inside the submedian nervure. The proximal half of the secondaries greyish white, rather darker towards the anal angle.

Beneath umber-brown, the outer portion of both wings rather

darker, the spots on the primaries as above.

Hab. New Ireland.

Obs. Allied to P. codrus, from which it differs in having the band of spots of the primaries interrupted, there being no spots in the spaces between the first and second, and second and third median branches, that between the first median branch and the submedian nervure being wanting. On the other hand, there is a spot on the inner margin of the primaries not usually seen in P. codrus. The single specimen sent by Mr. Brown has the secondary wings slightly injured, so that the prolongation of the second median branch, common to all the allied species of the P.-codrus group, is broken off.

17. Reports on the Collections of Birds made during the Voyage of H.M.S. 'Challenger.'—No. XII. The Procellariidæ. By Osbert Salvin, M.A., F.R.S., &c.

[Received June 18, 1878.]

Eighty specimens of Procellariidæ are comprised in the 'Challenger' collection, belonging to 22 species and 13 genera. The greater part of these were obtained during the visit to Kerguelen Island; others were secured at sea in the South Pacific Ocean, a few near the Straits of Magellan, at Nightingale Island, and elsewhere. None of the species present any difficulty as regards their nomenclature; but I take this opportunity of adding a few notes on this subject gathered during recent study of the species to which they belong.

OCEANITES OCEANICUS.

Procellaria oceanica, Kuhl, Beitr. p. 136, pl. x. f. 1.
Oceanites oceanica, Coues, Pr. Ac. Phil. 1864, p. 82; Salv. Orn.
Misc. ii. p. 227.

d, e. Females. d Ice Barrier.

"Obtained on the 14th February, 1874."

FREGETTA GRALLARIA.

Procellaria grallaria. Vieill. N. Dict. d'Hist. N. xxv. p. 418. Fregetta grallaria, Bp. Consp. ii. p. 197; Coues, Pr. Ac. Phil. 1864, p. 86.

Thalassidroma leucogastra, Gould, Ann. & Mag. N. H. xiii. p.

367, et B. Austr. vii. pl. 63.

568-571. Females. South Pacific.

"Eyes brown. Shot on the 11th November, 1875, at sea. Their

stomachs were filled with a yellow oil, and mixed with it some pieces of Crustacea."

I am strongly disposed to add to the above synonyms Thalassidroma gracilis, Elliot, Ibis, 1859, p. 391, and T. segethi, Phil. & Landb. Arch. f. Naturg. 1860, p. 282, names admitted by many authors to apply both of them to a species found on the Chilian coast. I have seen specimens of the present species in the Paris Museum from the same locality; and the Challenger specimens now before me were obtained at sea at no great distance from the same shore; so that on geographical grounds their identity is a reasonable supposition. The chief, if not the only discrepancy I can find between the description of F. gracilis and F. grallaria is one of dimensions, the former being considerably smaller (as shown by Mr. Elliot's measurements) than the 'Challenger' birds. Thus we have:—

	Wing.	Tarsus.	Tail.
	in.	in.	in.
F. gracilis	5.22	2.40	1.20
F. grallaria	5.9-6.3	2.9-3.0	1.3-1.4

T. segethi seems to be intermediate in dimensions; but so far as

the description goes, its identity with F. grallaria is obvious.

Mr. Sharpe (Zool. Kerg., Aves, p. 31) suggests that *P. leuco-gastra* may prove to be a stage of plumage of *P. melanogaster*; but I cannot think that this will ever turn out to be the case.

FREGETTA MELANOGASTRA.

Thalassidroma melanogastra, Gould, Ann. & Mag. N. H. xiii. p. 367, et B. Austr. vii. pl. 62.

a. Betsy Cove, Kerguelen.

Mr. Sharpe (Zool. Kerg., Aves, p. 30) unites *T. tropica*, Gould, with this bird, and calls it by the last-mentioned name. They may be identical; but in any case the adoption of the name *tropica* in place of *melanogastra* cannot be justified, as the latter, having been in use for over thirty years, ought not to be supplanted by the former, the two having been published simultaneously on opposite pages of the same publication!

PELAGODROMA MARINA.

Procellaria marina, Lath. Ind. Orn. p. 410. Pelagodroma marina, Salv. Orn. Misc. ii. p. 228.

a-c. Nightingale Island.

"Eyes black; a night-bird. These were taken out of holes in the ground during the day by help of the dogs."

THALASSŒCA GLACIALOIDES.

Procellaria glacialoides, Smith, Ill. Zool. S. Afr. pl. 51. Thalassæca glacialoides, Coues, Pr. Ac. Phil. 1866, p. 30.

a. Male. Ice Barrier.

"Obtained on the 26th February, 1874."

THALASSŒCA ANTARCTICA.

Procellaria antarctica, Gm. Syst. Nat. i. p. 565. Thalassaca antarctica, Coues, Pr. Ac. Phil. 1866, p. 31.

a. Male. Ice Barrier.

Obtained on 14th January, 1874.

b. Male. c, d. Females. Ice Barrier.

Obtained on the 14th January, 1874.

ADAMASTOR CINEREUS.

Procellaria cinerea, Gm. Syst. Nat. i. p. 563. Adamastor cinereus, Coues, Pr. Ac. Phil. 1864, p. 119.

565. Female. South Pacific.

"Eyes hazel; feet flesh-colour: the stomach of one was full of the beaks of Cuttlefish; stuff from the ship in the other, and small crustacea."

"Obtained on the 5th November, 1875.

MAJAQUEUS ÆQUINOCTIALIS.

Procellaria æquinoctialis, Linn. Syst. Nat. i. p. 213.

Majaqueus æquinoctialis, Coues & Kidder, Bull. U.S. Nat. Mus.

No. 2, p. 25; Sharpe, Zool. Kerg., Birds, p. 19.

a-d. Males. e. Female. Kerguelen.

OSSIFRAGA GIGANTEA.

Procellaria gigantea, Gm. Syst. Nat. i. p. 563.
Ossifraga gigantea, Coues, Pr. Ac. Phil. 1866, p. 32.
567. Female. South Pacific.
"Bill yellowish green, feet black."
Obtained on the 5th November, 1875.
a. Betsy Cove, Kerguelen.

PAGODROMA NIVEA.

Procellaria nivea, Gm. Syst. Nat. i. p. 562. Pagodroma nivea, Coues, Pr. Ac. Phil. 1866, p. 160. a, b. Females. Ice Barrier. "Obtained on the 14th January, 1874."

DAPTION CAPENSIS.

Procellaria capensis, Linn. Syst. Nat. i. p. 213.

Daption capensis, Coues, Pr. Ac. Phil. 1866, p. 163.

a. Antarctic Sea.

"Shot in April 1874."

ESTRELATA LESSONI.

Procellaria lessoni, Garn. Ann. Sc. Nat. 1826, vii. p. 54. Æstrelata lessonia, Coues, Pr. Ac. Phil. 1866, p. 142; Coues & Proc. Zool. Soc.—1878, No. XLVIII. Kidd. Bull. U.S. Nat. Mus. No. 2, p. 27; Sharpe, Zool. Kerg. Birds, p. 26.

a, b. Males. Betsy Cove, Kerguelen. c-f. Females. Betsy Cove, Kerguelen.

" Eyes black."

During a recent visit to the Paris Museum I had an opportunity of examining the type of Œ. sericea, concerning which I had occasion to publish some notes in 'The Ibis' for 1875 (p. 373). On seeing this type I at once recognized a specimen of Œ. lessoni! Œ. sericea (Less.), placed in the genus Adamastor by Bonaparte and Coues, has therefore no existence as a species distinct from Œ. lessoni.

ESTRELATA MOLLIS.

Procellaria mollis, Gould, Ann. & Mag. N. H. xiii. p. 363. Estrelata mollis, Coues, Pr. Ac. Phil. 1866, p. 150.

a, b. Nightingale Island.

"Eyes hazel. Night bird. Obtained on the 17th of October, 1875."

ESTRELATA BREVIROSTRIS.

Procellaria brevirostris, Less. Man. d'Orn. ii. p. 611.

Estrelata brevirostris, Salv. Orn. Misc. ii. p. 235; Sharpe, Zool. Kerg., Birds, p. 24.

Estrelata kidderi, Coues, Bull. U.S. Nat. Mus. No. 2, p. 28.

a. Young. Kerguelen.

The species included in Cabanis and Reichenow's paper on the Birds collected by the 'Gazelle' (J. f. Orn. 1876, p. 329) under the name Procellaria mollis, belongs here. Last year I examined in Berlin the specimen brought home by the 'Gazelle,' and found it to belong to this species.

The 'Challenger' specimen is quite young, but interesting, as showing that these birds moult at once from the downy plumage into

the feathering of the adult bird.

PRION DESOLATUS.

Procellaria desolata, Gm. Syst. Nat. i, p. 562.

Prion desolatus, Gray, H.-list. iii. p. 108; Sharpe, Zool. Kerg., Birds, p. 37 (excl. syn.).

Pseudoprion desolatus, Coues, Bull. U.S. Nat. Mus. No. 2, p. 32.

a. Male. Betsy Cove, Kerguelen. Obtained 11th January, 1874.

"Eyes black."

b-e. Males. Betsy Cove, Kerguelen. "Eyes black."

f. Female. Ice Barrier.

Obtained on the 14th February, 1874. g, h. Females. Betsy Cove, Kerguelen.

Of the eight specimens of this species brought home by the ex-

pedition, five are males and three females. They thus offer an opportunity of testing the view advanced by Mr. Sharpe as to the supposed sexual difference in the size of the bill existing in these birds1.

In these specimens there is no tangible difference between the bills of the sexes; and as the opposite sexes of P. banksi, as shown by the two 'Challenger' specimens, are also alike as regards the size of the bills, doubts may fairly be raised whether the great difference observable in the size of the bills in these birds is a sexual character at all.

PRION BANKSI.

Pachyptila banksi, Smith, Ill. Z. S. Afr. Birds, pl. 55. Pseudoprion banksi, Coues, Pr. Ac. Phil. 1866, p. 166.

a. Male. Marion Island.

"Eves brown."

b. Female. "Caught at sea near Crozets."

Without attempting to decide the question as to how many species of Prion exist, I use the name P. banksi for these birds, as their bills agree most nearly with that of the type of P. banksi in the British Museum.

Pelecanoides urinatrix.

Procellaria urinatrix, Gm. Syst. Nat. i. p. 560.

Pelecanoides urinatrix, Coues, Pr. Ac. Phil. 1866, p. 190; Sharpe, Zool. Kerg., Birds, p. 14.

a. Male. Kerguelen.

"Eyes dark grey."

b. Male. Betsy Cove, Kerguelen. Obtained January 1874.

c. Male. Christmas Harbour, Kerguelen.

d. Male. Betsy Cove, Kerguelen.

e-h. Females. Kerguelen.

i. Kerguelen.

j. Young. Kerguelen?

PELECANOIDES GARNOTI.

Puffinuria garnoti, Less. Voy. Coq. Zool. pl. 46. Pelecanoides garnoti, Coues, Pr. Ac. Phil. 1866, p. 190.

639. Female. Cove Harbour, Messier Channel.

640. Male? Cove Harbour, Messier Channel.
"Eyes hazel. These birds and another one which was put in spirit were found dead. Two were picked up by the boat in which Captain Maclear and I went, floating on the surface of the water; and the third was picked up by the galley on the rocks. They were quite fresh; the bodies were very thin.

"Their stomachs were filled with small leaves. It looks very much

¹ Latham seems to have been the first author who mentioned this supposed sexual difference in Prion. After describing P. vittatus (Syn. iii. p. 414), he adds:-"The female has the same plumage; but the bill, though greatly exceeding that of any other Petrel, is scarcely more than half the breadth of that of the "male."

as if these birds had got out of their region. Mr. Moseley says he saw what he supposed to be one of these birds on Penguin Island."

DIOMEDEA EXULANS.

Diomedea exulans, Linn. Syst. Nat. i. p. 214; Coues, Pr. Ac. Phil. p. 866, p. 175; Coues & Kidder, Bull. Nat. Mus. No. 2, p. 11; Sharpe, Zool. Kerg., Birds, p. 45.

574. Kerguelen.

DIOMEDEA BRACHYURA.

Diomedea brachyura, Temm. Pl. Col. 554; Coues, Pr. Ac. Phil. 1866, p. 177.

517-519. Males. North Pacific.

"These were all caught with the hook from the ship while at sea in June and the first half of July 1874, between Japan and Honolulu; they followed the ship every day in numbers till we got into the trade-winds, when no more were observed."

509. Female. North Pacific.

"Eyes brown, bill black, stomach empty. Shot on the 1st April, 1875, by Lord Campbell, with the Henry rifle, while on the wing. We were just north of the tropic; but this bird, as well as another Albatross, were seen some days before we had passed out of the tropics."

511. Male. North Pacific.

"Eyes brown, feet and bill dark or nearly black; stomach had cuttlefish. Caught with a hook by Percy on the 7th April, 1875."

DIOMEDEA MELANOPHRYS.

Diomedea melanophrys, Temm. Pl. Col. 456; Coues, Pr. Ac. Phil. 1866, p. 181; Sharpe, Zool. Kerg., Birds, p. 46.

Male. Female. Shot at sea, 8th July, 1874.

Male. Female. Christmas Harbour, Kerguelen.

DIOMEDEA FULIGINOSA.

Diomedea fuliginosa, Gm. Syst. Nat. i. p. 595; Sharpe, Zool. Kerg., Birds, p. 48.

Phæbetria fuliginosa, Coues, Pr. Ac. Phil. 1866, p. 186; Coues &

Kidder, Bull. Nat. Mus. No. 2, p. 21.

Male. See Barnier, 16th February, 1874.

Female. Royal Sound, Kerguelen, 17 January.



Salvin, Osbert. 1878. "Reports on the Collections of Birds made during the Voyage of H.M.S. 'Challenger.'-No. XII. The Pro-cellariidae." *Proceedings of the Zoological Society of London* 1878, 735–740.

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