before us he has gathered many of these articles together, added others not heretofore published, and appended thirty pages of vocabularies of the native tongues, specimens of Indian music and various statistical matter (rainfall, culture products, etc.).

The descriptions of travel and of the manners of the present inhabitants are vivid and well told, but for scientific purposes the articles on the native population will have the higher interest. These embrace a discussion on the independent native States in Yucatan, the commercial relations of the Indian tribes in northern Central America, the present Indian geographical names in the same area, the ruins of aboriginal towns and fortresses there found, the music and dances of the existing tribes, and special articles on the Lacandons and Kekchis, two branches of the Maya family which Dr. Sapper had unusual opportunities to observe.

The information he gives on all these subjects is abundant and drawn from his own studies. Especially his article on the architectural principles indicated in the ancient ruins, and the connection of the culture areas which they indicate, is replete with new and instructive suggestions. It is amply illustrated by a number of designs in the text.

The maps are eight in number and show respectively the location of volcanoes, the distribution of vegetation forms, the elevation of land, the cultivation of commercial plants, the extension of languages, the independent Indian tribes, the native names and the ancient ruins of northern Central America.

In the final paper of the volume the author ventures on the important question as to the original seat of the Mayan culture and language. He gives substantial reasons for saying it was *not* Yucatan, which peninsula he thinks was first occupied by the Mayas about the fifth century of our era; nor was it Guatemala, Tabasco, or the territory of the Huastecas, north of Vera Cruz; but most likely the highlands of Chiapas (in which he agrees with Dr. Schellhas). He considers the adoption by the Mayas of a sedentary and agricultural life to date from a remote antiquity, and conclusively disproves the prevalent notion that it was originated or deeply modified by either 'Toltecs' or Nahuas.

The extended vocabularies include a large number of 'culture words' from the Mayan dialects, and were in great part collected by himself. They add considerably to the value of this excellent work.

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UNIVERSITY OF PENNSYLVANIA.

Wild Neighbors. By ERNEST INGERSOLL. New York, The Macmillan Co. 8vo. Pp. xii+301. 29 illustrations. $1.50.

Mr. Ingersoll's 'Wild Neighbors' are some of our native mammals, the red and gray squirrels, panther, coyote, badger, porcupine, skunk, woodchuck, raccoon, and incidentally many others, with which the author endeavors to make us better acquainted through interesting accounts of their habits. The biography of each species contains some descriptive notes and extended life histories, covering general habits, distribution, economic importance, and comparison with other species. The skunks of the genus *Mephitis* are compared with the mink, the European polecat, the stinking badger of East India, the honey badgers of South Africa, and our more closely related genera, *Conepatus* and *Spilogale*. One chapter is devoted to 'the service of tails, their use and importance to various creatures,' and is extended to include birds, reptiles, insects and crustaceans, as well as mammals. One is given to animal training and animal intelligence and deals mainly with domesticated species and those of the menagerie, discussing their capacity for learning.

The work brings together many interesting facts from the lives of our best known mammals in a popular style, with technicalities carefully omitted. To those who have had little to do with mammals or mammal literature it will prove new and interesting, a great part being taken by direct or indirect quotation from the works of Audubon and Bachman, Kennicott, Lord, Goode, Thoreau, Burroughs, Coues, Allen, Roosevelt, Merriam, Hornaday, Bicknell and many other well known authors. Unfortunately, however, less reliable sources have been drawn upon also and many misleading statements are made. The reader is told that the Eastern chipmunk (*Tamias striatus*) is now conceded to be the only species ranging between the Atlantic and

Pacific coasts, while in reality some 22 species and 12 subspecies are now recognized in the United States. The nuthatches are erroneously classed with the woodpecker as birds that use their tails for support in climbing over the trunks and branches of trees. Young opossums are said to go about clinging to their mothers' tails soon after they are born.

The book contains much that is good in its way; but unless the reader exercises more knowledge of mammals than the author seems to possess, he will be unable to decide what should be accepted as reliable and what rejected as unreliable. To the student of mammals if offers nothing in the way of new and original matter. The nomenclature is out of date, a large proportion of the generic and specific names differing from those in present use.

The author has experienced the usual difficulty in obtaining illustrations of mammals. The few that appear to be new are evidently taken from badly mounted specimens and are wretchedly drawn. The reproductions from previous works are not the best that might have been selected, and in most cases the reader is left to guess where he has seen them before.

Vernon Bailey.

SOCIETIES AND ACADEMIES.

BOSTON SOCIETY OF NATURAL HISTORY.

A general meeting was held November 17th, seventy-one persons present. Dr. B. L. Robinson spoke of the flora of some of the islands of the Pacific, noting the various classifications of islands proposed and mentioning examples of the different classes. Insular floras show a paucity of species compared with genera; Leguminosæ are rare on oceanic islands. Dr. Robinson sketched the history of botanical exploration of the Galápagos and prefaced the result of his work upon the collections of Dr. Baur with an account of the classic studies of Hooker and Andersson. The flora of the upper, moister portions of the Galápagos is closely related to floras of Central America, Mexico and the West Indies, while in the lower, or desert portions, the flora has been derived from Peru and Chili. Dr. Robinson also gave a brief account of the flora of some of the Californian islands, and mentioned their resemblance to the flora of the Galápagos in the number of endemic types. The study of the flora of the Californian islands confirms Le Conte's theory that they were united with the main land up to Quaternary times.

Professor A. E. Verrill discussed the causes that determine the flora and fauna of the smaller islands off the New England coast, referring particularly to the Thimbles and other islands in Long Island Sound. The islands north of Cape Cod differ from those south of the Cape, though both are governed by the same principles; compared with the mainland the animals are few in number. The meadow mouse, *Arvicola sp.*, is the most important factor in regard to the flora, though the introduction of sheep and goats does much to change the vegetation. Many birds found on the Thimbles do not breed upon them. Reptiles are entirely wanting, and when introduced do not survive. With the exception of the red-backed Salamander, *Plethodon*, there are no Amphibians; the *Plethodon* is abundant and is frequently found associated with marine Crustaceans. The surface soil, though rich and black, did not originally contain earthworms; introduced later, they are now abundant. The larvæ of Scarabæidæ and Myriopods belonging to *Spirobolus* and *Polydesmus* were exceedingly abundant and replaced the earthworm. The *Polydesmus*, owing to the lack of fresh water and to the effect of salt water, is now extinct on the Thimbles. With insects the number of species is small; they swarm more rapidly and are more injurious than on the mainland. Of the Mollusca, two *Helices* and a *Succinea* abound; slugs are wanting. The plants are the same as those of the mainland, but only a limited number can withstand the adverse conditions caused by the salt spray, ravages of mice, drought, action of storms, etc. Certain plants are more hardy, grow more rapidly and flower more abundantly than the same species on the mainland.

Professor Verrill showed a number of drawings of marine invertebrates; painted in oil directly upon tiles and ground-glass tablets, they are helpful for purposes of museum illustration.

Samuel Henshaw,
Secretary.