THE DISTRIBUTION AND STATUS OF THE RHINOCEROS, Dicerorhinus sumatrensis, IN BORNEO — A REVIEW

by

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ABSTRACT

In the second half of the 19th century, the rhinoceros occurred throughout Borneo except southern Sarawak, northwestern Kalimantan and some parts of southern Kalimantan. The animal was extinct in the coastal and other populated areas in about 1930, especially in the southern part of Kalimantan. Presently some small populations remain, scattered over the Sarawak interior (if the rhinoceros survives at all there), northeastern Sabah, possibly also southern Sabah and around Mt. Kinabalu, and the interior of Central and East Kalimantan. It is estimated that some 15 to 25 rhinos are still alive in Borneo.

INTRODUCTION

Since 1840 the rhinoceros is known to inhabit Borneo, but agreement about its specific identity was not reached until 1895 (Rookmaaker, 1977). The Bornean rhinoceros is presently regarded as a subspecies of the two-horned Sumatran kind, Dicerorhinus sumatrensis harrissoni (Groves, 1965). Erroneous beliefs in the aphrodisiacal and medicinal properties of many rhinoceros parts, especially its horn, have reduced the animal to near-extinction. Protective laws are available (Chin, 1971; Van Strien, 1974: 62-63) and generally it is tried to practice them, but the difficulties are great.

The survival of the rhinoceros to this day is mainly due to its occurrence in remote and uninhabitable regions. Consequently, studying it in the field, although necessary, becomes very hard as has been experienced in supposedly better populated areas in Sumatra and Malaysia.

Therefore, the literature on Borneo remains as the only practical source to establish the present and former distribution of the rhinoceros there. More written statements about Borneo exist than one supposes, but they include rather few references to the rhinoceros. The following is an attempt to collect these.

For the latitudes and longitudes of the localities I may refer to "Atlas van tropisch Nederland" (anonymous, 1938) and "Gazette no.13" (anonymous, 1955).

DISTRIBUTION

Some distribution maps covering the whole island were published earlier. According to Guggisberg
(1966: 104), the animal lived throughout Borneo in 1850, but “presently” only in northern Sarawak and (unconfirmed) in Kotawaringin, East Kutai and along the Reyang river. Groves (1967: 225) shows localities of some museum specimens. Krumbiegel (1960: 16, left) and Groves & Kurt (1972: fig. 4) doubt the former distribution in southern and southwestern parts. Van Strien’s maps (1974: 33, 34) exhibit the records he could find in the literature. His map of the present occurrence shows Mt. Kinabalu and the East Kutai reserve.

1. SARAWAK

1.1. Fossil records

The excavations in the Niah cave have unearthed fossil rhinoceros material in several layers, the oldest 183 cm deep corresponding with a C14 date of 30,673 ± 700 years B.C. (upper pleistocene). The material has been discussed by Harrisson (1957: 164, pl. Pb; 1961b: 90) and Medway (1958; 1959: 157-158; 1964: 37; especially 1965b: 77-79). The fragments must belong to D. sumatrensis, although none of them can be identified unequivocally. A tendency to decrease in average size from the pleistocene to the present, demonstrated in several large mammals, has been described for Rhinoceros sondaicus Desmarest, 1822, by Hooijer (1946a: 27; 1946b). Similarly, recent Sumatran teeth of D. sumatrensis are normally smaller than the subfossil ones from that island (Hooijer, 1946a: 16-29), which Sody (1946) named D. s. eugenei. There is some evidence for a similar trend towards size diminution in Borneo material (Medway, 1965b: 81; Groves & Kurt, 1972: 3), but it is insufficient to draw any certain conclusions.

The British Museum received in 1884, from P. L. Sclater, some fossil rhinoceros bones and upper molars, found in an alluvial cave deposit (upper pleistocene?) near Bau in southwestern Sarawak, at a depth of some 20 m (Becarri, 1904: 135; Medway, 1965b: 80) — not at Paku (Banks, 1931: 21). The skeleton was catalogued under D. sumatrensis, but the molars (British Museum (Natural History) cat. no. M. 1968) were “provisionally referred to” R. sondaicus (cf. Lydekker, 1886: 129), as was noted by Banks (1931: 21) and Loch (1937: 145). Lydekker used the incorrect criteria of Busk (1869) to identify the teeth. Therefore Hooijer (1945: 233; 1946a: 10) suspected that they in fact belonged to D. sumatrensis, which was later confirmed by Medway (1965b: 80, pl. XXI) who, unlike Hooijer, was able to inspect the actual specimens.

Busk (1869) discussed two further second upper molars from Sarawak but their origin is unknown (Rookmaaker, 1977).

1.2. Recent records

Northern Sarawak:


Upper Baram river:


Reyang river:


Southern Sarawak:

Banks (1931: 19): never found “on the left bank of the Rejang or down into Saribas and Sarawak proper”, cf. Gomes (1911: 149) and Low (1848). Only fossil remains from Bau (see § 1.1).

1.3. Conclusion

In the first decennia of this century the species occurred from the Lawas interior in the north (ca 04°30'N) southward along the border with 1) ulu = headwaters.
Kalimantan (ulu Baram and ulu Reyang). The regions nearer to the coast were inhabited formerly (fossil evidence in Niah) but in more recent times only occasionally. The rhinoceroses recently did not occur south of the Reyang river, but again fossil remains were found there, at Bau.

2. SABAH

2.1. Recent records

General:


Sandakan district


— No 20th century records from this region.

Northern Sabah:


Segama river:


Southern Sabah:

Burgess (1961: 150): increase in Interior Residency in 1957. — Harrisson (1949: 71): single rhino recorded in upper Padas early 1946. — Little information from this region along the Kalimantan border is recorded.

Upper Kinabatangan:


Western Sabah:

Sandilands (1974): Tambunan man told him that permits to shoot one specimen were sold for $25 between 1903 and 1928. He found tracks in the ulu Karamuk in 1960, but none in 1974. — Harrisson (1956: 265): around Mt. Trus Madi and eastward to the Kinabatangan river, asserted by government officials in 1952; no traces there in 1956. — Harrisson (1956: 266): Pretyman shot a rhinoceros near Kota Kinabalu, early this century. — British Museum (Natural History), no. 1875.8.9.18.: mainland opposite Labuan Island, according to Jentink (1884: 556); possibly incorrect.

Northwestern Sabah:


2.2. Conclusion

Formerly the rhinoceroses was probably distributed throughout Sabah. Reports from the first half of this century are almost nonexistent. Presently it may live scattered from the ulu Kinabatangan southward to the border with Kalimantan, and from the ulu Segama eastward along the Darvel bay to the Dent peninsula. In those regions, at least, occasionally rhinos are killed or poached, or their footprints are seen. This situation will not last very long if nothing is done. The present occurrence on Mt. Kinabalu is doubtful since the few existing records are all very vague. However, it is not totally impossible.

3. BRUNEI

It is questionable whether the rhinoceroses ever existed in Brunei. Reports seem to be absent (Van Strien, 1974: 63). Van Lynden & Groll (1851: 565), without direct experience in the region, said it would occur in Brunei. However, Brunei formerly included parts of Sarawak. If the rhinoceroses ever occurred within Brunei, it perished there early in the 19th century at the latest.
4. KALIMANTAN

Both Zondag (1931: 222) and Westermann (1939: 352-354) reviewed the distribution of the rhinoceros in the Dutch, now Indonesian, part of Borneo. Besides earlier publications, they had some unpublished reports at their disposal. Their maps are an important source for the rhinoceros occurrence during the 1930’s. The number of records from a certain area, marked on their maps, are here given as: Zondag, or Westermann, 1 x, 2 x, etc. Other significant contributions were the accounts by Witkamp (1932) for the Kutai province, and by Pfeffer (1958) for the Kayan river area (cf. anonymous, 1958).

Two skulls, the localities of which I could not find, may be mentioned here, although it is uncertain that they came from Kalimantan. They are: Smithsonian Institution, Washington, no. 19955: Belupiaih, Linoh river; and Academy of Science, Philadelphia: Selat river (Groves, in litt., June 1975).

4.1. Recent records

Northern Kalimantan Timur (= northern part of East Kalimantan):


Ulu Bahau river:


Upper Kayan river (= “Apo Kayan”):


Upper Mahakam river:


Lower Kayan and Berau rivers:


West Kutai:


East Kutai:

Boek (1887: 111): sultan had horn of rhino shot near Tenggarong. — Witkamp (1932: 172): relatively common in 1920’s in mountains between Rantau and Telen rivers on one side and Street Makassar on the other; also little
north of Samarinda, on upper Separi, upper Karangmunus and upper Kutailama rivers; one shot there in 1905; traces often seen in 1905-1907. — Museum Bogor: Bungalow river (Groves, in litt., January 1976). — The Kutai national park (3,060 km²), established 10 July 1936, harboured some rhinos (anonymous, 1937b: 20; 1937c: 274); recently some expected (Van Strien, 1974: 35), but no unequivocal records exist. — Witkamp (1932): Kutai river is southern boundary of rhino range in Kutai province. Keller (1932), however, saw tracks and living specimen in source area of the Kembodja and Nangha river area. — Zondag (loc. cit.), Heynius-Viruly & Van (1939: 354) suggests that the animal wandered from more southern regions (?).

Kalimantan Selatan (= South Kalimantan):

Kalimantan Tengah (= Central Kalimantan):

Kalimantan Barat (= West Kalimantan):

4.2. Conclusion
Once the rhinoceroses inhabited most of Kalimantan. It probably did not occur, during the last centuries at least, in: (1) the southern part of Central Kalimantan, roughly between Banjarmasin and Kotawaringin; (2) in the point of East Kalimantan near Sangkulirang (rhinoceros presence in this area is shown on the map of Van Strien (1974: 33), but I have been unable to find the record in his text); (3) in West Kalimantan north of the Kapuas river, nor just south of it in the lower part of its course. The reason for the total lack of records from these regions, and my subsequent conclusion that the animal never was found there, is not clear to me. The kind of landscape and vegetation, however, may have played a role. The rhinoceroses had perished from most of the other southern areas (southern Kalimantan Barat, Kotawaringin and Kalimantan Selatan) by the 1930’s.

The present distribution 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.

STATUS
The number of rhinoceroses in the different parts of Borneo has been estimated several times, as can be seen in table I. Due to the lack of sufficient data, most of them can be no more than guesses. A decline, mainly caused by extensive hunting, is more or less visible.

The animal must have been quite numerous at the end of the 19th century, especially in Sabah. H. N. Ridley “passed four in one trip” near Sandakan (Shelford, 1916: 41). Similar statements are found in Pryer (1881: 394), anonymous (1886) and Bartlett (1891).

A few examples of the rhinoceroses slaughter in our century should be given. In the 1920’s 36 trophies came to Belaga (Sarawak) within two years (Banks, 1931: 20). Near Marudi (Sarawak) 79 rhinos were killed between 1925 and 1931 according to official records (Harrison, 1956: 264). From 1919 to 1927, 344 kg rhino horn was exported from the Dutch Netherlands Indies excluding Java. Tanjungseler was the main port for this product which was shipped either to Singapore or directly to China (Dammerman, 1929: 8, 84-85).

Whether the rhinoceros today still exists in Sarawak is unknown. If it survives, there are, very
optimistically, not more than three individuals. The situation in Sabah seems somewhat better. There might be between 10 and 20 rhinos spread over some parts of Sabah (mentioned above), with the odds lying on the lower side. I am also confident that some individuals survive in Kalimantan, but probably not more than five. How long these animals will be able to remain hidden from the human eye — their only chance of survival — must remain unanswered.

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