

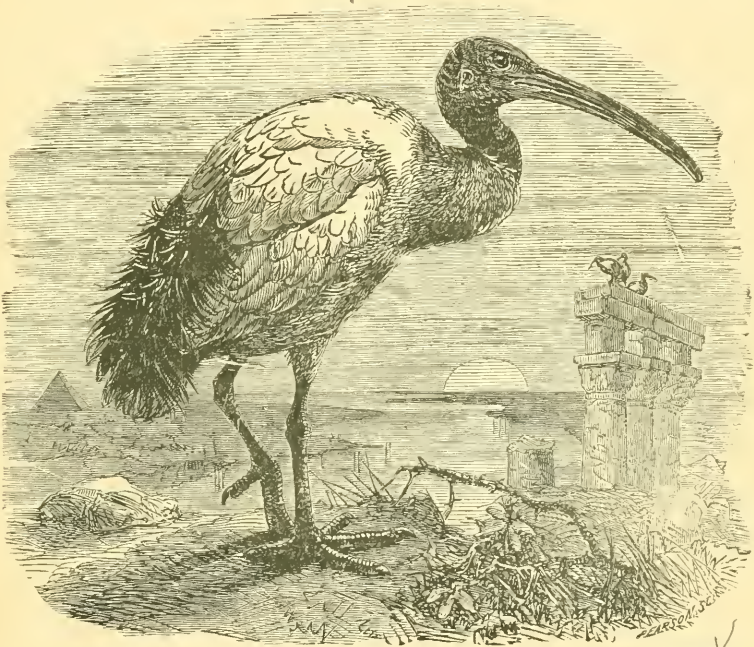
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THE IBIS,

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QUARTERLY JOURNAL OF ORNITHOLOGY.

EDITED BY
WILLIAM LUTLEY SCLATER, M.A., F.Z.S.



VOL. II. 1920.

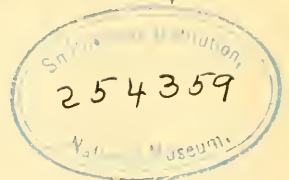
ELEVENTH SERIES.

He prayeth well, who loveth well
Both man and bird and beast.

PUBLISHED BY THE
BRITISH ORNITHOLOGISTS' UNION

AND SOLD BY
WILLIAM WESLEY & SON, 28 ESSEX STREET, STRAND,
LONDON, W.C. 2.

1920.



339. *Coscoroba candida* Vieill. Coscoroba Swan.

In looking over a collection of eggs made for me by D. Docherty, I find that in 1915 he took two fine clutches of eight incubated eggs on 18 August and 15 October respectively. Both these nests were in juncales and built of dry juncos. They are, therefore, further examples of the curious recurrences to swamp-nesting—*i. e.*, in deep waters (as is the custom of the Black-necked Swan), instead of on an island or at least marshy ground.

II.—*List of the Birds of the Canary Islands, with detailed reference to the Migratory Species and the Accidental Visitors.* Part V. *ALCIDÆ—PHASIANIDÆ.* By DAVID A. BANNERMAN, M.B.E., B.A., M.B.O.U., F.R.G.S.

Family *ALCIDÆ.**Alca torda.* Razorbill.

Alca torda Linn. Syst. Nat. 10th ed. 1758, p. 130—
Type locality: Sweden.

The Razorbill is a **Rare Visitor**.

It has only been recorded on a few occasions and is first mentioned by Webb and Berthelot*, who say it is found on the shores of almost the entire Archipelago, but is more numerous in the eastern group (Orn. Canarienne, p. 41).

About fourteen years later Bolle* published his notes to

* Godman in his paper (*Ibis*, 1872, p. 224) transferred Webb and Berthelot's and also Bolle's remarks on the Razorbill to the Little Auk, and gives their notes on the Razorbill under the latter species (*Alle alle*) in his own paper—an unfortunate error which later led Cabrera to think that Godman saw the Little Auk in the Canaries and to quote this in his list (*Catálogo*, p. 70). Even more unfortunate is the inclusion of the Little Auk as a visitor to the Canaries in the B. O. U. List of British Birds, 1915, p. 280. A glance at the references given by Godman will confirm this: he gives *Alca minor* [of Brisson], which is the Razorbill (and which name both Webb & Berthelot and Bolle employed in their writings), as a synonym of *Mergulus alle* (Linn.). The Little Auk has *never* occurred in the Canary Archipelago. This question will be fully dealt with in Appendix B under *Alle alle*.

the same effect (J. f. O. 1855, p. 177), and later wrote that it was several times killed by Berthelot in Canaria, where it appears in the harbour of Ciudad [the old town harbour of Las Palmas about three miles from the present landing place—the Puerto de la Luz], according to the opinion of competent naturalists, only as a bird of passage in winter (J. f. O. 1857, p. 348).

Savile Reid mentions that he did not meet with the Razorbill himself, but records that Don Ramon Gomez had specimens in his collection from the neighbourhood of Orotava; he notes "This is the only member of the Alcidae I recorded as Teneriffian" (Ibis, 1888, p. 82).

Meade-Waldo recorded it (Ibis, 1893, p. 207) as "a quite accidental visitor," and notes that he knew of but two examples from the islands.

It does not seem to have been observed since 1891.

Range. The Razorbill breeds in Europe, and in winter wanders to the Mediterranean seas. It has occurred once only in the Azores; the Canary Islands are probably the most southern point from which this species has been recorded on the African side of the Atlantic. The Razorbill also breeds in North America, extending to Long Island in winter.

Uria troille troille. Common Guillemot.

Colymbus troille Linn. Fauna Suecica, 2nd ed. 1761, p. 52
—Type locality: Spitsbergen.

The Common Guillemot is a very **Rare Visitor**. It has only once been properly identified, and then by Bolle who saw a specimen in the Léon collection in Canaria (J. f. O. 1857, p. 348). Prior to this Webb and Berthelot record the bird (Orn. Canarienne, p. 41) as a migrant, and very probably the bird in the Léon collection was the only one ever obtained. Webb and Berthelot might possibly have known this collection, for although they were working in the Canaries twenty-two years before Bolle arrived, we have no record of when the Léon collection was formed. The

Canary Islands are far beyond the normal limits frequented by this species.

Range. The Common Guillemot breeds in Europe as far south as the Berlenga Islands off Portugal. It also occurs on both coasts of north America. In winter the European birds wander south to about 30° N. in the Atlantic, occasionally entering the Mediterranean. The bird which occurred in the Canary Islands must have strayed miles farther south than any have done for a very long time.

Fratercula arctica arctica. Puffin.

Alca arctica Linn. Syst. Nat. 10th ed. 1758, p. 130—
Type locality: Sweden.

The Puffin is a **Rare Visitor**. It has been recorded on three or four occasions.

Meade-Waldo saw a young Puffin which had been obtained at Orotava (Ibis, 1893, p. 207).

Hartert saw specimens in both Cabrera's and Ramon Gomez's collection in Tenerife in 1901 (Nov. Zool. 1901, p. 306, lower footnote); the former may have been the young bird which Meade-Waldo mentions (*supra*), as most of the "rarities" occurring in Tenerife found their way into Cabrera's possession.

Cabrera does not, however, include the species himself in his Catalogue, so the bird which Hartert saw may have been obtained between 1893 and 1901, after Cabrera's list was published.

Lastly, I examined a stuffed example of this species in the Gonzalez collection in Lanzarote which had been obtained near Arrecife (Ibis, 1914, p. 63).

Range. The Puffin breeds in the north Atlantic as far south as the Berlenga Islands off Portugal, and in winter visits the western Mediterranean and in the Atlantic ranges as far south as the Azores, very rarely reaching the Canaries.

Family THALASSIDROMIDÆ.*

Thalassidroma pelagica. Storm Petrel.

Procellaria pelagica Linn. Syst. Nat. 10th ed. 1758, p. 131
—Type locality : Coast of Sweden.

I have termed the Storm Petrel an **Annual Visitor**, for it does not fall into any of the other seven categories into which I have divided the avifauna of the Canaries.

The first record of *T. pelagica* from the islands is given by Ledru in 1810 in his List of the Birds of Tenerife, vol. i. p. 184.

Webb and Berthelot in 1841 wrote "It appears that this species is found from time to time on the coasts of the Canary Islands" (Orn. Canarienne, p. 45). They record a bird which was caught by the fishermen and kept alive several days.

Bolle was of opinion that this was the Storm Petrel most frequently met with in the Canary seas (J. f. O. 1857, p. 346).

Meade-Waldo found it always about the islands (Ibis, 1893, p. 206). Cabrera possessed a specimen which had been caught at Punta del Hidalgo in Tenerife, and remarked that it occurred fairly frequently but was rare in certain seasons (Catálogo, p. 65); while Polatzek considered it but a rare visitor (Orn. Jahrb. 1909, p. 133).

There is no actual record of the Storm Petrel breeding in the Canary group, although I strongly suspect that it will be found to do so. While living on the deserted islet known as Montaña Clara from June 7 to 14, 1913,

* By force of circumstances the records of the Petrels and Shearwaters which visit the Canary Islands and do not breed there are exceedingly sparse. The conclusion must not be drawn from this that these ocean-birds are correspondingly rare in the seas of the Archipelago. We know that they do occur there and sometimes in considerable numbers. These I have termed "Annual Visitors" which visit the Archipelago annually but at no fixed season of the year, and which have not been known to breed in any of the islands.

The Distribution and Nidification of the Tubinares in the North Atlantic Islands are fully discussed by me in 'The Ibis,' 1914, pp. 438-494.

we procured from a hole in a cave on June 9 a Storm Petrel with testes enormously developed (Ibis, 1914, pp. 78, 263). As I have already suggested in my paper on the Tubinares of the North Atlantic Islands (Ibis, 1914, p. 450), it seems reasonable to suppose that the bird may have intended to breed on the island.

From the above notes I gather that *T. pelagica* visits the Canary Islands annually but at no settled period of the year. It cannot therefore be said to be either a Summer or a Winter Visitor, nor is it a Partial Resident, for it does not appear to breed regularly, if at all, in the Archipelago. Nor can we class it an Occasional Visitor.

Range. The range of the Storm Petrel is: Eastern portions of the north Atlantic south to west Africa, also western Mediterranean. It has been known to breed as far south as the Desertas (Madeira group), and in winter ranges to the Cape. Its distribution in the north Atlantic islands is fully discussed in 'The Ibis,' 1914, pp. 448-450.

Oceanodroma leucorhoa leucorhoa. Leach's Fork-tailed Petrel.

Procellaria leucorhoa Vieillot, Nouv. Dict. d'Hist. Nat. nouv. ed. xxv. 1817, p. 422—Type locality: France (Picardy).

The Fork-tailed Petrel is an **Annual Visitor**, chiefly in winter, to the Canary seas.

It is recorded by Meade-Waldo as an occasional visitor in winter; he did not see it at any other time of the year (Ibis, 1893, p. 206). I have examined a specimen in the British Museum which he obtained in Tenerife on the 23rd of February (Ibis, 1914, p. 451). This must be the bird mentioned by him in 'The Ibis,' 1889, p. 517.

M. J. Nicoll saw many *O. leucorhoa* just before sighting Gran Canaria on the 12th of November, 1905, when Naturalist on the late Lord Crawford's yacht 'Valhalla' (Ibis, 1906, p. 667).

Leach's Petrel has been erroneously recorded (Orn. Jahrb. 1913, p. 193) by von Thanner (from the reports

of fishermen) as breeding on Montaña Clara, one of the eastern islets—a statement which I have proved to be quite without foundation (*Ibis*, 1914, pp. 269, 270).

Range. Leach's Fork-tailed Petrel inhabits the north Pacific Ocean and the extreme north Atlantic and breeds also on many of the islets off the British Isles. In winter it is a visitor to all the north Atlantic islands, and is thus dealt with in detail in my paper on the distribution of Petrels and Shearwaters in the north Atlantic (*Ibis*, 1914, pp. 450, 451). It has also occurred off Liberia, Sierra Leone, and the Gold Coast on several occasions, and is said to visit south Africa casually. Two other races have been described from the Pacific (*cf.* Oberholser, *Proc. U.S. Nat. Mus.* vol. liv. 1917, pp. 165–172).

Oceanodroma castro castro. Madeiran Fork-tailed Petrel.

Thalassidroma castro Harcourt, *Sketch of Madeira*, 1851, p. 123—Type locality: Desertas Islands, Madeira group.

The Madeiran Petrel is a **Rare Visitor** which has been recorded only once, M. J. Nicoll having observed large numbers on 12 November, 1905, just before reaching Gran Canaria during the cruise of the 'Valhalla' (*cf.* Godman, *Monograph of the Petrels*, p. 16, et Nicoll, *Ibis*, 1906, p. 667). .

Polatzek also mentions this species in his list of breeding birds (*Orn. Jahrb.* 1909, p. 24), but solely on hearsay and on no real evidence whatsoever.

It is extraordinary that it has not been observed more often, for it is a remarkable fact that it breeds in every other group of the north Atlantic islands from the Azores to the Cape Verde Archipelago (*vide Ibis*, 1914, pp. 451–460). I do not believe it breeds anywhere in the Canary Archipelago (*Ibis*, 1914, pp. 85, 269). Neither Webb and Berthelot, Bolle, Godman, Savile Reid, Meade-Waldo, von Thanner, nor myself have ever seen it.

On the above evidence I cannot possibly include this species with the other Petrels which I have termed Annual Visitors.

Range. The Madeiran Petrel breeds in the Azores, Madeira group, Salvage Is., Cape Verde Is., and in St. Helena.

Birds breeding in the Pacific on the Hawaiian and Galapagos islands have been separated as subspecies. The nidification and distribution of this species in all the north Atlantic archipelagos is fully dealt with by me in 'The Ibis,' 1914, pp. 451-460.

Oceanites oceanicus oceanicus. Wilson's Petrel.

Procellaria oceanica Kuhl, Beiträge Zool. i. 1820, p. 136
—Type locality: South Atlantic.

Wilson's Petrel is probably an Annual Visitor to the Canarian seas, usually appearing in late spring, but has been noted at all seasons.

It is mentioned by several writers, but very few appear to have seen the bird personally. Meade-Waldo observed it occasionally at all seasons of the year (*Ibis*, 1893, p. 206), particularly on 15 May, 1888, off Garachico, Tenerife (MS. note-books). There is also a bird which I have recently examined in the Liverpool Museum labelled "♂. Orotava, Tenerife. R. Gomez (Coll.), 16. vi. 87."; and in the British Museum a specimen obtained by Lort Phillips in May "south of the Canaries."

It is worthy of notice that the only records occurred in May and June, and that Godman obtained specimens near Fayal, Azores, on 21 May, 1865 (*Ibis*, 1866, p. 104). It must be remembered how few observers know the bird well enough to recognise it at any distance, and the paucity of actual records can be placed to this account.

Range. Wilson's Petrel breeds in the South Polar regions, migrating northwards in winter. It has a very wide distribution in all seas excepting the north Pacific. I have dealt with its occurrences in all the north Atlantic islands in 'The Ibis,' 1914, pp. 460-461.

Pelagodroma marina hypoleuca. North Atlantic Frigate-Petrel.

Thalassidroma hypoleuca Moquin-Tandon, in Webb, Berthelot et Moquin-Tandon, Orn. Canarienne, 1841, p. 45
—Type locality: Tenerife.

This Frigate-Petrel is probably a rather scarce Annual

Visitor to the Canary-island seas, and although the type specimen was described from the coasts of Tenerife it has never been known to breed in the Archipelago, and therefore cannot be said to really inhabit this group. The records of this Petrel being taken in the Canary Islands are not numerous. I enumerated them all in my paper on the Petrels already alluded to (Ibis, 1914, pp. 463-464).

Serra ('Ornithologia Canaria') and Drouet, in his 'Faune Açoréenne' (1861), are both said to mention the Frigate-Petrel from the Canaries.

Savile Reid records an example which was brought to him alive in Tenerife on the 20th of March, 1887, and which is now in the British Museum (Ibis, 1888, p. 81).

The only other specimen in the National Collection was obtained by Meade-Waldo on the 20th of May, 1889, in Tenerife; this is probably the specimen mentioned in 'The Ibis,' 1889, p. 517. Meade-Waldo found it "not common," and noted that several were caught by the fishermen every spring (Ibis, 1893, p. 207).

Cabrera had an example in his collection which was procured at Tegina on the coast of Tenerife; he remarks that it is sedentary and locally distributed on certain coasts of the islands (Catálogo, p. 65); but Bolle never met with it (J. f. O. 1857, p. 346), although he is erroneously quoted as having done so. On the other hand, Bolle himself quotes Berthelot as saying that he had observed *T. hypoleuca* constantly all round the waters of the Canary Islands (J. f. O. 1857, p. 346).

Range. The North Atlantic Frigate-Petrel breeds in the Salvage Is. and the Cape Verde Is., and is accidental in the Azores and Madeira group. I have dealt with its distribution and nomenclature in these islands in 'The Ibis,' 1914, pp. 461-465. The typical species (*P. marina marina*) was described from 37° S. by Latham.

Family PUFFINIDÆ.

Puffinus puffinus puffinus. Manx Shearwater.

Procellaria puffinus Brünnich, Orn. Bor. 1764, p. 29
—Type locality: Faeroe Islands.

The Manx Shearwater is an Annual Visitor to the seas surrounding the Canary Islands.

It is first recorded from the Archipelago by Ledru in 1810 (*Voyage aux îles de Ténériffe*, vol. i. p. 185) in his List of the Birds of Tenerife. It is next mentioned by Webb, Berthelot, and Moquin-Tandon in their '*Ornithologie Canarienne*,' p. 43, where they say that it is to be found, "Dans Pile déserte d'Allegranza où elle habite toute l'année."

Bolle (J. f. O. 1855, p. 178) also includes the species (on the authority of Berthelot) as an inhabitant of Allegranza, but in his next paper (J. f. O. 1857), after he had apparently paid a visit to the island himself, he omits it altogether from his final list, which points to his not having found Webb and Berthelot's statement to be correct.

The next record is given by Savile Reid, who during a visit to the islands in 1887 saw hundreds of *P. p. puffinus* on the sea off Tenerife on the 19th of March (Ibis, 1888, p. 80).

The following year Meade-Waldo records many Manx Shearwaters at sea off Garachico, between Tenerife and Gomera, on the 15th of May, 1888 (MS. note-books), and in his "List of Birds observed in the Canary Islands" wrote that he considered it "sometimes common on the water in winter," and further remarked that "it does not seem to come to land" (Ibis, 1893, p. 206).

Cabrera included it in his list as common in the islands of the western group, nesting ("anidando") on the deserted rocks, and cited Berthelot and Godman as his authorities (Catálogo, p. 65).

Ramon Gomez, the Orotava chemist and bird-collector, obtained a specimen in June. I made a note of this but have mislaid the original reference. Probably it was in MS.

Koenig recorded a specimen from Palma (J. f. O. 1890, pp. 462 et 487) which was *presented* to him, and this bird, so Dr. Le Roi told me in a letter in 1914, is no longer in the Koenig Museum but has long since been destroyed. There is another skin in the Bonn Museum which is labelled from Tenerife but with no further data.

As recently as 1905 it has been said by Floericke that *P. p. puffinus* breeds in the eastern islands (A. d. Heimat d. Kanarienvög. 1905, p. 95). This statement I have proved to be quite untrue, and I doubt very much whether the Manx Shearwater has ever bred on any of these islands (Ibis, 1914, p. 476).

Polatzek has without comment quoted Floericke's remarks (Orn. Jahrb. 1909, p. 23); he does not mention ever having seen the Manx Shearwater himself.

I did not meet with any sign of *P. p. puffinus* in Allgranza, Montaña Clara, Graciosa, the Roque del Oeste, or in either of the larger eastern islands during my expedition after Petrels and Shearwaters in May and June, 1913 (Ibis, 1914, pp. 85, 269), and so can only consider it an Occasional Visitor which sometimes, as in 1887 and 1888, visits the seas of the Archipelago in large numbers.

Range. The Manx Shearwater breeds in the islands off the coast of Great Britain. Its main breeding station in the north Atlantic islands is the Madeira group. It is said to breed sparingly in the Azores and Salvage Islands.

I have dealt with the distribution and nidification of this species fully in 'The Ibis,' 1914, pp. 472-477.

* *Puffinus kuhli fortunatus*. Canarian Kuhl's Shearwater.
(= *Puffinus kuhli flavirostris* auctorum.)

Puffinus kuhli fortunatus Bannerman, Bull. B. O. C. xxxv.

* In this list of Canarian birds I am following strictly the nomenclature used by the compilers of the B. O. U. List of British Birds (1915), except in one or two cases particularly noted on page 96 of Part I. I am now, however, inclined to agree with Mr. Mathews that Kuhl's Shearwater can no longer be placed under the genus *Puffinus*, and in future shall accept the new genus *Calonectris*, in which Mr. Mathews and Mr. Iredale propose to include this species.

1915, p. 120—Type locality : Isla Graciosa, Eastern Canary Islands.

This race of Kuhl's Shearwater is a Summer Visitor to the Canary Islands, absent only three months in the year.

Hab. in Archipelago.

The seas of all the islands, breeding on the following islands and rocks :—

Western Group : Gran Canaria, Tenerife, and probably Palma, Gomera. Hierro.

Eastern Group : Fuerteventura, Lanzarote.

Outer islets : Lobos, Graciosa, Montaña Clara, Algranza, Roque del Este, Roque del Oeste.

Obs. In the Bulletin of the British Ornithologists' Club, vol. xxxv. 1915, pp. 118–120, I showed that the Shearwater inhabiting the north Atlantic islands could no longer retain the name *P. k. flavirostris* Gould, which form is confined to the Cape seas, and is a totally distinct bird from the form inhabiting the Canaries and islands to the north of this Archipelago. I therefore proposed the new name *Puffinus kuhli fortunatus* for the latter bird and recognised five distinct geographical races of this Shearwater.

Dr. Hartert then wrote to me that he believed the Shearwater which bred in the north Atlantic archipelagos (Azores, Madeira, Salvages, and Canary Islands) was identical with *P. k. borealis* of Cory ; and if this proves to be the case then Cory's name has undoubted precedence over mine, and the Canarian bird must then be known as *P. k. borealis*, which Hartert has already accepted. Until they are conclusively proved to be identical—and this to my mind cannot be done until a large series from both sides of the Atlantic are compared—I prefer to treat the birds from the other side of the Atlantic as distinct under Cory's name. At present we have only a very few American specimens, though an enormous series from the African islands is in the British and Tring Museums.

P. k. borealis is not yet known to breed off the American continent, but if, as Dr. Hartert thinks, it wanders across the Atlantic from the African islands, it is curious that it

should turn up there at a time when *P. k. fortunatus* is breeding. I am strongly inclined to agree with Messrs. Mathews and Iredale that Petrels and Shearwaters do not wander hundreds of miles from their breeding quarters, and I maintain that the African islands Shearwater must bear the name I bestowed upon it, until it is proved to be undoubtedly the same as the American bird. When this has been done to my satisfaction I shall be the first to sink my name and make it a synonym of *P. k. borealis*. As yet I am not convinced that I am in error.

Mr. Francis Harper, of the American Biological Survey, has most kindly got together all the available data referring to *P. k. borealis* in American waters. He writes me under date 17 August, 1919, as follows:—"I have just managed to collect for you some data on the North American occurrences of *Puffinus borealis*. It is known on this side only from Long Island, Rhode Island, Massachusetts, and somewhat doubtfully from Labrador.

"The Long Island dates range from August 6 to October 18; the Rhode Island dates from July 21 to November 16; and the Massachusetts dates from August 2 to October 16 and perhaps November.

"On August 8, 1915, Murphy and I collected seven specimens, together with an equal number of *P. gravis*, off Montank Point, Long Island, and saw a number of others. There were four males (length in flesh 19·87–22·50 in.) and three females (21·25–22·25 in.). The testes of the males were small, and either white or half-pigmented; the ovaries of two females were noted as 'small': of the third, '½ in. long.'

"Colors of soft parts as follows: 'Bill straw-yellow, an obscure dusky band across the bases of the nails. Tip and edge of upper nail also dusky. Iris dark olive-brown. Outer side of tarsus, outer toe, under side of all toes, dusky, with a pinkish tinge, irregular area toward tip of webs dusky. Rest of webs, inside of tarsus, upper side of two inner toes, flesh color, with pinkish tinge. Nails horn color, with a dusky streak on each side extending to tip.'"

In the British Museum we have only five skins, four collected in September 1886 at Wood's Holl, Mass., and one in October of that year "off Gay Head."

P. k. fortunatus breeds in hundreds in the Canary Archipelago—I believe on the coasts of all the islands, and although I have not actually traced any records from Gomera and Hierro, there can be little doubt of its nesting there. Its principal breeding-stations in the Archipelago are all the outer islets (Ibis, 1914, pp. 267, 268). I have studied the habits of this species carefully and already published my field-notes (Ibis, 1914, pp. 66-70, 80 et 267) at some length.

The main body of Canarian Kuhl's Shearwaters arrive in the Archipelago at the beginning of March, Savile Reid noted many hundreds off Tenerife on the 19th of March, 1887 (Ibis, 1888, p. 80). They do not seem to commence nesting in this month or during the early part of April, for Meade-Waldo, who visited Graciosa on the 6th of April, 1890, reported that the Shearwaters had not yet arrived in their breeding-holes (Ibis, 1890, p. 437 and MS. diaries). The fishermen on Graciosa told me that the birds arrived in their nesting-holes during the latter part of April and beginning of May "to clean their nests" (Ibis, 1914, p. 68).

Meade-Waldo saw them "in swarms" off Garachico (Tenerife) on the 15th of May, 1888 (MS. diaries).

When I visited Graciosa from May 27-31, 1913, the Shearwaters were all paired in their nesting-holes, but no eggs had been laid. The birds commenced to lay the first week in June, and by the second week in June nesting seemed to be in full swing on all the outer islets (Ibis, 1914, pp. 66-70, 80 et 87). The young are hatched in July.

At the latter end of October the Shearwaters begin to leave their nesting-places, and the main body finally leave the islands in November (Ibis, 1914, p. 470). Bolle thought that they left the islands in September (J. f. O. 1857, p. 314), but many turn up in the neighbourhood of Gran Canaria between the 1st of October and 17th of November (Ibis, 1912, p. 574). Meade-Waldo obtained three, and remarks

that they were fairly plentiful off Orotava between October 23 and 25, 1887 (MS. diaries). After November the birds certainly go out to sea and are seldom noted, though a few may be seen in the Canarian seas during December and January.

The Shearwaters are absent from the beginning of December until the end of February.

Most authors include this Shearwater in their papers, but apart from the references given above no definite dates are mentioned by them.

Range beyond the Archipelago.

The Canarian Kuhl's Shearwater also breeds in the Azores, Madeira group, and Salvage Islands. Four more allied races are found in (1) Mediterranean, Adriatic, Ægean, and Sea of Marmora; (2) Cape Verde Archipelago; (3) Cape Seas; (4) the bird which appears off the N. American coasts and may breed on that side of the Atlantic. The distribution and breeding range of the north Atlantic forms are dealt with fully by me in 'The Ibis,' 1914, pp. 466-472.

Puffinus assimilis baroli. Madeiran Allied Shearwater.

Puffinus baroli Bonaparte, *Conspectus Gen. Av.* 1856, p. 204
—Type locality: Desertas (Madeira group).

A Summer Visitor to the Canary Islands.

Hab. in Archipelago.

Western Group: Gran Canaria, Tenerife.

Outer islets: Graciosa, Montaña Clara.

Obs. P. a. baroli breeds on all the islands noted above. Although we have no records of this Shearwater breeding in Fuerteventura and Lanzarote or in the three extreme westerly islands, we must remember that the coasts of these islands are very little known. The possibility of its breeding on any of these islands must not be overlooked.

The Madeiran Allied Shearwater has been the cause of a great deal of discussion amongst ornithologists, especially with regard to the correct name it should bear. A review of the literature on this important question will be found in

my paper on my expedition to the eastern Canary Islands (*Ibis*, 1914, pp. 264-266).

P. a. baroli appears to arrive in the Canary group at the end of January or early in February. At the end of February it seems to commence breeding in Tenerife—a very early date; but the breeding-time seems to vary in the different nesting-colonies: at any rate, I have taken eggs as late as 8 June on the outer islets. February, March, and April I believe to be the true breeding-season, prolonged in certain colonies until the end of the first week in June. By the end of that month I believe the birds have all reared their young in the Canary Archipelago, and they probably leave the islands soon afterwards. We have no records of the birds being seen in this group from the beginning of July until the end of January, although we have no data to show when they actually take their departure.

The following notes are arranged under the heading of the different islands in which they breed. I have already noted that considerable diversity seems to be shown in the breeding-time of the various colonies.

Gran Canaria.

Only one record from this island. Meade-Waldo found a pair breeding near Arucas; unfortunately this record was erroneously published by me under *Bulweria bulweri* (*Ibis*, 1912, p. 574).

Tenerife.

First mentioned by Webb and Berthelot from this island—they mention a bird taken by the Orotava fishermen in February 1829, and include the species only as “De passage accidentel,” remarking that “La propagation de ce Puffin est encore inconnue,” which proves that the authors had never found it breeding in the Archipelago (*Orn. Canarienne*, pp. 43, 44).

Savile Reid mentions a bird from Orotava picked up on the shore on the 15th of March, 1887 (*Ibis*, 1888, p. 81).

Meade-Waldo wrote it was "Resident, but not in great numbers; it breeds very early in the year" (Ibis, 1893, p. 207), noting that it lays at the end of February and beginning of March (Ibis, 1890, p. 437). Meade-Waldo has the following entry in his MS. diary under date 16 March, 1888: "Got a *Puffinus obscurus** that a boy had brought in to Gomez and had caught in a cave this morning, he said it had a young one, it had the hatching spot on its breast."

Meade-Waldo says that he took on the 3rd of April an adult bird* sitting on an egg and young birds-in-down* on the 26th of April at Orotava; and again on 29 April, 1888, an entry in his MS. diary, "A boy brought a *P. obscurus* alive which he had caught in a cave."

Ramon Gomez—the Orotava chemist—obtained a male on the 16th of April, 1891, at Orotava, and a female on the 24th of April, 1888, at the same place. These two skins are in the Tristram collection in the Liverpool Museum, where I have examined them.

In May 1888, Meade-Waldo mentions seeing this Petrel on the water between Garachico and San Juan de la Rambla in company with four other species (MS. diaries).

It is curious that I have been unable to find any mention of this Shearwater in Tenerife later than the month of May. Its habits have not been studied very minutely in this island.

Outer islets.

Graciosa.—There seems little doubt that this Shearwater breeds on this island. Meade-Waldo visited Graciosa on the 6th of April, 1890, but did not meet with it (Ibis, 1890, p. 437). When camping on this island from 27 May to 7 June, 1913, I was assured by the fishermen (who showed me their nesting-holes) that *P. a. baroli* had already bred and departed. They told me that they came here in March (Ibis, 1914, p. 66).

Montaña Clara.—I spent a week on this island from June 7 to 14, 1913. Two eggs and young* in all stages

* Skins in the British Museum.

were obtained. Two fresh eggs were taken on 8th of June (Ibis, 1914, p. 79).

Range beyond the Archipelago.

The Madeiran Allied Shearwater breeds also in the Madeira group, Salvage Islands, and almost certainly in the Azores. It is represented by allied forms in several widely separated localities in the Pacific and Indian Oceans.

Its breeding range is dealt with fully by me in 'The Ibis,' 1914, pp. 477-483.

Bulweria bulweri bulweri. Bulwer's Petrel.

Procellaria bulwerii Jardine and Selby, Illustr. Orn. ii. 1828, pl. 65—Type locality: Madeira group.

A **Summer Visitor** to the Archipelago.

Hab. in Archipelago.

*Western Group**: Tenerife.

Outer islets: Montaña Clara.

Obs. Also recorded as breeding in Allegranza. It has ceased to breed there now apparently.

Bulwer's Petrel breeds in both the above-mentioned islands, but has not been recorded from anywhere else in the Archipelago except Allegranza. Webb and Berthelot (Orn. Canarienne, p. 44) give this latter island as its habitat in the Archipelago, and say of it: "Ce petit Puffin est très-commun dans l'îlot d'Allegranza; il niche dans les trous des rochers . . . Nous avons gardé plusieurs jours cinq ou six de ses 'Perritos' vivants, pendant notre séjour à Lancerotte. On nous les avait apportés d'Allegranza; . . ." From this account it seems certain that Bulwer's Petrel bred in Allegranza, but during my own expedition to these "outer islets" in 1913 no trace of Bulwer's Petrel could be found on that island (for an account of which see Ibis, 1914, pp. 84-87). It was, however, found on Montaña Clara.

Bolle confirms Webb and Berthelot's account, and wrote

* The note which I published in my "Birds of Gran Canaria" (Ibis, 1912, p. 574) in error under the heading of this species, really referred to *Puffinus assimilis baroli*. Bulwer's Petrel has not yet been found breeding in Gran Canaria.

(J. f. O. 1885, p. 178): "This bird is also caught and killed in large numbers for food, especially in Allegranza where it is very numerous . . ."

In his last paper (J. f. O. 1857, pp. 345, 346) Bolle mentions a conversation with Berthelot, who referred to Bulwer's Petrel nesting on Allegranza.

Nothing very definite was known about this Petrel in the eastern group or outer islets until I visited them in May and June, 1913, for the express purpose of ascertaining which Petrels and Shearwaters bred there. The only island upon which Bulwer's Petrel was found nesting was Montaña Clara, where they were quite common. At the time of my visit on the 7th of June all the birds had laid, but the eggs were all perfectly fresh, and when we left the island on the 14th of June in no instance had the young hatched out (Ibis, 1914, p. 80).

In the western islands of the Archipelago Bulwer's Petrel is recorded only from Tenerife. Meade-Waldo certainly wrote (Ibis, 1893, p. 207): "Fairly common, it breeds on all the islands, usually under big loose stones at the foot of the cliffs," but from a perusal of his MS. note-books, which he most kindly lent me, he does not mention the bird anywhere but from Tenerife, though he is probably correct in saying it breeds at any rate in some other of the western islands. From Tenerife it is first mentioned by Meade-Waldo on the 6th of February, 1888,* when he noted "two or three off the coast of Tenerife" when on his way to Gomera (Ibis, 1889, p. 5). He remarks in a later paper: "Bulwer's Petrel (*Bulweria columbina*) breeds commonly along the cliffs; there are two places, not very far from each other, to the east of Orotava" (Ibis, 1889, p. 517). Savile Reid did not see any amongst the various species of Petrels and Shearwaters noted by him on the 19th of March, 1887, off Tenerife (Ibis, 1888, p. 80). This is not surprising, as I believe *B. bulweri* to be almost entirely a night-flying bird.

* I regret that I missed this record when dealing with this species in my paper on the Tubinares (Ibis, 1914, pp. 488 and 493), the earliest record from any of the north Atlantic islands.

The next record from Tenerife is again given by Meade-Waldo, for he saw many off Garachico on the 15th of May, 1888 (MS. diaries).

In June records are plentiful from Tenerife.

Ramon Gomez obtained an egg on 12 June, and Meade-Waldo took a bird,* caught on its egg on 14 June. Adult birds* were also obtained by Gomez on the 18th. In the Cowley Bequest of eggs in the British Museum are specimens taken on the Anaga rocks off Tenerife on the 20th of June, while on the same date and following day Gomez took three adults* and one young† in down.

On the 25th of June three more adults* were obtained by Meade-Waldo at Santa Ursula (MS. diaries).

Koenig includes the bird and mentions a specimen from Tenerife which Gomez caught near Vilaflor on the 19th of July, 1888 (J. f. O. 1890, p. 463).

Cabrera had specimens in his collection and believed it was peculiar to the Canary Islands (Catálogo, p. 65).

The last mention of Bulwer's Petrel is by Polatzek, who remarks that it breeds in the Archipelago, leaving its nesting-places in the autumn and returning in the spring (Orn. Jahrb. 1909, pp. 23-24).

From the above records it appears that *B. b. bulweri* arrives in the Canary Archipelago in February, but does not commence breeding before May at the earliest. June is the month when nesting is in full swing, eggs taken by myself in the first and second weeks in June being the first obtained in the eastern Canaries. June 20 is the earliest date upon which young in down have been taken. The birds probably remain in the islands until the end of September, when they take their departure.

Range beyond the Archipelago.

Bulwer's Petrel breeds also in the Madeira group, Salvage Islands, and possibly the Azores, in the north Atlantic islands. A subspecies inhabits the Sandwich Islands in the Pacific and another closely allied subspecies the Bonin

* The skin is in the British Museum.

† In the Tring Museum.

Islands, while from the Fiji group a distinct species of *Bulweria* occurs, a very curious fact already pointed out by Messrs. Iredale and Mathews (*Ibis*, 1915, pp. 607-608). I have dealt with the various breeding-places of this Petrel in the north Atlantic islands in 'The *Ibis*,' 1914, pp. 488-494.

Family PODICIPIDÆ.

Podiceps nigricollis nigricollis. Black-necked Grebe.

Podiceps nigricollis G. L. Brehm, Vög. Deutschl. 1831, p. 963—Type locality : E. Germany.

The Black-necked Grebe is a **Rare Visitor**.

It has been met with on one occasion only. During my expedition to the Eastern Canaries, my taxidermist, Mr. A. H. Bishop, identified a small flock of these Grebes which had flown onto the salt lake known as the Lago Januvio in Lanzarote (*Ibis*, 1914, pp. 57, 270). The birds arrived on the 21st of May, 1913, but only remained a short time before flying over the dividing spit of land out to sea. The weather was boisterous and the Grebes had evidently come in to shelter from the stormy seas on the calm water of the "Lago." We watched them through powerful glasses for some time.

Range. The Black-necked Grebe breeds in central and southern Europe and ranges east through central Asia to Japan. It has been recorded from the Azores, and is found throughout the greater part of Africa.

Podiceps fluviatilis. Little Grebe.

[? *Podiceps fluviatilis fluviatilis.*

Colymbus fluviatilis Tunstall, Orn. Brit. 1771, p. 3—Type locality : Great Britain.]

A **Rare Visitor**.

A Little Grebe has been recorded on one occasion only from the Archipelago.

Polatzek wrote (Orn. Jahrb. vol. xx. heft 5, 6, 1909, p. 1) : "Inadvertently I did not include the Little Grebe (*Colymbus fluviatilis* Tunst.) with the birds of passage. In 1904 I

found fourteen of these birds in the small salt sea—Lago Januvio—in Lanzarote, and I was told that they stayed there nearly all the year but had never been found to breed there. This diving-bird ('Taucher') is a new record for the Canary Islands."

I have purposely named this species binomially. Polatzek certainly records the typical species as the one which occurred, and was probably right in doing so; but it is possible that it might have been *P. f. capensis* which he noted and which he would not be able to distinguish at a distance from *P. f. fluvialis*. As he does not appear to have obtained a specimen the identity of the race must remain in doubt. I have treated it accordingly.

Range. The typical European Little Grebe (*P. f. fluvialis* Tunst.—Type locality: Great Britain) breeds in central and southern Europe and across central Asia to Japan. Also in north Africa.

The African Little Grebe (*P. f. capensis* Salvad.—Type locality: South Africa) ranges throughout Africa except the extreme north, also in south-western Asia and India.

Family RALLIDÆ.

Porzana porzana porzana. Spotted Crake.

Rallus porzana Linn. Syst. Nat. 12th ed. 1766, p. 262—
Type locality: France.

The Spotted Crake is a **Rare Visitor** to the Canary Islands. It has however been recorded on several occasions, and it is reasonable to suppose that several have missed detection.

It is recorded first by Webb and Berthelot as "very rare," and they note that the only specimen in their possession was killed in March 1829 (Orn. Canarienne, p. 40).

Cabrera shot two in the spring near Laguna, but does not give the year (Catálogo, p. 60).

Meade-Waldo in his "List" says it is "a not unfrequent winter visitor" (Ibis, 1893, p. 201) and mentions Cabrera's birds (Ibis, 1890, p. 430).

I recorded one which was given to me in Lanzarote by

Don Gonzalcz y Gonzalez, who had obtained it near Arreeife. This specimen is now in the British Museum (Ibis, 1914, p. 63).

There are few districts in the Canary Islands suited to this Crake, but the most favourable locality is certainly the ditches of the Laguna plains, while the "Chareo" of Maspalomas in Gran Canaria and the Rio de las Palmas in Fuerteventura may also be occasionally visited.

Range. The Spotted Crake breeds in Europe southwards to the Mediterranean, and apparently in north Africa from Morocco to Tunisia. It is said to winter in India and Africa, but I am uncertain how far south it extends in the latter continent.

Porzana pusilla intermedia. Baillon's Crake.

Rallus intermedius Hermann, Obs. Zool. i. 1804, p. 198—
Type locality: Strasbourg.

This Crake is an **Occasional Visitor** in winter to the island of Tenerife, where it has been obtained on a number of occasions on the Laguna plains.

It would appear to have been a fairly regular visitor to Tenerife about the years 1887-1891, for Meade-Waldo says of it that "it occurs during most winters at Laguna" (Ibis, 1893, p. 201).

Cabrera had one in his collection from Laguna (Catálogo, p. 60), but it appears to have been overlooked of recent years.

Von Thanner has only once recorded Baillon's Crake in his list of migrants, but it must be remembered that this observer has his headquarters at Vilaflor, which is many miles from Laguna and a district ill-suited to Rails. Von Thanner remarks (Orn. Jahrb. 1912, p. 227) that a female example of "*Rallus pygmaeus*" was brought to him on the 4th of September, 1911, from Los Christianos in the island of Tenerife. This can only refer to Baillon's Crake—as *Gallinula* (not *Rallus*) *pygmaea* Brehm = *Rallus intermedius* Hermann = *Porzana pusilla intermedia* (Herm.).

Range. Baillon's Crake has an extensive breeding range in Europe and Asia, and is partially resident in Africa. The northern birds migrate in winter to Africa.

Porzana parva. Little Crake.

Rallus parvus Scopoli, Ann. i. Hist. Nat. 1769, p. 108—Type locality: Carniola.

The Little Crake can only be considered a **Rare Visitor** to the Archipelago.

Cabrera obtained two in the spring at Laguna (Catálogo, p. 60), which are doubtless the same pair which Meade-Waldo records having seen at Laguna (Ibis, 1889, p. 4, and 1893, p. 201).

Meade-Waldo's statement (Ibis, 1890, p. 430) that "it appears to be a pretty regular winter visitor to the ditches round Laguna" can hardly entitle it to a place amongst the regular "Winter Visitors," though it probably often escapes detection.

Hartert (from literature) notes (Nov. Zool. 1901, p. 306) that "the Little Crake is more or less regular in winter," which quite possibly is more correct than to term it a Rare Visitor. As, however, I can only trace three specimens I have scheduled it with the latter.

The last record is one of my own, for in 1913 I identified a Little Crake in the collection of Don Gonzalez y Gonzalez in Arrecife, Lanzarote, which had been shot in that island and the skin preserved (Ibis, 1914, p. 63).

Range. The Little Crake breeds in Europe, parts of Asia and north Africa. In winter it migrates south as far as equatorial Africa and north-west India, passing through the Mediterranean basin on migration.

Crex crex. Corn Crake.

Rallus crex Linn. Syst. Nat. 10th ed. 1758, p. 153—Type locality: Sweden.

The records available can only point to the Land Rail being an **Occasional Visitor** at the present day during the spring and autumn migrations.

There are very few records to help decide this question, but this is more likely to be due to lack of observers than to the non-arrival of the bird itself.

Meade-Waldo considered it to be "a regular migrant to Tenerife, but decidedly rare" (*Ibis*, 1889, p. 515), noting that a few appeared in the autumn and spring, being most frequent at Laguna (*Ibis*, 1893, p. 202).

Cabrera caught four in Tenerife, believing it to be an "accidental migrant" (*Catálogo*, p. 60).

Polatzek termed the bird an "occasional passer" (*Orn. Jahrb.* 1909, p. 129).

I identified a bird as belonging to this species in 1913 in the collection of Don Gonzalez in Arrecife, Lanzarote, said to have been shot locally (*Ibis*, 1914, p. 63).

Range. The Corn Crake breeds in Europe and western Asia and in winter visits Africa ranging to the Cape. It is said to breed also in the Azores, where it is reported to be fairly common.

Gallinula chloropus. Waterhen.

An Occasional Visitor.

Entire lack of any specimens for comparison prevents my determining whether the Moorhen of the Canary Islands is the large typical European form (*G. chloropus chloropus*), or whether it is the smaller African subspecies (*G. chloropus brachyptera*). I am inclined to believe the former is the race which occurs in the Archipelago, but until a bird is obtained for examination it must remain an open question. I have therefore employed binomial nomenclature for this bird.

The status of the Waterhen in the islands is not by any means easy to decide. I include it in this List as an Occasional Visitor, sometimes numerous in winter, which undoubtedly has been known to breed, at any rate in Gran Canaria. It may eventually have to be classed as a very rare Partial Resident, but unlike other Partial Residents its numbers are not augmented at regular seasons by fresh arrivals from Africa. It is also unknown whether the birds

which breed in Gran Canaria are resident throughout the year, or whether they take their departure when the young are sufficiently strong.

Further investigation on these points is badly wanted. I append the somewhat conflicting statements of several authorities.

The Moorhen is first mentioned by Viera in his *Diccionario* (1799) according to Savile Reid (*Ibis*, 1888, p. 76) under the name "polla de agua," where it is stated to occur occasionally in Gran Canaria.

Webb and Berthelot (*Orn. Canarienne*, p. 40) wrote: "a not very rare migrant in the winter."

Bolle notes: "Frequently in winter during migration" (*J. f. O.* 1855, p. 177), and later: "I saw the Waterhen in several pairs breeding in the small reedy fishponds of Arguineguin" (Gran Canaria). "Then it was known only as a winter visitor" (*J. f. O.* 1857, p. 340).

Meade-Waldo notes: "An occasional straggler" (*Ibis*, 1893, p. 202). Some Waterhens arrived with the great migration on April 25, 1890, in Tenerife (*Ibis*, 1890, p. 429).

Cabrera shot several near Laguna and says: "An occasional migrant, fairly numerous" (*Catálogo*, p. 61).

Polatzek wrote: "An occasional migrant, sometimes rather numerous, I obtained a live one in Grand Canary and I found them also in Fuerteventura" (*Orn. Jahrb.* 1909, p. 129).

Von Thanner saw one in Fuerteventura on the 23rd of March, 1904 (*Orn. Jahrb.* 1905, p. 65) and thought it bred in the district known as Rio Palma and in the barranco de la Torre (*Orn. Jahrb.* 1910, p. 100). In February 1909 he found it in the Maspalomas Charco (Gran Canaria), and received a clutch of five eggs (apparently taken at this place) in the summer (*Orn. Jahrb.* 1910, p. 100).

My own experiences of the Waterhen have been confined to spending about ten days in the Maspalomas Charco (in February, 1912) without so much as catching a glimpse of the bird, which may for all that have been present, so thick was the vegetation (*Ibis*, 1912, pp. 565, 573).

Range. The range of the typical Waterhen (*G. c. chloropus* Linn.—Type locality: England) has not yet been thoroughly determined. In the new B. O. U. List of Birds it is evident that it has not been kept separate from the African subspecies. It breeds throughout Europe and visits north Africa in winter. It will probably be found not to extend south of Morocco. Hartert (Nov. Zool. xxiv. p. 268) accepts the following as its range: Europe generally from Norway and Russia to the Mediterranean, eastwards to Turkestan, northern Africa north of the Sahara, chiefly migrating in northern area.

G. c. brachyptera [*Stagnicola brachyptera* Brehm, Vogel-fang, 1855, p. 331—Type locality: "Mittelafrika"], on the other hand, ranges throughout Africa generally except Egypt (*cf.* C. Grant. Ibis, 1915, p. 48). It also occurs on the islands of St. Thomas and Annobon (*cf.* Ibis, 1915, pp. 116 et 233); also on the Seychelle Islands (*cf.* Hartert, Nov. Zool. xxiv. p. 268).

Fulica atra atra. Coot.

Fulica atra Linn. Syst. Nat. 10th ed. 1758, p. 152—Type locality: Sweden.

The Coot is a Winter Visitor to the islands in small numbers.

It is said by natives to have bred in the Charco of Maspalomas and probably in the pools of Arguineguin in Gran Canaria, and thus reported by von Thanner who saw two pairs there in February 1909 (Orn. Jahrb. 1910, p. 100). It is worthy of note, however, that when I visited the Charco in February 1912, I failed to identify a single bird, ideal though the conditions undoubtedly are in this district (Ibis, 1912, p. 573). The Coot is mentioned as early as 1799 by Viera in his Diccionario as occurring and breeding in Gran Canaria (*cf.* Reid, Ibis, 1888, p. 76). It was recorded from this island by Bolle, who mentions seeing it in the Léon collection (J. f. O. 1857, p. 340). Earlier than this it has been recorded from the Canary Archipelago by Webb and Berthelot in 1841 (Orn. Canarienne, p. 40). Tenerife is however the island to which the Coot usually comes, Bolle

first recording it in 1857 (*l.c.* p. 340) from the Binna collection. Savile Reid saw a bird alive in February which had been captured near Tacaronte (*Ibis*, 1888, p. 77)

Meade-Waldo believed it to be a regular winter visitor to all the islands, and records having seen several "walking about on the roofs of the houses at Orotava" (*Ibis*, 1893, p. 202). On rare occasions, as Cabrera says, it may be considered quite abundant in Tenerife. He had several skins in his collection (*Catálogo*, p. 61).

The Coot probably visits most of the other islands in the Canary group, but we only find it recorded from Hierro, Fuerteventura, and Lanzarote. The only record from Hierro is supplied by Meade-Waldo, who when he visited the island in November 1889 was shown a live Coot which had been caught a few days previously (*Ibis*, 1890, p. 431). In Fuerteventura Bolle notes that it comes to the pools formed in the rainy season (*J. f. O.* 1857, p. 340), and while in Lanzarote in 1913 I myself saw a Coot which had recently been shot in the island, in the Gonzalez collection (*Ibis*, 1914, p. 63).

Range. The Coot, which breeds throughout Europe, extending eastwards to China and Japan, visits north Africa in large numbers in winter, a few travelling as far south as the Canary Archipelago. I am not aware that any have been taken south of these islands. According to Ogilvie-Grant the Coot breeds in the Azores, and it is probable that these birds are non-migratory. Whether, on rare occasions, this takes place in the Canary Islands has yet to be proved.

Family COLUMBIDÆ.

Columba junoniæ *. Canarian Laurel Pigeon.

(*Columba laurivora* auctorum.)

Columba junoniæ Hartert, *Nov. Zool.* xxiii. 1916, p. 86—
Type locality: Palma, Western Canary group.

* I agree with Hartert that Webb and Berthelot (*Orn. Canarienne*, 1841, p. 26) renamed the Madeiran Laurel Pigeon *C. laurivora* and that this must therefore become a synonym of *C. trocaz* and can no longer be used for the Canarian Pigeon.

A Resident species.

Hab. in Archipelago.

Western Group: Palma, Gomera.

Range beyond the Archipelago.

Does not occur.

Columba bollei. Bolle's Pigeon.

Columba bollii Godman, Ibis, 1872, p. 217—Type locality: Tenerife.

A Resident species.

Hab. in Archipelago.

Western Group: Tenerife, Palma, Gomera.

Obs. Bolle's Pigeon was at one time resident in Grau Canaria, but disappeared with the laurel forest, probably about the year 1888.

Range beyond the Archipelago.

Does not occur.

Columba livia canariensis. Canarian Rock-Pigeon.

Columba livia canariensis Bannerman, Ibis, 1914, p. 270—Type locality: Gran Canaria.

A Resident subspecies.

Hab. in Archipelago.

Western Group: Gran Canaria, Tenerife, Palma, Gomera, Hierro.

Eastern Group: Fuerteventura, Lanzarote.

Outer islets: Lobos, Graciosa, Montaña Clara, Allegranza.

Range beyond the Archipelago.

Does not occur.

Streptopelia turtur turtur. Common Turtle Dove.

Columba turtur Linn. Syst. Nat. 10th ed. 1758, p. 164—Type locality: England.

The Turtle Dove is a regular **Summer Visitor** in considerable numbers to the Canary Islands.

Early writers, Ledru (1810, vol. i. p. 184), Webb and Berthelot (Orn. Canarienne, 1841, p. 28), and Bolle in his first

paper (J. f. O. 1855, p. 173) confused the Turtle Dove which came regularly to the islands with *Chalcopelia afra* (Linn.). Bolle in his last contribution (J. f. O. 1857, p. 331) corrected his mistake, but fell into the error of believing there were two species of Turtle Doves breeding in the Archipelago—*Streptopelia t. turtur* in the western group, and *Streptopelia (Turtur) senegalensis* (Linn.) in Fuerteventura.

There is, however, only one species found breeding in the Canary Islands, and this is the form here recorded. To this species the notes of all former writers must apply. I have myself camped on the Manrique's property* at La Peña, which swarms with Turtle Doves, but they are all *Streptopelia turtur turtur* as in the western islands.

The Turtle Dove arrives in the Canary Islands in spring, the first recorded date being March 13 when von Thanner noted (Orn. Jahrb. 1910, p. 98) an arrival of this species in the south of Gran Canaria, this being an exceptionally early date.

Polatzek noted (Orn. Jahrb. 1909, p. 13) the first arrivals on 2nd of April, 1902, in Lanzarote, but according to this observer these birds passed through the island, while the breeding birds followed later—probably these birds passed on to the western islands of the Archipelago.

Meade-Waldo procured birds in Fuerteventura near Santa Catarina on the 28th of March (MS. note-books); and Bolle found them especially numerous at Jandia in that island in April (J. f. O. 1855, p. 173).

Webb and Berthelot considered that the Turtle Dove did not arrive until after May or sometimes at the end of June (Orn. Canarienne, p. 28).

If this was the case between 1828 and 1830 it certainly is not so at the present day. April is probably the month when most of the breeding birds arrive.

The Turtle Dove breeds in all the large islands, but appears to be specially numerous in Gran Canaria and Tenerife; here it frequents the orchards, sheltered barrancos, and even private gardens, and builds its nest in palms,

* The estate mentioned by Bolle.

tamarisks, fruit-trees, pomegranate bushes, and once according to Polatzek (*Orn. Jahrb.* 1909, p. 13) in the peculiar *Euphorbia canariensis*.

I have taken fresh eggs in Fuerteventura on the 11th of May, and young birds just fledged and unable to fly were obtained in Lanzarote on the 26th of May, in which island the bird appears to be practically confined to the valley of Haria (*Ibis*, 1914, p. 273).

The Turtle Doves remain in the islands throughout the summer, and as the time for departure approaches they congregate in flocks. In Tenerife the doves are said to gather on the coast in large numbers. Webb and Berthelot mentioned the promontory Montaña Raja as a favourite spot upon which the Turtle Doves assembled before quitting this island (*Orn. Canarienne*, p. 28).

The birds depart in November (*Polatzek, l. c.*), but as already noted a very few are said to remain in the eastern islands through the winter. Webb and Berthelot mention having shot odd birds in every month of the year, and Meade-Waldo likewise mentions that "a few spend the winter in the eastern islands" (*Ibis*, 1893, p. 200). This may occasionally be the case, but I doubt whether it is so except on very rare occasions.

Floericke's remarks (*A. d. Heimat d. Kanarienvög.* 1905, pp. 85, 86) on the Turtle Dove are quite untrue, and the explanation of his assertion that it is a Resident bird is given by Polatzek, who has taken some pains to show up the unreliable part of Floericke's work (*Orn. Jahrb.* 1909, p. 14).

Range. The typical Turtle Dove (*S. turtur turtur*) breeds in Europe from Norway and Sweden and north Russia to the Mediterranean countries and western Asia. Many visit north Africa in winter, but it is uncertain how far down the west coast the typical bird wanders. Measurements show that the Turtle Dove of the Canary Archipelago is on the average slightly smaller than typical examples, but I agree with Dr. Hartert that this is not sufficient ground upon which to found a new race, particularly as the Canarian Turtle Dove is only a Summer Visitor and not a Resident.

Streptopelia turtur arenicola. North African Turtle Dove.

Turtur turtur arenicola Hartert, Nov. Zool. i. 1894, p. 42—Type locality: Fao (Persian Gulf).

This North African Turtle Dove is a very **Rare Visitor**, which has occurred on one occasion only in the Canary Islands. A bird was shot by myself in company with the typical species in a field near Las Palmas, Gran Canaria, on the 5th of May, 1913, and duly recorded in 'The Ibis,' 1914, p. 274.

The specimen has been twice examined by Dr. Hartert and once by Lord Rothschild, who consider it to be unquestionably an example of *S. t. arenicola* "which must have been out of its range—a straggler only."

Range. Dr. Hartert has kindly allowed me to make use of his unpublished MSS. and he accepts the following as the range of *S. t. arenicola*:—Persia, Buchara and Turkestan to Yarkand, Kashgaria, Afghanistan, Transcaspia, Palestine, Lower Egypt and rest of north Africa from Tripolitania to Morocco, south to the oases of the north-western Sahara, as far as Ghardaïa and Onargla, probably also still nesting in El-Golea. Migratory in north-west Africa but winter quarters not yet known.

Family PTEROCLETIDÆ.

Pterocles orientalis. Black-breasted Sand-Grouse.

[*Pterocles arenarius* (Pallas), anctorum *.]

Tetrao orientalis Linn. in Hasselquist's *Iter Palæstinum*, 1757, p. 278—Type locality: Anatolia (Western Asia Minor, probably near Smyrna).

A **Resident** species.

Hab. in Archipelago.

Eastern Group: Fuerteventura.

Obs. Occasionally used to be seen on the plains in the

* For reasons why *arenarius* of Pallas must be discarded in favour of *orientalis* Linn., see Hartert, Nov. Zool. xxiv. 1917, p. 284.

south-east of Gran Canaria; it does not breed there and has not been noticed since 1856 (Bolle, J. f. O. 1857, p. 332).

Range beyond the Archipelago.

Northern Africa, including the Sahara, in Mediterranean countries of Europe especially Spain and Portugal, also in south-east Russia. In Asia it occurs from Palestine to north-west India.

Family PHASIANIDÆ.

Caccabis rufa. Red-legged Partridge.

[or *Caccabis rufa australis*.

Caccabis rufa, var. *australis* Tristram, Ibis, 1839, p. 28—
Type locality: Gran Canaria.]

A Resident subspecies.

Hab. in Archipelago.

Western Group: Gran Canaria.

Range beyond the Archipelago.

C. r. australis does not occur elsewhere (if this race is accepted).

Obs. The validity of this subspecies is still in question, only more material can decide the point.

Caccabis barbara * *kœnigi*. Kœnig's Barbary Partridge.

Caccabis petrosa kœnigi Reichw. Orn. Monatsber. 1899, p. 189—Type locality: Tenerife.

A Resident subspecies.

Hab. in Archipelago.

Western Group: Tenerife, Gomera.

Eastern Group: Lanzarote.

Obs. Webb and Berthelot say that it also inhabits Hierro (Orn. Canarienne, p. 29). It has not been recorded from that island since they wrote in 1841. In Lanzarote it is very rare and is confined to one locality.

Range beyond the Archipelago.

Does not occur.

* *Caccabis barbara* (Bonnaterre) [Tabl. Encycl. et Méth. i. 1791, p. 208] is the correct specific name of the Barbary Partridge.

Coturnix coturnix coturnix. Migratory Quail.

Tetrao coturnix Linn. Syst. Nat. 10th ed. 1758, p. 161—
Type locality: Sweden.

The Migratory Quail is, as its English name implies, a **Bird of Passage** in large numbers. It is also a **Summer Visitor** and may prove to be a **Partial Resident**. Unfortunately it has been so confused with the Resident Quail that it is very difficult to arrive at the exact status which it has in the islands.

The Quail has long been known as a very plentiful species in the Canary Islands. Bethencourt speaks of "a marvellous number of Quail" and it is mentioned by Ledru in 1810 (vol. i. p. 184) from Tenerife. The older writers* did not, however, realise there are two races of the Quail in the Archipelago, the migratory and an island form which until recently has been confused with the African Quail, and their accounts therefore do not always agree. The island race has recently been named by Hartert *C. c. confisa* (Nov. Zool. xxiv. 1917, p. 423—Type locality: Madeira).

It would appear to arrive in the Archipelago very early in the spring—sometimes as soon as the end of January. According to Meade-Waldo numbers arrive in February and they begin to breed then near the coast (Ibis, 1889, p. 517).

The Quail breeds in all the large islands apparently, and according to Polatzek (Orn. Jahrb. 1909, p. 14) remains longer in the western than in the eastern group. This looks to me as if only the Migratory Quail was found in the eastern islands, the Resident Quail (*C. c. confisa*) occurring only in the western islands.

That the Migratory Quail visits Fuerteventura and Lanzarote in much larger numbers in rainy years than in dry years, is shown by von Thanner, who remarks (Orn. Jahrb. 1912, p. 221) when he visited Fuerteventura in the spring of 1912: "after the abundant rain Quails ('Wachteln')

* Meade-Waldo seems to have been the first ornithologist to realise that there were two races of the Quail in the Canary Islands (Ibis, 1889, p. 517).

which during the dry years were never seen came in great numbers . . ." Von Thanner was in Lanzarote in May 1913, and says (Orn. Jahrb. 1913, p. 189): "During our travels we always heard the Quail in the fields."

Bolle shot many in Fuerteventura on the stubble fields after the harvest which occurs there in April (J. f. O. 1855, p. 173).

Webb and Berthelot give a long account of the Quail in Tenerife. Of its migrations they observe: "Nous ne saurions assurer si la Caille est de passage aux Canaries, ou bien si elle y est réellement sédentaire. L'opinion des chasseurs de Ténériffe est partagée à cet égard. Toute fois, nous pensons qu'il en est pour cet oiseau comme pour d'autres espèces, que son émigration n'est pas générale. L'apparition des Cailles voyageuses doit avoir lieu au printemps, quoique nous ne l'ayons pas constatée"

"Le depart des Cailles pour d'autres régions s'effectue probablement au commencement de l'automne; et bien qu'elles aient abandonné à cette époque les champs labourés, on en entend chanter encore de temps en temps dans les hailliers pendant les belles journées d'hiver." (Orn. Canarienne, pp. 29, 30.)

It will be seen that these authors mention August and September as the best months for shooting them and that the departure takes place probably at the commencement of autumn. The migration from the islands is as usual not so marked as the arrival.

Bolle's notes here obviously refer to both species. He wrote (J. f. O. 1855, p. 173): "They say that part of them leave the country in winter" (this obviously refers to *C. c. coturnix*), and continues "and the rest—by far the greater number—remain" (thus referring to what must be *C. c. confisa*).

Bolle notes that the principal shooting season in Tenerife is September and October, putting it a month later than Webb and Berthelot, so that the migratory birds probably leave the Archipelago in November, being absent barely two months.

According to Meade-Waldo the Quail rears two or three beves of young in the year (Ibis, 1893, p. 201).

Von Thanner was assured that the Quails left the island of Fuerteventura directly after breeding but returned again in the autumn (Orn. Jahrb. 1905, p. 62). This may refer to *C. c. confisa* only.

Whether some of the typical birds remain in the Archipelago during the entire winter is not yet known, but I should think it highly probable that such is the case, especially as the resident birds (*C. c. confisa*) probably interbreed with the migratory, as instanced by birds which I obtained at Firgas in Gran Canaria in June 1913 (Ibis, 1914, p. 292).

In dealing with the migrations of the Quail in the Canaries we must bear in mind the fact that the resident form has been greatly confused with the Migratory Quail, and also that local migration of the resident form may take place between the islands and thus add to the confusion. Specimens must be shot and preserved from all the islands at all seasons before we can safely write about the migrations of this species.

Range. Hartert has recently gone very fully into the question of the races of *Coturnix coturnix* (Nov. Zool. xxiv. 1917, pp. 420-425). He accepts the following for the range of the typical Migratory Quail: "Europe to Yenesey and Lake Baikal, south to Morocco, Algeria, Tunisia, Egypt, and Persia, also in small numbers nesting in north-west India, wintering chiefly in northern tropical Africa south of the Sahara (south to Gambia and Abyssinia), in Arabia and India."

It will be a stream of the birds which pass down the west coast of Africa to Gambia, which pass regularly through the Canaries on migration.

Coturnix coturnix confisa. Quail.

Coturnix coturnix confisa Hartert, Nov. Zool. xxiv. 1917, p. 423—Type locality: Madeira.

A Resident subspecies.

Hab. in Archipelago.

Western Group: Gran Canaria, Tenerife, Palma, Gomera, Hierro.

Eastern Group: Doubtful if occurs.

Obs. The status of the Resident Quail in the Canaries is very difficult to determine. It has until recently been confused with *C. c. africana* and by all the older writers with *C. c. coturnix*.

Whether or not it occurs in the eastern Canary Islands I have been unable to determine. My own opinion is that it is probably confined to the higher western islands. Proof of this is wanting. The question is more fully dealt with under the preceding species.

Range beyond the Archipelago.

Madeira.

[To be continued.]

III.—*Notes on the Birds of Quetta.*

By Colonel R. MEINERTZHAGEN, M.B.O.U.

(Plate I.—Map.)

THE following notes represent an endeavour to bring up to date the list of birds that have been obtained at or near Quetta at various times. During a residence of nearly two years I had frequent opportunities of visiting almost every portion of the country in the vicinity, and of making the small collection which forms the basis of these notes.

Quetta lies in the highlands of Baluchistan, and though the larger part of the surrounding country is waterless and bare, there are many spots, not only in the hills but in the plains, where thick forest, mountain torrents, fern-clad ravines, and other attractive localities exist.

In the plains, the rivers have cut for themselves deep marshy beds in the soft alluvial soil. In and at the base of the hills nearly all the river-beds are dry, only to contain raging torrents after heavy rain. The huge masses of mountains, rising to over 11,000 feet in places, are covered with juniper, wild briar, and other vegetation, whilst round