

CAPTIVE PROGRAMS

SUNGAI DUSUN GENE POOL EXPANSION

The intensive management center at Sungai Dusun in Peninsular Malaysia will be significantly expanded and improved soon. The Department of National Parks and Wildlife Management has announced plans to enlarge the existing enclosures (which comprise 7 units of 1 hectare each) by constructing a 10 hectare paddock that will extend into the adjacent forest.

SUMATRAN RHINO "RESCUES"

In August 1994, the Department of Wildlife and National Parks rescued a Sumatran rhinoceros from the Mersing Coast region of the state of Johore in Peninsular Malaysia. The remnant forest inhabited by this rhino was being cleared for agriculture. The rhino was an adult male and will be placed in the Sungai Dusun intensive management center. Another rescue occurred in Sabah during June 1994. This rhino was a female and is currently in the intensive management center in Sepilok.

CAPTIVE PROGRAMS FOR SUMATRAN RHINO

In 1984, the IUCN SSC conducted a workshop in Singapore to develop an initial strategy for conservation of the Sumatran rhinoceros and provide guidelines for the proposed *ex situ* programs considered critical for survival of the species at that time.

Since then, 39 Sumatran rhinos have been captured.

Currently, 23 Sumatran rhino survive in 10 facilities worldwide. These 23 Sumatran Rhinoceros in captivity worldwide represent about 5% of the entire global population of this species. Considering the estimated decline of 50% in Sumatran rhino numbers since 1984, it seems more imperative than ever that these rhino in captivity be propagated to contribute to survival of the species.

However, the captive programs to date have not been successful.

Mortality has been high (40%) and deaths continue. Two of the surviving rhino in the United States are very ill. There is speculation by some rhino managers

and researchers that the major husbandry problem may be nutritional.

Moreover, none of these Sumatran rhino have yet reproduced in captivity. One calf has been born at the Melaka Zoo in Malaysia, but to a female that was captured pregnant.

The reasons why the Sumatran rhino has been so difficult to breed in captivity are not certain. The species will reproduce under captive conditions. Indeed, the very first rhinoceros ever born in captivity was of this species, at the Calcutta Zoo in 1889. The 3 other rhinoceros species which have been in captivity the African Black and White Rhinoceros (*Ceratotherium simum*) and the Indian/Nepalese Rhinoceros (*Rhinoceros unicornis*) do reproduce regularly in captive conditions.

There are some possible causes for the difficulties with breeding the Sumatran rhino in captivity. It is true that there had been some problems with the sex ratio of rhinos captured. The result had been that adult females have not been in the same place as adult males a significant amount of time. However, there have now been mature pairs together at seven facilities for some time. There has been some reluctance by captive managers about placing the sexes together because courtship is so violent. At least one of the deaths in captivity was almost certainly caused by trauma inflicted during courtship. Other facilities have had significant injuries. It has been very difficult to detect estrus in the Sumatran rhino. This difficulty has prevented managers from regulating introduction of males to females to times of estrus when it might be expected that courtship would be less violent.

A number of the persons who have studied the Sumatran rhinoceros in the field believe the most significant problems have been the limited space and the less-than-natural conditions for the rhino in the captive facilities. One aspect that has been emphasized in particular is the need for total separation of males and females except when females are in estrus. Such separation is almost certainly the natural situation in the wild.

**SUMMARY - CAPTIVE PROGRAMS
SUMATRAN RHINO - 1984 TO 1994**

<u>COUNTRY</u>	<u>CAPTURED</u>	<u>BORN</u>	<u>IMPORTED</u>	<u>EXPORTED</u>	<u>RELEASED</u>	<u>DIED</u>	<u>ALIVE</u>
P. MALAYSIA	3/9	0/1	1/0	0/2		2/2	2/6
SABAH	7/1	0/0	0/0	0/0	1/0	3/0	3/1
INDONESIA	7/11	0/0	0/1	4/7		2/2	1/3
THAILAND	0/0	0/0	0/1	0/0		0/1	0/0
U.K.	0/0	0/0	1/2	0/0		0/1	1/1
U.S.A.	<u>0/0</u>	<u>0/0</u>	<u>2/5</u>	<u>0/0</u>	—	<u>0/2</u>	<u>2/3</u>
TOTAL	17/21	0/1	4/9	4/9	1/0	7/8	9/14

SUMATRAN RHINOCEROS LIVING IN CAPTIVITY

<u>COUNTRY</u>	<u>INSTITUTION</u>	<u>MALES</u>	<u>FEMALES</u>	<u>TOTAL</u>
Indonesia	Jakarta	0	1	1
	Surabaya	0	1	1
	Taman Safari	1	1	2
	<i>Subtotal Indonesia</i>	<i>1</i>	<i>3</i>	<i>4</i>
Malaysia				
	Peninsula			
	Malacca	1	2	3
	Sungai Dusun	1	4	5
	<i>Subtotal P. Malaysia</i>	<i>2</i>	<i>6</i>	<i>8</i>
Sabah	Sepilok	3	1	4
	Tabin (Released)	(1)	0	(1)
	<i>Subtotal Sabah</i>	<i>3</i>	<i>1</i>	<i>4</i>
United Kingdom	Port Lympne	1	1	2
	<i>Subtotal U.K.</i>	<i>1</i>	<i>1</i>	<i>2</i>
United States	Cincinnati	1	1	2
	Los Angeles	0	1	1
	New York	0	0	0
	San Diego	1	1	2