

## CONCLUSION

Mount Kinabalu is probably the youngest granite intrusion in the world today, and with an age of around 1.5 million years is geologically very recent indeed. The radiocarbon ages of the wood found in the sedimentary beds around Kinabalu also show that the glacier on the summit was melting as recently as 3000 years ago.

The topography of the National Park is therefore very young. The easily eroded sediments combined with the heavy rainfall in the Park (110 in per annum at 5000 ft and over 200 in on the summit of Kinabalu) causes continual erosion to take place with the development of steep ridges and gorges cut by the ever running streams.

The topography is ever changing and still developing and will continue to do so until the loose sediments are washed down to the sea leaving vast areas of boulders and exposing again the original rocks of the Crocker Range. Nevertheless, Mount Kinabalu will continue to dominate the skyline and be the main topographical feature of the area.

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## Animal Life of Kinabalu National Park

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Over the centuries before the creation of the Kinabalu National Park under the National Park Ordinance of 1962, the local kampong people supplemented their diet of hill padi by collecting jungle fruits and by hunting. All the meat they obtained—apart from a few domestic fowls—was taken from the jungle. The continual hunting over the years decimated the population of animals, especially that of the larger mammals.

The National Park Ordinance gives the wild life in the Park absolute protection, and hunting is illegal. Some poaching still takes place but it is hoped that the continual policing of the boundaries, the education of the people, and the firm prosecution of offenders will help to bring home the need for conservation; and will be followed in time by the re-establishment of the depleted animal populations.

The Kinabalu National Park covers an area of 275 square miles with the greater part of about 200 square miles being situated to the north of Mt. Kinabalu and therefore inaccessible to the general tourist. This area is wild country with deep valleys, gorges and precipitous ridges clothed in dense jungle ranging from 500-13000 ft above sea level on the northern ridge of Mt. Kinabalu itself. The area also encloses Mt. Tambuyokan, 8426 ft.

The northern part takes many days of hard jungle walking for any expedition to get into it. In time, with the development of new roads and tracks, the area may become more accessible than at present and be an excellent source of ecological information for scientists. There are no plans at present for its future development other than the establishment of ranger stations to help to protect it. The area to my mind should remain in its wild natural state and become a reservoir and breeding ground for the greatly depleted fauna of Sabah. It is known to be the haunt of the very rare Sumatran rhinoceros (*Didermocerus sumatrensis*) which has been senselessly hunted over the centuries for the supposed magical properties of its horn. This animal, without conservation measures, may well become extinct in our lifetime but it is hoped that the existence of the National Park will help in its re-establishment. In 1961 the Royal Society Expedition to Kinabalu found tracks of the rhinoceros high up on the eastern ridge of the mountain. An unauthenticated report of 1970 also recorded tracks high up on Mt. Tambuyokan.

Two other rare animals, the Tarsier (*Tarsius bancanus*) and Orangutan (*Pongo pygmaeus*) are also to be found in the Park although away from inhabited areas. The protection given by the National Park Ordinance

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and outside its boundaries by the Fauna Conservation Ordinance of 1963 is having some effect, especially with the latter species as Park Rangers on boundary duties constantly report the presence of the animal or sight its nests. These reports however are all from the west, east and northern boundaries.

The mammals to be found in Sabah have been well described by Professor John Harrison in his book *An Introduction to the Mammals of Sabah*. They should all be present in the Park with the exception of the elephant and whale. Lord Medway's *Notes on the Mammals of Kinabalu National Park* (Park Information Leaflet 8) describes the mammals that a visitor to the Park can expect to see and also the zonal distribution by altitude of some of the small rodents on the mountain.

#### MAMMALS

Among the mammals known to be in the Park are the following:—

##### *Insectivora*

There are seven species of shrew, including the Kinabalu Shrews (*Crocidura baluensis*) known only from the higher levels of Mt. Kinabalu, the flying lemur (*Cynocephalus variegatus*) and Pangolin (*Manis javanica*).

##### *Primitive Primates*

There are ten species of tree-shrews in Sabah and they are the commonest animals seen around Park Headquarters. They are squirrel-like in habit and form but can be distinguished from the squirrel by their 'shrew-like' long pointed muzzles. Although called tree-shrews, they are often seen among low bushes and inspecting dead tree trunks at ground level. They make loud squeaking noises when disturbed which resemble in some way a bird alarm call. The Mountain Tree-shrew (*Tupaia montana*) is confined to Mts. Kinabalu and Trusmadi at elevations above 3000 ft.

The Slow Loris (*Nycticebus coucang*) and Tarsier (*Tarsius bancanus*) are also present but rarely seen. The Tarsier has only been reported on one occasion from the western side of the Park boundary.

##### *Primates*

Sabah has nine species of the apes and monkeys and it is surprising that none of them are ever seen in the areas surrounding the Park Headquarters at 5300 ft. This area was easily accessible to kampong people in the past and was much hunted over, which in all probability accounts for their absence.

To the north of the mountain and on the western and eastern boundaries, Macaques (*Macaca* spp.), Leaf Monkeys (*Presbytis* spp.), and the

Gibbon (*Hylobates moloch*) are often seen. The Orang-utan has been mentioned previously.

##### *Bats*

Fruit-eating and insectivorous bats are seen and heard at night. They are often caught in mist nets set up for bird banding causing much havoc to themselves and to the nets. The fruit bats are the worst culprits in this respect.

##### *Rodents*

Three species of porcupines are present, and in the whole of Sabah, 28 species of squirrels which include the flying, tree and ground varieties. Some of the smaller tree-squirrels are common at Park Headquarters, as are the ground-squirrels and should easily be seen by observant visitors.

There are also many species of rats present. The most interesting is the Kinabalu Rat (*Rattus baluensis*) which is only found on the summit zone of the mountain. This rat is unafraid of humans and is most inquisitive. Most visitors to the mountain who stay in one of the mountain huts will come across one of these rats, as they often enter the rooms to inspect the occupants. They seem to exist on the bare rocks of the summit by eating green matter and titbits left over by climbers.

##### *Carnivores*

There are several carnivores present in the Park but their presence have not been reported for the last few years.

Among the carnivores of Sabah are the Bear (*Helarctos malayanus*), weasels, otter, musangs and mongoose. The cat family is represented by the Clouded Leopard (*Neofelis nebulosa*) and four other smaller cats (*Felis* spp.).

##### *Ungulates*

This group includes the rhinoceros mentioned previously which it is hoped will re-establish itself in the Park.

The Bearded Pig (*Sus barbatus*, Fig. 1) is found in the Park and visitors walking the various trails may see signs of its presence from tracks and rootings.

Tracks of Mouse Deer (*Tragulus javanicus*) and Barking Deer (*Muntiacus muntjak*) may often be seen on the trails and occasionally, the Barking Deer may be heard to 'bark'. The Sambhur Deer (*Cervus unicolor*, Fig. 2) is also present but it has not been seen recently on the south side of the mountain. Medway reports that an antler of the species was once found at 13000 ft on the east summit of Kinabalu.

A herd of the wild cattle of Borneo, the Banteng (*Bos banteng*), was reported to me in 1969 by a Park Ranger who found them in the north eastern portion of the Park.



PLATE 60. Orang-utan. (photo—G.S. de Silva).

studying hill and mountain birds and also for the migratory species as they cross the Crocker Range.

Twelve common birds to be seen on the ascent of Kinabalu are described in Park Information Leaflet 7, by Smythies.

Despite the fact that the animal population of Sabah has been depleted over the years, there still remains a wealth of species within the National Park. With the protection given to them, it is hoped in time that their numbers will increase and that they will become easily seen again in the future.

Nevertheless, with keen observation, the general tourist can find much evidence of animal life and if lucky, catch an occasional glimpse of a wary animal.

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