

Observations and Sketches afield, with examples (pp. 269-314). VIII. Ecology— Interpretation of Environment as exemplified in Orthoptera (pp. 315-433). The author says: "This work consists essentially of suggestive essays drawn from observations afield, and treating of various insects, birds, and plants. In this account there is brought together a series of life histories of many animal forms. I have given more consideration here to the insects than to other groups of animals. I think this is justifiable when it is remembered how many more representatives of these animals populate the earth, as compared with other families of animals."

The work will appeal to the general reader interested in nature study through its wide scope, clear and non-technical descriptions, and evident scientific merit. The author is an entomologist of standing, whose special field is the Orthoptera, from which many of his illustrations and examples are drawn. In discussing general questions of evolution he quotes liberally from standard authors, including not only Darwin, Wallace, and Poulton, but the more recent investigators in the field of experimental biology, and current authorities in ecology. It is on the whole a safe guide, replete with original observations, and with illustrations on a liberal scale from the author's own sketches and photographs, and must prove a useful introduction to the study of the animal and plant life of "temperate America." Much of the work is based on studies and observations carried on for many years at Lakeside, Michigan. The ornithological matter is not extensive, consisting mainly of passing references, in the section on 'Animal Behavior,' to various species in illustration of the general subject, and to the Ruby-throated Hummingbird as an agent in the pollination of flowers.— J. A. A.

Curl's 'Notes on the Digestive System of *Hydrocorax*.'— In an illustrated paper¹ of six pages, the author gives a detailed account of the digestive system in *Hydrocorax hydrocorax* (Linn.), with special reference to the periodical casting-off of the lining of the stomach. This deciduous membrane "is formed by secretion from the glands of the stomach and after reaching its full thickness, separates spontaneously, leaving the glands to begin at once the formation of a new sac . . . It seems reasonable to suppose that, at least when the breeding season is past, the food, mixed with, and acted upon by, the secretion of the proventricular glands, passes into the deciduous sac lining the stomach; here muscular action completes the mixing, triturates the food, and prepares the digestible parts to pass over into the duodenum. The refuse is then periodically ejected in the membranous sac. Whether this routine is changed in the breeding season, I cannot say."— J. A. A.

¹ Notes on the Digestive System of *Hydrocorax*. By Holton C. Curl. Surgeon, U. S. Navy. Philippine Journal of Science, Vol. VI, No. 1, pp. 31-37, pl. i, ii. February, 1911.