

**SUMATRAN RHINO CONSERVATION CENTRE
DEPARTMENT OF WILDLIFE AND NATIONAL PARKS
SUNGAI DUSUN, SELANGOR
MALAYSIA**

MONTHLY REPORT

JULY 2003

BY

Dr. AIDI MOHAMAD

INTRODUCTION

There was two breeding recorded this month between Ara and Seputeh. The first mating was on July 7, about 28 minutes and the second was on July 31, about 43 minutes. This is the second and third mating for Seputeh after the surgery.

Apart from that, the routine procedures including blood collection, ultrasound and rhino mixing were carried out throughout the month.

Ultrasound was conducted on the females including Minah and Panjang. No ovulatory follicles observed and the females were not mixed with Ara.

RHINO MANAGEMENT

A) Daily Management

i) Night stall

Daily work

Mohd Noor managed the night stalls together with Shariff and Umor. Shariff and Umor cleaned the night stalls daily while Mohd. Noor inspected the food supply when it arrived around 9.30 a.m. The browse and fruits were weighed and cleaned before giving to the rhinos. About 40 to 50 kg of browses and 7kg of fruits including papaya, banana and sweet potatoes were given daily. The rhinos were also given horse pellet about 2.0kg every morning. Every Monday and Thursday morning, blood samples will be collected from all rhinos.

The rhinos

The rhinos were let out first before cleaning the night stalls. After cleaning, the browses were put in the feed trough and the rhinos were let in for their morning meal. The water trough was cleaned and the drinking water was changed on daily basis. Daily observation was made and recorded in the workbook for each rhino. The rhinos were fed twice daily: 9.00 a.m. and 3.00 p.m.

ii) Ten acres enclosure

Daily Work

Adam will inspect the electric fencing every morning. The fencing will be cleaned from any foreign objects such as spider web, dried leaves or creepers to avoid short circuit. Voltmeter was used to ensure that the voltage of the fencing is about 7.0 kV. They will also inspect the fencing for any damages.

The rangers then put about 50kg of browses and this was done twice daily.

B) Breeding Program

i) Breeding Introduction

Seputeh was suspected to be in estrus on July 2 and was mixed starting from July 1. On July 7, she was mated for about 28 minutes.

Following the last mating, Seputeh was expected to be in estrus on July 28. She was paired with Ara starting from July 25 and was bred on July 31 for 43 minutes. Minah was also paired with Ara but no breeding behaviour was observed. The pairing observation was summarized below (Table 2).

ii) Bleeding Program

a) Blood Collection

The blood collection was carried out twice weekly, every Monday and Thursday. The bleeding procedure was summarized in Table 1.

b) Progesterone Hormone Profile

Blood samples were sent to UPM for hormonal analysis.

C) HEALTH STATUS

The rhinos were weighed at least once a month but Minah's weight was monitored every week. The result is tabulated in Table 3 and 4.

Table 1: Blood Collection from the Rhinos, July 2003

Date	Rhino ID	Area taken	Remarks
July 3	Mas Merah Rima Minah Panjang	Tail Tail Tail Tail	Samples were taken from the females for P4 analysis.
July 7	Panjang Mas Merah Rima	Tail Tail Tail	Samples were taken from the females for P4 analysis.
July 10	Rima Minah Panjang Seputeh Mas Merah	Tail Tail Tail Tail Tail	Blood was taken for P4 analysis
July 14	Minah Panjang Mas Merah Seputeh	Tail Tail Tail Tail	Samples were taken from all females for P4 analysis.
July 17	Minah Seputeh Panjang	Tail Tail Tail	Samples were taken from the females for P4 analysis.
July 21	Minah Panjang Mas Merah Seputeh	Tail Tail Tail Tail	Samples were taken from the females for P4 analysis.
July 24	Minah Seputeh Panjang Mas Merah	Tail Tail Tail Tail	Blood was taken for the P4 analysis
July 28	Panjang Minah Mas Merah Seputeh	Tail Tail Tail Tail	Samples were taken from the females for P4 analysis
July 31	Panjang Minah Seputeh	Tail Tail Tail	Samples were taken from the females for P4 analysis

Table 2: The Sumatran Rhino Reproductive Examination and Breeding Introduction, July 2003

Exam Date	Female ID	Ultrasound Data	Behaviour
July 1	Minah	R: MSF L: 10-12mm	No mixing.
	Seputeh	No exam	Ara followed Seputeh but wanted to fight.
July 2	Panjang	R: MSF L: 12mm	Panjang vocalized and blowing a lot.
	Seputeh	No exam	Too much head butting. Seputeh pushed Ara away.
July 3	Seputeh	No exam	Ara followed & tried to mount but Seputeh walked away. Head butting too much. Aggression & separated.
July 4	Seputeh	No exam	AM: Ara followed & mounted Seputeh 3x but she walked away. Ara chased her around, separated. PM: Following but head butting too much, mountings 3x but Seputeh looked early.
July 5	Seputeh	No exam	AM: Following. 4x mountings but Seputeh looked early. PM: 12x mountings & Seputeh looked ready but Ara had 3 partial erections.
July 6	Seputeh	No exam	AM: 10x mountings & 3 partial erections. Seputeh looked ready but Ara looked tired. PM: Release Ara into 10 acres.
July 7	Seputeh	No exam	Ara followed & mounted after five minutes with erection and searching. 8x mountings recorded & the last resulted intromission about 28 minutes.

Exam Date	Female ID	Ultrasound Data	Behaviour
July 8	Minah	R: MSF L: 14mm	No mixing
	Seputeh	No exam	Some following but Seputeh turned around & wanted to fight.
July 11	Minah	No exam	Head butting too much. No interest observed
July 12	Panjang	No exam	Panjang vocalized & blowing a lot when Ara approached her.
July 14	Minah	No exam	No interest observed.
	Panjang	No exam	Vocalized & blowing, no interest
July 15	Minah	R: MSF L: 16mm	No mixing.
July 17	Minah	No exam	No interest observed.
July 18	Minah	No exam	No interest. Too much head butting.
July 19	Minah	No exam	No interest. Too much head butting.
July 20	Minah	No exam	Ara followed but Minah turned around and head butting occurred. No interest observed.
July 21	Panjang	No exam	No interest observed.
	Minah	No exam	Ara followed but head butting too much.

Exam Date	Female ID	Ultrasound Data	Behaviour
July 22	Minah	No exam	Ara checked Minah but ignored her when she walked away. No interest observed.
July 23	Minah	R: 10-12mm L: 22mm	AM: Ara sniffed Minah & followed her for a while. Head butting too much, Minah walked away & Ara ignored her. PM: No interest observed
July 24	Minah	No exam	AM: Ara sniffed Minah & followed her for a while but lost interest. Minah walked away & Ara ignored her. PM: No interest observed
July 25	Minah	No exam	Not much interest observed
	Seputeh	No exam	Head butting a lot.
July 26	Minah	No exam	Not much interest observed
	Seputeh	No exam	Ara followed but Seputeh turned around & head butting a lot.
July 28	Seputeh	No exam	Head butting a lot, Seputeh looked early.
July 29	Seputeh	No exam	A lot of following. Ara tried to mount but Seputeh walked away.
July 30	Seputeh	No exam	Ara followed & mounted 4x but Seputeh walked away. head butting a lot.
	Panjang	No exam	Panjang vocalized a lot.
July 31	Seputeh	No exam	Ara mated Seputeh for 43 minutes.

Table 3: Rhinos' Body Weight (Kg), July 2003

Month/ Rhino ID	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
MAS MERAH	610	*	603	*	*	605	*					
MINAH	522	530	539	534	535	523	520					
SEPUTIH	762	762	772	774	776	765	770					
PANJANG	572	566	569	550	548	540	538					
ARA	614	615	623	627	635	625	630					

*Inside the 10 acres enclosure

Table 4: Minah's Weekly Body Weight (Kg), July 2003

Rhino ID / Date	2/7	10/7	16/7	25/7
Minah	521	517	515	520

Rhinos' Breeding Dates at Sg. Dusun, 2000 – 2003.

Date(s)	Rhinos	Remarks
5/10/00	Rima & Ara	Bred for 46 minutes.
14/10/00	Panjang & Ara	Bred for about 35 minutes.
19/10/00	Seputeh & Ara	35 minutes.
29/10/00	Rima & Ara	Rima was bred for about 35 minutes.
8/11/00	Seputeh & Ara	Intromission was observed and lasted about 23 minutes.
9/11/00	Seputeh & Ara	Seputeh was bred for about 30 minutes.
10/01/01	Rima & Ara	Bred for 20 minutes after assisted intromission.
26/01/01	Seputeh & Ara	Bred for 30 minutes in the afternoon.
31/01/01	Rima & Ara	Bred for 20 minutes.
01/02/01	Rima & Ara	Bred for 32 minutes.
16/02/01	Seputeh & Ara	Bred for 29 minutes.
17/02/01	Seputeh & Ara	Bred for 35 minutes.
22/02/01	Rima & Ara	Bred for 55 minutes.
15/03/01	Rima & Ara	Bred for 14 & 5 minutes.
16/03/01	Rima & Ara	Bred for 10, 5 & 13 minutes.
08/04/01	Seputeh & Ara	Bred for 32 minutes.
11/04/01	Rima & Ara	Bred for 25 minutes.
03/05/01	Rima & Ara	Bred for 36 minutes.
25/05/01	Rima & Ara	Bred for 25 minutes.
31/05/01	Panjang & Ara	Bred for 26 minutes.
08/06/01	Seputeh & Ara	Bred for 13 & 19 minutes.
16/06/01	Rima & Ara	Bred for 35 minutes.
17/06/01	Rima & Ara	Bred for 30 minutes.
30/06/01	Seputeh & Ara	35 minutes
21/07/01	Seputeh & Ara	30 minutes
22/07/01	Seputeh & Ara	23 minutes
23/07/01	Seputeh & Ara	30 minutes
30/07/01	Rima & Ara	35 minutes
13/08/01	Seputeh & Ara	30 minutes
29/08/01	Mas Merah & Ara	2 minutes
03/09/01	Seputeh & Ara	27 minutes
04/09/01	Seputeh & Ara	15 mins. 32 minutes
25/09/01	Seputeh & Ara	43 minutes
26/09/01	Seputeh & Ara	34 minutes
17/10/01	Seputeh & Ara	30 minutes
18/10/01	Seputeh & Ara	30 minutes
23/10/01	Rima & Ara	30 minutes
08/11/01	Seputeh & Ara	55 minutes
13/11/01	Rima & Ara	20 mins. 20 minutes
24/11/01	Mas Merah & Ara	20 minutes

Date(s)	Rhinos	Remarks
18/01/02	Mas Merah x Ara	Bred for 35 minutes
04/04/02	Seputeh x Ara	Bred for 40 minutes
26/04/02	Seputeh x Ara	Bred for 15 & 35 minutes
17/05/02	Seputeh x Ara	Bred for 25 minutes
06/07/02	Seputeh x Ara	Bred for 25 minutes
29/09/02	Seputeh x Ara	Bred for 16 minutes
19/10/02	Seputeh x Ara	Bred for 15 minutes
20/10/02	Seputeh x Ara	Bred for 23 minutes
22/10/02	Rima x Ara	Bred for 28 minutes
10/11/02	Seputeh x Ara	Bred for 30 minutes
04/12/02	Seputeh x Ara	Bred for 52 minutes
17/12/02	Rima x Ara	Bred for 7 & 15 minutes
20/01/03	Rima x Ara	Bred for 25 minutes
21/01/03	Rima x Ara	Bred for 17 minutes
04/02/03	Seputeh x Ara	Bred for 10 minutes
05/02/03	Seputeh x Ara	Bred for 52 minutes
23/02/03	Rima x Ara	Bred for 19 minutes
12/04/03	Rima x Ara	Bred for 51 minutes
11/06/03	Seputeh x Ara	Bred for 12 minutes
07/07/03	Seputeh x Ara	Bred for 28 minutes
31/07/03	Seputeh x Ara	Bred for 43 minutes