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*THE LOWEST OF THE VERTEBRATES AND THEIR ORIGIN.**

IN many seas have been found—and in almost all temperate and tropical seas may be found—small animals of peculiar appearance and habits and of extraordinary interest. They have a translucent, compressed and elongated fusiform body attenuated at both ends, and therefore have received one of their names—*Amphioxus*; this form may be superficially modified, however, by the development of a membrane around the caudal portion of the body and the extension downwards of cirri from an oral ring. The existence of these cirri and the erroneous attribution to them of a respiratory function have given rise to another name for the group—*Branchiostoma*. *Lancelet* is a semi-popular equivalent of *Branchiostoma* and *Amphioxus*.

The animals thus distinguished externally are unique in their organization. The nervous system is manifest in an elongated tube without any expansion forwards into an *externally* specialized brain, and with its anterior portion only distinguished by the fact that there are (in front of the first myotome) two symmetrical pairs of sensory nerves which innervate the snout and have no corresponding ventral roots. A skeleton is represented by a simple notochord extending to both ends of the body, and there is no rudiment of a cerebral case or of sense capsules; the only other hard parts are developed around the anterior aperture, where

* *Columbia University Biological Series. II. Amphioxus and the Ancestry of the Vertebrates.* By ARTHUR WILLEY, B. Sc., Tutor in Biology, Columbia College. With a preface by HENRY FAIRFIELD OSBORN. Macmillan & Co. 1894. 8vo, xiv+316. Frontispiece. $2.50.