

## TWO NEW FORMS OF PETRELS FROM THE BERMUDAS.

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IN 'The Auk,' April, 1906, p. 217, Mr. Thomas S. Bradlee recorded as *gularis* an *Æstrelata* from Bermuda. Since that date the mounted bird has been in the Bermuda Museum of Natural History, by which it has recently been courteously loaned to Mr. Mowbray and critically examined by the writers. It is closer to *brevipes* Peale, of the western Pacific, but unquestionably distinct. This specimen is here made the type of a new species, and a Bermuda *Puffinus* (larger than *lherminieri* which breeds rather commonly in the Bermudas) the type of a new race.

***Æstrelata cahow* sp. nov.**

The type specimen, a mounted bird, Coll. Bermuda Museum of Natural History, was taken by Mr. Mowbray, Feb. 22, 1906, in a rock crevice, about 20 feet above high water, Southeast side of Castle Island.

Upper surfaces dark sooty, darkest on the primaries, grayish on the back and nape. Tail coverts (partially lost) dark gray, with white bases. Rectrices grayish black with white bases. Inner web of the two outer feathers white almost to the tip. Sides of the breast sooty gray. Primaries dark beneath. Under wing-coverts white, with a peculiar oval dark spot just inside the exposed primaries, as in *hasitata*. Tail cuneate. Forehead, lores and underparts white. Center of forehead and white region above the eye finely speckled with dark. The dark color from the side of the neck extends narrowly forward under the eye. Bill dark. Legs, basal third of foot, and inner toe, pale, remainder of foot dark. Wing  $10\frac{1}{4}$  in. Tail  $6\frac{1}{2}$ . Culmen  $1\frac{3}{16}$ . Tarsus  $1\frac{3}{8}$ . Middle toe and claw  $1\frac{3}{4}$ .

The name "cahow" was used by early settlers in Bermuda for an *Æstrelata* abundant at Cooper's Island, a mile at the most from where the type was taken and presumably of the same species. Numerous partially fossil bones (including skulls) which, after comparison, we believe to belong to the form here described have been found by Mr. Mowbray in various caves in the eastern end of the Bermudas, some about a half mile from where the bird was taken.

***Puffinus puffinus bermudæ* subsp. nov.**

The type, a skin, Coll. of L. L. Mowbray, March 10, 1905, sitting on a single white egg in a crevice in Gurnet Head Rock.

Close to the Manx Shearwater of which it is made a race, but differing from that species about as much as does *P. yelkouanus* of the Mediterranean. Slightly larger than *puffinus*, with less gray on axillars and under tail-coverts than *yelkouanus*. The three should probably stand as geographic races.

Above sooty black. Below white, the colors somewhat mingled at the line of demarkation at the level of the gape. Under tail-coverts white, the lateral ones outwardly mottled with gray. Under wing-coverts white. Axillars with subterminal dark gray bars and white tips. Wing 9 in. Tail  $3\frac{1}{3}$ . Bill  $1\frac{7}{16}$ . Tarsus  $1\frac{13}{16}$ . Middle toe and claw  $2\frac{1}{8}$ .

The bird has been compared with a specimen from the Orkneys in the American Museum, two from Wales and one from the Bosphorus in the collection of Dr. Jonathan Dwight. The British birds have the culmen slightly less than  $1\frac{3}{8}$  to  $1\frac{1}{4}$ , tarsus  $1\frac{11}{16}$  to  $1\frac{13}{16}$ , middle toe and claw  $1\frac{7}{8}$  to 2. In the Bosphorus bird the culmen measures just over  $1\frac{3}{8}$ , tarsus  $1\frac{13}{16}$ , middle toe and claw  $2\frac{1}{16}$ .

This is doubtless the form recorded as *anglorum* breeding in the Bermudas (Savile G. Reid. The Birds of the Bermudas, Zoologist, Oct. and Nov., 1877, reprint 1883, p. 41). No bones of this species were found with those referred to *Æstrelata cahow*, although mixed with them were skulls and other bones clearly referable to *P. herminieri*.