

**STATUS AND DISTRIBUTION OF
SUMATRAN RHINOCEROS
(*Dicerorhinus Sumatrensis*)
IN PENINSULAR MALAYSIA**

**STATUS DAN DISTRIBUSI BADAK KERBAU
(*Dicerorhinus Sumatrensis*)
DI SEMENANJUNG MALAYSIA**

by
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ABSTRACT

The number of Sumatran rhinoceros in the various areas of Peninsular Malaysia with particular emphasis on Taman Negara was determined. It was found that Taman Negara houses at least ten (10) rhinoceros while the total for the whole of Peninsular Malaysia was fifty three (53). Short and long term measures of protection are suggested in the discussion.

ABSTREK

Melalui kajian ini, jumlah Badak Kerbau yang masih terdapat di beberapa kawasan di Semenanjung Malaysia telah ditentukan, khasnya Taman Negara. Adalah didapati jumlah keseluruhan badak kerbau yang terdapat di Semenanjung Malaysia ialah 53 ekor dan di Taman Negara sahaja terdapat sekurang-kurangnya 10 ekor. Beberapa langkah jangka panjang dan pendek bagi menyelamatkan dan melindungi haiwan ini daripada pupus telah dicadangkan di sini.

INTRODUCTION

The Sumatran rhinoceros (*Dicerorhinus sumatrensis*) is an endangered species and its numbers have dwindled so rapidly within this last decade that it warrants that urgent measures be taken to preserve the species. It certainly has received tremendous attention amongst conservationists world wide. During colonial period poaching did pose a serious threat to the species existence. Nowadays poaching is no longer a threat but other external factors for example environmental disturbance or infection may endanger the species. Previous work was done in Sungai Dusun (Strickland - 1967) and Endau rompin (Flynn and Tajuddin -1981). That work indicated that Endau Rompin's rhinoceros represented the only interbreeding rhinoceros population in Peninsular Malaysia. There are other areas in Peninsular Malaysia where rhinos can be found. The purpose of this study is to extend and evaluate the population and viabilities in these areas.

AIM

The aims of the research were as stated below:

- (i)to evaluate the population status in certain areas
- (i i)to study the isolated animals with a view to translocate these animals to a safe area. Such safe area would be Sg. Dusun Game Reserve, Taman Negara or Endau Rompin.
- (i i i)to develop management/protection system to identify the threats faced by animals whether human or otherwise.

METHOD

Tracking of rhinos especially in tropical rainforest is a difficult task due to poor visibility. Thus no direct observation could be made. The study of tracks, footprints and marks on the soil and vegetation was done. The method used was the same as Flynn, Tajuddin and Nico Van Strien. (1974).

Systematic survey of the study area was done to ensure nothing important was missed. The major method used was a series of ground surveys through the study area. Whenever fresh tracks were encountered, they were followed, taking measurements of the footprint of the hind feet. (The footprints of the forefeet were not taken as they were usually trampled over by the footprints of the hindfeet). A set of between five to ten footprints were taken in order to make a conclusive decision of the size of animal (in terms of the foot size). The only track that could be mistaken for a rhinoceros track was that of the Malayan tapir (*Tapirus indicus*). Generally the tracks of the tapir were smaller, but an overlap in size could occur between large tapir and small rhinoceros tracks. However both the tracks could be distinguished clearly as those of tapir's were more rounded whereas those of rhinoceros were more squared off. Measurement of the central nail also helped to distinguish between the two animals. Generally the rhinoceros central nail was larger than that of tapir. A difference of between 1-2 cm was found between tracks in soft mud and those left in hard ground.

While tracking we also took note of the dung and the food plants that were eaten. The height of the rhino could sometime be estimated by measuring the height of mud splatted on tree trunks or saplings along the route taken by the rhino after it had just come out of its wallow.

In Tenggaroh, Mersing we placed salt bricks near the wallow in order to attract the animal.

STUDY AREA

The priority study area was Taman Negara. Rhino areas within the park were identified as follows:-

1. (a) Kuala Tahan

This area included the surrounding Ulu Tekah, Ulu Dayang and Ulu Yong area.

The Ulu Tekah area could be reached by a short walk of 20 mins from Lubuk Simpon. the area was relatively hilly and drained by two rivers i.e. Sg. Tekah and Sg. Dayang. Rhino food plants were plentiful there. That area was visited a total of four times. The Ulu Yong area could be reached either by following the trails from Kuala Tahan to Yong Hide and onwards or taking a boat downriver Sg. Tembeling to Belau Hide alighting point and walking up the old trail. The site where rhino tracks could be found were swampy and fairly hilly.

(b) Sg. Tanum

Parts of the river formed the western boundary of Taman Negara. The river was navigable most of the way except for fallen trees in some parts. The area was rich in wildlife especially sambar and barking deer and also wild boar. There were also a variety of birds. Rhino tracks were observed near two saltlicks. The two salt licks i.e. Jenut Atai and Jenut Kumbang were about 30 minutes apart by boat. Jenut Kumbang was well utilised with tracks of the other animals also eg. elephants and deer. There were animal trails leading out of the saltlick.

(c) Ulu Sg. Spia

It took at least seven hours boat ride from Kuala Tahan to reach the last ranger's post at Kuala Aur. From there four relatively dangerous rapids especially at high water had to be manoeuvred. Another day of boat ride would be required to reach Sg. Reh i.e. the rhino area. There were two wallows on a hill with a peak of about 800 m. Rhino tracks could be found in the lower parts of the hill at 91 m high.

(d) **Ulu Tahan**

This area could be reached on foot in five days from Kuala Tahan. Before Jenut Segantang could be reached, a series of three hills must be climbed first and on the way a number of rivers had to be criss-crossed. The trail to four-steps waterfall also follow this route.

Please refer to map fig. 1 to show the various areas mentioned above in relation to the whole area of Taman Negara.

2 . **Ulu Selama** (Bintang Hijau Forest Reserve - refer to fig. 2).

This reserve is a virgin forest. There were lots of mature trees as well as young saplings. Bamboo plants could be found along the rivers and rottan were plentiful near hill edges. The rhinos would have no problem in looking for food here. The core area was between the two salt-licks i.e. Sira Kemia near Sg. Selama and Sira Rimau near Sg. Rimau. Both the salt-licks were located near the respective river banks and on the trails of the folks looking for rottan. Both the licks were sulphur hot-springs. This area was visited last February.

3 . **Tenggaroh** (Mersing coast)

Much of this area had been logged. In fact one of the wallows that was still being used was located almost next to a logging road. Though the area was opened and much of the vegetation had been destroyed, there were still young saplings that the rhino could feed on. The area was only a few minutes walk from the sea. The rhino sometimes go to the beach.

4 . **Bukit Gebuk near Maran**

There used to be a forest where rhino tracks were found previously. However when the spot was visited last March, the whole area was already cleared and a house was built there. Further in towards the hill, there was a swamp and a number of wallows were found, but they were used by wild boars and tapirs. The only undisturbed forest left was right in the immediate surrounding of the hill, Bukit Gebuk.

5 . **Ulu Trengganu**

This area that was visited was partly, accessible by boat and partly on foot. The particular area was Sg. Badak a tributary of Sg. Kalong. There was a hill of 500 m high called Bukit Badak near the river. This area was visited in August 1982.

6 . **Endau-Rompin**

The Selai Camp was situated near Sg. Selai. From Kg. Kepoh, the journey on foot took five hours and a number of relatively high hills had to be climb-

ed, including one of 2,000 ft. high. The trails leading to the camp were clear as the area was regularly patrolled.

Please refer to map fig. 3 to show the rhino areas in the whole of Peninsular Malaysia.

RESULTS

The number of rhinoceros indicated at the various locations below were obtained through work carried out from May 1982 until March 1983.

TAMAN NEGARA

(a) Kuala Tahan area

A pair of rhinos were seen by an aborigines near Ulu Sg. Dayang and Ulu Tekah in November 1982. (Personal communication - Tekah bin Dollah). According to him one was a male and the other a female. They could be mating. A party was sent to the area to verify the validity of the sighting. Two sets of rhino tracks were observed.

hindfoot track (cm)	central toe (cm)
20.0	8.0
20.0	8.0
20.2	8.0
21.0	9.0
21.0	9.0
21.0	9.0

Another trip to Ulu Sg. Yong was organised in February this year and the tracks of one rhino was found. However the direction of the tracks could not be determined because the ground was hard and the tracks were estimated to be about two months old.

hindfoot track (cm)	central toe (cm)
20.2	8.5
20.2	8.5

(b) **Sg. Tanum**

Tracks of three rhinoceros were identified at the two salt licks near Sg. Tanum. Their measurements were as follows:-

At Jenut	hindfoot track (cm)	central toe (cm)
Atai	15.0	4.5
	15.0	4.3
	23.0	8.5
	22.5	9.0
	22.0	8.8

At Jenut	hindfoot track (cm)	central toe (cm)
Kumbang	17.0	6.0
	17.2	6.0
	17.0	6.0

(c) **Ulu Sg. Spia**

The tracks of one rhino was found near Sg. Reh, a tributary of Sg. Spia.

hindfoot track (cm)	central toe (cm)
17.3	7.0
17.3	7.2
17.5	7.3

(d) **Ulu Tahan**

A set of tracks was observed along Sg. Tor during a census carried out this February.

hindfoot track (cm)	central toe (cm)
20.3	8.0
19.0	8.8
20.1	10.0
20.2	8.5

(e) **Sg. Sat**

Tracks of two rhinoceros were discovered by kampong folks (personal communication Encik Ali bin Hanapiah) near Jenut Jentuh in Feb., 1983 and they were verified in March 1983. Their tracks were as follows:

hindfoot track (cm)	central toe (cm)
20.3	not available
22.9	not available

2. **Ulu Selama (Bintang Hijau Forest Reserve)**

Rhino tracks were observed near two salt licks i.e. Sira Rimau and Sira Kemian.

At Sira	hindfoot track (cm)	central toe (cm)
Rimau	19.0	7.5
	19.0	7.5
	19.5	6.5

At Sira	hindfoot track (cm)	central toe (cm)
Kemian	21.0	7.5
	17.0	5.5
	19.0	5.5
	21.0	7.5
	22.0	7.0

3. **Tenggaroh (Mersing coast)**

Two rhinos were observed at a relatively close range. Their track measurements were as follows:

hindfoot track (cm)	central toe (cm)
18.0	7.0
19.0	7.5
18.5	7.6

It was reported that the particular rhino was a female, as her genitals could be seen. The anterior horn was estimated to be 10 cm high and the length of the body from head to tail was 200 cm. The height of the rhino at shoulder level was 122 cm.

Another rhino was sighted on the 29th. Jan., 1983. It had the following track measurements.

hindfoot track (cm)	central toe (cm)
19.0	7.5
20.0	8.0
19.5	7.5

That rhino had a smaller anterior horn than the previous rhino and it measured 5 cm high. The length of the body was 183 cm. The height at the shoulder level was 130 cm.

4. Endau-Rompin

The specific rhino areas were Kemidak, Selai, Semberong, Ulu Endau and Gunung Pukin Besar. The only area that was visited was Selai in June 1982. Tracks of one rhino (18.5 cm, 18.6 cm) were observed besides the dung and food plants. Plaster casts of the tracks were also made. According to a census in May 1982, the estimated no. of rhinos in the whole of Endau Rompin was 20-25.

5. Sg. Dusun

This area was covered by another officer in the Dept. i.e. Encik Zuber bin Haji Zain who was trying to determine the areas presently utilised by the rhinos particularly outside the present reserve and also to determine the present status of the rhino in the reserve. The estimated number of rhinos in the reserve was between 3-5.

DISCUSSION

From the results it can be seen that at least 9 to 10 rhinoceros have been identified in the various areas of Taman Negara. They are distributed as follows:

Area	No. of rhinoceros
Kuala Tahan	2 - 3
Sg. Tanum	3
Ulu Spia	1
Ulu Tahan	1
Sg. Sat	2
Total	<hr/> 9 - 10 <hr/>

During the visits made to Ulu Atok, no rhino tracks were encountered. There are two possibilities here i.e. may be the rhino has ventured to a neighbouring area probably Kechau or the tracks were simply missed out. Back in 1977 the estimated number of rhinos in Ulu Atok was put at 3-4. Also for Ulu Spia according to 1977 report there were three (3) rhinos there. While in Ulu Tahan there were two (2) rhinos. Taking all the figures above, the estimated number of rhinos in Taman Negara is between 10-16. This initial study has shown Taman Negara to be a more important rhino area than previously estimated. Its importance is either equal or second to Endau-Rompin. The overall picture now gives optimism for Taman Negara because there are still areas within the park that have not been explored. It has not been shown yet that the rhinos there represent a continuous population as in Endau Rompin.

It has been a long time since any rhino has been sighted near Kuala Tahan area. It is still not known where they came from.

For other rhino areas in Peninsular Malaysia, the distribution is as follows:

Area	No.
Ulu Selama	3 - 4
Tenggaroh	2
Endau Rompin	20 - 25
Sg. Dusun	3 - 5
Bt. Gebuk	1 - 2
Total	<u>29 - 38</u>

Thus the total no of rhinos in the areas that were visited during the duration of May 1982 until March 1983 are between 29 - 38. These figures exclude other rhino areas such as Kuala Balah (3 - 5) and Sg. Dipak (3 - 5) in Kelantan, Ulu Lepar (3 - 5) and Krau Reserve (0 - 2) in Pahang, Ulu Belum (3 - 5) in Perak, Gunung Blumut (2 - 3) in Johor and Kedah border (0 - 1). Taking all these figures into consideration, the total estimated number of Sumatran rhinoceros in Peninsular Malaysia is between 53 - 81.

For short term protection measure, all the known rhino areas should be monitored regularly to determine population trend especially recruitment rates. For long term protective measure translocation of rhinos from low or insecure habitat to sanctuaries which contain viable breeding population, suitable habitat and good law enforcement should be done. Serious consideration to translocation of isolated rhinos from Bukit Gebuk, Maran must be given. One possible reserve where these rhinos can be released is Sg. Dusun which has much potential for maintaining a viable population of Sumatran rhinoceros. Another alternative is to breed them in captivity.

CONCLUSION

The results have shown that Taman Negara is as important if not equal to Endau Rompin in terms of rhino conservation. Regular monitoring so far has indicated that the population is breeding by the evidence of young rhinos e.g. in Taman Negara and Ulu Selama. The total estimated number of Sumatran rhinoceros in Peninsular Malaysia is 53. These figures give us optimism for rhino conservation in this country.

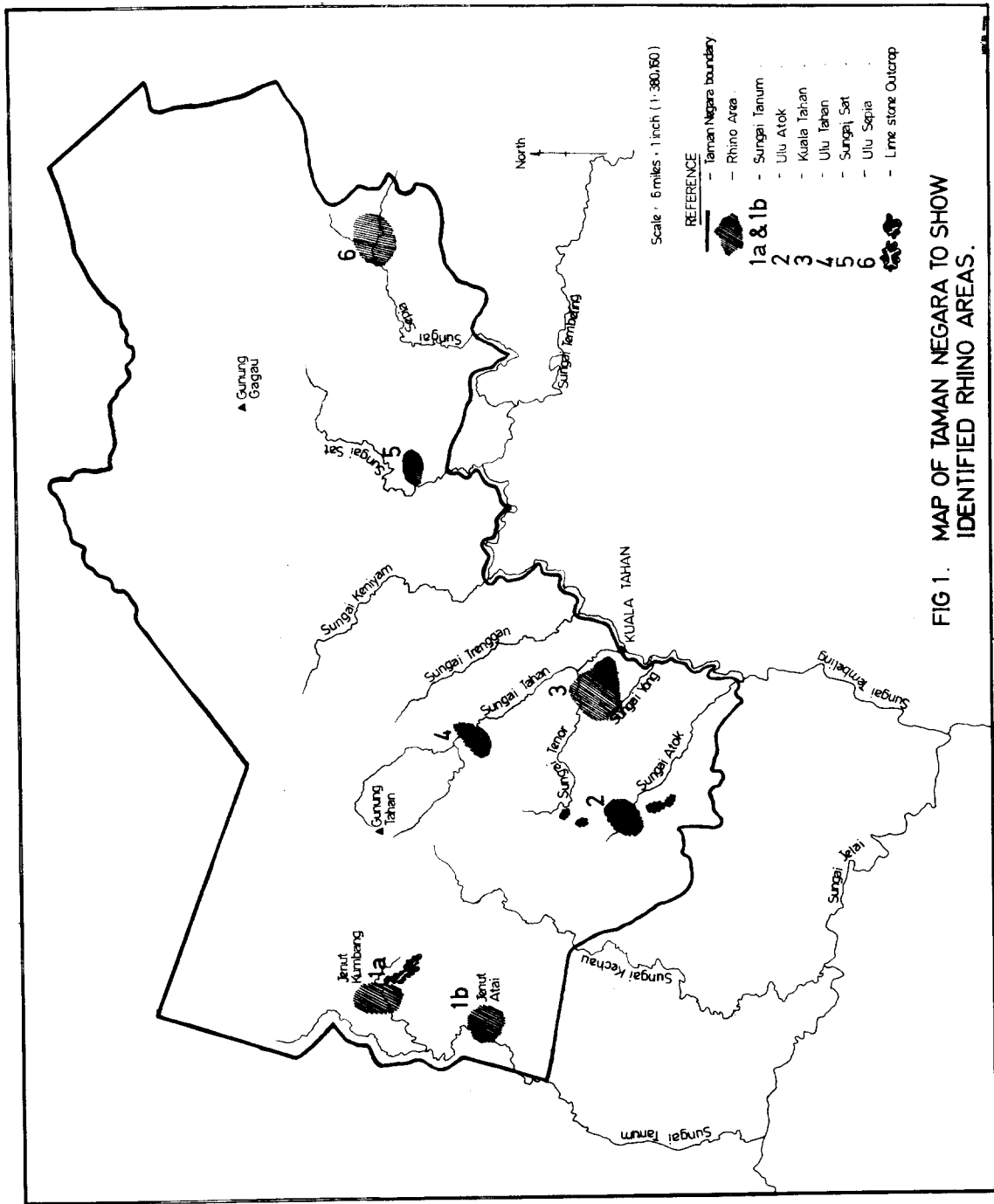
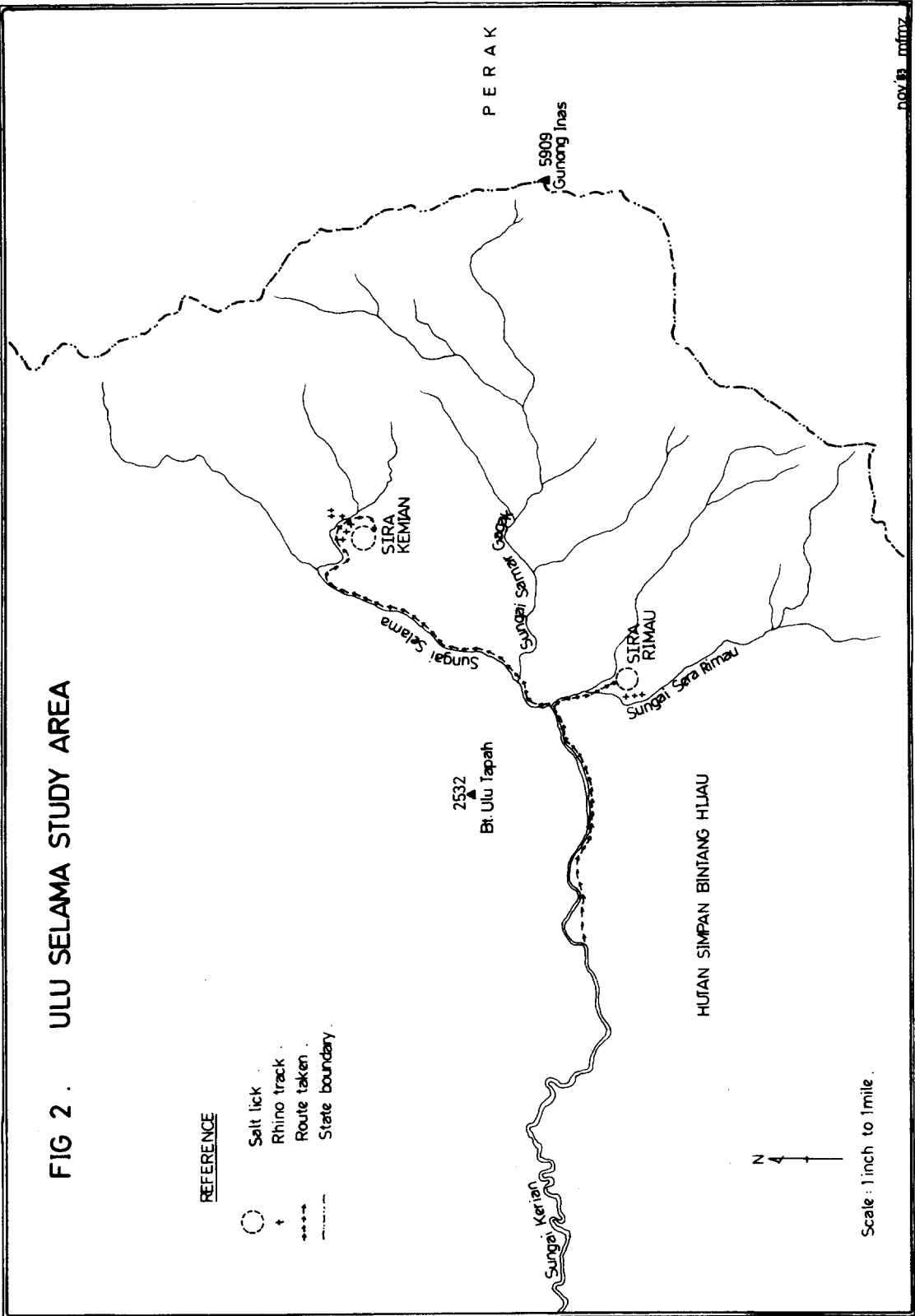


FIG 1. MAP OF TAMAN NEGARA TO SHOW IDENTIFIED RHINO AREAS.

FIG 2 . ULU SELAMA STUDY AREA

REFERENCE

- Salt lick
- Rhino track
- Route taken
- - - - State boundary



P E R A K

5909
Gunong Inas

SIRA
KEMIAN

2532
▲
Bt. Ulu Tapah

SIRA
RIMAU

HUTAN SIMPAN BINTANG HLIAU

N
↑

Scale : 1 inch to 1 mile

FIG. 3 MAP OF PENINSULAR MALAYSIA SHOWING RHINO AREAS .

