

SCIENTIFIC RESULTS OF EXPLORATIONS BY THE U. S. FISH
COMMISSION STEAMER ALBATROSS.

[Published by permission of Hon. Marshall McDonald, Commissioner of Fisheries.]

NO. XIV.—BIRDS FROM THE COASTS OF WESTERN NORTH AMERICA
AND ADJACENT ISLANDS, COLLECTED IN 1888-'89, WITH DESCRIPTIONS
OF NEW SPECIES.

BY

CHAS. H. TOWNSEND,

Resident Naturalist of the Steamer Albatross.

During the cruise of the *Albatross* from San Francisco to the Gulf of California, in the winter of 1889, anchorages were made at many islands off Upper and Lower California. Although these calls were for the purpose of drawing seines along the beaches, or conducting other fishery investigations, valuable specimens of plants and land animals were usually secured. The islands at which collections were made are: San Clemente, San Nicolas, Santa Barbara, Santa Rosa, and Santa Cruz, off California, and Guadaloupe, Cerros, Clarion, Socorro, San Benedicte, Carmen, George, and Angel Guardia, off Lower California. Collections were also made at many places on the main-land. The naval officers attached to the vessel rendered valuable assistance to the naturalists in these gatherings, and the sailors when granted shore liberty and furnished with collecting outfits seldom failed to return well laden. Frequently more specimens were brought on board than the naturalists found time to preserve, as they were employed in caring for the fishes and other marine specimens yielded from the regular dredging and fishing operations.

The islands of the Santa Barbara group have hitherto been very imperfectly explored with regard to their fauna. Clarion and San Benedicte Islands, of the Revillagigedo group, had never before been visited by naturalists. Socorro, an island of the same group, and one abounding in peculiar species of vertebrates, had not been visited since the type specimens were collected by Grayson, about the year 1870. The flora of all the Revillagigedo Islands is practically unknown, as the *Albatross* brought back only a small collection of flowering plants.

A rich field awaits the naturalist who can explore these islands carefully. A large snake inhabits Clarion Island, but I was unable to secure the single specimen I saw.

The nearer Revillagigedo Islands, San Benedicte and Socorro, lie about 100 miles southwest of the end of the peninsula of Lower California, Clarion being nearly 100 miles west of these. Clarion Island is about 6 miles long by 3 in average breadth. The central portion is a plateau about 1,000 feet high, with a few elevations perhaps 500 feet higher. It is mostly overgrown with long grass, head high, through which the pedestrian flounders helplessly; the slopes of the lesser elevations are clearer, with scattered bushes and low, scrubby trees. I was not able to reach the plateau until after two hours of laborious struggle through the wilderness of cactus that covers its southern slopes, cutting nearly every yard of the way with a sharp *machete*. No other members of the party attempted it. Cactus renders all the lower portions of the island practically impassable. The island is probably without fresh water, although a small lagoon near the south beach contained slightly brackish water at the time of our visit there in March. Southerly gales would probably drive sea water into the lagoon and for a time at least render this wretched supply entirely worthless.

Socorro Island is more than twice as large as Clarion and vastly more rugged and mountainous, having elevations of perhaps 5,000 feet. The greater portion of the island is covered with brush growing among rough volcanic rocks, two hills at the southwest end only being smooth and grassy. No permanent water holes were noticed in the vicinity of Braithwaite Bay, where the *Albatross* anchored.

San Benedicte Island is smaller than the others, being 3 or 4 miles long by 1 wide, with elevations of 500 feet or more. No cactus was observed on San Benedicte, and no woody bushes of any kind, but it is covered with a tangle of tall grass that is almost impenetrable. It is apparently without fresh water.

The Revillagigedo Islands are surpassed in volcanic roughness only by Angel Guardia Island in the Gulf of California. A singularly inappropriate application of names by their discoverers is noticeable. That distress must have been great indeed that could have found relief upon arid Socorro—*succor*; and at Puerto Refugio, Isla de la Ángel Guardia, we found ourselves upon the borders of a great waterless desert, where we were in constant danger of treading upon huge rattlesnakes, whose repulsiveness was rather emphasized by the abundance of a large iguana-like lizard (*Sauromalus*—bad reptile), a veritable dragon in appearance. A port of refuge and a guardian angel's habitation, indeed! Spanish sarcasm, I doubt not, in both cases.

It is proposed to supplement the somewhat concise diagnoses of new species in this paper by more complete descriptions at another time.

Five new species and six new subspecies are here described. The entire collection numbers 226 specimens, representing 92 species and subspecies.

The localities are mentioned in the order in which they were visited.

I. CLARION ISLAND.

Speotyto rostrata sp. nov.

Clarion Island Burrowing Owl.

SP. CHAR.—*Adult male*: Readily distinguished from *S. cunicularia hypogea* by its larger and more elongated beak, larger feet, shorter wings and tail, barred markings on tail much narrower, markings on top of head less distinct. Wing, 6.40; tail, 2.90; culmen, .65; tarsus, 1.90.

Type, No. 117531, ♂, U. S. Nat. Mus. Clarion Island, off Lower California, March 4, 1889. C. H. Townsend.

Common; five specimens obtained.

Zenaidura clarionensis sp. nov.

SP. CHAR.—*Adult male*: Resembles *Z. macroura*, but has larger bill and feet, shorter wings and tail, vinaceous colors of under parts more intense and extending farther back, dark spot below auriculars smaller and less conspicuous, upper parts less spotted with black. Wing, 5.45; tail, 4.86; culmen, .65; tarsus, .90.

Type, No. 117525, ♂, U. S. Nat. Mus. Clarion Island, March 4, 1889. C. H. Townsend.

Abundant among the bushes on the higher parts of the island, but not easily obtained on account of the extensive tracts of cactus which effectually bar one's progress in every direction. We found it almost impossible to move on Clarion Island without a "machete" or some other sword-like instrument to clear the way. Six specimens saved.

Troglodytes tanneri sp. nov.

SP. CHAR.—*Adult female*: Probably more nearly related to *T. insularis* from Socorro Island than any other species of the genus, but very distinct in its larger size and darker coloration. Wings much larger, feet larger, bill slightly heavier, upper parts rusty, below creamy or buffy. Wing, 2.25; tail, 1.85; culmen, .60; tarsus, .80.

Type, No. 117515, ♀, U. S. Nat. Mus. Clarion Island, March 4, 1889. C. H. Townsend.

This is the most abundant bird on the island. It is named for Lieut. Commander Z. L. Tanner, U. S. Navy, with whom, during various voyages of the *Albatross* to the West Indies, South America, and Alaska, I have sailed more than 50,000 miles. Ten specimens obtained.

Puffinus auricularis sp. nov.

SP. CHAR.—*Adult female*: Not unlike *P. opisthomelas* in general appearance. Bill and feet smaller; colors of upper parts darker, nearly black; black of head extending below eye to level of mouth; black of wing extending well over edge of wing to the under surface; sides of

neck mottled by the gradual blending of white and black. Wing, 8.75; tail, 3.15; culmen, 1.20; tarsus, 1.70.

Type, No. 117540, ♀, U. S. Nat. Mus. Clarion Island, March 4, 1889. C. H. Townsend.

More than twenty of these birds, attracted doubtless by the electric lights, came on board the *Albatross* during the night we anchored off Clarion Island. It is a common species about the islands of the Revillagigedo group. Five specimens.

Asio accipitrinus (PALL.).

One specimen, ♀, March 4; no others seen.

Heteractitis incanus (GMEL.).

Common; three specimens, March 4.

Himantopus mexicanus (MÜLL.).

One specimen, March 4; a large flock seen.

Fregata aquila (LINN.).

Large communities of these birds occupy the bushes and rocks in some parts of the island, and doubtless breed there. One specimen, March 4.

Sula, sp.

Two or three species of "booby" abound at Clarion Island and breed there, as we found many nests and young. No specimens were collected, but it is likely that the species are the same as those of San Benedicte Island, where we obtained *S. piscator*, *S. brewsteri*, and *S. cyanops*.

Corvus, sp.

Several crows or ravens were seen at Clarion Island, which I remember as apparently smaller than the ravens collected at San Benedicte Island. No specimens could be secured.

II. SOCORRO ISLAND.

Oceanodroma socorroensis sp. nov.

SP. CHAR.—*Adult male*: Similar to *O. homochroa*, but wings longer; tail shorter and less deeply forked; tarsus and toes shorter; *sides of rump whitish*; no white on under surface of wings.

Wing, 5.50; tail, 2.75, forked for .50; culmen, .55; tarsus and toes, .85.

Type, No. 117497, ♂, U. S. Nat. Mus. Socorro Island, March 8. C. H. Townsend.

Only one specimen of this petrel was secured and very few others were seen, but some of the hills of the western end of the island are literally honeycombed by the burrows of some creature, which I am constrained to believe is this bird. The most diligent search failed to re-

veal the presence of any small mammal, while feathers of petrels were found about the burrows, which seemed of the proper size for this species. The small lizards of the island could not have excavated burrows of such a nature. If this theory should prove the correct one, I predict that the number of petrels to be seen at Socorro Island when visited at the proper breeding season will be something hitherto unheard of.

Mimodes graysoni (BAIRD).

Common; five specimens, March 8.

Pipilo carmani (LAWR.).

Common; three specimens, March 8.

Columbigallina passerina socorroensis (RIDGW.).

Common; five specimens, March 8.

Compothlypis graysoni (RIDGW.).

Common; three specimens, March 8.

Troglodytes insularis (BAIRD).

Common; four specimens, March 8.

Buteo borealis socorroensis (RIDGW.).

Two specimens; March 8; only four or five seen.

Nycticorax violaceus (LINN.).

Rare; one specimen.

Zenaidura graysoni (LAWR.).

One specimen; no others seen.

The adult plumage of this species is here described for the first time, the original descriptions being from young birds collected by Colonel Grayson about twenty years ago, since which time no collector has visited the island.

Adult female: Upper parts, except head, olive-brown with a rusty wash; scapulars with a pair of large oval black spots near the end of each feather upon the outer margin of the webs, making more than a dozen spots in all; hind head, sides, and under surface of wings leaden blue. Forehead, sides of head, and entire under parts dark cinnamon. Bill black. Feet and legs red. Wing, 5.80; tail, 4.80; culmen, .60; tarsus, .1.

Type, No. 117498, U. S. Nat. Mus. Socorro Island, March 8, 1889. C. H. Townsend.

III. SAN BENEDICTE ISLAND.

Salpinctes obsoletus (SAY).

Abundant. This bird and the raven are the only resident land birds. Five specimens, March 10.

Corvus corax sinuatus (WAGL.).

Abundant and very familiar; three specimens, March 10.

Fregata aquila (LINN.).

Numerous; one specimen, March 10.

Sula piscator (LINN.).

Three specimens, March 10.

Sula brewsteri Goss.

One specimen, March 10.

Sula cyanops (SUND.).

One specimen, March 10.

These three specimens of *Sula* are rather numerous at San Benedicto Island.

IV. LOWER CALIFORNIA.

Amphispiza belli cinerea subsp. nov.

SUBSP. CHAR.—*Adult male*: Resembles *A. belli nevadensis* in lightness of coloration, but is much smaller, paler, and less streaked, being without the dark streaks on the back, and having the markings of throat and breast diminished. Wing, 2.25; tail, 2.55; culmen, .35; tarsus, .75.

Type, No. 117575, ♂, U. S. Nat. Mus. Ballenas Bay, Lower California, May, 1888. C. H. Townsend.

Two specimens; others apparently similar were seen.

Calamospiza melanocorys (SPEER.).

One specimen, May, Ballenas Bay, Lower California.

Ægialitis nivosa (CASS.).

One specimen.

Callipepla californica vallicola (RIDGW.).

Four specimens, Cape St. Lucas, April 7.

Harporhynchus cinereus XANTUS.

Two specimens, Cape St. Lucas, April 7.

Campylorhynchus affinis XANTUS.

Two specimens, Cape St. Lucas, April 7.

Auriparus flaviceps (SUND.).

Two specimens, Cape St. Lucas, April 7. One specimen, Concepcion Bay, March 19.

Polioptila plumbea BAIRD.

Two specimens, Cape St. Lucas, April 7. One specimen, La Paz, March 14. One specimen, Concepcion Bay, March 19.

Melanerpes uropygialis (BAIRD).

One specimen, Cape St. Lucas, April 7. One specimen, La Paz, March 14.

Dryobates scalaris lucasanus (XANTUS).

One specimen, Cape St. Lucas, April 7.

Columbigallina passerina pallescens (BAIRD).

One specimen, Cape St. Lucas, April 7.

Carpodacus frontalis ruberrimus (RIDGW.).

One specimen, Cape St. Lucas, April 7.

Helminthophila celata lutescens (RIDGW.).

One specimen, Cape St. Lucas, April 7.

Empidonax cineritius BREWST.

One specimen, Cape St. Lucas, April 7.

Chondestes grammacus strigatus (SWAINS.).

One specimen, Cape St. Lucas, April 7.

Amphispiza bilineata (CASS.).

One specimen, Carmen Island, Gulf of California, March 18.

Pipilo fuscus albigula (BAIRD).

One specimen, La Paz, March 14.

Sterna elegans GAMB.

One specimen, La Paz, March 14.

Larus heermanni CASS.

One specimen, Cousag Rock.

Larus philadelphia ORD.

One specimen, La Paz, March 14; Upper Gulf of California, March 27.

Larus occidentalis AUD.

One specimen, Georges Island, Gulf of California, March 25.

Sula brewsteri GOSS.

Two specimens, Georges Island, Gulf of California. This species breeds here in abundance.

Hæmatopus frazari BREWST.

One specimen, Concepcion Bay, March 19.

V. NEAR MOUTH OF RIO COLORADO, SONORA.

Otocoris alpestris pallida subsp. nov.

SUBSP. CHAR.—*Adult male*: Palest of all the horned larks. The usual ruddiness of hind neck and rump much bleached out and blended with the coloration of the back in the paleness which suffuses the entire upper parts. Wing, 4.00; tail, 2.75.

Type, No. 117679, ♂, U. S. Nat. Mus. Near mouth of Rio Colorado, Sonora, March 26. C. H. Townsend. One specimen.

Lanius ludovicianus excubitorides (SWAINS.).

One specimen, March 26.

Spizella breweri (CASS.).

One specimen, March 26.

VI. CERROS ISLAND.

Thryothorus bewicki bairdi (SALV. and GODM.).

One specimen, May 5, 1888.

Amphispiza bilineata (CASS.).

One specimen, May 5, 1888.

VII. GUADALOUPE ISLAND, LOWER CALIFORNIA.

Salpinctes guadeloupenensis RIDGW.

Six specimens, February 28.

Carpodacus amplus RIDGW.

Four specimens, February 28.

Junco insularis RIDGW.

Four specimens, February 28.

VIII. SANTA BARBARA ISLAND, CALIFORNIA.

Melospiza fasciata graminea subsp. nov.

SUBSP. CHAR.—*Adult male*: About the size of *Melospiza fasciata samuelis*, but with shorter tail and larger feet. Hind neck decidedly ashy; dark markings of back and sides of throat smaller and less blended; entire coloration lighter, giving an ashy appearance. Wing, 2.35; tail, 2.25; culmen, .40; tarsus, .80.

Type, No. 117634, ♂, U. S. Nat. Mus. Santa Barbara Island, February 13. C. H. Townsend.

Five specimens. This bird is extremely abundant on the small island of Santa Barbara, where it lives in the long coarse grass that grows thick and tangled everywhere, making walking difficult. From constant moving through the grass the plumage of this bird is always much worn. It is pre-eminently a dweller among grass.

Zonotrichia gambeli intermedia RIDGW.

One specimen, February 13.

Zonotrichia coronata (PALL.).

One specimen, February 13.

Carpodacus frontalis (SAY).

One specimen, February 13.

IX. SAN CLEMENTE ISLAND, CALIFORNIA.

Helminthophila celata sordida subsp. nov.

SUBSP. CHAR.—*Adult male*: Entire plumage decidedly darker than *H. celata lutescens*. Feet and bill larger; wings slightly shorter. There is an appearance of grayness about the upper plumage, owing to a leaden tinge on ends of feathers. Throat and under parts slightly streaked. Wing, 2.35; tail, 2.10; culmen, .45; tarsus, .70.

Type, No. 117606, ♂, U. S. Nat. Mus. San Clemente Island, January 25. C. H. Townsend.

One specimen. Occurs also on the islands of Santa Cruz and Santa Rosa.

Melospiza fasciata clementæ subsp. nov.

SUBSP. CHAR.—*Adult male*: Similar to *M. fasciata graminea* (Townsend.), from Santa Barbara Island, but much larger, the bill being conspicuously longer (half an inch or more). Wing, 2.50; tail, 2.50; culmen, .45; tarsus, .85.

Type, No. 117620, ♂, U. S. Nat. Mus. San Clemente Island, January 25. C. H. Townsend.

Seven specimens. Found also on Santa Rosa Island.

Thryothorus bewickii bairdi (SALV. and GODM.).

Five specimens, January and May.

Amphispiza belli (CASS.).

Eight specimens, January 25, 1889, and May 8, 1888.

Pipilo maculatus megalonyx (BAIRD).

One specimen, January 25.

Carpodacus frontalis (SAY).

Four specimens, May 8, 1888, and January 25, 1889.

Otocoris alpestris insularis subsp. nov.

SUBSP. CHAR.—*Adult male*: In this bird the pallid and the ruddy colorations, characteristic of the western horned larks, are reduced to the minimum. It is much darker than *Otocoris alpestris chrysolæma*, with the light edging of the dark feathers of the back more sharply defined, and feathers of sides darker. Wing, 3.85; tail, 2.60; culmen, .45; tarsus, .85.

Type, No. 117674, U. S. Nat. Mus. San Clemente Island, January 25. C. H. Townsend.

Four specimens. This dark race inhabits the islands of San Nicolas, San Clemente, Santa Cruz, and Santa Rosa, and is very abundant. It was not found on the small island of Santa Barbara.

Speotyto cunicularia hypogæa (BONAP.).

Two specimens, January 25.

Ptychorhamphus aleuticus (PALL.).

One specimen, January 25.

X. SAN NICOLAS ISLAND, CALIFORNIA.

Otocoris alpestris insularis TOWNS.

Four specimens, January 25, 1889.

XI. SANTA ROSA ISLAND, CALIFORNIA.

Carpodacus frontalis (SAY).

Five specimens, January 7.

Melospiza fasciata clementæ TOWNS.

Four specimens, January 7.

Pipilo maculatus megalonyx (BAIRD).

Two specimens, January 7.

Helminthophila celata sordida TOWNS.

One specimen, January 7.

Otocoris alpestris insularis TOWNS.

One specimen, January 7.

XII. SANTA CRUZ ISLAND, CALIFORNIA.

Aphelocoma insularis HENSH.

Seven specimens, February 6.

Pipilo maculatus megalonyx (BAIRD).

Two specimens, February 6.

Zonotrichia gambeli intermedia RIDGW.

Two specimens, February 6.

Zonotrichia coronata (PALL.).

One specimen, February 6.

Ammodramus sandwichensis alaudinus (BONAP.).

One specimen, February 6.

Helminthophila celata sordida TOWNS.

One specimen, February 7.

Thryothorus bewickii bairdi (SALV. and GODM.).

One specimen, February 7.

Salpinctes obsoletus (SAY).

Two specimens, February 7.

Vireo huttoni (CASS.).

One specimen, February 7.

Otocoris alpestris insularis TOWNS.

One specimen, February 7.

XIII. PROCELLARIIDÆ FROM VARIOUS LOCALITIES.

Halocyptena microsoma COUES.

One specimen. This is the second specimen of this species known. It flew on board the *Albatross* in Panama Bay, March, 1888, until which time the type specimen described in 1864 remained unique.

Puffinus tenebrosus PELZ.

Two specimens, Chatham Island, Galapagos, April 6, 1888.

Procellaria tethys BONAP.

Two specimens, near Equator, Pacific Ocean, March 1, 1888.

Cymodroma grallaria (VIEILL.).

Three specimens, 26° south latitude, Pacific Ocean, February 23, 1888.

Diomedea nigripes AUD.

One specimen, 80 miles off Cape Flattery, Washington, June, 1889.

Diomedea albatrus PALL.

Two specimens, 80 miles off Cape Flattery, Washington, June, 1889.

Fulmarus glacialis glupischa STEJN.

One specimen, off San Diego, California, January, 1889.