

## REVIEWS.

### I.—ANNUAL REPORT ON GAME PRESERVATION IN BURMA FOR THE YEAR ENDED 31st MARCH 1938.

The 'Annual Report on Game Preservation in Burma' for the year which ended on 31st March 1938 gives us little information about practical Game-Preservation. The reason is not far to seek. The Burma Government vote inadequate supplies from the large forest revenue for this service.

We read on the first page of six areas aggregating 542 square miles, nearly 150,000 acres, containing a formidable list of species to be preserved—that we may presume was the object in creating these sanctuaries—, but when we turn over the page we find that only two of these sanctuaries have guards attached to them, and then only a total of eight, six in the Pidaung Sanctuary and two in the Kabita Sanctuary.

In these areas there were two cases of poaching discovered in the Pidaung Sanctuary and none in the others. As four of them appear to have looked after themselves—this is not surprising.

In paragraph 8 we are informed that 'From reports of the keepers the stock of animals appears to be increasing steadily', in the Pidaung Sanctuary. One bison herd of 105 animals was reported, and the Game Warden himself obtained a close-up view of another herd containing 52 animals. The counting of a herd of wild animals, always moving, always restless, is a very difficult and exacting business, and only figures obtained by trained observers, such as the Game Warden himself, can be considered as reliable.

In paragraph 9, bison and *saing* are referred to as 'rutting' in April, but the *Besidae* do not rut in the meaning of the word as applied to the *Cervidae*. With bison and *saing* the females come into season not the males, and although the reasons for the urge are somewhat obscure it is probably governed by conditions of feeding rather than by conditions of weather due to seasonal changes.

Mention is made of the probability of any very old bison being killed by tiger or panther. It would be interesting to know of any reliable records of panthers killing bison.

In several places in this report it is suggested that action might be advisable to reduce tiger in sanctuaries. The very name 'Sanctuary' implies a refuge for all wild life and in the early stages of conservation of wild life as pertains at present in Burma such mistakes should be avoided.

In paragraph 12 the Kabita Sanctuary is referred to as having as its sole object the preservation of *Rhinoceros sondaicus*, and it is recorded that during the year a calf was born, bringing the total up to seven specimens.

These statements are based on the reports of the ranger-in-charge of the sanctuary and no expert examination was made by the Game Warden.

I have recently seen a report made by an entirely independent observer, well qualified to explore the area and examine the evidence, and it is extremely doubtful if there are anything like seven *sondaicus* in this sanctuary. The statement that a calf was born during the year was not supported by any reliable evidence obtained by the investigator I refer to.

As his report is published in this issue it is unnecessary for me to refer to the matter further.

In paragraph 15, sanctuaries are proposed for thamin, the Brown-antlered Deer, in the Shwabo Division, which it is hoped will be constituted during the coming year.

This rare and striking deer has been persecuted to such an extent in Burma that it is on the verge of extermination, and as the Game Warden writes, 'There is little doubt that the continued existence of this deer will depend on the protection afforded by sanctuaries'.

In paragraph 24, referring again to the Kabita Sanctuary, it is stated that it is believed the *Rhinoceros sondaicus* in this area are the only recognised survivors of this species in the world. This is incorrect because they undoubtedly exist in Java and Sumatra.

In Chapter II reference is made to the wild life in forests other than Sanctuaries.

The question of proper control of the work of wild life preservation is briefly referred to and it is clearly indicated that a system by which the care of the fauna has to be entrusted to those who have full time-work as Forest Officers is unsatisfactory and can never mean efficient protection for wild life.

It is difficult to understand the reference to the case mentioned in paragraph 36 of shooting a male bison being prosecuted in a civil court. Surely poaching is a criminal offence in Burma?

Mention is made in paragraphs 39, 40, and 41, that wild dogs are on the increase.

It is possible that wild dogs have a period during which they progressively increase and then due to some unknown reason become scarce, again increasing until some unknown peak is reached. This phenomenon is well recognized amongst some species, the Ptarmigan in Alaska being a striking example. It is Nature's way of adjustment and something of this sort may operate to keep wild dogs within reasonable limits.

In paragraph 41 surprise is expressed at the reported disappearance of game in the Tharawaddy Division.

Until there is an adequate staff for the purpose of wild life conservation answers will never be found to these queries.

The control of elephants, which is an important activity of the Game Warden, does not provide very exhilarating reading in a Game Preservation Report.

We are told that 711 elephants were removed from the forests of which 543 were killed or found dead. We are also told that the removal of 711 elephants from the forests probably slightly exceeds the annual natural increment. No reasons are given for this statement and it would be interesting to know on what statistics it was based. With the inadequate arrangements for guarding the fauna of Burma, it is somewhat astonishing to hear even a tentative figure mentioned in connection with the annual increase of calves which can only be ascertained after much observation and hard work.

Although a Wild Life Protection Act was passed in 1936, Rules had not been issued up to March 1938. As is so common in present-day legislation many important items have to be dealt with by the Rules, and it is surprising that the obligations that the legislators have placed on the Local Government have not been attended to! So the Game Rules of 1927 are still being followed where they do not conflict with the provisions of the new Act.

Paragraph 53 pleads for a better organization to deal with the preservation of the wild life of Burma, a very necessary and urgent matter if conservation is to be taken seriously and placed on a proper footing.

Chapter III deals exclusively with the control of firearms and ammunition and in studying this chapter it is easy to understand how unsatisfactory the position must be from the Game Warden's point of view.

The exploitation of the Fauna supplies the theme for Chapter VI. It calls for no special comment.

In Chapter VII the last paragraph contains a significant statement. It is:—'. . . although sambar and hog-deer may now be shot outside reserves irrespective of sex and without game licences. . . .'

It is astonishing that such game animals as sambar and hog-deer may be shot outside reserves without any restrictions and is a sad reflection on the medieval ideas of Burma on the value of such forms of wild life.

Paragraph 75 contains some alleged particulars of an animal not yet identified. If the other particulars are as valuable as the remark that it is 'apt to attack on sight' they are not worth considering.

Chapter IX, 'Financial Results', does not make inspiring reading. Under expenditure the biggest item is for elephant control, which means largely the destruction of elephants. There is no item at all for Rangers employed solely on Wild Life Conservation, outside the Sanctuaries, although 19 Game Rangers were employed to destroy.

Part IV refers to the Federated Shan States.

In paragraph 86 we are told that in these States there are two sanctuaries, Shwe-dang in Mongmit, comprising an area of 45 square miles, and Taunggyi Fuel Reserve North Block, in the Southern Shan States, comprising an area of 64 square miles. The former marches with the Shwe-u-dang Sanctuary in East Katho, Burma, making a compact block of 126 square miles.

No special staff guards these sanctuaries.

It is proposed to exploit teak in the Shwe-u-dzung Sanctuary, and as this area is supposed to contain *Dicerorhinus sumatrensis* one can imagine the result? The Sumatran rhinoceros will neither breed nor remain in a disturbed area. When will the Government of Burma appreciate the fact that wild life conservation and commercialism do not make happy bed-fellows? If commercialism is to take precedence of other considerations then it would be better to state clearly that wild life conservation is not a vital issue or even an important activity but that a little temporary window-dressing may be desirable at times.

After reading this report one is bound to feel sympathy with the Game Warden in having to make his bricks without straw. No successful conservation of the fauna, except possibly in a favoured site such as the Pidaung Sanctuary, appears to be possible under the unfortunate conditions which obtain.

If Burma really wants to preserve its wild life then it should organize a proper department to do so and should try to follow the lines adopted in North America where in many parts the work of conservation of the wild creatures of the plains, the forests and the streams has been successfully organized and is efficiently executed.

THEODORE HUBBACK.

II.—THE FORMENKREIS THEORY AND THE PROGRESS OF THE ORGANIC WORLD, by O. Kleinschmidt. Translated by F. C. R. Jourdain. Pp. 192. London: H. F. & G. Witherby.

This translation was first published in 1930. The book under review appears with the author's preface of 1940; and the author's note to the English translation is dated 1930.

The author's aim is to explain the nature of the Formenkreis Theory, which, in his opinion, is the key to the right interpretation of Evolution and Racialogy. With this end in view he begins by exposing all that is erroneous in the old theory of Evolution. He then disposes of the biased objections to the Formenkreis Theory, and thus clears the ground for a full statement of his doctrine, which he does in a manner that leaves no doubt as to what he holds.

The one drawback, however, is in the understanding of the very phrase 'Formenkreis'. 'Formenkreis is the true *Real species* of the philosopher Kant, not the *Species* of Linné, not the *Species* of Darwin, not the *Species* of my friend Dr. Hartret, and other English, German, or American zoologists, nor the *Formenkreis* of Tschubik, nor the *Rassenkreis* of Rensch (Author's note).

J. F. C.

III.—A GUIDE TO THE SNAKES OF UGANDA, by C. R. S. Pirman. Pp. xxi+362. The Uganda Society, Kampala, Uganda; 1938—London: Simpkin Marshall, Ltd., 1939. Price 30/- net.

Captain Pirman is an enthusiast who has put a great deal of work into this book, which should stimulate the study of the snakes of Uganda.

As he is already well known for his capacity for collecting and recording information, and as he is equally experienced in field work, the author has on the whole attained his threefold object: to afford a descriptive list of the known species and make their identification easy, to provide a better understanding of snakes generally, and to draw attention to their very definite role of benefactors to humanity. But to attempt to include so much, combined with the author's somewhat drab style, tends to make the book rather confused and unsatisfactory reading.

As a faunistic work the book is undeniably of the greatest value. It is moreover generously illustrated with abundant line drawings and coloured plates, some of them excellent. These and other unquestionably good points must induce a lenient view of the many shortcomings in the matter of clarity and presentation.

J. F. C.