note is made of his ability to carefully weigh scientific evidence and of his unprejudiced position and final decision concerning the doctrine of evolution. A portrait and a bibliography accompany the sketch.

Mr. Warren Upham, in an article on 'Physical Conditions of the Flow of Glaciers,' describes the veined or ribboned structure and the granular structure of glaciers and ice sheets, with a review of the theories of Forbes and Tyndall to account for glacial motion. Preference is given to the recent granulation theory of Deeley and Fletcher; and the lamination of the Greenland and Antarctic ice sheets is attributed, like that of Alpine glaciers, to the differential shearing movement of the ice layers, with varying decrease, growth and shear of contiguous ice granules.

Some phenomena presented by floating sand are discussed by Prof. F. W. Simonds. He records an instance of the floating of a considerable amount of sand on the Llano River of Texas, and he also states the results obtained by artifically floating sand of various materials and degrees of fineness.

Mr. Oscar H. Hershey describes the ancient river deposits of the Spring River valley in Kansas and outlines the Quaternary history of this stream.

Prof. E. W. Claypole, in an article entitled 'The Timepiece of Geology,' rapidly sketches the rise of paleontology and the use of fossils in determining the age of strata. The application of this means of fixing the age of various rocks is rapid and easy, but the final test is stratigraphy.

In an editorial comment Mr. Upham notices the shell-bearing sand and clay beds between deposits of till at Clava, Scotland. The interglacial fossiliferous beds he thinks to be modified drift, like the similarly shell-bearing sand and gravel of Cape Cod. In neither case would he consider the enclosed marine fossils to be evidence of submergence, instead of which the shells and their fragments are referred to glacial erosion from old sea beds and transportation in the ice sheets to altitudes where they are now found.

Under 'Correspondence' Prof. W. B. Scott writes concerning the term 'Goodnight Beds,' proposed for a division of the Texas Tertiary by Mr. W. F. Cummins.

PSYCHE, JANUARY.

A. P. MORSE begins a review of the N. E. Tryxalinæ, giving tables for the determination of the 8 genera and 15 species; three of the genera are new. H. G. Dyar describes and discusses an arctic Lymantriid larva found on Mt. Washington, N. H., which he suspects is Dasychira rossii. C. H. Tyler Townsend gives a table for the determination of the 12 species of Exorista from temperate North America known to him, describing one of them as new; and F. H. Harvey gives some notes on Smerinthus cerysii with a description of some of the early stages.

SOCIETIES AND ACADEMIES.

ENTOMOLOGICAL SOCIETY OF WASHINGTON.

A SPECIAL meeting was held December 26th in the assembly hall of the Cosmos Club under the auspices of the joint commission of the scientific societies of Washington, on the occasion of the annual address of the retiring President, Mr. Wm. H. Ashmead. Major J. W. Powell, of the joint commission, presided. Mr. Ashmead's subject was 'The Phylogeny of the Hymenoptera,' which he treated at length, giving his ideas as to the position of the Hymenoptera in the class Insecta, and as to the relative position of the several families of the order.

The 113th regular meeting was held January 2d. The following officers were elected for the year 1896: President, C. L. Marlatt; Vice-Presidents, Theodore Gill and H. G. Hubbard; Recording Secretary, L. O. Howard; Corresponding Secretary, Frank Benton; Treasurer, E. A. Schwarz; Additional Members Executive Committee, W. H. Ashmead, D. W. Coquillett and C. W. Stiles.

Mr. Schwarz presented a paper on the semi-tropical insect fauna of Texas. He referred to the fact that he had made a short visit to the region in question in 1895, and said that the fauna west and south of the Guadaloupe River, and which extends across the Rio Grande into the Mexican States of Coahuila and Tamaulipas, is by no means semi-tropical in its character. It is simply a subdivision of the lower Sonoran

fauna. The real semi-tropical in Texas occupies an extremely small area, namely, the delta of the Rio Grande from the mouth of the river to the head of the Arroyo Colorado. The latter is an ancient bed of the Rio Grande, and forms the northern boundary of the semi-tropical fauna. Within this area the fauna in question occurs in narrow isolated strips, within the bends of the river, along the various resacas which intersect and meander through this region. The more elevated land separating these strips is occupied by the general fauna of southwestern Texas, but there is a maritime fauna of a more tropical character extending along the coast, probably as far north as Corpus Christi Bay. Finally the fauna of the yucca-covered ridges running parallel with the coast also belong to the semi-tropical region.

Dr. Gill said that Mr. Schwarz's observations on the extremely limited character of this fauna in Texas agree with his own deductions from the study of fishes. The paper was further discussed by Messrs. Ashmead and Howard.

Mr. Ashmead presented a paper on the genera of the Eupelminæ, showing that ten years ago only eight genera were tabulated by Cresson, and only one of these was known to occur in the United States. As a result of recent studies he has found in the United States representatives of 25 genera, several of which are new. He spoke briefly of some of the peculiar forms.

A paper by Mr. C. F. Baker on 'The Affinities of Neolarra,' was read by the Secretary. The writer concluded that this genus does not belong to the Bembecidæ, with which it had been placed by Ashmead, but to the Apidæ. The paper was discussed by Mr. Ashmead, who said that he agreed with Mr. Baker in his conclusions. The speaker in his original description of Neolarra had been led to place it with the Bembecidæ, largely from the fact that the type was in such poor condition that some of its important characters could not be well understood. He further said that he agreed with Haliday in considering the Bembecidæ as rather closely related to the bees on account of the structure of the mouthparts.

L. O. Howard,
Secretary.

PHILOSOPHICAL SOCIETY OF WASHINGTON.

At the last meeting of the Philosophical Society of Washington the following communications were presented:

1. By Lieutenant W. H. Beehler, United States Navy, on 'The compensation of vibrations and other motions of a vessel at sea for the constant level-base of the Solarometer.' Illustrated by diagrams and a solarometer instrument itself.

2. By E. D. Preston, on 'Some original methods of reducing stars from mean to apparent place.' Illustrated by diagrams showing how results are quickly obtained graphically.

Berard R. Green,
Secretary.

NEW BOOKS.

The Sun. C. A. Young. New and Revised Edition. New York, D. Appleton & Co. 1895. Pp. xii+363. $2.00.

Introduction to the Study of Fungi. M. C. Cooke. London, Adam and Charles Black. New York, Macmillan & Co. 1895. Pp. x+360.

Mechanics and Hydrostatics. R. T. Glazebrook. Cambridge, University Press. New York, Macmillan & Co. 1895. Pp. xiv+208+xxiv. $2.25.

Primer of the History of Mathematics. W. W. Rouse Ball. London and New York, Macmillan & Co. 1895. Pp. iv+158. 65 cts.

Plane and Solid Geometry. Wooster Woodruff Beman and David Eugene Smith. Boston and London, Ginn & Co. 1895. Pp. ix+320. $1.35.

The Theory of Social Forces: Simon N. Patton. Philadelphia, American Academy of Political and Social Science. 1896. Pp. 151.

Ethnology. A. H. Keane. Cambridge, University Press. New York, Macmillan & Co. 1896. Pp. xxx+442. $2.60.

Principles of Metallurgy. Arthur H. Hiorns. London and New York, Macmillan & Co. 1895. Pp. xiv+388.

The Chemists' Compendium. C. J. S. Thompson. London, Whittaker & Co. New York, Macmillan & Co. 1896. Pp. 230. $1.00.

Practical Inorganic Chemistry. G. S. Turpin. London and New York, Macmillan & Co. 1895. Pp. vii+156. 60 cents.