

hydroids, ten of which have never before been described.

J. J. Lister presents an extended report on a peculiar hard white organism found growing on dead coral in thirty-five fathoms of water. It was made up of a continuous skeleton of solid polyhedral elements penetrated by a system of anastomosing canals; these were lined with soft tissue and were open to the exterior. The soft tissue contained here and there what seemed to be large unsegmented eggs and other masses which had the appearance of parenchymular larvæ. Taking all these peculiarities into account, the author believed the organism to be a sponge, but of so unusual a structure as to justify the erection of a new family for its reception. The species is called *Astrosclera willeyana*, and the family *Astroscleridæ*.

A series of embryo mound birds and one hatched nestling are reported on by W. P. Pycraft. The feather tracts of the embryo and the nestling plumage are described in detail. The birds are able to fly almost upon hatching, and this has led to the idea that they were at once provided with adult plumage. Pycraft points out that their plumage is not adult, though it is also not true nestling down.

S. J. Hickson and I. L. Hiles report on certain of the octocorallia, two species of *Stolonifera* and twenty species of *Alcyonaria*, three of which are new. The *Xeniidæ* are described by J. H. Ashworth. Of the sixteen known species of soft corals belonging to this genus, Dr. Willey's collection contained representatives of four, as well as material upon which the description of a new species is based.

G. H. PARKER.

The Austin [Texas] Dam. BY THOMAS U. TAYLOR. Water-Supply and Irrigation papers of the United States Geological Survey, No. 40. Washington, Government Printing Office. 1900. Pp. 52, pl. xvi.

In this publication Professor Taylor, of the Engineering Department of the University of Texas, gives an account of the inception, building, and failure of the 'Austin Dam,' a municipal undertaking for the purpose of controlling the water supply of the Colorado River.

The first foundation stone was laid May 5,

1891, and the disaster, due to an unprecedented flood, occurred April 7, 1900.

As remarked by Mr. F. H. Newell, in his letter of transmittal, "There are many useful lessons to be drawn from the history of such an enterprise, for it often happens that failure is more instructive than success. Throughout the United States many communities are now discussing the utilization of water power for irrigation and other industrial purposes, and they may be saved from mistakes or be led to adopt precautionary measures by a clear understanding of the causes of the disasters which have occurred through the neglect of certain precautions."

The scope of the paper may be seen from the following general headings: Introduction, Preliminary Projects, Construction of Dam, Leak under Head Gate, Flow of Colorado River, Economic Aspect, Silting of Lake McDonald (the body of water back of the dam), Failure of the Dam. The illustrations are both numerous and excellent, some being from photographs taken immediately after the accident.

Among the errors pointed out are the following: That the minimum flow of the river had been greatly overestimated, hence the power developed upon the completion of the dam fell far short of that hoped for; that evaporation as a factor had almost been lost sight of, that the engineers in charge of the work of construction (the dam cost \$611,345.29) had been hampered and interfered with in the prosecution of their labors; and that the geologic conditions prevailing at the site had been ignored. To these errors are attributed the failure of the enterprise to meet the expectations of the public and its failure as an engineering feat.

While Professor Taylor's paper is of the greatest interest to the engineering profession, there is much of value in other lines, as, for instance, the carefully conducted investigation of the silting up of Lake McDonald.

FREDERIC W. SIMONDS.

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SCIENTIFIC JOURNALS AND ARTICLES.

THE *American Geologist* for January contains an article by S. E. Bishop on 'Brevity of Tuff