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ON THE DISTRIBUTION, STATUS AND CONSERVATION OF WILD ELEPHANTS IN MYANMAR

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ABSTRACT

Wild elephants in Myanmar (= Burna) are found in 87 townships, in 13 States and Divisions. The area inhabited by wild elephants is about 115,600 km². It is estimated that a total of over 4000 wild elephants still survive in fraghmented populations across Myanmar. The mortality rate in the keddah capture method is about 30%, which is higher than the death rates incurred in the other two methods. The conflicts between man and elephant occur in some regions, but these are not too serious at present. Poaching is widespread and no doubt there are serveral elephants lost in the remote areas as a resualt of poaching. Recommendations are made for the effective protection and sustainable management of elephants in Myanmar.

INTRODUCTION

Myanmar (=Bruma) is situated between latitudes 9° 30' N to 28° 31' N and longitudes 92° 10' E to 101° 11' E. It comprises a total land area of 676, 577km² spread over 14 administrative states and divisions. Since the mountains of Myanmar run north and south the biggest rivers too follow the same course. There are four main rivers (Irrawaddy, Chindwin, Sittang, Salween) flowing from north to south. They have extensive networks of feeder streams. The Irrawaddy and Chindwin are both navigable. The whole of Myanmar consists of mountain ranges and river valleys. The major mountain ranges are; the Kachin hills in the north, the Rakhine and Chin hills in the west and north -west, the Bago Yoma in the central part, the Shan Plateau in the east, and the Tenasserim in the south.

VEGETATION, FOREST COVER AND CLIMATE

The closed forest accounts for 37.2% of the land area. Closed forest affected by shifting cultivation comprises 16.1%. Degraded forest affected by shifting cultivation is about 14.3%, while non-forest area exlends to about 24.3% and water bodies account for 2% of the land area. The northern part lies in the subtropical and temperate zones. Myanmar has a tropical monsoonal climate with three well-defined seasons: dry season from mid-february to mid-may, wet season from mid-may to mid-october, and cold season from mid-october to mid-february.

The rainy season lasts from mid-May to mid- October when the monsoon blows from the Bay of Bengal in the south-west. The north - east monsoon blows during the rest of the year when little rain falls. The annual rainfall has a big range from as little as 20-40 inches in the central dry zone to as high as 200 - 250 inches along the coast of Rakhine and Tenasserim. The total human population in 1993 was estimated at 43.13 milloin and it grows at an annual rate of 2.3%. The population density is 64 per km².

The great variation in rainfall, temperature, soil and topography is responsible for the different forest types. Myanmar forest area is divided into 8 floristic zones such 1. Tidal forest, 2. Beach + Dune forest, 3. Swamp forest, 4. Evergreen forest, 5. Mixed deciduous forest, 6. Dry forest, 7. Deciduous Dipterocarp forest, and 8. Temperate evergreen forest. Evergreen, semi-evergreen and mixed deciduous forests are the most important habitats for elephants. Bamboo, one of the elephants's most preferred food items is particularly abundant in the evergreen and deciduous forests of the Rakhine, Bago Yoma and Tenasserim regions. With abundant bamboo resources, the country is not short of elephant fodder and habitats.

Distribution and Number of Wild Elephants

Elephants were once widely distributed in Myanmar, mainly in frosted hill tracts. They were far more common in the northern than southern Myanmar, and this remains the case even today. The main centres of elephant abundance are: 1. The Northern hills 2. The Rakhine Yoma in the west. 3. The Bago Yoma in lower Myanmar and 4. The Tenasserim Yoma in the south They are only sparsely distributed in the Shan and Kayar States, and are absent from the dry zone and Chin Hills.

Elephants were found mainly in evergreen, semi evergreen, moist deciduous and bamboo forests, The combined area of these types in Myanmar was estimated at over 220,000km².

According to a questionnaire survey carried out in 1990 -91 and the reports of private catchers, Wildlife Division recorded the distribution of wild elephants in each township area of the States and Divisions. Wild elephants are still widely distributed in 87 township areas of Myanmar. (Table 1) Another observation is that wild elephants are distributed over 115,600 km² of good forest in 13 States and Divisions.

The population of wild elephants in Myanmar was estimated from time to time on the basis of local information and questionnaire surveys.

TABLE 1

List of the Townships in States and Divisions where wild Elephants occur (1990/92)

STATES-DIVISIONS	TOWNSHIPS
1. Kachin	*Myitkyina*
	Moekaung
	Waingmaw
	Moenyin
	Shwegu
	Moenyin
	Bamaw
	Mancy
	Karmaing
	Tanaing
	Sonparabon
2. Kayar	*Demawsoe*
	Pharusoe
3. Kayin	*Myawaddi*
	Kyarimseikkyi
	Hlaingbwe
4. Chin	*Paletwa*
5. Sagaing	*Kanbalu*
	Kyanhla
	Kani
	Minkin
	Pale
	Kalaywa
	Mawleit
	Paungpyin
	Pinlebu
	Homemalin
	Tamu
	Layshi
	Kante
	Nanyun
	Bamout
	Katha
	Htichaint
6. Tenasserim	*Yephu*
	Dawae
	Thayetchaung
	Tenasserim
	Myeit (east)
	Botepyin
7. Pegu	*Tharyawaddi*
	Letpandan
	Okpho
	Kyobinkank
	Zigon
	Nattalin
	Padaung
	Pegu
	Daikoo
	Kyawktaga

STATES-DIVISIONS	TOWNSHIPS
	Phyu
	Oktwin
	Taungngu
	Yetashae
8. Magwe	*Saetotetaye*
	Gangaw
9. Mandalay	*Pyinmana*
	Tatgon
	Yamethin
	Pyawbwe
	Thazi
	Kyaukse
	Maymyo
	Mataya
	Sintku
	Thabeit Kyin
10. Mon	*Ye*
11. Rakhine	*Gwa*
	Thantwe
	Taungup
	Anm
	Myaepon
	Minpya
	Maungtaw
	Buthitaung
12. Yangon	*Taikkyi*
	Hlegu
13. Shan	*Pinlaung*
	Phekon
	Moemeit
	Mabane
	Ywangan
14. Irrawaddy	*Ngaputaw*
	Pathein (west)
	Thabaung
	Yekyi
	Mawlamyaing

The most recent estimate made by Wildlife Division is 14,639 (Table 2). This estimate does not include the animals in Kachin, Shan, and Kayar states. According to my peronal estimate, based on questionnaire surveys and from the records available from the department files in Kachin State there could be as many as 850 wild elephants. Shan state is thought to have less than 600 animals and abont 70 elephants may occur in Kayar state. It is thus quite possible that about 5,000 elephants many still survive in the wild in Myanmar.

Capture of Wild Elephants

Capture of elephants is controlled by the Forest Department through the elephant control scheme. Licences are issued yearly to the prospective capture teams of good standing. Capture teams with bad reputation are black - listed. The capture limit is determined each year. Based on a workable estimate of wild elephants each year, allowable annual off take of elephants to be captured is calculated. This was 100 elephants for 1994. The capture limit was set at 200 animals per year for 1974; 75 for 1980/81; 150 per year for 1981/82; and 120 per year for 1982/83 to 1989/90. List of captured, released and dead wild elephants by the 3 capture methods between 1970/71 and 1992/93 is shown in Table 4. It shows that a total of 2,122 elephants were captured.

TABLE 2.

Estimates of wild elephants in Myanmar
(Questionnaire survey by Wildlife Division 1990/91)

STATE / DIVISION	NUMBER
Kachin	110
Kayar	-
Kayin	170
Chin	0
Sagaing	1180
Tenasserim	100
Pegu	230
Magwe	4
Mandalay	33
Mon	100
Rakhine	1161
Yangon	117
Shan	1254
Irrawaddy	180
TOTAL	4639

A total of 395 elephant died in the process of which 21 (4.6%) died from the Melashikar method; 314 (30.1%) from the Keddah method; and 60 (9.7%) from chemical immobilization method. 83 elephants were released. Total number of elephants captured from the wild was 2,122 and total number that died was 395 during the period 1970/71 to 1992/93. Crop raiding by elephants occurs throughout their present range in Myanmar. From 1983 to 1993, there were reports of elphants killing people in Rakhine State, Yangon and Sagaing Division. These problems related to elephants are the result of rapid development in agriculture and infrastructure (roads, highways), building of dams in catchment areas, heavy extraction of forest products and efforts of elephants capture operations.

Myanmar has been doing its best to save all wildlife species in general and the elephant in particular. Wild elephants have been protected since 1879 under the Elephant Preservation Act which was later amended in 1883. The act was superseded by the Wildlife Protection Act of 1935 and its amended Act of 1956. Under the Wildlife Protection Act elephants are declared completely protected animals. Lately, they are given added protection under the Public Property Protection Act of 1963. To protect them from illegal trade, there is the Elephants Registration Act of 1951. But Myanmar still faces the probleam of elephant poaching and illegal trade in elephants and their products.

TABLE 3

Personal estimate of wild elephants in Myanmar (1991)

State-Division	*Number (minimum)*	*Number of Townships with wild elephants*	*Approximate area under wild elephants (km²)*
Kachin	850	11	19900
Kayar	50	02	850
Kayin	170	03	5500
Chin	-	-	-
Sagaing	800	18	22000
Tenasserim	150	06	18500
Bago	280	14	12000
Magwe	25	02	1200
Mandalay	100	10	3750
Mon	100	01	1250
rakhine	750	08	16500
Yangon	110	02	950
Shan	550	05	8700
Irrawaddy	180	05	4500
	4115	87	115600

TABLE 4

Mortality of Elephants in Myanmar

YEAR	MELASHIKAR				KHEDDAH				IMMOBILIZATION				CAPTIVE STOCK IN HAND
	C	R	D	B	C	R	D	B	C	R	D	B	
1970-71	80	2	-	78	136	1	64	71	12	4	-	8	157
1970-72	83	-	-	83	185	3	56	126	15	3	-	12	221
1970-73	78	123	2	64	122	5	30	87	1	-	-	1	152
1970-74	31	4	1	26	93	3	21	69	19	3	6	10	105
1970-75	37	2	3	32	50	1	14	35	24	-	4	20	87
1970-76	14	3	2	9	18	-	9	9	37	2	3	32	50
1970-77	19	1	3	25	29	-	9	20	34	-	3	31	76
1970-78	31	-	-	31	39	1	11	27	22	-	2	20	78
1970-80	24	-	2	22	44	-	10	34	25	-	1	24	80
1970-81	27	-	5	22	77	-	17	60	29	-	3	26	108
1970-82	19	-	1	18	78	2	25	51	25	-	4	21	90
1970-83	16	-	2	14	87	10	34	43	21	1	2	18	75
1970-84	-	-	-	-	29	3	7	19	27	1	1	25	44
1970-85	-	-	-	-	-	-	-	-	40	5	-	35	35
1970-86	-	-	-	-	-	-	-	-	41	6	7	28	28
1970-87	-	-	-	-	-	-	-	-	39	3	8	28	28
1970-88	-	-	-	-	-	-	-	-	49	1	3	45	45
1970-89	-	-	-	-	-	-	-	-	42	-	3	39	39
1970-90	-	-	-	-	-	-	-	-	26	1	5	20	20
1970-91	-	-	-	-	-	-	-	-	32	-	3	29	29
1970-92	-	-	-	-	-	-	-	-	22	-	-	22	22
1970-93	-	-	-	-	55	-	7	48	22	-	-	22	70
	-	-	-	-	-	-	-	-	17	-	2	15	15
	459	24	21	424	1042	29	314	699	621	30	60	531	1654

C : CAPTURED - Total captured = 2,122

R : RELEASED - Total released = 83

D : DEAD - Total dead = 395

B : BALANCE

In 1985 there were many elephants killed without Licences in the Tanaing township in Kachin State. Regional forest officer from Shan/ reported on the poaching of wild elephants for tusks in 1984/85. In the Mon, Rakhine, Kayin States and Sagaing Division, poaching, illegal capture and trade were widespread, untill pread until 1992. Army troops captured many elephants without licence during their military operations in Kayin State and Tenasserim Division between 1991 and 1993. Between 1982/83 and 1990/91, 55 elephants were killed. These reports show that poaching, illegal off take and trade are still widspread in Myanmar.

DISCUSSION

Elephants still inhabit about 115,600 km² of forest land in 87 Township areas in Myanmar. The forests in Myanmar have a high elephant carrying capacity and perhaps, they could support a maximum of 20,000 elephants in the wild. However, this high carrying capacity is being slowly reduced as a result of deforestation and habitat loss. For example, in the Yangon Division, there were about 1,115km² of elephant habitat prior to 1983, but since then about 165 km² of forest has been lost as a result of degration. It is likely to lose a further 45km² of forest in the Tabuhla dam and Ngamoeyeil dam areas.

Elephant populations occur (or did occur in the past) in at least four legally established wildlife sanctuaries namely, Pidaung, Shwe U Daung, Tamanthi and Alangdaw Kathapa, but their present status is not known excet in Alangdaw kathapa. The four areas total about 2, 055 square miles.

It is likely today Myanmar has over 4,000 elephants in the wild, and the populations are widely distributed. But the estimates of elephant numbers are not based on rigorous study and so should be regarded only as educated guesses. It was only recently, with the assistance of the IUCN/ SSC Asian Elephant Specialist Group that Myanmar Forest Department has started to estimate elephant numbers using indirect methods involving the dung counts. This is the beginning of putting elephant conservation on a sound scientific understanding.

In Myanmar, there are 3 methods available for the capture of wild elephants. These are: (1) chemical immobilization (still practised in Myanmar); (ii) Kedah and (iii) Mela - shikar methods used by private elephant catchers. However, the two latter methods have been stopped since 1982 on account of the high mortality

involved. In 1991 in order to provide recruits to the pool of elephants used in timber extraction, the Forest Department once again allowed the private elephant catchers to capture elephants using the Keddah method. As can be seen in Table 4, the mortality is very high in this method.

Compared to other Asian countries where elephants occur in the wild, the conflicts between man and elephant are not very serous in Myanmar. But this situation will change with the fragmentation of elephant populations and their habitats and the expansion of human populations into elephant habitats. There is still time for Myanmar to set aside large areas where elephants could range without much conflict with man. Another possibility would be to establish the so called "Managed Elephant Reserves" as recommended by the IUCN/SSC Asian Elephant Action Plan. This will enable both man and elephant to co-exist in Myanmar and thus secure the long - term survival of both species.