

# SCIENCE

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FRIDAY, APRIL 7, 1899.

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MSS. intended for publication and books, etc., intended for review should be sent to the responsible editor, Professor J. McKeen Cattell, Garrison-on-Hudson N. Y.

## THE FRESH-WATER BIOLOGICAL STATIONS OF THE WORLD.\*

AWAY back at the beginning of the investigation of minute forms of life, which followed upon the invention of the microscope,

\* Annual address of the President before the Nebraska Academy of Sciences at Lincoln, November 25, 1898.

or shall I say discovery, for it seems to have been historically an accident, the early students searched the ditches and ponds and lakes for the organisms which constituted the objects of their study. Anton von Leeuwenhoek, whose name is familiar to you as one of the most zealous early workers among microscopic objects, enriched science by a long series of new organisms of this character. Roesel von Rosenhof, whose careful investigations on various fresh-water animals, published under the title of 'Insect Diversions' are still standard sources of information concerning the habits and structure of these forms, together with Swammerdam, Trembley, O. F. Müller, and a whole host of others, devoted their attention almost exclusively to the fresh-water fauna. But this movement seems to have culminated with the appearance, in 1838, of Ehrenberg's famous volume 'The Infusion Animalcules as Complete Organisms.'

Extended investigations had already impressed zoologists with the richness of the marine fauna. Numerous animal groups of common occurrence in the sea were apparently entirely wanting in fresh water, and the astounding richness of the sub-tropical and tropical oceans with which the European investigators came early in contact on the shores of the Mediterranean, and in the expeditions to the new lands of the Tropics, entirely over-

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