Evolution in the Breeding Habits of the Fulvous Tree Duck.

FOR the preparation of this article I am indebted to Mr. H. Wanzer, chief engineer for Miller & Lux, and C. W. P. Smith, a local collector of some note, both of Los Banos, for my information on the breeding habits of this species from its first appearance in Merced county, until last season when I spent three months collecting in that locality.

Mr. Wanzer states that *Dendrocygna fulva* was first brought to his notice in June 1895, and that they have returned each subsequent season, arriving about the first of June, and that they did not seem to increase until about 1898, but since that time have increased with such rapidity that they now are common summer residents in the irrigated districts around Los Banos.

From time to time since 1895 pot-hunters have told wonderful stories of finding large numbers of eggs piled up on bunches of dead grass and on small knolls that rose above the water in the swamps. The number of eggs in these nests ranged from 30 to 100 or more, according to report, and in not a few cases the finder has brought the eggs with him in order to prove that what he said was true.

About the 15th of June 1896, Mr. Wanzer found a nest, if such it would be called, in Camp 13 swamp, containing 62 eggs. The eggs were placed on a pile of dead grass which had drifted together about four inches above the water, and looked as if someone had emptied them carefully out of a basket, there being no attempt at nest-building or concealment. Mr. Wanzer took twelve eggs, three of which are now in the collection of W. H. Hayes of Los Banos, and the other nine he placed under a hen, five of them hatching.

He states that the young were black with a white band around the neck. A pen was built for the purpose of watching them mature, but they all died within a week. I saw quite a number of the young last season but failed to observe the white band of which Mr. Wanzer speaks. The young are very difficult to get as they always make for the tall grass at the edge of the water at the slightest noise. Those that I procured were partly feathered and probably too old to show any indication of the white about the neck.

I found from inquiry among local collectors and hunters that no one is positive of seeing any young of this species until the last two or three seasons, and I was unable to find anyone who had found one of these large clutches last season. Most of the hunters agree that the large clutches are becoming very rare, which goes to show that instead of colonizing and laying from 30 to 100 eggs in a set without any attempt at nest-building and just out of the water on floating vegetation similar to the coots, they are becoming civilized and are nesting similarly to other species of ducks.

There may be a few silurians that still persist in colonizing, but if so, they failed to come under my notice last season. While I have heard a great deal about the eggs being incubated by the heat generated from decaying vegetation, I have been unable to find anyone who is positive of any of these large clutches being incubated by this process, so I think I can safely say that it is a mistaken idea with regard to the Fulvous Tree Duck, from the fact that there is no authentic data of anyone seeing young of this species until the past few years. Also there was no perceptible increase in numbers until they had quit colonizing.

I collected five sets of eggs of this species last season and in every instance the nest was placed on dry ground and so well concealed that it would be very hard to find without flushing the old bird. I found this duck not a very close setter, it generally flying when I was 20 or 25 feet from the nest. I took my first set on

April 28, which is very early as they usually do not arrive before June 1, and it contained fifteen fresh eggs. The nest was placed in a bunch of wire grass fully 500 feet from water and was very well built of fine wire grass and lined with a few feathers (not down) apparently from the breast of the bird. This nest was very well concealed.

I took my second set on May 5, consisting of ten fresh eggs; third set May 6, containing seventeen eggs, slightly incubated; fourth set, May 13, containing fourteen fresh eggs, and the fifth set on May 14, containing eleven eggs, incubation advanced. All the nests were similar to the one found April 28, except the one on May 13 which contained no feathers, but all were well built, very well concealed and ranged from thirty to thirty-five feet from the water.

Mr. Smith informs me that he has found nests of this species in grainfields fully one-half mile from water, which goes farther to prove that we may look forward with no serious apprehension to the Fulvous Tree Duck becoming extinct, now that they are returning to the old and time-honored mode of incubation and have given up the idea of co-operative colonies.

Oakland, Cal. F. S. BARNHART.

Capture of a Floresi's Hummingbird at Haywards, Cal.

ON FEB. 20, 1901, the first return movement of bird-life from the south began at Haywards, Cal. About four o'clock in the afternoon of that day numberless hummingbirds began to buzz around a mass of flowering aloes, which bore long spikes of vermillion-colored flowers. I first noticed five male *Calypte anna* sucking the honey from the tube-like blossoms with apparent enjoyment, and they were presently joined by a male *Selasphorus alleni* which I shot.

A half hour later I saw what, at first glance, seemed to be a hybrid—apparently a Rufous-like Anna's Hummingbird. The rufous-edged tail and under wing coverts showed a bird of which I knew nothing. Soon I had it in hand and was more puzzled than ever by its crimson or rose-red helmet and throat patch. I at first took it to be *S. platycercus*, but upon comparison my specimen proved rich in coloring beyond any hummingbird I had ever collected, and subsequent examination proved the bird to be none other than the Floresi's Hummingbird (*Selasphorus floresii*).

It has been suggested that this spring capture of *S. floresii* in California would indicate that the species is a summer resident of some portion of the Pacific Coast, but no female of the species having yet been recorded, its breeding range remains to be yet determined. Mr. Robert Ridgway mentions that this species of hummingbird is so rare that only two known examples have been recorded, both males, and that the female, as also its range and breeding habits, are unknown.

Mr. Gould described the type specimen as having been found at Bolanos, Mexico, by Mr. Floresi who gave it to George Loddiges, Aug. 11, 1845, the specimen being now in his collection. My specimen corresponds fully with Mr. Ridgway's description and is a male in full adult plumage. No data is given with the specimen recorded by Mr. Walter E. Bryant in *Forest & Stream* (XXVI, p. 426), so we are in the dark as to what time of the year his specimen was taken in California.

W. OTTO EMERSON.

Haywards, Cal., March 4, 1901.

1. Report U. S. Nat. Museum, 1890, p. 341-313.

Forrest S. Hanford of Oakland, Cal. left April 30 for Carson City, Nevada., via. Placerville. Mr. Hanford will travel leisurely from the latter place to Carson City over the Lake Tahoe road, collecting enroute, and will join F. J. Steinmetz, the well-known Carson ornithologist, on a summer's outing.