

AN UNRECOGNIZED RACE OF MURRELET ON THE PACIFIC COAST OF NORTH AMERICA

WITH THREE ILLUSTRATIONS

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On July 13, 1937, J. Elton Green landed with a party on Outer Guadalupe Island, which is one of three small islands (known respectively as Outer, Middle and Inner) lying off the south point of Guadalupe Island, Mexico. The outer island appears to be the crater of an extinct volcano, and has steep slopes full of crevices and pot-holes. Here he collected two sets of eggs of the Xantus Murrelet and an incubating bird (no. 17668, S.D.S.N.H.). Having previously taken murrelets upon a number of islands both on the Pacific coast and in the Gulf of California, he was struck by the unusual head markings of the Guadalupe specimen, with the white of the underparts extending up the side of the head so as to include the eyes. The bird also showed a tendency toward graying around the ear coverts between the white and the slaty-black back.

Later, when this Guadalupe specimen was compared with the series of murrelets in the collection of the San Diego Society of Natural History, it was found that these characters existed in only two other specimens, each of which was a Guadalupe breeding bird. It was then observed that the Guadalupe birds compared perfectly with the original description of *Endomychura hypoleuca* (Xantus), which appeared, under the name *Brachyramphus hypoleucus*, in the Proc. Acad. Nat. Sci., Phila., Nov., 1859, p. 299, and contained the wording: "the entire underparts, including tail coverts and inside of the wings, pure white, *this color extending on the sides of the head so as to include the eyes.*" [Italics ours.] This description fitted only the Guadalupe breeding birds, not those collected from other Pacific coast islands.

With this information at hand, other collections were consulted. Of approximately forty murrelets examined by Green in the California Museum of Vertebrate Zoology, no Guadalupe specimens were found and also none with the "white of the underparts including the eyes." In the California Academy of Sciences collection, only two birds showed the white eye-area, these being both Guadalupe specimens; these were borrowed for comparison. Other examples of murrelets were generously loaned by the Carnegie Museum of Pittsburgh, the Harvard Museum of Comparative Zoology, the Santa Barbara Museum of Natural History, E. N. Harrison, and L. M. Huey.

Through the courtesy of the U. S. National Museum, a photograph of the type specimen of *Endomychura hypoleuca* (no. 13046, U.S.N.M.), collected by Xantus "14 miles off the coast of Cape San Lucas, Lower California, Mexico," July 14, 1859, and a skin of another murrelet (no. 66618, U.S.N.M.), also collected by Xantus at San José, Lower California, Mexico, in March, 1860, were procured. The label does not identify this last locality more closely; it is probably San José del Cabo. Both of these specimens show the white around the eyes, and, in support of our theory, we can only assume that they were wanderers from Guadalupe Island.

Ridgway, in "The Birds of North and Middle America" (Bull. 50, U. S. Nat. Mus., part 8, 1919, p. 752), states, with a question mark, that the winter plumage of Xantus Murrelet is "similar to the summer plumage, but with white on sides of head involving most of the loreal, suborbital, and auricular regions." His question may have been raised by the plumage of Xantus' March bird, but it can have no bearing on the type specimen of *hypoleuca*, which was a summer bird, collected on July 14. That the whiteness of the loreal, suborbital, and auricular regions is not a winter color phase is proved by the fact that it occurs in every breeding murrelet from Guadalupe Island

that is known to us. All the adult specimens showing this character that we have been able to locate are included in figure 14, printed herewith.

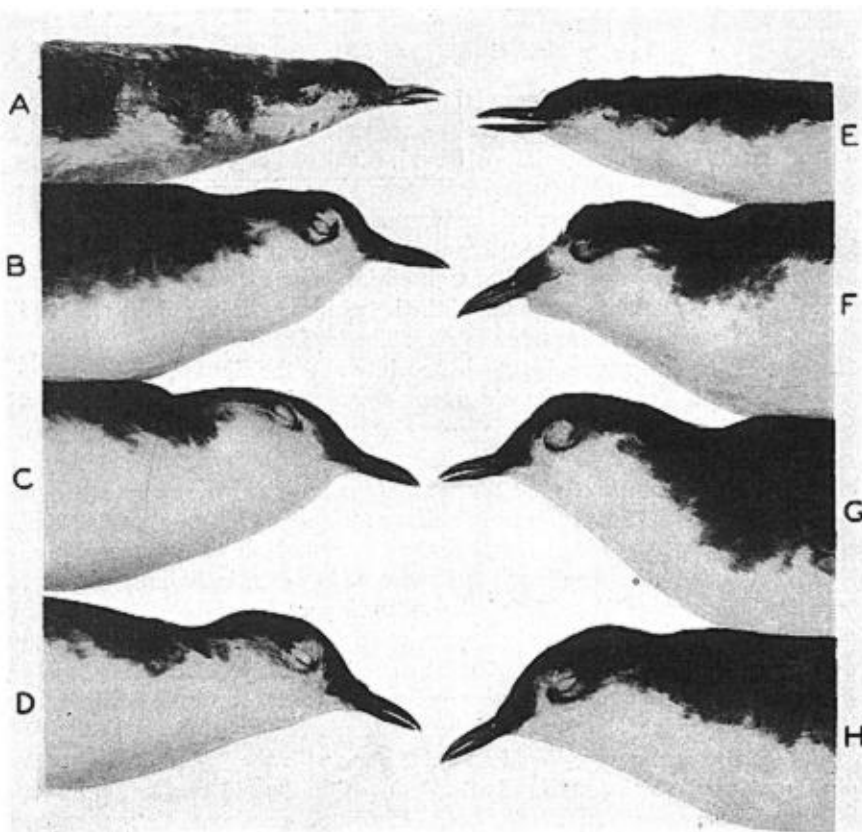


Fig. 14. Murrelets showing characteristic white "eye-area" of Xantus' type: A. 13046, U.S.N.M., ♀, type of *Endomychura hypoleuca* (Xantus), 14 miles off coast of Cape San Lucas, Lower California, Mexico, July 14, 1859 (from a photograph); B. 28057, C.A.S., ♂, Guadalupe I., Lower Calif., April 19, 1925; C. 28056, C.A.S., ♂, Guadalupe I., Lower Calif., April 19, 1925; D. Collection Ed. N. Harrison, Encinitas, Calif., ♀, Guadalupe I., Lower Calif., April 6, 1938; E. 66618, U.S.N.M., ♀, San Jose, Lower Calif., March, 1860, J. Xantus coll.; F. 38, S.D.S.N.H., ♂, Guadalupe I., Lower Calif., May 18, 1892; G. 8867, S.D.S.N.H., ♂, Guadalupe I., Lower Calif., July 13, 1923; H. 17668, S.D.S.N.H., ♀, Guadalupe I., Lower Calif., July 13, 1937.

The difference between Guadalupe breeding murrelets and those from other Pacific coast nesting stations is evident even in specimens of the downy young. In figure 15 is shown a group of six young. Bird A is the only Guadalupe specimen, and quite conformably it is the only bird with the white touching the eye. Birds B and C, which were collected on the San Benito Islands off the coast of Lower California, are very similar to D and E, taken on Los Coronados Islands, and do not show the Guadalupe characteristic. Bird F is a downy specimen of *Endomychura craveri*, which exhibits the same tendency for the dark color to come down on the sides of the neck as it does in the adult *craveri*.

Among the specimens borrowed from the Harvard Museum of Comparative Zoology is one (no. 305512) bearing the label: "*Brachyramphus hypoleucus* ♀, near Guadalupe Isl., June 27, 1906. Coll. of John E. Thayer." Examination of this bird shows it to bear the characteristics of *Endomychura craveri*, rather than those of *E. hypoleuca*. The

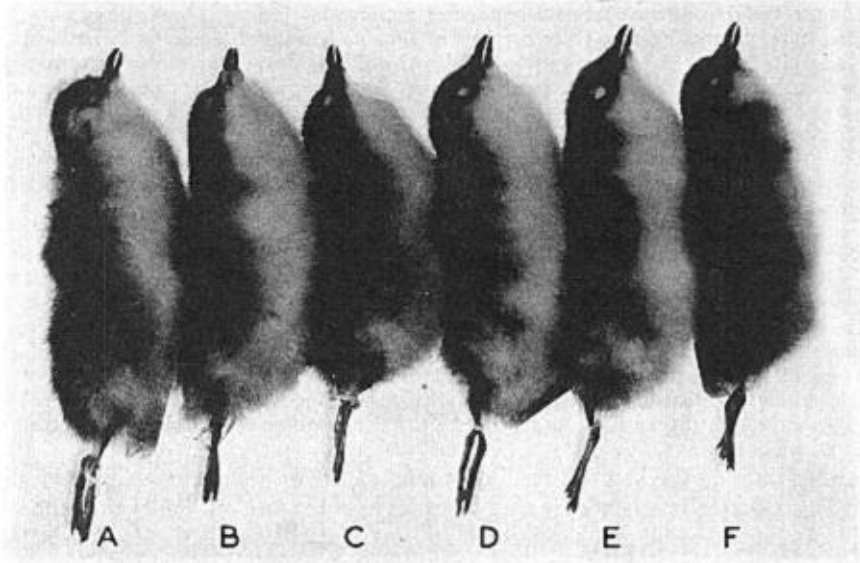


Fig. 15. Downy young murrelets: A. 10687, S.D.S.N.H., Guadalupe I., Lower Calif.; B. 22956, Carnegie Mus., San Benito Is., Lower Calif.; C. 22955, Carnegie Mus., San Benito Is., Lower Calif.; D. 10682, S.D.S.N.H., Los Coronados Is., Lower Calif.; E. 10681, S.D.S.N.H., Los Coronados Is., Lower Calif.; F. 9797, S.D.S.N.H., George's Island, Gulf of Calif., Sonora.

migrations of *E. craveri*, which breeds in the Gulf of California, are not fully known; but, after nesting, it occurs on the Pacific Ocean. In the collection of L. M. Huey is a specimen (no. 235) taken off San Diego, California, as early as August 13 (1914).

Because of the consistency of the "white eye-area" character in all the Guadalupe breeding birds we have examined and in the two birds taken by Xantus farther south on the open ocean, and the absence of it in the rest of the group, regardless of sex or season, we consider that there should be a separation between the two. However, we do not feel that our findings have enough bearing on *Endomychura craveri* to affect that species. Perhaps a closer tie between *E. hypoleuca* and *E. craveri* will be discovered in the future, but due to lack of material we can only speculate as to the possibilities. We therefore believe that the new form should be made a subspecies of *hypoleuca*. The original murrelet, as described by John Xantus, is then the Guadalupe bird and its name becomes *Endomychura hypoleuca hypoleuca*.

The specimen we are choosing for the type was taken from its nest on Anacapa Island, California, on May 16, 1938. This bird and two others were secured while the authors were on a collecting trip on the yacht of the late Robert P. Scripps of San Diego. It seems fitting that we should name the new form in honor of this man who did so much to further interest in Pacific coast science, and we therefore designate it

***Endomychura hypoleuca scrippsi*, new subspecies. Scripps Murrelet.**

Type.—Male adult, no. 17934, coll. San Diego Society of Natural History; Anacapa Island, California, May 16, 1938; collected by J. Elton Green, original no. 4105.

Description of type.—Entire upperparts, including loreal, suborbital, and auricular regions so as to include eyes, slaty-black or deep slate-gray; primaries and upper wing coverts slaty-black with brownish tinge; a narrow white crescentic mark beneath lower eyelid and a corresponding mark above upper eyelid; entire underside except outer portions of sides and flanks pure white, white of underparts not touching eye; outer portions of sides and flanks slate-gray with some bicolored black and white feathers at junction between black and white regions; under wing coverts pure white; inner webs of primaries grayish-white passing into gray distally and toward shafts; bill black.

Subspecific characters.—As compared with *Endomychura hypoleuca hypoleuca*, loreal, suborbital, and auricular regions slaty-black instead of white.

Range.—Resident along the coasts of California and western Lower California; known to breed on coastal islands from Anacapa Island to Natividad Island. Winters as far north as Point Arena, Mendocino County, California.

Measurements of type.—Length of closed wing, 111.0 mm.; tail, 32.0; tarsus, 23.5; middle toe (without claw), 22.8; exposed culmen, 18.7.

Remarks.—In making this study of murrelets we compared the measurements of over 200 birds of the genus, hoping to find some correlation or overlapping. Using tenths of millimeters, we found that the largest birds were from the north, those of the Gulf of California the smallest, and the Guadalupe birds tended to range near the center of the scale. However, we did not find enough of definite significance to influence the present study. It is known that the bill of *craveri* is comparatively long and slender, and that of *hypoleuca* comparatively short and heavy. But between the subspecies of *hypoleuca* the differences are not diagnostic. A general comparison of the adults of the three murrelets is shown in figure 16.

In thus limiting the known breeding ground of *Endomychura hypoleuca hypoleuca* (Xantus) to Guadalupe Island, it may be of interest to state our belief that the future of this form may depend on its success in nesting upon the small islands off Guadalupe,

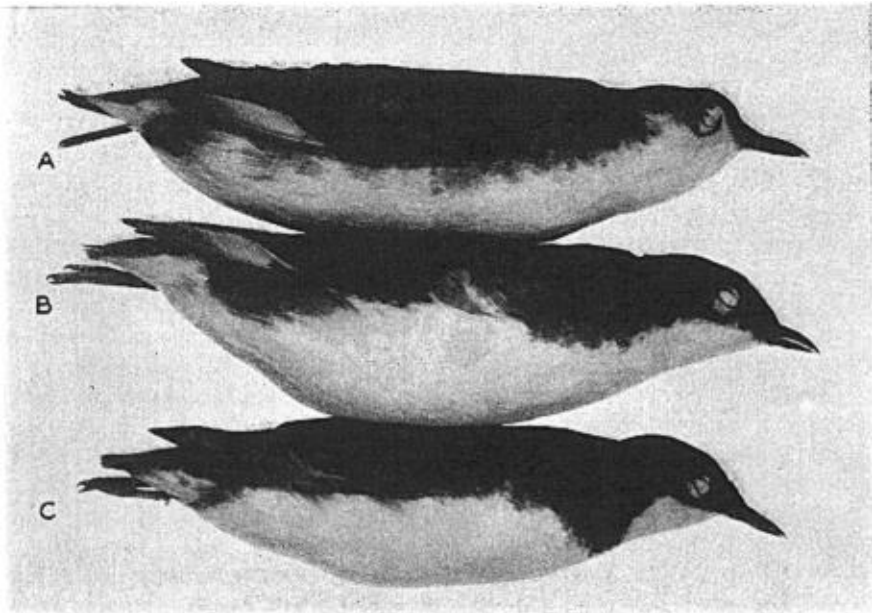


Fig. 16. Specimens of the three murrelets, selected to show characteristic plumage differences: A. *Endomychura hypoleuca hypoleuca*, no. 17668, S.D.S.N.H.; B. *Endomychura hypoleuca scrippsi* (type), no. 17934, S.D.S.N.H.; C. *Endomychura craveri* (showing maximum extension of dark collar), no. 15154, S.D.S.N.H.

inasmuch as the main island is now overrun with introduced domestic cats. On his 1937 visit, Green found no evidence of cats on Outer Guadalupe Island. He did, however, find a surprising number of discarded murrelet eggs, such as he has never seen elsewhere, and which he interpreted as an overcrowded condition of the nesting ground. Some of these eggs were broken or nicked, but just as many seemed unharmed, with the exception of showing that they had been exposed to the weather a varying number of seasons.

A rough estimate of these discarded eggs on the west slope alone would be over one hundred in an area of about 2500 square yards. As many as seven old eggs were found in one crevice, while groups of two and three were common. Some of these eggs were inside cavities while others were just outside and below the openings from which they had rolled. Almost no eggs were in the nesting cavities. The concentration of these birds on this island seemingly presents a vital problem in adequate nesting facilities when one considers the available nesting area on the main island before cats were introduced. Fortunately, due to the difficulty of landing, this outer island enjoys comparative seclusion from disturbance by man.

In closing, we wish to thank the individuals and the representatives of the museums previously named for the use of specimens; in addition, we thank Dr. Joseph Grinnell for his helpful advice, and Mr. Clinton G. Abbott for his interest and assistance. To Captain G. Allan Hancock we are indebted for the opportunity to land on Outer Guadalupe Island, and to Mr. F. S. Rogers of the San Diego Museum, for making the excellent photographs used for illustrations.

San Diego Society of Natural History, San Diego, California, October 3, 1938.