methods is good and contains suggestions that are most useful to all who have to do with these little pests. The discussion of mosquito remedies and enemies brings together the usual recommendations in concise form, and nothing is added by the author from personal experience.

Chapter XI., containing identification keys and a systematic list, covers sixty pages and is a most useful and ingenious production. The differences in habits and life cycle between the species of mosquitoes are so great and so radical that before practical work can be intelligently done it is absolutely necessary to know what species is really in fault. Many hundreds of dollars have, in the past, been wasted and many a mosquito campaign has in the past ended in failure, simply because the measures adopted failed to reach the species really in fault. These tables will at least help in the attempt to identify the pestiferous types.

For health inspectors, for those interested in sanitation generally and for physicians this book will be especially useful.

There is a rather scanty bibliography and a satisfactory index, in which the illustrations are separately referred to. As to the illustrations, those of the adults are rather disappointing. It seems to be exceedingly difficult to get a really characteristic representation of an adult mosquito and Miss Mitchell has not succeeded any better than others. Some of the illustrations of eggs and of structural details are excellent.

On the whole this is a very useful book: with plenty of faults and an abundance of points that might be criticized if criticism is fault finding; but altogether considered it is commendable. JOHN B. SMITH

SCIENTIFIC JOURNALS AND ARTICLES

The American Naturalist for May opens with an article by A. E. Verrill on "Geographical Distribution; Origin of the Bermuda Decapod Fauna," which is considered an offshoot, mainly by accidental migration, from the West Indian fauna. Incidentally is suggested the desirability of introducing new species of crustacea to serve as food for fishes. Charles T. Brues discusses "The Interpretation of Certain Tropisms of Insects," concluding that we can not make satisfactory progress in interpreting the behavior of insects studied in the laboratory without careful reference to their behavior in nature. The third paper, on "The Evolution of Tertiary Mammals, and the Importance of their Migrations," deals with the Miocene Epoch. J. F. McClendon considers "Xerophytic Adaptations of Leaf Structure in Yuccas, Agaves and Nolinas." Francis B. Sumner gives a summary of the work of the season of 1907, at the Biological Laboratory of the Bureau of Fisheries at Woods Hole, Mass. Finally, Gertrude C. and Charles B. Davenport treat of the "Heredity of Hair-form in Man," showing what, under various conditions, are the chances of children having straight, curly or wavy hair. There is a detailed review of half a score of papers on crinoids by A. H. Clark, and a capital summary, by H. S. Jennings, of recent works on animal behavior.

Bird-Lore for May–June has articles on "A Family of Barred Owls," by W. C. Clarke; "The Brown Thrasher," by Charles E. Heil; "A Bittern Study," by Agnes M. Learned; "The Nesting Habits of Henslow's Sparrow," by E. S. Woodruff, and the fourth paper on "The Migration of Flycatchers," by W. W. Cooke. There are many illustrations and many notes. The report of the Audubon Societies shows continued progress and notes two new bird reservations, at Tortugas Keys and Fort Niabrara.

THE *Bulletin of the Charleston Museum* for May contains articles on the "Preparation of Museum Exhibits" and on "The Snowy Heron in South Carolina." This species, as the result of protection, has begun to reestablish itself on the South Carolina coast, and one rookery contained about one hundred birds, another at least two hundred, besides many of other species.

A RECENT number of Smithsonian Miscellaneous Collections is devoted to a paper by C. W. Gilmore on "Smithsonian Explorations in Alaska in 1907 in Search of Pleistocene

Vertebrates" and especially of the mammoth. Mr. Gilmore notes the conditions under which the fossils occur and presents an extremely clear and convincing suggestion as to how the Siberian mammoths became imbedded in ice, a suggestion that calls for no sudden and widespread glaciation and no great beds or ponds of ice. Mr. Gilmore gives a summary of our knowledge of the Pleistocene mammals of Alaska and the localities where they were found, and gives the particulars of the finding of two teeth of the mastodon near Dawson.

In *The Museums Journal* of Great Britain for May, Professor Geddes discusses "The Museum and the City—A Practical Proposal," to interest the public by devoting special attention to illustrating by maps, models and documents the past history of a city and suggest plans for its future improvement. W. B. Barton has "Thoughts on the Equipment of an Art Gallery and Museum" and S. L. Moseley has some notes on "Preserving Plants in Natural Form."

NOTES ON ENTOMOLOGY

The recent parts of Wytsman's "Genera Insectorum" include the hymenopterous family Trigonaloidæ (fascicle 61) by W. A. Schulz, 24 pp., 3 pls. The author has been fortunate in examining nearly all of the available material in this small family, so that all but three species are placed in the system. A number of new genera are established, mostly at the expense of *Trigonalys*. Fascicle 62 is by Dr. Schmiedeknecht on the parasitic Hymenoptera of the subfamily Pimplinæ, 120 pp., 2 pls. The author adopts the usual tribes, but the arrangement of genera is quite different from that of Ashmead. He makes no new genera, but accepts most of those of Ashmead; however he drops many of Förster's genera. Over 1,500 species are catalogued, of which 340 are in the genus *Pimpla*. Fascicle 63 is on a small group of tropical butterflies, the subfamily Dioninæ of the family Nymphalidæ. H. Stichel is the author, 38 pp., 3 pls. Fascicle 64, a ponderous volume of 487 pages, treats of the tiny beetles of the family Pselaphidæ. The author is A. Raffray, who has devoted his whole attention for many years to these insects. Over 3,000 species are arranged in the 452 genera. There are nine plates, three exhibiting the structural details, and the others show about 80 species, drawn by the author. M. Raffray considers that the 3,000 known species are not one third of the existing forms.

The British Museum has long been considered the greatest in the world. Recently it has published an account of its collection.[1] There are lists of the accessions for each year, the number of species and specimens in each order, and the number of boxes for each family. The number of types in each accession is often mentioned, and the persons who revised and arranged each group. The entire number of insects (1904) was 1,018,000 specimens. By orders as follows:

	Specimens	Named Species
Lepidoptera	355,767	41,210
Coleoptera	398,000	67,300
Hymenoptera	132,000	19,600
Hemiptera	57,650	11,700
Diptera	46,900	7,377
Orthoptera	18,800	3,900
Neuroptera	9,056	1,864
Aptera	140	21

The largest collection ever received was the famous Bowring collection of Coleoptera, 230,000 specimens; the next, Stephens general collection, 90,000 specimens; the third, 51,130 Lepidoptera of the Leech collection; the fourth, 45,000 Coleoptera, with over 3,000 types from the Pascoe collection.

Meigen's first work, a classification of flies, has been one of the rarest of entomological publications. Owing to this and to the fact that Meigen himself abandoned them, the genera there presented have rarely been accepted, but recourse was taken to later and more extensive works of this author. Dr. F. Hendel has now republished the paper, with numerous commentaries and references under

[1] "The History of the Collections contained in the Natural History Departments of the British Museum," 2 vols., 1905–7. Insecta, Vol. II., pp. 550–653.