

Further comments on the field identification of North American pipits

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BEN KING'S ARTICLE on the identification of the pipits (*Anthus* spp.) known to occur in North America (King, 1981) should prove extremely useful, and Ben is to be congratulated for this careful compilation. Readers with field or museum experience with these birds should read the article carefully, as they may be able to contribute supplementary or corrective information. I offer two such comments here.

I want to underline King's warning that first fall Meadow Pipits (*A. pratensis*) look very much like Brown Tree-Pipits (*A. trivialis*). The characters he gives to separate these species are, in large part, useful primarily if the two are seen together. There is a trap, not mentioned by King, into which it is all too easy to stumble. My first experience with large numbers of fall migrant Palearctic *Anthus* was on St. Agnes, Isles of Scilly, in October 1978. I had no trouble deciding that three species were present: Meadow Pipits, Brown Tree-Pipits, and Rock Pipits (*A. spinoletta* subsp.), and so entered them in my notes. I had three field guides with me: Peterson *et al.* (1966), Bruun (1970), and Heinzel *et al.* (1972). All give more or less the same array of characters to distinguish Meadow Pipit and Brown Tree-Pipits, as might be expected. Only Peterson *et al.* mention the marked difference in hind claw length; Heinzel *et al.* show it in the figure without mentioning it, and the figure in Bruun shows no claw difference. I found this of little use as a field character; even when the pipits were walking on very short grass or a bare substrate, it was very difficult to approach them, in the open, closely enough to be sure of the length of the hind claw.

The alleged distinctiveness of calls would be useful only after one was sure one had heard both, preferably by having them pointed out by somebody who knew the calls, since the written descriptions are not much help. The differ-

ences in song and song-flight are obviously irrelevant during fall migration. The habit of frequent perching in trees and bushes attributed to the Brown Tree-Pipit was of little help in an essentially treeless habitat, and I knew that pipits were not rigidly confined to specific habitats on migration if only because I saw Rock Pipits occasionally walking around in meadows. I was therefore limited entirely to color characters. Only Heinzel *et al.* warn that immature Meadow Pipits have flesh-pink legs like those of Brown Tree-Pipits, and I somehow overlooked this caveat. Going by plumage color, and misled by leg color, I had no doubt that the large numbers of pipits seen in meadows and downs on St. Agnes included both Meadow Pipit and Brown Tree-Pipits. Toward the end of my stay, I learned from a local expert that all were Meadow Pipits, and that what I had taken to be two species were, in fact, the two age classes of that one species.

When I returned to St. Agnes in October 1981, even knowing that what I was seeing were adult and first fall plumages of the Meadow Pipit, I found it hard to believe they were all one species. Although I could not assign two "kinds" of call-notes to the yellowish and whitish "kinds" of pipits, King emphasizes that differences in calls among pipits "are often subtle and require experience to detect in the field." On the 1981 trip I also had the field guide of Keith and Gooders (1980). This book does mention that "juveniles" of the Meadow Pipit have flesh-pink legs, but does not specifically point out, as do Heinzel *et al.*, that this is a character of Brown Tree-Pipits as well. However, the fall migrants are not "juveniles", which are birds in their first (non-downy) plumage; October migrant pipits are in the first basic plumage. For someone whose principal previous field experience with *Anthus* has been with North American

Water Pipits, in which there is little or no difference between the first and later basic (non-breeding) plumages (see beyond), it was especially hard to believe that the two "kinds" of pipits on St. Agnes were not Brown Tree-Pipits and Meadow Pipits but rather two age classes of the latter.

Thus King's warning that Brown Tree-Pipits and first fall Meadow Pipits are very hard to tell apart can be expanded; adult and first fall Meadow Pipits look so different, with the latter converging toward Brown Tree-Pipits in color of plumage and legs, that it is easy to be fooled (and misled by field guides) into thinking that the age classes represent two species.

TURNING TO ANOTHER subject, King unfortunately chose to follow Vaurie (1959) rather than the A.O.U. (1957) in recognizing only a single subspecies of Water Pipit in North America, *Anthus spinoletta rubescens*, rather than three (*rubescens*, *alticola*, *pacificus*). The three subspecies recognized by the A.O.U. are fairly distinct in basic plumage, and very distinct in alternate (breeding) plumage, such that spring migrants in areas of overlap could easily be separated in the field if seen reasonably closely. They are different enough to mislead an observer into thinking that two species of pipit were present.

The most distinctive North American subspecies is *A. s. alticola*. This is the form that breeds in the Rocky Mountains of the United States. The A.O.U. Check-list (1957) mentions Utah, Colorado, Arizona and New Mexico, and Davis (1961) adds Montana. This subspecies represents the extreme within *A. spinoletta* of reduction of streaking of the underparts. Many specimens in alternate plumage lack any dark markings on the breast, and a few even lack them on the flanks. At most, there is a single broken row of very small streaks

or spots across the breast. A very few specimens of *A. s. rubescens*, which nests from Newfoundland across northern Canada to the Mackenzie Delta and probably northeastern Alaska, have underparts with the streaking reduced as much as in typical *alticola*. These can be distinguished from true *alticola*, at least until the plumage is worn and faded, by having white chins (as shown in King's Plate 1), contrasting with the pinkish-buff of the remaining underparts. This contrast is lacking in the richly colored *alticola*; in the hand, the ventral color of *alticola*, when unfaded, can be seen to be deeper than that of unstreaked specimens of *rubescens*.

As suggested above, most spring examples of *A. s. rubescens* are streaked on the flanks and have a necklace of streaks on the breast, with the average specimen being somewhat more heavily streaked than the "breeding" bird figured on King's Plate 1. Month for month, the general color of the underparts is paler than that of *alticola*, but is still of a pinkish buff. In the third subspecies, *pacificus*, which breeds from Alaska south to the mountains of California and east to western Alberta, the underparts are of a somewhat yellower (less pinkish) buff than those of either *alticola* or *rubescens*, and worn breeding birds are almost pure white below, with prominent white superciliary lines. The streaking of the underparts averages heavier than that of *rubescens* because the unstreaked or lightly streaked extreme of the latter race does not appear to have a counterpart in *pacificus*. Thus the color of the underparts and superciliary of a truly "breeding" *pacificus* matches King's figure of the fresh Olive Tree-Pipit (*Anthus hodgsoni*) more closely than his figure of the "breeding" Water Pipit.

Birders in western North America, where "accidental" pipits are most likely to occur, should be aware of this geographic variation in the Water Pipit, as specimens of *alticola* have been taken as far west as Portland, Oregon, and of *pacificus* as far east as Corpus Christi, Texas (both based on specimens in Carnegie Museum of Natural History).

The three subspecies are much less distinctive in the fall. When direct comparison is possible, *rubescens* can be seen to be of a richer, darker brown color dorsally than either *alticola* or *pacificus*, which are much alike in back color; *pacificus* is slightly grayer, and

usually has distinct black streaks on the crown (partly concealed in very fresh plumage). This is important, as King characterizes the "non-breeding" plumage of the Water Pipit as having blackish streaks on the back and crown that are "faint [and] indistinct" (italics King's). There is great overlap in color of underparts in fall, but the pinkish-buff extremes are found in *alticola* and the whitish-buff extremes in *pacificus*, as might be expected. All three show a similar range of variation in ventral streaking in this plumage, with the average somewhat heavier in *pacificus* and lighter in *alticola*.

Using fresh fall specimens aged by reliable collectors, including some birds just finishing the molt out of juvenal plumage and thus unequivocally in first basic plumage, I am unable to confirm any of the characters King lists for "first fall" Water Pipits. Kathleen Klimkiewicz of the Bird Banding Laboratory (pers. comm.) knows of no plumage character for identifying the age classes of this species in the hand, but this is not surprising, since so few Water Pipits are banded in North America that there has been little impetus for research on the age classes of the species.

ON THE OTHER hand, there is, at least in *A. s. rubescens* (the race best represented in the material I examined), a weakly developed sexual difference in markings. Using only spring and summer specimens taken on or near the breeding grounds, I find that there is a noticeable tendency for males to predominate among the unstreaked and least streaked examples. Arranging the 20 specimens with the least ventral streaking in sequence of increasing amount of streaking, I found that only the 4th, 9th, and 16th were females. Although the series as a whole has more males than females, the ratio is by no means the 17:3 found in the sample of sparsely streaked extremes. At the heavily streaked extreme of these spring and summer birds, females do not clearly predominate. I realize that this is exactly the opposite of what I stated in 1954 (in Sutton and Parmelee, 1954), when I wrote that there was little or no sex difference among the unstreaked birds, but that females dominated the heavily streaked extreme; I am at a loss to explain my earlier interpretation, as I was studying essentially the same series of specimens.

A word or two are necessary about

the figures of the Water Pipit on King's plates. The faint whitish scalloping on the back of the "breeding" figure on Plate 1 is an artifact of wear, and only appears on some individuals. The figure of the dorsal aspect of the "breeding" Water Pipit on Plate 2 is far too pale for any individual of any North American subspecies, and only the grayest extremes of spring *A. s. alticola* show so little brown on the back. This plate also errs in showing black on the outer web of the outermost rectrix in both plumages of the Water Pipit. Only a relatively small minority of specimens of either age class shows any pigmentation at all on the outer web of this rectrix, and in those that do, it is diffuse rather than sharply defined as shown.

In summary, then, field identification of accidental species of pipits may be complicated by the fact that there is enough geographic variation in North American Water Pipits, at least in spring, to mislead an observer seeing two subspecies into thinking that one of them may be an "exotic" pipit. This applies, so far as is known, from coastal Texas west to the Pacific. Referring to King's Plate 1, "breeding" examples of *Anthus spinoletta pacificus* will be much more heavily streaked below, with whiter underparts and superciliary and more prominent streaking on the crown. At the same season, *A. s. alticola* will have the amount of ventral streaking shown or less (often immaculate), and, unless worn and faded, will have the chin concolorous with the throat and breast. *A. s. rubescens* will very rarely have less ventral streaking than shown, and often more. Referring to King's Plate 2, no American race of the Water Pipit is as pale gray above as shown in the "breeding" figure, and only *alticola* even approaches it, the other two being decidedly browner than shown. Except when very fresh, examples of *pacificus* are likely to show as much crown streaking as shown for the Olive Tree-Pipit. And all but a minority of examples of all of the American races have immaculately white outer rectrices.

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LITERATURE CITED

- AMERICAN ORNITHOLOGISTS' UNION. 1957. Check-list of North American birds, 5th ed. Amer. Ornith. Union
- BRUUN, B. 1970. The Hamlyn guide to birds of Britain and Europe. Hamlyn, London.
- DAVIS, C V. 1961. A distributional study of the birds of Montana. Unpubl. Ph.D. thesis, Oregon State Univ., Corvallis [not seen; cited in Skaar, 1969].
- HEINZEL, H., R. FITTER, and J. PARSLow. 1972. The birds of Britain and Europe with North Africa and the Middle East. Collins, London.
- KEITH, S., and J. GOODERS. 1980. Collins Bird Guide. Collins, London.
- KING, B. 1981. The field identification of North American pipits. *Am. Birds* 35:778-788.
- PETERSON, R.T., G. MOUNTFORT, and P A D HOLLom 1966. A field guide to the birds of Britain and Europe, rev. ed. Collins, London.
- SKAAR, P.D. 1969. Birds of the Bozeman Latilong. P. D. Skaar, Bozeman, Montana.
- SUTTON, G.M., and D.F. PARMELEE. 1954. Survival problems of the Water-Pipit in Baffin Island. *Arctic* 7:81-92
- VAURIE, C. 1959. The birds of the Palearctic fauna. Passeriformes. With-erby, London.
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POPULATION

The breeding birds of Minnehaha County, South Dakota: then (1907-1916) and now (1971-1975)

A comparison shows substantial changes in the breeding status of at least 35 species

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IT IS GRATIFYING to note that in recent years the general public has become increasingly aware of and sensitized to various aspects of the natural environment. In particular, large numbers of people have become actively involved in amateur ornithology and spend many hours in the field observing birds. As the number of competent field observers increases, it should be possible to get better information about the way bird populations change in time and space (see, for example, Weydemeyer 1975).

For five years (1971-1975) the authors took almost-weekly field trips, from May to August inclusive, into the countryside surrounding the city of Sioux Falls in Minnehaha County, South Dakota (Table 1). In addition to these automobile trips, we made less frequent visits to a number of woodland habitats in other parts of the county. During each trip we made careful notes of the bird species and numbers we sighted. The body of information we collected is important for two reasons. First, we always drove along the same route, approximately 50 miles in length, so that the same general habitats were monitored repeatedly and systematically. Second, there is available, for precisely this same restricted geographical area, a similar body of information collected many years ago (1907-1916) by Larson (1925).

In this paper we compare breeding bird populations for these two periods and attempt to explain some of the observed differences.

HABITATS

ALTHOUGH IN GROSS detail, the landscape still fits the description given by Larson, the following is included to describe the habitats more precisely as they exist today. The linear extents of the various habitat types along the field trip route in 1974 are presented as percentages in Figure 1.

Land under cultivation

Principal crops along the route were corn, soybeans, alfalfa and small grains, *i.e.*, oats, rye and wheat. In general, row crops such as corn and soybeans do not support populations of breeding birds while small grains and alfalfa often do, at least until they are harvested. Also included in this category are Kentucky Bluegrass (*Poa pratensis*) pastures used for grazing. Although these pastures are usually cropped quite short they do support breeding bird populations.

Farmsteads

As is true for most of the Upper Mid-

dwest, the landscape in eastern South Dakota is blocked out in square-mile sections, most of which are separated by graded, gravel-surfaced roads. It is along these roads that the farmsteads are located. The farmsteads usually consist of the owner's or tenant's residence and a number of out-buildings used for crop and equipment storage and to house livestock. These buildings are often protected from the north and west by a planted grove of trees. Important tree species in these groves are Cottonwood (*Populus deltoides*), American Elm (*Ulmus americana*), Silver Maple (*Acer saccharinum*), Green Ash (*Fraxinus pennsylvanica*) and Box-elder (*Acer negundo*).

Marshes

West of the city of Sioux Falls, the poorly-drained, rolling, glacial topography supports a large number of marshes or pot holes, many of which become dry after successive years of drought. Dominant species of emergent vegetation in these marshes include Cat-tails (*Typha* spp.), Bulrushes (*Scirpus* spp.) and Burreed (*Sparganium* spp.). At the marsh perimeters, Sedge, *Carex* spp., are often found.

¹Deceased September 22, 1976