

with a result he can not verify, has somewhat the function in his education of the puzzle in our society amusements or the game of sliced animals in the nursery.

J. MARK BALDWIN.

PRINCETON.

*THE WORK AT THE BIOLOGICAL LABORATORY OF THE U. S. FISH COMMISSION AT WOODS HOLL.*

THREE months ago the United States Fish Commission announced that its Biological Laboratory would be reopened; that it would be equipped for investigation; that men of science would be welcome, and that every effort would be made to collect all needed material, and to furnish, within certain limits, all necessary instruments and apparatus for research. The Station is the most extensive plant for the study of marine life and practical fish-culture in the world. There are four buildings: The Hatchery, Laboratory and Aquarium; the Residence; the Shops and Store House; and the Power House. It is in possession of a small fleet of steam and sailing vessels, and by special enactment the officers are empowered to use, at their discretion, any means for the capture of fish or other marine organisms.

The Commission has refurnished the Biological Laboratory and added ten new rooms for research. It has equipped a laboratory for physiology. It has purchased a bacteriological outfit, and a creditable library of biology and fish-culture has been installed. Two steam launches and the schooner *Grampus* have been attached to the Station, several fine-mesh seines, trawls and tow-nets have been purchased, and a large fish-trap has been placed at a favorable locality.

From the day of the opening of the laboratory, April 1st, several tables have been continuously occupied, and, at the present time, the scientific force numbers twenty-four. Several have expressed the desire of extending their work during the

autumn and winter months, and it is proposed to keep the laboratory open throughout the year.

The Commission does not attempt to instruct or to dictate as to what lines of research are to be pursued, how the work shall be carried on, or where the results shall be published. It is convinced that all lines of biological research are indirectly, if not also directly, helpful to its more immediately practical work, and it happens that fully one-half of the investigators are now busy with problems bearing directly upon the anatomy, embryology, physiology and pathology of fish. The large corps of collaborators has made it possible to secure definite data respecting the breeding habits of many marine forms. The floating-fauna has been systematically examined; valuable information has been gained respecting the larval life of the star-fish, the developmental stages of the clam, the rate of growth of the scallops, the causes of mortality of lobster fry, and the pathogenic bacteria infesting fish.

With the cooperation of the Marine Biological Laboratory, it is proposed to make a series of synchronous observations on the temperature and floating fauna of Vineyard Sound. The combined vessels of the two laboratories provide a sufficiently large fleet to make these observations of special interest. It is also proposed to resume again the deep-sea work begun by the Commission many years ago, though the temporary use of the *Fish Hawk* by the United States navy will prevent the work from being undertaken the present season.

H. C. BUMPUS.

*ZOOLOGICAL NOTES.*

PUBLICATIONS OF THE AMERICAN MUSEUM OF NATURAL HISTORY.

THE Report of the American Museum of Natural History, New York, for 1897, re-