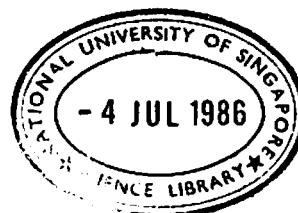


NATURE CONSERVATION
IN
WESTERN MALAYSIA, 1961

*An issue to mark the occasion of the
TWENTY-FIRST ANNIVERSARY
of the founding of the
MALAYAN NATURE SOCIETY
1940 — 1961*

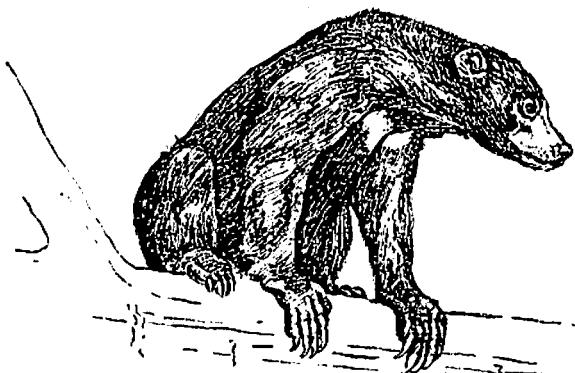
Edited by
J. Wyatt-Smith and P.R. Wycherley



the pressure for land increases there is no doubt that if a sensible overall land use policy for Malaya is to be instituted and one in which the conservation of wild life is to play its part, it will be absolutely essential for both the Forest Department and the Game Department to work closer together than in the past and to provide comparatively small strict sanctuaries for wild life in carefully chosen localities within existing large Forest Reserves.

Reference

Report of the Wild Life Commission of Malaya, 1930; Vols. I—III. Government Printing Office, Singapore, 1932.



WILD LIFE CONSERVATION IN NORTH BORNEO

By

P. F. BURGESS

The colony of North Borneo, with about eighty per cent of its 29,388 square miles still under evergreen rain forest, may be conveniently divided for purposes of discussion here into the West Coast and Interior Residencies, and the Sandakan and Tawau Residencies. Extensive shifting cultivation is practised in the hilly West Coast and Interior Residencies and little primary forest remains there; the population density averages about thirty-one persons per square mile. In the less mountainous Sandakan and Tawau Residencies man has until recently made little impact on the forests and the population density is less than six persons per square mile.

The island of Borneo lies on the Sunda Shelf and in prehistoric times was connected to the mainland of Asia. The fauna of the Malaysian region (that is the Malay Peninsula, Sumatra, Java, Borneo and the adjacent small islands) has affinities largely with the Indo-Chinese sub-region and a western and an eastern drift from that sub-region can be recognised. In the western drift many mammals reached Borneo through Malaya and Sumatra, with the notable exception of the tiger, Malayan tapir and the common Malayan wild pig. The banteng and the Ferret Badger (which are absent from Malaya and Sumatra) reached Borneo from the Indo-Chinese sub-region on the eastern drift, and the Proboscis Monkey also has strong affinities through that drift with the Indo-Chinese sub-region. The Megapode or Incubator Bird is an interesting example of a species which has crossed Wallace's Line from the Australian region. Borneo being a continental island with no longer any connection with the mainland of Asia, has a fauna which is particularly vulnerable; should any species become extinct through man's activities there is no possibility of natural recruitment from the mainland of Asia.

Legislation

The Wild Animals and Birds Preservation Ordinance, 1936, contains the main legislation for the protection of wild life; elephant, rhinoceros, banteng, tarsier, orang utan, gibbon and Proboscis Monkey are all protected and the maximum penalty for shooting, killing, capturing, wounding or keeping any of these without a licence is a fine of up to \$500 and imprisonment for six months. Shooting deer with a blowpipe is not controlled, but if firearms are used a licence is necessary. Game licence fees are \$100 per head for elephants and \$20 and \$5 respectively

for unlimited licences to shoot banteng and deer. The Ordinance contains a long list of protected birds; those not protected include the petrels, duck and teal, most birds of prey, several partridges and pheasants, plovers, curlews, snipe, pigeons and parrots.

Licences to shoot elephant, banteng, deer and protected birds may be issued by the Governor, the Residents, District Officers and the Conservator of Forests respectively, and it is declared Government policy not to issue licences to shoot deer and banteng for the sale of their meat. The shooting of tarsier, orang utan, gibbon and Proboscis Monkey is prohibited, though the Governor (who has in this respect delegated his powers to the Conservator of Forests) may issue licences to keep these animals as pets. The issue of licences to kill rhinoceros has been prohibited since April 1947. Specific penalties are laid down for shooting female animals under game licences and these range from \$5 for a doe to \$500 for a cow elephant; fishing with explosives, pursuing game with cars or aeroplanes, using headlights or spotlights to dazzle game, shooting from trains or steamers, using spring guns, sharpened stakes or fire for hunting are all forbidden. A land holder may kill any protected animal in defence of human life or his crops or property. In order to restrict trade in wild animals, the import of rhinoceros, banteng, tarsier, orang utan, gibbon or Proboscis Monkey has been forbidden under the Customs Ordinance since 1950, and the export of birds is also prohibited except under licence from the Conservator of Forests.

The Birds Nest Ordinance, 1914, is concerned with the orderly exploitation and marketing of edible bird-nests rather than the conservation of the swiftlets producing them. There is, however, provision for the District Officer to regulate the taking of nests and all nest collectors are required to have permits.

The Turtle Preservation Ordinance, 1917, is designed to control the killing of turtles and the collection of turtle eggs, and licences are issued by the principal European Customs Officer of any port or by the District Officer under this Ordinance. The Green Turtle (*Chelonia mydas*) is the egg producing turtle, and the Hawksbill Turtle (*Eretmochelys imbricata*) the producer of turtle shell. The maximum penalty for offences under the Ordinance is a fine of \$100 and imprisonment for six months.

The Forests Ordinance, 1954, prohibits hunting and fishing in Forest Reserves, except under permit issued by a Forest Officer, and the maximum penalty is a fine of \$1,000 and imprisonment for six months. All tusks and similar trophies are forest produce when found in Forest Reserves, and their disposal is under the general control of the Conservator of Forests.

It will be seen that the administration of the various Ordinances concerned with the conservation of wild life is divided between the Governor, the Residents, District Officers, Customs Officers and Forest Officers, and at present no single authority is responsible for the protection of wild life as a whole. In practice, hunting and shooting within Forest Reserves is controlled by the Forest Department staff and in other lands such control is in the hands of the licensing authorities.

Sanctuaries

Bird sanctuaries have been declared at Sipidan Island (a possible nesting place of the Lesser Frigate Bird), Bohaydulong Island (a nesting place of the Megapode), Kota Belud (visited by migratory wild fowl during the winter months) and at Labuan. A proposal was made in 1933 to reserve under the Land Ordinance a considerable area in the Upper Segama and Tengkayu drainages in order to protect rhinoceros, but this proposal had to be abandoned due to opposition by timber interests. Consideration is being given now to reviving the proposal in a modified form.

Present Status of Principal Animals

Since the termination of the British Borneo Timber Company's monopoly in 1952, the forests of North Borneo have undergone great development and many areas hitherto untouched by man have been worked, largely by mechanical methods, for timber. These areas have been made accessible by road and rail and timber camps of considerable size established far into the jungle. Great agricultural expansion has also taken place in the Apas and Quoin Hill areas of Tawau, at Mostyn, behind Semporna, to the west of Lahad Datu, and in the Sandakan Peninsula a main trunk road is under construction from Sandakan westwards to Telupid on the Sg. Labuk where large scale development of rich volcanic soils for agriculture is envisaged. The impact of this development upon the wild life of the Colony varies considerably from species to species.

The principal animals of the Colony are considered briefly in the following notes, and an attempt has been made to evaluate the effect of the development of the Colony on the more important species:—

Order - Primates

Family - Simiidae

The Orang Utan (*Simia satyrus*) (syn. *Pongo pygmaeus*).

North Borneo remains one of the strongholds of this generally rare species. There is evidence from the number and distribution of the peculiar nesting platforms which this animal builds in trees and from visual records and captures, that the species is distributed throughout the Colony, and that the stock is a

considerable one. Since, however, nesting platforms are usually used only for one night, the presence of a large number of these platforms does not necessarily indicate the presence of a large number of orang utan. The extension of timber working and land clearance for alienation is not so favourable for the survival of the orang utan as it is for deer, banteng and elephant; the orang utan is relatively easily captured and cases continue to occur where the young are caught after the mother is either shot or killed in tree felling operations. It is impracticable to return these young animals to the jungle and it is Forest Department policy to take possession of them and keep them under Departmental arrangements until they are large enough to be presented to overseas zoological gardens. Exports of orang utan under these arrangements during the past five years have been as follows:—

1956	—	2 individuals
1957	—	5 "
1958	—	2 "
1959	—	5 "
1960	—	3 "

Departmental proposals have been made for the establishment within one of the larger Forest Reserves of a station where captured young orang utan can be fed and allowed increasing freedom until they return to the jungle of their own accord, and in view of the increasing rarity of this species throughout the world it is considered that such arrangements would be preferable to the export of captured animals.

Family - Hylobatidae

The Sunda Island or Grey Gibbon (*Hylobates moloch*)

Only the one species of gibbon occurs in North Borneo and it is protected under the Wild Animals and Birds Preservation Ordinance. Gibbons are, however, often caught, particularly in timber felling operations, and kept as pets. They rarely live very long in captivity abroad and frequently suffer from pulmonary complaints; licences to keep captured gibbons within the Colony are issued reasonably freely. There is no indication that the stock is in any way declining.

Family - Cercopithecidae

The Crab-eating Macaque (*Macaca irus*)

The Pig-tailed Macaque (*Macaca nemestrina*)

The Crab-eating Macaque is commonest in estuarine swamps, but is found throughout the country up to 4,000 feet. The Pig-tailed Macaque is usually found in lowland forest and is not attracted to river banks and seashores as is the Crab-eating Macaque. The Pig-tailed Macaque occasionally causes damage in rice fields and is often tamed for picking coconuts. Neither species is in danger of becoming rare.

Family - Colobidae

The Banded Leaf Monkey (*Presbytis femoralis*)

The Sunda Island Leaf Monkey (*Presbytis aygula*)

The Maroon Leaf Monkey (*Presbytis rubicundus*)

The White-fronted Leaf Monkey (*Presbytis frontatus*)

The Silvered Leaf Monkey (*Trachypithecus pyrrhus*)

The leaf monkeys, particularly *P. aygula* and *P. frontatus*, were formerly



Photos: G. S. Brown

A young proboscis monkey.



Young orang hutan.

G. S. Brown.

much persecuted in Sarawak as the source of bezoar or geliga stones, but there is no record of leaf monkeys being destroyed for this purpose in North Borneo during recent years.

The Proboscis Monkey (*Nasalis larvatus*)

This species, allied to the leaf monkey, is confined to Borneo, but is by no means rare in the mangrove and riparian forests of the Colony. The species is rarely molested and cases of capture or shooting are almost non-existent. It occurs in the coastal forests of both the East and West Coasts of the Colony and appears to prefer to sit in trees over water. There is no danger at present of this species becoming extinct.

Family - Tarsiidae

The Tarsier (*Tarsius tarsier*)

This animal is protected, but is nocturnal and is rarely seen or molested.

Order - Carnivora

Family - Ursidae

The Malay Bear (*Helarctos malayanus*)

This animal is not commonly seen in North Borneo but appears to be more common on the West Coast than the East. It occasionally causes damage by eating the leading shoots of coconut palms, but it is rarely molested.

Family - Viverridae

The Binturong (*Arctictis binturong*)

This is the largest civet in Borneo and since it is largely nocturnal and also spends much of its time in the tree tops, it is rarely seen or molested. One was, however, shot in Kretam in 1957. This is a species of the primary forest and at present appears to be in no danger of becoming rare.

Family - Felidae

The Clouded Leopard (*Felis nebulosa*)

The Marbled Cat (*Felis marmorata*)

The Leopard Cat (*Felis bengalensis*)

The Flat-headed Cat (*Felis planiceps*)

These, with the exception of the Clouded Leopard, are small animals, about the size of a domestic cat; the Clouded Leopard may reach nearly six feet "between pegs", but nearly half this length is tail. Little is known of the distribution of the smaller cats, but the Clouded Leopard has been recorded on several occasions at Kalabakan near Tawau. All the cats are forest dwellers and are in no danger of becoming extinct.

Order - Edentata

Family - Manidae

The Scaly Anteater or Pangolin (*Manis javanica*)

The skins and scales of these animals were exported in considerable quantity before the war to China where they were used for making charms. During the period 1912-1935, no less than 2,300 pangolin were killed every year to maintain this trade, but of recent years exports have almost entirely ceased and the animal remains relatively unmolested.

Order - Ungulata**Family - Elephantidae****The Asiatic Elephant (*Elephas maximus*)**

The origin of the North Borneo elephants is obscure, though it is commonly believed that they are the descendants of a number of beasts given to the Sultan of Sulu by the East India Company in 1750 and subsequently liberated in North Borneo. There are, however, records of the existence of elephants (probably tame ceremonial beasts) in Brunei in 1521 and there are also fossil relics of elephant bones. The elephant of North Borneo is confined to the East Coast and does not appear to have penetrated north of the Sugut River. The species extends south into Indonesian Borneo and the limits in this direction are not precisely known. The western limits of elephant in North Borneo are indefinite, but they have recently been recorded as reaching Penungah on the Kinabatangan River for the first time and they are occasionally, though very rarely, recorded near Pensiangan, probably having entered from Indonesian Borneo. The North Borneo elephant is far less shy of man than is his Malayan counterpart and many instances have been recorded of elephant staying in close proximity to forest operations for considerable periods and refusing to move on. Borneo elephants are popularly supposed to be smaller than those of Malaya and Burma, but it would probably be more correct to say that large bulls are rarer. An average elephant in North Borneo appears to be no smaller than that in Malaya; forefoot diameters of fifteen inches and more are not uncommon. Elephant in the settled areas of the East Coast are persistent crop raiders and occasionally individuals are shot for this reason; there is no indication of any decline in numbers in the elephant population due to the control of crop raiders. The largest pair of tusks on record from the Colony was found in the forest near Tawau, weigh thirty-three and thirty-two and a half pounds, and each measures four feet eight inches along the outer curve; there is no reason to suppose that these tusks are exceptionally large, since systematic recording of information of this kind has only recently been established in the Colony. It would appear that forest exploitation and regeneration operations in general favour elephants, since the regenerated forest contains more feed than did the primary forest which it replaces. The constant presence of man and noisy mechanical extraction plant in the forest may, however, have a tendency to move the elephants into the undisturbed primary forests of the centre of the Colony, and this may account for the presence recently of elephants further west than previously recorded.

Family - Suidae**The Bearded Pig (*Sus barbatus*)**

This is the only species of pig recorded from the Colony, the common wild pig of Malaya (*Sus cristatus*) not having reached Borneo. There is considerable variation in the colour of *Sus barbatus*, some individuals being white. Local migrations of Bearded Pig are well known and are said to be due to the fruiting of certain trees (possibly *Shorea gysbertiana*, the illipe nut), and during these migrations enormous numbers of pig are sometimes shot. Pig are very common around cultivation and are declared a pest under the Agricultural Pests Ordinance 1917. They appear, however, to be well capable of holding their own and there is no risk of the species becoming extinct. The lack of tiger in North Borneo is probably one reason for the extremely large pig population.

Family - Tragulidae**The Larger Mouse Deer (*Tragulus javanicus*)****The Smaller Mouse Deer (*Tragulus kanchil*)**

These small deer are both shot and trapped in large numbers, but even in the heavily shot areas it is remarkable how many may be seen along timber extraction routes with a torch at night. There would appear to be little danger of this animal becoming rare.

Family - Cervidae**The Sambur (*Cervus unicolor*)**

The common Malay name *rusa* is not commonly used in Borneo, where the species is known as *payau*. The Sambur is largely parasitic on man and appears to congregate in large numbers around food crops and shifting cultivation on the edge of the forest. For this reason and because the meat is in great demand, this species suffers more from excessive shooting than any other animal in the Colony. The creation of lush grazing along timber extraction routes, the settlement within the forest of large camps of forest workers with inadequate meat supplies, and the fact that Sambur can easily be shot with a shotgun, has led to widespread slaughter of these deer wherever the forest is opened up. It has even recently become necessary to permit the shooting of Sambur for the sale of meat in the Semporna sub-district, though in general Government policy is against such shooting. As mentioned previously, the use of powerful lights to dazzle animals is illegal under a Rule made under the Wild Animals and Birds Preservation Ordinance, but the use of headlamps for night shooting of deer is extremely widespread and the control of such illegal shooting is in general difficult to enforce. As in Sarawak, it appears likely that the only way of preserving this species will eventually be in game sanctuaries, where the entry of human beings is forbidden except under carefully controlled conditions. The vast forests of the centre of the Colony, however, must still contain a considerable stock of Sambur and there is no immediate danger of the species becoming rare. The control of illegal shooting of Sambur outside Forest Reserves is in the hands of the licensing authorities.

The Barking Deer (*Muntiacus muntjak*)

This inoffensive animal suffers like the Sambur from considerable shooting, both legal and illegal. It is, however, less given to congregating near cultivation than the Sambur and is more an animal of the primary forest. Considerable numbers are shot by survey and prospecting parties, but there is no reason to suppose that the number killed is greater than the natural increase.

Family - Bovidae**The Banteng (*Bibos sondaicus*)**

Banteng are not entirely forest dwellers and require grassland or secondary forest for their food supply. As a result, they tend to cause damage to cultivation and since they are not aggressive they are very vulnerable to poaching. The exploitation of the forest for timber is followed by the establishment of lush regrowth with grass (not *Imperata*) along extraction routes and this is very favourable for the banteng; provided poaching and unnecessary shooting in defence of crops can be kept under control, the future for this species is good. Unfortunately, the meat of banteng is in great demand, since very few domestic cattle are kept on the East Coast, and there is no doubt that considerable illicit

slaughter of banteng takes place. The shooting of the species for the sale of meat has now been prohibited by Government, but in the immediately post-war years banteng meat was shipped from Tungku in Darvel Bay in specially constructed refrigerated launches and it is gratifying to record that this trade has now entirely ceased. The control of illegal shooting of banteng outside Forest Reserves is carried out by the Administration and the Police Department.

Family - Rhinocerotidae

The Sumatran or Two-horned Rhinoceros (*Didermoceros sumatrensis*)

This animal is more in need of protection than is any other species of mammal found in the Colony. Throughout the East the rhinoceros has suffered from poaching due to the supposed aphrodisiac properties of all parts of the carcass, but in particular the horn, and North Borneo is no exception. There is no provision under existing legislation to make the possession of rhinoceros horn an offence, and since rhinoceros are found only in remote areas and the horn is relatively easily concealed, poaching is difficult to control. Rhinoceros have been recorded during recent years in the Upper Kinabatangan, the Darvel Bay forests, the Dent Peninsula, near Ranau, and in the Interior Residency, where in 1957 the Resident recorded that rhinoceros were on the increase. Any estimate of the numbers of rhinoceros living in the Colony today is bound to be largely guesswork, but it is unlikely that more than twenty to thirty individuals exist. The Forest Department has evidence of rhinoceros poaching having taken place in the Darvel Bay area in 1958 and the presence of Iban hunters (recruited in Sarawak) in the timber camps is a powerful factor in the organisation of rhinoceros poaching. A rhinoceros was shot illegally in Ranau in 1958 and the offender convicted in court. It is of interest to record that during the years 1912-28, legal exports of rhinoceros horn alone indicated that about twenty rhinoceros a year were being killed, but it is probable that many of the exports were of horn imported from South Borneo. Only the most determined efforts, including constant patrolling by game rangers employed solely for the purpose, combined with the enactment of legislation to make the possession of parts of rhinoceros illegal, is likely to save this species from extinction in North Borneo. Every step in the development of the Colony, whether it be alienation of land for agriculture or the exploitation of the forests for timber, is likely to result in the further destruction of rhinoceros and ultimately the preservation of the species within a large and well patrolled game sanctuary is probably the only possible means of ensuring its survival.

Birds

Relatively little shooting of birds for sport or for food is carried out in the Colony. The number of migrant duck visiting the Kota Belud area during the winter months has, however, declined of recent years if pre-war tales of the shooting enjoyed there are to be believed. This decline may well be due to the stalking of duck on the water by natives using water buffalo to approach the birds, and it is hoped that the declaration of a bird sanctuary over the main marsh visited by the duck will go a long way to encouraging their return. The number of *pergam* (Green Imperial Pigeon) and *punai* (mainly Pink-necked Green Pigeon) which flight to and from the mangrove in the evening and early morning is enormous and must be reminiscent of the numbers said to flight in Perak and Selangor in the 1920's. The pheasants and partridges are caught in traps, particularly by timber camp employees, but there is no reason to suppose that this trapping, though largely illegal, is in any way reducing the stock of these

birds. The eggs of the Megapode are valued as food and are collected in considerable quantities by the natives, but in order to protect the egg supplies the natives themselves are reluctant to kill adult birds, which are thus reasonably effectively protected.

In conclusion it should be emphasised that the rich wild life heritage of North Borneo remains as rich as it is largely because the Colony has been little developed. There are now signs, however, of rapid economic development, though the possible dangers therefrom to wild life should be offset by a new Wild Life Conservation Bill which is shortly to be introduced in the Legislative Council.

