

PREFACE

THE importance of the fauna of the Hawaiian islands has long been recognised, but as no adequate exploration of their zoology had been attempted, the British Association for the advancement of science appointed a Committee in the year 1890 "to report on the present state of our knowledge of the Sandwich Islands, and to take steps to investigate ascertained deficiencies in the fauna, with power to co-operate with the Committee appointed for the purpose by the Royal Society, and to avail themselves of such assistance as may be offered by the Hawaiian Government or the Trustees of the Museum at Honolulu." The Committee of the Royal Society just alluded to was appointed almost simultaneously, and the two Committees have continued to work together till the present time.

The joint Committee has received the most valuable support and assistance from the Trustees of the Bernice P. Bishop Museum at Honolulu. Indeed one of the most important duties in writing this Preface is to make this acknowledgment, and to return thanks for this support.

At an early meeting of the Committee it was decided to limit its investigation to the Land-fauna. Two reasons influenced this decision, viz. (1) that this was as much as the Committee could hope to accomplish, and (2) that while the Land-fauna was known to be undergoing great impoverishment, it was believed that the Marine-fauna was comparatively exempt from analogous changes.

The Committee decided to undertake an exploration of the Islands, and was so fortunate as to secure for the purpose the services of Mr R. C. L. Perkins, then a young graduate of the University of Oxford. Dr Perkins continued his exploration for some years. As he has given an account thereof in the Introduction that follows this prefatory notice it is unnecessary to give particulars here, beyond saying that he underwent great dangers and fatigues, in his arduous and solitary task, with the most determined perseverance, the most unflinching courage; camping out in the mountains, without a companion, for periods as long as he was able to carry food and equipment.

As the result of his work the Committee found itself in possession of an enormous number of specimens, and in pursuance of its work decided on investigating this material and reporting thereon.

It is not possible to state exactly the number of specimens that have resulted from Dr Perkins' labours, but it cannot be far short of 100,000, and not improbably exceeds

that number. The Insects of the Archipelago were previous to this investigation supposed to be scanty in the number of species, and it was believed that individuals of each species were as a rule also very few. Both these conclusions have now been shown to be incorrect. Dr Perkins estimates the number of known species of the Class of animals to be upwards of 3,300; and he considers this number to be probably not much more than one half of the total Hawaiian Insect-fauna.

The other Classes of Arthropoda are represented by a considerable number of species. Mollusca is specially rich, nearly 500 species or forms having been recorded. Aves has about 50 peculiar species. The other Classes of animals have been by various means satisfactorily investigated, so that no general zoological Census of the islands can yet be given. But it may be said that at the present time if an exhaustive list of the land and marine fauna could be compiled it might amount to 10,000 species, the great majority of them being peculiar to these precincts. And even this number is liable to be greatly increased if the classes of microscopic animals were included; Protozoa being, so far as is known to the writer, still untouched. These points are mentioned because it would be a matter for profound regret were it supposed that the work of this Committee—long as it may have lasted—has completed our knowledge of Hawaiian zoology. The Islands having now passed into the control of a State so abundant in wealth and power we may hope that some real effort may be made, by means of local Associations or expeditions from the United States, to supplement our imperfect knowledge. At present there is so far as we know, only one Natural History Association in the Archipelago—the Hawaiian Entomological Society, established in 1905.

Though the task of the Committee may be considered as still incomplete, various reasons render its dissolution advisable. The Committee has lost during its existence two Chairmen, and Dr Perkins who has done most of its work is not able to continue to make for it the great exertions he did make for so many years.

He has however drawn up for us a review of the subject of Hawaiian Zoology. This, in the form of an introduction, will follow this prefatory note. The fauna of the Archipelago has undergone great changes owing to human interference with the natural conditions. It has always been a difficult task to estimate what part of the Fauna is due to recent natural immigration, what to human introduction. The intimate acquaintance of Dr Perkins with the fauna for so many years gives a special value to his review, which, we have no doubt, will be of great assistance to future investigators.

It will be seen from his Introduction that he considers the whole of the fauna is due to ancient and recent immigration, and is now augmented by human introductions. And the peculiarities of the fauna apparently fully justify this conclusion. On this subject we may refer to Wallace's chapter on dispersal and migration (*Geographic*).

distribution of animals, Chap. ii) which correctly foreshadows the way in which this fauna has been formed. The peculiar conditions of life in Hawaii are to some extent illustrated by the maps and landscapes that accompany Dr Perkins' Essay.

The Committees when first constituted consisted of Dr W. T. Blanford, Colonel Godwin-Austen, Mr O. Salvin, Dr P. L. Sclater, Mr E. A. Smith, with Sir W. H. Flower and Professor Alfred Newton as Chairmen, Dr S. J. Hickson as Treasurer and D. Sharp as Secretary. Subsequently Dr F. D. Godman and C. V. Riley joined it. Sir W. H. Flower and Professor Newton, the early Chairmen having deceased, their duties were taken up by the present Chairman Dr F. D. Godman. Professor Hickson the Treasurer, and D. Sharp the Secretary, have filled these offices throughout the 22 years of the existence of the Committee.

The Honourable C. R. Bishop, the founder of the Bernice P. Bishop Museum, has afforded by the instrumentality of the Trustees of that institution the most valuable assistance to the Committee; and as an acknowledgment thereof the Fauna Hawaiiensis has been dedicated to him.

It appears from the Accounts of the Treasurer that the Committee has derived its funds from seven sources, viz.:—(1) the Trustees of the Bernice P. Bishop Museum; (2) the Council of the Royal Society; (3) the Government Grant Committee of the Royal Society; (4) the British Association for the advancement of science; (5) the British Museum (Natural History); (6) Sale of the Fauna Hawaiiensis; (7) Bank Interest. The Treasurer reports that the total from these various sources amounts at present to £4717. 6s. 3d.

The first set of the specimens resulting from the work of the Committee has been placed in the British Museum (Natural History), which Institution possesses the types of all the new species described in Fauna Hawaiiensis (except possibly a very few described though the property of others). The second set of specimens has, as a rule, been given to the Naturalists who worked out the collections, and whose names will be found in the Table of Contents in Vol. I of the Fauna Hawaiiensis. The third set has been sent to the Bernice P. Bishop Museum, Honolulu. A considerable number of specimens has been given to Dr Perkins for his assistance in Honolulu, where he has been for some years a resident. In addition to these extensive parts of the collections, others have been given to the great Museums at Edinburgh, Dublin, Manchester, Cambridge, Christiania, Stockholm, Copenhagen, Paris, Berlin, Dresden, the Netherlands, Florence, Turin, and Boston U.S. The few specimens still remaining are promised to the Museum of Harvard University.

D. SHARP

(Hon. Secretary of the Committee and
Editor of the Fauna Hawaiiensis).

ERRATA

The following corrections should be made in the text:

Vol. I, p. 31, line 3, for 'first' read second.

Vol. II, p. 13, line 16, for 'interno' read externo.

„ p. 607, at bottom of page delete *N. conifer*, which is an *Odynerus*.

„ Pl. V, figs. 7 and 7a, in description of Plate, for '*A. koelense*' read *A. amaurodytum*.

Vol. III, p. 591, second line from bottom, for 'Anobiids' read *Xyletobius*.

„ p. 616, line 7, twice, and lines 11, 12, 16 and 18, for 'I' read II.

Introduction, p. lxiii, 6 lines from bottom, for 'isolation' read specific endemicity.