

A HYBRID BETWEEN THE CLIFF AND TREE SWALLOWS.

BY FRANK M. CHAPMAN.

THE American Museum of Natural History has recently acquired from the collector what seems to be a hybrid between *Petrochelidon lunifrons* and *Tachycineta bicolor*. The specimen (No. 78,119 Springfield, Mass., Aug. 20, 1902, Leon C. Holcomb) is apparently a bird of the year and, in addition to presenting evidences of hybridism, exhibits also albinistic characters, though it is possible the latter may be a result of hybridity. Generally speaking this specimen resembles *bicolor* below and *lunifrons* above, the rusty and buff markings of the last named species, however, being, in this supposed hybrid, white. A more definite understanding of this interesting bird's color and markings may be gathered from the appended comparative tables :

FORM.

T. bicolor. ♂ im. *Hybrid.* ♂ im. *P. lunifrons.* ♂ im.

Bill.

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| Medium; width at nostril 4.5 mm. Nostril elliptical; a well-developed operculum. | Medium; width at nostril 4.5 mm. Nostril circular; a well-developed operculum. | Rather heavy and broad; width at nostril 6.3 mm. Nostril circular; no operculum. |
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Wing.

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| Long, 118 mm. | Short, 103 mm. | Medium, 105 mm. |
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Tail.

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| Medium, 50 mm.; fork, 9 mm. deep. | Short, 40 mm.; fork, 4 mm. deep. | Medium, 45 mm.; fork, 2 mm. deep. |
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Feet.

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| Slender, tarsus 11 mm.; middle-toe, 11 mm.; nail, 4 mm. | Medium, tarsus, 11 mm.; middle-toe, 11 mm.; nail, 3 mm. | Rather stout, tarsus, 11 mm.; middle-toe, 11 mm.; nail, 5 mm. |
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COLOR.

T. bicolor. ♂ im. *Hybrid.* ♂ im. *P. lunifrons.* ♂ im.

Under parts.

| | | |
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| White, sides of breast dusky sometimes forming a faint breast band. | White, a well-defined dusky breast band; left side of throat and abdomen washed with yellow. | Throat dusky black more or less mixed with cinnamon and, usually, whitish; breast and sides dusky washed with rufous. |
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Under wing-coverts.

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| Dusky, bend of wing whitish. | White, bend of wing partly yellow. | Dusky washed with rufous or cinnamon. |
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Under tail-coverts.

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|--------|--------|-------------------------------------|
| White. | White. | Mixed dusky and rufous or cinnamon. |
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Upper parts.

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| Uniform dusky slate or grayish brown. | Forehead white, a faint yellowish tinge; pileum sooty black with slight steel-blue reflections; a well marked nuchal collar white faintly tinged with dusky and yellow; back like pileum the feathers basally white; rump white, slightly tinged with yellow anteriorly. | Forehead cinnamon, usually mixed with dusky and sometimes white; pileum dusky black with slight steel-blue reflections; nuchal collar grayish brown, back somewhat paler than pileum, tipped with buffy, rump ochraceous buff. |
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Upper tail-coverts.

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| Dusky slate or grayish brown. | White tipped with fuscous. | Grayish brown, edged with buffy. |
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Tail.

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| Dusky slate or grayish brown. | Fuscous, inner web of outer feather white, except at end; outer web of three outer feathers edged with whitish. | Grayish brown faintly iridescent, with indications of a white terminal mark on the inner web of the outer feather. |
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Wings.

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| Dusky slate or grayish brown, inner tertials lightly edged with white. | Fuscous, tertials faintly edged with whitish. | Grayish brown faintly iridescent, the coverts slightly, tertials more widely, margined with buffy or ochraceous. |
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It is of course well known that in the Tree Swallow both birds of the year and adults moult before leaving us for the South while the Cliff Swallow migrates before moulting. It is consequently of interest to observe that in this hybrid moult has begun normally with the innermost primaries.

This fact is also of importance in determining the bird's age and, in connection with the unworn condition of the wing-feathers, it leaves no doubt that the specimen is in post-natal plumage.

The radical differences in the character of the nests of the supposed parents of this bird lead one to speculate on the type of nest-structure in which it was reared, but, unfortunately, our curiosity in this direction cannot be gratified.

GENERAL NOTES.

The Arctic Tern in Hawaii.—When shooting in the low, brackish-water marshes at Kahuku, on the island of Oahu, on April 30, 1902, Manuel Silva, a Portuguese boy of my acquaintance, shot a fine male specimen of *Sterna paradisæa* in full spring plumage. I secured the bird for the Bishop Museum. It had the bill and feet rich carmine when freshly killed and from it I took the following measurements: Length, 15.25; wing, 11.50; culmen, 1.20; tarsus, .47; middle toe and claw, .91; tail, 7.25.

The boy said that it was the only one of the kind that he saw, and it being a stranger to him he spent much time in pursuit of it and was fortunate enough to secure it by a chance shot. The bird was in good flesh and exhibited no signs of having experienced any very severe hardship in reaching this Territory.

This is the second specimen of this species which has been reported from the Hawaiian Islands, one having been taken eleven years before by Mr. R. T. Guarde at Hilo on Hawaii, as reported by Mr. Henshaw in 'The