New York, The Macmillan Company. 1900. Part IV, pp. viii + 354–530, plates xxxiv–liii. 21s.

Biological Lectures from the Marine Biological Laboratory at Woods Holl, 1899. Boston, Ginn & Company. 1900. Pp. 282.

SCIENTIFIC JOURNALS AND ARTICLES.

The American Naturalist for May, opens with a detailed account of 'Marine Biology at Beaufort,' by H. V. Wilson, calling attention to the advantages of this locality as a field of research. J. G. Needham describes 'The Fruiting of the Blue Flag (*Iris versicolor* L.)' noting the effect of civilization in altering its environment. Chas. W. Hargitt presents 'A Contribution to the Natural History and Development of *Pennaria tiarella* McCr.' and R. W. Shufeldt reviews 'The Ornithological Results of the Polar Expedition under Dr. Nansen.' The ninth part of 'Synopses of North-American Invertebrates' is by Nathan Banks, and is devoted to 'The Scorpions, Solpugids and Pedipalpi.' There are numerous reviews of recent literature.

Bird Lore for June has for its leading article, a comparison of 'Song Birds in Europe and America' by Robert Ridgway, which is very favorable to our native birds. William L. Baily describes 'The Kingfisher's Home-Life,' with illustrations of the young at different ages, and Laura G. Page has an article on 'Swallows and Feathers.' Florence Merriam Bailey tells 'How to Conduct Field Classes,' and there is a notice of the course of 'Bird Study at Wood's Holl Marine Biological Laboratory.' There are some interesting notes, and in the Audubon Department an important agreement of the members of the Millinery Merchants Protective Association regarding the importation, manufacture and sale of North American birds, by which the Association agrees not to use any more North American birds after the stock on hand is exhausted, in return for which the Audubon Society and Ornithologists Union are to do everything in their power to prevent the passage of laws interfering with the manufacture and sale of ornaments made from the plumage of barnyard fowl, edible birds, game in season and foreign birds.

SOCIETIES AND ACADEMIES.

THE ACADEMY OF SCIENCE OF ST. LOUIS.

AT the meeting of the Academy of Science of St. Louis on the evening of May 23, 1900, the following subjects were presented:

A paper by Dr. Adolf Alt, entitled 'Original contributions concerning the glandular structures appertaining to the human eye and its appendages,' was presented by title.

Dr. M. A. Goldstein read a paper on 'The physiology of voice production,' in which he discussed three essential factors in the production of voice: the motor force, the organ of sound, and the resonators. The essential features presented may be summarized as follows: (1) All elements carefully considered, the best form of breathing applicable to voice production and singing is the rational combination of the costal with the diaphragmatic type. Reserve force in breathing is best attained by deep inspiration, fixation of the distended diaphragm and thorax, and control of these muscles while tone is produced. (2) To facilitate vocalization, the larynx should never be tightly contracted by the muscles of the throat, especially in the production of the registers. (3) On the resonating cavities, their proper conformation and position in relation to the vibrating cords and larynx, depend the quality and timbre of the voice, so that the careful and proper placing of tones is perhaps the most essential factor in voice production.

Professor F. E. Nipher read a short communication on the zero photographic plate, to which reference was made at the meeting of May 7th, and in his paper published as Vol. X., No. 6, of the Academy's Transactions.

The zero plate is one upon which a photographic image has been made, but which will develop no image in a bath placed in light of given candle power, at a distance of one meter from the source. For example, if the developing bath is twenty centimeters from a sixteen candle lamp, a Cramer isochromatic plate, such as is called 'instantaneous,' held for ninety seconds at a distance of one meter from the lamp, will be a zero plate. With an opaque stencil over the plate when placed in a printing frame, during the exposure, there will develop a positive of holes through the stencil, if the