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ON THE JUVENAL PLUMAGE OF NORTH AMERICAN PIPITS.—While there are excellent descriptions of the juvenal plumages of the two species of North American pipits, Sprague's Pipit, *Anthus spragueii* (see Harris, Can. Field-Nat., 47: 94) and Water Pipit, *Anthus spinoletta* (see Dwight, Ann. New York Acad. Sci., 13: 289) I have been unable to locate colored illustrations of either. The frontispiece of this number of 'The Auk' is thought, therefore, to present these plumages for the first time.

The juvenile of *A. spragueii* was drawn from a specimen taken at St. Charles, near Winnipeg, Manitoba, on August 22, 1931, and represents a female, 13 days after hatching. The drawing of *A. spinoletta* is that of a young male, possibly 12 days old, collected at Cape Dorset, Baffin Island, on July 25, 1938. Notes on the colors of soft parts were made of each at the time of collection. The specimens are, respectively, numbers 29399 and 31482 in the Royal Ontario Museum of Zoology, Toronto.

It will be seen that these two species are more markedly distinct in juvenal than in adult plumage. The juvenal plumage of *spinoletta* is essentially similar to the adult plumage, except that the streaking is coarser and more extensive, both above and below. The juvenal plumage of *spragueii* is more distinctive. The feathers of the scapular and interscapular tracts are margined completely with pale buff and whitish and present a "scaled" effect, reminiscent of the back pattern of some juvenile sandpipers, particularly Baird's Sandpiper, *Erolia bairdii*.

Reference to Witherby *et al.* (The Handbook of British Birds, Vol. I) and to specimens in the R. O. M. Z. bird collection reveals that several Old World species of *Anthus* resemble *spinoletta* in possessing a streaked back-pattern in the juvenal plumage. These are *A. trivialis*, *A. pratensis*, *A. cervinus*, *A. gustavi*, etc. Another group, including *A. campestris* and *A. richardi*, appears to resemble *spragueii* in having a "scaled" dorsal plumage. Perhaps of some significance to the systematist is the even greater resemblance between the juveniles of *A. spragueii* (Motacillidae) and *Lullula arborea*, the Wood-lark (Alaudidae).

A circumstance that struck me forcibly while collecting specimens of juvenile birds in the prairie region of Manitoba was the similarity in juvenal plumage of three species of birds, representing two families, that were closely associated on the nesting grounds. I refer to Sprague's Pipit, Baird's Sparrow, *Ammodramus bairdii*, and Chestnut-collared Longspur, *Calcarius ornatus*, all of which have a "scaled" pattern on the dorsal area. This was considered somewhat remarkable, especially since the "scaled" juvenal plumage is not common among the Fringillidae and since another species of *Calcarius* (*C. lapponicus*) has the dorsal surface streaked.

The implication seemed to be that there may be some survival value in a "scaled" dorsal plumage for prairie-nesting passerine birds, though why it should be more advantageous than a streaked plumage is not obvious.—T. M. SHORTT, Royal Ontario Museum of Zoology, 100 Queen's Park, Toronto, Ontario.



(Upper) Sprague's Pipit, *Anthus spragueii*; juvenile female; about 13 days old; out of nest two or three days; St. Charles, Manitoba; August 22, 1931; R. O. M. Z. No. 29,399. See also page 379.

(Lower) American Pipit, *Anthus s. spinoletta*; juvenile male; about 11 or 12 days old; out of nest and capable of flight; Cape Dorset, Baffin Island; July 25, 1938; R. O. M. Z. No. 31,482.