

British Columbia" by Munro and Cowan (1947).

In September 1954 while the U.S.C.G.C. *Northwind* was crossing the northeast Pacific from Unimak Pass (Aleutian Islands) to Victoria, B.C., the ship was accompanied by this species over much of the distance. Specifically, Laysan Albatrosses were observed during daylight hours on September 24, 25 and 26 from approximately lat. 54°N, long. 157°W to lat. 51°45'N, long. 137°30'W. The latter position is 200 sea miles from the

west coast of the Queen Charlotte Islands and is definitely closer to British Columbia than to any other land. The number of individuals in sight at any one time varied from one to six or more. Birds were photographed at close range on several occasions. They were accompanied by much larger numbers of Black-footed Albatrosses (*D. nigripes*). The latter species maintained its attendance to within 50 or 60 miles of the Vancouver Island coast. — FERRIS NEAVE, *Biological Station, Nanaimo, B.C.*

## REVIEWS

**Animal Camouflage.** By E.M. Stephenson and Charles Stewart (London, Charles and Adam Black). Distributed by the MacMillan Company of Canada \$3.00, Second Edition 1955; 1-179, Glossary 180-187, Bibliography 188-189, Appendices 190-195; 15 plates, 9 figures.

This interesting book, first published in the Pelican series in 1946, has been brought up to date and more extensively illustrated in the present cloth-bound edition.

The book covers a wider field of information than the title suggests. In addition to the general chapters on camouflage, with their many well-chosen examples, there are philosophical discussions of "Camouflage and its Contribution to Survival" and "What is the Real Significance of Camouflage". These chapters review the selective action of camouflage and its possible mode of action in regard to survival. Also discussed are the complicated types of camouflage that seem almost impossible to explain by mutation and natural selection only.

Supplementing the general discussions of camouflage and its values there are several chapters devoted to colour changes and the hormonal and nervous control under which they take place in the different phyla of animals.

A chapter on mimicry deals with both form and behaviour and discusses the reasons why mimicry may be useful under varied conditions. Two chapters deal with colours and patterns, the bases for many types of camouflage. Of these "Nature's Pigments and Colour Effects" deals with colour produced by pigments and by surface structure. "Control of Colour Change in Vertebrate Animals" goes into detail on nervous and hormonal control of chromato-

phore and melanophore cells in vertebrates from dogfish to snakes. Nervous control of these cells (in contrast to hormonal) becomes more common as one reaches higher orders.

The final chapter on "Sight in the Animal World" brings together much useful information on what the different animal groups can and cannot "see" in relation to the structure and location of their eyes.

This compact book will be welcomed by both biologists and general readers. The complexities of camouflage are discussed, some are explained, and the need for additional research is made apparent. The data are presented and conclusions are drawn with commendable freedom from bias and preconception.

The type is easy to read, the format pleasing and the illustrations well chosen. Typographical irregularities are pleasantly few. — V.E.F. SOLMAN.

**Check-List of Amphibians and Reptiles of Canada and Alaska.** By E. B. S. Logier, and G. C. Toner (Contributions of the Royal Ontario Museum of Zoology and Palaeontology No. 41, August 31, 1955).

Two major groups of common Canadian vertebrates are the amphibians and reptiles which occur from coast to coast and northwards to the tree line. As a source of food they form an indispensable item in the diet of many other animals. The astronomical numbers of insects and the vast numbers of rodents that they annually consume are testimony of their economic value to Canada. Yet this segment of our fauna has had so little attention that until August of 1955 there was only one comprehensive check list of Canadian amphibians and reptiles



(R.C. Mills, 1948) and it contained no maps and cited no records. The few obsolete local lists that are in existence constitute a situation sharply in contrast with that occurring in the United States where there is a separate handbook each for frogs, salamanders, turtles, lizards and snakes of the country, where nearly every state has its own herpetofaunal handbook, and where distribution maps are frequently published showing new *county* records. It is, therefore, with gratitude that we greet the Check-List of Amphibians and Reptiles of Canada and Alaska by E. B. S. Logier, and G. C. Toner (Contributions of the Royal Ontario Museum of Zoology and Palaeontology No. 41, August 31, 1955) which contains the first Canadian herpetofaunal distribution maps ever to be published.

This eighty-eight page volume represents the work of over a decade of accumulating scattered records and reports from various Canadian and American sources, and a glance at the acknowledgements section impresses one with the number of contributors involved. The order, families, genera, species, subspecies and common names are conveniently listed phylogenetically in the table of contents. There follows a four page introduction, a list of abbreviations, acknowledgements, and pages 7 to 75 are devoted to maps and text. The remainder of the book consists of a list of 187 references.

The 44 amphibian and 54 reptile species are treated each in three paragraphs: scientific and common name; brief description of range in Canada; and a list of Canadian locality records arranged alphabetically by province. As the authors point out their check list is not an inventory of records but an outline of distribution, and consequently they have cited only one or two of the available records for any given area. Each of these records is represented by a spot on the distribution map for that species. These maps are conveniently located adjacent to their respective species in the text. In addition to this treatment of the text material, there is a special discussion on the taxonomic status of *Bufo americanus copei* in eastern Canada and on *Thamnophis sirtalis* ssp. in British Columbia. The taxonomist and student of animal populations will find these two discussions most informative and should be struck by the fact that the taxonomy and distribution of even our

common toad and garter snake have as yet been insufficiently studied.

In the opinion of the reviewer, the value of this book is greatly enhanced by the introduction. In this section, Mr. Logier and Mr. Toner deplore our paucity of knowledge in respect to Canada's herpetofauna and present a few of the challenging problems which confront the would-be investigator. Foremost of these is the concept of the species and subspecies and the justification in describing new forms. The two writers are of the opinion that a form should be thoroughly studied and then named (if it proves to be unique) rather than first naming and then studying (the latter usually resulting in another synonym for the literature). The authors poignantly state "To note differences and resemblances where they may be observed by any means whatever is a legitimate function of the study of zoology, but to attach trinomials or quadrinomials to any vagary of variation that appears in a population is something else again... In the same train of thought, we should remark with considerable emphasis that the application of racial names to geographic gradients of variation is a highly dubious procedure, but the variations and factors relating to them are worthy of careful study". The reviewer hopes that their introduction and distributional maps both will serve as guides to future Canadian herpetologists.

As is inevitable in a work of this nature, there are a few errors. On page 9 under *Ambystoma jeffersonianum*, the Nova Scotia reference of Bleakney 1953 should read 1952. In *Rana sylvatica* the Quebec locality records have been repeated under Labrador where the records of Backus 1954 were meant to have been quoted. The Atlantic ridley turtle is designated as *Leptochelys* instead of *Lepidochelys*. On the erratum slip on page 49 the painted turtle from Laval County, Quebec, should certainly be referred to *Chrysemys picta marginata* and not *C. p. picta*. One Canadian snake species, *Contia tenuis* of British Columbia, was omitted from this check list. Perhaps the greatest criticism that can be levelled against this volume is the poor quality glue used in attaching the paper cover. It is an admirable thing to reduce the selling price of a volume through such a cover, but it is deplorable that such a significant work as



this Check-List of Amphibians and Reptiles of Canada and Alaska did not receive one of a more tenacious nature. — SHERMAN BLEAKNEY, *National Museum of Canada, Ottawa.*

**The Mammal Guide.** By Ralph S. Palmer. Doubleday and Company Inc., Garden City, New York, 384 pp, 40 colored plates, 37 line drawings, 145 maps, 1954. Price \$5.50.

Although numerous field guides and handbooks dealing with birds, reptiles, amphibians, insects and marine invertebrates have appeared within the last decade or so, similar works dealing with mammals have been conspicuous by their absence. Without up-to-date references amateur naturalists have tended to neglect mammalogy, to the disadvantage of the science as a whole, since non-professional persons have, in the past, made most worthwhile contributions. They are responsible for many of the specimens in our museums and their studies and observations of the animals in the wild have added greatly to our knowledge of species whose life history would otherwise remain unknown.

But if the amateur mammalogists were obliged to wait for suitable reference, they did not wait in vain. In 1952 "A Field Guide to the Mammals" by Dr. William H. Burt and illustrated by Richard P. Grossenheider appeared, followed in 1954 by "The Mammal Guide" by Dr. Ralph S. Palmer. Both books are guides to identification of North American mammals, but Dr. Palmer's book, in addition has brief accounts of the biology of each species, with a paragraph devoted each to habitat, reproduction, habits and economic status. There is a short but adequate description of each species and either a line drawing or a colored plate as a further aid to identification. There are 250 figures in color depicting 182 species. The range of each species is delineated on a small map accompanying the text. In those cases where a number of species are closely related and have similar habits, they are treated as a group. Most of these are the smaller species for which very little definite information is available, in any case.

It is obvious that the author has devoted a great deal of time and effort in the preparation of this work, including the examination of a tremendous mass of literature. It is therefore not surprising that there is little to criticize.

However, there could be some improvement in the reproduction of the colored plates. It is doubtful whether the amateur could distinguish between the varying and brown lemmings, using the colored figures as guides. And even the professional mammalogist would have difficulty identifying the meadow vole, the pine mice or the red-backed mouse without the aid of the captions. However, since the identification of many small mammals is dependent upon the examination of minute characters not obvious in a small figure, this criticism is not as serious as it might at first appear. In a few cases the range maps may be misleading, as in some cases the distribution as shown is that of the range of the species at the time when the white man arrived on the continent (pronghorn), while others delineate the range as it is today (bison, gray wolf).

Some of the vernacular names used may cause confusion. It is obvious that mammalogists should come to some agreement regarding the English names to be applied to species of the genus *Peromyscus*, and that either *Phenacomys* should be retained as the vernacular for the rodents of that genus, or, "spruce mouse", as used by Dr. Palmer, should be adopted.

For those who want a single volume, of the field guide type, which at the same time provides a certain amount of information on the biology of the species treated, this book can be highly recommended. Both the author and the publishers are to be complimented on the excellence of this publication. — AUSTIN W. CAMERON.

**A Study of Variations in the Maskinonge from Three Regions in Canada.** By A. S. Hourston, 1955. *Contrib. Roy. Ont. Mus. Zool. and Palaeo.* No. 40, 13 pp., 4 tables, 16 pls.

This interesting and carefully conducted study indicates that there is considerably more geographical variation in the maskinonge than had probably been realized. The author discusses the names and taxonomic history of the two sub-species of maskinonge and examines the nature and extent of the subspecific differences between maskinonge from different parts of their range.

To this end, fish were collected, by means of angler co-operation, from three distinct areas in Ontario and Quebec where the spe-





Bleakney, J. Sherman. 1955. "Check-list of Amphibians and Reptiles of Canada and Alaska, by E. B. S. Logier and G. C. Toner [Review]." *The Canadian field-naturalist* 69(4), 169–171. <https://doi.org/10.5962/p.341627>.

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