

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

**MONTHLY REPORT**

**OCTOBER 2002**

**BY**

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**&**

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## **INTRODUCTION**

A few breeding occurred involving two females, Rima and Seputeh. Ara bred Seputeh on two consecutive days, October 19 and 20 for about 15 and 23 minutes respectively. On October 22, Ara bred Rima for about 28 minutes when the two rhinos were mixed. Based on the progesterone hormone profile, Seputeh was mixed with Ara on October 19 and good breeding behavior was observed in the morning without any successful mounting. Later, the rhinos were paired again in the afternoon and breeding was achieved. The next morning, Ara and Seputeh were mixed again and breeding occurred.

As for Rima, she was mixed with Ara on daily basis and good behaviour was observed starting from October 17 followed by the successful breeding on October 22. However, no breeding occurred on other females although they were also paired with Ara.

Blood sample were collected as usual, twice weekly and the samples were sent to UPM for hormonal analysis. Blood was also sent to Veterinary Research Institute, Ipoh was routine checking.

As for Minah, she was weighed weekly and her weight improved a lot after giving her the 'Equine Senior' pellet. Her weight has been up and she looked more active and alert. The other rhinos are also in a good health and they were weighed once a month.

## **RHINO MANAGEMENT**

### **A) Daily Management**

#### **i) Night stall**

##### *Daily work*

Starting this month, Mohd Noor will manage 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. 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 drinking water was changed daily and stress vet (multi-mineral powder) was mixed inside it. 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. The amount given was about 100kg for each rhino per day.

## **B) Breeding Program**

### **i) Breeding Introduction**

#### **a) Rima**

After eleven months without breeding, Ara bred Rima on Oct. 22 for about 28 minutes. Rima had a history of prolonged luteal phases (refer Robin's report) but she was mixed with Ara on a daily basis to stimulate cycling. On Aug. 26 and 27, she was given prostaglandin therapy and good breeding behaviour observed after the treatment (refer Robin's report). However, her progesterone level remains low (between 0.01ng/ml to 0.13ng/ml) since Sept. 1.

Rima and Ara were mixed from Oct. 15 to 20 and they showed good breeding behaviour especially on Oct 15, 17, 18 and 19. Ara ignored her when the two were mixed on Oct. 20. She was scanned on Oct. 15 and her follicle size is about 15 mm. Rima was not paired with Ara on Oct. 21 for safety reasons after Ara bred Seputeh the day before.

On Oct. 22, Rima was paired with Ara and she was bred for 28 minutes. After the breeding, semen collection was attempted. Rima was put in the chute soon after the breeding and semen was collected manually. The semen was examined under a microscope but the samples were not good and contain a lot of debris. Then it was decided to leave Rima alone in the chute and she lay down after 20 minutes. Semen was observed dripping from the vulva and was collected and was examined under the microscope. There were a lot of sperm observed swimming around and this could confirm the motility is very good. Grossly, no dead sperm or bent tails were observed. However, a thorough evaluation should be done to confirm this.

**b) Seputeh**

Ara bred Seputeh for two consecutive days on Oct. 19 (15 minutes) and Oct. 20 (23 minutes). The breeding behaviour correlates with her progesterone level, which was 0.11ng/ml (19/10) and 0.07ng/ml (21/10) respectively. Her estrus cycle is about 21 days and she is expected to be in estrus on Nov. 10 or 11 if she is not pregnant.

**c) Panjang**

Panjang was mixed on daily basis to stimulate to cycle. Good breeding behaviour was observed on her but there was no interest from the male, Ara. Her progesterone level is also low between 0.20ng/ml to 0.35ng/ml.

**d) Mas Merah**

Mas Merah progesterone profile is irregular. Her hormone level fluctuated between 0.50ng/ml to 0.70ng/ml. She was mixed with Ara daily to avoid any missed breeding. She blowing and vocalizing during the mixing and the rhinos were separated to avoid fighting.

**e) Minah**

Minah was also mixed on regular basis but no breeding occurred. Her progesterone level is also low between 0.11ng/ml to 0.25ng/ml.

**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 and the latest blood result was attached below.

### C) HEALTH STATUS

Generally, all rhinos are in the good condition. Minah still having weight problem and she was given rice bran and cattle pellet to increase her weight. Her weight is being monitored on weekly basis and the result is showed in Table 4. The other rhinos were weighed once a month

### D) FECAL pH

On Oct 23, pH testing was conducted on all females and the result showed that their fecal had pH 8.

**Table 3: Rhinos' Body Weight (Kg), October 2002**

Month/ Rhino ID	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
RIMA	552	542	542	554	580	576	562		558	580		
MAS MERAH	612	590	578	586	595	594	584		602	600		
MINAH	462	450	476	476	480	450	458		442	466		
SEPUTIH	738	752	742	736	*	724	764		776	*		
PANJANG	532	*	523	512	538	514	528		526	526		
ARA	610	588	574	574	613	592	634		630	626		

#### REMARKS:

\* In the 10 acres enclosure

**Table 4: Minah's Weekly Body Weight (Kg), Oct. to Nov. 2002**

Rhino ID / Date	1/10	8/10	15/10	22/10	6/11	14/11
Minah	456	461	466	486	488	487

**Table 1: Blood Collection from the Rhinos, October 2002**

<b>Date</b>	<b>Rhino ID</b>	<b>Area taken</b>	<b>Remarks</b>
Oct 2	Mas Merah Rima Minah Panjang	Tail Tail Tail Tail	Samples were taken from two females for P4 analysis.
Oct 7	Panjang Seputeh Minah Mas Merah Rima	Tail Tail Tail Tail Tail	Samples were taken from the females for P4 analysis.
Oct 10	Rima Minah Mas Merah Panjang	Tail Tail Tail Tail	Blood was taken for P4 analysis
Oct 14	Minah Seputeh Panjang Mas Merah Rima	Tail Tail Tail Tail Tail	Samples were taken from all rhinos for P4 analysis.
Oct 16	Mas Merah Rima Minah Seputeh Panjang	Tail Tail Tail Tail Tail	Samples were taken from the females for P4 analysis.
Oct 18	Minah Panjang Mas Merah Rima	Tail Tail Tail Tail	Samples were taken from the females for P4 analysis.
Oct 21	Minah Mas Merah Panjang Rima Seputeh	Tail Tail Tail Tail Tail	Blood was taken for the P4 analysis
Oct 23	Minah Mas Merah Panjang Rima Seputeh	Tail Tail Tail Tail Tail	Blood was taken for the P4 analysis

Date	Rhino ID	Area taken	Remarks
Oct 29	Mas Merah Seputeh Panjang Minah Rima	Tail Tail Tail Tail Tail	Blood was taken for the P4 analysis
Oct 31	Minah Mas Merah Rima Seputeh Panjang	Tail Tail Tail Tail Tail	Samples were taken from these females for P4 analysis.

**Table 3: Observation on the Rhinos During Introduction, October 2002**

<b>Date</b>	<b>Rhino ID</b>	<b>Observation</b>
Oct 1	Panjang & Ara	Good behaviour observed between the two rhinos. Ara tried to follow Panjang but she vocalized a lot.
Oct 2	Panjang & Ara	Good behaviour observed between the two rhinos. Ara tried to follow Panjang but she vocalized a lot.
Oct 3	Minah & Ara	No interest observed between the two rhinos.
	Mas Merah & Ara	Mas Merah blows and want to fight with Ara.
	Panjang & Ara	Good behaviour observed, Ara followed Panjang but the female vocalized.
Oct 4	Panjang & Ara	No interest showed by the female. Ara sniffed her but she walked away.
Oct 5	Panjang & Ara	Ara sniffed Panjang but no further response. He ignored her and continued to eat.
Oct 6	Panjang & Ara	No interest showed by the female. Ara sniffed her but she walked away.
Oct 7	Panjang & Ara	Ara sniffed Panjang but no further response. He ignored her and continued to eat.
Oct 8	Minah & Ara	Minah walked away after eating the fruits and Ara followed her. The rhinos were side-by-side and later pushing each other head to head.
	Mas Merah & Ara	Mas started to blow when approaching the feeding area. No response from Ara and the rhinos were separate to avoid fighting.
	Rima & Ara	Eating together, Ara sniffed Rima but no interest. Rima walked away, Ara ignored her.



Date	Rhino ID	Observation
Oct 11	Minah & Ara	Eating together, Ara sniffed Minah but ignored her when she walked away.
	Rima & Ara	Both rhinos were eating together. Ara sniffed her but no interest.
	Panjang	No interest showed by the female. Ara sniffed her but she walked away.
Oct 15	Minah & Ara	No interest observed.
	Panjang & Ara	Panjang showed some interest but no response from Ara.
	Mas Merah & Ara	Mas vocalized and blowing a lot. Separate to avoid fighting.
	Rima & Ara	Ara followed Rima for a while. No further response.
Oct 16	Panjang & Ara	No interest observed.
	Rima & Ara	No interest observed.
Oct 17	Panjang & Ara	Ara showed no interest.
	Rima & Ara	Ara followed Rima but she turned around and head butting occurred. She walked away and Ara ignored her.

Date	Rhino ID	Observation
Oct 18	Mas Merah & Ara	Mas blowing and vocalized a lot. No interest observed.
	Minah & Ara	Minah showed some interest but no interest on Ara.
	Panjang & Ara	No interest observed on both rhinos.
	Rima & Ara	Ara followed Rima but she turned around and head butting occurred. She walked away and Ara ignored her.
Oct 19	Rima & Ara	Ara followed Rima but a lot of head butting was observed.
	Seputeh & Ara	Ara bred Seputeh for 15 minutes in the afternoon.
Oct 20	Rima & Ara	Ara ignored Rima and busy looking for Seputeh.
	Seputeh & Ara	Ara bred Seputeh 23 minutes.
Oct 22	Rima & Ara	Ara bred Rima for 28 minutes.
Oct 24	Mas Merah & Ara	Mas approached the feeding area and eat for a while. She walked away but turned back and blowing at Ara.
	Minah & Ara	Ara sniffed her but no futher response. Minah walked away and Ara ignored her.
	Panjang & Ara	Ara followed Panjang for a while and come back to eat. Panjang approached him but Ara ignored her.
Oct 25	Minah & Ara	Eating together for a while. Min ah walked away and Ara ignored her.
	Mas Merah & Ara	Mas blowing and vocalized a lot. No interest observed.
	Panjang & Ara	Both rhinos eating side by side. Panjang walked away and waited for Ara but no response from Ara.

Date	Rhino ID	Observation
Oct 28	Minah & Ara	Eating together, side by side. Ara sniffed, Minah walked away and Ara ignored her.
	Mas Merah & Ara	Mas Merah blows and then come to the feeding area, eating beside Ara. Mas Merah walked away and Ara ignored her.
	Panjang & Ara	Both rhinos eating side by side. Panjang walked away and waited for Ara but no response from Ara.
Oct 29	Minah & Ara	Ara sniffed Minah but no further response.
	Mas Merah & Ara	Mas Merah blows and vocalized a lot. No interest observed.
	Panjang & Ara	Ara sniffed Panjang and followed her for a while. No further response.
Oct 31	Minah & Ara	Ara followed Minah but she turned around and head butting occurred. She walked away and Ara chased her. Head butting occurred again.
	Mas Merah & Ara	No interest observed. Mas vocalized and blowing.
	Panjang & Ara	Ara trailed Panjang half way but he turned back begging for fruits.