

Appendix I.

Notes on the present range and conservation of the Sumatran rhino.

Present Situation:

1. Burma

Range: Peacock (1933) and Angoll (1947) reported that there were rhinos in the Tenasserim drainages as well as in other areas of Burma, from Shwe-U-Daung and Arakan south to Bassein, and from Pegu Yoma to the Salween drainages. Hubbuck (1939), Christison (1945) and U Tun Yin (1954/56/57) also mention rhinos in Singpo county, Arakan and Kamaing. U Tun Yin estimates the total number of rhinos in Burma at around 26 (1967).

Laws for protection: There are reserves as well as laws designed to protect the rhino, but these laws are not strict enough: in recent years high officials have been able to shoot rhinos legally for "medical reasons" (U Tun Yin, 1967). Simon (1967) suggested trapping the Burmese rhinos and releasing them in three selected areas for better protection.

Political situation: The socialist government of General Ne Win has been in power since 1962. The underground movement of former president U Nu, operating from the Thailand-Burmese border, has not had much effect. The communist guerrilla groups of the north were pushed back to the northern mountainous regions of the Chinese border. Ne Win follows a policy of neutrality and of strict nonalignment. He controls the rate of industrialization and tries to keep out all western influences (Neue Zürcher Zeitung, 1/16/71). Burma is therefore practically closed to foreigners except for short tourist visits to restricted areas. Such a visa is limited to 7 days.

2. Thailand

Range: Lekagul (1968) thinks that the Sumatran rhino has already been wiped out although a few may still survive in the Tenasserim Range. A small population of D. sumatrensis has been tracked near the province of Chaiyaphoon in northeast Thailand, three of which were killed in the past year (personal communication, McNeely to Kurt). According to reports from Karen Hill tribe hunters, a second population of about 3 to 10 rhinos that migrates between Burma and Thailand might live in the Tenasserim Range. Rhinos have been reported near the Isthmus of Kra.

Laws for protection: A game law was passed by the government in 1960, but it has so far not yet been properly enforced due to a shortage of well-trained wardens, insufficient funds for equipment, and a lack of co-operation between various

provinces of Saraburi, Rassisima, Ayut, and Prachinburi with a total area of about 2168 km² (Suvanakorn, 1968). The Forest Department is trying to create three or four game reserves (Banijbatana, 1968).

Political situation: Thailand is struggling with communist infiltration from Laos and Cambodia. It might be difficult to travel freely, and it would probably be wise for an ecologist to rely on local village heads in order to avoid getting involved in any political situation. The American army still maintains air bases in east Thailand which could possibly provide assistance in case of emergency. The northern boundaries are impossible to visit as they are a center for opium smuggling as well as a hideout for Chinese guerrilla units cut off from Taiwan (*Tagesanzeiger*).

3. Laos

It is not known whether or not there are still rhinos in Laos. There are hunting laws, but it seems as if they exist only on paper (Brix, 1968). It is impossible to do any kind of survey here as the country has been taken over by the Viet Cong with the exception of a small strip along the western border.

4. Cambodia

Little is known about the rhino situation in Cambodia. In 1965 there was a national park in Angkor as well as a hunting law forbidding the hunting of large wild animals. There were also projects for several game reserves. But now most of the country is under the control of F.U.N.K. (National Liberation Forces), with only the region of Phnom Penh, the Khemarak Harbor and parts of the provinces of Oddar Meanchey, Battambang, and Pursat remaining under governmental control. Information and perhaps permission for a short survey could be organized through the "Tagesanzeiger" with the help of President Shianouk now residing in Peking.

5. Malaya

Range: It is certain that a number of rhinoceros still exist in Malaya. Hislop (1965) estimates that there are about 30 animals and thinks all of them are D. sumatrensis.

"u) West Máláya?" The last known rhinoceros in the state of Johore in the southern part of the Malayan Peninsula was shot in 1947, but a few might still exist in swamps. In 1949 Hislop found two adults and a young rhino in north Selangor on the banks of the Bernam River. A sanctuary was created but it is now surrounded by cultivation on three sides. Rhinos are said to exist on the other side of the river in the state of Perak, but no sanctuary has been established. In 1949 rhinos were also seen in the foothills of Gunong Bubu.

The largest concentration of rhinos in Malaya, though no estimate of the size of the population is given, is to be found in the Bintang Orang Reserve in northern Perak and in the neighboring Gunong Tua Forest Reserve in south Kedah, a relatively undisturbed, well-watered region with a number of salt licks. Rhinos have been reported at the border of Thailand in the states of Perak and Kedah, but there is no estimate of the possible number of rhinos.

Hislop is convinced that there are some rhinos living in the unexplored parts of Trengganu. The Taman Negara Park, which contains parts of Kelantan, Trengganu and Pahang, shows evidence of rhinos. The difficult, unexplored country in the east and southeast of the Park could easily contain rhinos. There are reports of rhinos in the imperfectly known Krau Game Reserve in Central Pahang. Southeast Pahang is a vast area of swampy jungle and is unknown insofar as wildlife is concerned. Hislop thinks that the rhinoceros are to be found in this region, especially in the upper valley of Sungai Endau (all information from Hislop, 1965).

In 1971 Scriven made an expedition to the Sungai Dusun Reserve in North Selangor and found tracks of three rhinos (Agenda Paper CSS 71/48).

b) East Malaya: D. sumatrensis seems to be extinct or very rare in Sabah in eastern Malaya. The last animal was seen in 1957 (Silva, 1965). The rhino is virtually extinct in Sarawak (Anderson, 1968).

Laws for protection: There are several game reserves and laws protecting wildlife. These laws are inadequately enforced due to a shortage of officers and game rangers, weak penalties (maximum penalty for killing a protected animal like rhinoceros is 6 months imprisonment) and lack of public support. In the opinion of the Game Department the rhinoceros will soon disappear if no action is taken (Medway, 1965). The Sumatran rhino is completely protected in Sabah, with the maximum penalty being five years imprisonment and a fine of 5000 dollars.

Malaya is making "land capability maps" that show which parts of the country are good for mining, agriculture, and timber exploitation. Only land classified as V, which is land that has no mineral, agricultural or productive forest potential, will be available for game reserves, water catchment, recreation, etc. (Panton, 1968).

Political situation: The country as a whole is safe, though there is a Maoist minority seeking independence. It has formed guerrilla units.

6. Indonesia

Range: a) Sumatra: The present range of Dicerorhinus sumatrensis includes Lampung in South Sumatra with about 15 rhinos, Riau in Central Sumatra with about 15, and North Sumatra and Atjeh with about 20 (estimates by Basjarudin, 1968). In recent times there have been no positive reports.

of rhinos in South Sumatra. Nilton (1963) did not find any rhinos in the area of Pokambaru in Riau where Skafte captured rhinos in 1961. Schonkel (1969) gives some evidence that there might still be some rhinos in the region of Udjung Daru and Pasirpengarajan in Central Sumatra. Kurt (1970) estimates the rhino population of the Leuser Reserve and its peripheries at about 27 (rhinos heard or tracks he himself saw) to 60 (number given by local pawangs).

b) Borneo: Burgess (1961) recorded rhinos from the upper Kinabatangan River, Darvel Bay, and Dent Peninsula.

Laws for protection: There are numerous nature reserves throughout Sumatra, Java, and Celebes. Modern conservation laws exist but they are not adequately enforced. At present the destruction of the natural habitat looms as a far greater threat to the rhinoceros than poaching.

Java is overpopulated, and the human population is increasing as well in Sumatra in the regions of Medan, Padang, and Telukbetung. Most of the primary forests in parks with few inhabitants, such as Riau, have been granted to timber companies. According to a 1970 map from the Indonesian government, the rain forest in central Sumatra which harbors a rhino population will soon be destroyed by timber companies.

The Leuser Reserve in North Sumatra is one of the largest compact rain forest areas. It harbors a number of rhinos which are relatively well protected, but many of the rhinos seem to live in the northern peripheries of the Park (Kurt, 1970). Those rhinos living outside the Park are endangered, as large areas of North Sumatra and Atjeh will be cleared by timber companies.

Nevertheless, it must be said that the survival of large rhino populations is perhaps best guaranteed in Sumatra because of the existing laws, a large reserve in the north, and a low human population in the reserves.

Political Situation: The country seems to be politically stable.