

and its liberal patron leads one to look for results far more full and satisfying than have yet been secured.

CHARLES K. WEAD.

SCIENTIFIC JOURNALS AND ARTICLES.

The Popular Science Monthly for June contains a series of papers 'On the Definition of some Modern Sciences,' presented originally before the Philosophical Society of Washington. The 'Introduction' is by W. H. Dall; Carroll D. Wright defines 'Statistics,' Roland P. Falkner 'Political Economy,' E. A. Pace 'Psychology' and Lester F. Ward 'Sociology.' Marshall O. Leighton discusses 'The Commercial Value of Human Life,' concluding that the pecuniary value of life is subject to the same economic laws as are applied to other commodities. 'Instinct' by Douglas A. Spaulding is a reprint of much value, as it contains the record of a series of important experiments on young birds which seem to prove that instinct is indeed inherited memory. Arthur C. Scott has an article on the 'Educational Value of Photomicrography,' describing some of the methods used and showing some of the results obtained. John Waddell considers 'Sugar and the Sugar Beet,' stating that the profits of beet raising average twenty dollars per acre. There is a biographical sketch of 'Peter Guthrie Tait' by C. K. Edmunds and J. McKeen Cattell presents some very decided ideas 'Concerning the American University.' There are also some good brief articles under 'The Progress of Science.'

In *The American Naturalist* for May Henry F. Osborn discusses 'The Law of Adaptive Radiation,' the differentiation of habit in several directions from a primitive type. One of the conclusions reached is that function precedes structure. Charles T. Brues describes some 'New and Little Known Guests of the Texan Legionary Ants,' and in 'The Structure and Classification of the Tremataspidae' William Patten presents the evidence for the arthropod affinities of the primitive 'fishes,' proposing for *Pterichthys* and allied forms the new class Peltacephala. Elliot W. Downing considers 'Variation in

the Position of the Adductor Muscles of *Anadonta grandis* Say.' The number contains the Quarterly Record of Gifts, Appointments, Retirements and Deaths.

The Plant World for April contains 'Suggestions for the Preservation of Our Native Plants' by F. H. Knowlton, 'Among Florida Ferns' by A. H. Curtiss and shorter articles and reviews. In the Supplement Charles L. Pollard treats of the families of the Orders Primulales and Ebenales and begins that of the Gentianales.

Bird Lore for May-June opens with an article on 'The Increase of the Chestnut-sided Warbler' by A. Radclyffe Dugmore, illustrated with reproductions of some good photographs by the author. Francis H. Herrick writes of 'The Chebec's First Brood,' and Gerard A. Abbott describes 'A Grebe Colony.' The fourth paper of the series 'How to Name the Birds,' by Frank M. Chapman treats of the Tanagers, Swallows, Waxwings and Shrikes. The shorter articles, including notes, reviews and editorial comment, are all interesting.

The Museums Journal of Great Britain for May contains a description of the new Glasgow Art Gallery and Museum, which was an outcome of the successful international exhibition of 1888. The cost will be not far from \$1,250,000. There is a series of notes on 'Some South African Museums' which shows that steady progress is being made in natural science, and the balance of the number is taken up with notes on British and foreign museums.

SOCIETIES AND ACADEMIES.

PHILOSOPHICAL SOCIETY OF WASHINGTON.

THE 553d regular meeting was held May 10, 1902, Vice-President Gore in the chair.

The first paper was by Dr. S. P. Langley, 'On the Laws of Nature,' is printed in the current issue of SCIENCE.

Mr. C. G. Abbot, of the Smithsonian Astrophysical Observatory, then read a paper on 'The Relation of the Sunspot Cycle to Meteorology.*' The author admitted as proved

* This paper will appear in the *Monthly Weather Review* for April.