

tion of equilibrium both during swimming and at rest. More important is the fact that central stimulation of the lateral nerve causes coordinated compensating movements of the fins, exactly similar to those caused by similar stimulation of the acoustic nerve. In both cases a reflex arc between sense-organs and locomotor organs exists. The inference is that the organs of the lateral line are sense-organs of equilibrium analogous to the ear. These results testify indirectly to the correctness of the theory that the ear is a derivative of the lateral line. The equilibrium function is crude in the latter, more perfected and differentiated in the former. The sense of hearing in vertebrates arose along with the change from a water to a land existence, and the appearance of a *papilla acustica basilaris*. In vertebrates above the fishes, the ear appreciates all kinds of visible motion that the physicist recognizes, rotary, progressive or translatory and vibratory.

GARY N. CALKINS,  
Secretary of Section.

#### SCIENTIFIC JOURNALS.

*The American Naturalist* for February opens with an article by E. C. Case, reviewing the significance of certain changes in the temporal region of the primitive reptilia. This is followed by a paper by the late James Ellis Humphrey on Manasseh Cutler, one of the pioneers of American science, born in 1741. Professor J. H. Comstock and Mr. J. G. Needham continue their study of the wings of insects, taking up the venation. Other articles follow by Dr. F. C. Kenyon on the daily and seasonal activity of a hive of bees, by Dr. Erwin F. Smith on the first annual meeting of the Society for Plant Morphology and Physiology, and by Dr. Charles E. Bessey on some characteristics of the Foothill vegetation of western Nebraska.

THE contents of the April *Monist* are predominantly philosophical. The number opens with an article by Professor John Dewey on 'Evolution and Ethics,' which seeks to correct the view of the late Professor Huxley that Nature is essentially unmoral. Dr. Woods Hutchinson, of the University of Buffalo, writes on *Lebenslust*, a scientific homily upon the

nobility and righteous pleasure of being alive; E. E. Constance Jones discusses 'An Aspect of Attention;' Professor C. Lombroso seeks to substantiate his theory of the degeneracy of genius by considering certain 'Regressive Phenomena in Evolution,' while Professor Ferdinand Hüppe, of Prague, discusses in a long contribution, and in the light of a special philosophical theory, the 'Causes of Infectious Diseases,' attacking the prevailing views of Virchow, Pasteur and Koch. Finally, in a disquisition entitled 'The Unmateriality of Soul and God,' Dr. Paul Carus attempts to banish the metaphysical materialistic notion of substance from the domains of psychology and theology.

*The Atlantic Monthly* for April contains an article by Professor George H. Darwin which analyzes the relations of the earth to the moon and the solar system, the tidal phenomena produced by the moon which react upon it in turn, and details the prospective future history of the two bodies down to the times when they will revolve in unison, and our days and months will be of the same duration. Mr. John Muir continues his articles upon Government Parks with a description of the Yellowstone. Dr. McGee contributes a vivid description, in part based on personal experience of the five stages of thirst in the desert.

#### NEW BOOKS.

*Évolution individuelle et hérédité.* FELIX LE DANTEC. Paris, Alcan. 1898. Pp. 308.

*Practical Electricity and Magnetism.* JOHN HENDERSON. London, New York and Bombay, Longmans, Green & Co. 1898. Pp. xv+388.

*Birds of Village and Field.* FLORENCE A. MERIAM. Boston and New York, Houghton, Mifflin & Co. 1898. Pp. vi+406. \$2.00.

*A Laboratory Manual in Practical Botany.* CHARLES H. CLARK. New York, The American Book Company. Pp. 271. 96 cents.

*The Story of Life in the Seas.* SIDNEY T. HICKSON. New York, D. Appleton & Co. 1898. Pp. 173. 40 cents.