

# SOS RHINO BORNEO ANNUAL REPORT

2001

## 1.0 Introduction

- 1.1 SOS Rhino means Save Our Sumatran Rhino. In Malaysia, there is a commercial brand of tomato ketchup called SOS Tomato or SOS Tomato Cili that is popular among the people. It is therefore amusing to get, even applicants for job with SOS Rhino, to equate SOS Rhino to ketchup.
- 1.2 This notion is gradually evaporating especially amongst the literates in Malaysia as more publicity have been aired either in the print media or via television especially the Hallmark Channel.
- 1.3 SOS Rhino is a US-base non-profit non-governmental conservation organization that focuses on the rare and critically endangered Sumatran rhinoceroses. They are only found in Sumatra Indonesia, West Malaysia and in the Malaysian State of Sabah in the island of Borneo. Their number is estimated to be less than 300 individuals.
- 1.4 SOS Rhino has previously worked and assisted governments of India, Indonesia and Malaysia in conservation efforts of their rhino populations. As of November 2000 SOS Rhino has taken an important step in its conservation effort by focusing on the Sumatran rhinos in Sabah.
- 1.5 The decision to concentrate on the rhinos in Sabah is not an easy one as the situation is more fluid. In this sense, there is no reliable information and data on the wild population of rhinos. There is extremely no further work and expertise on breeding the last pair of Sumatran rhinos at Sepilok. The last successful breeding record in Sepilok was in 1995.
- 1.6 Thus, SOS Rhino has embarked on a heavy responsibility in Sabah. SOS Rhino Borneo as it is referred to, is here to assist the Wildlife Department Sabah in its Sumatran rhino conservation effort.
- 1.7 SOS Rhino Borneo strategies are:
  - i. To evaluate the reproductive potential of the last pair of captive Sumatran rhinos at Sepilok and to attempt captive breeding when data are favorable.
  - ii. To undertake field surveys in known rhino habitats such as Tabin Wildlife Reserve, Sabah Foundation concession area and Lower Kinabatangan Wildlife Sanctuary to determine their presence, population, demographic and security.

- iii. To collaborate with Universiti Malaysia Sabah (UMS) by providing scholarship grants for local Malaysian students to undertake research on Sumatran rhinos especially on ecology.
- iv. To work with the villagers around rhino habitats on wildlife conservation through the community outreach program (COP).
- v. To promote tourism in Sabah by focusing on the Sumatran rhino conservation effort by organizing special tour packages and organizing international conference and workshop on the species.

## **2.0 EX SITU PROGRAM**

- 2.1 SOS Rhino started recruiting field and research assistants in November 2000. Twelve staff were trained by SOS Rhino Field Scientist Dr. Annelisa Kilbourn at Sepilok. They were familiarized to the two Sumatran rhinos by working with the animals; cleaning the stalls, gathering and feeding, weighing the animals and recording feed intake, health evaluation and treatment of wounds and assisting in breeding. The staffs were also trained on the use of GPS, compass and map readings, identification of hoof prints including measurements, making casts and collection and preserving of plants, dung, urine and hairs.
- 2.2 Dr. Annelisa collected blood for progesterone hormone profiling and to relate to the daily sexual behavior study. She has tried to breed the animals on February 13<sup>th</sup> and March 21<sup>st</sup> 2001. Although unsuccessful there were no ugly incidents of biting of the female. Previously, Dr. Nan Schaffer has worked on reproductive integrity of both the male and female at Sepilok. No major problem is encountered as to render the female unfit for reproduction. However, semen evaluations have not shown any sign of viable spermatozoa.
- 2.3 SOS Rhino recruited a local Malaysian veterinarian Dr. Cheong Chee Choong as of April 2001. He graduated recently from Universiti Putra Malaysia, the only institution of higher learning in the country that offers veterinary medicine. He was sent to Singapore Zoological Gardens for 2 weeks for training. Dr. Cheong tendered his resignation as of January 25<sup>th</sup>, 2002 without giving any reasons.
- 2.4 Dr. Cheong has been able to collect blood from these animals quite easily and provides excellent progesterone and estradiol hormones profiling. Our appreciation to Mr. Yap of the veterinary faculty UPM for undertaking the hormone profiles. Dr. Cheong has also been trained on semen collection and evaluation. Dr. Kilbourn has also guided him on ultrasound work.
- 2.5 Dr. Cheong has attempted to breed the animals twice on July 14<sup>th</sup> and October 24<sup>th</sup> 2001. On both occasions the female was not ready, and she was badly injured by the male. The breeding was temporarily halted to allow the female to recuperate

from the injuries. As of December 2001, no breeding was done because of the construction of the visitor's viewing platform inside the rhino enclosure.

- 2.6 The female Gelogob was bred successfully in 1995. She was then believed to be pregnant based on no-return estrus, increasing body weight and enlargement felt in the uterus on palpation. Due to the lack of manpower and equipment, the pregnancy was not followed up. It is not unrealistic to assume pregnancy failure as shown by the Cincinnati rhino.
- 2.7 Lately Dr. Cheong has been able to detect estrus via mucous discharge. Unfortunately permission was not granted to join the animals after this sign was noticed.

### **3.0 Constraints and Possible Solutions**

- 3.1 The *ex situ* program is now facing a crucial problem with the departure of Dr. Cheong Chee Choong. Dr. Annelisa Kilbourn is on a quarterly contract with SOS Rhino and Wildlife Conservation Society (WCS). Daily behavior study and hormone profiling is an on-going process. This includes consistent assessment of the reproductive integrity of the male and female. Without a key personal in Sepilok, this program will not succeed.
- 3.2 The only person who can ensure progress and success of this *ex situ* program is Sepilok's wildlife department veterinarian. It is of paramount importance that the vet gets involved directly with the evaluation of the animals, collecting samples, daily sexual observations, studying the reports and data gathered, and to determine the date and time of joining the animals.
- 3.3 On written request, SOS Rhino can assist him by providing the necessary equipment to assist him with getting the job done. Also on written request SOS Rhino will provide short-term consultants to assist with breeding the animals. These consultants may be either local or foreign.
- 3.4 The people who have experience and successfully join these animals are Dr. Edwin Bosi, Steve Romo, Dr. Zainal Zahari, Dr. Aidi and staffs of Cincinnati Zoo (Rhino unit).
- 3.5 Time is an essence for the last pair of Sumatran rhinos at Sepilok. They are growing older by the day and many things can happen such as death by accidents, natural or diseases.
- 3.6 The Wildlife Department Sabah must make a quick decision on the *ex situ* conservation program of their Sumatran rhino.

- 3.7 SOS Rhino has offered to take over the program for at least 24 months. We will have free access to the animals. Our commitment is evaluating the reproductive integrity of both the animals and recommending to the Director of Wildlife Department whether to proceed with breeding or not. If the animals show potential for breeding SOS Rhino will join them based on hormone profiles and daily behavior study (and determine estrus). SOS Rhino will provide veterinarian(s) and other experts as per required for the program.
- 3.8 The risk and danger involved in mixing the animals is real as shown by previous attempts. This risk needs to be taken in order to proceed with the breeding program. The risk can be minimized through the involvement of experience personals.
- 3.9 Sumatran rhinos are large herbivore and browsers. Their home range is estimated between 15 – 30 square km. Such huge range indicates their feeding behavior. They consume at least 20% of their body weigh of fresh browse daily. A quick math indicates that a 500 kg rhino consumes about 100 kg of fresh feed daily. In captivity, their choice of feed is limited in terms of diversity and abundance. Their survival depends entirely on their 'captors'.
- 3.10 It cannot be denied that feeding the animals is difficult task. First, the feed must be palatable and nutritious. We may be providing large amount of browse but the intake is minimal. Secondly, the gathering of feed is getting difficult due to limited sources. Many sites where feeds were found have been developed. The distance from Sepilok to the new sites is getting further and further. Thirdly, orchards farms are limited in number and frequent pruning is not good for their trees. The use of insecticides/pesticides must be considered when collecting/gathering feed sources for the rhinos.
- 3.11 Attempts have been made to feed the animals with concentrate but not successful. This could help to provide a balance diet.
- 3.12 It is to re-emphasize that animals in captivity depends entirely on human. Poor husbandry, management and negative attitudes of staffs are the main causes of mortality among captive animals.
- 3.13 The most important pre-requisite for successful captive management is proper design of enclosure with adequate space.
- 3.14 As human plays a crucial role in the survival of these captive animals, recruitment of disciplined, committed and responsible staffs are extremely important.
- 3.15 Feeds must be provided as per required by the species. The quality is as important as the quantity. Water must be clean and *ad libitum*.

- 3.16 The staffs of Wildlife Department Sabah can continue to collect feed for the animals but it must be done consistently. Feeding the animals with banana without browse is totally unacceptable.
- 3.17 The other option is to contract out the collection of feed as done in Sungai Dusun. This will ensure consistent and adequate supply of quality browse. It is an expensive arrangement but extremely worthwhile as we are dealing with such rare and critically endangered species. The Cincinnati Zoo 'imports' its ficus browses from Florida and California at high expense. Their success in breeding and the birth of the first Sumatran rhino in captivity on September 13<sup>th</sup> is a testimonial of their commitment despite the high price they have to pay for keeping the rhinos alive.

#### 4.0 *IN SITU PROGRAM*

- 4.1 There are few known Sumatran rhino habitats in Sabah. They are Tabin Wildlife Reserve (TWR) and Danum Valley Conservation Area (DVCA) and the Lower Kinabatangan Wildlife Sanctuary (LKWS). According to data from the International Rhino Foundation (IRF), there are between 40-70 sumatran rhinos in the island of Borneo. All these individuals are reported in the north of the island. Wildlife department Sabah has conducted joint surveys to determine the number of Sumatran rhino in Sabah. Other data came from postgraduate students undertaking research on this species. During the Sumatran rhino Population Habitat and Viability Analysis (PHVA) meeting in November 1995 in Sandakan, the wildlife department Sabah has reported that the population of Sumatran rhino in Sabah is probably about 30 individuals.
- 4.2 The 3-year GEF-UNDP for Sumatran rhino in Malaysia and Indonesia was launched in 1996. During this period Rhino Protection Unit (RPU) was emphasized beside purchase of vehicles and other field equipment. The RPUs were deployed in TWR and DVCA. Based on the zero report on poaching provides some indication on the success of the unit in protection the animals. However, about March 2001 an adult female was killed within the Kalabakan Forest Reserve, southeastern part of Sabah.
- 4.3 SOS Rhino started operating in TWR on December 2000. Twelve field staffs were trained and deployed in TWR for the following reasons:
- i. to undertake field survey to determine presence and population of the rhinos, distribution and demographics.
  - ii. By providing grant to postgraduate student at UMS to undertake research on nutrition and behavior of this species.
  - iii. To assist the wildlife department Sabah in enforcement and protection of the forest reserve.

4.4 The other objectives of SOS Rhino *ex situ* program are:

- i. To work with local villagers along the TWR and other known rhino habitats on sustainable conservation efforts.
- ii. To promote tourism in TWR and other known rhino habitats.
- iii. To promote volunteerism involving local and foreign individuals who will later become beacons and promoter of Sumatran rhino conservation.
- iv. To encourage tour agency to place and link Sumatran rhino conservation in their organizational concept and provide financial support for SOS Rhino.

## 5.0 Progress *In Situ* Program

### 5.1 19<sup>th</sup> October 2000

- 5.1.1 Tabin Scientific Expedition II from 15<sup>th</sup> October to 4<sup>th</sup> November 2000 was jointly organized by UMS and Wildlife Department Sabah and funded by DANCED.
- 5.1.2 The scientific study focused on the limestone area north of TWR, along the Tabin river.
- 5.1.3 Dr. Edwin Bosi was involved with the fauna survey along with staffs from the wildlife department Sabah.
- 5.1.4 **Old rhino hoof prints, probably in the region of six months, were found during the survey. At least two rhinos were in this area.**
- 5.1.5 **20-21cm diameter found on sandy wallow at the river bank at N05° 18.691' and E118° 44.280'**
- 5.1.6 **17cm diameter found along old logging road at N05° 18.960' and E118° 44.326'.**
- 5.1.7 Other animals found were elephants (hoofprints), tembadau (fresh dung and tracks), sambar deer (sighting and tracks), wild pigs (tracks), orangutans (calls and nests), gibbons (calls), longtail macaque (sighting), Monitor lizard (sighting), White egrets, oriental darters, purple herons, sandpipers, swiftlets, imperial pigeons, hornbills and black crows.

**5.2 16<sup>th</sup> – 20<sup>th</sup> December 2000**

5.2.1 A team comprising Dr. Edwin Bosi, Harry Ikok, Bob Kapis, Syril Philip, Jupin Nor, Nimrod Ding, Roger Garuda and Harry Bisius went to KM22 core area. The purpose of the trip is to check out the efficiency of the field team, try the phototrap cameras and GPS. Six cameras were installed but failed to obtain any useful pictures. Heavy rain and flash floods hampered our progress.

5.2.2 The team found a giant jungle tortoise, reticulated python and three sambar deer along the trail to core area. Other animals encountered, sighting, sounds or tracks, were pigtail macaque, helmeted and rhinoceros hornbills, elephants, tembadau, orangutans, barking deer and gibbons.

**5.3 5<sup>th</sup> – 11<sup>th</sup> January 2001**

5.3.1 A team comprising Dr. Annelisa Kilbourn, Jupin, Tony, Syril, Ronny, Bob and Sillih (JHL) went to core area KM22.

5.3.2 **Fresh hoof prints of a rhino measuring about 21 cm diameter were observed on the mud volcano.**

**5.4 17<sup>th</sup> – 25<sup>th</sup> January 2001**

5.4.1 A team comprising Dr. Annelisa Kilbourn, Jupin, Harry Ikok, Harry Bisius, Bob, Syril, Rosli (JHL) went to core area KM22.

5.4.2 **They went to retrieve the cameras and found them to work well. Pictures of elephants, wild pigs, sambar deer and longtail macaque were taken.**

5.4.3 **The rhino tracks found during the last trip were not obvious anymore. This gives an idea how long tracks can last when they are not under the canopy and during the rainy season.**

**5.5 4<sup>th</sup> – 15<sup>th</sup> February 2001**

5.5.1 A team comprising Harry Ikok, Tony, Nimrod, Bob, Mohd Nor (student) and James Kapis (JHL) went to core area to check on the cameras. The cameras were functioning well.

5.6            **24<sup>th</sup> February – 1<sup>st</sup> March 2001**

5.6.1           A team comprising Lois Loling, Nimrod, Jannifer, Wildfred, Syril, and Bob went to the core area. There was nothing to report.

5.7            **24<sup>th</sup> – 28<sup>th</sup> April 2001**

5.7.1           A team comprising Lois Loling, Nimrod and Syril started making transect from KM7 northwest of TWR. They found a fairly high density of fauna namely elephants, tembadau, sambar deer, wild pigs, barking deer and mouse deer.

5.8            **21<sup>st</sup> – 28<sup>th</sup> April 2001**

5.8.1           A team comprising Bob Kapis, Jabanus and Wildfred went to core area to check on the cameras. **One unit was crashed into the mud by an elephant.**

5.9            **16<sup>th</sup> – 21<sup>st</sup> May 2001**

5.9.1           A team comprising Dr. Edwin Bosi, Harry Bisius, Bob, Lai Chinsoi, Jannifer, Syril, Richard Yumin and Nimrod went to northwest part of TWR. This was to check on the transect, install cameras and to teach the team members on looking for rhino tracks.

5.9.2           **Two different sizes of old rhino hoof prints were found. The tracks were about 6 months old.**

5.9.3           **19 cm diameter and 7 cm diameter midtoe at N05° 14.437' and E118° 33.265'**

5.9.4           **20 cm diameter at N05° 14.401 and E118° 32.301'**

5.10           **6<sup>th</sup> – 12<sup>th</sup> June 2001**

5.10.1          A team comprising Harry Bisius, Jannifer, Peter Majintang, Tony Lenggen, and Makarius John went to KM21 and started the south transect.



5.10.2 The team installed the cameras and successfully made a 2km transect. They encountered about 6-8 wild elephants at KM15.

**5.11 5<sup>th</sup> – 11<sup>th</sup> June 2001**

5.11.1 A team comprising Bob Kapis, Nimrod, Sheena, Richard, Lai and Sarinus went to KM22 and started the north transect. They installed two cameras.

**5.11.2 The team found an old rhino tracks measuring 18cm diameter. Unfortunately, there was no GPS reading.**

**5.12 5<sup>th</sup> – 12<sup>th</sup> July 2001**

5.12.1 A team comprising Cyril Philip, Nimrod, Richard, Jannifer and Tony went to southwest part of Tabin to continue the transect. They installed two cameras. They were chased by elephants. They heard calls of Argus pheasants in this area.

**5.13 5<sup>th</sup> – 11<sup>th</sup> July 2001**

5.13.1 A team comprising Harry Bisius, Lai, Peter, Makarius and Sarinus went to the northwest part of TWR.

**5.13.2 They found old rhino tracks and wallow.**

**5.13.3 16 cm diameter at N05° 13.290' and E118° 33.200'**

**5.13.4 No measurement at N05° 13.350' and E118° 32.514'**

5.13.5 This area has a fairly high density of fauna. They found elephants, sambar deer, wild pigs, barking deer, giant forest tortoise, Argus pheasants, Binturong, Monitor lizards, gibbons and orangutans.

**5.14 20<sup>th</sup> – 25<sup>th</sup> July 2001**

5.14.1 A team comprising Dr. Edwin Bosi, Cyril, Richard and Sarinus went to southwest part of TWR.

- 5.14.2 **Rhino tracks were found on the top ridge and along old logging roads. They were consistently 18 cm diameter. The tracks were about 6 months old.**
- 5.14.3 **18cm diameter at Elev. 207m, N05° 10.235' and E118° 33.183'.**
- 5.14.4 Other animals observed were elephants, wild pigs, sambar deer, barking deer, orangutans, fresh water terrapins and flying foxes.
- 5.14.5 Base camp 1 is at N05° 11.312' and E118° 33.243'
- 5.14.6 Base camp 2 is at N05° 11.003 and E118° 33.226'
- 5.14.7 Base camp 3 is at N05° 09.462' and E118° 33.237'
- 5.15 **6<sup>th</sup> – 13<sup>th</sup> August 2001**
- 5.15.1 A team comprising Dr. Annelisa Kilbourn, Lai, Syril, Nimrod, Jannifer, Richard, Makarius and Sarinus went to northwest part of TWR.
- 5.15.2 **They found an old rhino tracks along the old logging road.**
- 5.15.3 **18 cm diameter, 7 cm diameter midtoe, at Elev. 73m, N05° 15.035' and E118° 33.473'.**
- 5.15.4 Base camp KM6 is at N05° 11.566 and E118° 32.465'
- 5.15.5 Base camp 1 is at N05° 12.002 and E118° 32.497'
- 5.15.6 Base camp 2 is at N05° 13.267' and E118° 32.522'
- 5.15.7 Base camp 3 is at N05° 14.258' and E118° 32.164'
- 5.16 **22<sup>nd</sup> – 25<sup>th</sup> August 2001**
- 5.16.1 A team comprising Syril, Nimrod, Sarinus, Lai, Makarius and Richard went to the northern part of TWR in search of the mud volcano reported to be near Rugged Hill. They did not find the mud volcano.

**5.17 7<sup>th</sup> – 12<sup>th</sup> September 2001**

5.17.1 A team comprising Syril, Nimrod, Richard, Vincent, Pondey, Hilary and Yoktan went to core area.

5.17.2 **They found fresh rhino tracks at the mud volcano, possibly 3-day old. Three different measurements were found.**

5.17.3 **18cm diameter, 7cm diameter midtoe**

5.17.4 **19cm diameter, 7cm diameter midtoe**

5.17.5 **22cm diameter, 7cm diameter midtoe**

5.17.6 Footnote: Base on the sizes of the hoof prints, it cannot be ascertained whether there is one animal involved. However, assuming that it is the same animal as that noticed in January 2001, it means that the rhino will visit the mud volcano (for minerals) on 6-monthly interval. This assumption may not be true as the field team has not been to the mud volcano on a monthly basis.

**5.18 19<sup>th</sup> – 24<sup>th</sup> September 2001**

5.18.1 A team comprising Syril, Sarinus, Makarius, Yoktan and Pondey went to core area to continue the south transect.

5.18.2 **They found old hoof prints of rhinos. Two different measurements were noticed in the same area.**

5.18.3 **19cm diameter, 7 cm diameter midtoe, at N05° 11.311' and E118° 38.527'**

5.18.4 **20cm diameter, 7 cm diameter midtoe,**

**5.19 6<sup>th</sup> – 10<sup>th</sup> September 2001**

5.19.1 A team comprising Lai, Sarinus, Makarius and Jennifer went to southwest of TWR.

- 5.19.2 They found fresh rhino tracks, possibly 3-week old, around the mud wallow. A camera trap was installed at this site but it may have ran out of film.
- 5.19.3 18cm diameter, 6cm diameter midtoe
- 5.20 19<sup>th</sup> – 23<sup>th</sup> September 2001
- 5.20.1 A team comprising Nimrod, Lai, Richard, Vincent, Hilary and Jannifer went to core area to continue the east transect.
- 5.21 2<sup>th</sup> – 4<sup>th</sup> October 2001
- 5.21.1 A team comprising Nimrod, Vincent, Sarinus and Pondey went to northwest part of TWR to retrieve the cameras.
- 5.22 6<sup>th</sup> – 13<sup>th</sup> October 2001
- 5.22.1 A team comprising Nimrod, Sarinus, Makarius, Vincent and Hilary went to core area to proceed with the north transect.
- 5.23 6<sup>th</sup> – 13<sup>th</sup> October 2001
- 5.23.1 A team comprising Lai, Syril, Jannifer, Sarinus, Yoktan and Pondey went to continue the east transect. They have made about 6km from KM22.
- 5.24 18<sup>th</sup> – 24<sup>th</sup> October 2001
- 5.24.1 A team comprising Nimrod, Richard, Makarius, Vincent and Hilary went to continue with the north transect from KM22. A Sabah Society's member Timothy Daw came along for this survey.

**5.25 18<sup>th</sup> – 23<sup>th</sup> October 2001**

5.25.1 A team comprising Lai, Syril, Jannifer, Sarinus, Pondey and Yoktan went to continue with the east transect.

5.25.2 **They found rhino tracks and dried dung. The dung is placed in the refrigerator.**

5.25.3 **16cm diameter, 5cm diameter midtoe at elev. 174m, N05° 12.309' and E118° 42.276'.**

**5.26 4<sup>th</sup> – 13<sup>th</sup> November 2001**

5.26.1 A team comprising Lai, Nimrod, Makarius, Vincent, Yoktan, Hilary and Pondey went to core area to continue with the east transect.

5.26.2 **They found fresh rhino tracks, dung, urine and hair. Some plants were also collected along the rhino trails. The samples are kept in the refrigerator while the leaves are been pressed in newspaper.**

5.26.3 **There were two different rhino tracks and believed to be mother and calf.**

5.26.4 **18cm diameter, 7cm diameter midtoe at Elev. 97m, N05° 12.295' and E118° 43.057'**

5.26.5 **20cm diameter, 8cm diameter midtoe same location**

**5.27 24<sup>th</sup> – 28<sup>th</sup> December 2001**

5.27.1 A team comprising Jannifer, Hilary, Vincent and Pondey went to northwest part of TWR for survey. The Singapore YEP team and Borneo Tourism Institute (BTI) were in the survey team.

**5.28 24<sup>th</sup> – 28<sup>th</sup> December 2001**

5.28.1 A team comprising Syril, Sarinus, Yoktan and Richard went to northwest of TWR for survey. The Singapore YEP team and BTI were also in the team.

5.28.2 They found rhino tracks, possibly about 1-week old.

5.28.3 Measurement not taken at Elev. 300m, 0672613 and 0572761.

5.29 29<sup>th</sup> December – 3<sup>rd</sup> January 2001

5.29.1 A team comprising Sarinus, Hilary, Yoktan went to the southwest of TWR for survey together with the Singapore YEP team and BTI.

5.29.2 They found rhino tracks.

5.29.3 20cm diameter, 7cm diameter midtoe at N05° 10.793' and E118° 33.441'.

5.30 29<sup>th</sup> December – 3<sup>rd</sup> January 2001

5.30.1 A team comprising Jannifer, Vincent and Pondey together with the Singapore YEP team and BTI went to southwest of TWR for survey.

5.30.2 They saw rhino hoof prints found by the previous team.

## 6.0 Summary of rhino survey

Date	Location	Hoof print sizes	Remarks
19.10.2000	North TWR and along Tabin river	20-21cm dia. 17cm dia.	UMS-JHL expedition 6-month old
17-25.1.01	Core area mud volcano	20cm dia	Fresh 1-2 days
16-21.5.01	Northwest TWR	19cm dia 7cm midtoe 20cm dia.	6-month old

5-11.6.01	Core area	18cm dia	Old
5-11.7.01	Northwest TWR	16cm dia	No measurement taken for 2 tracks. Also found wallow
20-25.7.01	Southwest TWR on ridge and along old logging road	18cm dia 7cm midtoe	6-month old
6-13.8.01	Northwest TWR along old logging road	18cm dia. 7cm midtoe	
19-24.9.01	Core area south transect	19cm dia. 7cm midtoe  20cm dia. 7cm midtoe	Old tracks
7-12.9.01	Core area at mud volcano	18cm dia. 7cm midtoe  19cm dia. 7cm midtoe  22cm dia. 7cm midtoe	Fresh tracks about 3 days old
6-10.9.01	Southwest TWR near wallow	18cm dia. 6cm midtoe	About 3 weeks old
18-23.10.01	Core area east transect	16cm dia. 5cm midtoe	Also found dried dung
4-13.11.01	Core area east transect	18cm dia 7cm midtoe  20cm dia. 8cm midtoe	Fresh tracks about a week old.  Collected fresh dung, urine on leaves, hair and plants along trails
24-28.11.01	Northwest TWR		
29-3.12.01	Southwest TWR along old logging road	20cm dia. 7cm midtoe	Old tracks

## **7.0 Preliminary finding**

- 7.1 Based on the facts above, it can be adduced that there are at least 8 rhinos in Tabin Wildlife Reserve. Our field surveys indicate that there are two females with calves and an adult male on the east of the core area. There are at least two rhinos in the northwest part of Tabin and one in the southwest part of the reserve.
- 7.2 These findings are very relevant to the conservation effort of SOS Rhino Borneo. We have now determined the presence of rhinos in TWR. We have also some clue on the number. We are also certain that there is a breeding colony of Sumatran rhinos in Tabin.
- 7.3 We hope that the Masters student will gather more data on demographics using phototrap cameras and DNA fingerprinting on dung samples, population, behavior and nutrition of the rhinos in Tabin.
- 7.4 SOS Rhino Borneo will compile all the data and information including threats, and prepare a comprehensive management and conservation plan for the species in Tabin.

## **8.0 Enforcement and Protection of TWR**

- 8.1 Tabin Wildlife Resort S/B has the exclusive rights to the reserve. It operates a jungle resort providing jungle camps, houses and restaurant for tourists and visitors. The Resort is also collecting entry fee or conservation fee, to help fund the conservation of the reserve. Vehicles are also subjected to entrance fee.
- 8.2 Thus, it is not incorrect to imply that the Resort is responsible to protect the reserve against poachers and illegal intruders, and maintained the road network in good condition at all times.
- 8.3 Enforcement of the reserve used to be handled by RPU from the wildlife department Sabah. The RPU was funded by GEF-UNDP for three years beginning in 1995. The enforcement is still undertaken by staffs of wildlife department in Tabin.
- 8.4 SOS Rhino after having almost completed its field transects and surveys of the reserve will provide at least two staffs to assist the wildlife department to protect the reserve. SOS Rhino Borneo is willing to patrol the area west of Tabin reserve in particular, the road linking the gate at Tungku to the gate at Tomanggong. We are waiting for an official letter from the wildlife department to appoint SOS Rhino Borneo staffs as honorary game wardens. SOS Rhino Borneo field team has encountered poachers inside the reserve and the matter has been reported to the wildlife office in Tabin.



- 8.5 SOS Rhino Borneo has been guaranteed supply of diesel from Rainbow Ridge Berhad for the task of patrolling along this road. Rainbow Ridge who manages a conservation property of approximately 600 hectares adjacent to the western border of Tabin reserve has also agreed to construct a 6-room staff quarters for SOS Rhino Borneo. We are waiting for approval from the Tabin Wildlife Management Committee to proceed with the construction at KM7 Tomanggong Road. We are also waiting for approval from the same to construct a research house, funded jointly by SOS Rhino and the Singapore Zoological Gardens.
- 8.6 SOS Rhino Borneo has been given an approval by the Forestry Department Sabah to enter any forest reserve for purpose of rhino conservation. In return, SOS Rhino Borneo is to provide the Forestry Department Sabah information on illegal activities encountered by the team.

## 9.0 Miscellaneous

### 9.1 Staffs of SOS Rhino Borneo

- 9.1.1 SOS Rhino employs a veterinarian for the ex situ program at Sepilok and assisted by two research assistants. This part of the program is now on hold as the veterinarian is resigning as of 25<sup>th</sup> January 2002.
- 9.1.2 SOS Rhino employs 12 field workers for the in situ program at Tabin. We have one Supervisor, two team leaders and field assistants. The turnover is extremely high due to several factors:
- i. lack of discipline
  - ii. lack of responsibility
  - iii. lack of commitment and dedication
  - iv. inability to work together
  - v. lack of focus and understanding of job
  - vi. short term interest in their job
  - vii. no team spirit
  - viii. money as the main reason for working
- 9.1.3 The nature of this job is very demanding. The right person is one who loves the jungle life, jungle activity, keen on nature (wildlife and plants), keen to learn, and one who considers the job as a career and source of financial security.

- 9.1.4 Thus, the scheme of service is and must be tuned towards fulfilling the aspirations of the staffs. We have reasons to believe that our staffs are well paid as compared to workers in the oil palm plantations. They live very much above the poverty line (RM600 per month), and provided with a group insurance coverage.

## **10.0 Training**

- 10.1 SOS Rhino has provided training for our veterinarian by sending him to Singapore Zoological Gardens (SZG) from 23<sup>rd</sup> September to 6<sup>th</sup> October 2001. SZG is collaborating with SOS Rhino in Sumatran rhino conservation in Sabah. Thus, SZG provided the funding for the training.

- 10.2 SOS Rhino has provided training for two field staffs namely Cyril Philip and Jannifer William, to Jakarta and Sumatra from 6<sup>th</sup> to 11<sup>th</sup> November 2001.

## **11.0 Seminar and talks**

- 11.1 Dr. Edwin Bosi presented a slide show on Sumatran rhino conservation in Sabah to the Kiwanis group at Beverly Hotel on 8<sup>th</sup> November 2000.

- 11.2 Dr. Annelisa Kilbourn gave a briefing to staffs of wildlife department Sandakan on SOS Rhino at Sepilok Orangutan Rehabilitation Center on 12<sup>th</sup> November 2000.

- 11.3 Dr. Edwin Bosi and Dr. Annelisa gave a talk on Sumatran rhino conservation at Renaissance Hotel Sandakan organized by WWF-Sabah on 12 December 2000.

- 11.4 SOS Rhino has organized the first Sumatran rhino conservation seminar together with ITBC, UMS, wildlife department Sabah and WWF-Sabah. The seminar was held on 1<sup>st</sup> February 2001 at UMS campus. Several papers were presented and the attendance was encouraging. Dr. Nan Schaffer, Dr. Annelisa Kilbourn and Dr. Edwin Bosi presented papers during the seminar.

- 11.5 Dr. Edwin Bosi and Dr. Annelisa gave talks on large mammals survey technique organized by wildlife department Sandakan and WWF Sabah at Sandakan Hotel on 22<sup>nd</sup> February 2001.

- 11.6 Dr. Edwin Bosi was invited by the wildlife department Sabah to present paper "Assessment of Sumatran rhino in Lower Kinabatangan Wildlife Sanctuary" on 28<sup>th</sup> – 30<sup>th</sup> March 2001 at Sepilok Nature Resort.
- 11.7 Dr. Edwin Bosi presented a paper " Sumatran Rhinoceros Conservation Strategy in Sabah" at the International Elephant and Rhino Research Symposium, Vienna, June 7-11, 2001. Dr. Nan Schaffer also presented a paper and posters during the Symposium.
- 11.8 Dr. Edwin Bosi presented a slide talk on "Sumatran Rhino in Sabah– Is it heading for extinction" on 8<sup>th</sup> August 2001 at the Shangrila Tanjung Aru Resort organized by Sabah Society. More than 50 people attended.
- 11.9 Dr. Annelisa Kilbourn gave a talk on Cybertracker technology to staffs of SOS Rhino Borneo, wildlife department Lahad Datu, and AREAS-WWF Sabah at wildlife department Lahad Datu's office on 3<sup>rd</sup> September 2001.

## **12.0 Meetings**

- 12.1 Dr. Edwin Bosi and Dr. Annelisa Kilbourn met with Dr. Geoffry Davison of WWF Sabah on 17<sup>th</sup> January 2001 to brief him on SOS Rhino.
- 12.2 Dr. Edwin Bosi and Dr. Annelisa Kilbourn met with representative of the Director of Forestry Department Sabah on March 1<sup>st</sup>, 2001. We handed him information regarding SOS Rhino and our application to enter forest reserves. We have positive reply from the Director on this matter.
- 12.3 Dr. Edwin Bosi and Dr. Annelisa Kilbourn met up with Dr. Davison of WWF Sabah on 20<sup>th</sup> August 2001 concerning collaborative works between SOS Rhino and AREAS.

## **13.0 Masters student**

- 13.1 SOS Rhino is collaborating with Institute of Tropical Biology and Conservation, UMS by providing research grant for USD10000. for a Masters student to work on Sumatran rhino.
- 13.2 The first student, Mohd. Nor Awang Tua, started in December 2000 but dropped out after six months. About RM10000. has been wasted on him. A second student subsequently applied for the funding but dropped off within a month.

- 13.3 A third student, Mohd. Zalaludin Bin Latipi, has started as of November 2001. He has been to Sepilok to work on the captive rhinos with Dr. Cheong and also participated in the survey conducted at Tabin by SOS Rhino Borneo with the Singapore youth and Borneo Tourism Institute students on 28<sup>th</sup> November to 3<sup>rd</sup> December 2001.
- 13.4 Dr. Edwin Bosi has been appointed second supervisor to the student by the UMS.

#### **14.0 Vehicles**

- 14.1 SOS Rhino Borneo has three vehicles. They are Land Rover SS9984C, a Nissan Patrol ST1611A and a Ford Ranger SS7467B.
- 14.2 The Nissan Patrol was driven without authorization, fell off the bridge and into the swollen river near the SOS Rhino base camp on 29<sup>th</sup> April 2001. The vehicle is now being repaired for RM4950.
- 14.3 The Ford Ranger is a new vehicle purchased on 20<sup>th</sup> November 2001 for use by SOS Rhino Borneo, and owned by SZG.
- 14.5 There is a need to recruit staff as driver, with driving license and very responsible.

#### **15.0 Future Plans**

##### **15.1 Community Outreach Program (COP)**

- 15.1.1 SOS Rhino Borneo is keen to start the community outreach program (COP). We hope to identify and recruit staffs from the villages sharing the same border with Tabin reserve as COP officers. They will be trained accordingly on community-related program so they will be able to promote conservation among the villagers and participate in sustainable activities. We also hope that they become involved with tourism and provide an alternative source of income rather than been involved in destructive activity in the Tabin reserve.

##### **15.2 Danum Valley and other rhino habitats**

- 15.2.1 SOS Rhino Borneo must eventually expand its activity to other known and unknown rhino habitats. The next plan is to move to Danum Valley

Conservation Area (DVCA) belonging to Sabah Foundation with the same objective as that in Tabin reserve. The last known record of their presence here was in mid eighties.

- 15.2.2 As we become more proficient and experience, we will be able to cover more ground and this will provide the government of Sabah a comprehensive management and conservation plan for Sumatran rhino in Sabah.

## **16.0 Tourism**

- 16.1 A special tour package was organized by Dr. Nan Schaffer and Dima Elissa in March 2001. It involved viewing the animals at Sepilok and working with Nan. It also includes listening and watching slide shows on Sumatran rhino conservation by Nan. Later, the group has the chance to see other wildlife destinations such as Sukau and enjoy the other places as Poring Hotspring, Kinabalu National Parks and the fine beach resorts.
- 16.2 Hopefully, the world will become peaceful, calmer and improved economy. These will encourage people to travel.

## **17.0 Volunteerism**

- 17.1 Many countries have emulated the volunteer program initiated by the Late President John F Kennedy. Singapore is one Asian country that supports volunteerism. SOS Rhino Borneo is closely working with Singapore International Foundation in promoting volunteerism among Singapore youths.
- 17.2 The other form of volunteer program is for groups or individuals who has the time and money to spend by getting involve with SOS Rhino Borneo's field work.

## **18.0 Extensive Survey**

- 18.1 The idea of making line transects is to facilitate survey work either on intensive or extensive scale. These transects are permanent and surveys can be repeated. The transects can also be used by other researchers working on other animals. The line transects are effective as they reach the

most remote part of the reserve. Studying animals that are illusive and few can be challenging especially when the habitat is very large.

- 18.2 The transects are not easy to make as it involved many man hours and the sites get further and further from the base camp. We are expected to complete the transects by end of April 2002 and then organize an extensive survey involving at least 60 people.
- 18.3 The wildlife department Sabah is also planning to organize a big survey in Tabin in 2002. It is therefore logical to work together with the wildlife department on the survey.

## **19.0 Construction of staff and research quarters**

- 19.1 SOS Rhino Borneo is fortunate to have the support of Rainbow Ridge Berhad and the SZG. The former has agreed to construct a 6-room staff quarter while SZG will fund the construction of a research house. The Singapore YEP agreed to supply books and reading materials including computers for the library in the research house.
- 19.2 The application to build these two facilities at KM7 Tomanggong road has been forwarded to the wildlife department Sabah and pending on deliberation and approval from the Tabin Wildlife Management Committee.

## **20. Cybertracker**

- 20.1 Cybertracker is a new technology for fieldwork in Sabah. SOS Rhino Borneo is trying out this gadget in Tabin. We are also recommending to AREAS and wildlife department Sabah to acquire and use these equipment. The software has been programmed by Dr. Annelisa Kilbourn and hopefully, all the conservation agencies using them will have consistent data input that can be shared.

## **21. International Conference**

- 21.1 SOS Rhino Borneo is planning to organize the 1<sup>st</sup> International Sumatran Rhino Conference in Kota Kinabalu, Sabah on 4<sup>th</sup> – 6<sup>th</sup> April 2002. UMS has agreed to be co-organizer while the wildlife department Sabah has agreed to support by appointing an officer to sit in the committee.

21.2 The conference may be postponed to later dates when SOS Rhino and some other bodies working on the Sumatran rhino has ironed out some minor differences on the format of the conference. The Chairman of the Asian Rhino Specialist Group has indicated that an international Sumatran rhino conference will be held in two years time. He suggested that SOS Rhino and UMS with the cooperation of the Asian Rhino Specialist Group organize a workshop instead.

## 22. Conclusion

22.1 SOS Rhino Borneo has been successful in both its *in situ* and *ex situ* programs.

22.2 Our success at Sepilok is the ability to collect blood samples for hormone profiling. We have attempted to join the animals using hormone profile as the basis. It is shown that this is not adequate based on injuries sustained by the female. Detection of estrus through mucous discharge, swollen vulva, restless behavior and so forth must be incorporated. Our progression in this field has been far reaching. It is indeed unfortunate that we are unable to proceed further. Our understanding with the wildlife department Sabah is that, breeding or joining of the animals is entirely in the hand of the department.

22.3 Our success in the field is equally far reaching. Our ability to find fresh rhino tracks, fresh dung and urine, hair and plant samples has given us a new breath of life and vigor. The finding of small hoof prints in the presence of bigger hoof prints points out to us of a breeding rhino colony in Tabin reserve. The finding makes more urgency and crucial for the protection of Tabin reserve.

22.4 If we are able to determine the presence and likely population sizes of Sumatran rhino in other known and unknown habitats in Sabah, we can vigorously work on monitoring and protection of the habitats. A breeding colony is meaningless if we are unable to provide full protection to them in their habitat.

Prepared by

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