

TROPICAL WILD LIFE

IN BRITISH GUIANA

ZOOLOGICAL CONTRIBUTIONS
FROM THE TROPICAL RESEARCH STATION
OF THE NEW YORK ZOOLOGICAL SOCIETY

By

WILLIAM BEEBE,
DIRECTING CURATOR

G. INNESS HARTLEY AND PAUL G. HOWES
RESEARCH ASSOCIATE RESEARCH ASSISTANT

WITH AN INTRODUCTION BY
COLONEL THEODORE ROOSEVELT

VOLUME I.

*Photographs and Other Illustrations
by the Authors*



PUBLISHED BY THE NEW YORK ZOOLOGICAL SOCIETY
111 BROADWAY, NEW YORK CITY
JANUARY, 1917

INTRODUCTION

The establishment of the Tropical Research station in British Guiana by the New York Zoological Society marks the beginning of a wholly new type of biological work, capable of literally illimitable expansion. It provides for intensive study, in the open field, of the teeming animal life of the tropics.

One pleasant feature of the station is the cordial hospitality it extends to all naturalists. Jealousy is regarded as utterly unworthy, and the whole effort of the station is to secure, from whatever source, the most thorough research possible. Every original investigator fit to work in the field is sure of an eager welcome and of all possible aid in his studies.

The time has passed when we can afford to accept as satisfactory a science of animal life whose professors are either mere roaming field collectors or mere closet catalogue writers who examine and record minute differences in "specimens" precisely as philatelists examine and record minute differences in postage stamps—and with about the same breadth of view and power of insight into the essential. Little is to be gained by that kind of "intensive" collecting and cataloguing which bears fruit only in innumerable little pamphlets describing with meticulous care unimportant new subspecies, or new "species" hardly to be distinguished from those already long known. Such pamphlets have almost no real interest except for the infrequent rival specialists who read them with quarrelsome interest.

Of course a good deal can still be done by the collector who covers a wide field, if in addition to being a collector he is a good field naturalist and a close and intelligent observer; and there must be careful laboratory study of series of specimens of all kinds. But the stage has now been reached when not only life histories, but even taxonomic

characters can normally be studied better in the field than in a museum—or at least, when, although both types of study are necessary, the field study is the more important; and when intensive study in the field, as carried on at this station, yields more important results than can normally be achieved by the roaming collector.

In addition, it must always be remembered that the really first class naturalist whose observations are to bear most fruit, must possess the gift of vividly truthful portrayal of what he has possessed, the vision clearly to see in its real essentials. The best scientific books, from Darwin and Wallace to Bates and Waterton and Audubon, are those which possess such vision and are so interesting to intelligent laymen that they are often to be found in the libraries of cultivated people who are not professed scientists. Mr. Beebe has the wide horizon of interest, and the happy art of expression, which entitle him to go in this class.

This gift of expression is of value because it is based on a really phenomenal gift of both wide and minutely intensive observation. The fundamental differences between the quality of his study and the quality of the study of the average closet museum worker can be illustrated by his observation of those queer South American game birds, the tinamous.

Closet naturalists have long known that some of the tinamou had rough, and some smooth, tarsi. This fact awakened no curiosity in their minds, no desire to find out whether it was correlated with any difference in habits or life history. They simply treated it as justifying a terminological decision as to whether it marked a genus or a subgenus; and examined the tarsus of each specimen with only sufficient care to enable them to decide the specimen-drawer into which it should be thrown.

Beebe was a different kind of observer, and he was working in the birds' haunts, in Demerara. The small tina-

mou has smooth tarsi; its nesting habits are extraordinary, for the male makes the nest, stays with it until he can persuade a roving female to drop an egg in it, and then hatches the egg and rears the chick, while the female goes off; and as soon as the chick is fairly grown the male finds another temporary mate of advanced feminist views. The big tinamou has more normal nesting habits, although the male hatches and rears the family. This tinamou has rough tarsi.

Beebe found that there was always dust or dirt in these rough tarsi; one day he sterilized some earth, by heat, scraped the dirt from a rough tinamou tarsus into it, and reared the culture. Various plants came up, and all of them were arboreal. Inasmuch as during the daytime the big tinamou, like the little tinamou, was a ground bird, this seemed to indicate that it roosted in the trees at night. Cautious inquiry of the Indians (so made as not to indicate that a given answer was expected) drew forth the statement that at night the little tinamou roosted on the ground, the big one in trees. Finally, watching from a shelter one evening, Beebe actually saw a big tinamou ascend a tree and squat lengthwise on a branch, just before darkness came on.

The invaluable studies on the various stages of the breeding habits, the nestling development, the molting changes of hoatzins, toucans, anis, jacanas, not to speak of the studies of the strange swarming insect life, and the mammalian life, could only have been made by trained field observers working with intensive observation out in the field at the tropical station. Mr. Beebe and his associates, Messrs. Hartley and Howes, have not only done a first class job, but they have pointed out the way into what is probably the most fruitful field for original and productive biological investigation.

THEODORE ROOSEVELT.

Sagamore Hill,

December 10, 1916.