

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

**MONTHLY REPORT**

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**BY**

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**&**

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## INTRODUCTION

There are three breeding involving a male and two females this month. Ara bred Seputeh twice this month on 8/6/01 and also on 30/6/01. He also bred Rima on two consecutive days, on 16/6/01 and 17/6/01 respectively.

Panjang suffered a vaginal bleeding for a few days but her conditioned is stable. Samples had been sent to the lab for investigation. Vaginal swabs from Panjang and also Minah were sent to Veterinary Research Institute (VRI), Ipoh for bacteriology and sensitivity test. Blood was also sent for complete blood count (CBC).

The daily introduction was conducted between Ara and Mas Merah to establish breeding. Shah was paired with Minah to stimulate the female to cycle. The procedure was carried out every morning and observation made was recorded. As for the bleeding procedure, it is still carried out twice weekly on all females for progesterone analysis. However, blood will be collected once a week on the bred females.

## RHINO MANAGEMENT

### A) Daily Management

#### i) Night stall

##### *Daily work*

Adam, Shariff and Umor managed the night stalls. Shariff and Umor will clean the night stalls while Adam and other rangers will mix Shah and the two females. Then, he will checked 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 1.5kg every morning. On Monday and Thursday, Adam will help the veterinarian to collect the blood from all females.

##### *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*

Mohd Noor inspects 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 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**

### **1) Daily Introduction**

The daily introduction was carried out between Shah and Mas Merah to establish breeding. However, no positive response was observed between the two rhinos and it was decided to mix Mas Merah and Ara starting from 12/6/01 onwards in order to establish breeding. As for Shah, he was paired with Minah starting from 18/6/01. The daily introduction is hoped to stimulate her to start cycling again. The introduction period is about 10 to 30 minutes depending on the behavior shown by the rhinos. The mixing period will be prolonged if breeding behavior was observed. The observation throughout the procedure is summarized below (Table 2 and 3).

During the mixing procedure between Ara and Mas Merah, the female looked afraid when she realized the existence of the male. She will blow and vocalize and sometimes will try to challenge the male. The rhinos will be separated when head butting observed between the rhinos as well as when the aggression occurred.

### **2) Breeding Introduction**

Ara bred Seputeh twice this month. The first breeding was on 8/6/01 and the second one is on the 30/6/01. The first breeding occurred with two intromissions about 13 and 19 minutes respectively. The second breeding lasted about 35 minutes but the male chased away the female after the breeding. As for Rima, she was bred in two consecutive days: 16/6/01 and 17/6/01. The breeding took about 35 and 30 minutes respectively.

### **3) Bleeding Program and Blood Profile**

Blood collection was done twice weekly on all females for progesterone profile. However, blood was collected once a week on bred female. Once a month, blood will be collected on all rhinos for health check and the result showed that all rhinos are in a good condition. The result for health check is not available yet.

The latest result for the P4 analysis was received on 28/6/01 and revealed that Seputeh is not pregnant. Therefore, she was paired with Ara starting on 29/6/01 and Ara bred her on 30/6/01 for 35 minutes.

### **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. According to the personal there, the machine was sent for repair and is not available.

As for the general health, all rhinos looked healthy except for Panjang and Minah. Panjang suffered a vaginal bleeding a week after Ara bred her. However her condition looked normal. As for Minah, she has lost some body weight and her appetite has dropped slightly.

### **C) FEEDING**

The feeding program had no changes. A contractor supplied the browses and fruits and delivered them around 9.30a.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.

**Table 1: Blood Collection from the Rhinos, June 2001**

<b>Date</b>	<b>Rhino ID</b>	<b>Area taken</b>	<b>Remarks</b>
01/06/01	Panjang	Tail	
04/06/01	Panjang Mas Merah Minah Seputeh	Tail Tail Tail Tail	Blood for P4 analysis.
07/06/01	Seputeh Rima Mas Merah Minah	Tail Tail Tail Tail	Get blood samples from all females. The rhinos seem very cooperative.
11/06/01	Rima Seputeh Mas Merah Panjang	Tail Tail Tail Tail	Get samples via tail from all females.
13/06/01	Rima Mas Merah Panjang	Tail Tail Tail	Samples were taken from all females for P4 analysis.
16/06/01	Rima	Tail	
17/06/01	Rima	Tail	
18/06/01	Mas Merah Panjang Rima	Tail Tail Tail	Samples were taken from the females for P4 analysis.
19/06/01	Panjang Seputeh	Tail Tail	Blood collected for P4 analysis
21/06/01	Minah Panjang Mas Merah	Tail Tail Tail	Samples were taken from the females for P4 analysis.
25/06/01	Panjang Minah Rima Mas Merah	Tail Tail Tail Tail	Samples were taken from the females for P4 analysis.
27/06/01	Panjang Minah Seputeh Mas Merah	Tail Tail Tail Tail	Samples were taken from the females for P4 analysis.

**Table 2: The Pairing Program of the Ara and Mas Merah, June 2001**

Date	Remarks
12/06/01	Mix Mas Merah & Ara. The female blew and vocalized a lot. She looked afraid to the male. Separated after 5 minutes.
13/06/01	Mix Mas & Ara around 9.00 o'clock. She blew and vocalized a lot and looked afraid to the male.
14/06/01	Mix Mas Merah & Ara in the morning. The female approached the feeding area while the male was busy eating. She started to eat and vocalized but no response from the male. However, she looked afraid to the male and walked away.
15/06/01	The male was busy eating when Mas approached him. The female blew and started to eat facing each other. She also vocalized but no response from the male. Then she walked away from the male.
18/06/01	Mas Merah entered the paddock and she ran away from the male when she saw him. She looked afraid to the male and was separated.
19/06/01	The female was eating when the male approached her. Both rhinos were eating side by side but the female started to blow and vocalize. She walked away and the male followed. The female vocalized and ran away.
20/06/01	Mas Merah was eating when Ara approached her from the back. She blew and vocalized when she saw the male. Then she walked away but the male ignored her and kept eating. She went back to the feeding area and head butting occurred. Mas vocalized and the rhinos were separated.
21/06/01	Ara approached Mas Merah from the back while the female was eating. He sniffed her but no further response. The female started to blow and vocalize when she saw the male and then walked away from him.
22/06/01	Mas Merah was busy eating when Ara approached her from the back. As soon as she realized the male, she started to blow and vocalized but kept eating. Later she walked away from the feeding area.
23/06/01	Mas Merah was busy eating when Ara approached her. Both rhinos were eating together but the Mas Merah started to vocalize and looked afraid. She walked away from the male. Ara try to follow but Mas vocalized a lot and started to run away from the male.
25/06/01	Mas vocalized a lot when Ara approached her. She blew and started to challenge the male. Head butting observed and the rhinos were separated.
26/06/01	Mas Merah vocalized and ran away from the male when she was approached from behind. She looked afraid and kept vocalized but no response from the male. Separated after five minutes.
27/06/01	Ara approached Mas when she was eating. She walked away and the male started to follow. Head butting observed and the female vocalized a lot.
28/06/01	Mas blew when Ara approached her. Then she ran away from the male and vocalizing a lot. The male followed but the female kept avoiding him.
29/06/01	Mas Merah was eating when Ara approached her. She vocalized and blew and then walked away from the male. She ran away when the male started to follow her.

**Table 3: The Daily Introduction of Shah and the female; Mas Merah and Minah,  
June 2001**

Date	Remarks
1/6/01	Mas approached the feeding area when released into paddock. Shah was busy eating and ignored Mas. Shah sniffed Mas Merah but no further response. Both rhinos were busy eating side by side.
4/6/01	Released Mas from night stall. She went straight to feeding area while Shah was busy eating. Both rhinos ignored each other when they were side by side (5 feet apart). Both rhinos kept eating.
5/6/01	Mas Merah went straight to the area where Shah was eating, looking for food. No response from Shah when the female approached. Both rhinos were eating side by side and no breeding behavior observed. Separated after 10 minutes.
6/6/01	Shah was eating when Mas Merah entered the paddock. She went straight to the feeding area where Shah was. No response from Shah although both rhinos were side by side. He was busy eating. Shah sniffed Mas Merah but continue to eat.
7/6/01	Shah was busy eating when approached by Mas Merah. Shah sniffed the female but no further response. Both rhinos were busy eating side by side.
18/6/01	Minah approached the feeding area when released into paddock. Shah was busy eating and ignored Minah. Shah sniffed Minah but no further response. Both rhinos were busy eating side by side.
19/6/01	Minah approached the feeding area when released into paddock. No response from both rhinos when they notice each other.
20/6/01	Minah went straight to feeding area looking for fruits. No response from Shah when she approached. Both rhinos were side by side eating and then Minah walked away. No positive response observed.
21/6/01	Minah approached the feeding and Shah blew when he saw her. Head butting occurred and the female walked away. No response from Shah. Minah moved a lot but Shah was standing at the feeding area begging for fruits. No positive response observed. Shah tried to attack Minah and the rhinos were separated.
22/6/01	Minah went straight to the feeding area while Shah was busy eating. Shah blew and tried to attack Minah when she approached him but the female moved away. Head butting occurred and the female turned away. No positive response observed and the rhinos were separated.
23/6/01	Released Minah from the night stall. She went straight to feeding area while Shah was busy eating. Head butting occurred and Minah moved away. Shah tried to attack Minah when she approached him again but the female ran away.

Date	Remarks
25/6/01	Minah approached Shah while he was busy eating. Head butting occurred and Shah tried to nip Minah but she walked away. No positive response observed from both rhinos.
26/6/01	Shah blew when Minah approached him. He tried to push her away and nipped her but Minah ran away. Head butting occurred when Minah approached Shah again. Then, Minah walked away ignoring the male. No positive response from the male.
27/6/01	Shah was eating when Minah approached him. The rhinos were standing side by side but no positive response observed. Then, Minah walked away but no response from Shah. He was busy looking for food.
28/6/01	Shah attacked Minah when she approached him. Minah moved away avoiding Shah. Shah tried to attack again when Minah approached him. No positive response observed.
29/6/01	Shah pushed Minah away when she approached him. Head butting occurred and the female walked away. No response from Shah when the female walked away from him. He is busy looking for food.



## **Panjang Case: Haemorrhagic Vaginal Discharge in a Sumatran Rhinoceros.**

### **History**

On 8<sup>th</sup> June 2001, Panjang: a female Sumatran rhino at Sg. Dusun Conservation Centre is producing a bloody vaginal discharge. Upon investigation, about 200 gram to 300 gram of clotted blood and tissue (?) was found on the floor. Physical examination was conducted and the vulva was cleaned. However, blood was still trickling out and some blood was collected and sent for bacteriology work. The bleeding stopped in the afternoon but occurred again on 10<sup>th</sup> June until 12<sup>th</sup> June but the amount of blood is decreasing. Despite of the problem, the female looked normal with good behaviour and appetite. No treatment was given.

This female Sumatran rhino is 19+ years old and has been in captivity for 14 years without reproducing. In October 2000, this female was bred with a male and 18 days later produced the same bloody discharge. Following that, the female was left alone and not introduced for breeding. In March 2001, she was examined by ultrasound and a very large ~12cm mass was observed in the uterine body. This mass appeared vascularized. The uterine horns contained cysts and the ovaries appeared active with two follicles present on both of them. The vagina was not examined. The female has bred 7 days prior to the initiation of this bleeding. This was her first breeding since last October.

### **Action / Plan**

Blood samples and also the aborted material were sent to veterinary Research Institute (VRI), Ipoh for bacteriology and histology. Later, vaginal swabs were sent to VRI to confirm any infection. At the moment, no treatment was given and the female looked normal.

### **Result**

The result from the vaginal swab showed that a pure culture of *Corynebacterium* sp. was isolated. Samples were then taken again and sent to VRI and UPM for further confirmation and the result is not available yet.