the Department at Toronto where the writer examined it on May 3, 1930, and identified it as an immature (white phase) Little Blue Heron (Florida cærulea).

Mr. Stevenson informs me by letter that the bird was trapped by Mr. George Moase on March 28, 1929. The specimen is now in the collection of the Royal Ontario Museum of Zoology.

The bird is practially all white but there is a certain amount of slate-grey in its plumage-the primary tips, edges of primaries, certain feathers of the back, most of the crown and parts of the occipital and long back plumes being of this colour. This first nuptial, mostly white, plumage is evidently worn by immatures of this species until they are almost a year old or less, when slate-coloured feathers begin to appear in their plumage, such as in the specimen under consideration. Mr. A. C. Bent1 remarks that he has seen this white plumage as late as May 1st. The following measurements were taken from the dried skin on the date of examination—wing, 93/4 inches, bill 23/4 inches, and tarsus 31/4 inches.

This is apparently the third locality at which this bird has been taken in Ontario and in addition to being the most northerly record, the present specimen is the first to be detected in the spring. The other two localities are in the Lake Erie region, viz., at Aylmer, Elgin county² (four birds of the white phase, two of which were

taken on August 15, 1901) and at Point Pelee, Essex county³ (one in white phase taken in September, 1904).

It is of interest to recall that Mr. P. A. Taverner has recorded4 the capture of one in the full plumage of the adult at Detroit, Michigan, on May 2, 1882.—Jas. L. Baillie, Jr.

A GRAY RED SQUIRREL.—On May 8, 1931, I observed a gray individual of the Red Squirrel (Sciurus hudsonicus) in a much-frequented section of conifers in High Park, Toronto. whole of the upper parts including the head and tail were of a beautiful slate-gray colour, the individual hairs being banded with blackish and white giving a pepper-and-salt effect as in the normal pelage. There was a slight suggestion of light brownish-gray on the lower back and upper side of the tail but the general tone of the pelage was decidedly gray.

The only other individual I have ever seen exhibiting this colour phase is a male taken by A. A. Wood at Caradoc, Ontario, on January 8, 1925, and now in the Royal Ontario Museum of Zoology.

The animal was at once noticeable on account of its colour. It seemed to me unlikely that anyone could have passed it without being struck by its different coat, and yet Toronto naturalists have scoured that region regularly for years and no one had reported anything new in the Red Squirrel world. It seems likely that the animal was a comparatively new arrival, possibly a young one Is this a distinct colour phase, is it a condition of immaturity or what? Perhaps some mammalogist can enlighten us.—JAS. L. BAILLIE,

BOOK REVIEWS

REPORT ON A GAME SURVEY OF THE NORTH CENTRAL STATES. Made by Aldo Leopold for the Sporting Arms and Ammunition Manufacturers' Institute under direction of its Committee on Restoration and Protection of Game. Madison, Wisconsin, 1931.*

This publication of some 300 pages is a condensed and unified summary of reports made by the author to the Sporting Arms and Ammunition Manufacturers' Institute, in which he presents the results of a "Game Survey" made by him, during 1928-1930, in the states of Minnesota, Iowa, Missouri, Wisconsin, Illinois, Michigan, Indiana and Ohio. The forms of game chiefly dealt with are Bob-white, Rabbits, Pheasants, Hungarian Partridge, Ruffed Grouse, Sharptailed Grouse, Prairie Chicken, Wild Turkeys, White-tailed Deer, and Water-fowl. Although the area covered by the Survey is non-Canadian and presents in large part a condition of intense agricultural activity that is paralleled in only a comparatively small part of Canada, yet it is thought that this work abundantly merits a review in The Canadian Field-Naturalist because it is in such large measure a new and profitably stimulating type of publication on game matters.

The author not only studied game conditions at first hand in the states mentioned, but with commendable industry, through correspondence and interviews, amassed, assorted, and made available the views of great numbers of scattered residents of the region, who, as sportsmen,

¹ A. C. BENT, Life History, Birds, 1926, p. 180.

² J. H. AMES, Auk, 19: 94, 1902.

³ B. H. SWALES and P. A. TAVERNER, Auk, 24: 139-40,

^{*} Copies obtainable from American Game Association, Investment Bldg., 15th and K Streets, NW., Washington, D.C., at \$1.00 each postpaid.

conservationists, farmers, game wardens, scientists, or others having to do in some capacity with local game problems, had obtained useful information concerning them. He also made use of the literature on the subject and of various official records, although perhaps somewhat hurriedly.

As a result of his efforts he is able to present an immense amount of valuable information relating to the principal game species of the region with which he is dealing. This information is set forth in a clear and orderly fashion that greatly increases its value, and is frequently presented not only in the text, but by means of maps, charts, and diagrams. The present problems involved in maintaining a huntable supply of game creatures in an area of this kind are clearly delineated and intelligently considered.

The relations of hunting to other principal land uses in these states, such as agriculture and lumbering, are discussed in detail and given the prominence that they merit. The importance of these relationships, as compared with those details of hunting regulations that commonly are given much more of sportsmen's attention is repeatedly emphasized and in this lies one of the principal contributions to game conservation made by this volume. The idea of Game Management, including adequate provision of suitable environment, as the essential background of continued hunting is thoroughly established by The practice of such Game Managethe author. ment involves scientific research, competent, continuous administration, and the co-operation of the land-owner and the sportsman.

The entire book is a mine of useful facts and stimulating ideas and should be read by every conservationist and sportsman, whether concerned directly with similar environmental conditions or not.

It is, of course, unfortunate that the state "surveys" on which the book is based had to be made so hurriedly. Those responsible for the carrying out of this work, while deserving much credit for initiating this new line of endeavour, ought to realize that to allow any man only a month or two in which to dash about over a large

state and "survey" its game supply and game problems is not conducive to desirable thoroughness. As a result of this condition, much of the work, admirable as it is in many respects, rests on an uncertain and untested foundation, because it is necessarily built so largely on the opinions and memories of untrained observers. The marvel is that the author has succeeded in producing a report so well worth while in spite of this handicap.

The incomplete and temporary character of the important records of many state game commissions, as revealed by this report, and the well-known brevity and uncertainty of the tenure of office of many of the commissioners are among the preventable conditions that now hamper conservation.

It is the reviewer's opinion that, of the many charts, maps, and diagrams which illustrate this volume, some are over-burdened with data and made so complicated as to reduce their efficacy to a serious extent. Unless pictorial aids such as these convey a clearer message than the accompanying text and convey it more readily, there is no good reason for presenting them. Some of the graphic presentations of data in this work could be vastly improved by dividing among several diagrams the information now recorded on one.

Important though the relations between game conservation and agriculture admittedly are, particularly in a region where agriculture is intensive, they are scarcely deserving of the term "fundamental", which we find applied to them from time to time in this report. The fundamental questions in conservation lie deeper than that; they are questions of the inter-relations of all species of life on this earth, and especially of the relations between our own species, now the dominant one, and each of the others. While these relations are conditioned in very important ways by all our large-scale activities, including agriculture, they are, after all, fundamentally dependent on the numbers of the human population and its consequent requirements in space, food, and raw materials generally as related to the similar requirements of other species.—H.F.L.



Lewis, Harrison F. 1931. "Report on a Game Survey of the North Central States, by Aldo Leopold [Review]." *The Canadian field-naturalist* 45(8), 207–208. https://doi.org/10.5962/p.339314.

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