

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

MONTHLY REPORT

MARCH 2001

BY

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&

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INTRODUCTION

Ara bred Rima on two consecutive days this month. The other female i.e., Seputeh was suspected pregnant based on her high progesterone level. As for the other females, Mas Merah is cycling while Panjang and Minah still has low level of progesterone. Dr. Terri Roth visited the center for two weeks and she did some scanning on all females. She will write a report about her findings and will be sent it later.

The daily introduction was started between Ara and Mas Merah and also between Shah and Panjang. However, the result is not promising. As for Minah, she will be closely monitored since her progesterone level is low. As for the bleeding procedure, it is still carried out twice weekly on all females for progesterone analysis. As for the bred females, blood will be collected once a week. Other than that, the fecal sampling was stopped at the end of the month.

RHINO MANAGEMENT

A) Daily Management

i) Night stall

Daily work

Adam and Umor managed the night stalls. However, Umor and Shariff arrived first at 7.00 a.m. and they cleaned the night stalls. Then, Shariff will inspect the electric fencing with Mohd Noor while Umor and Adam will continue the work in the night stall. The food supply will be arriving around 9.30 a.m. daily. 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 1.5kg every morning.

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 three times daily; 9.00 a.m., 12.00 noon and 3.00 p.m.

ii) Ten acres enclosure

Daily Work

Mohd Noor and Shariff inspect the electric fencing every morning. The fencing was 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 rangers 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 (Inside Quarter Acre)

i) Rhino Pairing

Seputeh should be coming into estrus on 9/03/01. Blood was taken on 7/03/01 and sent to UPM for confirmation. The result showed that her progesterone level was high (3.08ng/ml) and she was not mixed with Ara. Blood was taken again on 10/3, 12/3 and 13/3 and the result confirmed that Seputeh has a high level of progesterone: 3.11ng/ml, 3.32ng/ml and 4.06ng/ml respectively. She was treated as a pregnant animal and her progesterone level will be monitored once a week.

As for Rima, she was expected to be in estrus on 15/3/01. On 13/3/01, blood was taken and sent to UPM for pregnancy confirmation. Unfortunately, the result revealed that she was not pregnant. She was mixed with Ara on the 15/3/01 morning around 11.00 o'clock. Two intromissions occurred, which lasted about fourteen and five minutes respectively.

The next day (16/3/01), around 11.00 a.m., the rhinos were paired again. Three intromissions were recorded, which lasted about ten, five and thirteen minutes respectively.

ii) Bleeding Program

a) Blood Collection

The bleeding was still carried out twice weekly. As for the bred females, the blood was collected once a week. The blood procedure was summarized in Table 1.

b) Progesterone Hormone Profile

The latest blood result was attached below.

iii) Fecal Sampling

The fecal collection is still continued for all females. They were pooled and stored in - 20°C before sending them to UPM. The collection was stopped at the end of then month.

iv) Ultrasound

Dr. Terri Roth did some scanning on all females during her visit to the center from 13/3/01 to 20/3/01 to evaluate their reproductive status. A preliminary finding revealed that Seputeh has a lot of pathology and Panjang has a big mass but both rhinos had active ovaries. Mas Merah and Rima did have some pathology but both rhinos could be breed. As for Minah, her ovaries are not active and she could be suffered from a low-grade uterine infection. A full report about the findings is being prepared.

B) HEALTH STATUS

Generally, all rhinos are in the good condition. Weighing program could not be carried out since the weighing machine is at Zoo Melaka. The rhino will be weighed in April.

C) FEEDING

No changes were made for the feeding program. The browses and produces were supplied by the contractor, which deliver them around 9.30 a.m. daily. The feed was checked to ensure their quantity and quality upon receiving them. They were cleaned and weighed before giving to the rhinos. The rhinos were given about 40 kg of browses, 3 kg of concentrates and 7 kg of fruits daily. Jackfruit or cempedak was ordered (2-4kg) on bleeding days especially for Seputeh.

Table 1: Blood Collection from the Rhinos, March 2001

Date	Rhino ID	Area taken	Remarks
01/03/01	Mas Merah Panjang Rima Minah Seputeh	Tail Tail Tail Tail Tail	Samples were taken from all females for P4 analysis.
08/03/01	Mas Merah Minah Seputeh Rima Panjang	Tail Tail Tail Tail Tail	Get blood samples from all females. The rhinos seem very cooperative.
10/03/01	Rima Seputeh	Tail Tail	Blood was taken for pregnancy test
12/03/01	Minah Rima Seputeh Panjang Minah	Tail Tail Tail Tail Tail	Samples were taken from three females for P4 analysis.
13/03/01	Rima Seputeh	Tail Tail	
15/03/01	Rima Mas Merah Panjang	Tail Tail Tail	Get samples via tail from all females.
19/03/01	Minah Mas Merah Panjang Rima	Tail Tail Tail Tail	Dr. Zainal took the samples from the four females and also Shah.
22/03/01	Rima Mas Merah Panjang	Tail Tail Tail	Get samples via tail from all females.
29/03/01	Minah Mas Merah Panjang Rima Seputeh	Tail Tail Tail Tail Tail	Samples were taken from all females for P4 analysis.

Breeding and Daily Introduction of the Sumatran Rhino, March 2001

A) Breeding Introduction

a) Ara and Rima (15/03/01 & 16/03/01)

Rima was expected to be in estrus on 15/03/01. On 13/03/01, blood was taken from her and sent to UPM for pregnancy confirmation. The result revealed that she was not pregnant. Therefore she was mixed with Ara on 15/3/01 around 11.20 a.m. but no breeding was occurred. In the afternoon, the rhinos were mixed again and Ara bred Seputeh for about fifteen minutes before slipping himself during thrusting. Later, another intromission occurred, which lasted about five minutes.

The next morning, the pair was mixed again around 8.35 a.m. Eight mounting were recorded during the procedure. Three intromissions were observed which lasted about ten, five and thirteen minutes respectively.

b) Ara and Seputeh

Seputeh should be mixed with Ara on 7/3/01. However, the blood result showed that she has a high level of progesterone level. Therefore no mixing we carried out on her.

B) Daily Introduction

a) Shah and Panjang (17/03/01 to 20/03/01)

On 17/3/01, the rhinos were mixed around 10.00 a.m. for about six minutes but no positive response was observed throughout the procedure. Shah was busy eating when Panjang was released from her paddock. Panjang went straight to the feeding area but Shah ignored her. However, it was observed that Shah's ear was protruding upward and he was very alert. Both rhinos kept eating but Panjang walked away from Shah when no more fruits were offered to them. She went straight to the night stall's gate.

The next morning (18/3/01), both rhinos were mixed again around 10.00 o'clock. Shah was eating when Panjang approached the feeding area. No response was noted from Shah when Panjang blows. Both rhinos were then busy eating side by side. Shah was observed sniffing Panjang but no further response. Panjang walked away while Shah was eating and went straight to the night stall. The same observation was noted when both rhinos were mixed on 19/3/01, around 9.45 a.m. Both rhinos were busy eating and ignored each other. No positive response was observed from both rhinos and Panjang went straight to the night stall and the rhinos were separated. The rhinos were paired for about seven minutes.

The next morning around 9.30 a.m., the rhinos were mixed again. No positive response was observed and the rhinos were separated after fourteen minutes of mixing. Both rhinos were busy eating side by side and then Panjang walked away to the night stall's gate.

c) Ara and Mas Merah (19/03/01 to 20/03/01)

The rhinos were mixed for two consecutive days and no positive behavior was recorded. On 19/3/01 around 11.00 a.m., the rhinos were paired together. Mas Merah was released from the night stall while Ara was busy eating. She went to the feeding area when the ranger called her but looked very afraid of the male. She blows a lot and then walked away from the feeding area. Ara response to the blow by urine sprayed and looked very alert but he kept eating. Mas Merah walked around the paddock and stayed away from the male. When she was baited to the male, she screamed and run away. Both rhinos were then separated to avoid fighting. The procedure took about ten minutes.

The next morning around ten o'clock, both rhinos were paired again. Ara was busy eating when Mas Merah was released from paddock 1. She was baited to the feeding area but reluctant to approach the male. She vocalized a lot and did not eat the banana when offered. She walked away from the male and started blowing. The male response by blowing and urine spraying but he was kept eating by the ranger. The female was then baited out from the breeding yard to avoid fighting. The procedure only took about five minutes.

Recommendation

Based on the observation, the following was recommended for the daily introduction, which will started from 28/3/01 onwards.

- 1) Shah will be paired with Mas Merah since the female was observed very afraid of Ara. Furthermore, both rhinos had been paired last year and the result was promising.
- 2) Ara will be paired with Panjang since Ara bred her once last year.
- 3) Minah will be paired with Shah since she was observed very afraid of Ara. Furthermore, her mother Rima was successfully bred by Ara and it is not advisable to breed both females to the same male.
- 4) A weekly report about the progress of the daily introduction will be given to the committee for any comment or recommendation.