 5 yrs

Population number in Bacan Island (Molluca) > 100000, Population number in Tangkoko and around = 3500

11. Data Source

DATA SOURCE/QUALITY: census monitoring; indirect information; field study; literature; -

12. Recent Field Studies

O'Briend & Kinnaird; Tangkoko; 1992-93; General survey
Rosebaum et al; Tangkoko, Bacan; 1992-94; General survey
Kyes et al; Tangkoko; 1999-2000; General survey

13. Status

IUCN CATEGORY (Global): Endangered

IUCN CATEGORY (National): Endangered

CITES: II. - NATL WILDLIFE LEGISLATION: SK 301/1991; PP No. 7/1999. - NATL REDBOOK DATA: none. - INTL REDBOOK DATA: Endangered. - OTHER LEGISLATION: none. - PROTECTED AREA: Tangkoko and Dua Saudara Nature reserve, Gunung Ambang, Gunung Sibela. - PROTECTED PLAN: none.

RED LIST CATEGORY: Endangered

IUCN-BASIS: A3

14. Research Recommended

Survey Studies; Genetic Research; life history; epidemiology; PHVA is recommended.

15. Management Recommendations

habitat management; wild population management; monitoring; sustainable utilization; public awareness; genome resource; captive breeding / cultivation; work in local communities;

16. Captive Breeding / Cultivation Recommendations

husbandry;preservation of live genome;

17. Facilities: Primate Research Institute, Pasteur, France. Taman Safari Indonesia, Ragunan zoo

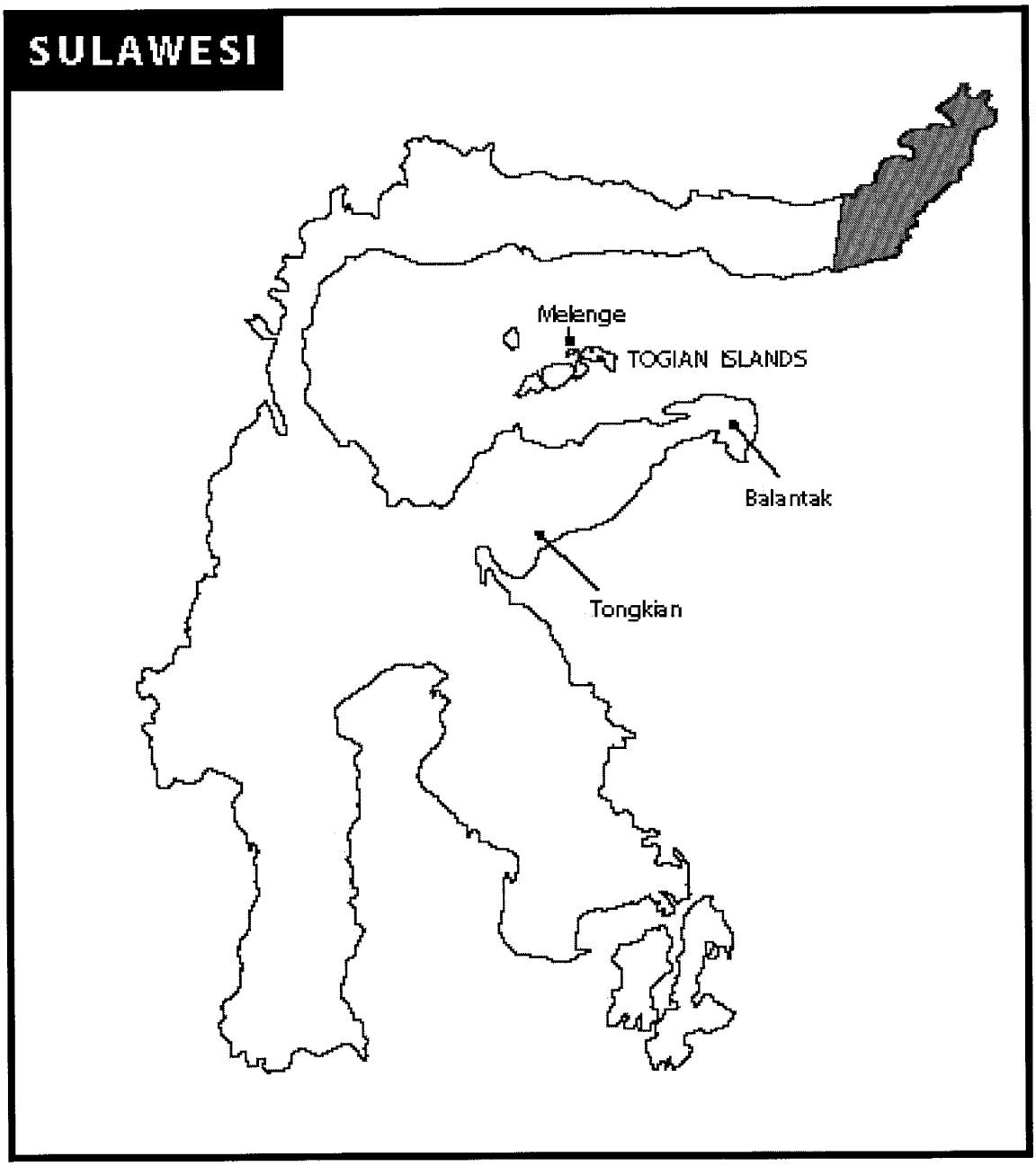
Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	6	7	37	50

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: Ongoing ex situ program intensified or increased.

19. TECHNIQUES TO PROPAGATE THE TAXON: Some techniques known for taxon or similar taxon.

21. SOURCES: O'Briend & Kinnaird; Tangkoko; 1992-93; General survey. Oryx, 1996.
Rosebaum et al; Tangkoko, Bacan; 1992-94; General survey. AJP, 1998.
Kyes et al; Tangkoko; 1999-2000; General survey. AJP, 2000.

22. COMPILERS: Hudiyono, Muhammad Ali Imran,Ign. Pramana Yuda, M. Bismark, Randall C.Kyes, Entang Iskandar, Sudariono Sady, Harjanto W. Sukotjo, Achmad, Djuwantoko, Haerudin R. Sadjudin, RPA Lelana



Macaca nigra

Indonesian Primate Camp

Macaca nigrescens — Gorontalo/Dumoga Bone macaque

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Macaca nigrescens

FAMILY: Cercophitecidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Gorontalo/Dumoga Bone macaque English
Yaki Indonesia

2. Distribution of the Taxon Indonesia

- HABITAT: Primary forest, selective log forest, bordering on raid garden. - NICHE: 100 - 600 asl. - HISTORICAL DISTRIBUTION: Indonesia. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Bogani Nani Warta Bone Naional Park.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km.

OCCUPANCY AREA: < 500 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: 3 (Dumoga, Gorontalo, Limboto).

6. Habitat status:

Fragmented.

- RECENT CHANGE: 51% to 80%. - PRIMARY CAUSE OF CHANGE: Deforestation, land use conservation.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Deforestation, land use conversion

7. Threats:

	now	future		pop decline
HUMAN INTERFERENCE				
habitat fragmentation	Y	Y	second threat	
harvest for food	Y	Y	fourth threat	Y
harvest/hunting	Y	Y	third threat	Y
loss of habitat	Y	Y	first threat	Y

8. Trade:

Trade described as local;

Parts in Trade: Live animal
Meat

Effects: Declining population

9. Population (global) 4,000-5,000

Subpopulations 1000-2000
Mature 90% of total
Avg age parents 7-10 years

10. Population trends Stable

Past Decline % Period

Future decline of is predicted for a period of

Population number Dumoga (2000-2500), Gorontalo (1000-1500), Limboto (500-1000)

11. Data Source

DATA SOURCE/QUALITY: census monitoring; -

12. Recent Field Studies

Sugardjito et al. 1991 Habitat and population studies
Kohlaas, A.K. 1993 Ecological studies
Kurniawan. 1999 Population studies

13. Status

IUCN CATEGORY (Global): Vulnerable

IUCN CATEGORY (National): Protected

CITES: II. - NATL WILDLIFE LEGISLATION: SK Mentan No.301/Kpts II/1991; PP no.7/1999. - NATL REDBOOK DATA: none. - INTL REDBOOK DATA: Vulnerable. - OTHER LEGISLATION: none. - PROTECTED AREA: Dumoga Bone. - PROTECTED PLAN: none.

RED LIST CATEGORY: Vulnerable

IUCN-BASIS: A1a

14. Research Recommended

Survey Studies; Genetic Research; life history; PHVA is recommended.

15. Management Recommendations

habitat management; wild population management; monitoring; sustainable utilization; public awareness; genome resource;

16. Captive Breeding / Cultivation Recommendations

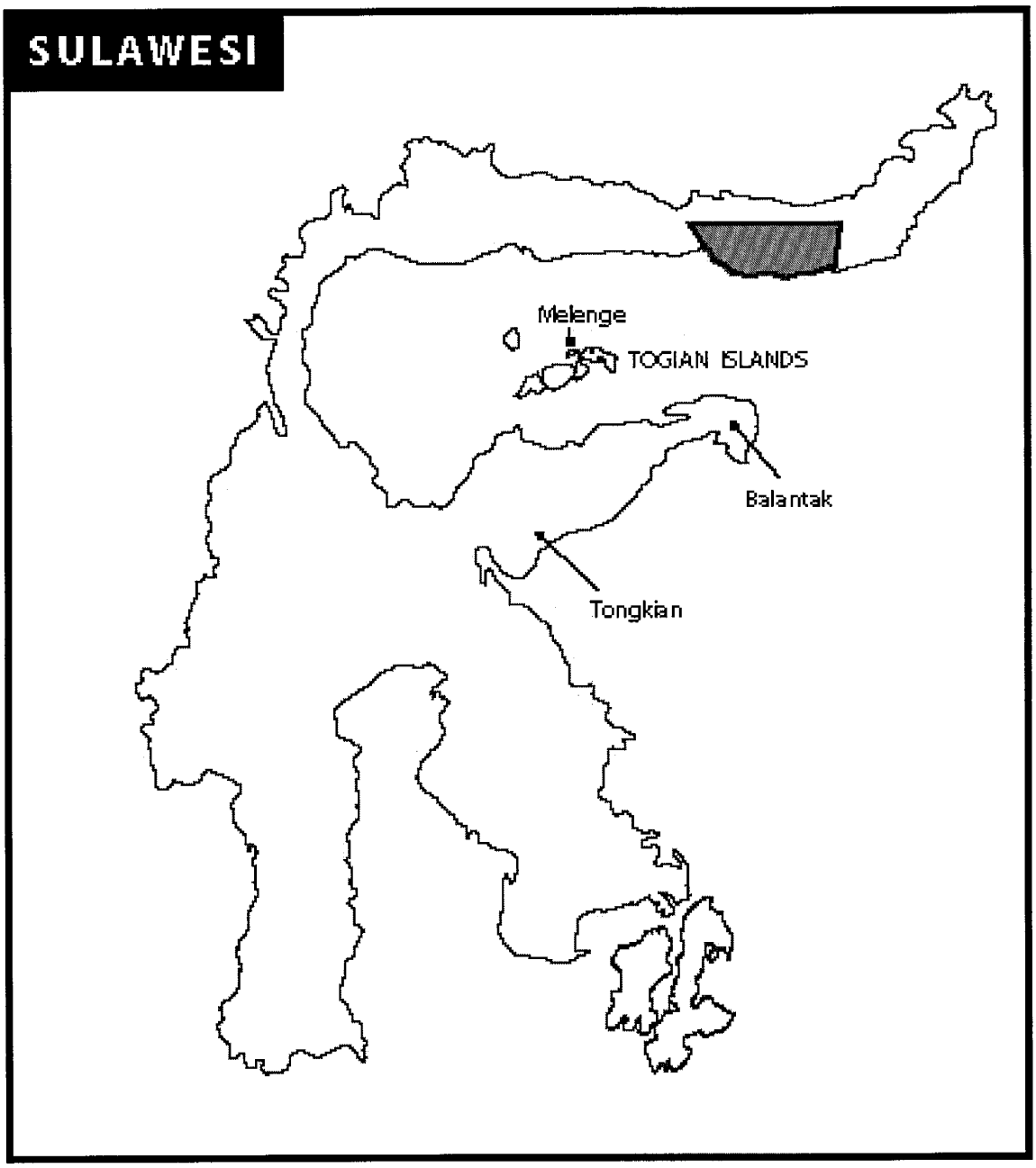
17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: No ex situ program recommended.

21. SOURCES: Kohlaas, A.K. 1993.
Kurniawan. 1999

22. COMPILERS: Hudiyono, Muhammad Ali Imran,Ign. Pramana Yuda, M. Bismark, Randall C.Kyes, Entang Iskandar, Sudariono Sady, Harjanto W. Sukotjo, Achmad, Djuwantoko, Haerudin R. Sadjudin, RPA Lelana



Macaca nigrescens

Indonesian Primate Camp

Macaca ochreata — Ochreata macaque

Taxonomy

1. Scientific Name / Ambiguities | Authority | Date

Macaca ochreata | Ogilby | 1841

Booted macaque

FAMILY: Cercopitecidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Hada	Indonesia
Ochreata macaque	English

2. Distribution of the Taxon Indonesian

- HABITAT: Mangrove, Savana, Tropical rain forest (primary and secondary). - NICHE: Lowland forest/ < 600 m asl. - HISTORICAL DISTRIBUTION: Indonesia. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: South East Sulawesi.

3.-4. Occurrence and Occupancy in _around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km.

OCCUPANCY AREA: < 10 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: > 3 (Rawa Aopa, Tanjung Peropa, and outer of protected areas.

6. Habitat status:

Fragmented.

- RECENT CHANGE: DD. - PREDICTED DECLINE IN HABITAT: DD. - PRIMARY CAUSE OF CHANGE: Deforestation, landuse conversaon.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Deforastation, landuse conversion

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y	Y	second
harvest/hunting	Y	Y	third
loss of habitat	Y	Y	first

8. Trade:

Parts in Trade: Live animal

Effects: unknown

9. Population (global) 5,000-7,500

Subpopulations Tanjung 1,000-1,500
Mature 90% of total
Avg age parents 7-10 yrs

10. Population trends Declining

Past Decline % <20% Period 5 years

Future decline of <20% is predicted for a period of 5 years

Population number in Rawa Aopa 1500-2000, Tanjung Peropa (1000-1500), others (2500-3250)

11. Data Source

DATA SOURCE/QUALITY: census monitoring; indirect information; field study; informal sightings; literature; -

12. Recent Field Studies

Baker et al; Sulawesi; Preliminary observation of captive Sulawesi macaques: M. maurus and M. ochreata x brunnescens.
Watanabe et al.; Sulawesi; Distribution and possible intergradation between M. tonkeana and M. ochreata at the borderland of the species in Sulawesi
Suprijatna, Jatna and Edy Hendras. Panduan Lapangan Primata Indonesia,2000

13. Status

IUCN CATEGORY (Global): Vulnerable

IUCN CATEGORY (National): Vulnerable

CITES: none. - NATL WILDLIFE LEGISLATION: SK Mentan No.301/1991. - NATL REDBOOK DATA: none. - INTL REDBOOK DATA: None. - OTHER LEGISLATION: none. - PROTECTED AREA: Rawa Aopa National Park, Tanjung Peropa Wildlife Sanctuary.

RED LIST CATEGORY: Vulnerable

IUCN-BASIS: B1a

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history;

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; genome resource; work in local communities;

16. Captive Breeding / Cultivation Recommendations

education; research;

17. Facilities:

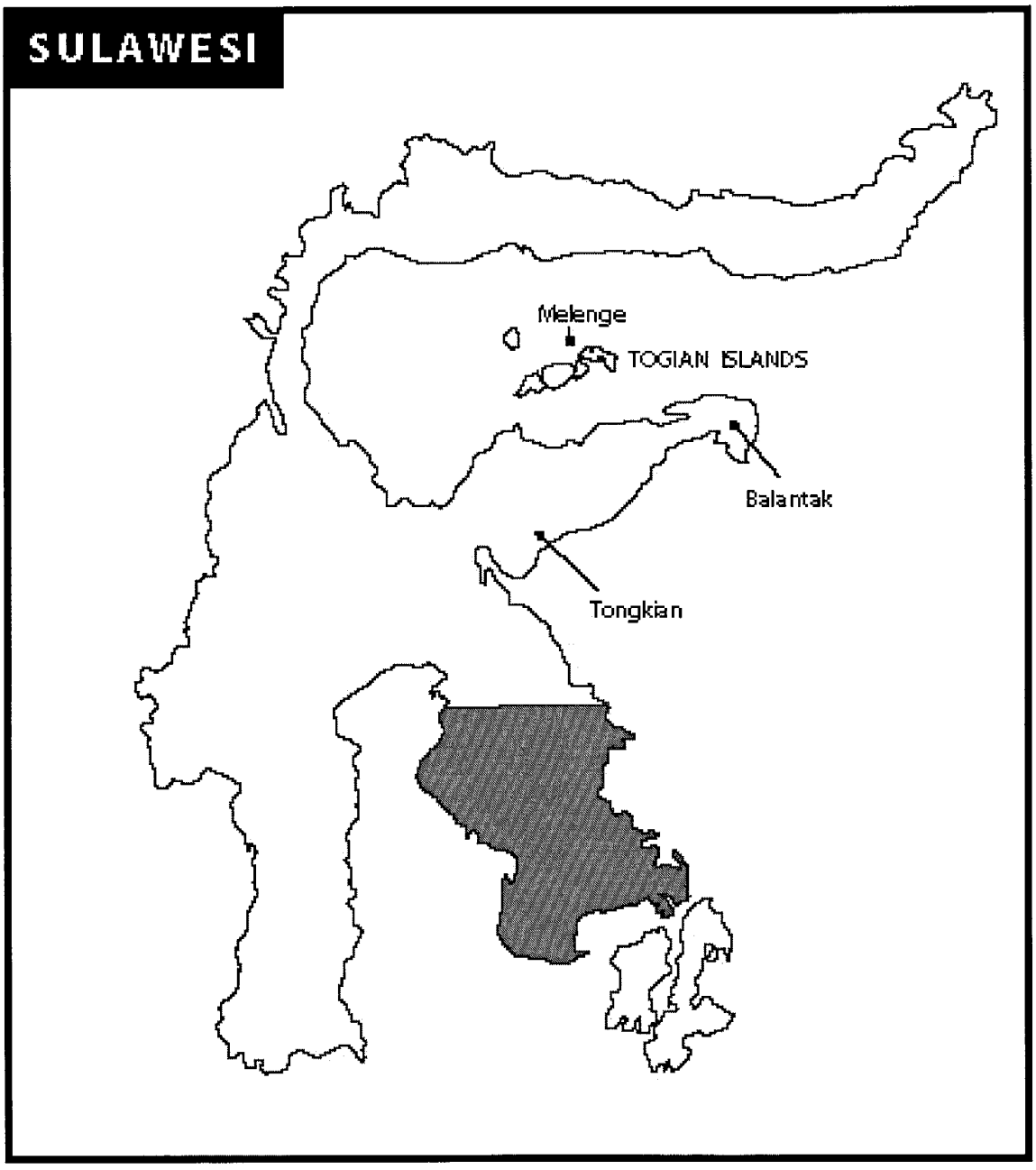
Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: Initiate ex situ program.

19. TECHNIQUES TO PROPAGATE THE TAXON: Some techniques known for taxon or similar taxon.

21. SOURCES: Baker et al; Sulawesi; Preliminary observation of captive Sulawesi macaques: M. maurus and M. ochreata x brunnescens.
Watanabe et al.; Sulawesi; Distribution and possible intergradation between M. tonkeana and M. ochreata at the borderland of the species in Sulawesi
Suprijatna, Jatna and Edy Hendras. Panduan Lapangan Primata Indonesia,2000

22. COMPILERS: Hudiyono, Muhammad Ali Imran,Ign. Pramana Yuda, M. Bismark, Randall C.Kyes, Entang Iskandar, Sudariono Sady, Harjanto W. Sukotjo, Achmad, Djuwantoko, Haerudin R. Sadjudin, RPA Lelana



Macaca ochreata ochreata

Indonesian Primate Camp

Macaca pagensis pagensis — Bokoi/Mentawai macaque

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Macaca pagensis pagensis

FAMILY: Cercopithecidae LEVEL: Subspecies
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Bokoi	Indonesian
Mentawai macaque	English

2. Distribution of the Taxon Indonesia

- HABITAT: Primary forest, riverine forest, wetland, high land forest. - NICHE: Riverine forest, hilly forst. - HISTORICAL DISTRIBUTION: Indonesia. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Pagai, Sipora island.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km.

OCCUPANCY AREA: 501-2,000 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: 3 islands (Sipora, Pagai Utara, Pagai Selatan).

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 21% to 50%. - PRIMARY CAUSE OF CHANGE: Forest conversion, plantation.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Fragmentation

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y	Y	
harvest for food	Y	Y	Y
harvest/hunting	Y	Y	Y
loss of habitat	Y	Y	Y

8. Trade:

Trade described as local;

Parts in Trade: Live animal
Meat

Effects: declining population

9. Population (global) 5,000-10,000

Subpopulations

Mature >2500

Avg age parents 10 yrs

10. Population trends Declining

Past Decline % <20% Period 10

Future decline of is predicted for a period of

11. Data Source

DATA SOURCE/QUALITY: informal sightings; literature; -

12. Recent Field Studies

Suryadi et al; Siberut Nat. Park; 1999; Ecology

13. Status

IUCN CATEGORY (Global): Endangered

IUCN CATEGORY (National): Endangered

CITES: II. - NATL WILDLIFE LEGISLATION: Gov. legislation no. 7/1999. - NATL REDBOOK DATA: None. - INTL REDBOOK DATA: None. - OTHER LEGISLATION: Tradional rule. - PROTECTED PLAN: National park management plan.

RED LIST CATEGORY: Critically endangered

IUCN-BASIS: B2a

14. Research Recommended

Survey Studies; Genetic Research; PHVA is recommended.

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; work in local communities;

16. Captive Breeding / Cultivation Recommendations

education; research;

17. Facilities:

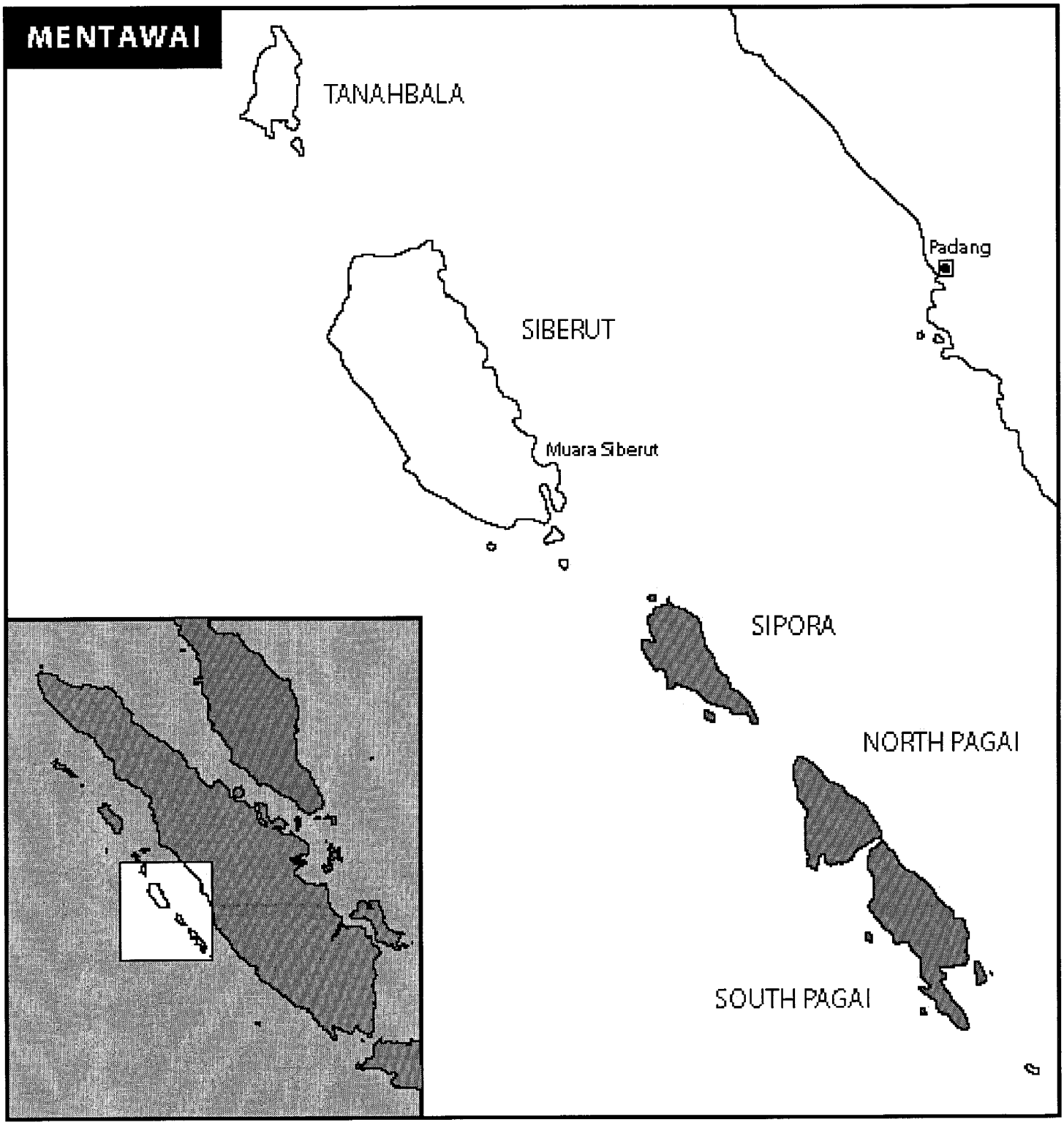
Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: Initiate ex situ program.

19. TECHNIQUES TO PROPAGATE THE TAXON: Some techniques known for taxon or similar taxon.

21. SOURCES: Suryadi et al; Siberut Nat. Park; 1999; Ecology
Jatna Supriatna; 2000; Panduan lapangan primata
Bismark; 1980; Populasi M. pagensis di TeiTeibutti

22. COMPILERS: Sudaryono Sady, Hudiyono, David, Imran, Achmad, Djuwantoko, Entang Iskandar, R.P.A. Lelana, Harjanto W. Sukotjo, M Bismark, Ign Pramana Yudha, Haerudin R Sadjudin



Macaca pagensis pagensis

Indonesian Primate Camp

Macaca pagensis siberu — Mentawai Macaque

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Macaca pagensis siberu

FAMILY: Cercopithecidae LEVEL: Subspecies
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Bokoi — Indonesian
Mentawai Macaque — English

2. Distribution of the Taxon Indonesia

- HABITAT: Wetland, lowland forest. - NICHE: Swamp, river. - HISTORICAL DISTRIBUTION: Indonesia. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: Siberut island.

3.-4. Occurrence and Occupancy in around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km.

OCCUPANCY AREA: 501-2,000 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: 2 (Siberut Park and logging area).

6. Habitat status:

Fragmented.

CHANGE IN HABITAT SIZE: Decrease in Area. - RECENT CHANGE: 21% to 50%.- DURING HOW MANY YEARS? 5 yrs. - PRIMARY CAUSE OF CHANGE: Fragmentation, land use conversion.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Fragmentation, hunting

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y	Y	
harvest for food	Y	Y	Y
harvest/hunting	Y	Y	Y
loss of habitat	Y	Y	Y

8. Trade:

Trade described as local;

Parts in Trade: Live animal, Meat

Effects: declining population

9. Population (global) 5,000 - 10,000

Subpopulations unknown
Mature >2,500
Avg age parents 10 yrs

10. Population trends Declining

Past Decline % <20% Period 5 yrs

Future decline of is predicted for a period of

11. Data Source

DATA SOURCE/QUALITY: indirect information; field study; informal sightings; -

12. Recent Field Studies

Suryadi, S. et al.; Siberut National park; 1999; Ecology

13. Status

IUCN CATEGORY (Global): Endangered

IUCN CATEGORY (National): Endangered

CITES: II. - NATL WILDLIFE LEGISLATION: PP. No. 7/1999. - NATL REDBOOK DATA: None. - INTL REDBOOK DATA: None. - OTHER LEGISLATION: Traditional rule. - PROTECTED AREA: Siberut National park.

RED LIST CATEGORY: Critically endangered

IUCN-BASIS: B2a

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; - OTHER RESEARCH: Necessary research on traditional value on the taxon. PHVA is recommended.

15. Management Recommendations

habitat management; wild population management; monitoring; sustainable utilization; public awareness; work in local communities;

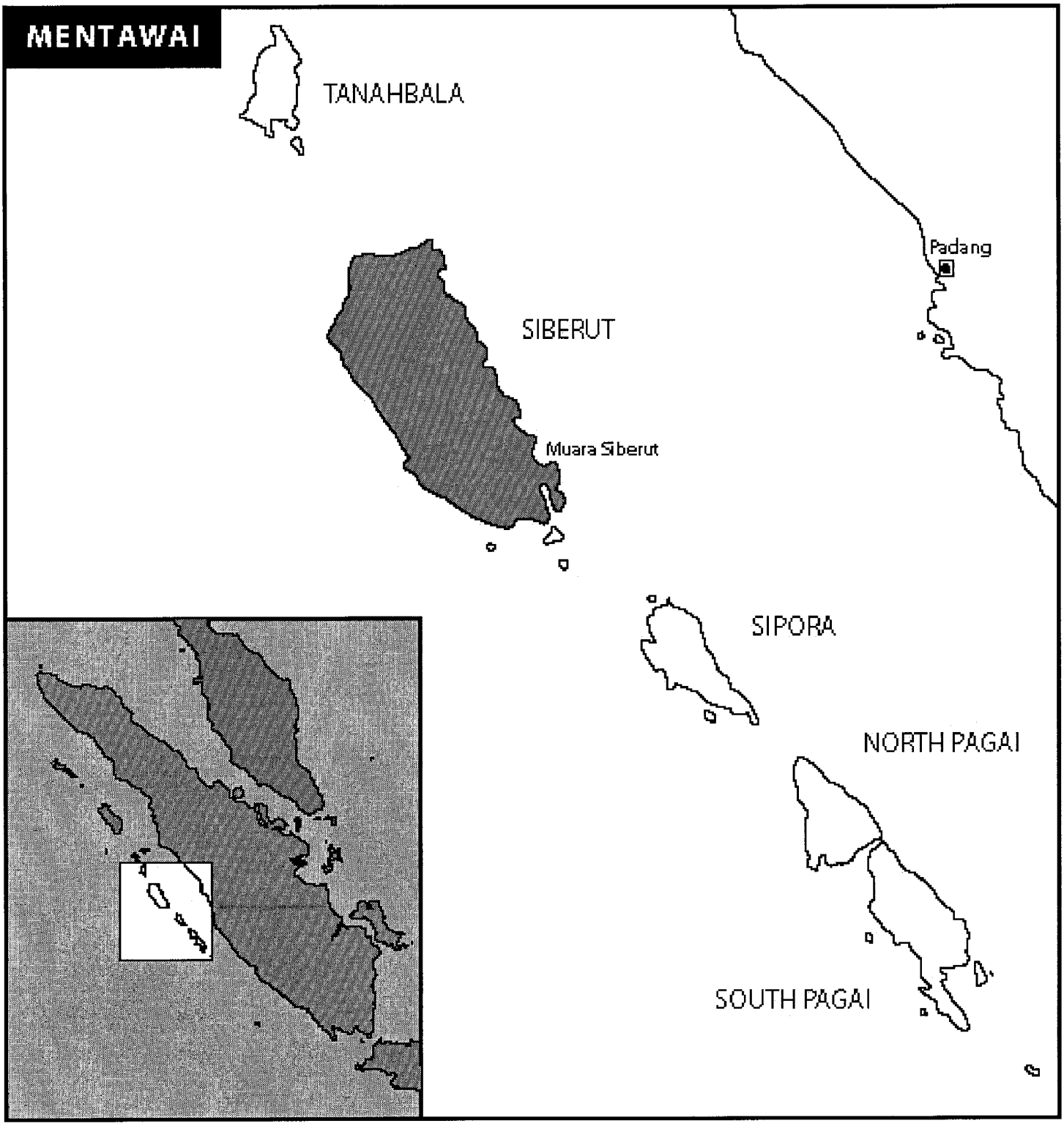
16. Captive Breeding / Cultivation Recommendations

17. Facilities:

Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

21. SOURCES: Bismark; 1980; Populasi M. pagensis in Tei Tei
A. Whiten; 1980; Penyelamatan Siberut
J. Supriatna & Edi Hendras; 2000; Panduan lapangan primata

22. COMPILERS: Hudiyono, Muhammad Ali Imran,Ign. Pramana Yuda, M. Bismark, Randall C.Kyes, Entang Iskandar, Sudariono Sady, Harjanto W. Sukotjo, Achmad, Djuwantoko, Haerudin R. Sadjudin, RPA Lelana



Macaca pagensis siberu

Indonesian Primate Camp

Macaca tonkeana — Tonkean macaque

Taxonomy

1. Scientific Name / Ambiguities Authority Date

Macaca tonkeana

Macaca tonkeana

FAMILY: Cercopitecidae LEVEL: Species
ORDER: Primata
CLASS: Mammalia

COMMON NAMES:

Boti	Indonesia
Tonkean macaque	English

2. Distribution of the Taxon Indonesia

- HABITAT: Tropical rain forest (primary and secondary forest), Coffe plantation. - NICHE: Primary and secondary of highland forest/600-1300 m asl. - HISTORICAL DISTRIBUTION: Indonesia. - CURRENT COUNTRIES: Indonesia. - GEOGRAPHIC EXTENT: East Sulawesi.

3.-4. Occurrence and Occupancy in _around area study/sighting

OCCURRENCE AREA: 101-5,000 sq km.

OCCUPANCY AREA: 501-2,000 sq km.

5. Number of Locations or Subpopulations

- NO. LOCATIONS: 4.

6. Habitat status:

Fragmented.

- PRIMARY CAUSE OF CHANGE: Deforestation, land use conversion.

CHANGES IN QUALITY: Decrease in quality.NOTES ON QUALITY: - Deforestation, land use conversation

7. Threats:

	now	future	pop decline
HUMAN INTERFERENCE			
habitat fragmentation	Y	Y	second threat
harvest/hunting	Y	Y	third threat
loss of habitat	Y	Y	first threat

8. Trade:

Parts in Trade: Live animal
Meat

Effects: declining population

9. Population (global) 5,000-7,000

Subpopulations 500
Mature 90% of total
Avg age parents 7-10

10. Population trends Declining

Past Decline % 21% to 50% Period 10 years

Future decline of 21% to 50% is predicted for a period of 10 years

11. Data Source

DATA SOURCE/QUALITY: literature; -

12. Recent Field Studies

Ueno and Fujita; Central Sulawesi, Spontaneous tool use
Jatna Supriatna etal; South Sulawesi;1990; Secondar intergradation betweem M.tonkeana and M. maurus.
El Bynum et al.; Central Sulawesi; Confirmation and location of the hybrid zone between wild population of M. tonkeana and M. hecki.
Thierry B.

13. Status

IUCN CATEGORY (Global): Vulnerable

IUCN CATEGORY (National): Lower risk - conservation dependent

CITES: II. - NATL WILDLIFE LEGISLATION: SK Menhut No.301/1991. - NATL REDBOOK DATA: none. - INTL REDBOOK DATA: none. - OTHER LEGISLATION: none. - PROTECTED AREA: Lore Lindu National Park, Morowali National Park, Tanjung Api Sanctuary. - PROTECTED PLAN: none.

RED LIST CATEGORY: Vulnerable

IUCN-BASIS: A2, B1a, B2a

14. Research Recommended

Survey Studies; Genetic Research; taxonomic research; life history;

15. Management Recommendations

habitat management; wild population management; monitoring; public awareness; genome resource; work in local communities;

16. Captive Breeding / Cultivation Recommendations

education; research;preservation of live genome;

17. Facilities:

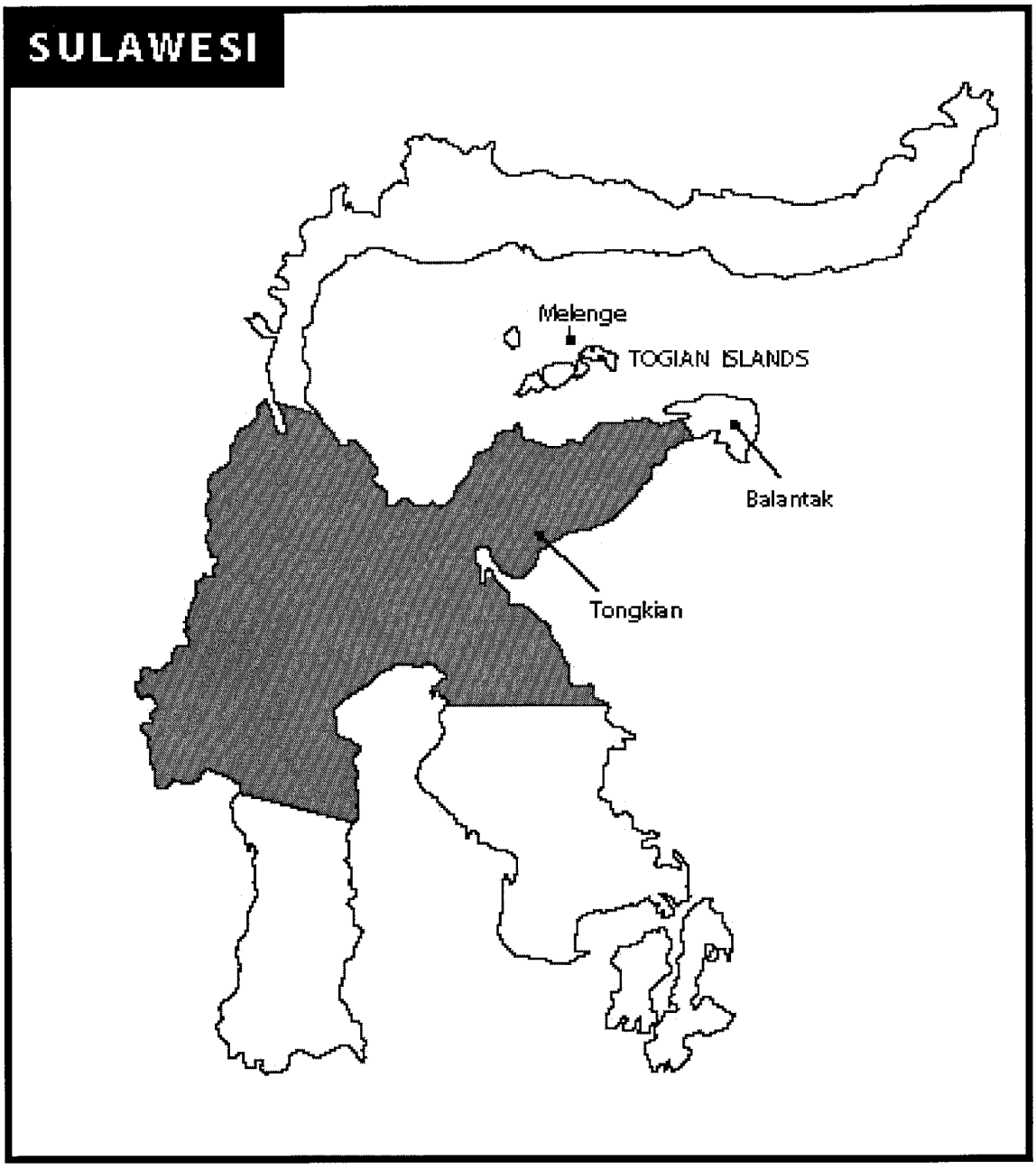
Populations	Males:	Females	Unsexed:	Total
IN CAPTIVITY:	0	0	0	0

18. LEVEL OF EX SITU MANAGEMENT RECOMMENDED: Initiate ex situ program.

19. TECHNIQUES TO PROPAGATE THE TAXON: Some techniques known for taxon or similar taxon.

21. SOURCES: Ueno and Fujita; Central Sulawesi, Spontaneous tool use
Jatna Supriatna et al; South Sulawesi;1990; Secondar intergradation betweem M. tonkeana and M. maurus.
El Bynum et al.; Central Sulawesi; Confirmation and location of the hybrid zone between wild population of M. tonkeana and M. hecki.
Thierry B.
Jatna Supriatna, and Edy Hendras, 2000, Panduan Lapangan Primata Indonesia

22. COMPILERS: Muhammad Ali Imran, Randall C.Kyes, Entang Iskandar, Sudariono sady, Harjanto W. Sukotjo, M. Bismark, Ign. Pramana Yuda, Hudiyono, Achmad, Djuwantoko, Haerudin R.Sadjudin, RPA Lelana



Macaca tonkeana

CONSERVATION ASSESSMENT AND MANAGEMENT PLAN FOR THE PRIMATES OF INDONESIA

Taman Safari
15-19 January 2001

FINAL REPORT

July 2001

Section 7

Regional Working Group Reports

Sulawesi

Introduction

In the administrative area of Sulawesi there are 22 taxa of primates found nowhere else in the world, 8 macaques and 14 tarsiers. Nine of these twenty-two primate taxa (41%) are endangered. Sulawesi itself is geologically complex and several regions of the island show high endemism. Therefore, a regional approach to Sulawesi primate conservation—one that takes into account biogeographic patterns—is essential. We identify 16 biogeographic regions based upon the distribution of Sulawesi primates. Throughout this region, deforestation is occurring at 1.87% per year, and current estimates are that the lowland and wetland forests of Sulawesi are now gone. Some biogeogeographic regions are more heavily impacted than others.

Problems

Of the sixteen biogeographic regions in Sulawesi, we identify four that currently have no protected areas–Sangihe, Togian, Peleng and Selayar. Nevertheless, each of these four regions is home to an endangered species of tarsier that is found nowhere else in the world. In other biogeographic regions, we note the following problems: hunting of macaques for bushmeat (mostly in non-Muslim area of North and Central Sulawesi), to prevent crop raiding and for sport. Legal land clearing and illegal encroachment into protected areas are major causes of habitat loss and fragmentation that effect both macaques and tarsiers. Pesticide use and the false belief that tarsiers are crop pests negatively impact tarsier conservation. Therefore, poor public awareness and false folk beliefs are another major problem that must be overcome.

Goal

The goal of the program is to conserve Sulawesi Primates using a biogeographic approach that takes account of areas of primate endemism within Sulawesi. We identify these objectives.

1. Stop primate hunting for bush meat, crop raiding extirpation, and for sport
2. Reduce habitat loss in and around protected areas
3. Increase public awareness and concern regarding the value of endemic primates, conservation areas, and simple, cost-efficient methods to conserve primate populations.

Recommended Actions

(5 year action plan, refer to the attached table for detail)

Many of the problems we identify will only be solved, in the long run, by increasing public cooperation with conservation efforts by local community education programs that stress the value of primates and conservation areas.

We note the following activities that help to address the problems:

1. Community cooperation with existing laws should be encouraged through a concerted multi-party education program regarding the value of primate populations and conservation areas. In addition, research should be conducted to determine better incentives to encourage local community members to help conserve.
2. Stop illegal land clearing (encroachment) in protected areas by developing multi-stakeholder participatory monitoring.
3. Support efforts to strengthen law enforcement capacity to stop illegal hunting (especially in Gorontalo, N. and SE Sulawesi).
4. Reduce bush meat consumption by disseminating information in the form of a poster campaign to schools and regional health officials of the health risks associated with non-human primates physical contacts (especially in Gorontalo, N. and SE Sulawesi).
5. Reduce legal land clearing, the general approach is as above (point 3). Some land clearing methods have the unintentional side effect of eliminating tarsier populations by removing all potential nest sites. This can be mitigated with public education that emphasizes that tarsier populations can exist in agricultural land if some nest sites (e.g. strangler figs, bamboo, vine-covered coconut trunk, etc) still remain.
6. Coordinate efforts with the Indonesian hunting association (PERBAKIN), to protect legal hunting rights by taking proactive measures against illegal hunting, i.e. we must persuade hunters that it is in their interest to curb illegal hunting (especially in Gorontalo, N. and SE Sulawesi).
7. Support efforts to develop techniques for herding control, in order to reduce human wildlife conflict, especially in Gorontalo, N, C and SE Sulawesi, with emphasis coconut, cacao, palm sugar plantations.
8. Integrated pest management using tarsiers in agricultural areas should be explored as a method to decrease the use of dangerous pesticides, increase the quality of agricultural products, and maintain healthy tarsier populations. This should be co-ordinated with a community education program.
9. Begin exploratory groundwork for the development of protected areas in at least five locations (Sangihe, Peleng, Togean, Tokala, Selayar). Community agreements through local workshop and information dissemination should be used as important part of a participatory, bottom-up approach,
10. Increase information system quality, through improvement of database and networking qualities. A head office should be established in Palu.
11. Increase HR capacity, by developing conservation training centers, especially in S. Sulawesi, Central and SE Sulawesi.
12. Development of a regional tarsier research center to assist with the community education programs mentioned herein.

Kalimantan

Introduction

In Kalimantan there are 13 species of primates: *Pongo pygmaeus*, *Nasalis larvatus*, *Presbytis frontata*, *Presbytis hosei*, *Presbytis rubicunda*, *Presbytis cristatus*, *Presbytis femoralis*, *Hylobatus agilis*, *Hylobatus mulleri*, *Macaca fascicularis*, *Macaca nemesterina*, *Tarsius bancanus*, and *Nycticebus caucang*. Some of them are endemic to Kalimantan such as Orang-Utan, *Presbytis rebicunda*, *Hylobates mulleri*, *Nasalis larvatus*, *Presbytis frontata*, and *Presbytis hosei*.

Except for *Macaca fascicularis*, all the primates are vulnerable due to habitat loss and trade in both live animals for pets and parts for medicine. In Kalimantan, habitat loss is mainly caused by logging, forest fire, mining and forest conversion for agriculture and plantation development. All the primates live in the lowland forest to hill areas, which has reduced significantly because of human activities and need for land. *Nyticebus coucang, Tarsius bancanus borneanus, Nasalis larvatus, Presbytis hosei* and *Pongo pygmaeus*, have suffered the most and their population has decreased significantly in the past three years.

The primates acquired for trade are *Pongo pygmaeus, Presbytis frontata, Presbytis hosei, Hylobates mulleri* and *Hylobates agilis*. *Pongo pygmaeus* is the most popular animal both domestically and internationally.

Both habitat loss and trade have contributed to population decline of the primates. Many of primate population in Kalimantan are now living outside protected areas such as conversion forest, forest and mining concession areas. Only ten percent of the remaining populations live in protected areas for the whole of Kalimantan.

Problem Statement

In effort to conserve threatened primates of Kalimantan, we faced three main problems that should be a priority. Those problems are:

1. Loss of habitat caused by logging activity both legally or illegally, forest fire, mining activity and forest conversion.
2. Population decline caused by habitat fragmentation, hunting for trade and decreasing habitat quality.
3. Lack of law enforcement and improper enforcement of existing law.

Goal

In facing these three problems, three goals have been proposed in order to conserve the Kalimantan Primates.

1. Reduce deforestation rates of existing habitat from 2.47% to 2% per year within five years.

2. Reduce population decline up to 30% from the current rate and stop threatened primates' trade, particularly for *Pongo pygmaeus*.
3. Strengthen institutional capacities and coordinate law enforcer tactics on trade and habitat destruction.

Recommended Action

1. Enrichment of degraded and existing habitat in Tanjung Puting and Kutai National Park in order to maintain viable populations of orangutans and other threatened primates.
2. Developing wildlife rescue centers in anticipation of the impacts of forest fires in all provinces.
3. Implementation of programs for local communities to support conservation of the threatened primates by developing alternative economic activities and ecotourism.
4. Strengthening the network of forest management leaders in and outside conservation areas to increase primate populations.
5. Establishing monitoring system in and outside conservation areas to support better protection of habitat and primate conservation.
6. Review the genetic polymorphism and diversities of threatened primates especially Bornean Orang-Utan.
7. Strengthening the buffer zone development in order to increase primate population.
8. Strengthening the carrying capacity of logging and mining concession areas to support primate populations.
9. Stop illegal trading of threatened primates especially Orang-Utans by enforcing the law and public awareness programs.
10. Review the status, ecology and distribution of threatened primates after the forest fires and other catastrophic events.
11. Establish restoration programs for logged over and fire damaged areas with native food and fire resistant species in order to supplement primate populations.
12. Proposing new protected areas for the critically endangered primates, i.e. *Presbytis hosei canicrus*.

Action Plan	Potential Funding Agency	Estimated Budget
1) Enrichment of degraded and existing habitat in Tanjung Puting and Kutai National Park in order to maintain viable populations of orangutans and other threatened primates.	DG-PHKA, CI, APAPI, JICA, GTZ,	US $ 100,000.
2) Development of wildlife rescue centers in anticipation of the impacts of forest fires in all provinces.	DG-PHKA, CI, APAPI, US & Europe Zoos	US $ 400,000

3) Implementation of programs for local communities to support conservation of the threatened primates by developing alternative economic activities and ecotourism.	**DG-PHKA, CI, APAPI, CI, TNC, Dian Tama, Kehati, GEF**	US $ 100,000
4) Strengthening the network of forest management leaders in and outside conservation areas to increase primate populations.	**DG-PHKA, CI, APAPI, NRMP, USAID, UNESCO**	US $ 50,000
5) Establishing monitoring system in and outside conservation areas to support better protection of habitat and primate conservation.	***DG-PHKA, CI, APAPI, NRMP, USAID***	US $ 10,000
6) Review the genetic polymorphism and diversities of threatened primates especially Bornean Orang-Utan.	**DG-PHKA, CI, APAPI, University, Zoo, JICA**	US $ 50, 000
7) Strengthening the buffer zone development in order to increase primate population.	**DG-PHKA, CI, APAPI, GEF, TNC, NRM USAID**	US $ 50,000
8) Strengthening the carrying capacity of logging and mining concession areas to support primate populations.	**DG-PHKA, CI, APAPI, Private Company**	US $ 100,000
9) Stop illegal trading of threatened primates especially Orang-Utans by enforcing the law and public awareness programs	**DG-PHKA, CI, APAPI, IPPL**	US $ 10,000
10) Review the status, ecology and distribution of threatened primates after the forest fires and other catastrophic events.	DG-PHKA, CI, APAPI, University (Harvard, Fullerton)	US $ 10,000
11) Establish restoration programs for logged over and fire damaged areas with native food and fire resistant species in order to supplement primate populations.	**DG-PHKA, CI, APAPI, JICA, TROPENBOS**	US $ 20,000
12) Proposing new protected areas for the critically endangered primates, i.e. *Presbytis hosei canicrus*.	**DG-PHKA, CI, APAPI, WWF, CI, TNC**	US $ 100,000

Total: over 1 Million US Dollars

Sumatra

Background

Sumatra has 10 endemic primates, which are distributed in several specific regions: orangutan (*Pongo abelii*) in Northern Sumatra; *Macaca pagensis, Simias concolor, Presbytis potenziani, Hylobates klossi* in Mentawai Island; *Presbytis melalophos* in Southern Sumatra; *Presbytis siamensis* in Riau and its nearby islands. These primates are being threatened by habitat loss and forest fragmentation due to logging, forest fire, and encroachment. Up to now, Sumatra has been known to be the highest deforestation rates in Indonesia (2.5%/year).

In addition to the habitat loss, the threat is now eminent due to new devolution of powers by the government. The local government will have an authority to manage their forest and can easily convert it to more unsustainable exploitation, which can expect to result in further decline in the primate population in Sumatra.

Goals

1. Reduce habitat loss and prevent further population decline of primate population in Sumatra.
2. Stop illegal trade of endangered primates.
3. Engage with local government during policy changes during devolution processes.

Recommended Action

1. Strengthen the capacity of law enforcers to support conservation of Sumatran primates.
2. Improve community involvement in primate conservation by creating a primate protection unit which should be part of an integrated program with the existing protection unit.
3. Develop public awareness programs through social and cultural approaches in order to enhance primate conservation in Sumatra.
4. Identify, develop and strengthen alternative economic activities for local communities surrounding conservation areas by creating ecotourism development, non-timber forest products and other new initiatives.
5. Strengthening local NGOs capacity for community outreach programs through in depth training, public awareness techniques, and develop strategies to disseminate the roles of primates in the ecosystem.
6. Create several workshops by local institutions in order to mainstream the primate conservation with other conservation efforts in the regional.
7. Establish a primate task force and develop training programs for locals in order to prevent and anticipate recurrent forest fires in the Riau, Lampung and Jambi provinces.
8. Investigate and reduce Sumatran primate related trades especially for the threatened species i.e. orangutans and siamang.
9. Develop wildlife sanctuary programs that can host confiscated primates.
10. Develop database for Sumatran primates containing information on population, habitat, distribution, ecology and behavior.

Java, Bali and Lesser Sunda

Introduction

The region composed of Java, Bali and Lesser Sunda has 6 species and 1 sub species of primates: *Hylobates moloch, Presbytis comata, Presbytis fredericae, Nycticebus javanicus, Trachypithecus auratus, Macaca fascicularis* and *Macaca fascicularis karimunjawae. Hylobates moloch* is one of the populations of primates which is most threatened. This species is categorized as a critically endangered species. The big threat to primate conservation in the region is habitat degradation, declining primate population, lack of law enforcement and regulation.

Species Status and Location

No	Scientific Names	Status (IUCN)	Location
1	*Hylobates moloch*	Critically Endangered	Banten, West and Central Java
2	*Presbytis comata*	Endangered	Banten, West Java
3	*Nycticebus javanicus*	Endangered	Banten, West Java
4	*Presbytis fredicae*	Endangered	Central Java
5	*Trachypithecus auratus*	Vulnerable	Java, Bali and Lombok
6	*Macaca fascicularis karimunjawae*	Vulnerable	Karimunjawa (Central Java)
7	*Macaca fascicularis*	Lower risk	Java, Bali and Nusra

Problem Statements

1. The loss of habitat due to forest degradation, deforestation, fragmentation, and land use change. (The declining of habitat quality and quantity: 10 %- 25 % /year, significantly impacts the primate population by decreasing it on average 2.5%-10%/year)
2. Alarming rate of decline of the primate populations due to hunting, poaching, pet trade, disease, etc.
3. Lack of law enforcement and regulation of some threatened species i.e. one species (*Presbytis fredericae*) do not have any protection and/or protected areas.

Goals

Based on the aforementioned problems, the following conservation program is suggested for ensuring a sustainable primate population and its habitat:

1. Preventing and recovering habitat loss of *Hylobates moloch, Presbytis comata, Presbytis fredericae, Nycticebus javanicus, Trachypithecus auratus, Macaca fascicularis,* and *Macaca fascicularis karimunjawae.*
2. Establishing and connecting fragmented habitat by the use of corridors and strengthening management of existing National Parks.
3. Establishing viable populations for each threatened species, i.e. rehabilitation of *Hylobates moloch, Presbytis comata, Trachypithecus auratus*, etc.

Actions

1. Inventory, monitoring and database formatting of habitat and populations of threatened primates in and out of Protected Areas.
2. Habitat improvement and enrichment of existing habitat.
3. Establishment of programs to empower local people in managing primate habitat outside Protected Areas.
4. Review of regulation and current law enforcement during the government devolution of power.
5. Strengthening capacity of communities to conduct primate monitoring and improvement of environmental techniques.
6. Genetic differentiation and polymorphism of the small population of endangered Javan Gibbon.
7. Establishment of rescue, rehabilitation and reintroduction centers of the Javan Gibbon and other threatened primates.
8. Establishment of a corridor among the metapopulations of primates in fragmented habitat [i.e. establishing corridor between CA. G. Simpang dan G. Tilu (Surili, Owa); G. Halimun, G. Salak and G. Gede Pangrango(Surili, Owa); G. Sumbing-G. Sindoro (Rekrekan)].
9. Establishment of a monitoring unit for primate trade.
10. Establishment of committee to assess the possibilities to have protection of *Presbytis fredericae* (Rekrekan) [i.e. protected areas].

Schedule

No	*Action*	*Year*					*Institution*	*Est. Budget*
		1	*2*	*3*	*4*	*5*		
1.	*Inventory, monitoring and data base*						*PKA, Univ., LIPI, Litbang, NGO*	*$100,000*
2.	*Habitat improvement and enrichment*						*PKA, Pemda, Community, NGO*	*$400,000*
3.	*Program to empower local people* Workshop; Training						*PKA, Pemda, Community, NGO*	*$200,000*
4.	*Review of the Regulation*						*PKA, Univ., NGO*	*$20,000*
5.	*Law enforcement*						*PKA, Police, Lembaga Peradilan, Community, NGO*	*$25,000*
6.	*Strengthening capacity of communities* Workshop; Training						*Community, NGO, Pemda, PKA*	*$50,000*
7.	*Genetic research for* Hylobates moloch						*LIPI, Litbang, Univ., NGO*	*$100,000*
8.	*Establish Rescue Rehabilitation & Reintroduction Center*						*PKA, NGO, Lembaga Konservasi*	*$300,000*
9.	*Establishment of a Corridor*						*PKA, Pemda, Community, NGO*	*$400,000*
10.	*Establishing Monitoring Unit Trade*						*PKA, Police, Lembaga Peradilan, Community, NGO*	*$150,000*
11.	*Establishment committee for* Presbytis fredericae						*PKA, NGO, Pemda, Community*	*$10,000*

PKA (Direktorat Jenderal Perlindungan dan Konservasi Alam) - Directorate General of Natural Protection and Conservation
Univ. (Universitas) - *University*
LIPI (Lembaga Ilmu Pengetahuan Indonesia) – *Indonesian Institute of Sciences*
Litbang (Lembaga Penelitian dan Pengembangan Kehutanan) – *Forestry Research and Development*
NGO (*Non Government Organization*)
Community
Pemda (Pemerintah Daerah) – *Local Government*
Lembaga Konservasi – *Conservation Board*
Lembaga Peradilan – *Justical Board*

CONSERVATION ASSESSMENT AND MANAGEMENT PLAN FOR THE PRIMATES OF INDONESIA

Taman Safari
15-19 January 2001

FINAL REPORT

29 January 2001

Section 8

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