

# SCIENCE

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## FISHES, LIVING AND FOSSIL.

A TEXT-BOOK of Ichthyology embodying the results of recent investigation and taking cognizance of both living and extinct forms has long been a desideratum. Dr. Günther's 'Introduction to the Study of Fishes' (1880) did not at all represent the condition of ichthyology even at the time of its original publication, and the German translation (1886) was scarcely more than a reproduction, in another language, of the original work and retained almost all its numerous defects and errors. Those defects and errors were especially manifest in the treatment of the extinct forms. The increase in our knowledge of past types, too, has been very great within the last decade, owing to the labors of Mr. Smith Woodward, Prof. Cope and others. The desideratum indicated, to a certain limited extent, has been supplied so far as the 'fossil' fishes are concerned, in a recent work, by Dr. Dean, of New York, entitled 'Fishes, Living and Fossil.\*' But it is not, as the author confesses, an elaborate introduction to ichthyology; its 'object is to enable the reader to obtain a convenient review of the most important forms of fishes and of their structural and developmental characters'

\* *Fishes, Living and Fossil*. An outline of their forms and probable relationships. By Bashford Dean, Ph. D., Instructor in Biology, Columbia College, New York City.—New York: Macmillan & Co. 1895. (Columbia University Biological Series III.—8vo, xiv, 300 pp.)