

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

MONTHLY REPORT

SEPTEMBER 2003

BY

Dr. AIDI MOHAMAD

INTRODUCTION

There was a mating between Ara and Seputeh. Seputeh was suspected to be in estrus on September 13 and she was paired with Ara starting on September 13 but was only bred on September 17 for 48 minutes.

The routine procedure including blood collection and ultrasound program was also carried out.

RHINO MANAGEMENT

A) Daily Management

i) Night stall

Daily work

Mohd Noor managed the night stalls together with Shariff and Umor. Shariff and Umor will clean 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 except Minah. She was fed with Equine Senior pellet to increase her weight. 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.

During the inspection, the ranger will look for the rhino inside the enclosure and call the rhino for their morning meal. The rhino was confined in the quarter acre first before putting their browse in the feeding trough twice daily. The total amount given was about 100kg for each rhino per day.

B) Breeding Program

i) Breeding Introduction

Seputeh and Minah were paired with Ara and the observation was summarized below in Table 1.

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 2.

b) Progesterone Hormone Profile

Blood samples were sent to UPM for hormonal analysis.

C) HEALTH STATUS

Minah showed an improvement and her weight is being monitored on weekly basis. The result is tabulated in Table 3. The other rhinos were weighed once a month.

Table 1: The Sumatran Rhino Reproductive Examination and Breeding Introduction, September 2003

Exam Date	Female ID	Ultrasound Data	Behaviour
Sept 3	Panjang	R: 10-11mm L: MSF	No mixing
	Minah	R: 16-17mm L: MSF	No mixing. KIV
Sept 5	Minah	R: 17mm L: MSF	No mixing. KIV
Sept 6	Panjang	R: 12mm L: MSF	No mixing
Sept 9	Panjang	R: 12mm L: MSF	No mixing
	Minah	R: 17mm L: MSF	No mixing. KIV
Sept 11	Minah	R: 17mm L: MSF	No mixing. KIV
Sept 13	Seputeh	No exam	No interest observed
Sept 14	Seputeh	No exam	Ara followed Seputeh but she wanted to fight. Separated
Sept 15	Seputeh	No exam	Ara followed Seputeh but she turned around and head butting occurred.
Sept 16	Seputeh	No exam	Ara followed Seputeh & mounted her 3x but she walked away.
Sept 17	Seputeh	No exam	AM: Following & 12 mountings recorded with 3x erection but Seputeh walked away. PM: 3 mountings and the last resulted intromission. which lasted for 48 minutes.

Exam Date	Female ID	Ultrasound Data	Behaviour
Sept 18	Seputeh	No exam	No interest observed.
	Minah	R: 17mm L: MSF	No interest observed.
Sept 19	Mas Merah	No follicular activity	No mixing
	Panjang	R: 12mm L: MSF	No mixing
Sept 23	Minah	R: 16-17mm L: MSF	No interest observed.
	Panjang	R: 12mm L: MSF	No mixing
Sept 29	Minah	R: 15mm (regressing) L: MSF	No mixing
	Panjang	R: 12mm L: MSF	No mixing

Table 2: Blood Collection from the Rhinos, September 2003

Date	Rhino ID	Area taken	Remarks
Sept 1	Mas Merah Minah Panjang Seputeh	Tail Tail Tail	Samples were taken from the females for P4 analysis.
Sept 4	Panjang Mas Merah Minah Seputeh	Tail Tail Tail	Samples were taken from the females for P4 analysis.
Sept 8	Minah Panjang Seputeh Mas Merah	Tail Tail Tail Tail	Blood was taken for P4 analysis
Sept 11	Minah Panjang Mas Merah Seputeh	Tail Tail Tail Tail	Samples were taken from all females for P4 analysis.
Sept 15	Minah Seputeh Panjang Mas Merah	Tail Tail Tail	Samples were taken from the females for P4 analysis.
Sept 18	Minah Panjang Mas Merah Seputeh	Tail Tail Tail Tail	Samples were taken from the females for P4 analysis.
Sept 22	Minah Seputeh Panjang Mas Merah	Tail Tail Tail Tail	Blood was taken for the P4 analysis
Sept 25	Panjang Minah Mas Merah Seputeh	Tail Tail Tail Tail	Samples were taken from the females for P4 analysis
Sept 29	Panjang Minah Seputeh Mas Merah	Tail Tail Tail	Samples were taken from the females for P4 analysis

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

Month/ Rhino ID	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
MAS MERAH	610	*	603	*	*	605	*	607	610			
MINAH	522	530	539	534	535	523	520	515	520			
SEPUTIH	762	762	772	774	776	765	770	768	772			
PANJANG	572	566	569	550	548	540	538	532	530			
ARA	614	615	623	627	635	625	630	635	632			

*Inside the 10 acres enclosure

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

Rhino ID / Date	3/9	5/9	9/9	11/9	18/9	22/9
Minah	515	515	515	517	518	520
	1 24/9	27/9	30/9			
	520	520	520			

The 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

Sumatran Rhino Emi - Reproductive History - Additions from Romo

Cincinnati Zoo & Botanical Gardens

Wild born ca 1988 - bred by Ipuh - wild born ca 1981

Date	Weight	Event	Days after previous	Gestation	Calf	Note	Romo Note
29-Aug-97	1690						no breeding
17-Sep-97	1658	bred min					
14-Nov-97	1704	bred 45 min	58				
5-Dec-97	1708	bred 38 min	21				
26-Dec-97	1714	bred 53 min	21				
16-Jan-98	1721	bred 49 min	21			Conceived - lost	no breeding - snow
24-Mar-98	1785	bred 30 min	67			Conceived - lost	
29-Jun-98	1701	bred min	97				
22-Jul-98	1687	bred min	23				
12-Aug-98	1672	bred min	21			Conceived - lost	pregnancy?????
1-Dec-98	1741	bred min	111				
8-Mar-99	1842	bred min	97				
29-Mar-99	1824	bred min	21				
17-Apr-99	1812	bred min	19				
8-May-99	1812	bred min	21				
29-May-99	1786	bred min	21				
25-Jun-99	1765	bred min	27				
29-Oct-99	1791	bred min	126				
19-Nov-99	1788	bred 40 min	21			Conceived - lost	
9-Dec-99	1816	bred 38 min	20			Conceived - lost	
16-Mar-00	1781	bred min	98				
8-Apr-00	1813	bred min	23				
26-May-00	1746	bred min	48			Regumate supplement	
13-Sep-01	1777	calved	475	475 days.	73# male		
16-Nov-02	1588	bred min	429				
23-Dec-02	1629	bred min	37				
13-Jan-03	1594	bred min	21				
22-Mar-03	1597	bred min	68				
10-Apr-03	1647	bred min	19				
30-Jul-04	1734	calved	477	477 days.	75# female		
5-Jan-06	1637	bred min	524				
29-Apr-07	1864	calved	479	479 days.	86# male		