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STATUS OF CONSERVATION IN WEST MALAYSIA

A. General Data

1. Area: c 50,000 square miles.
2. Population: 8 million.
3. Economy: Rubber and tin.

B. Government Departments and Official Organizations concerned with Conservation

1. Game Department; Chief Game Warden, Seremban, Negri Sembilan.
2. Department of Forestry, Kuala Lumpur; with State Forest Officers in each State.
3. Department of Fisheries, Director, Kuala Lumpur.
4. Department of Agriculture, Director, Kuala Lumpur.

C. Organizations concerned with Research into Conservation

All Departments listed above in B have research branches.

D. Private Conservation Organizations

Malayan Nature Society (P.O. Box 750, Kuala Lumpur). General conservation.

E. National Parks and Equivalent Reserves

1. The Game Department is responsible for establishing and maintaining West Malaysia's National Park (Taman Negara). The objects of establishing and maintaining the Taman Negara are to preserve and protect the flora and fauna, and objects of geological, archaeological and other scientific interest and through its utilization to promote the education, health and recreation of the people.
2. West Malaysia has only one national park (Taman Negara). It was established in 1938, and named the King George V National Park. It is located in the three states of Pahang, Kelantan and Trengganu. The most significant feature of the Park is that its fauna includes most of the species known to exist in the West Malaysian Peninsula, and even some of the rarest species in Asia.
3. Public information is offered in the form of a park brochure.
4. Some training of Park staff is given owing to shortage of trained officers.
5. At present, the Park has a 4-roomed rest house, 4 two-roomed chalets, a 40-bed hostel, and 5 two-roomed halting bangalows.

6. The Taman Negara is under the charge of a superintendent. He is responsible for the administration and control of the Park.
7. Ninety-nine per cent of the Park is true wilderness.
8. No exploitation, except for angling under licence.
9. The protection of the park is presently satisfactory but the problem will be apparent as agricultural development gets nearer to its borders.
10. No exotic introductions.
11. The major problems facing the Taman Negara are:
  - a) Insufficient funds for training of staff.
  - b) Difficulty in recruiting staff of the right calibre.
12. Over half a million dollars would have been spent by the time the conference starts to create more and better facilities for tourists and to improve accommodation for staff.

F. Other Areas

The Game Department has many other areas in mind to be created into Game Reserves of National Nature Monuments in various parts of West Malaysia. Total area amounts to 152 square miles.

G. --

H. --

I. Conservation of Wildlife

1. The Game Department is responsible for conservation of wildlife.
2. The laws protecting wildlife are found in the Wild Animals and Birds Protection Ordinance No. 2 of 1955. The present ordinance is considered to have many 'loop-holes' and requires revision.
3. Enforcement of this Ordinance is inadequate, as the Game Department is facing a serious shortage of staff and trained officers. Public support is also not encouraging but improving.
4. No training at the present moment.
5. At present, staff of the Game Department take action to drive animals away from cultivations they are destroying as soon as such a case is reported. As a final resort 'leaders' of the herd may be shot and killed to drive the animals away.

6. (a) The CHIOR Game Reserve has an area of 14 square miles. It is situated north of Sungei Siput, north of Perak.
- (b) The Taman Negara has an area of 1677 square miles. In addition to being a game reserve, it is also Malaya's only National Park. The object of this Park is the conservation of the fauna and flora indigenous to this country.
- (c) The Sungkai Game Reserve has an area of 15 square miles. It is situated north of Sungei Siput, north of Perak.
- (d) The Krau Game Reserve is situated east of Raub, Pahang. It has an area of 252 square miles. In this Game Reserve are many Elephants and Seladang.
- (e) Sungei Dusun Game Reserve has an area of 10,700 acres. It is situated southwest of Tanjong Malim, Perak.
- (f) Bukit Batu Game Reserve has an area of 7½ square miles. East of Kuala Kubu Bahru, Selangor.
- (g) Golf Course Kuala Lumpur Reserve.
- (h) Port Dickson Island Bird Sanctuary is situated on Pulau Burong (2 roods), Pulau Babi (1 rood) and Pulau Perjudi (1½ rood). They are situated to the southwest of Port Dickson.
- (i) Segamat Wild Life Sanctuary (146 square miles) and Endau-Kluang Wild Life Reserve (401 square miles). Both these reserves are situated on the northern border of Johore and Pahang.
- (j) Endau-Kota Tinggi Wildlife Reserve (878 square miles) is situated north of Kota Tinggi, Johore.
- (k) Kuala Pahang Bird Sanctuary has an area of 5 square miles situated to the east of Pekan, Pahang.

Note: The objectives of a), c), d), f), i) and j) are for the conservation of wildlife. As for b) above, in addition they also serve as a place of recreation for tourists. g), h) and k) are chiefly for the conservation of birds. Finally, e), the Sungei Dusun Game Reserves were created for the conservation of the Rhinoceros found there.

#### 7. Wildlife Research:

- (a) Research projects are being carried out.
- (b) A research division is being formed in the Game Department.
- (c) In addition to the rhinoceros, research on the elephants (Elephas maximus), gaur or seladang (Bos faurus) and sambur deer (Cervus unicolor) are deemed most urgent.

#### J. Threatened Species of Animals and Plants

1. Javan and Sumatran Rhinoceros (Rhinoceros sondaicus) and (Dicermocerus sumatrensis). Both species are believed by both the Malays and Chinese to be a 'miracle animal' and that all parts

of the animals have some medicinal value to cure all kinds of illness. It is believed that scraping of the rhinoceros horns made into a brew and taken will cure cancer and other diseases! An ounce of rhinoceros horn would fetch anything up to \$350.00 (Malaysian dollars), dried rhino blood could be sold at \$45.00 an ounce and even its dung is readily bought by Chinese practitioners.

The gaur or seladang (Bos gaurus) is poached for its meat.

2. Action in the right direction is being taken to save the rhinoceros; however, more could have been done if more funds were available.
3. Measures to prevent extermination: The creation of more game reserves in areas where these animals are found. A stricter law (the maximum penalty under the present Ordinance is 6 months imprisonment and/or a fine of \$ 1,000 for killing a totally protected animal which includes the rhinoceros) is insufficient to act as a deterrent. And finally the recruitment of more officers and Game Rangers to enforce the law.

K. --

L. --

M. Training of Conservation Personnel

1. Training schools:
  - (a) There are training schools for forestry personnel
  - (b) None for wildlife management.
  - (c) None in national park management.
  - (d) None in other aspects of conservation.
2. No opportunity for advanced training in above subjects (as such).
3. Dr. Lee Talbot was here recently; his report has not yet been published.
4. For training we believe that it would be preferable to send local staff abroad to established institutes, rather than to bring in 'international experts' unacquainted with local conditions, without special sponsoring from the Government, but see N. below.

N. Urgent Conservation Problems

We give below comments of an officer of the Game Department.

'In my opinion, the most urgent conservation problems facing my country today are listed as follows:

- (a) the shortage of staff of the Game Department;
- (b) lack of facilities and trained staff to do research work;
- (c) lack of facilities to train the staff of the Game Department;
- (d) lack of public support.

To approach the above problems particularly on a), b) and c) above, high officials of the Government should be made to see and understand the importance of the conservation of wildlife to this country and the world at large by local individuals or organizations and international organizations like the IUCN and others. Once the high officials of the Government see the point and give us their support I feel sure the problem will solve itself. As for d) above, once problems a), b) and c) are solved, then we could start on the 'education' of the public by running civic courses and lectures at school, etc. Presently international organizations could help immensely by sending us experts to help us in doing research work and training our officers overseas'.

#### RESEARCH IN RELATION TO NATIONAL PARKS AND NATURE RESERVES

by

Bernard THONG, Chief Game Warden, West Malaysia

#### Annex to: Status of Conservation in West Malaysia

Sound and realistic plans for the establishment and development of national parks and nature reserves must be based on research. Only thorough and continuing research can ensure that the precise requirements for the survival of a particular plant or animal are discovered. Unless such requirements are known, effort will be wasted in setting up reserves which will fail to achieve their intended purpose. The role of research in conservation is that of providing sound knowledge of facts and a reasoned estimate of the consequences on which to base action.

#### Introduction

National Parks and Nature Reserves are important especially for countries in South East Asia when much of their cultural richness is directly related to nature and natural objects, plants and animals. Under modern conditions, true national identity can only emerge if this natural context is carefully preserved. Therefore, realistic and soundly based plans must be made for the establishment of National Parks and Nature Reserves. Successful planning can only be based on research.

The plant and animal communities of our country are rich and diverse, comprising many different species of great variety. In this diversity, characteristic animals or plants are frequently specialized in their ecological requirements. If precise requirements can be discovered by

research, it may be possible to ensure the survival of particular plants or animals, or of whole inter-related animal communities, by setting aside tracts of land fulfilling these requirements.

It is important to stress that the characteristic tropical diversity of species is associated with relative scarcity of individuals of each component species. In other words, although there are many kinds of plants and animals in a given area, relatively few individuals of each kind will be found. In temperate countries, there are fewer kinds of animals or plants but more individuals of each kind. Therefore, in a tropical country like ours, proportionately larger areas of suitable habitat will be necessary to ensure the survival of a given plant or animal population. Research carried out on related forms in a temperate country will not provide a reliable basis for judgement of the minimum desirable area.

The estimation of the numbers of animals present in a given area selected as a potential Reserve can be based on direct observation only in a few cases; for example, birds favouring open habitats like the waders and other water birds, or large mammals of gregarious habit like the elephant or seladang. Both the elephant and seladang are conspicuous and often of economic importance as potential pests of cultivation or as game animals. Herds of both these animals are therefore generally well-known in areas where they occur. Reasonably accurate estimates of numbers and distribution can be based on reports of people who have an interest in the matter.

#### Techniques

Throughout our country, forest is the natural climax vegetation. Most genuinely indigenous animals are therefore restricted to forest habitat, in which it is not possible to make direct counts of the smaller or non-gregarious animals, but research programmes to establish the numbers present in a selected area are not difficult to devise. Some authorities recommend total collection from sample plots as a possible technique but it is felt that this method is not a good solution to the problem. It could also be disastrous if the species concerned was already rare. The use of the mark-release method is considered advisable, by which animals are trapped, marked in such a way that they can be recognised on subsequent capture, and returned to their original home range. The method of marking must not prevent the animal from continuing to behave in a normal manner. Within this limitation a variety of techniques can be used, ranging from dabs of paint or dye, to numbered metal leg-rings or ear-tags. In an area in which a known number of individuals have been marked, it is possible to calculate the total population present from a factor based on the proportion of marked to unmarked animals in any sample.

If this technique of mark-release is continued long-term, research projects involving marked individuals, will also yield indispensable data on longevity, reproductive cycles and other periodicities such as moult or antler shedding, fecundity, population structure and social relations, local and long distance movements, and many other aspects of

animal biology that are essential background knowledge. Unless such details are known, efforts will be wasted on setting up reserves which will fail to achieve their intended purpose.

### Reserve Boundaries

For example, boundaries may not be correctly drawn. Many of our larger animals travel long distances during the course of the year. Some undertake regular migrations, others like the elephants and seladang move irregularly within circumscribed areas. It is virtually impossible to alter the course of such movements, even by establishing artificial barriers. Unless the full range of the herd at all times of the year is totally enclosed within reserve boundaries, the animals may be subject to hunting and poaching at certain points on their habitual route. The effects of partial protection within the reserve can thus be completely useless.

There may also be natural seasonal fluctuations in numbers of animals, particularly of the smaller species. The annual climatic changes in tropical Malaysia are not associated with the marked variation in temperature characteristic of the temperate country. However cyclic variations in rainfall produce distinct seasonal changes which are reflected in the reproductive biology of our indigenous wild animals, many of which prove on investigation to have restricted annual breeding seasons. Reserve boundaries drawn on the basis of population densities calculated at seasonal peak of numbers, could enclose an area too small to ensure the survival of the species through the subsequent drop in numbers.

### Management

Even after the establishment of a reserve, continued research is indispensable to ensure that the reserve fulfils its intended function. At the very least, marking and sampling of animals should continue as a check that populations are being maintained at a satisfactory level.

Under foreseeable conditions in the future, it is in fact inevitable that in our country, as already in many temperate countries, reserves will require active management. When animal or plant numbers drop below a minimum level, it will be necessary to take action to prevent the extinction of the species concerned. Such action may include, for example, felling or replanting parts of the forest, draining or damming water sources, application of fertilizers, or provision of food sources or feeding stations for animals. But to be effective, the appropriate action must always be based on the results of thorough and systematic research.

It must be recognised too that that reverse situation may arise; that the numbers of one animal or plant (even the species which the reserve was designated to protect) can so increase that it begins to destroy the habitat, thus endangering associated forms of life or even its own species. In this case again, research will be needed to discover

appropriate remedial action, perhaps felling or culling, replanting or translocation.

### Research

In those few examples, the value of research in relation to National Parks and Nature Reserves is illustrated. At this stage it must be borne in mind that the word "research" is not something only a scientist or someone with a university background can do. In fact most of the procedures involved are simple and straight forward. "Research" in this context refers to the systematic collection of information about wild animals or plants. In everyday life, we try to take action only on the basis of sound knowledge of facts and a reasoned estimate of the consequences. In relating research to the problems of conservation, it is felt that in this field we should apply the same rule as we do in every day life.

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