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by Dr. Merriam's various publications on the subject. The faunal areas comprise (1) the "Humid Coast Fauna," which is subdivided into a "Northern Humid Coast Belt" and a southern "Santa Cruz District;" (2) the "California Fauna" including the dry "San Joaquin-Sacramento Basin," "San Francisco Bay Region," "San Diegan District," and "Santa Barbara Islands"; (3) the Sierran Fauna," divided into two subfaunas, the "Sierra Nevada" and Southern Sierras;" (4) the "Arid Interior Fauna," including the "Great Basin" and "Colorado Desert" subfaunas.

The Check-list comprises pages 9 to 74, and the Hypothetical List 75 to 79. This is followed by a full index of names and synonyms. The list includes the scientific name of each species with the original authority and the authority for the combination. Each name is preceded by a running list number, and, in parenthesis, the A. O. U. Check-list number. Following the scientific name, on the line below, is the common or English name. Under each species is given a list of synonyms, that is "all the other names besides the accepted one by which each species has been known in California literature." Following this is the 'status' which "is intended to give in a condensed sentence the range, comparative abundance and season of occurrence of the species in question. The range is usually expressed by Zones and Faunal Areas which are outlined in the accompanying maps." The list comprises 491 species and subspecies which are distributed thru the orders as follows: Pygopodes, 17; Longipennes, 23; Tubinares, 17; Steganopodes, 6; Anseres, 42; Herodiones, 10; Paludicolæ, 8; Limicolæ, 37; Gallinæ, 9; Columbæ, 4; Raptores, 38; Cocyges, 3; Pici, 21; Macrochires, 17; Passeres, 239. The Hypothetical List includes 33 species.

The author's "conservatism" has led him to include all species as well as subspecies that in any way seem worthy of recognition, for, as he states, a subspecies is as important as a species (and, the reviewer would add, often much more important in bringing to light facts of distribution, migration routes, and the effect of environments). Despite the oft repeated 'regrets' of lay ornithologists, and the objections of those scientists whose knowledge comes by inspiration rather than from specimens, these finely split subspecies exist in nature and are the very factors which make the avifauna of California the most perplexing and likewise one of the most interesting in all of North America. We heartily agree with our foremost systematist, Mr. Ridgway, that the best interests of science are subserved by prosecuting the present methods of splitting to a logical conclusion.

Not a few of the forms accepted by Mr. Grinnell have been excluded from the A. O. U. Check-list, and likewise a few appearing in this standard work have been omitted from the California Check-list. Probably we have no reason to hope for nomenclatural stability until systematic ornithology has ceased to progress.

The present paper is the most important work on California ornithology that has appeared in recent years.—W. K. F.

OSBERHOLSER'S REVIEW OF THE HORNED LARKS (*Proc. U. S. N. M. XXIV, June 1902, pp. 801-883, pl. XLIII-XLV, maps I-IV*)—This paper strikes us as a model of detailed systematic work. Points of nomenclature seem to be worked out beyond question, and the standard of nameable races appeals to us as quite conservative enough. For the present, at least, we ought to be justified in accepting Mr. Oberholser's conclusions as decisive.

As affecting California, several important changes are made. The subspecies we have been calling *chrysolema* is renamed *actia*, the former name proving exclusively applicable to a distinct Mexican form. What we have known as *arenicola* from the southeastern deserts is separated from the more eastern forms as a new race, *ammophila*. A new race is also described from the vicinity of Yuma and is called *leucansiptila*. A Rocky Mountain form, *leucolæma*, is recorded from the east-central border of the State in winter. All the rest of the races are as given in our "Checklist of California Birds," making, all together, eight distinct horned larks occurring in California.

From a more general point of view Mr. Oberholser's paper is of decided interest. While Henshaw in 1884 recognized by name eight different horned larks from North America, and Dwight in 1890 distinguished eleven forms from the same region, Mr. Oberholser's studies lead him to recognize no less than twenty-one different forms, all of which he treats as subspecies of *Otocoris alpestris*. This growing number is partly accounted for by an increase of available material, and also is significant of the rapid development of our analytical faculties. We can but await the results of the next *Otocoris*-monographer's work with especial interest. As Mr. Oberholser states in the present paper, almost infinite division is possible, and he might have easily doubled the number of races admitted. What will be the degree of difference recognized twelve years hence?

There is one practice in this paper which seems to us open to question. To select a case for illustration, Mr. Oberholser gives Stockton as a station for *leucolæma* based on one (or more) winter specimens. Now may not this individual, showing an aggregate of characters nearest *leucolæma*, be not simply an individual extreme of, say, *merrilli*; which occurs in numbers in the same locality at the same season? The author plainly states that individual and "local" variation within the range of a well-defined race may produce extreme types more different from each other than the average of that race is from the average of another of an entirely separate range. Is there not danger of denoting such extreme individuals by the names of similarly looking subspecies when their real affinities are not with those races at all? It is very evident that mistakes of this kind would lead to wrong deductions in regard to migratory movements, and distribution in general, which is after all where the chief value of distinguishing geographical races comes in.—J. G.