

*Neophron percnopterus*. Egyptian Vulture.

*Neophron percnopterus* (Linn.); Bannerman, Part I. pp. 44, 50, 56, 58, 61, 66, 78, 87, 89.

The Egyptian Vulture is not nearly so plentiful in the eastern group of the Canary Islands as it is in Gran Canaria or Tenerife. In Fuerteventura and Lanzarote it was sparingly distributed throughout both islands — by “sparingly” I mean that it would be unusual to see more than two or three pairs in a day’s march, while in Gran Canaria it is seldom indeed that two or more birds are not constantly in sight wherever one may happen to travel.

In Graciosa a single bird used to haunt the largest crater. I do not believe that any breed there, the precipitous cliffs known as “El Risco,” on the adjoining island of Lanzarote, proving far more attractive to their requirements.

In Montaña Clara a pair certainly appeared to be resident, on which island the birds had plenty of opportunities of choosing a suitable nesting-site where they would be undisturbed.

The island of Allegranza also possessed a single pair of these Vultures at the time of our visit.

An immature bird was obtained in Fuerteventura.

Bill pale horn-colour; iris dark hazel; feet dirty flesh-colour; head and neck pale chrome.

*Pandion haliaëtus haliaëtus*. Osprey.

*Pandion h. haliaëtus* (Linn.); Bannerman, Part I. pp. 61, 66, 78, 82, 86.

The Osprey is often seen round the coasts of all the eastern islands. It breeds in all the members of this group with the possible exception of Graciosa, where, however, it has been known to nest, although there are no high cliffs in this island. A pair was resident on Montaña Clara, and we watched their marvellous evolutions every day. This pair is said to nest on the north-west cliffs of the island (*vide* Part I. Plate III. fig. 2).

When I landed on the West Rock two Ospreys sailed out

from a crevice overhead, but I could not find any remains of a nest on this wave-lashed heap of lava.

In Allegranza the Osprey is resident and breeds on one of the smaller volcanoes.

No specimens were procured.

*Ardea cinerea.* Common Heron.

*Ardea cinerea* Linn. ; Bannerman, Part I. pp. 46, 87.

The Common Heron is resident in the Canary Islands, but I do not know whether it breeds anywhere in the eastern group as undoubtedly it does in some of the western islands. I only met with this bird on one occasion, when I surprised a Heron feeding on the reefs at Toston in Fuerteventura. Herons are recorded from both the larger islands.

A single bird was observed on Allegranza.

No specimens were procured.

*Phœnicopterus roseus.* Flamingo.

*Phœnicopterus roseus* (Pall.) ; Bannerman, Part I. p. 57.

The Flamingo has almost certainly visited the island of Lanzarote, for the native fishermen living near the Lago Januvio described to me a bird which could only have belonged to this species. Meade-Waldo saw the undoubted remains of one of these birds in the eastern Canary Islands. Other interesting Waders which have occurred in Lanzarote, but which I could hardly hope to meet with in so hurried a journey, are *Platalea l. leucorodia*, *Machetes pugnax*, *Himantopus himantopus*, *Recurvirostra avosetta*, *Limosa limosa*, and *Limosa l. lapponica*, stuffed examples of which were seen in a private collection of Lanzarote birds at Arrecife (*vide* Part I. pp. 62-63).

No specimens were procured.

*Thalassidroma pelagica.* Storm Petrel.

*Thalassidroma pelagica* (Linn.) ; Bannerman, Part I. p. 78.

A Storm Petrel was taken by one of my boatmen in a cave in Montaña Clara on the 9th of June. This is the first record of *T. pelagica* being taken *on land* in the Canary Archipelago. The testes of this specimen were very large,

and it appears highly probable that the bird had come ashore to breed. The local name of the Storm Petrel is "Alma Mestre," which probably equally applies to any of the small members of this family. For a further account see reference given above.

The Rev. F. Jourdain has drawn my attention to the fact that there are three eggs in the British Museum from the Tristram collection which were obtained on the "Desertas," off Madeira in the year 1849, probably taken by Dr. Frere. Mr. Jourdain rightly remarks that this is a highly interesting and little-known extension of the recognised breeding-range of this Petrel, and this fact lends colour to my theory that *T. pelagica* was breeding on Montaña Clara.

An example was obtained from Montaña Clara.

Bill black; iris dark hazel; feet black.

***Puffinus assimilis baroli*.** Little Dusky Shearwater.

*Puffinus assimilis baroli* Bonap.; Bannerman, Part I. pp. 64, 66, 79, 87.

*Puffinus baroli* Bonaparte, Consp. Gen. Av. 1856, p. 204.

*Puffinus obscurus* Gm.; Ogilvie-Grant, Ibis, 1890, p. 444.

*Puffinus assimilis* Gould; Ogilvie-Grant, Ibis, 1896, p. 50; Boyd Alexander, Ibis, 1898, p. 98.

*Puffinus obscurus bailloni* Bonap.; Rothschild & Hartert, Nov. Zool. vi. 1899, p. 196.

*Puffinus bailloni* Bonap.; Godman, Mon. Petrels, 1908, p. 138.

*Puffinus godmani* Allen, Auk, 1908, p. 339.

*Puffinus obscurus atlanticus* Rothschild & Hartert, Bull. B. O. C. xxvii. 1911, p. 43.

*Puffinus assimilis baroli* Bonap.; Mathews, Birds of Australia, vol. ii. 1912, p. 54.

Considerable confusion has taken place over the name of the Little Dusky Shearwater inhabiting the Canary Island seas. Old writers on the birds of the Canary Islands, such as Webb and Berthelot ('Ornithologie Canarienne,' 1841), Bolle (J. f. O. 1855), and later Godman (Ibis, 1872, p. 223),

Savile Reid (Ibis, 1888, p. 80), and Meade-Waldo (Ibis, 1890, p. 437; 1893, p. 207) all used for this Shearwater the name of *Puffinus obscurus*, but *P. obscurus* Gm., according to Godman, ranges from the islands of the Pacific Ocean to the Mascarene Islands, and therefore cannot be used for the Atlantic form of this Shearwater.

In 'The Ibis' for 1890, Ogilvie-Grant, writing on the birds obtained at Madeira, Deserta Grande, and Porto Santo, again refers to this Shearwater as *Puffinus obscurus*, although he corrects this statement later in 'The Ibis' for 1896, p. 50, where this and the bird from the Salvage Islands is said to be *Puffinus assimilis* Gould. In this decision he is followed by Boyd Alexander, who designates *Puffinus assimilis* as breeding in the Cape Verde Islands (Ibis, 1898, p. 98). Rothschild and Hartert pointed out (Nov. Zool. 1899, vi. p. 196), that the birds from Madeira are *not* the same as *P. o. assimilis* from the Australian and New Zealand Seas. They therefore adopted (with reserve) the name *Puffinus obscurus bailloni* Bonap., noting, however, that perhaps this Shearwater of the Atlantides required to be renamed. Hartert, however, keeps up this name in the Nov. Zool. 1901, p. 332, and 1905, p. 99.

Godman, in the 'Monograph of the Petrels,' 1908, p. 138, follows Rothschild and Hartert in calling this species *Puffinus bailloni*, but points out that the name *bailloni* was given by Bonaparte to a bird from *Mauritius* ("Isle de France") and therefore becomes synonymous with *Puffinus obscurus* Gm. He does not, however, give a new name to the north-east Atlantic form.

Allen, reviewing Godman's 'Monograph of the Petrels' (Auk, 1908, p. 339), seeing that Godman had noted the differences between the Madeiran and Mauritius Shearwater, named the former *Puffinus godmani* without seeing the specimens. Rothschild and Hartert, having discovered that the north Atlantic bird differed from that from the Seychelles, came back to the question and, ignorant of Allen's action, named the north-east Atlantic bird *Puffinus obscurus*

*atlanticus* (Bull. B. O. C. xxvii. 1911, p. 43). Recently Mathews, writing on *Puffinus assimilis assimilis* ('Birds of Australia,' vol. ii. p. 54), has shown that Bonaparte named the Shearwater from Madeira and the Canary Islands *Puffinus baroli* (Compt. Rend. xlii. 1856, p. 769; id. Consp. Av. 1856, ii. p. 204) and has thus cleared up the matter satisfactorily\*.

Very few *adult* specimens of this Shearwater from the Canary Islands are to be found in collections. It is not therefore possible to critically compare it with examples from the type locality. It has recently been shown that the birds from the Cape Verde Islands are distinct, and it will be interesting to compare a series from the Canary Islands, when such is available, with a series from Madeira.

During the Expedition the Little Dusky Shearwater was met with for the first time on the island of Montaña Clara. A complete account of this bird is given in Part I. of this paper (p. 79).

A series of nestlings was obtained illustrating the way in which the down is cast as the bird advances in age. This was the only island upon which we found them. They are known to the natives by the name of "Tahoce."

A series of this Shearwater was obtained from Montaña Clara.

Bill lead-colour, culmen black; iris dark hazel; back of tarsus, outer toe, and sole black; two inner toes and webs livid flesh-colour, more dusky on the webs.

Two eggs only were procured on the 8th of June.

In comparison with the egg laid by *Bulweria bulweri* that of *P. a. baroli* is decidedly large for the size of the bird.

In colour it is white with practically no gloss; the two eggs measure 48.5 × 33.5 and 49 × 34 mm.

\* While on this subject it may be as well to point out that the birds obtained in the Cape Verde Islands by Boyd Alexander (*vide supra*) are *not* of the same species as the Madeira and Canary Island form. Mathews ('Birds of Australia,' vol. ii. p. 70) has named this Shearwater *Puffinus herminieri boydi*.

*Puffinus kuhli flavirostris.* Yellow-billed Shearwater.

*Puffinus k. flavirostris* (Gould) ; Bannerman, Part I. pp. 61, 64, 66, 67, 68, 69, 70, 80, 82, 84, 87, et Bull. B. O. C. xxxiii. 1913, pp. 56-57.

A very large series of this Shearwater was obtained, all adult breeding birds. The differences which exist between this and the Mediterranean form *P. k. kuhli* have been clearly set forth by Dr. Hartert and Mr. Ogilvie-Grant (Nov. Zool. 1905, p. 97), and need not be enlarged upon. The following points in the series which I obtained are worthy of note :— It has already been remarked that the sex of this Shearwater can be accurately told when the bird is alive by the size of the bill and tarsus. The following measurements give the relative length of 25 male and 15 female examples :—

Bill, ♂ 53-57 mm.

„ ♀ 50-53·5 (many beaks measure 53 mm., but one example has an abnormally long bill of 55 mm.).

Tarsus, ♂ 56-58·5 mm.

„ ♀ 51-54·5 mm.

Wing, ♂ 337-374 mm.

„ ♀ 344-367 mm.

But more important than the actual length is the relative build of the bill and tarsus, that of the male being much heavier and stouter than that of the female.

For a complete account of the nesting habits, distribution, etc., of this species in the eastern Canary Islands see Part I. p. 66.

The Yellow-billed Shearwater swarmed on all the smaller islets and rocks of the eastern group, but was particularly numerous on Graciosa and Montaña Clara. It also nests, according to the natives, at the foot of El Risco in Lanzarote, but I did not have an opportunity of verifying this statement. In Fuerteventura Polatzek found it breeding “in a crater near the mountains of Oliva about eight kilometres from the sea-coast”; the same observer records a nesting colony “within an hour’s journey to the north-west of Yaiza,” in Lanzarote.

There is also a large colony on the island of Lobos. The natives call this Shearwater “Pardela.”

A large series of birds was obtained from the islands of Graciosa, Montaña Clara, Roque del Oeste, and Allegranza. A description of each of these islands with their various nesting colonies is given in Part I.

Bill pale yellowish horn-colour; iris dark hazel; feet pale flesh-colour, outer toe and webs dusky.

A series of 53 eggs was obtained from the four islands mentioned above between May 28 and June 14.

As this large series offers exceptional opportunities for comparison with the egg of *P. kuhli kuhli*, I have given detailed measurements. When first laid they are pure white in colour; a great variety of shapes are exhibited in the series.

79 × 51, 69·5 × 47, 75 × 46, 78 × 49·5, 75 × 51, 70 × 47·5, 72 × 51, 76 × 50, 72·5 × 50·5, 75 × 49·5, 73·5 × 51, 73 × 52·5, 69·5 × 51, 74 × 50·5, 75 × 50, 70 × 48, 66 × 47, 75·5 × 49, 81 × 48, 77 × 50, 75 × 50, 78·5 × 47, 79 × 50·5, 69 × 49, 82 × 50·5, 78 × 49, 77·5 × 49, 70 × 50, 74 × 49, 75 × 51, 73·5 × 53, 77·5 × 51, 77·5 × 50, 83 × 48, 76 × 48, 73 × 50, 78 × 48, 71 × 49·5, 77 × 47·5, 75 × 49, 74 × 50, 74·5 × 51, 73·5 × 51, 70·5 × 49·5, 74·5 × 47, 78·5 × 50 mm.

*Bulweria bulweri*. Bulwer's Petrel.

*Bulweria bulweri* (Jard. & Selby); Bannerman, Part I. pp. 74, 80.

A fine series of adult birds was obtained. It is not possible in the case of this species to tell the sex of the bird from external appearances, as is the case with *P. k. flavirostris*. The most important measurements of the specimens which I obtained are as follows:—

Bill, ♂	20·5-23	mm. (exposed part of culmen).	22	birds	examined.
"    ♀	20·5-21	"    "    "    "	4	"    "	"
Tarsus, ♂	25·5-28	"    "    "    "	22	"    "	"
"    ♀	26·5-27·5	"    "    "    "	4	"    "	"
Wing, ♂	187-205	"    "    "    "	(average of 24 birds—196·5 mm.).		
"    ♀	191-200	"    "    "    "	(average 195·5 mm.).		

Bulwer's Petrel resorts in the eastern Canary group to the little island of Montaña Clara to breed (Ibis, 1914, p. 80).

We did not discover it on any of the other outlying islets visited. Notes on the habits of this Petrel are given in Part I. (*vide supra*).

A large series of birds was procured from Montaña Clara.

Bill black; iris dark hazel; feet pale flesh-colour, outer toe and webs dusky.

Eighteen eggs were obtained, pure white in colour with an unglossed surface.

The measurements of 14 of this series are: 45·5 × 33, 42 × 30·5, 44 × 31, 43 × 30, 43 × 32·5, 44 × 31·5, 41·5 × 30, 41·5 × 28·5, 41·5 × 31, 42 × 31, 43 × 31, 42 × 30, 43 × 30·5, 42 × 31 mm.

*Puffinus puffinus puffinus* (Brünn.). The Manx Shearwater.

Bannerman, Part I. p. 85.

*Pelagodroma marina hypoleuca* (Webb & Berth.). The North Atlantic Frigate Petrel.

Bannerman, Part I. p. 83.

*Oceanodroma castro* (Harcourt). The Madeiran Petrel.

Bannerman, Part I. p. 85.

*Oceanodroma leucorhoa* (Vieill.). Leach's Fork-tailed Petrel.

Although all of the above species are from time to time found in the Canary Island seas, not one of them was met with during the Expedition. In the first part of this paper (for pages see above) I discussed the likelihood of the first three of the above species ever having bred in the Canary Archipelago. I am of opinion that *Puffinus p. puffinus* has ceased to breed in the group, or rather that we cannot now consider it to be a breeding bird until fresh satisfactory evidence is forthcoming.

There is no evidence whatsoever that *Pelagodroma m. hypoleuca* or *Oceanodroma castro* has ever been known to breed on any of the Canary Islands proper. (Both species breed on the Salvage Islands, distant 100 miles from the nearest point.)

As to *Oceanodroma leucorhoa* (Vieill.), we are told by



Herr von Thanner (Orn. Jahrb., 1913, p. 193) that *Thalassidroma leucorrhoa* (Vieill.), the "Alma mestre," according to the fishermen (italics mine) breeds especially on Montaña Clara.

Now unless Herr von Thanner has definite proof in the shape of specimens or eggs, which apparently he has not, that the bird in question is undoubtedly *O. leucorrhoa*, we must not accept the statement of the fishermen. It is very unlikely, although they are often excellent observers, that the fishermen distinguish between such species as *O. leucorrhoa*, *O. oceanicus*, *O. castro*, etc. As a matter of fact, during my stay of seven days on Montaña Clara we did not discover a single specimen of *O. leucorrhoa*. One of my fishermen, however, captured in a cave a small Petrel which he brought to me and called the "Alma mestre" (the same nickname used for *O. leucorrhoa* by Herr von Thanner). This bird was the Common Storm Petrel (*Thalassidroma pelagica* Linn.), which surely proves that the statements of the fisher folk must be carefully verified before being put into print.

*Podiceps nigricollis nigricollis*. Black-necked Grebe.

*Podiceps n. nigricollis* Brehm; Bannerman, Part I. p. 57.

While encamped on the shores of the Lago Januvio in Lanzarote, a small flock of Black-necked Grebes visited the lake. They did not remain for long, and none were obtained. A rare migrant to the Canary Islands, very few records of this species are forthcoming. This species has a very wide range extending throughout Africa, so that it is not surprising that it should occasionally visit the Atlantic islands. Records have even been made of its visiting the Azores.

No specimens were obtained.

*Columba livia canariensis*, subsp. nov. Canarian Rock-Dove.

*Columba livia livia* Gmelin; Bannerman, Part I. pp. 46, 71, 81, 87, 89.

An examination of a series of Rock-Doves from the Canary Islands has convinced me that we can no longer

unite them with *Columba livia livia*, with which up till now they have been considered identical. In fact, it will be noted that in Part I. of this paper I referred to the Rock-Dove as *C. livia* throughout. I had not then had time to examine the material which is now available, and which has induced me to alter my opinion since I wrote on the Birds of Gran Canaria.

As Rock-Doves more than most birds are susceptible to "wear and tear," it is necessary to have a complete series to deal with; moreover, all over the world they are inclined to mate with domestic "fancy" Pigeons and thus bring in a hybrid strain which eventually ruins the pure breed. This has undoubtedly occurred in the Azores, where a very remarkable race of Rock-Dove is to be found. In the Canary Islands, however, we have a bird, which although showing marked differences from the typical race, does not exhibit any trace of "crossing," and which is remarkably constant in the characters which I have assigned to it. The main differences, which at once catch the eye, are that the Canarian form is decidedly darker than Rock-Doves from Europe or northern Africa, that they are smaller in size than *C. livia livia*, and that they have not the pure white lower back which is so conspicuous a feature in typical examples of the Rock-Dove.

I therefore propose to name the Canarian race *Columba livia canariensis*, subsp. nov.

Type ♀. Cueva de las Ninas, Pinar Pajonal, Gran Canaria, 24. i. 10. [Coll. D. A. Bannerman.]

Culmen 21.5, wing 206, tarsus 29 mm.

*Habitat.* All the islands of the Canary Archipelago.

*Columba l. canariensis* differs from *Columba l. livia* in having

1. The colour of the plumage darker throughout; practically no variation is shown in a series of twelve examples.
2. The feathers of the rump light grey; a certain amount of variation takes place, but *C. l. canariensis* never exhibits the broad white rump of typical examples of *C. l. livia*.

3. The size is smaller. In 12 specimens the wing-measurements vary from 200–220 mm., and in 13 examples of *C. l. livia* from the British Islands and southern Europe the wings measure from 217–232 mm.

(When *alive* the birds strike one throughout as being a distinctly smaller race.)

As already mentioned, there is no trace of hybridism in birds from the Canary Islands, and they appear to be a perfectly definable race, of which the characters noted are always constant. *C. l. canariensis* is in my opinion more closely allied to *C. l. schimperi* than to *C. l. livia*.

*Columba l. canariensis* differs from *C. l. schimperi* from north Africa, south Arabia, and Nubia in having

1. The general colour throughout decidedly darker.
2. The lower back light grey instead of slate-grey.

In size the two subspecies are similar.

Seven birds from the above localities have wing measurements of 198–221 mm.

Specimens from Palestine, *Columba l. palestinae* Zedlitz, have the light upper parts of *C. l. schimperi* but have the lower back *white*, and in size they are apparently slightly smaller.

Mr. Stuart Baker ('Indian Pigeons and Doves,' p. 131) believes that the Indian Blue Rock Pigeon (*Columba livia intermedia*) extends through Persia, Arabia, Egypt and northern Africa as far west as Tunis, and he does not recognise *C. l. schimperi* Bonap. or *C. l. palestinae* Zedlitz. In these conclusions I do not agree with him, as I certainly consider the light north African form is a perfectly distinct subspecies. I have only a few examples from Palestine, but these appear to bear out the characters assigned to this subspecies.

Rock-Doves are found in all the eastern islands of the group; they were generally met with in the region of the coast but in much smaller numbers than in Gran Canaria, where they abound.

In Fuerteventura we first found them inhabiting the sea-cliffs at Toston, where they would come in to roost in the evenings, spending the day on the miserable patches of corn. In the cliffs which fringe the shore from Toston to La Peña hundreds of these birds breed. As in Gran Canaria, they also frequent caves in the interior. In a casual journey across the island very few are met with. The same state of things exists in Lanzarote; their stronghold in this island is the steep precipice, 1500–2000 feet in height, bordering the coast from Monte Famara to Punta Fariones. I did not discover any exceptionally large inland resorts, but doubtless some exist in remote parts of the island. In Graciosa several pairs lived amongst the sand-hills in the north of the island, while on Montaña Clara and Allegranza a very few were noted. In the former island they are evidently considerably harried by the Peregrine Falcons.

A small series was obtained from Fuerteventura, Lanzarote, and Graciosa.

Bill dark horn-colour; iris dark orange-yellow; feet crimson.

*Streptopelia turtur turtur.* Turtle Dove.

*Streptopelia t. turtur* (Linn.); Bannerman, Part I. pp. 48, 60.

Summer migrants to the Canary Islands, Turtle Doves were found breeding very plentifully in the fertile barranco de la Peña. They are doubtless found in all such places where there is water and where palm trees and tamarisks are found in which to nest. With the exception of Gran Tarajal this was the only place of the kind which I came across in Fuerteventura, and consequently was the only occasion on which I met with the bird in this island. A nest was found on May the 11th, in La Peña barranco, built in a low tamarisk; it contained two fresh eggs, which measure  $30 \times 22$  mm.

In Lanzarote none were seen until we reached Haria, when a pair of nestlings were brought to me from a neighbouring village. I did not see any Turtle Doves in the south of Lanzarote, where I expected to meet with them in the

cultivated districts of Yaiza and Uga. If they breed there they are by no means common.

A small series was obtained from Fuerteventura and Lanzarote.

Bill dark horn-colour; iris dark yellow, eyelids reddish; feet crimson.

*Note.*—It will be noted that the Turtle Doves from the eastern Canary Islands which I found breeding in the barranco de la Peña belong to the typical form *Streptopelia turtur turtur*. While in Gran Canaria I shot, on May the 5th, amongst examples of the above, a single specimen of the Pale Turtle Dove, *Streptopelia turtur arenicola* Hartert, Nov. Zool. i. 1894, p. 42.

This subspecies is found in north-west Africa, and was the only form met with by Dr. Hartert during his recent journey in the Sahara, *vide* Nov. Zool. xviii. 1911, p. 543. The type was originally described from Fao on the Persian Gulf, and its occurrence in the Canary Islands is of special interest.

*Pterocles arenarius*. Black-bellied Sand-Grouse.

*Pterocles arenarius* (Pall.); Bannerman, Part I. pp. 43, 49, 51, 52, 54, 88, and 89.

The Sand-Grouse is particularly numerous on the extensive plains above Puerto Cabras, where large numbers were seen. A description of the way in which these sporting birds are shot at their drinking-places is given in Part I. p. 54. In the north of Fuerteventura, where they appear to be very rare, we only met with one small flock between Oliva and Toston; they again became plentiful when the central plains were reached. In the actual neighbourhood of Antigua they did not appear to be as common as they are said to be further south.

None were seen in Lanzarote, and I do not believe the bird is resident in this island; it is entirely absent from the smaller islets.

A small series was obtained from Fuerteventura.

Bill whitish horn-colour; iris almost black; feet greenish brown, scales dirty white.

Two clutches of eggs were obtained : a marked difference existed between them, the one having a totally different ground-colour and markings from the other. Both were obtained in Fuerteventura.

Clutch A. Two eggs brought into camp by boys at Antigua, 15. v. 13.

Clutch B. Two eggs said to have been taken at Tuineje in June ; these contained well-developed chicks.

In clutch A the ground-colour is very pale coffee-colour, the general effect showing a yellowish tinge ; the overlying markings may be described as ill-defined suffused blotches of yellowish-brown and umber-brown. One egg in particular is more heavily marked than the other ; there seems to be no tendency for the markings, which are evenly distributed over the shell, to be gathered round the poles.

In clutch B the ground-colour is creamy white in one egg, pale buff in the other ; each is spotted and speckled unevenly with umber-brown and pale rufous with underlying blotches of stone-colour. In this clutch, as in the former, one egg is more heavily marked than the other.

Measurements of the four eggs are :— $48 \times 32.5$ ,  $44.5 \times 34$ ,  $49.5 \times 32$ ,  $46.5 \times 30.5$  mm.

*Ædicnemus œdicnemus insularum*. Eastern Canary Islands' Thick-knee.

*Ædicnemus œ. insularum* Sassi, Orn. Jahrb. 1908, p. 32 ; Bannerman, Part I. pp. 44, 58, 61, 71, 84, 87, 89.

When engaged in working out a collection of birds from Gran Canaria I was unable to identify specimens from that island and from Tenerife with Dr. Sassi's description of *Æ. œ. insularum*. During my recent expedition I collected a series of ten birds from the islands of Fuerteventura, Lanzarote, Graciosa, and Allegranza. On comparing this series with examples from the western islands, I saw at once that they were different and that *Æ. œ. insularum* Sassi must be upheld.

The ten examples of *Æ. œ. insularum* which I obtained in the islands mentioned, when compared with typical *Æ. œ.*

*ædicnemus*, are all slightly more sandy rufescent in the colour of the upper parts ; they are also more heavily streaked on the underparts, but the most pronounced difference is in the size, the wing-measurements varying from 220–232 mm. as against wing-measurements in eight British killed specimens of *Æ. æ. ædicnemus* of 233–250 mm.

Upon examining a series of Thick-knees from the western group it was noticeable that birds from these islands show a marked difference from *Æ. æ. insularum* as well as from *Æ. æ. ædicnemus*.

From *Æ. æ. insularum* they are distinguished by

1. Having the upper parts much darker.
2. By lacking the sandy rufescent tinge.
3. Being lighter on the underside.

From *Æ. æ. ædicnemus* they differ in being

1. Darker on the upper parts (the dark centres to the feathers being broader).
2. Lighter on the underparts (especially in birds from Gran Canaria).
3. Smaller in size.

In my paper on the Birds of Gran Canaria I gave a description of the Thick-knees which I obtained in this island and which were remarkable for their almost pure white underparts, the markings upon the breast and flanks being in consequence much bolder. Other differences are also noted ('Ibis,' 1912, p. 584)\*. I therefore propose

\* At the time when I wrote this paper I was very doubtful whether birds from Tenerife could be separated from *Æ. æ. ædicnemus*. A single bird shot in Tenerife in December 1887 appears to be very different from the rest of the series. It is very large in size, with a wing-measurement of 250 mm., and in colour is sandy-rufescent. It agrees exactly with examples of *Ædicnemus* in the British Museum from Egypt. Whether these are typical examples I am not prepared to say ; those which I have examined are relatively larger and more rufescent in colouring than British-killed examples of the Thick-knee. It seems probable that the large bird shot in Tenerife by Mr. Meade-Waldo was a migrant from the mainland ; it is not, however, *Æ. æ. saharae*, but may be a central Saharan form (see remarks by Hartert, Nov. Zool. 1913, p. 68).

to name the form inhabiting the western Canary group, *Œdicnemus œdicnemus distinctus*, subsp. nov. Type in the British Museum: ♀ ad. Las Palmas, Gran Canaria, 12. ii. 12. [Coll. D. A. Bannerman.]

Thick-knees (*Œ. œ. insularum*) were met with in all the eastern Canary Islands visited with the exception of Montaña Clara and the East and West Rocks. They were quite common though more often heard than seen, and were breeding in all the islands.

A series was obtained from Fuerteventura, Lanzarote, Graciosa, and Allegranza.

The following clutches of eggs were taken of *Œ. œ. insularum* :—

1. Two eggs, Antigua, Fuerteventura, 15. v. 13.
2. Two eggs, Haria, Lanzarote, 26. v. 13.
3. Two eggs, Haria, Lanzarote, 26. v. 13.
4. One egg, Haria, Lanzarote. Obtained by a native; no date.
5. Two eggs, Isla Graciosa; one egg found 3. vi. 13, the other taken from oviduct of a female shot on same date.

The eggs, which in several cases are particularly handsome, vary much in size and markings, the ground-colour being either rich buff or greenish buff; in no case was an egg found having a very pale-coloured ground.

The measurements of eight of the above eggs are:— $48 \times 37$ ,  $48.5 \times 36$ ,  $52 \times 38$ ,  $35 \times 35.5$ ,  $54 \times 35$ ,  $48.5 \times 37.5$ ,  $50 \times 38$ ,  $53 \times 38$  mm.

*Cursorius gallicus gallicus*. Cream-coloured Courser.

*Cursorius g. gallicus* (Gmelin); Bannerman, Part I. pp. 43, 44, 45, 46, 51, 52, 54, 57, 89.

A series of immature examples was obtained which clearly show the phases of plumage which the Cream-coloured Courser passes through before assuming that of the adult. The first stage which the fully fledged young exhibit is shown by a bird shot on May the 20th, which was in company with



its parents. This specimen has the feathers of the crown, entire upper parts, wing-coverts, scapulars, and rump barred with black. The black line running from behind the eye towards the nape, which is so marked a feature in the adult, is very short and narrow in the young. From above the eyes a broad isabelline band joins its fellow on the nape, which in the adult is pure white. Moreover, there is no trace of the bluish-grey hind-crown, and the underparts are a shade darker in colour than in the adult bird.

The next stage which is reached is seen in a bird (of an earlier brood), shot on May the 16th, which has begun to lose the bars on the feathers of the upper parts, and in consequence has a very patchy appearance. The principal change has taken place on the head, which is several shades lighter than in the younger bird. The black stripe from behind the eye is now more pronounced, and the broad isabelline band from above the eyes to the back of the nape has changed to white. The feathers of the hind-crown are becoming bluish-grey and the concealed black nape-patch is just appearing. The fore part of the crown still retains the speckled appearance of the young, but immediately in front of the grey hind-crown the sandy rufous feathers of the old bird have been assumed. The underparts are similar to the adult.

During my journey in Fuerteventura Coursers were not seen in the numbers which I had expected, but it must be remembered that I did not visit the large plain surrounding Tuineje in the south of the island, where they are said to be more numerous than elsewhere. They were met with on the plains above Puerto Cabras, between Oliva and Toston, and again in the neighbourhood of Antigua, but never in very large numbers.

In Lanzarote they were seen on only two occasions, in the desolate country near Januvio.

None were found on the smaller islets, but von Thanner saw a pair on Graciosa which had doubtless flown over from Lanzarote.

A small series was obtained from Fuerteventura and Lanzarote.

Bill dark horn-colour; iris dark hazel; feet creamy-white.

Two eggs were obtained which had been taken earlier in the year.

In colour they harmonize exactly with the ground upon which they are laid. The specimens obtained in no wise differ from the description given in the 'Catalogue of Eggs,' and measure  $35 \times 27$  mm.

*Glareola pratincola pratincola.* Collared Pratincole.

*Glareola p. pratincola* (Linn.); Bannerman, Part I. pp. 58, 63.

The Collared Pratincole is an occasional wanderer to the shores of the Canary Islands. It is, however, a distinctly rare visitor, at any rate, to the western group. Meade-Waldo records only two during his sojourn in the islands. I am inclined to believe that it is of more regular occurrence in Fuerteventura and Lanzarote, which would naturally be the first land sighted. I met with a pair on the wide plain bounded by the sea outside the town of Arrecife. A very high wind was blowing at the time. Later I saw an example of this species in the possession of Snr. Don Gonzalez y Gonzalez of Arrecife which had been shot close to that town. Herr von Thanner records four of these birds as having been seen outside Arrecife on the 7th of May, 1913, one of which had been shot.

A pair was obtained from Lanzarote.

Bill dark horn-colour, gape orange-red; iris dark hazel; feet greenish brown.

Testes and ovary small. Crop contained beetles.

*Hæmatopus niger meadewaldoi.* Meade-Waldo's Black Oystercatcher.

*Hæmatopus niger meadewaldoi* Bannerman, Bull. B. O. C. xxxi. 1913, p. 33; Bannerman, Part I. pp. 45, 46, 71, Plate VI.

*Hæmatopus niger* Cuv.; Webb & Berthelot, Ornithologie Canarienne, 1841, p. 33.

*Hæmatopus niger* Temm.; Bolle, J. f. O. 1855, p. 175.

*Hæmatopus moquini* Bonap.; Bolle, J. f. O. 1857, p. 337; Godman, Ibis, 1872, p. 220; Kœnig, J. f. O. 1890, p. 297; Hartert, Nov. Zool. 1901, p. 332; Thanner, Orn. Jahrb. 1905, p. 64; 1908, p. 213; Polatzek, Orn. Jahrb. 1909, pp. 21, 208.

*Hæmatopus capensis* Licht.; Meade-Waldo, Ibis, 1889, pp. 13, 508; 1904, p. 437; 1893, p. 204.

*Hæmatopus niger* Meade-Waldo!; Thanner, Orn. Jahrb. 1913, p. 189.

As I have figured this Oystercatcher in the first part of this paper (Plate VI.), I have thought it advisable to include the short original description which appeared in the 'Bulletin of the British Ornithologists' Club,' especially as it has recently been misquoted in the 'Ornithologische Jahrbuch.'

"*Hæmatopus niger meadewaldoi* Bannerman.

"Similar to *H. niger niger* Temm., but decidedly smaller, particularly as regards the measurement of the wing, but with the culmen conspicuously longer and the tarsus more slender. The basal portion of the inner webs of the primaries is white, forming a large patch, partially concealed by the under wing-coverts. In *H. niger niger* there is scarcely any white at the base of the quills, though the primaries become lighter towards the base"\*.

\* By referring to Plate VI. it will be seen that in the figure a faint wing-patch is visible, caused by the median portion of the outer webs of the primaries being whitish. At the time when I described this Oystercatcher I had only three birds in the brownish plumage to examine. I therefore hesitated to include this peculiar patch as a regular character. I have since procured myself an adult male example in the full glossy-black breeding-plumage, which is the specimen figured, and, as can be seen in the painting, the patch is most marked. I conclude, therefore, that it is a characteristic of the subspecies described and is not, as I at first believed, due to wear.

The following is a summary of the only four specimens in England :—

	Wing.	Culmen.	Tarsus.
	mm.	mm.	mm.
<i>a.</i> ♀ (type) .....	250	79	52
<i>b.</i> ♂ .....	259	77	49·2
<i>c.</i> ♀ .....	257	81	52
<i>d.</i> ♂ (figured) .....	262	72·5	54
<i>a.</i> E. Canary Is., 7. iv. 88, Coll. E. G. B. M.-W. Skin in the British Museum.			
<i>b.</i> E. Canary Is., 6. iv. 90, Coll. E. G. B. M.-W. Skin in the Liverpool Museum.			
<i>c.</i> E. Canary Is., 6. iv. 90, Coll. E. G. B. M.-W. Skin in the British Museum.			
<i>d.</i> E. Canary Is., 1913, Coll. D. A. B. Skin in the Tring Museum.			

The average measurements of the typical South African species, *H. niger niger*, are :—Wing: ♂ 285, ♀ 275 ; culmen: ♂ 69, ♀ 71 mm.

In all species of Oystercatcher the male has the culmen somewhat shorter than the female.

The occurrence of this rare Black Oystercatcher in the eastern Canary Islands has been known for many years, as will be seen by reference to the synonymy, it having been mentioned by every writer on the group. Unfortunately very little is known as to its habits in the islands, and how it worked its way up the African coast and finally crossed to the Canary Archipelago and there became resident and modified, is still wrapt in complete mystery. At the present day its nearest ally, *Hæmatopus niger niger* Temm., inhabits the coast and islands of Cape Colony, from which species *Hæmatopus niger meadewaldoi* has become evolved. It has been said that there is a Black Oystercatcher on the coast of Gaboon, but very little evidence of the fact seems to be forthcoming. It is true that an enormous part of the African coast-line is quite unknown, and it would not be surprising to find an allied form whose habitat is yet undiscovered.

*Hematopus niger meadewaldoi* is, so far as we know, confined to the islands of the eastern Canary group. It is unnecessary to be more explicit as to its particular haunts; suffice it to say that anyone intending to obtain specimens will save himself much time and trouble if he gives up all such ideas at once! Several collectors have in vain tried to shoot the birds, but have invariably returned empty-handed.

Having obtained trustworthy information as to where I might find this bird, I was lucky in meeting with the object of my search at the first attempt. The Black Oystercatcher strikes the observer at once as being an extremely fine bird, its brilliant red bill contrasting strongly with its surroundings as it runs nimbly over the rough ground. It shows little sign of fear, but when alarmed flies strongly, uttering a clear piping note as it takes to flight; the note is repeated three times in quick succession. I could learn nothing as to its breeding habits. No eggs appear ever to have been taken of this rare Oystercatcher.

The soft parts of this bird are as follows:—Iris brilliant red; ophthalmic ring orange-vermilion; bill bright orange-vermilion, becoming yellowish horn-colour at the tip; legs strawberry-pink, nails whitish horn. Testes large.

*Ægialitis hiaticula major*. The Greater Ringed Plover.

*Ægialitis hiaticola major* (Seeböhm); Bannerman, Part I. p. 46.

Dr. P. R. Lowe has recently drawn my attention to the fact that Seeböhm described a large race of the Ringed Plover, to which form I believe the examples which I have obtained in the Canary Islands should be referred. Although not one of the specimens which I obtained is fully adult, they all agree perfectly with immature examples of the larger race and not with the typical form.

A few Ringed Plovers were noted on the reefs at Toston in Fuerteventura; they were not met with anywhere else. Those of which I had a close view, all appeared to be of this species, although it is often impossible to distinguish in life between this and the typical form of the Ringed Plover.

That *Ægialitis dubia* undoubtedly occurs in the Canary Islands I have proved by shooting a bird in Gran Canaria on January the 19th, 1910, and the following year two eggs of this species were taken close to Las Palmas (*vide* Bannerman, *Ibis*, 1913, pp. 582-583).

A single example was obtained in Fuerteventura.

*Ægialitis alexandrinus alexandrinus.* The Kentish Plover.

*Ægialitis alexandrinus alexandrinus* (Linn.); Bannerman, Part I. pp. 43, 45, 46, 53, 57, 71.

The Kentish Plover is by far the most numerous of all the Charadriidæ. It was found plentifully on every part of the coast which I visited in Fuerteventura, Lanzarote, and Graciosa. It breeds everywhere along the shores, and in Graciosa young birds just able to fly were taken on June the 1st, and freshly laid eggs on June the 6th.

Nobody interferes with these little birds, and in consequence they are exceedingly tame, a marked difference in this respect existing between them and the passing Waders.

A small series was obtained from Fuerteventura and Graciosa.

Bill black ; iris dark hazel ; feet brown ; legs greenish-grey to slate-colour.

The two eggs obtained on June the 1st on Graciosa were similar in colour to the ground upon which they were laid :—Ground-colour pinkish buff, spotted and scrawled with deep black markings, and underlying spots of lavender-grey. They measured  $34 \times 24$  and  $33 \times 23$  5 mm.

*Squatarola squatarola.* The Grey Plover.

*Squatarola squatarola* (Linn.); Bannerman, Part I. pp. 46, 63, 71.

The Grey Plover was first seen at Toston (Fuerteventura), where a pair of birds in beautiful breeding plumage frequented the reefs for some days.

In Lanzarote I did not meet with any, but in this island a very short time was spent in the vicinity of the coast. The only other occasion on which I came upon the Grey

Plover was in Graciosa, where a small flock was seen on two occasions.

In the private collection which I looked through at Arrecife were several examples of this bird. The owner informed me that *S. squatarola* was a regular winter migrant to Lanzarote. Meade-Waldo records them as regular winter visitors to the eastern islands. I have shot specimens in Gran Canaria in February.

No specimens were obtained.

*Arenaria interpres interpres*. The Turnstone.

*Arenaria interpres interpres* (Linn.); Bannerman, Part I. pp. 43, 46, 53, 57, 71.

A very plentiful species in the eastern Canary Islands, Turnstones were found in Fuerteventura, on the rocky coast south of Puerto Cabras, and in large numbers on the reefs at Toston.

In Lanzarote a very large flock frequented the shores of the Lago Januvio.

In Graciosa they were equally plentiful, but none were seen on the rocky coasts of Montaña Clara and Allegranza.

Several examples were in full breeding plumage. I believe that many remain throughout the year, *i. e.* immature or non-breeding birds.

A small series was obtained in Fuerteventura and Graciosa. Bill dark horn-colour; iris dark hazel; feet reddish orange. In every case the testes were small.

*Calidris arenaria arenaria*. The Sanderling.

*Calidris arenaria arenaria* (Linn.); Bannerman, Part I. pp. 46, 63.

We did not meet with Sanderlings in May and June in the eastern islands. They are, however, occasionally numerous on migration, and I have seen many of them in the south of Gran Canaria in February.

A mounted example was seen in Arrecife (Lanzarote) which had been shot near that town.

No specimens were obtained.

**Tringa alpina alpina.** The Dunlin.

*Tringa alpina alpina* Linn. ; Bannerman, Part I. pp. 46, 57, 71.

Dunlins were seen sparingly on the reefs at Toston in Fuerteventura, by the Lago Januvio in Lanzarote, and on the island of Graciosa. Whenever met with they were always in very small numbers, never in flocks. One example had assumed breeding plumage and had the testes fairly large. Dunlins do not apparently frequent any particular part of the coast for long, and I do not think any remain in the islands through the summer.

Examples were obtained from Fuerteventura and Lanzarote.

Bill black ; iris dark hazel ; feet dark slate-colour.

**Tringa hypoleuca.** The Common Sandpiper.

*Tringa hypoleuca* Linn. ; Bannerman, Part I. p. 46.

A few Common Sandpipers were noticed on the reefs at Toston. In Gran Canaria these birds are, I believe, found all the year round, but I very much doubt if this is the case in the eastern islands, where they probably only touch on migration.

Specimens were obtained from Fuerteventura.

Bill dark horn-colour ; iris dark hazel ; feet pale yellowish grey.

**Totanus totanus.** The Redshank.

*Totanus totanus* (Linn.) ; Bannerman, Part I. pp. 46, 63.

A single bird was seen on the Toston reefs in Fuerteventura ; we did not meet with it again.

I saw a mounted example in a collection at Arrecife.

I should imagine the Redshank to be a scarce migrant to the Canary group.

None were obtained during the Expedition.

**Totanus nebularius.** Greenshank.

*Totanus nebularius* (Gunner) ; Bannerman, Part I. p. 72.

**Limosa lapponica lapponica.** Bar-tailed Godwit.

*Limosa lapponica lapponica* (Linn.) ; Bannerman, Part I. p. 63.



*Limosa limosa*. Black-tailed Godwit.

*Limosa limosa* (Linn.) ; Bannerman, Part I. p. 63.

A Greenshank was seen on the island of Graciosa. The other two species were not met with during the Expedition.

Stuffed specimens of both Godwits, which had been shot near Arrecife, were seen in Lanzarote. They occasionally touch the islands on migration.

*Numenius arquatus arquatus*. The Curlew.

*Numenius arquatus arquatus* (Linn.) ; Bannerman, Part I. pp. 46, 72.

A Curlew was heard calling on the reefs at Toston in Fuerteventura in the second week in May.

I next flushed four birds on the island of Graciosa early in June. Meade-Waldo often met with them in the eastern islands, but ridicules von Thanner's assertion that the Curlew has bred on the "Matas Blancas" in the south of Fuerteventura.

*Numenius phæopus phæopus*. The Whimbrel.

*Numenius phæopus phæopus* (Linn.) ; Bannerman, Part I. pp. 46, 72.

The Whimbrel is a very plentiful species in the eastern Canary Islands in May and June. It was particularly common on the reefs at Toston and on the north-west coast of Graciosa. It is doubtless found in every suitable place round the shores of the larger islands. Von Thanner says that Whimbrels breed on Graciosa.

Examples were obtained from Fuerteventura and Graciosa. Bill dark horn-colour ; iris dark hazel ; feet greenish grey.

*Sterna hirundo*. The Common Tern.

*Sterna hirundo* Linn. ; Bannerman, Part I. pp. 63, 72.

*Sterna sandvicensis sandvicensis*. The Sandwich Tern.

*Sterna s. sandvicensis* Latham ; Bannerman, Part I. pp. 63, 72.

Both the above species are found at certain times of the year on the coasts of the eastern Canary Islands. In 1841

*Sterna s. sandvicensis* was found in Fuerteventura and Lanzarote (Webb & Berthelot, Orn. Canarienne, p. 41), while *Sterna hirundo* was said to be sedentary there.

I did not meet with either of the above species during the Expedition. The fishermen, however, knew the "Garajáos" well, although they naturally do not discriminate between the two forms. It is probable that *Sterna hirundo* is the Tern which, according to their statement, visits the islands in the summer when the "Sardinas" are plentiful.

*Sterna s. sandvicensis* probably is occasionally seen in the winter. I have procured specimens off Gran Canaria in February. In Arrecife (Lanzarote) I saw stuffed examples of both species which had been obtained in the immediate neighbourhood.

No specimens were obtained.

*Sterna minuta* Linn. The Little Tern.

This Tern is also mentioned by Webb & Berthelot, 'Ornithologie Canarienne,' p. 42, as inhabiting "La partie orientale de l'Archipel Canarien." We did not see any signs of this bird, and could not hear of any having been procured in recent years. It is safe to assume that Terns do not now breed anywhere in the eastern group of islands.

*Larus cachinnans*. The Yellow-legged Herring-Gull.

*Larus cachinnans* Pallas ; Bannerman, Part I. pp. 53, 55, 61, 72, 81, 82, 83, 89.

The series which I obtained of this Gull did not show any variation in the colour of the back. All my specimens are uniform light grey on the mantle and wing-coverts.

The Yellow-legged Herring-Gull is a very common resident in the eastern Canary Islands. We met with it on every point of the coast which we visited. In the small islands north of Lanzarote this Gull simply swarms; it is very tame and is not molested by man. On the East Rock, according to the stories of the fishermen, the Gulls suffer a good deal from the persecution of "Falcons," probably *F. p. pelegrinoides*. The isolated Roque del Este

is the only breeding-place of this species which I know of in the eastern islands; here the birds can bring up their young more or less in safety. Fishermen occasionally land there, but in many weathers the rock is quite inaccessible.

A series was obtained from Fuerteventura, Lanzarote, Graciosa, Moñtana Clara, and Allegranza.

Bill deep chrome, tip paler, patch vermilion; iris light lemon-yellow; eyelids orange; feet chrome-yellow.

Testes large or fairly large.

Three eggs were given to me which had been taken on the East Rock some time in April. In colour they do not differ from the usual type of egg laid by this species and measure  $70 \times 48$ ,  $65 \times 48$ ,  $73 \times 50$  mm.

*Larus fuscus affinis*. British Lesser Black-backed Gull.

*Larus fuscus affinis* Reinhardt; Bannerman, Part I. pp. 53, 72.

The Lesser Black-backed Gull was not met with anywhere in the eastern islands during the Expedition. It obviously does not breed on any of the outer islands or rocks, as I once thought might be the case. It may, however, be considered a fairly regular winter visitor, but occasionally birds turn up in the spring and summer months. Thanks to Mr. Witherby's untiring efforts at ringing the young birds, we are learning much more concerning the movements of this and many other species. Mr. Witherby has kindly forwarded to me the following two highly interesting records. The first is that of a Lesser Black-backed Gull, No. 33,912, marked as a nestling on August the 2nd, 1913, at the Farne Islands, Northumberland, which was recovered by the captain of the Tenerife schooner 'Luz,' while he was engaged in fishing off Cape Juby (the nearest point on the African mainland to the Canary Islands) on November the 13th, 1913. The second instance, which is of more recent date, is that of another Lesser Black-backed Gull marked at the Farne Islands, Northumberland, on August the 2nd, 1913, which was shot on the shore of Lanzarote on

January the 5th, 1914. I am much indebted to Mr. H. F. Witherby for allowing me to publish these details.

As already noted (Part I. p. 73), the dark-backed race, *Larus fuscus fuscus*, is a very rare straggler to the Canary Archipelago.

*Larus marinus*. Greater Black-backed Gull.

*Larus marinus* Linn.; Bannerman, Part I. p. 85; Webb & Berthelot, Ornithologie Canarienne, 1841, p. 42; Bolle, J. f. O. 1855, p. 177; 1857, p. 341.

Messrs. Webb & Berthelot and Dr. Bolle in their works cited above each mention *Larus marinus* as breeding on the island of Allegranza, where the former assert that it was "assez commun." In those days this Gull was killed on account of its down, which was sold in London as eider-down! Very probably this breeding station was soon completely wiped out. We could not hear of any such Gull being seen in the island or even in the neighbourhood at the present day.

*Porzana porzana*. The Little Crake.

*Porzana porzana* (Linn.); Bannerman, Part I. p. 63.

*Gallinula porzana* Webb & Berthelot, Ornithologie Canarienne, 1841, p. 40.

An example of the Little Crake which had been shot near Arrecife, was given to me in Lanzarote. Webb & Berthelot record a specimen "of this very rare straggler" having been taken in the Canary Islands in March 1829. Other observers have also mentioned the species as appearing occasionally in the islands.

One bird obtained from Lanzarote.

*Chlamydotis undulata fuerteventuræ*. Fuerteventuran Bustard.

*Otis undulata fuerteventuræ* Rothsch. & Hart. Nov. Zool. i. 1894, p. 689.

*Chlamydotis u. fuerteventuræ* Bannerman, Part I. pp. 51, 52, 88, 89.

Mr. Rothschild rightly notes that the Fuerteventuran bird is much darker above and so harmonizes with the dark sunburnt rocks of Fuerteventura, in contrast to the truly sandy-rufous colouring of *O. u. undulata* which agrees so perfectly with the deserts which it inhabits.

This magnificent bird is, I fear, not nearly so plentiful at the present day as when Mr. Meade-Waldo collected in the island. It is evidently considered a great prize by the Spanish sportsmen, and foreign collectors have treated the bird in a most merciless manner. Even in the breeding season it cannot gain any peace, and the Spaniards have an abominable habit of trapping the bird actually on the nest. Unless this interesting Bustard is in some manner protected, at any rate during the breeding season, I am afraid it is in grave danger of extermination. From accounts which I received, I understand that it is more plentiful in the south of the island than in the centre, where I first met with it. It is seen, I believe, only at certain times of the year on the plains in the north of Fuerteventura. I found the bird in two localities, Antigua and Puerto Cabras. In the former district I came across an adult pair and a single male bird. While in the neighbourhood of Puerto Cabras a farmer brought me a very young bird in an interesting plumage, but it had unfortunately been dead two or three days. Bishop managed to save the skin, which is now in the Natural History Museum.

In Lanzarote the Bustard is rarely seen and then only in the south. I did not meet with it in this island. Polatzek gives several instances of his having seen it there.

For further accounts of *C. u. fuerteventuræ*, see papers by Bolle, J. f. O. 1857, p. 334; Meade-Waldo, Ibis, 1889, pp. 11-12 & 506; Polatzek, Orn. Jahrb. 1909, p. 19; and von Thanner, Orn. Jahrb. 1905, p. 62; 1910, p. 227; 1912, p. 221.

A single immature bird procured.

Bill dark horn-colour; iris yellow; feet greenish grey.

The egg of the Fuerteventuran Bustard is perfectly distinct in colour from that usually laid by *C. undulata*

*undulata*, the ground-colour of three in the British Museum and of the only example obtained by myself being rich buffy brown (Ridgway, Colour Standards, 1912, pl. xl.), and sparingly spotted and blotched with chocolate-brown with pale underlying purplish markings.

Measurements : 65·5 × 45, 62 × 43, 67 × 44, 66 × 43 mm.

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

*Caccabis petrosa kœnigi* Reichw. Orn. Monatsbr. 1899, p. 189.

*Caccabis petrosa petrosa* (Gmel.); Bannerman, Part I. p. 88.

The Barbary Partridge from the Canary Islands has been separated by Dr. Reichenow from the north African race on the grounds that it is darker and larger. Those which I have examined from the Canary Islands (8 examples) have wing measurements averaging 167 mm. Without exception Barbary Partridges from the Canary Islands are distinctly greyer on the back than African specimens. Those examined were mostly obtained in different months of the year.

We did not meet with the Barbary Partridge in Lanzarote, which is the only island in which it is resident. A few are said still to be found there. In 1890, when Meade-Waldo visited Lanzarote, he shot a specimen on the lava-flow in the north of the island, the only spot upon which it was said to exist.

*Coturnix coturnix coturnix*. The Migratory Quail.

*Coturnix coturnix coturnix* (Linn.); Bannerman, Part I. p. 44.

*Coturnix coturnix africana*. The African Quail.

*Coturnix coturnix africana* Temm. & Schleg.; Bannerman, Part I. p. 44.

Quails are plentiful in Fuerteventura and Lanzarote, but we did not succeed in shooting any during our visit. The corn, such as it was, was still standing and afforded a certain amount of cover. Many eggs, mostly quite fresh, were brought into camp by natives. Probably both the above named species, which occasionally interbreed, are found there, but as no

specimens were procured this is only conjecture. Likewise I have been unable to determine the exact status of the Quail in the eastern Canary group. It is certain that they are highly migratory, but whether *C. c. coturnix* as well as *C. c. africana* breed in the eastern islands has yet to be proved. Neither Polatzek nor von Thanner distinguish between the two forms. Neither do they remark on the regular migration from Africa, which certainly must take place. Webb & Berthelot were of opinion that migration occurred, but was not general, a certain number of birds departing at the commencement of autumn. For my part I suspect that *C. c. coturnix* arrives in the island to breed, departing again after the summer. *C. c. africana* is almost certain to breed in these islands, but is partially migratory, a very few remaining throughout the year. It is probable that its movements are also regulated to a certain extent by the prevailing weather-conditions. Von Thanner (Orn. Jahrb. 1913, p. 221), describing a visit to Fuerteventura in the spring of 1912, remarks that in consequence of the abundant winter rain the island presented a very different appearance to what it had done in former years, and that Quails which during the *dry years were never seen*, came in great numbers, and their song was heard all over the fields. It is possible that these Quails migrating from Africa would first touch the desert eastern islands, and finding, in consequence of the abundant rainfall, that the islands presented a very different aspect from their usual burnt up appearance, many would be tempted to remain to breed instead of continuing their flight to the western group.

While in Gran Canaria in June I obtained, through the kindness of Mr. T. R. Morgan, four live Quails which had been captured at Firgas. These birds proved to belong to (1) *Coturnix coturnix coturnix*, (2) *Coturnix coturnix africana* × *Coturnix coturnix coturnix*. The latter hybrid very closely approaches *C. c. africana*, but shows faint indication of the black throat and white collar of typical *C. c. coturnix*. The underparts have the rich reddish colouring of the African Quail.

No birds were procured, but a series of 29 eggs was obtained from Fuerteventura and Lanzarote.

Clutches of Quail's eggs were taken at—

- |                               |            |
|-------------------------------|------------|
| 1. Caldereta (Fuerteventura), | 5. v. 13.  |
| 2. „ „                        | 5. v. 13.  |
| 3. La Peña „                  | 12. v. 13. |
| 4. Haria (Lanzarote),         | 23. v. 13. |
| 5. „ „                        | 26. v. 13. |

This series show the usual variety of colouring. As I have no means of ascertaining whether they belong to *C. c. coturnix* or *C. c. africana*, I have not given any measurements or description.

## XII.—Description of a strange New Zealand Wood-Hen.

By GREGORY M. MATHEWS and TOM IREDALE.

(Plate XI.)

PROBABLY no small group of birds has been so much discussed as the New Zealand Wood-Hens, and, without exception, the investigators have been compelled to relinquish the problems without any satisfactory solution having been achieved.

The examination of the series available shows at once the reason of an indefinite result, viz., the accumulation of odd unsexed individuals instead of carefully localised sexed series. The restrictions placed upon scientific collectors by the New Zealand Government, coupled with the unrestricted advances made by the enemies of the birds, the felling of bush, etc., suggest that no definite solution will be reached.

In our Reference List ('Ibis,' 1913, pp. 211-214) we were compelled to lump under the name *Gallirallus hectori* (Hutton), the forms of the South Island Wood-Hen previously known as *Ocydromus australis* and *O. hectori*. To anyone acquainted with these birds and at all familiar with the topography of the South Island of New Zealand, such a lumping would savour of the absurd. The most casual