for the absence of any close relatives of the very distinct *P. jamaicensis* in the other West Indian islands.

The Peripatopsidæ, with five genera, are no less interesting. They are confined to the southern hemisphere, with the following distribution:

Paraperipatus Willey. 1 species. New Britain.

Peripatopsis Pocock. 6 species. S. Africa.

Opisthopatus Purcell. 2 species; one Natal, the other Chili!

Peripatoides Pocock. 4 species; two in New Zealand, two in Australia.

Ooperipatus Dendy. 4 species; one in New Zealand, one in Tasmania, two in Australia.

The case of *Opisthopatus* is most remarkable, though similar instances are known among insects. The Chilian *O. blainvillei* may be imagined to represent the last relic in America of the Peripatoid fauna of von Ihering's Archhelenis, a continent supposed to have once connected Africa with South America. This would mean that the genus *Opisthopatus,* though severed into two widely-separated parts, has retained its essential characters throughout Tertiary time.

The classification of the Australian and New Zealand species is not quite satisfactory. Professor Bouvier shows, or at least gives very good reasons for believing, that *Ooperipatus oviparus* is not genetically related to the other three species of the genus, but represents an independent development of oviparity from *Peripatoides* stock. Hence it would appear necessary to make *O. oviparus* the type of a new genus, to follow *Peripatoides* in the list. The Tasmanian species is called by Professor Bouvier *Ooperipatus insignis* Spencer and Dendy; but since it is not the earlier *P. insignis* Dendy, it must have a new name.

T. D. A. C.

SCIENTIFIC JOURNALS AND ARTICLES

IN *The American Naturalist* for January T. H. Morgan describes some "Experiments in Grafting" undertaken primarily with a view to finding out whether or not it is possible by artificial means to induce regeneration in a part that does not ordinarily regenerate. For example, a part of a lizard's tail was grafted on the stump of a leg, the idea being that the stimulation of the tail portion, which does regenerate, might induce regeneration in the limb. The results, however, are so far negative. Charles A. White discusses "The Phenogamous Parasites" and C. William Beebe gives a "Preliminary Report on the Investigation of the Seasonal Changes of Color in Birds," noting the influence of warmth and moisture. A. H. Wright and A. A. Allen have "Notes on the Breeding Habits of the Swamp Cricket Frog, *Corophilus triseriatus* Wied," and Adam Hermann describes "Modern Methods of Excavating, Preparing and Mounting Fossil Skeletons," methods which have probably reached a higher degree of perfection in this country than in any other and which Mr. Hermann himself has done so much to develop. John T. Gulick considers "Isolation and Selection in the Evolution of Species: The Need of Clear Definitions," pointing out that the above terms, as well as environment and even evolution, are used by different writers in a varying sense.

The Museums Journal of Great Britain for February opens with an article by James Duncan, on "Experience of Sunday Opening at Dundee," the matter being deemed of special importance because it is the most northern museum in "Sabbath-keeping" Scotland to open its doors on a Sunday. The results have been eminently satisfactory. There is a brief description of "The Royal United Service Museum" and, under "Museum Notes," F. W. Fitz Simons suggests that the round, perforated stones from Africa, known as Bushmen's stones, may have originally been symbols of Phallic worship.

The American Museum Journal for March has as frontispiece a reproduction of Eastman Johnson's portrait of the late Morris K. Jesup, taken in 1892. It is noted that a special publication will give an account of Mr. Jesup's life and service to the museum. There are articles descriptive of the "Bismarck Archipelago Collection," the "South American Blow-gun" and the "Exhibition showing the Congestion of Population in New York City."

This exhibit is shortly to be transferred to Brooklyn.

The Bulletin of the Boston Society of Natural History for March gives notice of the coming meeting of the geologists and mineralogists of the northeastern section of the United States, to be held in New York, April 6. It also gives a description of the botanical collection of the society and the work in its development.

Leaflets Listing and Describing Birds of Oregon may be added to the ever-increasing number of publications whose intent is to furnish information as to the habits and value of birds and the desirability of protecting them. These just mentioned are intended largely for use in the public schools. No. 1, by William L. Finley, treats of the "Study of Birds and Their Economic Value"; No. 2, by the same writer, tells of "Some Common Birds of Oregon with Notes on their Economic Value."

SOCIETIES AND ACADEMIES

THE SECTION OF GEOLOGY AND MINERALOGY OF THE NEW YORK ACADEMY OF SCIENCES

THE regular monthly meeting of the Section of Geology and Mineralogy of the New York Academy of Sciences was held on Monday evening, January 6, 1908, at the academy rooms in the American Museum of Natural History, New York City.

The section authorized the officers to arrange for a joint meeting of sections and departments of geology and mineralogy from neighboring academies, museums, surveys and colleges to be held in April. Invitations are being prepared and will be distributed through New England and the Middle Atlantic States.

Two papers were presented, the titles and abstracts of which follow.

A Revised Classification of the North American Siluric System: AMADEUS W. GRABAU.

A review of the successive modifications of the classification of the Siluric system in North America brings out the fact that the process of refining has been largely by separation off from this system of those divisions not properly belonging to it. Thus Dana in 1863 (first edition of the "Manual") included the Ordovicic and Cambric as Lower Silurian, dividing it into Potsdam, Trenton and Hudson, and dividing the Upper Silurian into Niagara, Salina and Lower Helderberg. In the fourth edition of the "Manual" (1895) the Cambric, Ordovicic and Siluric systems are recognized as distinct, though the name Lower Silurian is still preferred for the Ordovicic. The three-fold division of the Siluric is into (1) Niagara, (2) Onondaga (Salina), and (3) Lower Helderberg. In 1899 Clarke and Schuchert published their revised classification of the New York series, which has been pretty generally adopted. In this the Helderbergian exclusive of the Manlius was separated as Lower Devonic, while the remainder of the Siluric (Niagara and Onondaga (Salina), of Dana, 1895) was divided into the Oswegan (Oneida Conglomerate-Shawangunk grit and Medina sandstone), Niagaran (Clinton, Rochester, Lockport and Guelph), and Cayugan (Salina, Rondout and Manlius). Since then Grabau and Hartnagel have independently demonstrated that the Oneida is the equivalent of late Medina, and the Shawangunk, Salina. In 1905 Grabau suggested the Richmond age of the lower 1,100 feet of the Medina of Western New York,[1] uniting the upper with the Clinton. These relations were more fully discussed in 1906[2] and again in 1907 before the Geological Society of America, New York meeting, after a prolonged investigation of the Appalachian deposits. This relationship is now fully established and the dividing line between Ordovicic and Siluric is drawn at the base of the Upper Medina or the Medina proper. For the red Medina shales now recognized as of Ordovicic age the name Queenston beds is proposed, from the town of that name on the Niagara River opposite Lewiston, where these beds are partly exposed.

Recent studies by Grabau and Sherzer in southern Michigan and adjoining regions in Canada and Ohio have demonstrated the existence of about 900 feet of fossiliferous strata above the Salina, to which it is proposed to restrict the name Monroe. These will be fully

[1] SCIENCE, XXII., p. 529, October 27, 1905.

[2] Bull. 92 N. Y. State Museum.