RECENT LITERATURE

Natural History and Differentiation in the Yellow-bellied Sapsucker.—Thomas R. Howell. Condor, 54 (5): 237–282, 7 figs., 1952.—The four generally recognized subspecies of *Sphyrapicus varius* constitute a fascinating example of avian evolution. Their complex relarionships put to the test some of our modern criteria of species and subspecies. The ranges are almost wholly complementary: *S. v. varius* breeds across much of the northeastern United States and southern and western Canada; *S. v. nuchalis* is the bird of the Rocky Mountains, and ranges west to the Cascades; *S. v. daggetti* is confined principally to the Sierra Nevada, northern California, and adjacent areas; and *S. v. ruber* inhabits the Pacific Northwest. Most features of their life histories seem to be identical. Yet the migratory tendency is strongly developed in *S. v. varius*, progressively less so in *nuchalis* and *daggetti* respectively, and practically absent in *ruber*. Sexual dimorphism diminishes in a corresponding manner, disappearing altogether in *ruber*. The coloration varies so strikingly that the two western races, the "Red-breasted Sapsucker," have often been treated as a distinct species. More remarkable, in most of the limited areas where the breeding ranges of two races do come together, intermediates are far in the minority and interbreeding relatively uncommon. Only in the case of *daggetti* and *ruber* is a considerable zone of intergradation found.

The author undertook as his doctoral thesis the investigation of this intensely interesting situation, by combined laboratory and field studies, placing special emphasis upon the critical point of the "breeding behavior of the races at the points of junction." His findings are most interestingly summarized in this paper, along with his conclusions concerning the present status and possible history of the several forms.

Study of the pigmentation brings out the fact that the color differences, while probably genetic, are not as fundamental as they might first appear, the red carotenoid pigment being deposited chiefly at the tips of the feathers, and the red areas thus overlying to a large extent the black and white pattern beneath. But the characters are distinct enough to permit field recognition of the racial types and of intermediates, under favorable conditions even in juvenal plumage. The possibility of such recognition of living individuals enabled the author to make his greatest contribution: series of detailed nest observations in a number of selected areas of overlap.

When Howell's original data are combined with the published records, and inferences made from the numbers and types of intermediates in collections, there are still wide gaps in our knowledge; but the picture of the interbreeding now becomes much clearer. Apparently there is considerable interbreeding where *S. v. varius* meets *nuchalis* (though this remains obscure), and where *nuchalis* meets *daggetti;* very little is to be found, however, in the areas where *ruber* comes east into central British Columbia to meet and separate the ranges of *varius* and *nuchalis*. The situation the author describes in some of these areas of contact is such that almost within a stone's throw may be found nesting pairs of each of two races, mixed pairs, and intermediates actually mated and raising young. A few miles to either side the breeding population, save for stray individuals, is made up exclusively of one race or the other. With such field data presented, and appropriately backed up by specimens, there can be little argument about the virtual allopatry or about the interfertility of these forms. The studies brought to light no differences in breeding behavior, and certain small variations in habitat preference are not always operative. By the widely accepted criteria here used, it is clear that the four populations can only be

regarded as belonging to one polytypic species. But is it equally clear that only exceptionally could subspecies be expected to show such a degree of distinctness, or the dividing line between "intergradation" and "hybridization" would become tenuous indeed. During geographic isolation, this differentiation certainly proceeded far toward that point at which, with contacts re-established, full reproductive isolation would have been effective, and the specific level reached.

The author's discussion of the isolating mechanisms now in effect, and of the probable evolutionary history, appears well thought-out and sound. He invokes a combination of habitat preferences, ecological barriers, differences in migratory behavior, and differing sexual dimorphism, to explain how interbreeding is kept at its present low rate, and confined within its present narrow zones. Deriving *Sphyrapicus* from *Dendrocopos*, Howell further postulates that the species *S. varius* was broken into subspecies in the Pliocene, with further isolation during Pleistocene glaciation, and that present contacts, and the evolution of *S. v. ruber*, have come about since the retreat of the Wisconsin ice. While such hypotheses are difficult to evaluate, the suggestions appear very plausible, in so far as we are able to judge from the ecological data presented.

There are some three or four typographical errors in the text. A trivial fault, which annoyed this reviewer, is that most of the figures (the local sketch maps), very useful in visualizing situations, have been inadequately tied-in with the text; at least three do not even seem to be referred to, and some further use of correlating numbers or symbols might have increased the usefulness of all. Such defects, I should judge, must be in part the result of abridgement for publication, and detract but little from this very noteworthy contribution to the literature of bird speciation. —WILLIAM A. LUNK.

Avian Systematics and Evolution in the Gulf of Guinea. The J. G. Correia Collection.—Dean Amadon. Bull. Amer. Mus. Nat. Hist., 100: 393–452, 4 pls., January 20, 1953. $1.00.—The islands of Fernando Po, Principe, and São Tomé lie in the Gulf of Guinea on a line running nearly southwest from Mount Cameroon. This most recent analysis of the interesting avifauna of this group of islands is based on a collection made in 1928 and 1929 by Mr. and Mrs. José G. Correia. In the paper are included an annotated list of species and subspecies, a list of the birds of each island (including Annobon, which the Correias did not visit), and sections on zoogeography and evolutionary factors. *Treron australis virescens* (Principe), *Cuculus solitarius magnirostris* (Fernando Po), *Cyanomitra cyanolaema octaviae* (Efulen, Cameroons), *Hypargos nitidulus virginiae* (Fernando Po), and *Oriolus nigripennis alleni* (Bangah, Liberia) are described as new. The genera *Lampribis* and *Hagedashia* are combined with *Bostrychia*, and *Crecopsis* with *Crex*. (In the summary *Creciscus* was substituted, apparently inadvertently, for *Crecopsis*.)

The taxonomic part of this paper furnishes an up-to-date summary of the avifauna of this island group and is a valuable contribution to the systematics of African birds. Of greater general interest in Amadon's analysis of some of the evolutionary trends in the birds of these islands. As was to be expected, there is a direct proportion between the number of endemic subspecies, species, and genera on an island and the island's distance from the mainland. This is modified to some extent by the size of the island. On these islands, the absence of any adaptive radiations comparable with those in the Galapagos finches and the Hawaiian honey-creepers is accounted for by the linear arrangement of the islands, by the long distances separating them, and by their closeness to the mainland from which invasions of a relatively great number of species have occurred, thus filling more ecological niches with unrelated forms.

Although the endemic forms on Fernando Po, the nearest of the islands to the mainland, show no definite trends in variation of color and pattern, those of the outer islands show a marked tendency toward more subdued colors and less sharply defined patterns than related forms on the mainland. It is suggested that on the islands with poor avifaunas, the patterns and colors which serve as recognition marks for species on the mainland are gradually lost. That this is so is further indicated by the fact that these patterns are usually not lost when two or more closely related species occur on the same island.

Variations in general size and size of bill are also discussed, and several stimulating ideas are presented on these subjects. This paper should be widely consulted by everyone interested in insular faunas.

Errors in the summary include the statement that all the birds described as new in this paper were from Fernando Po (one was from Principe), the substitution of *Creciscus* for *Crecopsis* mentioned earlier, a misspelled generic name, and a misleading sentence. Such slips are difficult to excuse, especially in a publication of an institution with the reputation of the American Museum; and they impair the value of this important paper by suggesting that other such errors may lie elsewhere in the text.—ROBERT W. STORER.

A Comparison of Variation, Behavior and Evolution in the Sea Bird Genera Uria and Cepphus.—Robert W. Storer. Univ. Calif. Publ. Zool., 52, 1952: 121–222, plates 1–2, 19 figures in text. $1.25.—This is a comprehensive treatise of the variation in the murres and guillemots, based on extensive material. The author has examined no less than 3157 specimens in various museums. The biometric comparison is elucidated by using population range diagrams, after the method of Hubbs and Perlmutter. In this way a large amount of data can be compressed into a minimum space. When such large samples are compared with painstaking exactness the geographical variation certainly appears to be smaller than hitherto assumed. Nevertheless, all forms recognized in recent handbooks and monographs are upheld by the author, with the exception of one. In birds like the alcids with a very wide range of variation in most characters a thorough statistical treatment of the material is of great significance. When in *Uria l. lomvia* from Baffin Bay the variation in wing-length is 204–227 mm. (81 specimens measured) and in *U. l. arra* from Bering Strait 210–240 (71 measured), these two well-established subspecies scarcely appear to be separable, according to the 75 per cent rule, but the mean is 213.8 on *lomvia* and 225.5 in *arra*, with standard errors of only 0.6 and 0.7 and standard deviations of 5.25 and 5.90 respectively, which shows that the two populations differ considerably. Apparently the greater part of the material has consisted of breeding birds, which of course is an advantage when comparing populations of migratory birds. However, a number of races of *Cepphus grylle* differ more in winter than in summer-plumage. Storer does not describe these differences, nor those in the juvenile plumages. If the geographical variation in these plumages had been considered, Storer would probably not have united the low-arctic *C. g. arcticus* and the boreal *C. g. atlantis*, as these forms differ in winter-plumage although they are almost identical in summer-plumage.

There is an instructive chapter on water temperature and distribution, in which it is shown that the guillemots with much white in the plumage are extreme high-arctic forms. The ranges of the various species and subspecies of auks are closely correlated with water temperature, and the white color of the arctic forms is no doubt an adaptation to the low water temperatures. The larger size of certain Baltic sea-birds is correlated, according to Storer, with low salinity, a theory which sounds

plausible. On the other hand, I am not in agreement with the author when, in a chapter on population size, he puts forward a theory to explain the fact that, in an area suitable to the existence of both murres and guillemots, the population size of the murres is roughly the square of that of the guillemots. The limiting factor for the guillemots is said to be the number of available nest-sites, this being of a linear value, while in the murres the population number is restricted by the food supply, this being two-dimensional. That this cannot be the right explanation appears from a closer study of the life-habits of the two groups and is further borne out by the fact that the Razorbill (*Alca torda*), which has similar feeding habits to the murres, occurs in smaller numbers even than the guillemots.

Under the heading "Variants" the well-known *ringvia* and *motzfeldi* mutants are briefly dealt with, as are the more accidental albinisms; the number of these in collections is however far greater than appears in the paper.

In the ecological part there are some good sketch drawings of various postures, but these chapters do not contain much new information and are, besides, far from complete.

According to the introduction the present investigation was undertaken primarily in order to compare the effects of various innate and environmental factors on the evolution of the murres and guillemots. The author admits, however, that these birds are ill-suited to genetic analysis, and consequently the chapter on evolution and speciation deals largely in generalities.

The taxonomic appendix contains a synopsis of all the known forms of murres and guillemots, 5 species with a total of 21 subspecies. This is a far cry from Hartert's treatment of these birds in "Die Vögel der paläarktischen Fauna," in which only 9 subspecies were recognized, and shows how much more we now know about these birds. A few remarks may be added: In the range of *Cepphus g. arcticus* (p. 196) southeastern Greenland has been omitted, but it is rightly shown on the accompanying map. The murre of the Iberian Peninsula has recently been separated by Spanish ornithologists. The wintering grounds of *Uria a. hyperborea* are said to be "not definitely known," but specimens of this form have been obtained in winter from the Murman Coast right down to western Sweden.

The chief value of this work is in the excellent treatment of the enormous material examined by the author. The statistical analysis of all samples makes the variation very clear to the reader, and the last word is now probably said on the taxonomy of most of these forms. The author is to be congratulated on this fine piece of work.—FINN SALOMONSEN.

Crip, Come Home.—Ruth Thomas, illustrated by Aldren Watson. (Harpers, New York.) 175 pp. 7 line drawings, 2 plates. 1952. Price, $2.50.—This is a chronicle of a color-banded Brown Thrasher (*Toxostoma rufum*) that lived for ten years in the author's garden in central Arkansas. A book for the general reader, its literary qualities need not blind the ornithologist to its intrinsic merit as a life history study. The accounts of pair formation, nesting, parental care, relations between mates and former mates, and between neighbors—all these give an insight into the behavior of a highly intelligent and individualistic species. A vivid picture is presented of the environment—the weather throughout the year, the plants and the many other birds through the seasons. It is a fine thing to have, instead of the trite and trashy stuff that fills most popular bird books, such authentic observation and interpretation presented to the public.—MARGARET M. NICE.

King Solomon's Ring. Konrad Z. Lorenz. (Thomas Y. Crowell, New York). xxi + 202 pp., 1952. $3.50.—Many American scientists appear to consider the

writing of "popular" books and articles beneath them. This seems based in part on a justifiable aversion to many writers in this field who continue to offer their readers works in which truth is sacrificed for effect. Among many scientists there is also a feeling, possibly stemming from unconscious envy, that they are unable to write well and that they are best serving science by preparing the results of their research only in technical reports. While it does not come easily to some, most intelligent people who are willing to take the trouble can learn to write simply and clearly. Presenting the results of our scientific work to the public in terms which it can understand is necessary for two reasons. Much of the research carried on in this country is supported directly or indirectly by the public; it is its right to know what progress is being made. And perhaps more important, interest must be aroused in the many potential scientists who are needed more than ever before to expand our technical fields of endeavor. Popular writing and lecturing have long been considered obligations by German workers, and this is doubtless one reason that country has produced such an array of noted scientists. We might well emulate them.

Konrad Lorenz is an eminent product of this tradition; a world-famous animal psychologist whose literary style maintains its freshness even in translation. After enjoying chapters filled with amusing anecdotes and pages bordered with the author's deft sketches, we find that we have also learned many things about his fish, water shrews, dogs, and Jackdaws. Through a greater understanding of them, we have learned how to know better the animals around us; and thus we find that we have learned many principles of animal psychology. Who knows how many young people will find here the spark needed to bring them into this field?

It is unfortunate that the publisher did not see fit to have the book better edited from a mechanical standpoint. In most instances, punctuation marks appear outside the quotation marks; and in the wholly inadequate index containing the scientific names of only 17 birds, no less than eight of these are misspelled. Such matters, however, seldom offend anyone but editors, who seem damned to an existence of searching for just such minutiae. I do not hesitate to recommend this book to all who have an interest in animals, from dog-owners to professional biologists. From it, the former will find greater understanding of their pets; many of the latter might profit by its example.—ROBERT W. STORER.

Bird Recognition II. Birds of Prey and Water-fowl.—James Fisher. (Penguin Books Ltd., Harrison and Sons Ltd., Harmondsworth, Middlesex, England), 182 pp. 1951. Price, $0.85.—Owls, hawks, herons, ducks, grebes, and loons are treated in the second of a projected series of four paper-bound books on the identification of British birds. (The first of the series covers the water birds not discussed in the present volume. Volume 3 on game birds and the larger perching birds and volume 4 on the smaller perching birds are in preparation.)

Under the species accounts are discussed recognition, breeding, and distribution and migration. For each species, illustrations include distribution maps, a wash drawing of the bird, and an ingenious circular graph indicating its status in the British Isles throughout the year. A chart giving the habitats in which each species is regularly found, a key to the species treated, a series of drawings showing many of the species in flight or in winter plumage, a list of extreme rarities, and an index complete the volume. Careful planning has gone into the organization of this book which contains a large amount of information clearly presented. It should prove extremely useful as a field guide, and its low price will make it available to an unusually large number of people.—ROBERT W. STORER.

Bird Songs of Dooryard, Field, and Forest.—Recorded by Jerry and Norma Stillwell. (Jerry E. Stillwell, R. F. D. 2, Fayetteville, Arkansas.) $7.95. This most recent set of recordings of wild bird songs, by Jerry and Norma Stillwell, is most welcome. It consists of a single disk, on the two sides of which the songs and calls of forty-nine different species have been recorded. This has been accomplished by recording at the lower speed of 33⅓ rpm.

An outstanding feature of these recordings is that, for many of the species, a number of different variations of the song, as well as the call-note, are recorded. This has been done to a greater extent than in other records with which I am familiar, and it should help the student of bird songs to distinguish between those characters of a song that are specific, and those that are only individual. For example there are four songs of the Cardinal and nine of the Eastern Meadowlark. The Red-eyed Towhee calls "chewink" and then sings his "drink your tea" in three different ways. Five different Field Sparrows sing for us, each definitely Field Sparrow, and each at the same time entirely individual. The Bob-white not only sings his familiar whistle, but also the "scatter" call and the "caterwaul."

The announcer's explanations concerning the characters of many of the songs, that seem confusing at first to the beginning student, are helpful. For example the distinguishing characters of the songs of the Catbird, Brown Thrasher, and Mockingbird are first stated, and then demonstrated by the records.

Because bird songs are high in pitch and the notes very rapid, we often have difficulty in hearing all that there is in a song. We cannot appreciate the full richness of quality of certain songs, because the overtones that cause that quality are too high for us to hear. But when mechanical records are slowed down to half the actual speed at which the bird sang, the songs are slower, and the pitch an octave lower. Where we heard a trill, we hear a series of notes that can be counted.

In this set of records this has been done for the Carolina Chickadee and the Bewick Wren. The results are surprising, both in notes that were formerly inaudible and in a superior richness of quality that we would not have suspected.

Among the records on this disk are not only a greater variety of songs of species that are previously recorded elsewhere, but there are also songs of nine species that have not, to my knowledge, been previously recorded on disks available to the public.

Both for those who are learning to recognize the bird songs and for those who already know them but are studying them in greater detail, these records are exceedingly helpful. We owe to Mr. and Mrs. Stillwell a debt of gratitude for the long, patient, and difficult work that must have been necessary to record successfully, select, and put together on one disk, this splendid collection of songs and calls of our familiar birds.—ARETAS A. SAUNDERS.

ALDRICH, JOHN W. 1952. The source of migrant Mourning Doves in southern Florida. Journ. Wildl. Mgt., **16:** 447–456, 2 figs., 1 table.—*Zenaidura macroura* shot in this region and especially at Key West migrate from a very extensive area east of the Mississippi, possibly from the extreme northern periphery of the range of the species. Of 299 examined in 1950, 77 per cent were immature or juvenile.—J. J. H.

ARNY, SAMUEL A. 1952. Taxonomic status of the bank swallow of North America. Condor, **54:** 356–357.—Two specimens from North America reported as *Riparia riparia ijimae* resemble this Siberian race merely because of color differences between fresh and older, "foxed" skins. The North American population of *Riparia riparia* is separable from that of Europe and Asia on the basis of two mensural

characters and should be recognized. The name *R. r. maximiliani* (Stejneger) is available for this population.—W. H. Behle.

ATTWELL, (MRS.) G. D. 1952. The breeding of the Cardinal Woodpecker [*Dendropicos fuscescens*] at Gatooma, Southern Rhodesia. Ostrich, **23:** 88–91.—It was the male which remained in nest hole overnight with young.

AUSTIN, OLIVER L., JR. 1952. Notes on some petrels of the North Pacific. Bull. Mus. Comp. Zool., Harvard, **107:** 391–407, 4 figs., 4 tables.—Taxonomic; *Pterodroma, Oceanodroma,* and the forms of these.

AUSTIN, OLIVER L., SR. 1953. A Common Tern at least 23 years old. Bird-Banding, **24:** 20.—A *Sterna hirundo,* banded as an adult at Chatham, Mass., July 26, 1929, was found killed by an owl July 6, 1952. This bird could not have been less than 24 years old and almost undoubtedly was older, since "less than two-percent of this species breed when one year old and less than one-fourth before their third year."—M. M. Nice.

BAUMGARTNER, FREDERICK M., MEREDITH J. MORRIS, JOHN L. STEELE, and JACK E. WILLIAMS. 1952. Oklahoma Bobwhite food relations. Trans. 17th N. A. Wildl. Conf., pp. 338–359, 2 figs., 3 tables.—Acorns, ragweeds, panic grasses, and sumacs were of statewide importance in some 1,771 crops of *Colinus virginianus* collected from November through April. The leading foods varied somewhat from one part of the state to another.—J. J. H.

BENTON, ALLEN H. 1952. The Red-eyed Vireo as a Mocker. Kingbird, **2:** 40.—An individual in Cayuga Co., N. Y., imitated the calls of at least four other species.—H. D. M.

BISWELL, H. H., R. D. TABER, D. W. HEDRICK and A. M. SCHULTZ. 1952. Management of chamise brushlands for game in the North Coast region of California. Calif. Fish and Game, **38:** 453–484.—*Lophortyx californica* in late summer has densities of about 100 per sq. mile of heavy brush at 1500–2000 ft. elevation, 250 in opened brush, and 40 per square mile at 2000–2500 feet. Parallel densities for *Oreortyx picta* run 50–80, as many as 140–150, and perhaps 160.—J. J. H.

BLAKE, CHARLES H. 1953. Turnover Ratios. Bird-Banding, **24:** 7–10.

BOASE, HENRY. 1952. Mallard Counts in the Tay Estuary and in Angus. Brit. Birds, **45:** 377–386.—Records of *Anas platyrhynchos* extending over nearly 40 years.

BOULTON, RUDYERD, and A. L. RAND. 1952. A collection of birds from Mount Cameroon. Fieldiana-Zool., **34:** 35–64.—An annotated list describing a collection of 274 specimens taken in the area. A short description of the mountain habitats is given. For many of the species brief mention is made of habitats and altitudinal range.—P. S. H.

BRADFIELD, R. D. 1944 (privately printed), 1952 (reprinted). New South African Ornithological records and new forms. Ostrich, **23:** 127–128.—New subspecies: *Falco peregrinus wallichensis* from Swakopmund, South Africa; *Certhilauda subcoronata kaokoensis* from Messum River, southern Africa; and *Zosterops capensis haigamchabensis* from "Haigamchab, Goanikontes, Swakopriver," southern Africa.

BROWNLOW, H. G. 1953. The Design, Construction and Operation of Heligoland Traps. Brit. Birds, **45:** 387–399, 5 figs. detailed descriptions, illustrated with 5 figures.

BUE, I. G., LYTLE BLANKENSHIP, and WILLIAM H. MARSHALL. 1952. The relationship of grazing practices to waterfowl breeding populations and production on stock ponds in western South Dakota. Trans. 17th N. A. Wildl. Conf., pp. 396–414, 1 fig., 2 photos, 8 tables.—As a direct result of the U. S. Department of

Agriculture's encouragement of the development of stock ponds for cattle, nesting waterfowl have markedly increased in the short-grass country. In Stanley County, which had 1,850 artifically built ponds in 1951, 6 kinds of dabblers averaged 7.7 pairs and raised 29 young per square mile. In this year, 24 ducks were raised per pond (one-eighth to 10 acres in size). Frequency of nests tended to be inversely proportional to grazing pressure. The acquisition of new range reported in this paper appears to be a dramatic response to a range-management technique which was conceived originally without any thought of its wildlife implications. It not only illustrates the increasing importance of man as a factor controlling animal distribution on the North American continent, but it also provides some refutation of Hochbaum's hypothesis regarding the failure of waterfowl to nest today on many marshes in the northern tier of states. Hochbaum argues that the annihilation of the 19th-century breeding stock by overshooting on such water areas has resulted in a loss of breeding tradition; the progeny of today's birds tend to return to the homes of their parents. In line with this hypothesis, some state conservation agencies today are trying to restock their "shot-out" marshes with breeding ducks transplanted from the Prairie Provinces. This technique will probably be effective only when the experimental birds or their progeny are not subject to too heavy or too early shooting. Ducks invading the cattle-range country of South Dakota were common or fairly common surface-feeding species that were subject to significant shrinkage of habitat through drainage operations immediately to the east. Hochbaum's hypothesis could still hold for certain diving ducks which possess quite different internal population pressures of their own.—J. J. Hickey.

Buss, Irven O., Carl V. Swanson, and David H. Woodside. The significance of adult pheasant mortalities in spring to fall populations. Trans. 17th N. A. Wildl. Conf., pp. 269–284, 5 figs., 5 tables.—Climate, mainly precipitation, delayed the peak of hatching in two years and accelerated adult mortality enough in one to depress the fall population.—J. J. H.

Cartwright, B. W. 1952. A comparison of potential with actual waterfowl production. Trans. 17th N. A. Wildl. Conf., pp. 131–137.—Based upon a number of assumptions, the author considers some model populations and comes to the conclusion that: (1) approximately 80 per cent of female ducks succeed in producing young in a favorable breeding season, (2) the fall juvenile component of the total population then approaches 70 per cent. The former of these values is a bit higher than similar statistics for gallinaceous birds reported by investigators working with better field data; Cartwright's rests on the assumption that *all* ducks renest following destruction of their first nest—a hypothesis for which I do not think he can get critical support at this time. Although his analysis is rather oversimplified (viz. no consideration of summer mortality among the young), the result is probably close to being correct. The second conclusion on fall age ratios (70 per cent young) is in line with an estimate of 68 per cent for Mallards on September 1 derived from a small sample of banding data by the reviewer in Fish and Wildlife Service Spec. Sci. Rept.: Wildl. No. 15; both statistics hold for average conditions only.—J. J. Hickey.

Cartwright, Bertram W., and Jean T. Law. 1952. Waterfowl Banding 1939–1950 by Ducks Unlimited. (Ducks Unlimited, Winnipeg), pp. 1–53.—Includes much material on returns.

Chattin, John E. 1952. Appraisal of California waterfowl concentrations by aerial photography. Trans. 17th N. A. Wildl. Conf., pp. 421–426.—Aerial censuses

yield greater accuracy than do the conventional types, probably cost less, and yield a permanent record. Swans, geese, and coots are poor subjects. Photography is especially valuable when extremely large concentrations must be inventoried.—J. J. H.

COLLINS, HENRY C., JR. 1952. Birds of Massachusetts. (Caribou Press, Bronxville, N. Y.) 16 pp., illustrated in color and in black and white by Roger Tory Peterson (most figures reprinted from his field guide). $0.25.

COLLINS, HENRY H., JR. 1952. Birds of the Everglades. (Caribou Press, Bronxville, N. Y.) 16 pp., illustrated in color and in black and white by Roger Tory Peterson. $0.25.

COWAN, I. MCT., and JAMES HATTER. 1952. A trap and technique for the capture of diving waterfowl. Journ. Wildl. Mgt., **16:** 438–441, 3 figs.—A drive trap with long leads has been successful in catching over 7,000 diving ducks in British Columbia. Special care was taken in placing the trap. *Bucephala islandica* comprised the bulk of the catch.—J. J. H.

COWAN, JOHN B. 1952. Life history and productivity of Western Mourning Doves in California. Calif. Fish and Game, **38:** 505–521, 2 figs., 4 photos, 7 tables.—Winter flocks of *Zenaidura macroura* mostly involved paired birds which nested from mid-March to September 20. Each pair attempted 5.1 nestings in a season and produced 6.3 nestlings, 25 per cent using the same nest after each successful brood. One pair apparently used the same nest six consecutive times successfully; 65 per cent of the nests were successful.—J. J. H.

CRAMP, S., and W. G. TEAGLE. 1952. The Birds of Inner London. Brit. Birds, **45:** 433–456.

LE DART, R. 1952. Note sur la capture de la rarissime *Gallinago Sabini* (Vigors). Alauda, **20:** 109.—First capture of the dark variant of *Capella gallinago* in France.

DAVIS, L. IRBY. 1952. Winter bird census at Xilitla, San Luis Potosi, Mexico. Condor, **54:** 345–355, 1 fig.—A one day census was made in 1950. In 1951, 24 people made observations from November 22, 1951, to January 5, 1952, spending 305½ hours in the field and recording 238 species. These are listed for 13 areas with the largest number of each species seen in one day being given for each area. Comparison is made with the results of 1950.—W. H. Behle.

DORST, JEAN. 1952. Contribution à l'étude de la langue des Méliphagidés. L'Oiseau, **22:** 185–214, 14 figs.—A detailed and illustrated description of the structure of the tongue which is shown to be far from uniform in this group. The author concludes that the family Meliphagidae as now understood is a composite and not a natural group.

ENG, ROBERT L. 1952. A two-summer study of the effects on bird populations of chlordane bait and aldrin spray as used for grasshopper control. Journ. Wildl. Mgt., **16:** 326–337, 6 tables.—Bird mortality appeared to be in direct proportion to the grasshopper kill and not directly to toxicity of the insecticides applied at the usual rates.—J. J. H.

EVENDEN, FRED G., JR. 1952. Waterfowl sex ratios observed in the western United States. Journ. Wildl. Mgt., **16:** 391–393, 2 tables.—Large samples disclosed 126 Mallard males, 136 Pintail males, and 152 Shoveller males for each 100 females over a 9-year period. Sex ratios were balanced in Baldpate and Gadwall and tended to be unbalanced in 13 other species of ducks. Some simple biometrical analyses would have helped this presentation.—J. J. H.

FERRY, C. 1952. A propos d'une variante de chant de *Sylvia atricapilla*. Alauda, **20:** 109–112.

FINLAY, H. J. 1952. Microfaunal notes on matrices associated with fossil penguin bones. New Zealand Geol. Surv., Paleo. Bull. No. **20**: 58–64.—Evidence of remains of foraminifera associated with fossil penguins indicates the deposits are Oligocene, not Miocene.

FLASAR, IVO. 1951. Orel královský (*Aquila heliaca* Sav.) v Československu. Sylvia; **13**: 89–93.—The Imperial Eagle (*Aquila heliaca* Sav.) in Czechoslovakia. French summary.

GILBERT, O., T. B. REYNOLDSON, and J. HOBART. 1952. Gause's hypothesis: an examination. Journ. Anim. Ecol. **21**: 310–312.—The authors discuss difficulties in the concept that no two species with similar ecology can live together in the same place. Actually, Gause drew no general conclusion from his laboratory experiments and made no statement which resembles any wording of the hypothesis which bears his name. However, in a population of a species, mechanisms which reduce competition between it and populations of other species tend to persist.

GREENWAY, JAMES C., JR. 1952. *Tricholimnas conditicius* is probably a synonym of *Tricholimnas sylvestris*. Breviora (Mus. Comp. Zool.), No. 5: 1–4.

GULLION, GORDON W. 1952. Some diseases and parasites of American Coots. Calif. Fish and Game, **38**: 421–423.—Of 48 freshly trapped *Fulica americana*, 42 were infected, mostly by helminth parasites. Fungal infections in 3 were traced to *Aspergillus flavus*. One coot which died in captivity was heavily infested by the roundworm *Amidostomum raillieti*. Mites in the nasal processes of 3 proved to be a species new to science.—J. J. H.

HACHISUKA, MASAUJI. 1952. Bibliography of Chinese Birds. Quart. Journ. Taiwan Mus., **5**: 71–209.—A rather fully annotated list of mostly faunistic papers dealing with the birds of North China, the Yangtze Valley, and South China, with some Sikang and Tonkinese literature. Papers dealing with Hainan and Formosa are not included.

HALE, JAMES B. and DONALD R. THOMPSON. 1952. Small game hunting prospects 1952. Wisconsin Cons. Bull., **17**(9): 3–7.—Populations of *Bonasa umbellus* are still high, those of prairie grouse low, those of other gallinaceous birds show little change.—J. J. H.

HARRIS, STANLEY W. 1952. A throw net for capturing female waterfowl on the nest. Journ. Wildl. Mgt., **16**: 515, 1 fig.

HART, CHESTER M., JOHN F. DAVIS, and WILBUR F. MYERS. 1952. Pheasant cooperative hunting area results, 1951. Calif. Fish and Game, **38**: 597–604, 3 figs., 5 tables.

HANSON, WILLIAM R. 1952. Effects of some herbicides and insecticides on biota of North Dakota marshes. Journ. Wildl. Mgt., **16**: 299–308, 5 tables.—Chlordane and toxaphene were found to have lethal effects upon young birds that swim or dabble in the water.—J. J. H.

HAUGEN, ARNOLD O., and JAMES KEELER. 1952. Mortality of Mourning Doves from trichomoniasis in Alabama in 1951. Trans. 17th N. A. Wildl. Conf., pp. 144–151, 1 fig., 5 tables.—*Trichomonas gallinae* is estimated to have killed 25,000–30,000 doves in the breeding season.—J. J. H.

HERMAN, CARLTON M. 1953. Recognition of Trichomoniasis in Doves. Bird-Banding, **24**: 11–12.

HOWARD, HILDEGARDE. 1952. The prehistoric avifauna of Smith Creek Cave, Nevada, with a description of a new gigantic raptor. Bull. Southern Calif. Acad. Sci., **51**: 50–54, 2 figs.—Fifty avian species are listed from this Quaternary cave deposit. Most outstanding is *Teratornis incredibilis*, new species, represented by a single carpal bone 43 per cent larger than that of *Teratornis merriami*.—H. H.

IRWIN, MICHAEL P. STUART. 1952. Notes on some Passerine birds from Mashonaland, Southern Rhodesia. Ostrich, **23**: 109–115.

JAHN, LAURENCE R. 1952. Helping hand for waterfowl. Wisconsin Cons. Bull., **17**(9): 15–19.—In 1951, Wisconsin hunters reported killing about 676,000 birds. Research indicates that an additional 125,000–140,000 were crippled and left in the weeds.—J. J. H.

JAHN, LAURENCE R., and RUTH L. HINE. 1952. What about goose refuges? Wisconsin Cons. Bull., **17**(12): 12–13.—About 40,000 *Branta canadensis* now stop in Wisconsin each fall, 4 refuges serving as ecological dams retarding the southward flow of geese.—J. J. H.

JIRSÍK, JOSEF. 1951. K otázce ras strnada rákosního (*Emberiza schoeniclus*) v ČSR. Sylvia, **13**: 125–132, 1 plate, 1 table.—Contribution to the question of the races of the Reed Bunting (*Emberiza schoeniclus*) in Czechoslovakia. English summary.

JOHNSON, NED K., and FRANK RICHARDSON. 1952. Supplementary bird records for Nevada. Condor, **54**: 358–359.—Additional information on distribution or seasonal occurrence of 12 species.—W. H. Behle.

JONES, D. W., and G. M. KING. 1953. Observations of *Cinclus cinclus* in a salmon tank. Brit. Birds, **45**: 400–401.—The "bird can only reach stray eggs which will never have the chance to develop, and therefore the Dipper must not be regarded as an enemy of the salmon."

KILLPACK, MERLIN L., and DON N. CRITTENDEN. 1952. Starlings as winter residents in the Uinta Basin, Utah. Condor, **54**: 338–344, 3 figs.—Observations were made during the winters of 1947 to 1951. The starlings arrive about November 5 and leave about the first week in April. An analysis of contents of 95 stomachs is given, the major foods being fruits of the Russian Olive, grains, garbage, and corn silage. They roost with English Sparrows in holes dug in the roofs of open-fronted, straw-thatched cattle shelters.—W. H. Behle.

KOZICKY, EDWARD L. 1952. Variations in two spring indices of male Ring-necked Pheasant populations. Journ. Wildl. Mgt., **16**: 429–437, 3 figs., 3 tables.—Statistical analyses of the relative variability of crowing counts and roadside counts. Wind velocities, presence of dew, and relation to sunrise were found to have significant effects on test runs. Population trends for any 10-mile route require 9 random repetitions of the crowing count, 6 of the roadside count, in order to obtain results within 10 per cent of the true mean.—J. J. H.

KOZICKY, EDWARD L., GEORGE O. HENDRICKSON, PAUL G. HOMEYER and EVERETT B. SPEAKER. 1952. The adequacy of the fall roadside Pheasant census in Iowa. Trans. 17th N. A. Wildl. Conf., pp. 293–305, 3 figs., 5 tables.—Statistical analyses of Iowa's attempt to estimate differences in population levels of *Phasianus colchicus*.—J. J. H.

LABITTE, ANDRÉ. 1952. Contribution à l'étude de la biologie de reproduction de la pie-grièche écorcheur *Lanius collurio* L. Alauda, **20**: 102–108.—Notes on population density, nesting, incubation, and the young over a period of eleven years.

LEACH, E. P. 1953. British Recoveries of Birds Ringed Abroad. Brit. Birds, **45**: 458–465.

LEOPOLD, A. STARKER and ROBERT H. SMITH. 1953. Numbers and winter distribution of Pacific Black Brant in North America. Calif. Fish and Game, **39**: 95–101, 1 fig., 1 table.—About 175,000 *Branta nigricans* were inventoried in 1952, 63 per cent of them in Baja California.—J. J. H.

LISTMAN, WALTER. 1952. Noteworthy Records—October, 1952. Goshawk, **5**:

53.—Parasitic Jaeger and Sabine Gull on Lake Ontario near Rochester, N. Y., October 4, 1952.—H. D. M.

LISTMAN, [WALTER,] and [H.] VAN BEURDEN. 1952. Noteworthy Records—November 1952. Goshawk, **5:** 58–59.—Kittiwake at Lighthouse Beach, Lake Ontario, Monroe Co., N. Y., November 8, 1952.—H. D. M.

MACDONALD, J. D. 1953. Taxonomy of the Karroo and Red-backed larks of western South Africa. Bull. Brit. Mus. (Nat. Hist.), Zoology, **1:** 321–350, pls. 36–38, 5 figs.—These two forms, formerly regarded as distinct species and sometimes placed in different genera, are considered to belong to the same species, *Certhilauda albescens*. Seven subspecies of this species are recognized from South Africa, and two of these, *Certhilauda albescens patae* and *C. a. cavei* are described as new.—R. W. S.

MARPLES, B. J. 1952. Early Tertiary penguins of New Zealand. New Zealand Geol. Surv., Paleo. Bull. No. 20: 1–57, 6 figs., 11 tables, 8 pls.—Four new genera and five new species are proposed. The fossil penguins of New Zealand are of the lower Oligocene, not Miocene as has been usually believed. The differences between Recent penguins and certain fossil ones from Seymour Island, South Australia, and New Zealand are such that these fossil forms are placed in the Subfamily Palaeeudyptinae and the Recent ones in the Spheniscinae. [See also, Finlay, H. J. 1952].—Harvey I. Fisher.

MATOUŠEK, B. 1951. Hnízdění rybáka malého (*Sterna albifrons* Pall.) na Slovensku. Sylvia, **13:** 86–88, 1 plate.—Nesting of the Least Tern (*Sterna albifrons*) in Slovakia. French summary.

MATOUŠEK, B. 1951. Příspěvek k biologii vlhy evropské (*Merops apiaster*) na Slovensku. Sylvia, **13:** 122–125, 1 plate.—Contribution to the biology of the Bee-eater (*Merops apiaster*) in Slovakia. English summary.

MAYAUD, NOËL. 1952. Le phylum marin d'*Anthus spinoletta*. Ses particularités écologiques et morphologiques. Alauda, **20:** 65–79.—This species is divisible into two natural groups, the water pipits (or the *spinoletta* group to which belong the North American populations), and the rock pipits (the *petrosus* group). These two groups are separated ecologically and replace one another geographically. The *petrosus* group "le phylum marin" is restricted to the rocky coasts of Europe while the *spinoletta* group is very widely distributed throughout the whole of the Holarctic, chiefly in mountainous regions.

Mayaud deals with the *petrosus* group. Its races are rather poorly differentiated by differences in coloration caused, in some regions, by differences in the extent or lack of a prenuptial molt. The present reviewer had reached, independently, the same conclusion which is stated by Mayaud as follows: "If this molt is rather complete the bird acquires a nuptial plumage, i. e. a *littoralis* phenotype; if there is no prenuptial molt—or a partial molt—the prenuptial plumage persists and the bird has a *petrosus* phenotype." According to Mayaud and the findings of the reviewer, this molt does not occur (or is limited to a very few feathers) in the populations of *kleinschmidti* in the Faeroes, *petrosus* in Scotland, Great Britain and ? coast of Norway, but is complete (or virtually so) in the populations of *littoralis* of the Baltic and White Sea. The reviewer was not aware, however, that the breeding populations of the coasts of western and southern Brittany and region to the south were composed of individuals of both types.

Mayaud speculates on the factors influencing the geographical variations in the molt. Clouds and much reduced amount of sunlight may inhibit the endocrine mechanism responsible for the molt at least in the populations of the Faeroes,

Scotland, and Great Britain. These populations are largely sedentary while the populations of the Baltic and the White Sea migrate to the more sunny coasts of France or regions to the south, but the presence or lack of the molt in the populations of Brittany and to the south remains unexplained. A full nomenclature and synonymy of the rock pipits is given.—C. Vaurie.

MAYR, ERNST, and E. THOMAS GILLIARD. 1952. Altitudinal hybridization in New Guinea honeyeaters. Condor, **54**: 325–337, 4 figs.—Hybrid populations of two subgroups of the *Melidectes leucostephes-belfordi* group of honeyeaters are analyzed. The two groups, called "wattle-birds" and "black-bills," interbreed freely in a broad area of contact in the mountains of central New Guinea. A hybrid index for the several characters was calculated, an analysis of which shows six hybrid populations. In the hybrid zone, those populations taken at low altitudes show a prevalence of wattle-bird characters while birds of high altitudes have a prevalence of black-bill characters. Outside the hybrid zone black-bills and wattle-birds may range from 1600 to 3300 meters with no altitudinal variation of morphological characters except size. The interpretation is that the two groups attained morphological distinctness but not reproductive isolation in geographic isolation. When, after the breakdown of extrinsic isolation, these two kinds of honeyeaters met, they interbred freely. However, since their respective gene complexes had become correlated with a preference for and higher viability at different altitudes, there is now different genetic composition at different altitudes, presumably maintained by selection.—W. H. Behle.

MCLAUGHLIN, CHARLES L., and DAVID GRICE. 1952. The effectiveness of large-scale erection of Wood Duck boxes as a management procedure. Trans. 17th N. A. Wildl. Conf., pp. 242–259, 4 figs., 2 tables.—State personnel erected nearly 2,000 nesting boxes and distributed 4,000 more to clubs throughout Massachusetts. Some 89 per cent of the state-erected boxes proved to be functional, and 45 per cent of these were used by ducks; 64 per cent of 1,427 nests were successful. The Wood Duck population has apparently doubled wherever the wooden boxes have been erected. [In Illinois, F. C. Bellrose is using elliptical holes (4 x 3 inches) and boxes of 12-inch stove pipe with a steep conical top to reduce or eliminate predation.]—J. J. H.

MEES, G. F. 1952. Notes sur quelques oiseaux de la Corse. Alauda, **20**: 80–84.

MOREAU, R. E. 1952. The place of Africa in the palaearctic migration system. Journ. Anim. Ecol. **21**: 250–271.—A general discussion.

MURPHY, DEAN A., and THOMAS S. BASKETT. 1952. Bobwhite mobility in central Missouri. Journ. Wildl. Mgt., **16**: 498–510, 3 figs., 4 tables.—Presumably unmated *Colinus virginianus* ranged up to one-half mile in a single summer day, but generally remained within an area one-fourth to one-half mile in diameter at this season. No extensive fall shuffle was evident. Most fall and winter coveys remained within a distance of one-quarter mile to three-eighths mile. Spring dispersal distance were also short.—J. J. H.

MURPHY, ROBERT CUSHMAN, and JESSIE PENNOYER SNYDER. 1952. The "*Pealea*" phenomenon and other notes on storm petrels. (Birds collected during the Whitney South Sea Expedition, no. 62.) Amer. Mus. Novit., No. 1596: 1–16.—A discussion of specimens of storm petrels with spotted or streaked plumage, an aberrant condition that is known from several species. Such abnormal birds have been grouped in a heterogeneous "genus" *Pealea*. In disposing of this, the authors set forth taxonomic notes and measurements for a number of hydrobatids.—D. A.

NAYLOR, ALBERT E. 1953. Production of the Canada Goose on Honey Lake

Refuge, Lassen County, California. Calif. Fish and Game, **39:** 83–94, 3 figs., 3 tables.—Seventeen cover-types were used by *Branta canadensis* for nesting; mean clutch size was 5.5, nest success 68 per cent; 24 per cent were deserted, 8 per cent destroyed. Preseason predator control, construction of islands, and control of vegetation are recommended.—J. J. H.

PARMALEE, PAUL W. 1952. Ecto- and endoparasites of the Bobwhite: their numbers, species, and possible importance in the health and vigor of quail. Trans. 17th N. A. Wildl. Conf., pp. 174–188, 1 fig., 3 tables.—Six species of lice, 2 of ticks, 1 flea, 6 cestodes, nematodes, and worms were found on *Colinus virginianus* in the Post Oak region of Texas. Degree of contamination is by covey unit not by age groups.—J. J. H.

POOLE, DANIEL A. 1952. Current studies on botulism in ducks. Trans. 17th N. A. Wildl. Conf., pp. 160–167, 3 photos.—Progress report on attempts to induce the development of *Clostridium botulinum*, type C, on small experimental plots.—J. J. H.

POST, GEORGE. 1952. The effects of aldrin on birds. Journ. Wildl. Mgt., **16:** 492–497, 1 table.—The critical oral toxicity of this insecticide for *Phasianus colchicus* is 40 mg. per kg. of body weight. Applications of 2 oz. of aldrin per acre in kerosene for grasshopper work had no noticeable lethal effects on birdlife in the short-grass range of central Wyoming, but songbirds apparently left sprayed areas in search of food.—J. J. H.

PRESTWICH, ARTHUR A. 1952. Records of parrots bred in captivity. Part VI. (Grass Parrakeets). (A. A. Prestwich, London), pp. 289–376.

RAND, AUSTIN L. 1952. Secondary sexual characters and ecological competition. Fieldiana-Zool., **34:** 65–70, 2 figs.—A stimulating discussion of the possible rôle, in some species of birds, of certain secondary sexual characters in the reduction of ecological competition between the sexes. Examples are given of behavioral differences tending to segregate the sexes at certain seasons, and of structural dimorphism (bill modifications, tail development, size) tending to produce sexual differences in food habits. This notion has a two-fold significance: a short-term one reducing intra-specific competition for food, and a long-term, evolutionary one tending to increase the sexual dimorphism within the species.—P. S. H.

RANDLE, WORTH, and RONALD AUSTING. 1952. Ecological notes on Long-eared and Saw-whet owls in southwestern Ohio. Ecology, **33:** 422–426.—The roosting and feeding habits of the two species of owls are discussed. While the roosting habits of the two species appear to be identical, analysis of pellets shows that there is not extensive competition for food. The Long-eared Owls are chiefly field-foragers, the Saw-whet Owls chiefly woodland foragers. This difference in hunting habits allows the two owls to exist in close proximity to one another.—P. S. H.

REEVES, MAURICE C. 1952. Mechanical aids useful in studying Bobwhite Quail. Journ. Wildl. Mgt., **16:** 316–319, 1 fig., 1 photo.—A two-compartment cage is described as facilitating banding operations and permitting the quail to be released as a covey. Improvements are reported on the Stoddard trap, which uses a male to decoy females, and on the standard quail trap. Age and hatching-date calculations can be speeded up with a modification of the slide-rule principle.—J. J. H.

RIPLEY, S. DILLON. 1952. Additional comments on Philippine birds and a new record from the archipelago. Condor, **54:** 362.—A specimen of *Ardeola bacchus* (Bonaparte) is newly reported from Luzon. Attention is called to an additional record of *Ptilinopus leclancheri leclancheri* from Davao, Mindanao Island. *Edolisoma panayense* (Steere) is renamed *Coracina ostenta*.—W. H. Behle.

RIVOIRE, ANDRÉ. 1952. Les oiseaux de la montagne Sainte-Victoire. Alauda, **20:** 85–101, 3 figs.—A list of 60 species observed on this mountain. Nesting and other notes on *Accipiter gentilis, Aquila chrysaetos, Hieraaetus fasciatus, Coracia pyrrhocorax,* and *Monticola solitarius.* The mountain is only 3000 feet high and the regular breeding of *Aquila chrysaëtos* is notable.

SALINGER, HERBERT E. 1952. A Pheasant breeding population study on irrigated lands in southwest Idaho. Journ. Wildl. Mgt., **16:** 409–418, 1 fig., 4 tables.—Clutch size in *Phasianus colchicus* before June 15 averaged 9.3 in 1949, 10.3 in 1950. Eggs were "99.02" per cent fertile. Nests averaged 29 per 100 acres of alfalfa, and 25 in clover. When these were mowed, more than half the hens were killed. Shrinking clutch size is reported as the season progresses, but the data (successive means of 11.2, 11.5, 12.1, and 9.8) require a more rigorous analysis than the author mentions in his paper.—J. J. H.

SAPIN-JALOUSTRÉ, J. 1952. Découverte et description de la rookery de Manchot empereur (*Aptenodytes forsteri*) de Pointe Géologie (Terre Adélie). L'Oiseau, **22:** 143–184, 4 pls., 4 figs.—The first part of an important, thorough, and very well illustrated article on the Emperor Penguin. The author starts with a long and interesting historical section which is a summary of the various expeditions starting with the second expedition of Cook in 1772–1775. This expedition apparently brought back no specimens, but drawings of the birds encountered were made by G. and J. R. Forster. One of these, although labeled *A. patagonica,* is thought to be the first record of *A. forsteri,* but the present author, who reproduces this drawing, states that it is impossible to say whether the species depicted is really *A. patagonica* or *A. forsteri.* In this introductory section the author lists the known rookeries which he believes are not permanent and estimates that the present total number of individuals represented is less than 100,000.

The second section consists of field notes and an account of the discovery of the rookery at Pointe Géologie, which is estimated as between 9,000 and 10,000 individuals. Notes on behavior, food, and nesting are given. The mortality from the time that the egg is laid until the young molts is estimated as between 80 and 90 per cent. The body temperature of adults varies between 38 and 38.5 degrees centigrade, and the birds are free of ectoparasites.—C. Vaurie.

SAUNDERS, GEORGE B. 1952. Waterfowl wintering grounds of Mexico. Trans. 17th N. A. Wildl. Conf., pp. 89–100.—River deltas, coastal lagoons, and bays are preferred; the Gulf Coast populations vary from 750,000 to more than 3,000,000, Pacific coast ones from 980,000 to over 5,000,000; *Anas acuta* is the commonest species.—J. J. H.

SAYAMA, KENJI, and OSCAR BRUNETTI. 1952. The effects of sodium fluoroacetate (1080) on California Quail. Calif. Fish and Game, **38:** 295–300, 2 tables.—Minimum lethal doses lie between 1 and 5 mg./kg. of body weight. Histopathological changes in *Lophortyx californica* are not specific for this particular poison.—J. J. H.

SCHAUB, B. M. 1953. A Device for Removing Overlapping Bands from Birds' Legs. Bird-Banding, **24:** 12–14.

SCOULER, LLOYD. 1952. Crop depredation by waterfowl. Trans. 17th N. A. Wildl. Conf., pp. 115–123.—Review of a serious conservation problem in California; state and federal officials are not agreed on its solution.—J. J. H.

SEAMAN, G. A. 1952. The mongoose and Caribbean wildlife. Trans. 17th N. A. Wildl. Conf., pp. 188–197, 1 table.—*Herpestes javanicus* has reduced introduced *Colinus virginianus* to a remnant population on the U. S. Virgin Islands, has probably resulted in the near extinction of the quail dove (*Oreopeleia mystacea*)

and has probably caused seabirds to abandon Buck Island as a nesting ground. The Pearly-eyed Thrasher (*Margarops fuscatus*) may have to share the blame for a depleted fauna.—J. J. H.

SEUBERT, JOHN L. 1952. Observations on the renesting behavior of the Ring-necked Pheasant. Trans. 17th N. A. Wildl. Conf., pp. 305–329, 1 fig., 10 tables.—When 121 initial nests of *Phasianus colchicus* were deliberately disrupted in an enclosure, 68 hens renested after intervals of time associated with the length of time since the last egg was laid. Hens nested within territories of their cocks. Despite the high artificial density, intraspecific strife (labeled "inter-specific" by the author) was not observed to interfere with nesting.—J. J. H.

SLABÝ, OTTO. 1951. O chondrifikaci primordiálního krania u kosa (*Turdus merula* L.) s hlediska fylogenetické a oekologické morfologie. Sylvia, **13:** 103–121, 7 figs., 1 plate.—On the chondrification of the primordial cranium of the Blackbird (*Turdus merula* L.). Russian and English summaries.

STANFORD, JACK A. 1952. An evaluation of the adoption method of Bobwhite Quail propagation. Trans. 17th N. A. Wildl. Conf., pp. 330–337, 1 photo, 4 tables.—Wild-trapped *Colinus virginianus*, especially males, will occasionally adopt hatchery-produced chicks. This paper was originally processed as a separate publication by the Missouri Conservation Commission.—J. J. H.

STOKES, ALLEN W. 1952. Pheasant survival studies on Pelee Island, Ontario, 1946–1950. Trans. 17th N. A. Wildl. Conf., pp. 285–293, 2 figs., 2 tables.—Annual hen survival of *Phasianus colchicus* was 35–63 per cent. The species failed to increase in 1950 because of lowered hen survival. Annual survival of cocks was 6–12 per cent, 78–93 per cent of all males being shot.—J. J. H.

STONER, DAYTON, and LILLIAN C. STONER. 1952. Birds of Washington Park, Albany, New York. N. Y. State Mus. Bull. 344: 1–268, 52 figs.—This intensive study of the birds of a city park was initiated by the Stoners in 1933 and brought to completion by Mrs. Stoner after her husband's death in 1944. One hundred-and-twenty-two species and subspecies are included in the accounts which contain valuable information on migration dates, frequency of occurrence, and habits.—R. W. S.

TAYLOR, HELEN, and JOE TAYLOR. 1952. Florida—March, 1952. Goshawk, **5:** 13–16.—Sight record of Black-bellied Tree Duck near Tamiami Trail, March 18.—H. D. M.

DEL TORO, MIGUEL ALVAREZ. 1952. Los Animales Silvestres de Chiapas. Dept. Prensa y Turismo, Chiapas, Mexico. pp. 1–247.—Chiapas is one of the more isolated and less developed of Mexican states. Yet its capital, Tuxtla Gutierrez, has a surprising number of cultural institutions. Among them are a fine museum and a zoo, both the achievements of Dr. Alvarez del Toro, who fills the rôles of scientist, collector, taxidermist, artist, and author! Birds are his favorite group, and the present volume provides an excellent introduction to the rich avifauna of the tropics of southern Mexico. The appearance, habits, status, and food of each bird is briefly given, and many of the species are illustrated. This book will be of interest to the scientist and to the amateur naturalist who are visiting Mexico and wish to become familiar at one and the same time with the fauna and with the language.—Dean Amadon.

DEL TORO, MIGUEL ALVAREZ. 1952. Contribución al conocimiento de la Oologia y Nidologia de las aves chiapanecas. Ateneo (Organo del Ateneo de Ciencias y Artes de Chiapas, Tuxtla Gutierrez, Chiapas, Mexico), **2** (4): 11–21, 17 figs.—Notes on the nests of 22 species of birds in Chiapas.

TURČEK, FRANT. J. 1951. O stratifikácii vtáčej populácie lesných biocenóz typu Querceto-Carpinetum na južnom Slovensku. Sylvia, **13:** 71–86, 2 figs., 10 tables. —On the stratification of the avian population of the Querceto-Carpinetum forest communities in southern Slovakia. English summary.

VAURIE, CHARLES. 1952. Geographical variation in the Chat Flycatcher (*Bradornis infuscatus*). Amer. Mus. Novit., No. 1599: 1–9.

WAGNER, FRED H. 1953. Are we overshooting our Pheasant cocks? Wisconsin Cons. Bull., **18**(1): 13–15.—State-wide Wisconsin censuses disclosed a ratio of 1 cock *Phasianus colchicus* per 3.6 hens in the winter of 1950–51 and 1–3.7 a year later. County variations range from 1–0.7 [unhunted] to 1–10.—J. J. H.

WETMORE, ALEXANDER. 1952. The Birds of the Islands of Taboga, Taboguilla, and Uravá, Panamá. Smiths. Misc. Coll. **121:** 1–32, 3 pls.—Annotated list of 54 forms. Revisions of *Amazilia edward* and *Saltator albicollis*. *Amazilia edward ludibunda, Amazilia edward collata, Elaenia flavogaster cristula,* and *Saltator albicollis melicus,* new subspecies.

WETMORE, ALEXANDER, and WILLIAM H. PHELPS, JR. 1951. Observations on the geographic races of the tinamou *Crypturellus noctivagus* in Venezuela and Colombia. Bol. Soc. Venezolana de Ciencas Nat., **13:** 115–119, 1 map.

WHARTON, WILLIAM P. 1953. Recoveries of Birds Banded at Groton, Massachusetts, 1932–1950. Bird-Banding, **24:** 1–7.—Forty years of banding resulted in 146 recoveries, 95 of them more than 20 miles from Groton and thus regarded as "true recoveries;" this is one-fourth of 1 per cent of the 38,057 birds banded. Six maps show places of recoveries for 9 species.

WILCOX, HARRY H. 1952. The pelvic musculature of the Loon, *Gavia immer*. Amer. Midl. Nat., **48:** 512–573, 26 pls., 2 tables.—This is an excellent study, based on the dissection of 25 specimens. The complete description and illustration of each muscle is of great value as a basis for future comparative work. The function of each muscle is noted, and the interactions of the muscles in the highly modified style of locomotion in this species are discussed in detail.

The musculature of the Loon must be very constant in its form and relation, as compared to other birds for which we have comparable details, for few variations are mentioned.—Harvey I. Fisher.

WILLIAMS, GEORGE G. 1952. The origins and dispersal of oceanic birds. Texas Journ. Sci., **4** (2): 139–155, 2 figs.—A series of hypotheses intended to explain the distribution of "oceanic" families of birds. The subject is a very controversial one, but, unfortunately, many statements which this author must have intended as pure hypothesis are expressed as flat, unguarded statements.

WILLIAMS, GORDON R. 1952. The California Quail in New Zealand. Journ. Wildl. Mgt., **16:** 460–483, 1 fig., 10 tables.—*Lophortyx californica* was introduced between 1862 and 1870 and is now widespread between sea level and 6,000 feet and in rainfall varying from 13 to 100 inches per year. Heath and grassland are favored. Summer densities run about a bird per acre. Sex ratios generally follow those reported in America but have recently become markedly unbalanced as the age ratios displayed a dramatic failure in annual recruitment of young to the population. There is no clear-cut evidence for the operation of Allen's or Bergmann's laws on this species in New Zealand at the present time.—J. J. H.

WINTERBOTTOM, J. M. 1952. Observations on the Breeding of the South African Hoopoe [*Upupa epops*]. Ostrich, **23:** 82–84.

WOODGERD, WESLEY. 1952. Food habits of the Golden Eagle. Journ. Wildl. Mgt., **16:** 457–459, 1 table.—Among 51 stomachs of *Aquila chrysaëtos*, jack rabbits

or cottontail remains comprised the sole contents of 22 and the partial contents of 10.—J. J. H.

YOCUM, CHARLES F. 1952. Techniques used to increase nesting of Canada Geese. Journ. Wildl. Mgt., **16:** 425–428, 3 photos.—Near the Washington-British Columbia boundary where *Branta canadensis* nests in trees, 3 sportsmen have increased the population by anchoring iron wash tubs and woven willow baskets high in yellow pines, in the lower crotches of large willows, or on sloping tree trunks. About 650 goslings have been hatched in these devices.—J. J. H.

ZIMMER, JOHN T. 1952. Studies of Peruvian Birds. No. 62. The hummingbird genera *Patagona, Sappho, Polyonymus, Ramphomicron, Metallura, Chalcostigma, Taphrolesbia,* and *Aglaiocercus.* Amer. Mus. Novit., No. 1595: 1–29.

ZIMMER, JOHN T. 1953. Studies of Peruvian Birds. No. 63. The hummingbird genera *Oreonympha, Schistes, Heliothryx, Loddigesia, Heliomaster, Rhodopis, Thaumastura, Calliphlox, Myrtis, Myrmia,* and *Acestrura.* Amer. Mus. Novit., No. 1604: 1–26.—*Myrtis fanny megalura* (Malca, Cajabamba, Perú), new subspecies.

ZIMMER, JOHN T. 1953. Notes on Tyrant Flycatchers (Tyrannidae). Amer. Mus. Novit., No. 1605: 1–16.—*Myiarchus tuberculifer littoralis* (El Zapotal, Guanacaste, Costa Rica), *Idioptilon mirandae kaempferi* (Salto Pirahy [= Joinville], Santa Catarina, Brazil), and *Hemitriccus obsoletus naumburgae* (Sinimbú, Rio Grande do Sul, Brazil), new subspecies. Notes on other species, some rare and little known.

ZIMMER, JOHN T., and WILLIAM H. PHELPS. 1952. A new race of the honeycreeper, *Diglossa cyanea,* from Venezuela. Amer. Mus. Novit., No. 1603: 1–2.—*Diglossa cyanea tovarensis* (Colonia Tovar, Aragua, Venezuela), new subspecies.

LETTER TO THE EDITOR

CORRECTION CONCERNING THE BREEDING OF *Apus pallidus* AT BANYULS, FRANCE

We have just seen the statement in the Auk for July 1952: 339, quoted from the editor of L'Oiseau vol. 21: 216, suggesting that our friends David and Elizabeth Lack acted improperly in publishing the first breeding record of *Apus pallidus* for France in Alauda 19: 49, and that credit for the discovery was really ours. In this connection we beg to state that although we had ourselves seen the Swifts some days previously, Dr. and Mrs. Lack found them quite independently of us, and it was they not we who first identified the species concerned. Their attitude in publishing in Alauda was therefore perfectly correct.

L. Hoffmann
H. Wachernagel