

Project 839/840 Udjong Kulon Nature Reserve, Java - scientific programme and management

WWF GRANT 1973 - \$ 3,930 (Project 839)
\$ 8,572 (Project 840)

For previous reports see

- The Ark Under Way page 132
- Yearbook 1968 page 136
- Yearbook 1969 page 100
- Yearbook 1970-71 page 96
- Yearbook 1971-72 page 122
- Yearbook 1972-73 page 128

Illustration plate XXIV

Rhino Census

The rhino census was carried out as in previous years in two phases: northern areas on 4th and 5th April 1973, southern areas from 7th to 9th April 1973. For a successful rhino census, which is based mainly on the analysis of fresh rhino tracks, the climatic conditions are very important. In March 1973 rains had been frequent, less so in the first days of April. During the census we had two rains at night, but the days were hot and the soil dried rapidly. Under these conditions it was sometimes difficult to decide whether tracks were from the same day or from the day before. In addition, two experienced team-leaders (L. Schenkel and Mr. Widodo) could not take part in the census, a third was sick and unable to fulfil the whole programme. Due to these difficulties, three regions were not checked sufficiently. Despite these shortcomings the results of 1973 (Table I. a.) are virtually the same as in 1972 (table I. b.). Altogether it can be assumed that there were between 40 and 50 individuals in the reserve in 1973. If the results of the yearly census since 1967 are compared, a more or less steady increase of the rhinos can be seen (Table II).

Table I

Width of forefoot	a. Results of census in 1972		b. Results of census in 1973	
	Minimum	Maximum	Minimum	Maximum
Below 20 cm	3	3	2	2
21-24 cm	10	12	7	8
25-27 cm	16	21	15	20
28-30 cm	8	9	14	16
Not measurable, seen or smelled only	3	3	-	-
Total	40	48	38	46

Table II

Estimated numbers of rhinos (Census results since 1967)

Year	Minimum	Maximum	Mean
1967	21	28	24.5
1968	20	29	24.5
1969	22	34	28
1971	33	42	37.5
1972	40	48	44
1973	38	46	42

Monitor lizard (*Varanus salvator*)

From July 1972 until August 1973, a Swiss student, Mr. P. Vogel, studied the ecology and behaviour of the Monitor lizard in Udjong Kulon. Together with the Wild pig and the Leopard, the Monitor lizard is one of the main scavengers in Udjong Kulon. Obviously it does not feed on carcasses only, but finds food also along the sea coast, in ponds and rivers or riverbeds. As the study has shown, each individual moves within a fairly large home range, and can cover considerable distances when in search of food. The animals do not defend territories, but at a carcass competition over food can arise and the access to it is regulated according to a dominance order. Normally if a superior individual threatens, the inferior gives way. Sometimes fighting occurs in one of two types: ritualized wrestling with both rivals rising on hind legs; or the dominant animal rushes at the other one and chases it.

Further observations were made of sleeping patterns, sexual contact and deposit of eggs. The study is being written up and will be presented as a thesis at the University of Basel, Department of Zoology (Prof. Schenkel).

Protection and Management of Udjong Kulon

Generally speaking the situation in Udjong Kulon was satisfactory. There was no evidence of poaching in 1973, and the guards were doing their duty. Unfortunately their economic situation has - at least temporarily - become worse: rice has become much more expensive; in addition most prices have increased due to increased costs of transportation.

All the buildings for which WWF provided funds are well maintained, the expenses being covered from fees paid by tourists.

The road connection Labuan-Jakarta/Bogor met with no difficulties, the VW-Kombi being well serviced and in excellent condition, also the old Landrover is still useful for heavy transport. On the other hand, the motor-boat "Badak" with its two Perkins Diesel engines, provided by WWF in 1966, was several times out of order. Some engine parts and the suspension of one propeller shaft were defective and spares were not available in Jakarta. The locally-made wooden boat "Menjangan" with an outboard motor, for which WWF provided the funds, had to replace the "Badak" boat for transport between Labuan and Udjong Kulon. In stormy weather this boat provides less safety and protection, but it can be operated by one experienced man. We have been

World Wildlife Yearbook 1973-1974
Merged 1974
edited by Peter Jackson.

informed that the "Badak" boat was finally repaired. However, major repairs will soon be inevitable and in the long run it will be more economic to replace the boat by a new – preferably locally-made – boat for which spare parts are available in Jakarta.

General remarks

We are convinced that since 1967, when we started our mission, the situation in Ujung Kulon has steadily improved. Protection and management are increasingly effective and the rhinos are by now more numerous. However it is obvious that the continued interest and the assistance by WWF will still be needed to provide an impulse for the continuity of the present development.

Dr Rudolf Schenkel
and
Dr Lotte Schenkel-Hulliger

Project 884 Sumatran rhinoceros – conservation

WWF GRANT 1973 – \$ 12,806

For previous reports see
– Yearbook 1972–73 page 132

At the request of the rhino group of IUCN a project for the conservation of the endangered Sumatran rhinoceros was worked out. The aim of the two-year project is to determine the present range of *Dicerorhinus sumatraensis*, to collect data on its status and ecology and to evaluate possibilities for its conservation.

Work was started in November 1972 in the province of Aceh at the northern tip of Sumatra. The Gunung Leuser Reserve was considered to be one of the most important areas left in the rapidly-shrinking range of the Sumatran rhinoceros. During the first seven months special attention was given to this unique nature reserve. As no maps exist of the area and some 80% is completely unexplored and even unknown to local hunters, working conditions proved to be sometimes extremely difficult. Expeditions of two to four weeks were carried out, penetrating the mountainous forest areas where man has never been before. The rhinos had vanished from the peripheral areas of the Reserve, but in the valleys and mountains of the central part, reachable only by a week's march or by helicopter a surviving population of the Sumatran rhino was found. Trails, wallows and saltlicks indicated that the region is still regularly used by rhinos.

It was here that the investigator Markus Borner was able to make the only direct observation of a Sumatran rhinoceros. The animal, a young female, almost walked into his field camp and then

dashed off through the thick undergrowth. As the visibility in the tropical rain forest seldom exceeds 20 metres, direct observation of big game is very rare. The analysis of all kind of tracks is therefore of great importance.

In addition to defining the range of the rhino in the Gunung Leuser Reserve and to studying some ecology, the Reserve was surveyed for the Orang-utan and other big game. Former surveys indicated that the favourite habitats for most of the larger mammals do not exceed an altitude of 1500 m. It was assumed that the centre of the reserve consisted of high mountains, thus limiting the distribution of the larger mammals to the western and southern boundaries. The recent survey into the interior of the Reserve showed, that this assumption was wrong. A valley with a length of about 100 km transverses the centre of the reserve from North to South and is difficult to penetrate. Large areas of the bottom of this valley are below 1500 m and therefore suitable for large mammals.

Beside the Sumatran rhinoceros, and the Orang-utan, the occurrence of Rusa deer *Cervus unicolor*, Barking deer *Muntiacus muntjak*, Serow goat *Capricornis sumatraensis*, Mouse deer *Tragulus napu*, Tiger *Panthera tigris sumatraensis*, and others could be confirmed. No evidence was found on the occurrence of the Javan rhinoceros *Rhinoceros sondaicus*.

Recommendations were given on how the conservation of the reserve in general and especially the situation of the rhino could be improved. These suggestions have been taken up by the Nature Conservation Department of Indonesia and the Gunung Leuser Committee of WWF.

In the succeeding months investigation was extended to other provinces. In West Sumatra, one of the most densely populated provinces, rhinos died out some years ago. The province of Riau in central Sumatra was surveyed for two months. The hills and swamps of the large alluvial plains covered with tropical rain forest were once described as "rhino country". It was here that three female rhinos were caught in 1959/61, and the population was estimated from 25 to several hundred animals. Due to an incredible boom in timber logging and oil drilling in the last few years most of the vast virgin jungle has vanished. Timber and oil roads lead to the remotest wilderness, opening the country to human intrusion. The results of the survey indicate that the rhinoceros is extinct in this area by now.

In the province of North Sumatra, fresh rhino tracks were found in the mountainous centre of the Langkat reserve and in the lowlands bordering the province of Riau. Poorly maintained rhino trails in the Langkat reserve suggest that only very few animals still occur. In the lowlands at the boundaries between North Sumatra and Riau the survival of the remaining few rhinos is threatened by timber exploitation, and plantation projects.

To date about 1500 km have been covered on foot in the forest, 12,600 with a Toyota Jeep, 250 km with trucks and logging tractors, 650 km by prahu (local boat) or speedboat, 1200 km by plane and 550 km by helicopter.

BORNER