

Twentieth in the Fuertes print series

[The original painting by Louis Agassiz Fuertes was reproduced in *Bird-Lore*, Vol. XIX, No. 6, November-December, 1917. The accompanying text, written by Frank M. Chapman, is reprinted here in its original form.]

Notes on the Plumage of North American Birds

Frank M. Chapman

Cliff Swallow (*Petrochelidon pyrrhonota*, Figs. 1,2)

The adults of this species are alike in color, but the young bird (juvenal or nestling plumage), as Fuertes' figure (Fig. 2) clearly shows, is quite unlike its parents in many particulars. The crown and back are brownish, instead of steel-blue, there is no white mark across the brow, etc.

In this plumage the young bird migrates, and, as with most of our swallows, the postjuvenal molt does not occur until winter quarters are reached. For this reason specimens are lacking to show its exact nature, but it evidently is complete, since, when the Cliff Swallows return to us in the spring, young and old cannot be distinguished.

Violet-green Swallow (*Tachycineta thalassina*, Fig. 3)

The plumage changes of this species doubtless resemble those of its relation, the Tree Swallow. There is, however, a well-marked difference between the plumage of the male and female of this species, that of the latter being considerably duller, with the upper parts, especially the crown, washed with bronze or brownish.

The nestling plumage is much like that of the Tree Swallow and consequently is quite unlike that of the adult. From the young Tree Swallow the young Violet-green may be known chiefly by a patch of white on the flanks and by the less abrupt definition of the white of the underparts from the brownish of the upper parts on the sides of the head and neck. But these differences are not sufficiently pronounced to distinguish the two in life.

A specimen taken in New Mexico, October 11, is undergoing a complete molt which apparently would have brought it into the plumage of the adult in winter. This differs from that of the adult in summer (as does that of the Tree Swallow) in having the tertials tipped with white, a marking which disappears with wear.

Tree Swallow (*Iridoprocne bicolor*, Figs. 4,5)

There is practically no sexual difference in color in the Tree Swallow, but the nestling plumage (Fig. 5) is strikingly unlike

that of the adult. The upperparts and tail are dull sooty grayish brown, usually without a trace of the iridescent bluish green so conspicuous in the adult; the wings are of much the same color but show greenish reflections; the underparts are slightly duller, less silky white than in the adult.

The birds begin their migration in this plumage, but, as Dwight has shown, between the latter part of August and October a complete molt occurs in which the young bird assumes the plumage of its parents.

There is no spring molt, and the summer plumage differs from that of winter only in the absence of whitish tips to the tertials.

Rough-winged Swallow (*Stelgidopteryx ruficollis*, Fig. 6)

There is no sexual difference in color in this species, but the young in juvenal plumage differ from their parents in being washed with rusty, this color being clearer on the wing-coverts and margins to the inner wing-feathers and pronounced on the throat and breast, which are almost cinnamon.

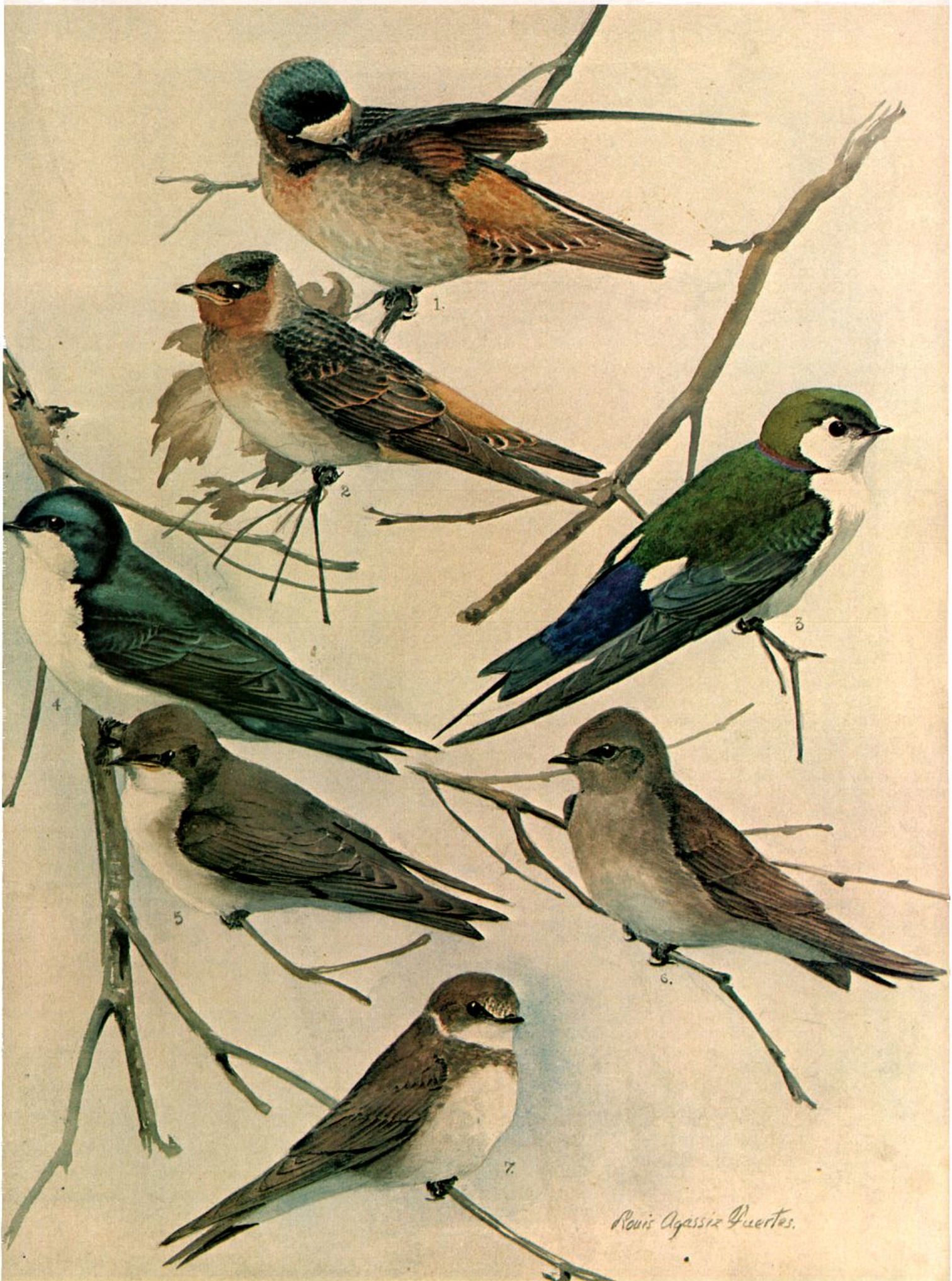
The post-juvenal molt doubtless occurs, as Dwight remarks, after the birds leave us and are traveling to their winter homes in Central America. It brings the bird into the plumage of the adult, which exhibits no seasonal variations.

The adult Rough-wing somewhat resembles a young Tree Swallow in general coloration but is duskier below, especially on the breast.

Bank Swallow (*Riparia riparia*, Fig. 7)

The Bank Swallow is found in both the New World and the Old. The sexes are alike, and there is but little variation with age. The nestling plumage differs from that of the adult in being slightly tipped with brownish or grayish above, in having the throat more or less spotted with dusky and the tail squarer.

This plumage is worn until after the bird leaves us for its winter quarters in the tropics, and is replaced, before the birds' return to us, by one resembling that of the adult. The adults also molt after leaving us, and the slight differences between winter and summer plumage are doubtless due to wear.



Rouis Agassiz Puertes.