

on that account one is not to be preferred above another. But there is a difference in flavour, and that which is preferred in that point will fetch the highest price and have the largest sale. Here, as in all other kinds of food, it is the flavour that makes the quality. It is the *bouquet* of wine and not the alcohol that constitutes its value.

E. LANKESTER

### THE SNAKES OF AUSTRALIA

*The Snakes of Australia: an Illustrated and Descriptive Catalogue of all the known Species.* By Gerard Krefft, F.L.S., C.M.Z.S., &c., &c., Curator and Secretary of the Australian Museum. Large 8vo. pp. 100, with 12 lithographic plates. (Sydney, 1869. London: Trübner and Co.)

WHEN we consider how very small is the number of zoologists who take an interest in, or make a special study of, the animals of the class Reptilia, and how little attraction this branch of zoology appears likely to have for the public, we cannot but feel surprised when, now and then, one bolder than his fellow-labourers prepares a comprehensive account of some portion of these animals, and ventures to put it forth in the shape of a goodly volume, which must have cost the author a vast amount of unappreciated labour, and the publisher a round sum of money without a prospect of its speedy return. Thus, on examining the work which has just been published under the above title by the Curator of the Sydney Museum, we find that the investigations on which it is based have been carried out by fourteen zoologists only, of whom not more than one half belong to the present generation, whilst the other half have only described a species or two incidentally.

The causes of this neglect of the study of reptiles are obvious. In Europe, a boy whom Nature has endowed with a taste for contemplating her works, begins to collect the objects most accessible in his neighbourhood, and most attractive by their variety of form or colour; he collects, and perhaps studies, birds and their eggs, beetles, butterflies, shells, or plants. What is more natural than that he should continue to devote himself to the same particular branch, if the duties of more mature years allow him to develop the fancy of his boyhood into scientific research? Consequently, ornithology, entomology, conchology, and botany are *popular* pursuits.

There are but few who become connected with public collections, and who, from more expanded views or duty, enter into the study of animals which have but rarely formed part of private collections. A boy in England would soon get tired of his taste for natural history, if he had to develop it through the scanty means afforded by the small number of British reptiles; and Ireland, as far as we are aware, has not yet produced a single herpetologist (although, as Mr. Krefft informs us, that island is inhabited by snakes—a fact which is certainly new to us).

On the other hand, we may predict that herpetology will become a more popular science in Australia, where reptilian life abounds. Snakes must be numerous there, for we are told that, "from six to ten specimens, belonging

to different species, were captured some years ago under a single stone not many miles from the city of Sydney;" that, "to go snake-hunting has been a pastime with school-boys for years," and that "the collecting-bag often forms part of the outfit of the wallaby-hunters, by whom the old sport of boyhood is not forgotten." Snakes in Australia must also play quite as important a part in relation to mankind as in tropical countries; for not less than two-thirds of the species, and fully nine-tenths of the individuals, are venomous. Ten years ago only some forty species of Australian snakes were known; and it is chiefly due to the energy of Mr. Krefft, as collector and curator of the Australian Museum, that this number is now doubled.

The work begins with a copious introduction, in which the natural history of snakes generally is treated in a popular manner; then follow technical descriptions of the eighty species known, and their geographical distribution and habits are indicated, the volume being illustrated by twelve lithographic plates. The descriptions are chiefly reproductions of the original diagnoses given by the various authors; and we do not notice any species which has not been described elsewhere. Thus, whilst we bear witness to the great progress in Australian herpetology due to Mr. Krefft's labours, we must add that he has effected it previously to and independently of the publication of his book. But, like all conscientious compilations, it will be useful to the student, and will supply a real want among residents in Australia desirous of acquainting themselves with objects which daily come under their notice.

Great credit is likewise due to Mr. Krefft for the caution used in working up his materials. European collections contain by far the greatest number of the typical specimens of the species described within the last century; and men working at a distance from this principal source of information, and more or less dependent on descriptions, are only too much exposed to the risk of failing in the determination of species, applying old names to really new species, and describing old ones as new. No end of labour in rectifying these errors is caused to European naturalists by such premature publications. But Mr. Krefft has been for years in constant communication with his fellow-labourers in England and Germany, sending duplicate examples for identification; and thus creating a well-determined collection, he has laid a solid basis for his own future researches and for the instruction of Australian students. We have heard an authority on the subject express the belief that there is not in the book a single species erroneously determined.

The plates which accompany the volume are the work of two ladies, Miss Scott and Mrs. Edward Ford, who, considering the peculiar difficulty of drawing snakes, have accomplished their task extremely well.

In conclusion, we must congratulate the trustees of the Sydney Museum on having found so able and zealous a curator as Mr. Krefft; and express the hope that his book may lead to new discoveries sufficiently numerous to call for a second edition. It is a good sign that the scientific literature of our colonies already contains such books as the one under review. May the number soon be largely increased.

A. GUNTHER