

Glaucous Gull (*Larus hyperboreus*). One huge individual, larger than any of the eight accompanying Glaucous-winged Gulls, followed our ship, drawing near and feeding time and again. It often alighted on the water and lagged behind, only to reappear in five or ten minutes. The mantle was of the lightest, most delicate pearl gray and the outer wings (primaries) were white. It was decidedly a white gull.

Glaucous-winged Gull (*Larus glaucescens*). A changing, small number of immatures followed the boat, going over and returning. One second-year individual remained in Wright's Harbor the full three days we were there.

California Gull (*Larus californicus*). Large rafts of mature birds (and only such) were seen resting at sea near Santa Cruz Island. Equaled the number of Western Gulls in the flocks that followed our boat.

Pacific Fulmar (*Fulmarus glacialis glupischa*). Fifteen to twenty were seen about San Pedro Harbor, only one in white and dusky plumage. At sea a few followed, dropping among the gulls as they fed on our lunch scraps. On our return trip only an occasional one or two approached us. Twice, floating carcasses were seen to be vigorously picked at for food. Our captain (Anderson of the "Moonlight") says they are known as fool-hens from their audacity and lack of fear.

Black-vented Shearwater (*Puffinus opisthomelas*). On the out trip very few seen. These swung in toward the flock of gulls feeding in our wake, but never stopped. On the return trip from one to six were in sight almost all the time, even near the mainland (Point Vincent). We saw them descend among gulls actively feeding on live fish, but not among the flocks that were feeding from our boat.

Sooty Shearwater (*Puffinus griseus*). Two individuals followed for several miles on the out trip, scooting into the water with the gulls that were following us for food. No others seen. "Barracuda birds," says Captain Anderson.

Cormorant. The white filaments of the Farallon and Brandt cormorants, as well as the white flanks of the Baird Cormorant, were seen on individual birds. These were the exceptions. One unidentified bird carried sea weed to the rocks.

Allen Hummingbird (*Selasphorus alleni*). Mr. M. W. De Laubenfels saw this species on Santa Cruz Island. [On April 6, 1925, on the north end of Catalina Island, we observed them at the height of the mating display.]

Island Jay (*Aphelocoma insularis*). One pair observed building a nest. An acorn was found wedged in the rocks at the very crest of a high ridge, far above the oaks of the canyon bottoms. It must have been placed there by this bird; the distance above the oaks impressed me.

Raven (*Corvus corax sinuatus*). Seen in pairs, but these often assembled in flocks for a time. In one pair observed, both birds were seen to "roll", one after the other.

Barn Swallow (*Hirundo erythrogaster*). Joseph H. Wales found a nest with five young in a cave.—ROLAND CASE ROSS, *Nature Study Department, Los Angeles City Schools, April 10, 1926.*

Notes on White-fronted and Tule Geese in Central California.—Ever since the publication of Swarth and Bryant's excellent paper drawing attention to the two forms of *Anser albifrons* wintering in central California (Univ. Calif. Publ. Zool., XVII, 1917, pp. 209-222), I have been particularly interested in these geese, and have taken advantage of such opportunities as offered for making observations upon them. Believing some of my notes may be of general interest, I hereby record them.

For the past fifteen years I have hunted ducks and geese on the Suisun Marshes, Solano County, where the White-fronted Goose (*Anser albifrons albifrons*) is a common winter visitant. Here dates of arrival over the period 1919 to 1925, inclusive, average October 11, with October 1, 1924 and 1925, and October 3, 1920, the earliest dates noted, and October 21, 1923, the latest date when first observed. The birds become common by early November.

The presence of the Tule Goose (*Anser albifrons gambeli*) on these marshes was first disclosed on November 23, 1919, when, in weighing the various geese resulting from a morning's shoot at a gun club three miles south of Suisun, Solano County, on the northern portion of Joyce Island, three specimens of this form were encountered. These birds, all adults, were strikingly larger than specimens of *A. a. albifrons* in the same bag, as their weights will indicate: 7 lbs. 8 oz., 6 lbs. 3 oz., and 7 lbs. 0 oz., against two immature White-fronted Geese weighing 4 lbs. 0 oz., and 5 lbs. 0 oz. The five specimens had 16, 18, 17, 16, and 16 rectrices respectively. The much darker shade

of brown of the neck, and especially of the head, of the Tule Geese was plainly apparent. Unfortunately no notice was taken of the color of the naked eye ring. However, the above characters easily separated the two forms, and there seemed no possibility of regarding the two immature geese as young of the larger form. It is unfortunate that no examples of adult *albifrons* were at hand for direct comparison, but I am familiar with the bird, and weights and measurements taken from adults at other times are almost identical with those of the immatures above mentioned. In size, especially of bill, length of neck and general proportions of the two forms, the above mentioned examples, and many since handled, show no tendency to intergrade, and they are much more easily separated than are some individuals of *Branta canadensis canadensis* and *B. c. hutchinsi*.

Since the time the above individuals were examined, I have become quite familiar with the Tule Goose in life, through numbers observed in the vicinity of Butte Creek in Butte and Sutter counties, and feel confident of the determination of the following occurrences of this form in the region named on the Suisun Marshes, all observations being made by me: November 7, 1920, two killed by another hunter and examined by me, also three adult White-fronted Geese in same bag; November 20, 1921, two noted at close range flying along a slough; December 11, 1921, two noted flying about willows and eucalyptus trees bordering an unfrequented slough; December 14, 1921, two birds flew within range but were not secured, on the slough where noted November 20. I believe the two individuals noted in the last three instances were the same birds, as the localities were quite close; and from the above records it may be inferred that this form is rather rare in this region, none having been noted since, though I have been present in the same spots on several occasions each year. The White-fronted Goose, as above stated, is common after early November and hundreds may be seen on favorable days. On November 20, 1921 (when two Tule Geese were noted), the commoner form was unusually abundant, upwards of two thousand being noted and eight secured, while it would have been an easy matter to have shot many more.

My notes on Tule Geese observed in the vicinity of Butte Creek, though mainly only corroborative of Judge F. W. Henshaw's observations (Swarth and Bryant, *loc. cit.*, pp. 218-219), may be of interest, if alone for this reason, so little being published regarding the life history of this form. I have found the Tule Goose, with the exception noted below, only along the heavily wooded banks of the larger sloughs of this region (Butte and Sanborn sloughs), where they apparently remain throughout the day, feeding in the small ponds formed by openings in the heavy tule growth of the surrounding overflowed marsh. Here they may be seen to best advantage in the morning between seven or eight and ten o'clock, when nearly all other geese including the smaller White-fronted are absent from the marshes, having repaired to the stubble fields for their morning meal. At this time, due to the absence of other geese, they are more noticeable, and may often be seen changing their positions by low flights over the marsh. After ten or eleven o'clock, due to the return of other geese to the tule swamps, where they loaf until time for the evening feeding, the Tule Geese are naturally much less in evidence. This, and the fact that only once have I noted them in barley fields, suggests that this form may obtain most of its food in the marshes rather than subsisting in large part on grain, like other geese of the region. This is an interesting point to prove, which I hope to be able to accomplish through stomach examination. The exception above referred to was a flock of seven birds seen feeding on a stubble field at 4 P. M. on November 12, 1922, in Colusa County just across the Sacramento River from the point of confluence of Butte Creek with this stream. This barley field in reality, however, more nearly resembled the chosen wooded habitat of the bird than the usual conception of a grain field, for, situated on a promontory formed by a sharp bend of the river, of some hundred odd acres extent, and liberally dotted with large Valley Oaks, with the river on the other side of the bordering levees, it indeed assumed such characters.

In flight, due to large size and more than proportionately longer neck (as pointed out by Judge Henshaw), and also, I believe, to slower, more measured wing beats, the Tule Goose may be distinguished from its smaller relative in the field. White-fronted Geese usually fly about at a considerable elevation, at least 300 to 400 feet above the ground, and sometimes much higher. In alighting they ordinarily descend in a series of cautious circles without any member of the flock uttering a sound (except a low and peculiar nasal wheeze, not audible unless the birds are in close proximity, and evidently a cautionary note) until within about 25 feet of the ground, when all simultaneously

start a high pitched gabble, continued during the flapping descent and until the flock adjusts itself to its new surroundings. Tule Geese fly rather close to the ground, at least over the marshy country, seldom attaining an elevation of more than 200 feet and usually much less. Particularly when flying along sloughs, which they are wont to do, they seldom exceed 50 or 100 feet and often proceed only a few yards over the surface. This habit may be because their flights here are less protracted than those of the other form, and suggests that they may be more easily obtained, which is doubtless the case, though offset by the remote nature of their surroundings.

Flocks of *gambeli* are composed of fewer individuals than those of *albifrons*. Six to eight birds is probably the mode of the former, with twelve the highest number observed by me, and pairs rather numerous, while the latter form is often seen in much larger gatherings. Judge Henshaw has also noted this fact.

The voice of the Tule Goose, as remarked upon by Judge Henshaw, is noticeably harsher and coarser than that of the White-fronted Goose, as might be expected in a larger bird, and to me it is more stentorian. It does not seem to be so noisy a bird as the smaller form and landings are accompanied with much less cackling than those above described, being executed, in some cases, in absolute silence. According to Judge Henshaw, the Tule Goose is less shy than the White-fronted, often decoying without the usual wary circling of the latter, and this habit has been confirmed by my observations.

These habits were clearly demonstrated in one or more ways by all the birds noted by me on the Suisun Marshes. The fact that these peculiarities are unknown to most observers, or at least not properly appreciated unless noted in the field, is, I believe, responsible for the lack of records we have of the Tule Goose from sections other than the vicinity of Butte Creek, rather than the non-occurrence of the bird in suitable localities elsewhere in the state.—JAMES MOFFITT, 1825 Broadway, San Francisco, California, June 10, 1926.

**The Cardinal Again.**—One year ago I reported the Cardinal (*Cardinalis cardinalis*). It had been under observation for about eight months. Since that time I have made frequent trips, almost weekly, and have found it in three new places as well as in the old. In fact, I have not made a trip to any of the locations in the past few months that I did not see or hear one or more. Mr. L. E. Wyman reports it has been seen at San Diego and Inglewood. I am surprised that the addition of a new species to the avifauna of California, especially one so beautiful as the Cardinal, has not aroused more interest and attention. It is here to be seen and heard by anyone who desires.

In the same locality may be seen the Russet-backed Thrush, Golden Pileolated Warbler, Chat, and many of the more common kinds.—H. N. HENDERSON, Whittier, California, June 29, 1926.

**Fruit-eating Hummingbirds.**—As I have access to but a small part of the literature pertaining to the hummingbirds, it is quite possible that the item now recorded may simply corroborate earlier observations of such a habit. But in my experience it is original.

*Heliodoxa jacula henryi* is one of the largest, as well as one of the most splendid, of the fifty-odd hummingbirds now known from Costa Rica. Normally, it is confined to the humid sub-tropical zone of the Caribbean watershed. On May 2, 1926, on the slope of the Volcano Turrialba, at an altitude of 3500 feet, and reached from the railroad station of Peralta, I met with several individuals. They were feeding upon the fruit of a small tree (possibly *Eugenia*). This fruit was of the size and form of an elderberry, and quite ripe. The birds would alight upon a branch within reach of the fruit, sometimes on the fruiting stem even; then slowly turning their heads toward the fruit, quickly pluck it from the stems.—AUSTIN SMITH, San José, Costa Rica, June 2, 1926.

**Correction Concerning Aviaries.**—In my paper on "Lessons in Aviculture from English Aviaries" (Condor, xxviii, Jan., 1926, pp. 3-30) it was an error to claim (p. 24) that Lord Tavistock was the first to breed the Princess of Wales Parakeet in England, as the late Mr. Hubert Astley holds the record, dating many years before. In the same article, the statement (p. 26) "Lime alone is useless except as a soil purifier" should read "Lime alone is useless as a soil purifier."—CASEY A. WOOD, House Boat "Bendemeer", Srinagar, Kashmir, India, May 13, 1926.