

RECENT LITERATURE.

Leopold's 'Game Management.'—In this volume¹ we have the most comprehensive summary of the problem of game conservation that has ever appeared. In his preface the author asks what is the good of man's power over nature if it is to be used solely for bread-and-butter ends? and adds "Are we too poor in purse or spirit to apply some of it to keep the land pleasant to see, and good to live in?"

"Game can be restored, he says, by the creative use of the same tools which have heretofore destroyed it—axe, plow, cow, fire, and gun; and control comes from the co-ordination of science and use."

Mr. Leopold's book is so full of detailed information on all sides of his subject that it is hopeless to attempt to review it adequately in the short space at our disposal, and we, therefore, select one of the eighteen chapters for comment—that which deals with "Predator Control." Our author very properly emphasizes the complexity of this question and the attitude of the average sportsman who plays a *leading part* in the drama although he usually "has neither seen nor read more than snatches of the *other parts*." The biologist he says, takes a "long-time" viewpoint, fearing the degeneration of game stocks and the elimination of predators as an esthetically valuable part of the fauna and the possible dangerous reaction from too stringent control measures. The sportsman on the other hand takes a "short-time" viewpoint, fearing that decrease in game may result in the prohibition of hunting and he thinks to stay such action by the extermination of predators without any understanding of what biologists are talking about when they oppose his policies. Mr. Leopold thinks that an adjustment of these viewpoints is possible with a better understanding of the problem and he has undoubtedly presented all sides of this question, as well as other involved questions, if only sportsmen and those in charge of game legislation will *read* his volume.

The greatest hindrances to harmony of views and adequate action is, to our mind, (1) the political complection of many State Game Commissions and their control by the less competent sportsmens' organizations which exist, as we heard one representative express it "to shoot game rather than to preserve it," and (2) the political influences which can be brought to bear upon Congress and Federal Commissions by powerful agricultural and stock raising organizations.

The whole matter is one of education and whether the general public and their representatives can be educated before wild life in general is decimated is a question. Mr. Leopold's admirable work will furnish the data for such education but it is perhaps too much to expect the sportsmen to read it

¹ Game Management | By Aldo Leopold | Consulting Forester. | Drawings by | Allan Brooks | Charles Scribner's Sons, 597 Fifth Ave., New York. London 1933. Pp. i-xxi + 1-481. Price \$5.00.

through and we trust that those can be found who will prepare terse articles based upon his book with easily grasped facts and arguments, and spread them in the sportsmen's journals and the daily press throughout the country.—W. S.

Jones on 'Insect Coloration and the Relative Acceptability of Insects to Birds.'—After Mr. W. L. McAtee's several able attacks on the theory of protective coloration, it is interesting to find something¹ on the other side of the question although the author accepts most of Mr. McAtee's conclusions and says: "Belief in the protective value of a character is not invalidated by evidence that it is occasionally disregarded by many enemies, or totally disregarded by a few, for it may still be one of the many factors in the equilibrium of survival." From this viewpoint he sees no irreconcilable conflict between the stomach examinations employed by Mr. McAtee and the experiments which he describes.

Mr. Jones' interesting experiments consisted in spreading various dead insects on bird feeding shelves, being careful to avoid any advantage in position, etc., and carefully recording the preferences displayed by the birds, eleven species of which fed there. The results of his experiments are given in detail and his conclusions are that insect acceptability to birds is relative and its causes complex; that coloration has material influence, and that in general brighter colored insects are the less acceptable; that there is a prevalence of so-called "warning coloration" among insects which feed on poisonous or acrid plants but that the relative unacceptability of many insects must depend upon other factors. Mr. Jones has also carried on interesting experiments on the acceptability of various dead insects to ants.—W. S.

Fauna of the National Parks.—This excellent publication² discusses the problems confronting the National Parks Service with regard to the conservation of the natural fauna and flora. The conditions at the time of settlement of the West and the changes already wrought by man before the parks were established are described as well as the efforts that have been made to re-establish the former conditions.

The point is emphasized that the arbitrary boundaries of the parks often exclude areas absolutely essential to the existence of their animal inhabitants, as for instance the lack of winter ranges for certain species which must as a result go outside the park at this season if they would survive. The problems of protecting the vegetation from the animals and the methods of control of the latter are discussed and there is an interesting

¹ *Insect Coloration and the Relative Acceptability of Insects to Birds.* By Frank Morton Jones, Sc.D. *Trans. Ent. Soc. London*, LXXX, pp. 345-386, pl. 18-28. December 31, 1932.

² *Fauna of the National Parks of the United States. A Preliminary Survey of Faunal Relations in National Parks.* By George M. Wright, Joseph S. Dixon, Ben H. Thompson. *Contribution of Wild Life Survey Fauna Series No. 1.* May, 1932. Washington, 1933. Pp. 1-157, figs 1-56. Price 20 cents, U. S. Govt. Printing Office.