

Milky Way," and Sigmund Exner on "Acuteness of Vision of Various Animals." The new German optical patents and instrumental designs are reviewed. The optical ateliers and their novelties receive a page of attention. Mention of new books and personal notices close the number.

The far-reaching significance of the appearance of this international journal on optics should be promptly appreciated. Glancing over the achievements of America's men of science in the field of optics during the last quarter of a century, and calling to mind the present manifold American activity in all kinds of optical enterprise, it seems that many interesting contributions ought to be made to this journal from the land of Alvan Clark, Henry Draper, J. Willard Gibbs, Henry A. Rowland, James Keeler, Samuel P. Langley and D. B. Brace.

The *Archiv für Optik* will, of necessity, be at the command of every American student and worker in optical fields. And the deeper interest in theoretical and practical optics to be awakened by this special journal will find concrete expression in more powerful optical instruments, largely of American design and manufacture, and in their manifold and ever-multiplying scientific uses.

M. B. S.

SCIENTIFIC JOURNALS AND ARTICLES

IN the December number of *The American Naturalist* the editor, Professor Frederic T. Lewis, of the Harvard Medical School, says: "*The American Naturalist* now completes its forty-first volume. With the development of the natural sciences in this country, in which it has had an important part, many technical journals have appeared; but these have not deprived the *Naturalist* of its special field. Although dispensing with its early subtitle—A Popular Illustrated Magazine of Natural History—it has always aimed to present in readable form an account of the progress of natural history, together with original articles on such animals, plants, and geological formations as are of general interest. In accomplishing this without the usual endowment or support of any scientific society, the journal

has depended upon its owners and the public for financial support, and upon the unpaid work of editors and contributors for its success. Messrs. Ginn & Company have decided to discontinue as publishers with the completion of this, their tenth volume. It is thought that to justify the work now being expended upon the journal, it should have a wider circulation and more generous support. The means of accomplishing this are being discussed, and the owners will be glad to receive practical suggestions from those interested." It has now been arranged that the *Naturalist* will in the future be published by The Science Press, and business communications should be addressed to Sub-station 84, New York City. Editorial communications should be addressed to the Editor of the *American Naturalist*, Garrison, N. Y.

The Museums Journal of Great Britain for December, 1907, contains a brief article by H. C. Bumpus, on "The New Museum at Frankfurt" which is commended, among other things, for the ample provision made for laboratories, and for a staff to use them. Huntly Carter tells "How to Promote the Use of Museums by an Institute of Museums." In spite of many good points this article strikes one as rather unpractical and to imply a willingness on the part of the public to study the workings and uses of museums that the same public is very far from possessing. Among other notes is an item to the effect that work has begun on a new wing for the National Gallery.

The Zoological Society Bulletin for January opens with an article by C. William Beebe on "New Rare Birds in the Zoological Park." Notable among these are the lammergeier, the hyacinthine macaw and the toura-cous. The park now contains 2,400 birds representing 520 species, perhaps the largest collection of living birds in the world. The principal article is by Elwin R. Sanborn on "The National Bison Herd," an account of the transportation of the herd of fifteen bison, presented by the Zoological Society to the national government, from New York to the Wichita range; the article is admirably illus-

trated. Mr. Ditmars records the reception of a toad, *Scaphiopus hammondi*, said to have been exhumed from limestone, at a depth of 150 feet, at Butte, Montana. As limestone is notable for caves and fissures there is nothing impossible in the specimen having lived out of sight long enough for the color pattern to have faded. It has now lived in a porcelain jar for eight months without feeding. But a rattlesnake has been known to exist seventeen months without eating and snails from three to eleven years. We trust that the future record of this toad will be carefully kept.

The American Museum Journal for January is a paleontological number. W. D. Matthew describes the recently mounted skeleton of "Allosaurus, a Carnivorous Dinosaur," and "The New Ichthyosaurus," this last one of the rare instances in which the shape of the paddles, tail and dorsal fin of this marine reptile are clearly shown. Walter Granger gives "A Preliminary Notice of the Fayûm Collection," which secured some 600 specimens of fossil vertebrates, and there are notes on ethnological material from the Congo, and the Bismarck Archipelago.

The Museum News of the Brooklyn Institute for January has articles on "Zuni Basketry," "Arctic Foxes" and the "Tree Frog and Protective Coloration."

The Bulletin of the Charleston Museum for December is mainly devoted to the "History of the Museum" subsequent to 1850, although it notes the preparation of the first loan, or traveling exhibit, devoted to illustrating the iron and steel industry.

SOCIETIES AND ACADEMIES

THE BIOLOGICAL SOCIETY OF WASHINGTON

THE 437th meeting was held January 11, 1908, President Stejneger in the chair.

The first paper, by Mr. E. W. Nelson, of the Biological Survey, on the "Distribution of Plant and Animal Life in Lower California," was in the form of a lecture illustrated by many lantern slides during which he gave a brief resumé of his recent expedition to the Peninsula of Lower California.

The peninsula, which is about 800 miles long and from 30 to 100 miles wide, was traversed its entire length and crossed eight times from one side to the other. The country proved to be mainly a mountainous desert subject to prolonged periods of drought during which no rain falls for several successive seasons. As a result surface water is very scarce.

The most interesting feature of this region is its plant life, as it has probably developed the most remarkable desert flora of the world. On the other hand, the bird and mammal life is very closely related to that of southern California. The birds and mammals in most cases are either the same as, or merely geographic races of, the Californian species. As would be expected, the greatest amount of differentiation has taken place in the mountains near the extreme southern end of the peninsula. Only about half a dozen birds and a single mammal, a species of mouse (*Oryzomys*), are derived from the opposite mainland of Mexico. These species all live near the southern end of the peninsula.

The second paper, by Dr. D. T. MacDougal, was a lantern slide lecture devoted in large part to "Changes in the Delta of the Colorado River."

During a visit to the lower part of the delta of the Colorado River in March, 1905, a great volume of flood water was seen to be leaving the main channel and making its way south-eastwardly to the gulf through the Santa Clara Slough, and the prediction was hazarded that a shift of the cutting action of the water might send the principal current to the sea in this way (*Bull. Amer. Geog. Society*, January, 1906).

Shortly after that observation was made, the entire stream was diverted into the Salton Basin for a time, leaving the bed of the river bare for more than a hundred miles. With the restoration of recent conditions the Colorado resumed its way to the Gulf, but in the meantime, such erosion and formation of bars had taken place in the section affected by the tides below the "Colony mesa," that the main current flowed through the Santa Clara Slough, if reports from three different sources are to be credited.