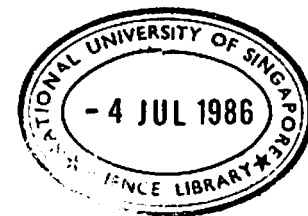


NATURE CONSERVATION
IN
WESTERN MALAYSIA, 1961

An issue to mark the occasion of the
TWENTY-FIRST ANNIVERSARY
of the founding of the
MALAYAN NATURE SOCIETY
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Edited by
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plant successfully to their garden, and they have the necessary sustained interest to keep it alive, they could so easily have taken it from neighbouring forest or roadside, and have left the plants in Templer Park alone for the enjoyment of other visitors.

The Friends of Templer Park Society, of which the Malayan Nature Society is a founder member, is the only voluntary body in Malaya devoted solely to the cause of conservation. The work it is doing is related to that of the old-established Friends of the Lake District in Britain, a society that has played so large a part in preserving that beautiful area from mining, overhead electric cables, ugly buildings, erosion, pollution, and all the same threats that constantly menace Templer Park. The Friends of Templer Park even anticipated the British "Conservation Corps", by persuading youth clubs to send volunteers to clear river beds, cut steps, and repair bridges. The Park comes under the portfolio of the Ministry of Rural Development, which has recognised the special part that the Friends of Templer Park Society plays in developing the Park, and gives many of their decisions legal force. This Ministry also pays into the Society's funds a subvention to cover the wages of a fore-man park-keeper and four labourers. The Templer Park project is rural development in the best sense; by demonstrating to the townspeople that the rural areas are not just a wilderness, but contain much of interest and beauty. It is, after all, the conservation of nature that marks rural development from merely a transporting of town to country.



THE SHWE U DAUNG, A RHINOCEROS SANCTUARY IN BURMA

By

OLIVER MILTON*

With the approval of the Survival Service Commission of the International Union for the Conservation of Nature, the author approached the Burmese authorities in January 1958 and sought permission to carry out an initial two-year study of the fauna with the intention of offering ideas and suggestions for its continued and improved preservation. One particular feature of the proposed survey was to find out, if possible, how many *Rhinoceros sondaicus* and *Didermoceros sumatrensis* still existed in the country and what steps could be taken for their future protection and prevention from extinction in Burma.

In 1955 Lee M. Talbot, an ecologist, undertook an extensive mission for the Survival Service in the Middle East and South East Asian countries to look into the status of certain endangered species. Lack of time in Burma prevented any field trips and so he gathered his information from sources in Rangoon, in particular, U Tun Yin, a retired government servant who is greatly interested in conservation. The number of rhino estimated as a result of these enquiries was between thirty-five and forty-six(1).

Estimating the population of a certain species is extremely difficult in a country such as Burma where so much of the land is covered with dense jungle. Figures produced by local inhabitants are, unfortunately, often incorrect as they are apt to overestimate the number of animals in a herd; by hazarding a guess rather than by individual counting (which, admittedly, is not always possible); through counting the same animal more than once; by incorrect interpretation of the tracks or by relying on information from other natives.

Once the Burmese Government had agreed to our Survey I was able to visit the Shwe U Daung sanctuary—as well as other areas—since this used to be a confirmed habitat of *Didermoceros sumatrensis*. I spent from 16th. July until 18th. August, 1959, in the reserve, but owing to the inclemency of the weather a future visit is necessary.

The first steps to preserve the rich fauna and flora of the Shwe U Daung were taken in 1918 when eighty-one square miles of the East Katha District were declared a Reserve. Eleven years later another forty-five square miles in the Mongmit Division were added, thus

* Burma Wild Life Survey 1958-60; now in Malaya.

bringing the total area to one hundred and twenty-six square miles. It became a reserve for the following species:—

- Barking Deer (*Muntiacus muntjak*)
- Bear (*Selanarctos thibetanus*)
- Elephant
- Gaur (*Bibos gaurus*)
- Leopard
- Pig
- Saing or Banteng (*Bibos sondaicus*)
- Sambur (*Cervus unicolor*)
- Serow (*Capricornis sumatrensis*)
- Tiger
- Two-horned Rhinoceros (*Didermoceros sumatrensis*)

Notice boards were placed along the boundary and a handful of game scouts did their best to patrol the area. During the last war the wild life suffered considerably and even until recently the area has been frequented by anti-government elements who have not only enjoyed the hunting but, at the same time, have prevented the Forest Department game officers from carrying out their duties.

The Reserve is approximately rectangular in shape—fifteen miles east-west and eight miles north-south—and divided lengthwise, both physically and ecologically, by a main ridge. There are, therefore, two distinct and almost equal sized parts, namely, the southern and the northern slopes.

The southern slope originates at the Ondan river and rises fairly steeply and uniformly to the main ridge of which the Shwe U Daung peak is the dominating feature. The lower section of the slope is covered by a consociation of bamboo (*Cephalostachyum pergracile*) which is used by the villagers of Ondan in the construction of their houses. At 2,800 feet the bamboo becomes less dense as other species, *Baccaurea sapida*, *Terminalia belerica*, *Careya arborea*, start to form a thick forest. At 4,500 feet there is an interesting first order ecotone as the forest merges into mountain meadow. Except for a few patches of mountain forest this grassland, dominated by *Imperata* sp., extends to the highest points along the ridge.

Above 4,000 feet the slope is not only completely exposed to the full force of the south-west monsoon but also in sight of the hot plains of Central Burma near Mandalay. Violent winds, sweeping up the slope and assisted by driving rain and mist, cause remarkable stunting of many trees, especially *Quercus* sp., and a distinct northerly inclination of the

branches. Numerous streams have their sources in this grassland and, rising from crystal clear springs, the water flows over limestone boulders and through the thick forest to the Ondan river.

The northern slopes of the range are quite different. Except for a small area of grassland the ground is covered with thick climax forest unaffected by the growth-inhibiting wind and sheltered from the monsoon. It can be described as Burma sub-tropical, wet hill forest and is typified by *Quercus*, *Castanopsis*, *Lauraceae* and *Meliaceae* with woody climbers, root climbers (*Ficus* spp.) and epiphytes.

At the foot there is no bamboo climax as found on the south side. Edaphic and climatic conditions cause a sudden change. The laterite soil, high diurnal temperatures and comparatively low annual rainfall (about 45 inches) result in Indaing forest (or dry dipterocarp forest) which is attractive to very few animals of the hill forests.

Our first camp was at 4,700 feet in the grassland on the south slopes and I doubt if the weather could have been more unpleasant. Except between four o'clock in the afternoon and ten at night there was thick driving mist and rain. The minimum temperature was 60°F., mildew formed on all our personal belongings and scarcity of good firewood made cooking very difficult. The thick mist reduced visibility to a score of feet and we were often unable to leave the camp for fear of getting lost in the grassland. I purposely chose these two worst months of the year as reports said that rhino like to congregate at certain wallows during the full moon of July.

Our second camp was on the north side where we sheltered under a huge overhanging rock. Although it rained almost continuously the surrounding forest kept us fairly dry. Owing to the configuration of the country the four main streams that rise in the northern slopes have numerous small tributaries, although many of them, even during the height of the monsoon, only flow after an exceptionally heavy shower. Those that are annual have their sources at springs of varying sizes and it was there that we found wallows. Some had been made by pig while others had been well churned by elephants. In one spot we found an old rhino wallow and at another puddle two indentations that might have been made by the nails of a rhino's foot. We found two sets of tracks and some dung which might have been two or three days' old. The continual rain and damp forest floor made it very hard to find, follow and identify tracks.

During our stay we sampled more than half the Reserve and came to the conclusion that there are two rhino still living but are naturally unable to say whether there are more. There might be. However, no

matter how many there are it is fairly certain that they are confined to the upper reaches of the streams as this is the remotest part of the Reserve. The western part has been visited by political insurgents and the eastern section is over-run by villagers during June and July when they collect certain jungle fruits.

Food to which the rhino is particularly partial, *Toddalia aculeata* and *Calamus* sp., grows abundantly at the sources of the four main streams and so it is here, in an area of about twenty-five square miles, that one will probably find the rhino population.

By questioning local villagers I learnt that seventeen rhino had been killed since about 1940, one man accounting for ten of them!! There seems to have been little hunting since 1956 owing to insurgents and recently the Government withdrew all privately owned arms and ammunition.

The values attached to various parts of the rhino are as follows:--

Dried blood	...	US\$2 per oz.
Fresh blood	...	US\$30 per lb.
Bone	...	US\$3 per lb.
Skin	...	US\$6 per lb.

and the horn varies from US\$105 to 210 PER INCH!!

It is doubtful whether the population can ever be determined precisely but it seems reasonable to believe that there might be between twenty and thirty *Didermoceros sumatrensis* and one or two *Rhinoceros sondaicus* still left in Burma.

Reference

TALBOT, L. M., (1960). A look at threatened species. *Oryx*, 5, 169-186.

UDJUNG-KULON NATURE PARK, JAVA*

By

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General Description

Udjung-Kulon is a peninsula at the most south-western part of Java, and with the small nearby islands covers an area of 41,120 hectares. It has long been famous for its wild life, and is the last remaining stronghold of the Javan or One-horned Rhinoceros (*Rhinoceros sondaicus*), one of the rarest mammals in the world today. It consists mainly of an obtuse conical mountain called Gunung Pajung, which means 'umbrella mountain', a name probably given to it because of the radiating ridges which resemble the frame of an umbrella.

The land is of mixed volcanic and sedimentary origin. The soil composition varies from the coral sands and limestones of the coast to tuff, tufa, marl sandstones, breccias, conglomerates and layered rock-formations on the higher areas, the ridges and mountain.

The southern and western sides of the mountain are walled by precipitous volcanic cliffs, from fifty to seventy metres high, which rise sharply from the sea. In several places the Grey-rumped Swiftlets (*Collocalia francica*) build their edible nests in the clefts and caves.

The eastern part of the peninsula is a low, gently rolling plateau some fifty metres high, whereas the western side is bordered by a row of hills which rise to about one hundred and forty metres.

The whole peninsula is covered with luxuriant forest and is uninhabited. Formerly there was a village called Djung-Kulon on the mainland opposite Peutjang Island, but in 1883 it was flooded by the tidal wave formed as a result of the eruption of Krakatau in the Sunda Strait. This wave swept away the entire village, together with the vast island-forest and morass-forest at the neck of Udjung-Kulon. All the present forests on the flat shore and on the islands have developed since that time.

* This is a comprehensive account of probably the longest established, the most studied and best developed Nature Park in the region. It is also one of the most interesting, being the last stronghold of the Javan or One-horned Rhinoceros, one of the last areas in Java with original lowland forest and yet at the same time containing around the coast and on the islands juvenile forest which has evolved since the destruction caused by the eruption of Krakatau in 1883. Ed.

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