Upupa epops. Hoopoe.

Upupa epops Hartert, Nov. Zool. 1901, p. 328 ; Thanner, Orn. Jahrb. xxi. p. 89 (1910) (part.).

Upupa epops fuerteventuræ Polatzek, Orn. Jahrb. 1908, p. 165 ; Thanner, Orn. Jahrb. xxi. p. 89 (1910) (part.).

a. Near Tirajana. 8th April '09.

b, c. ♀. The "Charco," Maspalomas. 24th Feb. '12.

d. ♀. Maspalomas Village. 25th Feb. '12.

e, f. ♂ ♀. Juan Grande. 2nd March '12.

Iris dark brown ; bill black ; feet greyish brown.

Total length in the flesh 11·1–11·3 inches.

Hoopoes are resident in the island, but a considerable addition to their numbers takes place in the summer months. At this time of the year they are much tamer than in the winter, allowing anyone to approach to within a very few yards : they are commonly seen in the beautiful garden of the Santa Catalina Hotel. In the winter they are scarce in the neighbourhood of Las Palmas, but odd pairs occasionally wander down from the interior, and I have several times flushed these birds on the ground near the golf-links. A single pair is generally to be found in many of the inland villages in the north, such as Firgas, Moya, Arucas, &c. South of the Cumbres they become more plentiful, and in these isolated spots shew no signs of fear whatever. They were most numerous in the "Charco" at Maspalomas, where they used to appear in the evenings, sometimes as many as four or five at a time. Herr von Thanner recognises a subspecies, *Upupa epops fuerteventuræ* Polatzek, and records specimens obtained at the "Charco" under that name.

Cypselus murinus brehmorum. Pale Swift.

Cypselus murinus brehmorum Naumann, Naturg. Vög. Mitteleuropas, iv. 1901, p. 233*; Hartert, Nov. Zool. 1901, p. 326 ; id. Vög. Pal. Faun. vol. ii. p. 839 (1912).

Apus apus brehmorum Hartert ; Naumann, Naturg. Vög. Mitteleuropas, iv. 1901, p. 233 ; Polatzek, Orn. Jahrb. 1908, p. 163.

a, b. ♂ ♀. Barranco below Santa Brigida. 1st April '09.

c. ♀. Between Maspalomas and Juan Grande. 2nd March '12.

Iris brown; bill black; feet black. Wing-measurements 167–172 mm.

C. m. brehmorum is paler and more brownish grey than *C. apus*, the white on the throat extends lower, and the forehead is decidedly paler.

From *C. murinus* it is distinguished by its darker colouring throughout.

This Swift is almost entirely confined to the north of the island; Herr von Thanner never met with it in the south, and I have only done so on one occasion, near Juan Grande, where about ten birds were hawking over the plain. Very few are to be seen in the winter months.

In April (1910) when passing through the town of Aguimes, I was very much struck with the thousands of Swifts which were hawking over the houses—the air was literally full of them, but in about four days' time they had totally disappeared. This is the only occasion on which I have seen this Swift in any numbers. Earlier in the year a few occasionally make their appearance in the neighbourhood of Las Palmas and Santa Brigida. Canon Tristram believed them to be resident, but in this, I think, he was mistaken; by far the greater number observed are summer migrants.

On the 18th of August (1908) I observed a few Swifts in the Monte, and in May and June (1912) I noticed several hawking over the Port Road.

Polatzek found these Swifts in the Barranco Guiniguada. In August and September he mentions that they went regularly every morning along the Barranco past San Matéo towards the heights, and returned about five o'clock in the afternoon.

Cypselus unicolor. Madeiran Black Swift.

Cypselus unicolor Tristram, Ibis, 1889, p. 23.

Apus unicolor Hartert, Nov. Zool. 1901, p. 327 : Polatzek, Orn. Jahrb. 1908, p. 164.

a, *b*. ♂ ♀. Near Barranco de Fataga, Maspalomas, 28th Feb. '12.

Iris dark; bill black; feet blackish.

This is the resident species generally found in the south of Gran Canaria, where it frequents the deep barrancos, and roosts in the high overhanging cliffs. A few birds occasionally wander to the "Charco" on the coast, but they are generally confined to the higher level. Curiously enough, I have seldom seen these little Swifts anywhere in the north of the island, but I believe there is a colony in the Barranco de la Virgen near Firgas. Polatzek records them from Tafira.

Dendrocopus major thanneri. Thanner's Great Spotted Woodpecker.

Picus major Thanner, Orn. Jahrb. xxi. p. 91 (1910).

Dendrocopus major thanneri Le Roi, Orn. Monatsb. 1911, p. 81 *.

Dryobates major thanneri Hartert, Vög. Pal. Faun. vol. ii. p. 906 (1912).

a. ♀. Near Cueva de las Ninas, 750 metres. 22nd Jan. '10.

b. ♂. Pinar Pajonal. 23rd Jan. '10.

c. ♂. Cueva de las Ninas, 760 metres. 24th Jan. '10.

d. ♂. Pinar Pajonal, 830 metres. 23rd Jan. '10.

e. ♂. Pinar behind Cueva de las Ninas, 3400 ft. 10th Feb. '11.

f. ♂. Pinar above Juncal, 4000 ft. 11th Feb. '11.

Iris cherry or bright red; legs and feet slate-coloured to black; bill blackish horn-coloured; nails black.

Total length 9·2–9·7 inches: expanse of wing 16·2 inches; tip of the wing to tip of tail 1·9 inches.

Dendrocopus major thanneri is distinguished from *D. m. canariensis* (typical locality Tenerife) by having (1) the entire under side lighter throughout, (2) the brownish frontal band generally lighter. From typical Swedish examples of *D. major* it is distinguished by the darker brown

under side (light coffee-colour), which is intermediate in shade between *D. m. canariensis* and *D. major*.

These beautiful birds are confined to the pine-forests, and in these woods are fairly plentiful. In the various excursions which I have made in the Pinar Pajonal I met with the Great Spotted Woodpecker on every occasion. In flight they are most conspicuous. During the month of February they were always seen in pairs, and were not so shy as other members of the genus which I have come across. Their cry is very loud and betrays their presence at a long distance. Nesting-holes of this species seemed to me to be peculiarly scarce. Herr von Thanner remarks that these holes were always placed higher up the tree-trunks than in the woods of Tenerife. Despite its circumscribed area this bird is extraordinarily well known by the peasants.

Hirundo rustica. Swallow.

Large numbers of Swallows arrive in the island in the early summer, and may be seen hawking over the corn-fields. They do not remain to breed. Herr von Thanner mentions having seen *H. rustica* near Maspalomas as early as February 5th, after a violent storm.

Chelidon urbica. House-Martin.

An irregular migrant. I have only once seen the species in the winter months, *i. e.* two examples flying over the "Charco" in company with a few Swifts on February 25th (1912). Herr von Thanner saw great numbers at Maspalomas on February 5th after a violent storm.

Turdus merula cabreræ. Blackbird.

Turdus merula cabreræ Hartert, Nov. Zool. 1901, p. 313 *; Thanner, Orn. Jahrb. xxi. p. 93 (1910).

a. ♂. San Matéo, 2500 ft. 22nd Dec. '08.

b. ♂. Cueva de las Ninas, 760 metres. 24th Jan. '10.

c, d. ♂ ♀. Santa Brigida, 1500 ft. 20th Jan. '11.

e. ♀. Juncal, 3600 ft. 6th Feb. '11.

f, g. ♂ ♀. Above San Matéo, 2800 ft. 11th Feb. '12.

Iris chocolate-brown, pupil blue ; bill (♂) orange, (♀) brown ; feet brownish horn-coloured.

Total length in the flesh 10·1 inches ; expanse of wings 14·8 inches.

This insular race of Blackbird is distinguished from *T. merula* by its longer bill, shorter wing and tail, and by the very dark colouring of the female.

The Blackbird is by no means conspicuous in Gran Canaria, and is confined to the cultivated ground and deep sheltered barrancos. In the Monte two or three individuals can generally be seen close to Santa Brigida, and the woods between this place and San Matéo are perhaps the spots most frequented by them in the island. In the south I have met with them sparingly, generally in the almond-groves or near some village, where their familiar cry has betrayed their presence. They are resident and breed in the island, and, contrary to the custom of the bird found in England, lay very few eggs in a clutch. The song is very seldom heard.

Turdus musicus. Song-Thrush.

Turdus musicus Meade-Waldo, Ibis, 1889, p. 1.

a, b. ♂ ♂. Santa Brigida. 20th Jan. '11.

c. ♂. Cueva de las Ninas, 2800 ft. 7th Feb. '11.

Iris reddish-brown ; bill—upper mandible black, lower mandible yellowish ; feet yellow.

Total length in the flesh 8·1 to 8·9 inches ; expanse of wings 13·6 inches.

The Song-Thrush is a winter visitor to Gran Canaria ; I found it in considerable numbers near the Cueva de las Ninas in February 1911. A few were seen near Santa Brigida in January, but they are by no means plentiful in the Monte districts. I was much struck by the remarkable wildness displayed by these birds ; they were very hard to approach, and flew with surprising swiftness. They do not remain to breed.

Erithacus rubecula superbus. Tenerife Redbreast.

Erithacus superbus Koenig, J. f. O. 1889, p. 183 *.

Erithacus rubecula superbus Thanner, Orn. Jahrb. xxi. p. 92 (1910) ; Hartert, Vög. Pal. Faun. vol. i. p. 754 (1910).

a–c. ♂ ♂ et ? San Matéo. Between 5th–13th Feb. '11.
d. ♂. Above San Matéo, 2800 ft. 11th Feb. '12.
Iris dark ; bill black ; feet brown.
Total length in the flesh 5·2–5·4 inches.

This fine dark-breasted Redbreast is very scarce in the island of Gran Canaria. The first three examples mentioned were shot by a Spaniard above San Matéo and sent to me in the flesh. Another was seen by one of my party on the way from San Matéo to the Cumbres just within the vegetation belt. Herr v. Thanner mentions it as "common" at Tejeda and Moya, and says that he saw several above Mogan. Certainly I never saw a Redbreast in the Pinar although I kept a sharp look-out for it.

In January 1912 a "Robin" was actually seen in the garden of a house between the Port and Las Palmas at sea-level; that the species should be seen so low down as this is a remarkable occurrence. During a stay of two days at San Matéo in February 1912 I saw several Redbreasts at very close quarters. The first was singing from a tree high up the hillside, and my attention was attracted to it by the peculiar liquid notes which I certainly did not recognise as ever having heard previously. Another was seen not far away, 300 feet above San Matéo. It was remarkably tame, and flew on to a stone within six yards of our party. Its favourite haunt in the neighbourhood is on the sides of the deep barranco which leads from the village towards the Cumbres. Here, amidst the luxuriant growth of flowering plants, cactus, and other tangled vegetation, the Redbreast spends its days, seldom seen by any but those who know its habits, and doubtless nesting in the many hidden recesses, which afford it seclusion and shelter. I have not myself found its nest, but Mr. Meade-Waldo mentions that it is "not unfrequently found placed in the branches of a tree ; the number of eggs laid being two or three, occasionally four." Certainly Herr von Thanner's assertion that he found this bird "very frequent everywhere on the north side of the island" is far from my own experience, as I look upon it as decidedly rare and very locally distributed.

It is a remarkable fact that the Common Redbreast, *Erithacus rubecula*, which is found in the neighbouring islands of Gomera, Palma, and Hierro, is *not* found in Gran Canaria or Tenerife, *Erithacus rubecula superbus* taking its place in these two islands.

Sylvia atricapilla. Blackcap.

Sylvia atricapilla obscura Tchusi, Orn. Monatsb. 1901, p. 129*; Thanner, Orn. Jahrb. xxi. p. 91 (1910); Hartert, Vög. Pal. Faun. i. p. 585 (1910) (geographical form).

a. ♂. Santa Catalina Garden, Las Palmas. Dec. '08.

b. ♂. Las Palmas. 11th Jan. '09.

c. ♀. Santa Brigida. 5th Jan. '09.

S. a. obscura Tschusi was supposed to be slightly more dusky, but see Dr. Hartert's remarks, Vög. Pal. Faun. i. p. 585.

The "Capirote," as this bird is known locally, is, after the Canary, the finest songster in the islands. It is to be found in numbers in every garden, being confined chiefly to the cultivated districts. In Las Palmas it is most confiding, building its nest in numbers in the large grounds of the Catalina Hotel. I examined one nest in another garden built in a shrub within ten yards of the house. On 19th March (1910) I found a nest built in a thick prickly bush; it was composed largely of wool interwoven between grass and lined entirely with hair; the eggs, which were four in number, were slightly incubated.

One male example that I shot had the chin of a dull chestnut-colour, which is said to be the result of the bird feeding on oranges, but this is the only specimen I came across with this peculiar marking.

The Blackcap is resident in the island, but the numbers are largely increased in the spring by migrants. Von Thanner notes that the migratory birds can easily be distinguished by the thick layer of fat which is found on their skin. At the beginning of June (1912) Blackcaps were more numerous in the private gardens of Las Palmas than I had ever seen them previously.

Sylvia melanocephala leucogastra. Sardinian Warbler.

Sylvia melanocephala leucogastra Ledru, Voy. Ténérife u.s.w. p. 182 (1810); Thanner, Orn. Jahrb. xxi. p. 92 (1910); Hartert, Vög. Pal. Faun. i. p. 594 (1910).

a, b ♂♂. "Charco," Maspalomas. 24th Feb. '12.

c. ♀. "Charco," Maspalomas. 28th Feb. '12.

Iris light brown, eyelids brilliant red; bill black; feet yellowish flesh-coloured.

The male of this subspecies is similar to *S. melanocephala*, but somewhat smaller; the inner webs of the outer tail-feathers are not pure white, but flecked with grey.

The female is distinguished by having the entire upper side greyer, especially on the crown, and in having a similar tail to the male.

I have examined a series of this Warbler from the Canary Islands, and the differences noted above are, as I am aware, very small indeed. However, one would naturally suppose an insular form of this little bird in the Canary Islands to vary from the true Sardinian Warbler, and although these differences are very slight, especially in the case of the male, yet they are constant in the series at my disposal, and on these grounds I propose to uphold this new subspecies.

I did not meet with the Black-headed Warbler until my last expedition in the island, which took me to the extreme southerly point of Gran Canaria. Here, in the "Charco," I found several pairs of this little bird, apparently isolated in the small oasis. They were extremely difficult to shoot as they hopped about in the tamarisk bushes or darted in and out amongst the high clumps of long grass. Eventually I managed to secure three specimens. I should say there must have been about ten birds inhabiting this spot.

Although I made a long excursion inland, I did not again meet with this Warbler. Herr von Thanner remarks that "they are found everywhere on the south coast," yet I should say that if this is the case they are decidedly scarce. I saw none in the Barranco de Mogan. Mr. Ogilvie-Grant saw two examples of the Sardinian Warbler in Madeira, where its curious flight attracted his attention.

Mr. Meade-Waldo, who spent several winters in the Canary Islands, tells me that this Warbler is extremely common in Tenerife as well as in several of the other islands in the group which he has visited. It is strange that the bird was so scarce in Gran Canaria.

Sylvia conspicillata bella. Spectacled Warbler.

Sylvia conspicillata bella Tschusi, Orn. Monatsb. 1901, p. 130*; Thanner, Orn. Jahrb. xxi. p. 91 (1910); Hartert, Vög. Pal. Faun. i. p. 599 (1910).

a. ? Las Palmas. 30th Dec. '08.

b. Las Palmas. 7th Jan. '09.

c. Las Palmas. 2nd April '09.

d. Confital Bay (sea-level). 4th Feb. '12.

e, f. Barranco de San Lorenzo. 16th Feb. '12.

Iris light brown; bill horn-coloured; feet yellowish flesh-coloured.

"Upper side very similar to *S. conspicillata*, but darker grey head, browner back, and more chestnut primary-coverts."

Examples from Gran Canaria are obviously darker than *Sylvia conspicillata*, of which I have examined a small series from the type locality, Sardinia.

On comparing an adult bird from Madeira (the type locality of *Sylvia c. bella*) killed in February with one of my birds from Gran Canaria obtained in the same month, I find that the Madeiran bird is slightly darker even than Gran Canaria specimens. It would be interesting to compare a large series from these two islands.

Spectacled Warblers are found in the island throughout the year. They seem to prefer the low-lying barren ground and hottest valleys to the more cultivated districts. They may always be seen on the waste land behind the Catalina, frequenting the Euphorbias and other small bushes which cover the sides of the barrancos. They are shy little birds, and when once alarmed fly some distance to a thick shrub from which they are particularly hard to dislodge; their cry is unmistakably that of a Warbler, and when frightened they begin a peculiar chattering and scolding. I did not see any in the neighbourhood of the Pinar.

Phylloscopus rufus canariensis. Canarian Chiffchaff.

Phyllopneuste rufa canariensis Hartwig, J. f. O. 1886, p. 486 *.

Phylloscopus fortunatus Tristram, Ibis, 1889, p. 21.

Phylloscopus rufus canariensis Hartert, Nov. Zool. 1901, p. 32.

Phylloscopus collybita canariensis Thanner, Orn. Jahrb. xxi. p. 91 (1910) ; Hartert, Vög. Pal. Faun. i. p. 504 (1910).

a. ♀. Santa Brigida. 4th Jan. '09. Wing 55 mm.

b. ♂. Las Palmas. 6th Feb. '12. Wing 48 mm.

c. ? Las Palmas. 12th Feb. '12.

d. ♂. Las Palmas (Alcaravaneras). 16th Feb. '12. Wing 52 mm.

e. The "Charco," Maspalomas. 24th Feb. '12. Wing 53 mm.

Bill—upper mandible dark horn-brown, lower lighter ; iris and feet dark brown.

The Chiffchaff of the Canary Islands is distinguished from *P. rufus* by its smaller size, darker colouring throughout, and the very different wing-formula, the wing being shorter and more rounded than in the European species. The 2nd primary is extremely short, shorter than even the 8th. The 4th and 5th primaries are the longest, the 3rd and 6th are approximately equal in length. Wing-measurements are given opposite the individual examples obtained.

This is perhaps the commonest bird in the Canaries. Found throughout the island, it is extremely tame, nesting freely in the gardens and woods. Herr von Thanner (Orn. Jahrb. xxi. p. 95) mentions that "there are no Chiffchaffs in the Pinar." In this he is mistaken, as I have myself shot specimens above the Cueva de las Ninas and have often both heard and seen them in every part of the Pine Forest which I have traversed. The Chiffchaff breeds very early in Gran Canaria. A pair were nesting under the eaves of a cottage near Santa Brigida, and the little birds made free use of large pieces of cotton-wool which were placed for them.

In 1910 one pair built in a small fir-tree in a private garden ; this nest was almost completed on February 2nd and

had four eggs on the 14th of that month. Another nest in the same garden contained only one egg on February 19th, but by the 27th of the month four eggs were laid.

On March 14th of the same year I found a Chiffchaff's nest built on the ground : it was placed at the foot of a small bush in an exposed position ; the nest was composed of grass and lined thickly with feathers and harmonised perfectly with the dead grass around. It contained four eggs. Dr. Tristram never heard of a nest placed on or near the ground, those which he found were almost always in the crowns of palm-trees and once in a laurel-tree. The colouring of the eggs of this species varies considerably, the red spots differing in size to a great extent. In one clutch which I took the spots were very minute and numerous, predominating at the larger end, and in another clutch were much larger and more scanty.

Von Thanner mentions having procured Chiffchaffs here which had "light plumage and pale yellow tail-feathers." At the time of my visit to this spot in February 1912, Chiffchaffs were remarkably scarce. The only specimen that I procured here certainly did not shew any marked differences from those obtained in the north of the island. At the beginning of June of this year Chiffchaffs appeared more plentiful in the private gardens of Las Palmas than I had ever noticed them.

Lanius excubitor koenigi. Koenig's Grey Shrike.

Lanius excubitor koenigi Hartert, Nov. Zool. p. 309 & p. 323* (1901) ; Thanner, Orn. Jahrb. xxi. p. 91 (1910).

a, *b*. ♂ ♂. Between Agnimes and Tirajana. 8th April, '09.

c, *d*. ♀. Cueva de las Ninas. 760 metres. 24th Jan. '10.

e. ♂ (?). Cueva de las Ninas. 3200 ft. 9th Feb. '11.

Bill black : iris reddish brown, pupil blue ; feet black.

Total length in the flesh 9·4 inches; expanse of wings 12·6 inches.

This Shrike is most nearly allied to *Lanius excubitor algeriensis* from Algeria and *Lanius excubitor dodsoni* from Morocco.

Examples from Gran Canaria of *Lanius e. koenigi* have

(1) the upper parts similar to *L. e. dodsoni*, but darker than *L. e. algeriensis*;
(2) the under parts similar to *L. e. algeriensis*, but lighter than *L. e. dodsoni*.

A resident species, the Grey Shrike is the most locally distributed of any bird found in the island. It is entirely absent from the north of Gran Canaria. As I travelled south, Shrikes were first met with after the town of Aguimes had been passed, and along the main road to Tirajana they were by no means rare. In these southern villages they largely frequent the almond-groves, perching on the topmost branch, from which they give forth their musical whistle. They are not found on the Cumbres, but after descending on the southern side they become quite plentiful; near the Cueva de las Ninas (on the edge of the Pinar) they were found up to 2280 ft. I expected to meet with this Shrike on the desert-like country between Carrisal and Maspalomas, but only saw a single example in a Euphorbia-bush near Juan Grande. Another pair, however, frequented the sandy ground in the neighbourhood of the "Charco" at Maspalomas. Further round the coast in the Barranco de Mogan I came across several pairs. On the 8th April (1909) I discovered a nest, containing five fully fledged young, placed in the centre of a low bush on very stony ground. This nest was situated within a few yards of the main road between Aguimes and Terajana. Three of the young birds I brought away, hoping to keep them alive, but in this, I am sorry to say, I failed.

Mr. Meade-Waldo found the number of eggs laid to vary from four to six in a clutch.

Sandy-coloured examples of this Shrike are occasionally met with.

Parus cæruleus teneriffæ. Tenerife Blue Tit.

Parus cæruleus teneriffæ Hartert, Vög. Pal. Faun. p. 359 (1910); Thanner, Orn. Jahrb. xxi. p. 91 (1910).

a, b. ♂ ♀. Santa Brigida. 4th Jan. '09.

c. ? San Matéo. Feb. '11.

d–g. ? Above San Matéo (2800 ft.). 10th and 11th Feb. '12.

Iris reddish brown; bill black; feet dark brown.

This pretty little Tit is found throughout the island, and is especially common in the Monte and just above San Matéo. It is plentiful in the south of the island, and frequents the Pinar, where I have seen it up to 1000 ft. in some numbers. It is a noisy little bird, and its note is often the only sound heard in the depth of the silent forest, as it moves in small parties from tree to tree. Occasionally it is found near Las Palmas, frequenting the thick vegetation in the gardens of the Santa Catalina Hotel.

The eggs laid are generally three to five in number.

Motacilla boarula canariensis. Canarian Grey Wagtail.

Motacilla boarula canariensis Hartert, Nov. Zool. 1901, p. 313 *; Thanner, Orn. Jahrb. xxi. p. 93 (1910).

Motacilla boarula boarula Hartert, Vög. Pal. Faun. p. 298 (1910).

a. Above San Matéo, 4000 ft. 22nd Dec. '08.

b. Between San Matéo and Teror. 23rd Dec. '08.

c, d. ♂ ♀. Las Palmas. 20th Feb. '11.

Iris dark brown; bill black; feet dark brown. Total length in the flesh 7 inches; expanse of wings 9½ inches.

As I have not a series of adult birds in my own collection for comparison, I quote the following remarks of Dr. Hartert on this subspecies, *vide* Nov. Zool. 1901, p. 313:—

"*Motacilla b. canariensis* stands between *M. b. boarula* and *M. b. schmitzi*. It is not so dark on the upper surface as the latter, the parts round the ear are not so black, but they are much darker than in typical European birds, the superciliary stripe and the stripe on the cheek are smaller. . . . . Mr. Meade-Waldo has already pointed out the superior

size of the Wagtails of the Canaries, but, unfortunately, he did not name them."

The Grey Wagtail is one of the most confiding birds imaginable. It is found plentifully throughout the entire island, a pair or more frequenting every esacia and pool of water. It appears equally at home in some hidden gorge in the mountains or walking fearlessly amongst the washer-women on the edge of the water-tanks. Its nest is often placed in the hole of a wall or house, and from three to six eggs are laid, usually of a brownish stone-colour. Mr. Meade-Waldo mentions that occasionally a clutch of brick-red eggs is laid, and not unfrequently one of pure white eggs.

Motacilla alba. White Wagtail.

a. ♀. Las Palmas. 13th Jan. '10.

The White Wagtail is a rare migrant in Gran Canaria. In the many months which I have spent in the island I have only met with it on five occasions :—

(1) A single bird seen on the field opposite the Metropole Hotel early in January (1910).
(2) A pair on the water-tanks past the golf-links (13th Jan. 1910).
(3) One bird seen on the Las Palmas cricket-ground (28th Feb. 1911).
(4) A fine adult bird on a wall near the Port Road (middle of February 1912).
(5) A pair reported as seen frequenting a timber-yard in Las Palmas Harbour (February 1912).

From this it will be seen that stragglers are found in the island in January and February.

Anthus berthelotii. Berthelot's Pipit.

Anthus berthelotii Bolle, J. f. O. 1862, p. 357 * ; Ibis, 1863, p. 343.

Anthus berthelotii berthelotii Thanner, Orn. Jahrb. xxi. p. 93 (1910).

a. Above San Matéo, 2500 ft. 22nd Dec. '08.

b, c. Cumbres, above San Matéo, 5300 ft. 22nd Dec. '08.

d. ♀. Las Palmas, sea-level. 7th Jan. '11.
e. ♀. Las Palmas. 21st Feb. '11.
f. ♂. Santa Brigida, 1580 ft. 23rd Feb. '11.

Iris brown; bill horn- or yellowish horn-coloured: legs light flesh-coloured. Total length in the flesh 5·6 inches.

Berthelot's Pipit is found from north to south of Gran Canaria, and is one of the tamest possible birds imaginable, hopping in front of people without the slightest fear. On the highest points of the Cumbres it is quite common, and I have procured specimens at 5300 ft., almost the highest ground in the island. It is generally seen singly or in pairs, and is particularly numerous on the Palmas golf-links, where the nests may be found in numbers. These little birds are remarkable for the antics with which they try to draw one from their nests if suddenly disturbed. While walking over the links on March 11th (1911) my attention was attracted by a Berthelot's Pipit, which suddenly appeared before me fluttering along the ground as if quite unable to fly, with an apparently broken wing. The little creature fluttered in and out of the Euphorbia for about fifteen yards, when it took to flight. I guessed it must have a nest close by, and the ruse to lead me away was marvellously enacted. I had not far to search, and found an extremely neat and cup-shaped nest placed in a slight depression on the ground at the very foot of an Euphorbia-bush; the nest was firmly wedged in amongst the branches of the Euphorbia and was composed on the outside of small dried twigs, then a thick layer of dried grass woven very tightly, and lined entirely with goats' hair.

The nest contained three eggs, having the ground-colour greenish brown, with a ring of darker brown round the larger end. The eggs were incubated about seven days. This was on March 11th. Later in the month, on March 18th, I found two more nests placed in a hollow in the ground under the shelter of an upright stone; each contained two young in down.

The nestling is covered with dark grey down, the gape being brilliant light yellow in colour.

So far as I am aware no migration of this species takes place. A long description of the habits &c. of this interesting little Pipit will be found in 'The Ibis' for 1863, by Dr. Carl Bolle. Only on one occasion have I seen this bird perched on a tree: it being such an unusual occurrence, I promptly shot it to make sure of the identification.

Calandrella minor polatzeki. Polatzek's Short-toed Lark.

Calandrella pispoletta rufescens Hartert, Nov. Zool. 1901, p. 325.

Calandrella minor distincta Sassi, Orn. Jahrb. 1908, p. 30; Thanner, Orn. Jahrb. xxi. p. 93 (1910).

Calandrella minor polatzeki Hartert, Vög. Pal. Faun. i. p. 217 (1910) *.

a. ♂. Between Las Palmas and Tirajana. April '09.

b–d. ♂. Las Palmas. 17th March '11.

e. Juv. Near Las Palmas. 18th March '11.

f. ♀. Telde Plains. 22nd Feb. '12.

g–h. ♀ et ? ♂. Plain between the "Charco" and Maspalomas. 25th Feb. '12.

Iris brown; bill horn-coloured; feet yellowish flesh-coloured.

Total length 5·2 inches; expanse of wings 10·4 inches.

The supposed form from Gran Canaria which Dr. Sassi has described under the name of *C. m. distincta* cannot possibly hold good. I have examined a large series at the Tring Museum from the Canary Islands, and find that the characters given are not constant.

As might be supposed, the Short-toed Lark of Gran Canaria is similar to the form found in Fuerteventura and Lanzarote, and differs very strikingly from the Tenerife subspecies *C. m. rufescens*.

Polatzek's Short-toed Lark is locally distributed over the island. On the 16th and 17th of March (1911), a number of these birds appeared on the island, and large flocks were found on the golf-links, where two or three birds only are usually to be seen. They were scattered about

in small parties in company with Trumpeter Bullfinches, and did not seem to be paired. Hitherto I had only met with this Lark sparingly in the northern part of the island. The following day (March 18th), I met some boys who had just taken a young bird of this species from the nest. I tried to rear it, but in this I failed, and added it to my collection of skins (specimen *e*).

These Larks are far more plentiful on the extensive plains betw en Telde and Arguineguin than they are in the neighbourhood of Las Palmas.

Emberiza calandra. Corn-Bunting.

Emberiza calandra thanneri Tschusi, Orn. Jahrb. 1903, p. 162*; Thanner, Orn. Jahrb. xxi. p. 93 (1910).

a. ? Above San Matéo (4000 ft.). 22nd Dec. '08. Wing 102 mm.

b. ? Las Palmas (sea-level). 7th Jan. '09. Wing 97 mm.

c. ♀. Las Palmas (sea-level). 7th Jan. '11. Wing 86 mm.

d. ? Las Palmas (50 to 100 ft.). Jan. '11. Wing 89 mm.

e. ♂. Cumbres (Camp IV.) (5650 ft.). 12th Feb. '11. Wing 94 mm.

f. ♂. Cumbres (Camp IV.) (5650 ft.). 13th Feb. '11. Wing 98 mm.

g. ♀. Las Palmas (50 to 100 ft.). 31st Jan. '12. Wing 85 mm.

†*h*. ♂. Between Las Palmas and Tamaraceite (100 ft.). 7th Feb. '12. Wing 87 mm.

i. ?. Between Las Palmas and Tamaraceite (100 ft.). 7th Feb. '12. Wing 89 mm.

†*k*. ♂. Between Las Palmas and Tamaraceite (100 ft.). 7th Feb. '12. Wing 90 mm.

†*l*. ♂. Between Las Palmas and Tamaraceite (100 ft.). 7th Feb. '12. Wing 87 mm.

m. ? Above San Matéo (2800 ft.). 10th Feb. '12. Wing 94 mm.

n. ♂. Above San Matéo (2800 ft.). 10th Feb. '12. Wing 96 mm.

o. ? Above San Matéo (2700 ft.). 11th Feb. '12. Wing 87 mm.

p. ♂. Above San Matéo (2600 ft.). 11th Feb. '12. Wing 95 mm.

q. ? Above San Matéo (2600 ft.). 16th Feb. '12. Wing 93 mm.

r. ? Plateau above Las Palmas (100 ft.). 15th Feb. '12. Wing 86 mm.

s. ? Plateau above Las Palmas (100 ft.). 15th Feb. '12. Wing 87 mm.

t. ♀. Maspalomas Village. 25th Feb. '12. Wing 87 mm.

†*u*. ♀. Maspalomas Village. 25th Feb. '12. Wing 86 mm.

Iris dark; bill—upper mandible horn-coloured, lower mandible yellowish; feet yellow.

The remarkable difference in size between examples of the Corn-Buntings which I obtained in Gran Canaria led me to suppose that there might be two distinct forms inhabiting the island, a resident *E. c. thanneri* and a migratory race. I therefore collected a fair series from different parts of the island, and my supposition was strengthened by finding that all examples (with one exception) shot on the high ground had a wing-measurement of 93–102 mm., whereas those from the coast-line were considerably smaller, with a wing-measurement of 85–90 mm. The latter, without exception, all appeared to have much lighter under parts than those from the hills.

The Hon. Walter Rothschild and Dr. Hartert very kindly invited me to the Tring Museum, where the ample series placed at my disposal soon convinced me that my Gran Canaria birds all belonged to the same race. Dr. Hartert has made a further examination of the series, and for this I am deeply indebted to him. He is of opinion that the size

† Dr. Hartert is of opinion that the sex in specimens *h*, *k*, *l*, and *u* has been wrongly determined. Certainly the measurements of these examples point to their being females, but as I did not dissect them myself I cannot disprove this.

depends on sex, and believes that four specimens in my collection labelled males are in reality females. If this is the case, it will be seen that the wing-measurement of males varies from 93 to 102 mm., and of females from 85 to 90 mm. Again, the birds obtained on the high ground had more yellowish under parts and the spotting on the breast was considerably coarser.

That Corn-Buntings inhabiting the same island or country vary considerably in both colour and size is borne out by the large series in the Tring Museum.

Dr. Hartert has kindly sent me two birds from Sardinia which are so widely different in the markings of the breast, as also in the size of the wing, as to appear at first sight perfectly distinct species; others from Morocco and Algeria shew the same differences only to a lesser degree.

In the Orn. Jahrb. (1903) Dr. Tschusi separated the Canary Island form under the name *E. c. thanneri* on the ground that the markings were coarser and darker than in *E. calandra*. Dr. Lorenz has been good enough to send me the types of this subspecies from Vienna, which I have carefully compared with the large series at my disposal. I do not consider this form sufficiently distinct to be worthy of subspecific rank. As I have shown above, individuals from the same islands vary to such a large extent amongst themselves that it seems impossible to find any constant characters. The description which Dr. Tschusi gives applies to examples in my collection from San Matéo and elsewhere in the hills, but to none of the specimens obtained on the coast; moreover, it is equally applicable to many examples of *Emberiza* from Europe. Dr. Sassi is, I believe, of the same opinion as myself.

Corn-Buntings are found very plentifully in certain parts of Gran Canaria, especially in the neighbourhood of San Matéo. In February (1912) literally hundreds of these Buntings were to be found in the corn-fields above the village, and their rasping call resounded from every tree.

Early in February numerous small flocks used to frequent the ground between Las Palmas and the Port, and many were shot on the hillside behind the Santa Catalina Hotel. They are much more rare in the south of the island, but are sparsely distributed even to the most southerly points, where I have seen examples in the Barranco de Mogan and in the grain-fields of Maspalomas. Occasionally these birds wander to the Cumbres, and while encamped there at 5650 ft. I came across a large flock.

This is a resident species in the hills, but I believe that its numbers are augmented in February, although I have not actually observed migration taking place. Certainly at some seasons of the year it appears to be much more plentiful than at others.

Fringilla teydea polatzeki. (Plate XII.)

Fringilla teydea polatzeki Hartert, Orn. Monatsb. 1905*, p. 164; Polatzek, Orn. Jahrb. 1909, p. 4; Thanner, Orn. Jahrb. xxi. p. 93 (1910); Bannerman, Ibis, April 1911, pp. 401–2.

a. ♂. Pinar between Cueva de las Ninas and Juncal, 900 metres. 24th Jan. '10.

b. ♀. Outskirts of Pinar, Cueva de las Ninas, 760 metres. 24th Jan. '10.

c–e. ♂ ♀ ♀. Above Juncal, 1000 ft. 6th Feb. '11.

f. ♂. Pinar above Cueva de las Ninas, 3200 ft. 10th Feb. '11.

g. ♂. Pinar above Cueva de las Ninas, 3700 ft. 10th Feb. '11.

h. ♀. Pinar above Juncal, 4000 ft. 11th Feb. '11.

Iris reddish brown; bill bluish horn-coloured; feet grey-brown with pinkish tinge or slate-coloured (specimen *a*).

Total length in flesh 7·2 inches; tip of wings to tip of tail 1·6 inches; expanse of wings 10·5 inches.

The two females shot on the 6th of February had the eggs in the ovary quite undeveloped.

Fringilla teydea polatzeki from Gran Canaria is distinguished from the resident species of Tenerife, *Fringilla teydea*, by the following marked characteristics :—

(1) The tips of the median and greater coverts are much *whiter* than in *F. teydea*, in which bird they are bluish grey. As Herr Polatzek rightly asserts, this characteristic is especially apparent in freshly killed specimens. After death this snow-white becomes more dull with a bluish tinge.

(2) The upper parts are the merest shade more ashy olive-grey than in *F. teydea*.

(3) The black band on the forehead is distinctly more pronounced in *F. t. polatzeki* than in *F. teydea*, which has hardly any indication of a frontal band at all.

(4) The bill is shorter, as can be seen from the following table :—

Fringilla teydea polatzeki.		*Fringilla teydea.*	
3 (♂).....	1·6 mm.	4 (♂).....	1·7 mm.
		1 (♂).....	1·8 mm.
1 (♀).....	1·6 mm.	3 (♀).....	1·75 mm.
2 (♀).....	1·5 mm.	1 (♀).....	1·7 mm.

(5) A considerable difference will be found in the measurements of the wings in the two forms.

The following measurements are given on the authority of Herr Von Thanner, who appears to have had an enormous series available from which to made his deductions (i. e., *F. teydea polatzeki* 76 skins, *F. teydea* 122 skins) :—

	Fringilla teydea polatzeki.	*Fringilla teydea.*
Largest wing ♂	97 mm.	107 mm.
Smallest wing ♂	90 mm.	96 mm.
Average wing ♂	94 mm.	101·2 mm.
Largest wing ♀	97 mm.	97 mm
Smallest wing ♀	85 mm.	80 mm.
Average wing ♀	87 mm.	91·7 mm.

The wing-measurements of three males and three females of *F. t. polatzeki* which I procured are ♂ 92, 93, 94 mm., ♀ 86, 88, 92 mm.

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FRINGILLA TEYDEA POLATZEKI ♂ ♀.

It was not until 1905, when Herr Polatzek by chance procured examples in the Pinar of Gran Canaria, that a Blue Chaffinch was known to inhabit this island. Until then the fact seems to have escaped the notice of all other naturalists who have travelled in Gran Canaria. The specimens which Herr Polatzek obtained were sent to Dr. Hartert at Tring Museum, who pronounced the bird to be a new subspecies of the well-known Blue Chaffinch (*Fringilla teydea*) of the neighbouring island of Tenerife. As I intended visiting the island in 1908, Mr. Ogilvie-Grant asked me to try and procure specimens for the British Museum. On my arrival in the island in December, with this end in view, I made an expedition over the Cumbres to the Pinar above San Bartolomé, only to find the woods in that direction entirely devoid of bird-life. The following year I again spent some time searching in another direction, making Tirajana my headquarters, but again without result. In January (1910) I entered the Pinar Pajonal from the south, pitching my camp at the Cueva de las Ninas, and here at last I met with the object of my search, procuring both a male and female example. Having now discovered the region in which the Chaffinches were to be found, the next year I again crossed the Cumbres, entering the Pinar by way of Juncal, a tiny village on the outskirts of the forest. No sooner had I gained the pines than the presence of several Blue Chaffinches became evident to me, and in the course of my ride to my old camping-ground I procured two pairs and saw about a dozen more birds besides. This was in February, and afterwards I spent many more days encamped in the forest. Although I only obtained one other pair of this Finch, yet I had ample opportunity of gauging their numbers and noting their habits. Several more birds were seen, but I contented myself with the three pairs already obtained. If a certain other collector had done likewise instead of slaying seventy-six examples the previous year, this very beautiful and interesting bird would not now be in danger of extermination, which will undoubtedly take place if such wholesale

destruction is allowed to pass uncondemned. However, in this case, as well as in that of the unique Bullfinch (*Pyrrhula murina*) of the Azores, the warning has, I fear, come too late, and, as the same collector is responsible for the butchery of both species, I sincerely hope that some means may be found to put a stop to such indiscriminate ravages in the future.

The Pinar Pajonal (Plate X. fig. 2), to which these Chaffinches are exclusively confined, covers a considerable area, as can be seen from the map (Plate IX.). Their distribution even in this limited space appears decidedly local, and they are certainly more plentiful in the Pinar above Juncal than near the Cueva de las Ninas. That they move about in the forest seems evident: on one day ten or more birds may be seen in a certain part of the pine-wood, whereas for a week none will be seen at all, when they will suddenly reappear in the same spot. Occasionally single birds—generally males—are to be met with in some remote part of the forest, and no amount of searching would produce another. Herr von Thanner mentions that he found these Chaffinches most plentiful wherever there was sufficient moisture and where the undergrowth was densest: he noticed that they were particularly fond of the seeds of *Stellaria media*. Unlike its neighbour in Tenerife, the bird found in Gran Canaria is remarkably quiet: one would sit for a considerable time on a bough without uttering a sound, presently it would fly as silently to the ground and commence searching diligently amongst the fallen pine-needles. The call-note, when uttered, was very low, much weaker than that of the Tenerife bird. Herr von Thanner actually mistook its cry for that of the Chiffchaff! Very little appears to be known as to the nesting-habits; it probably begins to build in May, and lays its eggs late in that month. Von Thanner thought that it probably commenced laying earlier than the species in Tenerife, owing to the lower altitude at which it is found, but I doubt if this be the case. The Blue Chaffinch was known to the few forest guardias and

goatherds in the Pinar, but outside this radius no one seems to have ever heard of it. The Woodpecker, on the other hand, although it inhabits the same area, is known all over the island.

The differentiation which has taken place between the two forms *F. teydea* and *F. t. polatzeki* is very curious, more especially as both birds are living under practically the same conditions and on two islands separated by only thirty-one miles of sea. I sincerely hope that this interesting subspecies may henceforth be allowed to increase in peace, as it undoubtedly will if unmolested by man, and it is aided by the additional fact that Sparrow-Hawks are practically unknown in the pine-forests of Gran Canaria.

Fringilla canariensis. Gran Canarian Chaffinch.

Fringilla canariensis canariensis Hartert, Nov. Zool. 1901, p. 324.

Fringilla cœlebs canariensis Thanner, Orn. Jahrb. xxi. p. 93 (1910); Hartert, Vög. Pal. Faun. i. p. 128 (1910).

a, b. ♂ ♀. Santa Brigida. 4th Jan. '09.

c, d. ♂. Santa Brigida. 8th Feb. '10.

e. ♂. Hoya Bravo. 22nd Feb. '11.

f. ♂. Santa Brigida. 22nd Feb. '11.

g–i. ♂ ♂ ♀. Above San Matéo, 2800 ft. 10th Feb. '12.

k. ♂. Above San Matéo, 2800 ft. 11th Feb. '12.

Iris dark; bill bluish horn-coloured; feet brown or greyish black.

Total length 5·9 inches.

This Chaffinch is not nearly so numerous as its near ally in Madeira. In fact, unless anyone knows exactly where to go, he may pass weeks in Gran Canaria without meeting with a single example.

It is certainly more plentiful in the north of the island than in the south, being practically confined to the Monte and Vega Districts. Its favourite haunts are the secluded woods to be found at Teror, Hoya Bravo, and certain parts of the Monte between Santa Brigida and San Matéo, and especially in the laurel woods above the latter village,

which lies at 2500 ft. Von Thanner found it most plentiful at Moya, to the west of Teror.

In the south of Gran Canaria, as I have said, this Finch is particularly scarce, and I have never seen or heard a single example in the large tracts of pine-forests through which I have travelled. It is by no means shy, and can be watched as closely as our own form at home. The note of the male is very similar to that of *F. cœlebs*. The Chaffinch is resident in the island and breeds in suitable places.

In the neighbouring island of Tenerife it commences laying about 23rd of May. Mr. Meade-Waldo says that "Three eggs are the usual clutch, though four are often laid, and also very frequently only two!"

In examples from Gran Canaria the wing-measurements in males appear to be decidedly smaller than in birds from the other islands. Moreover, the black frontal band is less distinct.

The changes of plumage to which this Chaffinch is subject render it very difficult to make out a satisfactory key to the species found in the Canary group. Two examples in my collection, killed in February, have the mantle and back olive-brown, the feathers of the crown being also tipped with this colour.

Key to the Species of Fringilla *inhabiting the North Atlantic Islands.*

I. Upper parts uniform dark slate-grey ..... *F. palmæ.*
II. Upper parts parti-coloured.
a. Crown of head light slate-grey, black frontal band very distinct.
*a*¹. Upper mantle olive-green, middle of back brownish grey..... *F. maderensis.*
*b*¹. Entire mantle and back washed with olive-green ..... *F. morcleti.*
b. Crown of head glossy blue-black, frontal band indistinct ... . *F. canariensis.*

The scattered distribution of the various species of *Fringilla* in the North Atlantic islands has been commented on by almost every writer on this group.

Fringilla canariensis is confined to the islands of Gran Canaria, Tenerife, and Gomera.

Fringilla palmæ to the islands of Hierro and Palma.

Fringilla maderensis to Madeira.

Fringilla moreleti to the Azores.

Passer hispaniolensis. Spanish Sparrow.

Passer hispaniolensis hispaniolensis Thanner, Orn. Jahrb. xxi. p. 97 (1910).

a, *b*. ♂ ♂. Between San Matéo and Teror. 23rd Dec. '08.

c–*e*. ♂ ♂ ♀. Las Palmas. 11th Feb. '10.

f. ♀. Las Palmas. 20th Feb. '11.

g. ♀. Las Palmas. 21st Feb. '11.

h, *i*. ♂ ♀. San Matéo (2500 ft.). 10th Feb. '12.

k. ♂. Maspalomas Village. 25th Feb. '12.

Female. Iris light brown; bill yellowish horn-coloured; feet light brown.

Total length in the flesh 5·2 to ·6 inches; expanse of wings 9·3 inches.

This Sparrow seems to be increasing in numbers every year; it is found in town and country, and huge flocks may be seen on the cultivated land. In the early mornings the noise which these Sparrows make in the palms and Eucalyptus-trees is enough to wake the soundest sleeper. In habits they are even more aggressive than *P. domesticus*, and have completely "ousted" the weaker Sulphur-throated Rock-Sparrow from the neighbourhood of Las Palmas—at any rate, so far as nesting is concerned. They have absolutely no fear, and will build even inside the house if a suitable grating is available for their needs. They are very partial to the date-palm, and the fruit is in consequence never allowed to ripen. In this tree they build their nests in profusion, although they also choose the eaves of houses and verandas. Building operations commence in March, and the nest is a most untidy structure, as can be imagined. One which I examined on the 15th of March (1911), built inside a ventilation-grating in a much-frequented room, was composed of thin twigs and grass loosely woven together.

It was lined with grass and no feathers were used, although many pigeons and poultry are kept close by. The nest was a domed structure and, as I have mentioned, was very large. On this date (15th March) it contained only two eggs, the ground-colour bluish green, closely spotted with dark brown, the spots becoming united at the thick end into irregular blotches.

The plumage of the male entirely changes in January before the breeding-season commences, and when this change is completed he is one of the most handsome birds to be seen. The head becomes rich chocolate-colour and the black centres to the feathers on the back and mantle become very intense. The under parts undergo the most complete change, the throat becoming dead black and reaching on to the breast, the feathers of which are tipped with white. The cheeks and a large ear-patch change from a dirty buff colour to pure white, the breast likewise becomes white, and the feathers of the sides and flanks deep black edged with buff, giving the bird a most conspicuous appearance. By the 10th of February, and in some cases earlier, this change of plumage has completely taken place. The females, apart from becoming generally brighter in colour throughout, shew no very marked difference.

Petronia petronia madeirensis. Yellow-throated Rock-Sparrow.

Petronia petronia madeirensis Erlanger, J. f. O. 1899, p. 482 *; Hartert, Vög. Pal. Faun. i. p. 141 (1910).

Petronia petronia maderensis Thanner, Orn. Jahrb. xxi. p. 97 (1910).

a. ♂. Aguimes Road. 8th April '09.

b, c. ♀ ♀. Santa Brigida. 22nd Feb. '11.

Iris light brown; bill horn-coloured, lower mandible yellow; feet brown. Total length in the flesh 5·9 inches.

I have compared a series of this Rock-Sparrow obtained in the Canary Islands with typical examples of *Petronia petronia*. I find that examples from the Canary Islands have the under parts more grey-brown and the upper parts

darker throughout. There appeared to be no difference whatever in the size of the wings.

The Rock-Sparrow is very locally distributed in Gran Canaria; it frequents the dry rocky ground overgrown with Euphorbia and Cactus. Large flocks are always to be found in the Barranco Séco between Las Palmas and Tafira, and many are usually seen there, dusting themselves on the main road. In the town of Las Palmas it has been entirely supplanted by the Spanish Sparrow, though occasionally a large flock wanders down below the golf-links. In the villages in the Monte it is found nesting under the eaves of the houses, and on the road to Aguimes large flocks are always to be seen.

Serinus canarius. Canary.

Serinus canaria canaria Hartert, Vög. Pal. Faun. i. p. 84 (1910).

a. Near Santa Brigida, 5000 ft. 22nd Dec. '08.

b, *c*. ♀ et ? Santa Brigida. 4th Jan. '09.

d. ♂. Tirajana, 2700 ft. 9th April '09.

e–h. ♂ ♀. Cumbres (camp 4), 5650 ft. 13th Feb. '11.

i. ♂. Charco, Maspalomas, sea-level. 23rd Feb. '12.

k. Charco, Maspalomas, sea-level. 28th Feb. '12.

Iris dark; bill dark or light horn-coloured; feet brown.

Total length in the flesh 4·9–5·4 inches; expanse of wings 8·7 inches.

The Common "Canary" is very plentiful indeed all over the island, and is by no means confined to the Monte, although it prefers the high ground. It sings gloriously in its wild state, and several may often be heard at the same time; it seems especially fond of the Eucalyptus-trees which line the road from below Santa Brigida to San Matéo.

I saw several at Juncal, 3600 ft. (just below the Pinar), and others again in the pines at the Cueva de las Ninas close to my camp. On the Cumbres the birds are more often seen in flocks; I met with them at 5000 ft., just below Roque Nublo, on Feb. 12th. On the following day, while

encamped actually in cloud (5600 ft.), I shot four birds out of a huge flock which I mistook in the mist for that of another species.

In the extreme south-west they are somewhat scarce. I shot two birds in the sand-hills at Maspalomas, not very far from the coast.

Erythrospiza githaginea amantum. Trumpeter Bullfinch.

Erythrospiza githaginea amantum Hartert, Vög. Pal. Faun. i. p. 89 (1910)*; Thanner, Orn. Jahrb. xxi. p. 97 (1910).

a. ♂. Puerto Mogan. 25th Jan. '10.

b. ♂. "Alcaravaneras." 31st Jan. '11.

c–d. ♂ ♀. Las Palmas. 20th Feb. '11.

e. ♂. Las Palmas. 10th March '11.

f. ♀. Las Palmas. 6th Feb. '12.

Iris light brown; bill—(specimens *a–d*) salmon-pink, (specimen *e* breeding) bright coral-red; legs and feet yellowish light brown.

Total length in the flesh 5–5·2 inches; expanse of wings 9½ inches.

Examples from the Canary Islands differ from *E. githaginea* in having the back darker.

The Trumpeter Bullfinch is another very locally distributed species found in the island. It is a desert-loving form and prefers the most "dried-up" and arid ground. I first met with this bird near Telde, as I was driving along the main road through very parched country, on April 8th, 1909, and on January 25th of the following year I saw a few close to the beach in the Barranco de Mogan. In 1911 they became much more plentiful in the neighbourhood of the Las Palmas golf-links, and in February several small parties were seen behind the Catalina. A little later, on March 16th, numbers were scattered over the golf-links in small flocks; many were feeding on some newly sown land close by, and the males all appeared to be in brilliant breeding-plumage; they were

in company with Short-toed Larks, and the sudden influx of both these usually uncommon species was most noticeable.

The true home of this bird, as I discovered during my last expedition, is the desert tract which lies between Carrisal and Maspalomas. In this district I found it fairly plentiful, wandering over the plains in little parties of from ten to fifteen. It took very little notice of human beings, and I could ride within half a dozen yards of a flock before they would take to flight. It must breed here in very large numbers annually, although I was a little too early this year (1912) to find the eggs. The previous year, while searching the ground to the east of the golf-links on March 18th, I found a nest of this Bullfinch placed in a hollow cup in the ground under the shelter of a stone; it contained four eggs, the ground-colour of which was very light blue thinly spotted with chocolate, and with a cluster of chocolate markings at the thick end.

This entire nest was stolen shortly afterwards by the little Spanish boys, who seem to spend all their time searching for and destroying nests, eggs, and young birds of every species. In the neighbourhood of Las Palmas, at any rate, very few birds can rear their young in peace without molestation of some kind from these human pests. The boys are marvellously quick at finding nests, and their eyesight for detecting birds such as the "Thicknee" is little short of miraculous.

Acanthis cannabina nana. Brown Linnet.

Cannabina cannabina nana Tschusi, Orn. Monatsb. 1901, p. 130 *.

Acanthis cannabina meade-waldoi Hartert, Nov. Zool. 1901, p. 323.

Acanthis cannabina nana Hartert, Vög. Pal. Faun. i. p. 75 (1910); Thanner, Orn. Jahrb. xxi. p. 97 (1910).

a. ♂. Between San Matéo and Teror. 23rd Dec. '08.

b. ♀. Las Palmas. 30th Dec. '08.

c. ♀. Santa Brigida. 4th Jan. '09.

d. ♂. Monte. 16th Jan. '10.

e, f. ♂ ♀. Above San Matéo (2600 ft.). 10th Feb. '12.

g. Above San Matéo (2800 ft.). 11th Feb. '12.

Iris dark; bill dark greenish horn-coloured; feet brown.

A. c. nana is distinguished by its small size from the European species. Wing-measurements: ♂ (2) 76 mm., (2) 78 mm.; ♀ (2) 74 mm., (1) 75 mm.

Linnets are resident in the island, and may be seen frequenting the grain-fields in large flocks; they seemed particularly plentiful in 1912, and in February there were many hundreds in the fields above San Matéo. They are almost confined to the Monte and the Vega districts, in the south of the island they are rare. Breeding commences in March. The first nest of this species which I discovered was almost complete on March 8th; it was placed in a small fir-tree about twelve feet from the ground, and was composed of small fir-twigs lined with hair. The nest was empty, but on March 12th it contained four eggs, and another was laid between that date and March 14th, when I next visited the nest.

The eggs were bluish white faintly marked with purplish brown.

ACANTHIS CARDUELIS PARVA. Lesser Goldfinch.

Carduelis carduelis parva Tschusi, Orn. Monatsb. 1901, p. 131*; Thanner, Orn. Jahrb. xxi. p. 97 (1910).

Acanthis carduelis parva Hartert, Vög. Pal. Faun. i. p. 69 (1910).

Carduelis carduelis nana Hartert, Nov. Zool. 1901, p. 323.

a, b. ♂ ♀. Las Palmas. 5th April '09.

c. ♂. Tirajana. 9th April '09.

d–f. ♂ ♀. Above San Matéo (2800 ft.). 11 Feb. '12.

This is a small form of the European Goldfinch. Upper parts exceptionally dark.

Goldfinches are met with in some numbers in the Monte and Teror districts. They are never seen very far from cultivated land and at times are found close to Las Palmas. They are resident in Gran Canaria throughout the year, and Herr von Thanner found them breeding in some numbers

in Moya. Huge flocks were seen at San Matéo in February (1912), where they were feeding in the fields literally in hundreds. In the south I found them to be decidedly scarce.

The female shot on April 5th contained well-developed eggs in the ovary.

Corvus corax tingitanus. Raven.

Corvus corax tingitanus Irby, Ibis, 1874, p. 264 *.

Corvus corax canariensis Hartert & Kleinschm. Nov. Zool. 1901, pp. 45 & 326 ; Thanner, Orn. Jahrb. xxi. p. 91 (1910); Hartert, Vögel Pal. Faun. i. p. 6 (1910).

a. ? Between Aguimes and Tirajana. 8th April '09.

b. ♂. Between Juan Grande and Aguimes. 3rd March '12.

Messrs. Hartert and Kleinschmidt have, I consider, separated the Raven of the Canary Islands from *Corvus c. tingitanus* on somewhat slight grounds.

The following remarks on this subspecies appeared in the Nov. Zool. 1901, p. 326 :—

" We find that the form from the Canaries is distinguished from *C. c. tingitanus* . . . . by its beak, which is longer, straighter, and weaker (where it is equally strong it is longer, where it is equally long it is weaker), and by the edges of the feathers, which are more *Corax*-like and less closed. As a rule, but not always, the feathers of the throat are longer."

On comparing examples from Gran Canaria and Tenerife with the small series of *C. c. tingitanus* in the British Museum, it struck me that the bill in birds from Gran Canaria was, if anything, *heavier* than in examples of *C. c. tingitanus*. This appears to be in direct opposition to the conclusions which Dr. Hartert has arrived at. When a very much larger series from Gran Canaria is available some slight differences may possibly be found to be constant; but as the description of *C. c. canariensis* does not apply to my specimens from Gran Canaria, I prefer to unite these birds with *C. c. tingitanus*, the resident species on the N.W. coast of Africa.

Ravens are numerous in Gran Canaria, particularly in the south of the island near Maspalomas and Juan Grande, where I have seen as many as twenty at a time following the plough. In the Cumbres they are plentiful, and when we were encamped at 5000 ft. their hoarse croakings used to rouse us very early in the mornings as they flew over the tent. They breed in the most inaccessible cliffs, laying from three to six eggs. Specimen *a* had a huge nest placed on a ledge high up a sloping cliff close to the main road. This nest was almost completed on April 8th, but contained no eggs. In the north of the island they are not nearly so common. A pair frequent the cliffs on the north-west and can be seen wending their way every evening over the golf-links towards Guanarteme. They feed largely on carrion, and a dead mule or sheep is sure to attract some of these birds in company with the Vultures.

The following species, not mentioned in the foregoing list, have also occurred in Gran Canaria on migration, as given on the authority of Herr von Thanner:—

Alauda arvensis. Sky-Lark. Near Maspalomas, 25th Feb. and 3rd March. Two and six birds respectively.

Ruticilla phœnicura. Redstart. Pinar near Mogan, 27th March.

Chloris aurantiiventris. Greenfinch. Moya, 12th April.

While Herr Polatzek records *Merops apiaster* (the Common Bee-eater) as a "bird of passage."

Ducks and Waders have been recorded from time to time as having occurred in the "Charco" at Maspalomas. As long ago as 1857, Dr. Carl Bolle, writing in the 'Journal für Ornithologie' for that year, mentions among others the following species as having occurred in the island. I have given the names which Dr. Bolle employed verbatim, adding the English appellations:—

Himantopus melanopterus Temm. Black-winged Stilt. (Maspalomas.)

Totanus calidris Beehst. Redshank.
Ardea minuta Linn. Little Bittern.
**Platalea leucorodios* Keys. Spoonbill. (Arguineguin.)
Phœnicopterus antiquorum Temm. Flamingo. ("Chareo," Maspalomas.)
Fuligula nyroca Keys. et Blas. (Isleta.)
Fuligula nigra Degl. Common Scoter. (Canaria.)
Uria troile Lath. Common Guillemot. (Canaria.)
Alca minor Briss. Little Auk. (Canaria.)

XXIX.—*Notes on* Licmetis pastinator (*Western Long-billed Cockatoo*) †. By Thomas Carter, M.B.O.U. (Wensleydale, Broome Hill, Western Australia).

(Text-figures 11 & 12.)

As this fine bird has, for some reason, quite disappeared from the districts where it formerly abounded, and seems to be nearing extinction, I send the following notes upon it and its present distribution. Of its life-history and habits hardly anything appears to have been written in existing ornithological literature.

Gould, in his 'Handbook,' describes "the lores and bases of the feathers of the head and front of neck" as being *scarlet*, while Mr. A. G. North, in his Australian Museum, Sydney, Special Catalogue No. I. ('Nests and Eggs of Birds found Breeding in Australia and Tasmania'), gives salmon-colour for these parts, which agrees with the coloration of my series of skins, excepting that the lores and facial feathers in them are distinctly *orange* or orange-scarlet. Gould also states that the naked space round the eye is greenish blue, but in all the birds examined by me, both alive and immediately after death, this bare skin was of a blue colour, varying from a dull leaden shade to almost

* In the Museum at Las Palmas there is a Spoonbill labelled "Puerto de Luz, 21 Oct. 1880."

† See Campbell, 'Nests and Eggs of Australian Birds,' p. 620.