

THE PRESENT STATUS  
of the  
SUMATRAN RHINOCEROS  
(*Dicerorhinus sumatrensis*)  
in  
INDONESIA

prepared by NICO VAN STRIEN  
and WIDODO SUKOHADI

A report prepared for the IUCN/SSC ASIAN RHINO SPECIALIST GROUP  
meeting in Kuala Lumpur - Malaysia, June 27 - July 4, 1982.

I THE STATUS OF THE SUMATRAN RHINO IN KALIMANTAN.

There is no reliable information available on the present status of the Bornean subspecies of the Sumatran rhino - *Dicerorhinus sumatrensis harrissoni* (Groves, 1965), and the current opinion is that the rhino has been virtually exterminated in the Indonesian part of the island of Borneo. Only in the most remote parts of central Borneo, on the border between Indonesia and Sarawak and Sabah, a few rhinos are rumoured to survive.

A detailed review of the historic and present distribution and status of the rhino in Borneo has been published by L.C. Rookmaker in 1977 - **The distribution and status of the rhinoceros, *Dicerorhinus sumatrensis*, in Borneo - A review. Bijdragen tot de Dierkunde 47(2), 197-204.**

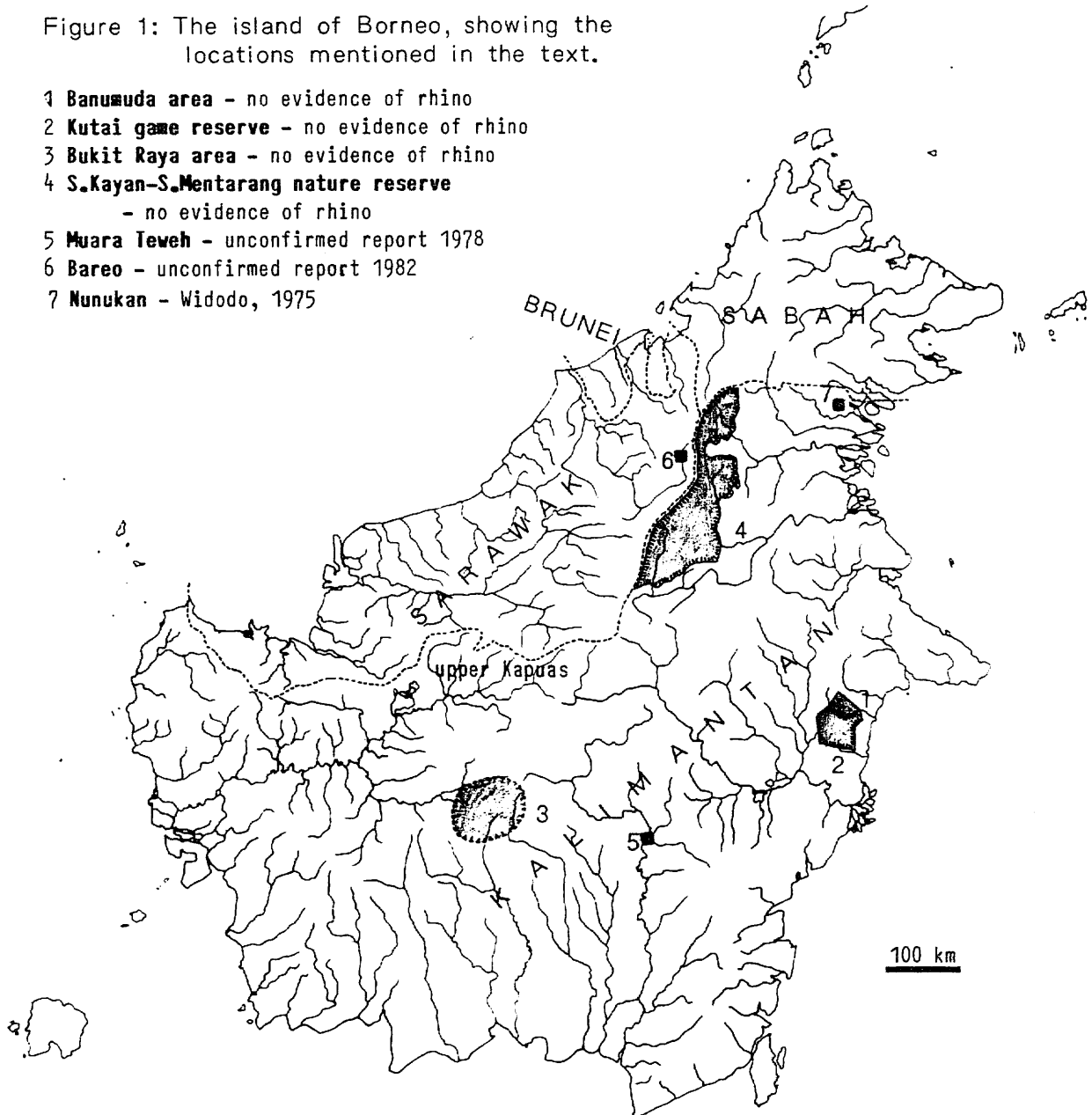
On the present status he concludes.... can only be guessed since practically no reports later than 1945 are known. A few wandering individuals, or tiny remnant populations, may still occur in the ulus of the Mahakam, Kayan and Bahau rivers, and in northern Kalimantan Timur. More exact information does not exist.....

The last reliable record of rhino in Kalimantan are the tracks reported by A.P.M. van der Zon in 1977 - **Sumatran rhino in Kalimantan (Borneo). Tigerpaper 4(2), 12.** In 1976 van der Zon encountered two sets of rhino tracks in the Banumuda area, north of the Kutai Game Reserve. In 1978 other sign of rhino were reported from the same area by **Peter Cockburn and Effendi Sumardja - Proposed Management Plan for Kutai Nature Reserve, East Kalimantan, Indonesia, World Wildlife Fund Programme, Bogor, Nov. 1979.** The last report is inconvincing, since the sign reported were apparently only mudsmears on saplings. The Banumuda area is adjacent to the Kutai Nature reserve, where the rhino has disappeared several years ago. Therefore it was proposed to include the nanumuda area in the nature reserve.

In 1980 Nico van Strien and three students from the School of Environmental Conservation Management, Ciawi, Indonesia, made a three week survey of the Banumuda area, to collect more data on the occurrence of the rhino there. During this survey not a single sign of the presence of rhino was found and locally no reports on the existence of rhino were received that did not refer to the two reports mentioned above. It was concluded that there is no viable rhino population in the Banumuda area, and that the reported tracks were probably made by stray animals driven out of their original range by logging disturbance. At the time of the survey logging had started in the Banumuda area, making the proposed inclusion of the area in the nature reserve senseless and unrealistic. (Nico van Strien. Report on a survey of the proposed Banumuda extension of Kutai, East Kalimantan. April 1980).

Figure 1: The island of Borneo, showing the locations mentioned in the text.

- 1 Banumuda area - no evidence of rhino
- 2 Kutai game reserve - no evidence of rhino
- 3 Bukit Raya area - no evidence of rhino
- 4 S.Kayan-S.Mentarang nature reserve - no evidence of rhino
- 5 Muara Teveh - unconfirmed report 1978
- 6 Bareo - unconfirmed report 1982
- 7 Nunukan - Widodo, 1975



The only other areas where rhino were supposed to survive are some parts of the central mountain chain. The Bukit Raya area was surveyed by van der Zon in 1976, and no evidence of rhino was found there, and the local villagers believed that no rhino were left in that area. (**Sumatran Rhino in Kalimantan - Tigerpaper 4(2), 12**).

In 1981 J.H. Blower, N.Wirawan and R. Watling - Preliminary survey of S.Kayan - S.Mentarang Nature Reserve in East Kalimantan - World Wildlife Fund, Indonesia Programme. Bogor, May 1981 - surveyed the central and southern part of the new 1,6 million hectares S. Kayan - S. Mentarang Nature reserve in the northwest corner of east Kalimantan, bordering Sabah and Sarawak. On the rhino Watling writes ..... no sign of the Sumatran rhinoceros was seen and all informants (both Dyaks and Punans) believed that no rhinoceros occurred in the area and that its disappearance was attributed to heavy hunting by their fathers generation. The value of Rhinoceros horn is well known and if any individual do remain their outlook for survival is poor.....

In 1975 a hoof and faeces were collected by PPA guards near Nunukan, close to the Sabah border. The rhino was reported killed by Dayak Punan villagers (Widodo, pers. com.).

On 21 March 1978 Mr. Darpon Dirap, Muara Teweh, Kalimantan Tengah, reports in a letter, found in the FAO files at PPA headquarters in Bogor, that there are still a few rhino's left in the Muara Teweh area. But he writes that his informant stated that there are only one or two left.

Recently Ken Proud - WWF assistant representative in Bogor - received a report from a friend who worked in Sarawak, that someone from Bareo had crossed the border with Kalimantan and shot a rhino there. On his return the Sarawak border patrol confiscated the parts he had taken.

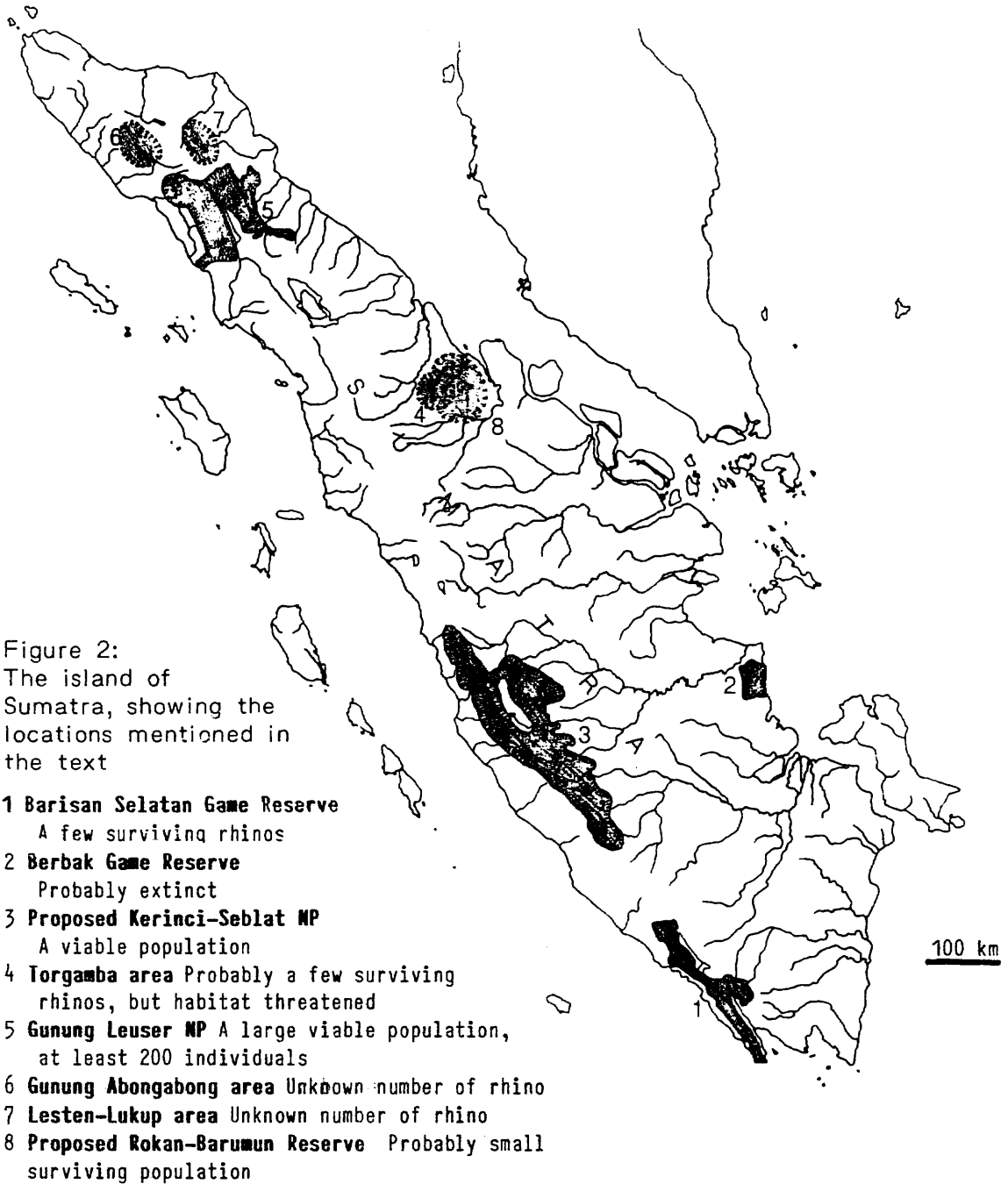
In June 1982 reports appeared in the Indonesian press that in West Kalimantan, in the village of Belatung, (location unknown, probably upper Kapuas) a herd of 20 tri-horned rhinoceroses were seen. The article speaks about a rare species claimed to be extinct.

These unconfirmed reports indicate that there is still a chance that a few rhino survive in "forgotten" corners of Kalimantan, but it remains doubtful whether there are any viable populations left that could perpetuate the existence of this species in Kalimantan.

## II THE STATUS OF THE SUMATRAN RHINO IN SUMATRA.

The situation in Sumatra is rather different from that in Kalimantan. The sumatran form of the rhino - Dicerorhinus sumatrensis sumatrensis Fischer, 1814 - is still found in a number of places, in a few even in considerable numbers. But with the rapid opening up of the interior of the island for logging, agriculture and resettlement most of the remaining rhino populations will disappear soon, and within a few years there will be hardly any rhino left outside the large Bukit Barisan Reserves (Gunung Leuser, Kerinci, Barisan Selatan).

The distribution and status of the rhino in Sumatra have been studied by Marcus Borner from 1973 till 1975, the results of which were published in progress reports of WWF project 884 and in his thesis - **A field Study of the Sumatran Rhinoceros, Dicerorhinus sumatrensis Fischer, 1814, Ecology and Behaviour Conservation Situation in Sumatra. 1979 Juris, Zuerich.**



In five areas rhino were found to be present: Barisan Selatan Reserve (then called Sumatra Selatan I), Berbak Reserve, Kerinci-Seblat, Torgamba and Gunung Leuser Reserve. In large parts of Sumatra the rhino had been exterminated in the previous decades, most notably so in the vast lowlands of the province of Riau, which was once an important rhino area. Also in the periphery of the existing reserves the rhino had vanished.

Borner estimated the total number of rhino left on Sumatra to be between 40 and 75: Gunung Leuser (including Langkat) 22 - 45, Torgamba 1 - 5, Kerinci-Seblat 15 - 20, Barisan Selatan 2 - 5.

#### Barisan Selatan Reserve (formerly Sumatra Selatan I or Sumsel I or SS I)

Borner surveyed this area in february and March 1975. In the southern part of the reserve no evidence of rhino was found, but local reports were received of a sighting in 1974 at the Kedjadian river and of tracks found in 1972, west of Wai Kedjadian. Borner supposes that these records concern stray animals from the northern part of the reserve.

In the northern part of the reserves tracks were found by Borner in two places: in the area of Wai Siran, and between the mountain ridge south of Liwa (1200 m asl) and the Handaring kiri river (500 m asl). A rhino was reported to be killed east of Liwa in 1974. Borner concludes .... Well maintained rhino trails and feeding marks indicated that a small resident rest-population of rhinos is still surviving in the northern part of the Sumatra Selatan I reserve.....

In 1981 rhino tracks were found by Widodo near Way Paya, in the southern most tip of the reserve. Again in 1982 tracks were found in this part of the reserve, at Wai Belambangan, by PPa guards. In the same year a rhino was seen by several guards at Bukit Penotoh (Widodo, pers. com.). More detailed information has not become available, despite the frequent visits made to the reserve for the preparation of the management plan, written by **Robert de Wulf, Djoko Supomo and Kurnia Rauf - Barisan Selatan Game Reserve Management Plan 1982-1987. UNDP/FAO National Parks Development Project, Bogor, July 1981.**

The management plan says..... The status of the Sumatran rhino (Didermoceros sumatrensis) in Barisan Selatan Reserve is not clear..... In the past there must have been a good-sized population of rhino in Barisan Selatan, however scattered, as these are solitary animals. The rapidly dwindling primary forest of the Reserve makes the survival of the rhino very doubtful..... In an earlier report **de Wulf - The decreasing value of South Sumatra I Reserve for National Park Development. Bogor, December 1979** - writes concerning the rhino areas reported by Borner..... Human disturbance however is now so considerable in these areas that we must fear that the rhino is extinct in SS I.....

In the management plan it is recommended..... During the planning period, covered by this plan, surveys should be carried out to determine distribution and status of major mammal species, particularly elephant, tiger, Sumatran rhino, wild dog..... and further.....Protection of all species should be enforced, and main attention should be concentrated upon acquiring further evidence of the continued existence of Sumatran rhino.....

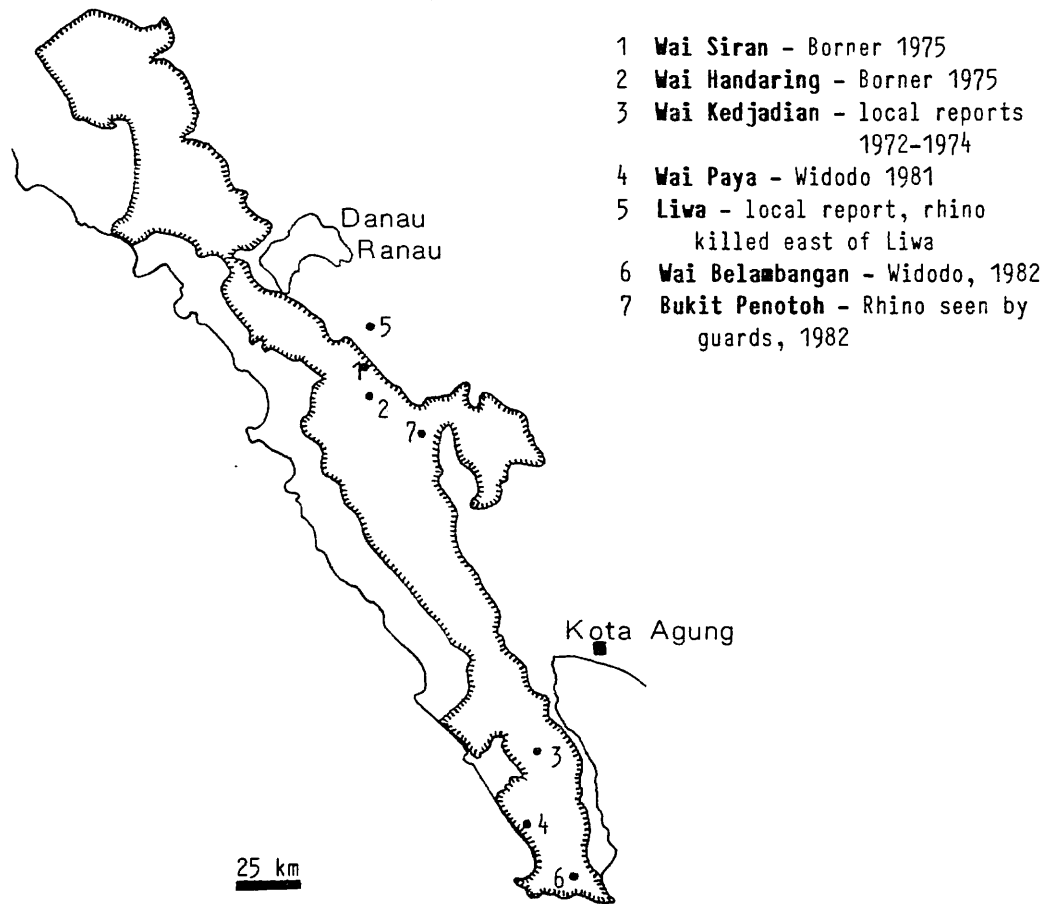


Figure 3: The Barisan Selatan Game Reserve, with the locations of recent Rhino reports.

Berbak Nature Reserve.

When Borner visited the reserve in November 1974, no evidence of the occurrence of rhino was found. Tracks were reported by villagers from the vicinity of Simpang Kubu. In his thesis he mentions a report from Sutrisno Soewoko, who had seen rhino tracks in the southeastern part of the reserve in 1976.

These tracks are probably the same as the tracks reported by Jan Wind in 1976 - **Visit to Suaka Margasatwa Berbak: 25 Jan - 4 Feb. 1976.** At an unspecified location very fresh footprints of rhino were met. The tracks were of big size ( 26,5 cm width and distance between forefoot-forefoot 180 cm) and it was suggested that they were probably made by the Javan rhino (*Rhinoceros sondaicus*).

Later the reserve was surveyed for the preparation of the management plan by de Wulf - **Berbak Game Reserve, Management Plan 1982-1987, UNDP/FAO National Parks Development Project, Fieldreport 38, Bogor, May 1982.** It appears that since the tracks reported by Wind, no more evidence has been recorded, and the rhino is presumed extinct in Berbak Nature Reserve.

Kerinci-Seblat area.

The Kerinci-Seblat area is a 1.5 million hectares mosaic of protected areas of different status ranging from protected forest to hunting reserve, game reserve and nature reserve. Most of the area will probably soon be declared a National Park.

Borner surveyed the area in mid 1974 and found evidence of rhino in several places. In the area of Danau Tucu (or Tujuh) tracks and faeces of rhino were found and Borner calls the area..... a rhino region comparable to the Gunung Leuser area. Many rhino-trails can be found. However, most of them are overgrown, indicating that the rhino population is very small and at the edge of extinction.....

Near Lempur, on a plateau southeast of Lake Kerinci, Borner found wallows, indistinct rhino trails and fresh tracks of at least three different rhinos, including a cow/ calf pair. Borner presumes that.....the region surveyed is probably only the periphery of the rhino area. I suspect the core area to be situated in the mountain ridge to the east.....

In the Sungei Seblat area, northwest of Muara Aman, fresh tracks were found. Borner writes....I found fresh rhino tracks in the middle part of Sungei Seblat, north of Air Putih. They were about one day old and very large. The width of the hindfoot was between 25 and 26cm, which is the largest rhino track I have ever found. I found no evidence of trails, feeding marks or wallows, and I therefore think that I penetrated only the periphery of the rhino area.....

Borner concluded about the Kerinci-Seblat area..... there is a rest population of rhinos, which is surviving in the mountainous area at the boundaries of Jambi- and Bengkulu-Provinces. The area extends from Lake Kerinci in the north about 75 km south to River Seblat. A small corridor is leading further north to Gunung Tucu and probably Gunung Kerinci.....

In 1979 several fresh rhino tracks were reported by **Suharto Djojosedharmo - Laporan Peninjauan Habitat Satwa di Kabupaten Solok dan Kabupaten Pesisir Selatan (Komplek G. Kerinci) Sum-Bar. Pusat Rehabilitasi Mawas Bohorok - Sumatra Utara.** The tracks were found about 2 km from the road from Muara Labuh to Sungai Penuh (Gunung Bonkat or Buntak?) , kabupaten Pesisir Selatan. The tracks were described as being very abundant, much more than in the Gunung Leuser area. In the Kabupaten Solok no rhino were found.

In 1980 **de Wulf- Fieldreport Kerinci-Seblat no 2.** - and MacKinnon found fresh tracks in an area south of Lempur in the Tebat Pelapo or Tebat Selapo area. The tracks were found in an abandoned resettlement village. They were about 1 day old and measured 25.5 cm. In the same report is mentioned that a team from Bandung, searching for gas sources, found fresh rhino tracks near Gunung Sumbing (or Sumbing). In another report **de Wulf - Fieldreport Kerinci-Seblat no. 1.** - mentions that the game guards report the rhino to be abundant near Air Simpang Seblat and Hulu Melam.

Recently the guards reported the presence of rhino in the Rawas Ulu Lakiton area, near Lebuk Linggau (Widodo, pers. com.).

In the management plan for this area written by **Robert de Wulf, Djoko Supomo and Kurnia Rauf - Kerinci-Seblat Proposed National Park, Preliminary Management Plan 1982-1987. UNDP/FAO National Parks Development Project. Bogor, April 1981.** - a map is given, showing the recent rhino records and the status is described as follows.

.....One of the world's rarest mammals occurs in the proposed National Park; the Sumatran rhinoceros Dicerorhinus sumatrensis. The world population

of Sumatran rhino is said to total between 100 and 160 individuals (Borner, 1979). Together with Gunung Leuser, Endau Rompin in West Malaysia and Southern Sabah, the proposed National Park is the only area where the rhino has a reasonable chance of survival (as only in these four areas breeding is confirmed). The rhino population of Kerinci-Seblat is estimated at at least 15 but it is quite possible that as many as 100 could still survive.....

The management plan recommends..... surveys should be carried out to determine distribution and status of major mammal species, particularly elephant, tiger, Sumatran rhino,.....and.....Protection of all species should be enforced, and main attention should be concentrated upon the Sumatran rhino population in South Kerinci and elsewhere.....

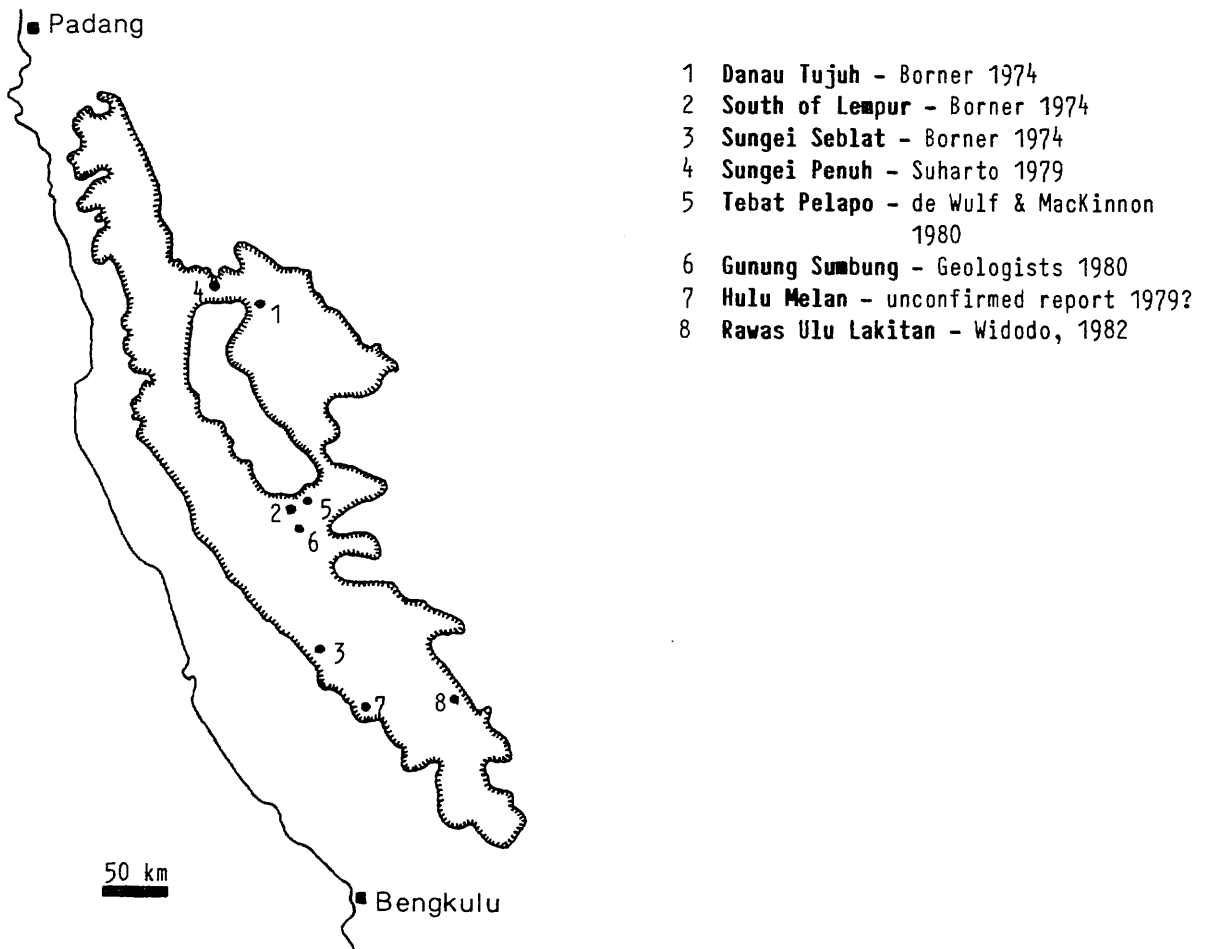


Figure 4: The proposed Kerinci-Seblat National Park, with the locations of recent rhino reports.



### Torgamba.

The Torgamba area is situated on the border between the provinces of Sumatra Utara and Riau, southeast of Rantoprapat. Borner surveyed this area in December 1973, and he found fresh and old tracks about two day-trips north of the Asahan basecamp. No other information could be had and Borner concluded..... evidently some rhinos have survived in the forest of Torgamba. However this short survey doesn't allow to give an estimate of their number which is probably very low. In his thesis Borner reports also evidence of rhino found by Laurie and McDougall in 1975, east of the Asahan basecamp close to the provincial border.

K.S. Depari reports - in letter 8 May 1982 - that a rhino was killed in Torgamba in 1967 or 1968 by a planter. Pieces of skin and bones were found in the village of Asam Jawa.

About the present situation Depari reports that large parts of the former forest reserve Torgamba have been converted into oilpalm plantation (2000 ha, with 3000 ha to follow). He expects that the logging concessions will soon get permission to clearcut the rests of the forest and that there is no hope for the survival of the rhino in Torgamba.

### Gunung Leuser National Park.

The Gunung Leuser National Park forms the major stronghold of the Sumatran rhino. The number of surviving rhinos is much larger than in the other known areas, in Indonesia and elsewhere, probably with the exception of the kerinci-Seblat area. The rhinos of Gunung Leuser have been the subject of two detailed studies, first by Marcus Borner, who worked there from 1973 till 1975 and published the results of his study in a thesis (for the title see page 3).

From 1975 till 1980 Nico van Strien conducted a fieldstudy on the rhino in the core area of its distribution; the upper Mamas valley. The results are currently being evaluated and they will be published soon in the form of a thesis. Van Strien's work has partly been continued to date by a student from the Universitas Nasional in Jakarta, Pepen Abdullah, under the World Wildlife Fund Project 1907. This project aims at a continued patrolling of the rhino area to prevent poaching and at collecting additional data for the ongoing study.

Van Strien left the Gunung Leuser area in 1979 to take up a position at the School of Environmental Conservation Management in Bogor, Indonesia, but returned to the rhino area, together with Pepen Abdullah, in August 1980. Later Pepen Abdullah made two more trips to the rhino area in the upper Mamas valley - in May/June 1981 and in October/ November 1981. On both trips valuable new data could be collected and no sign of poaching were found.

The distribution of the rhino in Gunung Leuser is well documented. The main distribution is in the central part of the western half of the Gunung Leuser National Park covering an area of roughly 150,000 hectares. But also in other parts of the reserve rhinos are found; Bengkong, Kapi, Langkat, but generally in a much lower density.

Borner found virtually no evidence of the existence of the rhino in the Kapi area, the part of the reserve that links the eastern (Langkat) half

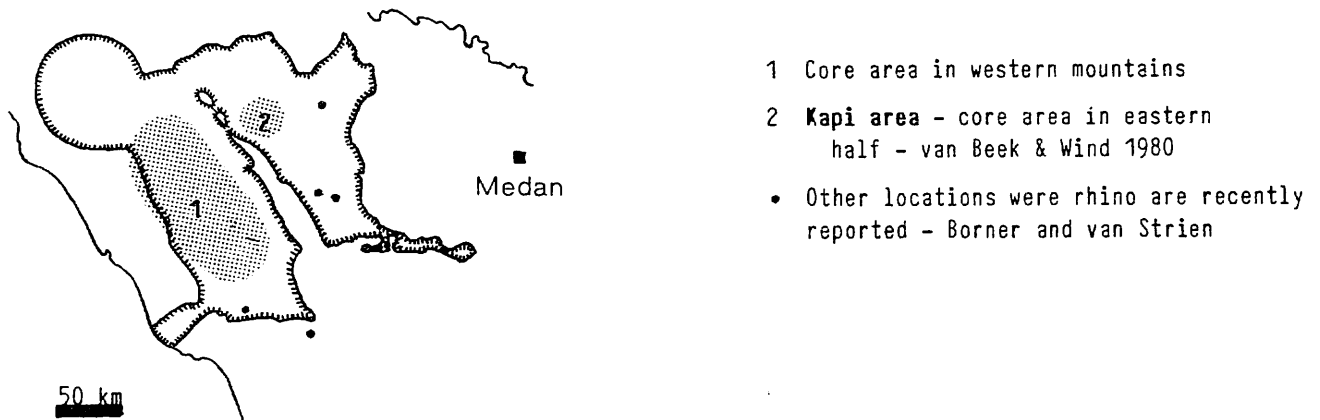


Figure 5: The Gunung Leuser National Park, with the distribution of the Sumatran rhino.

with the larger western part (Gunung Leuser proper), of which he visited the northern areas. In 1981 Kees van Beek and Jan Wind (Van Strien, pers. com.) entered this area from the south and reported abundant sign of rhino in the area south and west of Gunung Kapi. Signs were reported to be of the same nature and abundance as in the Mamas, indicating a good density. Although the area is rather small, compared to the rhino habitat in the western part, it is of great significance in view of the present developments in the Alas valley, that cuts through the Kapi area. Pressure from the population will soon result in a continuous strip of cultivated land along the Alas river, effectively cutting the Kapi area, and therewith the Gunung Leuser National Park in two parts. Migration of rhino between the western and eastern parts, as is still occasionally taking place, will then be impossible. The rhinos in the Gunung Kapi area could then function as a breeding nucleus for the restocking of the Langkat side of the reserve, where the rhino has suffered heavily from poaching.

Borner estimated 22 to 45 rhinos for the total of Gunung Leuser. The preliminary evaluation of the data obtained in the upper Mamas have learned that this is an underestimate. In the study area, which is about 10,000 ha, 39 different rhinos could be identified on the shape and size of the footprint. About half of these individuals appear to spend most or a large part of their time in the study area, the rest comes there only occasionally to visit a saltlick. During the period of the study, from 1975 to 1980 13 calves were born in the study area.

Assuming that the density of the rhino in the rest of the main distribution area is not greatly different from that in the Mamas, a total number of at least 200 individuals can be estimated to survive in the Gunung Leuser Reserve.

Other areas.

Most likely there are other areas outside the five mentioned above where the rhino is surviving in small numbers.

When working in Gunung Leuser many verbal reports were received about the occurrence of rhino in the province of Aceh, north of the Gunung Leuser Reserve. Rhino are most likely still found in the mountains that form the northern continuation of the Gunung Leuser chain (the Gunung Abong-abong area), and in the Lesten - Lukup area, forming the northern continuation of the Langkat chain. But it is unknown whether there are any sizable groups left or merely a few stray animals.

In 1977 John Seidensticker - Project 1023- "Operation Tiger". Indonesia, Establishment of a reserve in Central Sumatra. - surveyed a proposed reserve, an area between the Rokan and Barumun rivers extending from the Mallaca Straits to the foothills of the Barisan Range. He reports, without giving details, that a small population of Sumatran rhino exists in the area. The area is adjacent to the Torgamba area and it is possible that reference is made to the small rhino population believed to survive there.

BOGOR, 25-VI-1982.