7. LAND (INCLUDING SHORE) BIRDS OF COSMOLEDO

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Introduction

Excepting a brief reference by Abbott to a rail (see below), the earliest reference to birds on Cosmoledo seems to be by Bergne (1901), who had the lease of Aldabra, including also Cosmoledo, at the beginning of the century. Dr D. R. Stoddart has brought to my notice the list of birds made by Bergne, as a result of his visit to Cosmoledo between 9 and 12 October 1901. In addition to five sea birds and a "curlew", it includes four species to be referred to below. Dupont (1907) drew up a fairly comprehensive list of birds as a whole. Fryer (1911, 430) thought that land birds were scarce on Cosmoledo, which was "too broken into small islands to be suitable for a land fauna". Vesey-FitzGerald (1940, 486-488) gives an account of the land, exclusive of shore, birds of the Aldabra archipelago, including Cosmoledo, which he visited in 1937. According to Williams (1953) and Benson (1969) he also collected sunbirds and a white-eye on Menai Island in April 1952. But he has recently explained to me that he only visited Cosmoledo the once, in 1937, and that these specimens were merely collected at his request, and that at the time he was in Africa. Hartman (1958), who spent 10-12 December 1957 on Cosmoledo, visiting Menai and West North Islands, also gives an account of the land birds. H.M.S. Owen called at Menai on 13-15 March 1964, and some observations are given by Bourne (1966). The Bristol Seychelles Expedition, of which R. Gaymer was a member, visited Menai on 9 November 1964, and Gaymer made a further visit to Menai on October 1965. He has kindly made his observations available. I. S. C. Parker collected specimens for the National Museum of Kenya, Nairobi, on Menai on 6 October 1967.

A grant from the Frank M. Chapman Memorial Fund, made at the instance of Dr Dean Amadon, Lamont Curator of Birds in the American Museum of Natural History, enabled me to visit Cosmoledo and Astove myself, on the M.F.R.V. Manihine, during the time that I was working on Aldabra, in January-March 1968. We were on Cosmoledo on 6 March: on Wizard Island from about 0900 to 1300 hours, and on Menai Island from 1600 to 1845 hours. My own observations were augmented by many from A. W. Diamond and P. Grubb. Some additional observations were made on Menai Island by Dr M. E. D. Poore and Dr D. R. Stoddart during a further visit by M.F.R.V. Manihine, on 14 September 1968.

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In addition to the generous assistance from the Chapman Fund, I am much indebted to various other persons. Dr R. H. Carcasson, the former Director, and A. D. Forbes-Watson, lent me the specimens collected by Parker for the National Museum of Kenya, and permitted me to make use of them in this paper. They also seconded to me a skinner, Loriu Lokiru, who worked for me throughout my time on Aldabra, and accompanied me to Cosmoledo and Astove. Professor Charles G. Sibley and Mrs Eleanor H. Stickney lent me the material collected by Hartman in the Aldabra archipelago as a whole, in the Peabody Museum of Natural History, Yale University, and which was brought to my notice by R. K. Brooke, of Rhodesia, while on a visit to that Museum. A. M. Hutson, of the Department of Entomology, British Museum (Natural History), has identified the stomach contents of my specimens. Dr D. W. Snow and his staff in the Bird Room, British Museum (Natural History), have given me the necessary facilities for the comparative study of specimens. My own from Cosmoledo and Astove are to be presented to the American Museum of Natural History, while Parker's land birds from these two atolls have recently been donated by the National Museum of Kenya to the British Museum (Natural History). I thank Mr J. A'C. Bergne for the opportunity to make use of unpublished observations made by his father on Cosmoledo in 1901.

Resident true land birds

Dryolimnas cuvieri — White-throated Rail

Abbott (in Ridgway 1895, 529) had it at second-hand that rails "swarm" on Cosmoledo (and Astove), while according to Fryer (1911, 430, under D. abbotti ?), a rail still existed in 1908 on South Island, Cosmoledo. We were unable to land on South Island, which has no human settlement, so that it is possible that this species does still exist there. This is worth further investigation.

Streptopelia picturata — Malagasy Turtledove

This species is listed by Dupont (1907, as Turtur saturatus) for Cosmoledo, and Bergne (1901) mentions a brown "Tourterelle des Iles", but no other reference to its occurrence has been traced. However, one of the labourers on Aldabra, who had previously lived on Cosmoledo for more than ten years, assured me that it still occurs on South Island. Like the case of the rail, this is worth further investigation. A relic population might still survive--in contrast to the situation on Assumption, where extirpation is complete.

Geopelia striata — Barred Ground-Dove

On Menai, I had a quick view of a small long-tailed dove, which I took to be this species, not Oena capensis, which occurs in Malagasy as well as in Africa. I only saw the one bird, which may represent a not very successful artificial introduction. Elsewhere, as in the Seychelles and on Farquhar, this eastern species evidently thrives (Watson et al. 1963, 170, 188; Stoddart and Poore 1970), but there seems to be no previous suggestion of its occurrence in the Aldabra archipelago.

Cisticola cherina Malagasy Grass-Warbler

Bergne (1901) lists "Allouette", French for a lark. He may well have seen Cisticola cherina, brown above striped blackish, and white below, in general colour resembling a typical lark. It is not mentioned by Dupont (1907), nor by Fryer (1911). It is recorded from Menai by Vesey-FitzGerald (1940, 488), and apparently from both Menai and West North Islands by Hartman (1958). Gaymer found it plentiful on Menai in November 1964 and October 1965, as I and Diamond did on Wizard and Menai. Diamond often heard a "tic" alarm-call, reminiscent of that of a Robin Erithacus rubecula in England. Stoddart and Poore heard this call and saw birds both on the southern dunes on Menai and on the path across champignon north of settlement in September 1968. On Wizard Diamond found a nest containing three eggs, in a bushy Achyranthes 0.6 m above the ground. This is rather high: the greatest height which Rand (1936, 450) gives is 450 mm. The entrance was near the top. Hartman (1958) and Watson et al. (1963, 198) imply that the bird was artificially introduced to Cosmoledo and Astove. This seems most unlikely, and it is virtually certain that colonisation (from Malagasy) was unaided by man. There may be no instance of the successful artificial introduction of an insectivorous warbler in any part of the world.

Vesey-FitzGerald (1940, 488) collected a specimen on Astove. It was sent to the British Museum, but cannot now be found. Hartman collected a male on Menai, Parker three males on Menai and two on Astove. In all, sixteen specimens are available from these two islands and Wizard. Twelve of them are adult, in breeding dress. Their measurements in mm, and of material in this dress from Malagasy, in the British Museum, with the addition of a few in the University Museum of Zoology, Cambridge, are as follows:

	Wing	Tail	Culmen from base
		Malagasy	
19 ♂♂	50 - 52 (50.8)	37 - 42 (39.4)	11.5 - 13 (12.3)
15 ♀♀	45 - 48 (47.1)	36 - 41 (38.9)	11 - 13 (13.0)
		Astove	
3 ♂♂	51 52 53	38 39 40	12.5 13 13
3 ♀♀	47 47 48	34 38 39	12 12.5 12.5
		Cosmoledo: Menai Island	
4 ♂♂	51 52 52 52	37 38 39 42	11.5 11.5 12 12.5
		Cosmoledo: Wizard Island	
2 ♂♂	50 50	38 39	12.5 13
3 juv.♂♂	47 48 48	40 42 42	12 12 one broken
1 juv.♀	45	41	11

The juveniles are suffused with rusty above and on the flanks, as described by Lynes (1930, 113) for Malagasy. The juvenile female is also washed with sulphur on the chin, throat and chest. Whereas my adults had the palate wholly black, all four juveniles had black restricted to a small area in the centre, the female without any black

at all. Also, they had irides grey-brown instead of red-brown, and in two at least skull-ossification had barely started. Probably none is more than about two months old (from date of hatching), and they are assumed to be from eggs laid not earlier than December. They are probably fully grown, nevertheless their measurements are kept separate.

The wing-lengths suggest that, while the Astove and Menai birds are similar in size to those from Malagasy, those from Wizard are slightly smaller, particularly if the juveniles are taken into consideration. Weights (in g) also tend to bear this out. Using also data from Parker's specimens as well as my own, the result is as follows:

Astove

3 ♂♂	9	10	10.8
3 ♀♀	8.4	8.5	10.8

(The heaviest female contained an enlarged, yolking egg)

Cosmoledo: Menai Island

3 ♂♂	10	10	10

Cosmoledo: Wizard Island

2 ♂♂	9.5	9.7	
3 juv.♂♂	8	9	9.4
1 juv.♀	8.2		

It can be seen that the Wizard males are lighter than those from Astove and Menai, the only exception being the Astove male weighing only 9 g. Also, the juvenile female from Wizard is slightly the lightest female. The investigation could be taken further by trapping and weighing of live birds at the same time of day.

As to colour, absolutely no variation could be discerned, and the known range of Cisticola cherina must be extended to include Astove and Cosmoledo. The two atolls may have been colonised quite recently, though in 1937, according to Vesey-FitzGerald, the species was already abundant on Astove. It is a pity that Nicoll (1906, 705) was unable to visit Astove and Cosmoledo, as we could have been reasonably sure from the account that he would have written what the situation was in 1906, and the inference from Bergne that it was already on Cosmoledo in 1901 would have been further illuminated. The fact that neither Dupont nor Fryer mentions it does not necessarily mean that it was absent at the time of their visits. Unlike Nicoll, they were not primarily ornithologists. Nicoll (1906, 686-692) visited Gloriosa in 1906, but makes no mention of C. cherina. It would be interesting to know whether it is there now.

Perhaps in due course Aldabra and Assumption will also be colonised. S. A. Renvoize (personal communication) is unaware of any difference in the species of grasses on the four atolls to account for its presence only on Cosmoledo and Astove. On the other hand, from the physiognomical aspect, on Aldabra there is no habitat comparable to the fairly open plantations with grassy ground cover found on Menai and Astove, or the low scrub on Wizard and Astove.

It would be interesting to ascertain how extensive the breeding season is on Cosmoledo and Astove. Parker's specimens, collected in early October, were already in breeding dress. The differences between breeding (summer) and non-breeding (winter) dress are clearly and correctly given by Lynes (1930, 112). For south-central Africa, Benson, Brooke and Vernon (1964, 83) give 82 egg-laying records for the related C. juncidis, all within the period November-June (only three for November, and a marked fall-off in the last three months). Yet Rand (1936, 449) expresses the opinion that cherina probably breeds throughout the year in Malagasy, and gives several records suggesting egg-laying in August and September (one definitely for the latter month). Nor are specimens in breeding dress on Cosmoledo and Astove in early October in keeping with the data for juncidis. Thus cherina would appear for some reason to be more plastic in its season. As would be expected in juncidis too, breeding was still under way on Cosmoledo and Astove in March. Apart from the nest with eggs found by Diamond, the heavy female collected on Astove held an egg measuring as much as 10 x 15 mm.

In order of predominance (numbers of individual specimens in each group), the stomach-contents of my specimens as a whole, including those from Astove, were:

Hemiptera: Homoptera and Heteroptera, including one Reduviidae nymph
Coleoptera: including Nitidulidae and Curculionidae
Orthoptera: including Tettigonoidea and Acridoidea
Diptera: including Fannia sp. larvae (Muscidae), Scenopinidae, and Asilidae
Hymenoptera: winged ants
Neuroptera: Myrmelionidae
Arachnida: small spiders

Corvus albus — Pied Crow

Listed from Cosmoledo by Dupont (1907, as C. scapulatus) and by Bergne (1901, as "Corbeau"). Vesey-FitzGerald (1940, 488) gives it as a visitor only. Hartman (1958) records a pair from West North Island; Bourne (1966) a pair on Menai, "the first for many years". I saw a pair on Menai, but was told that these were the only birds on the atoll as a whole. But Gaymer's information is that there were as many as five on Menai when he was there on 1 October 1965. Two of these he saw.

Zosterops maderaspatana — Malagasy White-eye

Vesey-FitzGerald (1940, 488, as Z. aldabrensis) records it as common on Cosmoledo (no particular island specified), as does Hartman (1958) for Menai. The only other record of white-eyes on Cosmoledo is of one seen by Gaymer on Menai on 1 October 1965. None was seen by any of our party on either Wizard or Menai, though it was seen by Stoddart and Poore on Menai in September 1968.

Three specimens collected on Menai have been studied (Benson 1969), and described as a distinct subspecies, differing from the population of nominate maderaspatana on Astove in being paler green above and paler

yellow on the throat and under tail-coverts. But it has since been ascertained from Vesey-FitzGerald that the specimen collected in his name (on 15 April 1952) was kept in alcohol, probably for several months, before being skinned by J. G. Williams in Nairobi. It is also understood from Mrs Stickney that Hartman's specimens may have been in alcohol for as long as one year. It is possible that the pallor of all three Menai specimens may be due to immersion in alcohol, and the validity of Z. m. menaiensis Benson requires further investigation. The special interest of Hartman's two specimens is however that they are partially grey and partially green above. It is unlikely that this was caused by alcohol. They seem to closely resemble the only known specimen of Z. hovarum Tristram, which probably came from Malagasy. The other specimen is wholly green above.

Nectarinia sovimanga Souimanga Sunbird

The species is listed from Cosmoledo by Dupont (1907, as Cinnyris abbotti). Fryer (1911, 430) records a Cinnyris; Vesey-FitzGerald (1940, 487) records the species as "especially common" on Menai; Hartman (1958) as "very common" on Menai, "common" on West North Island; and Bourne (1966) "many" Nectarinia sp. on Menai. On Wizard we did not find it to be common. On Menai it was more so, though not as numerous as Cisticola cherina. Vesey-FitzGerald found a nest containing young (he does not say how many) on West North Island on 5 October, and Hartman saw a nest containing two eggs on Menai, during 13-15 December. Gaymer reports that the birds were plentiful on Menai in November 1964 and October 1965. I collected on Wizard two old nests, now in the British Museum (Natural History). Each was about 1 m above the ground, attached to a bush identified by S. A. Renvoize as Azima tetracantha. This plant is well equipped with large spines, which might help protect the nests and their contents from any enemies. Three juvenile males collected by Parker on Menai on 6 October, the bills of which are recorded as "black with yellow gape", and a juvenile female by Vesey-FitzGerald on 15 April, for further details of all four of which see below, are probably only about one month old from date of hatching, suggesting egg-laying respectively in August and late February or early March. On Aldabra, occupied nests with eggs have been found throughout the period August to March, and presumably this also applies on Cosmoledo. There may even be some breeding throughout the year, as with some Nectarinia spp. in south-central Africa (Benson, Brooke and Vernon 1964, 93-95).

Taking into consideration the material (Benson 1967, 85) in which N. s. buchenorum was represented by only three specimens, all from Menai, and that recently collected, including Hartman's specimens (Astove, 2 ♂♂ 1♀ ; Menai 2♂♂ 1♀ ; Assumption 1♂ 1 juv.♀ ; Aldabra 1♂), revised measurements in mm are as follows:

	Wing	Tail	Culmen from base
		Astove (buchenorum)	
7 ♂♂	54 - 57 (55.1)	39 - 43 (40.6)	17.5 - 20 (19.1)
5 ♀♀	50 - 53 (50.8)	35 - 36 (35.2)	16 - 19 (17.5)
2 juv. ♀♀	49 50	33 35	16.5 19
		Cosmoledo: Wizard (buchenorum)	
1 ♂	55	39.5	20
1 ♀	51	34+	19.5
		Cosmoledo: Menai (buchenorum)	
6 ♂♂	54 - 57 (55.5)	39 - 44 (40.2)	18 - 20 (18.8)
3 juv. ♂♂	52 53 55	34 36 37	17 18 19
2 ♀♀	51 53	33 36	17 18.5
1 juv. ♀	50	31	16
		Assumption (abbotti)	
6 ♂♂	53 - 55 (54.3)	37 - 41 (39.2)	19 - 21 (20.0)
1 ♀	49	34	16+
1 juv. ♀	49	32	18
		Aldabra (aldabrensis)	
20 ♂♂	51 - 55 (52.7)	33 - 40 (37.8)	18 - 21 (19.5)
2 juv. ♂♂	50 51	32 33	19.5 20
12 ♀♀	47 - 50 (48.4)	30 - 35 (32.5)	17 - 19 (18.2)

Specimens not indicated as juvenile are certainly fully grown, and measurements of wing indicate that Astove and Cosmoledo birds are larger than those from Aldabra, with Assumption birds intermediate. Astove and Cosmoledo birds also average larger than those from Malagasy and Gloriosa, see figures for the latter two areas in Benson 1967, 85. They also have proportionately shorter bills than any others.

Of the material now available, much more comprehensive than I had previously, in the first instance adult males may be considered. The existence of an off-season dress was denied (Benson 1967, 88), but it is now evident that, as in some African species (Skead 1967, 20-24), it does exist, at least in aldabrensis and abbotti, and probably in all the subspecies. Ten specimens of aldabrensis are in full metallic (breeding) dress, with the red chest-band fully developed. Most of the remainder (another ten) have this dress only partially developed, with the upper-side largely dull olive, and the lower abdomen always dull olive-yellow instead of dingy white. They appear to represent an off-season dress. In the white of the abdomen, those in breeding dress only differ from specimens of apolis, of dry south-western Malagasy, in that it is less bright, not so pure a white. Three of the males of abbotti, collected by Nicoll on 12-13 March, also appear to be in an off-season dress. The other three differ from males in breeding dress of aldabrensis in having the abdomen mainly black, with a relatively little dingy white on the lower abdomen, while the rump and upper tail-coverts have some metallic green instead of being plain black. All the males from Astove and Cosmoledo (buchenorum) appear to be in breeding dress, with no constant

difference apparent between the two atolls. White on the abdomen has almost disappeared. In some specimens the process is complete, in others some of the feathers of the lower abdomen have whitish fringes. Metallic green on the rump is more extensive than in abbotti, while the lower back is black instead of olive as in abbotti and aldabrensis.

I stated (1967, 84) that buchenorum can also be distinguished by the brownish, less reddish tone of the chest-band. This is not borne out by the relatively long series now available. The colour in the type of buchenorum the only adult male of this subspecies which I had previously seen is almost a brick-red, and is quite accurately reproduced in the colour plate accompanying the original description (Williams 1953). According to the colour-chart of Villalobos-Dominguez and Villalobos (1947), it is nearest to SSO 8°(9). Specimens of nominate sovimanga are about the same, though the band is narrower, as it also is in apolis. In the other males of buchenorum the colour is more scarlet in tone, according to the same colour chart nearest to S 9°(6). Only Hartman's two males from Menai show some tendency to brick-red. In apolis, abbotti and aldabrensis the colour is always scarlet rather than brick-red, and the latter colour is only normal in nominate sovimanga. The type of buchenorum, also two females, one adult, one juvenile, were collected in Vesey-FitzGerald's name on the same day (15 April 1952) on Menai. He has told me that, like the specimen of Zosterops maderaspatana, they were kept in alcohol before being skinned in Nairobi. According to Mrs Stickney, certain of Hartman's specimens were also in alcohol prior to skinning, and this is the cause of the brick-red chest-band in some of the adult males, which are otherwise normal in colour.

Of adult females, Vesey-FitzGerald's specimen does not appear to have been affected by alcohol, but a Hartman specimen from Menai lacks the usual wash of yellow on the underside, and was in alcohol for one year. Material of nominate sovimanga is distinctly washed with olive on the upperside, and a relatively bright yellow below. In buchenorum (disregarding Hartman's female from Menai), abbotti and aldabrensis the upperside is brown with little or no olive wash, and the yellow wash on the underside is much less bright. In these respects these three subspecies from the Aldabra archipelago do not seem distinguishable from one another. Four specimens of apolis are like those from the Aldabra archipelago on the upperside, though perhaps a trifle paler. On the underside they are white with no yellow wash except for a slight sign of it in two from Tabiky. Four of the Astove specimens show a variable degree of orange-red fringing to the feathers of the chest, and the one which has this most pronounced, collected by Parker, also has some metallic bluish-green fringes to the feathers of the crown, nape and mantle. One old specimen of aldabrensis in the British Museum also shows slight signs of this orange-red fringing. M. P. Stuart Irwin has shown me in the National Museum of Rhodesia, Bulawayo, females of two African species, N. bifasciata and mariquensis, the odd individual of which shows the same tendency to red fringing on the chest. Benson and Irwin (1966) also note this in N. bourieri.

Of six specimens whose extreme youth is shown by uniform sooty chin and throat, a male from Aldabra and three collected by Parker on Menai agree with each other in being washed with dull olive above and olive-yellow below. But a juvenile female each from Menai and Assumption, respectively Vesey-FitzGerald and Hartman specimens, lack any olive above or yellow below. This is certainly attributable to immersion in alcohol. Another juvenile male from Aldabra, somewhat older, agrees best in colour and pattern with adult females, though has some olive above. It lacks the sooty chin and throat. The younger of the two Aldabra juvenile males, and one of the three from Menai, have no metallic feathers at all, the others only a few. Two juvenile females from Astove are like adult females but are more olive above.

It may be helpful to give the following summary of the subspecies, based only on males in breeding dress, noting that females of nominate sovimanga are richest in colour, apolis the least so, the other three subspecies rather richer than apolis:

N. s. sovimanga (Gmelin): Abdomen yellow, black restricted to uppermost part. Chest-band brick-red, relatively narrow. Wing 51-56 mm. Gloriosa and Malagasy except the dry southwest.

N. s. apolis (Hartert): Like last, but abdomen white, chest-band scarlet. Dry southwestern Malagasy.

N. s. buchenorum (Williams): Abdomen almost or completely black; chest-band scarlet, and broader. Lower back black instead of olive as in the last two; rump and upper tail-coverts metallic green instead of black. Larger, wing 54-57 mm. Bill proportionately shorter than in all four other subspecies. Astove and Cosmoledo.

N. s. abbotti (Ridgway): Like buchenorum, but some white on lower abdomen, lower back olive, metallic on rump less extensive. Slightly smaller than last, wing 53-55 mm. Assumption.

N. s. aldabrensis (Ridgway): Like abbotti, but lower abdomen wholly dingy white (not so bright as in apolis or nominate sovimanga); rump and upper tail-coverts wholly black, without any metallic. Wing 51-55 mm. Aldabra.

No plausible explanation can be offered for the extensive black in the male of buchenorum, both on the abdomen and on the lower back. If it is the effect of melanism, then it is puzzling that the female shows no richness of colour. It is very like the female of abbotti and aldabrensis, and only slightly richer than in the dry country apolis. The males of apolis and of aldabrensis (in breeding dress) are rather similar. The only colour differences are that apolis has the scarlet chest-band narrower, and the abdomen a brighter white, with the black on the upper abdomen more restricted.

While on Astove, Diamond noted that this species appeared to be larger than on Aldabra, thus agreeing with inference made above from wing-lengths. The following weights in g from specimens collected by me do not support this very well:

Astove

3 ♂♂	6.8	7.6	7.6
2 ♀♀	6.0	7.2	

(The heavier female contained an enlarged, yolking egg)

Wizard

1 ♂	7.2
1 ♀	6.9

Aldabra

12 ♂♂	6.4 - 7.9 (7.1)
6 ♀♀	5.7 - 6.8 (6.3)

Nevertheless, trapping and weighing the live birds at the same time of day might well demonstrate a more marked difference.

In adults of buchenorum which I collected on Astove and Wizard, males had the flesh-coloured palate suffused with black, whereas in females there was no such suffusion. The stomach-contents of specimens collected by Parker on Menai consisted of fragments of insects, including some Coleoptera. Those of a male and a female taken by me on Wizard consisted of small Arachnida (spiders) and Homoptera.

Serinus mozambicus — Yellow-fronted Serin

Bergne (1901) lists "Sourin", "greyish yellow" in colour. This name may be a corruption of "Serin". S. mozambicus is a common and widespread species in southern Africa, and is sometimes kept as a cage bird. It is greyish green above, yellow below. It has been introduced to Desroches, in the Amirantes (Watson et al. 1963, 182), as well as to Mauritius and Reunion (ibid., 148, 159), and an introduction to Cosmoledo would not be surprising. But there is no subsequent record, and so presumably it died out long ago.

Possibly resident shore birds

Ardea cinerea — Grey Heron

Listed by Dupont (1907). Between us, Diamond, Grubb and I saw at least five individuals on Wizard, and two more on Menai.

Egretta garzetta — Little Egret

Dawson (1966, 7, under E. dimorpha) records that it occurs on Cosmoledo "in large flocks", though we have no evidence of this. There were however at least five birds on Wizard at the time of our visit. I counted three dark phase individuals, one white. On Menai, Diamond counted 13 dark phase birds, four white. Bourne (1966) refers to egrets and herons as abundant on Menai, of which some at least were presumably E. garzetta.

Parker collected a female on Menai, and I collected a female on Wizard. Some particulars for them are:

Locality	Menai	Wizard
Wing	277 mm	287 mm
Culmen from base	90 mm	92 mm
Culmen exposed	88 mm	90 mm
Colour of plumage	bluish grey, chin, throat and outer primary coverts white	similar, but in fresher dress, bluish grey darker
Colour of soft parts	upper mandible blackish, lower blackish at tip; rest pale horn; front of tarsi black, back and toes greenish yellow	bill black; orange-yellow at base and around eye; legs black, feet yellow; irides yellow
Weight	-	540 g

According to me (Benson 1967, 68), E. assumptionis does not seem recognisable, and these two specimens must be assigned to E. g. dimorpha, of Malagasy and the Aldabra archipelago. Their bill-lengths are lower than the minimum given by Grant and Mackworth-Praed (1933, 193) for assumptionis.

Bubulcus ibis — Cattle-Egret

No earlier record has been traced. Inland on Wizard, there were some fifty individuals at least. In the south, Grubb counted 15, about half with buffy breeding plumes. I saw another 34 in the north, including one flock of 19. One bird was seen on Menai. This is not strictly a "shore" bird at all, but is best treated with other Ardeidae spp.

Butorides striatus — Little Green Heron

Listed by Dupont (1907, as B. atricapillus). Only one individual was seen by us on Wizard, and a total of five on Menai. No specimen has been collected, but most likely Cosmoledo birds are B. s. crawfordi, as on Assumption and Aldabra.

Migrants

Unless otherwise indicated, the following records of shore birds are from Diamond, Grubb or myself.

Squatarola squatarola — Grey Plover

Eight on Wizard, also noted on Menai. One on Wizard was mainly in breeding dress.

Charadrius leschenaultii — Great Sand-Plover

Listed by Dupont (1907, as Aegialitis geoffroyi). On Menai and Wizard in small flocks.

Numenius phaeopus — Whimbrel

Listed by Dupont (1907). About 30 on Wizard, some perching on Agave inflorescences or on tops of Tournefortia bushes. Also noted on Menai, where Parker collected one.

Numenius arquata — Curlew

Listed by Dupont (1907), but not seen by us.

Limosa lapponica — Bar-tailed Godwit

About five seen by Diamond on Menai.

Tringa nebularia — Greenshank

Listed by Dupont (1907, as Totanus glottis). One on Wizard, two on Menai.

Actitis hypoleucos — Common Sandpiper

Listed by Dupont (1907), but not seen by us.

Arenaria interpres — Turnstone

Listed by Dupont (1907). Large numbers on Menai (Bourne 1966). At least 100 on Wizard. Also seen on Menai.

Crocethia alba — Sanderling

Seven seen by myself on Wizard, noted by Diamond on Menai.

Erolia minuta — Little Stint

Listed by Dupont (1907), but not seen by us.

Erolia testacea — Curlew-Sandpiper

In small flocks on Menai and Wizard.

Dromas ardeola — Crab-Plover

Listed by Dupont (1907). Bourne (1966) records 20 on Menai. At least 50 on Wizard, over 30 on Menai.

Of true land birds, Vesey-FitzGerald (1940, 488) records a Broad-billed Roller Eurystomus glaucurus on Wizard on 6 October 1937. It was presumably E. g. glaucurus, well known as a migrant from its breeding quarters in Malagasy to Africa. Gaymer also reports one seen on Menai on 9 October 1964 and again on 1 October 1965. He saw a single Blue-cheeked Bee-eater Merops superciliosus on Menai on 1 October 1965. This would be unusually early for the palaearctic M. s. persicus, two of which I definitely saw on Aldabra on 22 March 1968. The earliest arrival date for the subspecies in Zambia is given as late October (Benson and White 1957, 51). Gaymer's record is presumed to refer to M. s. superciliosus, suspected of migrating from breeding quarters in Malagasy to Africa. On Menai, I saw a Red-backed Shrike Lanius collurio, an adult female or an immature bird, perched at the top of a Tournefortia bush. This seems to be the only record of this palaearctic species from the Malagasy Region, and it can only be of a stray individual. Other palaearctic land birds may be expected to occur on Cosmoledo occasionally. The number of such species recorded by now from Aldabra is about 14.

Summary

1. An account is given of the land (including shore) birds of Cosmoledo.

2. Of the resident true land birds:

(a) A rail Dryolimnas cuvieri and a turtledove Streptopelia picturata are said to have existed some 60 years ago, but are now extinct except perhaps on South Island.

(b) A warbler Cisticola cherina may be a recent coloniser from Malagasy, and is undifferentiated from the parent stock, except that specimens from Wizard Island are rather small in size. There is a well-marked subspecies of a sunbird Nectarinia sovimanga, confined to Cosmoledo and Astove. A white-eye Zosterops maderaspatana, only known from Menai Island, may belong to the same subspecies as on Astove. Two out of the three specimens collected are remarkable for being partially grey above. The first two of these species are plentiful, the white-eye less so.

(c) A crow Corvus albus occurs in small numbers. There is one record of a dove Geopelia striata, probably introduced by man. Another such introduction may have been a serin Serinus mozambicus, but it has apparently died out.

3. The number of species of resident true land birds is much less than on Aldabra (see list in Stoddart, Benson and Peak 1970), despite the fact that Cosmoledo is nearer to Malagasy, the principal source of colonisation. But the land area of Cosmoledo is much less.

4. There are four possibly resident herons or egrets (family Ardeidae).

5. Of migrants, eleven species of shore birds which breed in the Palaearctic Region have been recorded; also the Crab Plover Dromas ardeola and three species of true land bird.

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