

ORNITHOLOGICAL LITERATURE

A DISTRIBUTIONAL SURVEY OF THE BIRDS OF SONORA, MEXICO. By A. J. van Rossem. Louisiana State University Museum of Zoology Occasional Paper No. 21, October 25, 1945: 379 pp., 26 maps. \$3.50.

The publication of this report is an important milestone in the ornithology of Middle America. For the first time, the bird life of a Mexican mainland State is thoroughly reviewed, with discussion of the local status, migration, and breeding localities of each form. Those interested in the birds of the southwestern United States will find in the book information on the excellent collections and notes made by Mearns and Holzner along the Mexican border between 1892 and 1894. Van Rossem has examined and critically identified specimens that are scattered far and wide, and he has cleared up the confusion of the Sonora-Chihuahua boundary.

After a brief foreword and historical résumé, van Rossem lists the 69 persons known to have done field work on Sonoran birds, with comments on their itineraries and the present locations of their specimens. He then lists in systematic order the 111 names originally based on Sonoran specimens and gives the present allocation of each, the type locality of each form, and the collectors of the type specimens. The avifaunal areas of Sonora are shown in a colored map and described in a short chapter. A distributional synopsis is given for each subspecies of Sonoran bird, consisting of the scientific and English name; a synonymy with the bibliographical citations for the original description and all Sonora references in the literature; a brief statement of the bird's status and the dates of its occurrence. There are 25 helpful maps which show in detail the distribution of 7 genera and of 25 additional species. The footnotes (occasionally lengthy) are mainly on taxonomic matters and include descriptions of two new orioles, *Icterus bullockii parvus* (p. 238) and *I. cucullatus restrictus* (p. 242). In all, 407 species, or 533 forms (given as 532 on page 26), are recognized for Sonora. A list of 37 "species of unverified occurrence" follows, and the work closes with a useful gazetteer, a full bibliography, and an index of scientific names. The book is well printed on good paper.

Though it covers all data available to 1944, this is decidedly a preliminary report, and the author expresses the hope that it will stimulate new work. Indeed, before van Rossem began this study in 1930, aside from such general works as those by Ridgway or Salvin and Godman, only eight papers of any importance had appeared concerning the birds of Sonora. Most of these were mere lists of names or short, unreliable accounts of birds seen; none of them treated the interesting country inland and south of Guaymas. Van Rossem, whose field work and extensive museum researches had already added 162 forms to the Sonoran list, here adds 32 more. Evidence of how much work is still needed in the Sonoran field is the fact that several species (particularly geese and shore birds), recorded only once, were then recorded in numbers, while several fringillids (Evening Grosbeak, Pale Goldfinch, Crossbill, and such juncos as the Slate-colored, Cassiar, and Thurber) that occur regularly in southern Arizona have not been recorded for Sonora at all.

Taxonomically, the International Code is followed, and several nomenclatural innovations result. Further, the genus *Hedymeles* is merged with *Pheucticus*; *Myiarchus cinerascens mexicanus* and *Icterus cucullatus nelsoni* are revived; and a number of proposed, or even accepted, races (e.g. *Lophortyx douglasii languens*, *Otus guatemalae tomlini*, *Dendrocopos scalaris agnus*, *Empidonax difficilis immodulatus*, *Vireo gilvus leucopolius*, *Dendroica nigrescens halseii*, *Aimophila carpalis bangsi*, *Melospiza melodia bendirei*) are considered synonyms. On the other hand, a hummingbird (*Amazilia florenceae*) is recognized, though known only from a

single skin, and two races (*Aratinga holochlora brewsteri*, *Empidonax difficilis culiacani*) are recognized although their breeding range is unknown. *Myiarchus nuttingi* and *cinerascens* are considered distinct species, though van Rossem admits "hybridization on a mass scale." The ranges of several races (*Ardea herodias sancti-lucae*, *Sayornis saya quiescens*, *Polioptila caerulea obscura*, *Guiraca caerulea salicaria*, and *Carpodacus mexicanus ruberrimus*) are extended, and *Psaltiriparus minimus cecaumenorum* is recorded from Arizona.

Where Sonora data are deficient, van Rossem quite properly cites records for contiguous border localities. Apparently, however, records for Menager's Dam (Papago Indian Reservation, Arizona) are not cited, though this is only a mile or so from Sonora, and a few of the birds on the Sonoran list (notably the Bronzed Cowbird and Rufous-winged Sparrow) occur there.

Sonora data have been critically analyzed, and in most cases migration, breeding, and winter records are carefully distinguished. It is perhaps doubtful whether future observations will confirm the migration of the Prairie Falcon, Green Kingfisher, and Rufous-winged Sparrow which van Rossem predicates on the basis of the Sonoran records for these species. On the other hand, further field work will probably produce evidence of migration in the Turkey Vulture, Virginia Rail, White-throated Swift, Bridled Titmouse, Desert and Rock Wrens, and Mockingbird; it will perhaps contract the winter ranges van Rossem assigns to the Western Sandpiper, Black-necked Stilt, Avocet, Wright and Western Flycatchers, Rough-winged and Violet-green Swallows, and Clay-colored Sparrow. The two swallows, in particular, migrate north much earlier than is sometimes realized, and February 23, given by van Rossem for the Rough-winged Swallow, is most assuredly *not* a winter record; also, California and Arizona are not as van Rossem states, within the winter range of the Rough-winged.

Van Rossem has revised the breeding ranges of several birds and discredited some alleged breeding records. One might desire further details on the supposed breeding in Sonora of the Mallard, Western Tanager, and Black-headed Grosbeak, and a statement on how far south the Elf Owl breeds. It is interesting to learn that the breeding range of none of the Horned Larks, Meadowlarks, Red-wings, or Song Sparrows extends over the main part of Sonora; that there are gaps in the distribution of the Bob-white and Yellow Warbler, and apparently only isolated colonies of several species, notably flycatchers. Some historical data are given for the Black Vulture and Sonora Motmot, but nothing seems to be known of the history of the English Sparrow and Bronzed Cowbird in Sonora.

Van Rossem adopts a middle course in the matter of sight records, including several species and even two subspecies on sight records alone, and it would seem that in places a more critical attitude would have been better.

Ecology is not extensively treated. Most birds are, quite correctly, assigned to life zones; yet the opening discussion is based on the "provinces" of Dice and others. The correspondence of the distributional maps of species with the map of the Sonoran avifaunal areas is often merely general. Here and there, however, there are some interesting ecological data, as, for example, that for the Inca Dove, Olivaceous Flycatcher, and Botteri's Sparrow. Van Rossem suggests that the Long-billed Dowitcher (*Limnodromus scolopaceus*) prefers fresh-water localities in the Southwest, while *L. griseus hendersoni* prefers the coast.

Like all large works, this one has its minor flaws—the terms "vagrant" and "casual" are used loosely at times; the author, in identifying Audubon's "Rancho La Sone" with Sonoyta (p. 320) may have placed it too far to the west. But such details are trivial in comparison with the magnitude of the task accomplished. The report stands as a monument to the industry and scholarship of the author.—Allan R. Phillips.

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