

Chapter 5

OBSERVATIONS ON THE BIRDS OF ALDABRA IN 1964 AND 1965

R. Gaymer

Department of Zoology, Bristol University

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1. GENERAL OBSERVATIONS

Birds are conspicuous on Aldabra, for although the number of species is small, the species themselves are represented by large populations. This paper presents observations on the natural history of the land birds, together with some notes on the sea and shore birds, obtained during two visits to Aldabra made by the Bristol Seychelles Expedition, the first from 11 November to 14 December 1964, the second from 4 October to 20 November 1965.

Fourteen land birds are considered here, together with the flamingo, which spends much of its time at inland pools. Of these fourteen, only three have apparently not diverged from their Madagascan or Comoran ancestors (Benson 1967). These are the Pied Crow Corvus albus, which is extremely mobile amongst these islands; the Cattle Egret Bubulcus ibis, which seems to be a recent arrival; and the Madagascar Bulbul Hypsipetes madagascariensis. Pied Crows are frequent around the settlement on West Island, and also occur in areas of Mixed Woodland and beach vegetation on South Island. Their total numbers cannot exceed a few hundreds. Cattle egrets have previously been recorded only as rare vagrants, but as elsewhere there has been a recent increase, and at least 100 birds now live on South Island, around Takamaka.

There are no introduced birds on Aldabra apart from the few chickens on West Island, despite the many introduced species in neighbouring island groups. Very large numbers of migrants visit Aldabra, but these are mainly waders, which feed on the lagoon and among the brackish pools in the southeast. A number of vagrant land birds have also been recorded, and are listed by Benson (1967). Only the Broad-billed Roller Eurystomus glaucurus glaucurus may occur regularly, having strayed on migration between Africa and its breeding quarters in Madagascar. The Blue-cheeked Bee-eater Merops superciliosus might be expected, since it has been seen on Cosmoledo (R. Gaymer, October 1), as might the Madagascar Grass-warbler Cisticola cherina, which is common on Cosmoledo and Astove. Four specimens of a barn owl were collected on Aldabra in 1892 and one in 1906, but none have been recorded since, and they must be assumed extinct. They do not appear to differ from the African Tyto alba affinis (Benson 1963), which also occurs in Madagascar and the Comoros.

The main land bird habitats are (1) mixed scrub and woodland covering the interior of South Island, and to a lesser extent West and Middle Islands; (2) Pemphis scrub, which covers most of the rest of the atoll; (3) mangrove communities fringing the lagoon; and (4) the coastal vegetation, which is best developed in the west.

In probable order of abundance the commonest species are the Sunbird, the Fody, the Bulbul and the White-eye. These are omnivorous birds, able to utilise the many flowering shrubs and trees, with which their breeding season is synchronised. Excepting the pigeons, the larger birds are either scavengers with a wide range of foods and feeding sites, such as the Ibis and Pied Crow, or, like the Kestrel, Nightjar, Drongo and Coucal, they are more specialised and feed on lizards or large insects which are in more regular but limited supply. These birds are mostly less numerous, despite their smaller size.

The fruits and seeds of the flowering plants provide a large and continuous food supply for the ground-feeding Turtledove, since germination and decay are

minimal on the dry rocky or sandy ground. Fleshy fruits are much less abundant, and the supply must be very seasonal. This probably explains the rather small numbers of the Comoro Blue Pigeon, which are only common in the southeast, where Ficus and other trees are concentrated. The numbers and distribution of the other birds also correspond with the vegetation types.

1. Mixed Scrub on Platin

Most of the land birds are commonest here, with the exceptions of the Pied Crow and the White-throated Rail, which latter is confined to the mangrove, Pemphis scrub and beaches of Middle Island and Polymnie. The Comoro Blue Pigeon, Madagascar Coucal, Madagascar White-eye, and probably the Madagascar Nightjar are only otherwise found in areas of rich beach vegetation. The White-eye and the Coucal seem particularly dependent on dense cover. Although found inland, the Pied Crow is best considered as a littoral scavenger, and is commonest around the outer coast. Cattle Egrets roost in a large clump of trees at Takamaka, as do the Sacred Ibis and fruit bats.

2. Pemphis Thicket on Champignon

Pemphis appears to provide little food, and it is generally avoided by the birds. The White-throated Rail is an exception. Where mixed woodland is close, the Sunbird and the White-eye are sometimes seen, and the former at least may nest.

3. Mangrove

Mangroves are a major habitat for nesting sea birds, and dense stands of Rhizophora are also inhabited by occasional water birds, and by Drongos, which nest near the edges. Small numbers of Sunbirds occur in open mangrove of this type, and also of Avicennia and other genera, as do Drongos and sometimes Kestrels and Fodies. Sacred Ibis feed in mangrove on the lagoon margins. Turtledoves may nest in mangrove, but this has not been observed. The Flamingos are largely confined to this habitat, which also serves as winter quarters for many migrant waders.

4. The Settlement

The settlement area on West Island is visited by Sunbirds, Bulbuls and White-eyes, but only because it is an area of rich beach vegetation. The Fody and Turtledove exploit the food provided by the kitchens and the feeding of domestic animals, the Fody being especially efficient in competition with chickens for rice. Both species also exploit the many Casuarina trees along the beach, and the Fody breeds in the lower branches. Pied Crows scavenge for offal when possible, but are discouraged. The other birds avoid the settlement.

2. THE LAND BIRDS

Threskiornis aethiopica abbotti Ridgway Sacred Ibis

Because of its large size (70 cm.) and pleasant flesh, this bird is uncommon and is restricted to the more remote parts of South Island, where it is most abundant in well-developed mixed woodland and open mangrove. It feeds in small groups in the lagoon at low tide, or in twos and threes inland (Plate 28). Large numbers roost at Takamaka, where a colony was found nesting over a small tree by the pool (Plate 33). There were 21 nests, built in a mass at a height of 7-10 feet; 17 of the nests contained two eggs, two had one egg, and one had three. The eggs were off-white in colour, stained, and without lustre. By the following day (November 22) a further bird had laid. Over the next five days all the eggs vanished, despite minimal disturbance. Fryer (1911) found a similar colony in which two out of a total of 18 eggs were destroyed, according to him in gaining access to their own individual nests. The nests found in 1964 were about 45 cm. in diameter, composed of twigs, and lined with a small amount of tufts of grass and dead and fresh leaves, none of which were woven. The cavities were shallow. Nicoll (1906) found old nests in mid-March, at which time the young were fully grown.

Reports of feeding include the taking of scraps and turtle offal from around the camps of turtle fishermen, and small crabs and other marine animals. The bill is used to probe for food in the mud of the lagoon and of fresh and brackish pools inland. Many Ibis are also seen searching in leaf litter inland, and may eat lizards, large insects, and some vegetable matter. These birds were once extremely tame, but although all ages are still very inquisitive, only the juveniles now approach to within two or three yards: they are recognisable by their rather shabby appearance, smaller size, and feathered necks.

Phoenicopterus ruber roseus Pallas Greater Flamingo

The flamingos on Aldabra have been variously reported "resident . . . numbers 500 to 1000" or absent, and therefore previously only as migrants in passage. It is clear that they are regularly present at least in the southeast, where they occur in small groups or pairs in the brackish pools amongst the mangroves (Plate 36). There seemed to be about 50 birds at the time of our visit, but they are very shy and difficult to approach. They may breed, but this has not been confirmed. Although the mangroves in the southeast seem to be the main habitat, flamingos have also been reported in the lagoon proper; flying over Middle Island in the east; and over South Island near Dune Jean Louis.

Falco newtoni aldabranus Grote Madagascar Kestrel

This kestrel hunts lizards and rarely hovers, but is otherwise fairly typical. The male is chestnut and black dorsally, with a grey head, and spotted beneath. The female is larger, more spotted, and generally brownish above. The only prey seems to be the lizards Ablepharus and Phelsuma, and possibly some nocturnal geckos. Unlike the Madagascan form, this bird avoids human habitations. It occurs over much of South Island, but since breeding territories

are very large, the total population cannot exceed 100 birds. The only breeding record is one nest at Anse Mais, on the west coast of South Island. It was found on 18 November, in the crown of a coconut palm, at about 25 feet above the ground, and contained a little down and three large young (see Penny 1964, 40). Lizards were being brought to the young by the parents, who also defended the area against Pied Crows, Drongos and Bulbuls. On one occasion a kestrel was observed driving seven Pied Crows away. This behaviour was seen at Takamaka, indicating that breeding may also have been in progress there.

Dryolimnas cuvieri aldabranus (Günther) White-throated Rail

This Rail, the Aldabra form of which is flightless, has head, neck and breast a dull chestnut colour, otherwise the general colour is olive, with the chin and throat of adults white. It appears to be confined to Middle and Polymnie islands, but may also occur on Esprit and Michel in the lagoon. There is no evidence that rails have lived on South Island, although Abbott (in Ridgway 1895) states that they did and had been exterminated by feral cats. Rails were then common around the settlement on West Island, but were rare by 1908 (Fryer 1911) and have not been recorded since. Cats and rats are the most likely cause of their extinction on West Island.

It is possible that these Rails are in some way associated with the large colonies of sea birds which occur in the same areas. Eggs are certainly eaten with speed and efficiency when offered, although large insects and shore crabs may be more important foods in the wild.

Bendire (1894) describes the only nests recorded, collected by Abbott. They were rather loosely constructed from small twigs and plant stems, one at 18 inches above the ground, the other more typically in a cavity in the rock. The first nest was 25 cm. wide and 18 cm. deep, with a cavity measuring 11.5 by 9.5 cm., which meant that the hen sat with only the head protruding. The second nest was composed of finer materials, mainly dried grass, and was concealed behind a tuft of grass. Clutches were 4, 3, 2 and 2. The average size of the eggs was 4.25 x 3.0 cms. The shells were strong, fairly glossy with fine granulations, and of a creamy white colour, sparingly dotted with liver brown, vineaceous and lavender. The marks were heaviest at the larger end. These nests were taken in December, so it is surprising that others on Aldabra at the time have seen no signs of breeding. Abbott (1893) says that a few pairs were breeding in September, but that most did not breed until November-December. Nicoll (1906), who was on Assumption from 11 to 13 March, thought the breeding season of the Rail was over, though he did see several young still covered with black down. On Aldabra, Abbott gives the clutch size as three, rarely four, despite local reports that this is often exceeded. The hen sits very closely and quickly returns once disturbed. In Madagascar the breeding season of this species probably includes October, November, and January to March (Rand 1936).

A startling variety of calls is produced, with the head raised. A drum-like sound, often followed by a long curlew-like whistle, is common, and when excited a series of shrieks and grunts can be produced, which may be used to call the young (Nicoll 1906). Pairs are territorial and fighting has been reported.

Alectroenas sganzi minor Berlepsch Comoro Blue Pigeon

This medium-sized fruit pigeon is strikingly coloured pale grey and midnight blue, with bare red skin around the eye (Gaymer 1966; Penny 1965, 411). The male has some of the feathers on the head and neck faintly tipped with pink. Juveniles are green with some yellow above, and greenish grey below.

Small groups of blue pigeons are conspicuous in larger trees, and they are also seen flying overhead at some height in ones and twos. They are well distributed in the mixed woodland on South Island and West Island, often revealing their presence by a hoarse 'hoo', repeated four or five times. This is especially characteristic of the male display, in which he hops through the canopy of a tree after a female, cooing, bowing, and raising the plume feathers of the head and neck, often stopping to drive away other birds, including Bulbuls. This display has been regularly observed in November and December, but the testes of two males taken at that time were small (10 x 4 mm.) with little fat. Nesting and rearing may occur in February to March. Young birds have been seen with their parents in March (Nicoll 1906). In the Comoros Benson (1960) collected a female of this species containing an almost fully developed egg on 2 November, while in Madagascar Rand (1936) found that A. madagascariensis breeds from July to March. On Aldabra the nests are probably built in the tops of larger trees inland.

These pigeons eat the fleshy fruits of Ficus sp. (la fouché, banyan) and small flocks are attracted to these and other fruiting trees. Fruits up to 1 cm. in diameter are swallowed whole, many being dropped while feeding. Drinking has not been observed, nor have they been seen on the ground.

Streptopelia picturata coppingeri (Sharpe) Madagascar Turtledove

This pinkish grey-brown dove, about 30 cm. in length, spends much time on the ground in small groups, searching for seeds, which are the main food. Casuarina seeds are eaten where possible, and some rice and other scraps are eaten at the settlement. In the Comoros some insects are also taken (Benson 1960) but this has not been seen on Aldabra. Small freshwater pools are visited regularly in the morning and evening (at least in the dry season), being approached on the ground, usually in small flocks.

Remarkably little is known about breeding. Abbott (in Ridgway 1895) reports that nesting occurs in mangrove in September to November. This is surprising, since they are now rarely seen in mangrove. Males were observed courting and driving other males away during November and December. In the Comoros, Benson (1960) had evidence of this species breeding in August to November, while in Madagascar Rand (1936) found that the season probably extends at least from July to October. On Aldabra, two white eggs are probably laid on a flimsy platform of twigs in the canopy of a tree, as elsewhere.

Centropus toulou insularis Ridgway Madagascar Coucal

A large clumsy bird, about 45 cm. long, which includes a long graduated tail and heavy hooked beak. Both male and female have the characteristic call--a descending 'tou-lou-lou'--but at different pitches, the male's being

the higher. This call carries very well, and often reveals their presence when the birds are well hidden in the canopy of a tree or in a bush. They are only found in areas of dense mixed vegetation, in which much of their time is spent in search of food. This consists of centipedes, lizards, crickets, and probably grasshoppers, cicadas, mantids, etc. Bird eggs are also eaten, and young may be taken too. Abbott (in Ridgway 1895) reports his belief that small rats are eaten. Food is swallowed whole, being captured mainly on the ground.

Abbott describes the nest, which is oval and very large, with an entrance at one end, by which he presumably means at the side. It is made of loosely interwoven strips of bark, grass, and, where available, coconut leaves. He gives the height as 5 to 8 feet above the ground, although Fryer (1911) describes a nest as "low down" in a bush. Three or four white eggs are laid. The birds are in breeding plumage by October, and pairs can be heard calling together in their large territories. As in Madagascar (Rand 1936), the breeding season of this species probably extends from December to March.

Caprimulgus madagascariensis aldabrensis Ridgway Madagascar Nightjar

This nightjar is about 24 cm. long, with typical grey and brown cryptic coloration. It is rarely seen, but at night the falling rattle and two-noted cry (with the second note stressed) can commonly be heard inland, especially in the southeast. Abbott (in Ridgway 1895) also reports a "winnowing" cry.

Occasionally a roosting bird may be flushed from the ground during the day. Almost nothing is known of this bird's habits. Abbott reports that beetles were taken at night from around a pile of refuse on West Island. He states that breeding occurs on open ground or sand hills, and found a nest with young in September. Rand (1936) records breeding of this species in Madagascar in August, September and October.

Hypsipetes madagascariensis rostratus (Ridgway) Madagascar Bulbul

This noisy bird is grey, with an orange bill and a short black erectile crest. It is sometimes in groups of up to a dozen, although a group of two or three is more normal. The song is a harsh, quite complex whistle, but many other sounds are made. Berries and other fruits, flowers, and flower buds form the major part of the diet, but mantids, orthoptera and other large insects are taken when possible, sometimes on the wing.

The breeding season probably extends from November to January, though in the Comoros Benson (1960) gives evidence of breeding starting as early as September, and in Madagascar Rand (1936) gives the season as extending at least from September to January. On Aldabra nesting material was being carried on 27 November, and two nests were collected by Abbott on 22 December and 31 December. These are described by Bendire (1894). They were rather slight, and composed of fine rootlets, small twigs, dry leaves and plant fibres, being lined with finer materials of the same kind, plus dry grasses. They measured 10.4 x 7.2 cm. externally, and 9.5 x 4.5 cm. deep internally. Both were at about 8 feet above the ground, in the crotches of thorny shrubs. One contained two eggs, the other only one, and these averaged 2.48 x 1.77 cm. The shells were close grained, glossy vinaceous pink, profusely spotted and blotched

with different shades of claret brown, vinaceous rufous and lavender, forming a wreath at the larger end.

Dicrurus aldabranus Ridgway Aldabra Drongo

Adults of this species are black, with a long forked tail and a total length of about 28 cm. The bill is stout and compressed, hooked at the tip, with strong nasal bristles at the base. Immature birds are rather unevenly grey, paler beneath. Drongos are commonly seen in pairs or family parties, sitting conspicuously on bare branches in mixed woodland near mangrove. It is a pugnacious bird, with large territories. The nesting area itself is successfully defended against even Ibis and Grey Herons. Bendire (1894) describes two nests, collected in November and early December. These were very firmly constructed of fine twigs and lined with finer ones, to form a rather shallow cup 7.5 cm. wide and 3.25 cm. deep, the outer dimensions being 14 x 5 cm. Three eggs were rich cream, with scattered spots of cinnamon rufous and brick red, some with one or two lavender dots. There was no lustre, and the markings were heavier at the larger end. Average measurements were 2.65 x 1.9 cm. These nests were built on a horizontal branch of Casuarina, but where this tree is absent, nests are built in mangrove, at a height of 15-20 feet above the ground. Inland, nests may be built in large Ficus and other trees. One such nest was composed mainly of dried sedges, looped over a fork at 18 feet. It was frail in appearance, with a fairly deep cup internally. Spider's web is often incorporated, and this was also noted by Abbott (in Ridgway 1895). Abbott gives the clutch size as three or four.

A nest with one young was seen at the end of November, but it was later found abandoned. Another nest was found on 2 December containing three young. Several family parties were seen in November and December, but none had more than two young, and most had only one, and this may be the usual number reared. Benson (1960) found eggs of D. waldeni on Mayotte in the Comoros in October and November, while Rand (1936) found the breeding season of D. forficatus in Madagascar to be from September to December. Nothing is known about feeding, but related species eat beetles, homoptera, and spiders. The young are fed by both parents on what appeared to be large insects.

Nectarinia sovimanga aldabrensis (Ridgway) Souimanga Sunbird

This is a typical sunbird, very small (about 11 cm.), with a long down-curved beak. The male has bright metallic coloration, the female and juveniles are dull brownish grey. These birds are very active, and hop continuously through bushes and trees, uttering a frequent high-pitched 'chink'. The males sing loudly in the breeding season, which is prolonged, extending at least from September to January (Abbott in Ridgway 1895). Morris (1963) found eggs in January. Nests are domed, and usually suspended from a branch at 4-12 feet above the ground, or sometimes hung from branches or roots over the edge of a pit in the ground. The nest is begun by fastening streamers of twice or more the final length of the nest to the chosen Pemphis, mangrove, or other branch. Abbott (in Ridgway 1895) describes the formation of an oval mass of nesting material, which the hen then opens out by pushing in her head

and body, later entering the cavity, and finally lining it with feathers. The nest includes bark fibres, grasses, dried marine grass from the beach, down from pods of wild cotton, and many hundreds of feathers. It takes about eight days to build, all the work being done by the female. Vesey-FitzGerald (1940) gives the internal dimensions of a nest on Astove as 10 cm. deep and 8 cm. wide, the entrance being 3.5 x 4.0 cm. Morris (1963) gives the entrance as 4 cm. in a nest about 11.5 cm. across. He describes the eggs as dirty white, mottled with umber. He later found this nest in "tattered ruins". Two nests which were built into a branch, rather than suspended, were also the highest seen, at 10 and 12 feet above the ground. The nesting density is sometimes very high. Eleven nests were counted at Anse Mais in mid-November. Two eggs are laid, and incubation takes 13 days, the sexes sharing the task. The eyes of the young open on the seventh day.

Nectar is sipped with the tubular tongue, sometimes while hovering, but generally while perched. Small flies are eaten in large numbers, with some solid vegetable matter, mainly stamens and other flower parts. All solid food is swallowed in very small pieces. The young are probably fed mainly on insects.

Although no longer so tame that they alight on one's arm (Abbott in Ridgway 1895), the females and juveniles will often inspect an intruder while hovering in front of his face.

Zosterops maderaspatana aldabrensis Ridgway Madagascar White-eye

This tiny yellow to olive-green bird, with a white ring around the eye, is usually seen in small flocks, which move through the bushes and trees with repeated soft calls, well described by Morris (1963) as a low, rather bell-like 'tee-eep', and an almost continuous low twittering. Although often hard to locate, white-eyes are very common in areas of rich beach vegetation and in the denser parts of the mixed woodland. The diet is mixed, consisting of berries (swallowed whole), small beetles and other invertebrates, nectar taken up with the brush tongue, and buds and flower parts. Food is not taken on the wing.

Breeding takes place from October to December (Abbott in Ridgway 1895). Nests are built at about 6 feet above the ground, slung into a fork at the top of a bush. They form a small deep cup, in which two or three pale blue-green translucent eggs are laid, and are composed of shreds of bark, leaves, grass and small twigs, with little lining. Casuarina needles have also been reported.

During courtship pairs can be seen preening each other around the head and neck while sitting side by side on a branch. The male sings, and pairs are territorial, but this is not so apparent as in most of the other birds.

Foudia eminentissima aldabrana Ridgway Red-headed Forest Fody

This bird is common and conspicuous, especially around the settlement on West Island. The female is somewhat sparrow like, but is more yellow, with dark streaks, and has a more powerful bill. The male in breeding plumage has a vivid orange-scarlet head and breast, with the belly and back yellow and the rump orange. Immature birds resemble the female.

Flocks of breeding adults may be formed while feeding, but this is unusual. Males are strongly territorial, with a characteristic threat display, in which the wings and tail are drooped, and the head, breast and rump feathers puffed out (Plate 35). The intruder is then challenged with a series of wheezing or fizzing calls, and a metallic 'ching-ching'. A female may be so challenged, but on recognition the calls become a series of thin high whistles at about half-second intervals, uttered by one or both sexes. The male then raises his wings high and quivering above his back (in obvious strong contrast with the threat posture) and if accepted mounts and copulates with the crouching female, keeping his wings raised. Copulating was observed in November and December. Territories may be as small as 1000 square yards in groves of larger trees, indicating a possible forest ancestry. Nests may be from 4 to 20 feet high, and if one is destroyed another is built nearby. Mixed woodland is preferred, and Casuarina is used if available. Nests in mangrove are rare. Abbott (in Ridgway 1895) gives the clutch as four, but those he collected were 3, 3, 2 and 2. We observed four nests with eggs: all had three eggs, these being laid in one case on consecutive days, ceasing after the third egg. Abbott also states that nesting is in November, December and January; it probably extends to February or March. The male assists in nest construction but not in incubation. Bendire (1894) describes the nest and eggs. Nests are domed, and are built into the branches of a tree or shrub. They measure 23 x 18 cm., with inner dimensions 7.5 cm. wide and 7.0 cm. deep. The eggs are pale glaucous green, nearer blue, unspotted, with a rather thin glossy shell. They average 2.05 x 1.4 cm. in size.

These fodies feed on seeds, flowers and beetles taken from among bushes and trees, or from the ground. Other small invertebrates may also be taken. Rice and kitchen scraps are eaten at the settlement, and Casuarina seeds wherever found. Abbott reports that unripe maize was eaten if opened by rats, but since the bill is very powerful, they must have been so unfamiliar with maize that they attacked it only when exposed.

3. NOTES ON SEA AND SHORE BIRDS

There have been no studies of the marine birds of Aldabra, apart from a small amount of collecting, and some scattered observations. Benson (1967) has listed the known species. The following notes on sea and shore birds are divided into (1) known breeding species, and (2) unconfirmed breeding species.

1. Breeding Species

Phaëthon rubricauda Red-tailed Tropicbird

A population probably numbering some hundreds lives mainly along the northern part of the lagoon, breeding on small islets under rock ledges, bushes or tall grass (Plate 31). Nest with egg found on 18 November.

Sula sula Red-footed Booby

Many thousands breed in colonies scattered amongst the frigate bird camps on Middle Island. Vesey-FitzGerald (1941) describes nesting, and states that

breeding occurs "around September". Some fledged young were seen in November (Plate 30). No dark morphs seem to occur as reported on Gloriosa.

Fregata minor Greater Frigatebird
Fregata ariel Lesser Frigatebird

Huge camps containing tens of thousands of these birds occur in the mangrove fringing the lagoon shore of Middle Island. Eggs of both species were present on 7 October, although the season has been given as May to August. Frigates may breed on the Cargados Carajos and Gloriosa, but otherwise the Aldabra colonies supply the entire western Indian Ocean. Vesey-FitzGerald (1941) reports that frigates nest on Cosmoledo but this no longer seems to be the case. The colony reported by Fryer (1911) on West Island, Aldabra, seems also to have gone, probably as a result of human activities. Benson (1960) supposes that frigates breed in the Comoros, but in view of the small numbers seen they may be visitors from Aldabra. Stoddart and Wright (1967) describe frigates diving for water at freshwater pools on the South Island plain.

Butorides striatus Little Green Heron

A local race, frequent around the west coast, but less common elsewhere. Probably nests, as in the Seychelles (Dawson 1966), over a long period, concentrated in the northwest monsoon, but this requires confirmation.

Egretta garzetta Little Egret

Many thousands feed in the lagoon at low tide, and elsewhere, and the bird is also seen inland. White morphs outnumber the slate-grey dark morphs by about 7 to 3 (Dawson 1966). Probably breeds in the mangrove, August-September.

Sterna sumatrana Black-naped Tern

Regularly seen in small numbers in the lagoon. A nest with one egg was seen on 17 November on a small bare island in the lagoon near Polymnie. Eggs have been found in September to November on other island groups (Vesey-FitzGerald 1941).

Anous stolidus Common Noddy

Thousands occur on small bare islands out in the lagoon, scattered amongst the frigate colonies on Middle Island, and on the cliffs of islands in West Channels. It breeds in cavities and ledges of islets in the lagoon (Vesey-FitzGerald 1941), and probably in the mangrove; the season may be June-August.

2. Unconfirmed Breeding Species

Phaëthon lepturus White-tailed Tropicbird

Rather more common and widespread than the red-tailed species. Would breed in similar situations.

Sterna albifrons Little Tern

Perhaps a hundred seen along the northern coast in November, and more rarely in the lagoon. They are locally reported to breed, laying one egg in a sand scrape.

Thalasseus bergii Crested Tern

Frequently seen feeding in shallow water over the outer reef or in the lagoon, sometimes in small groups. Locally reported to breed, young being taken from the bare low Chalen Islands, near West Channels.

Gygis alba Fairy Tern

Seen flying in twos and threes in the lagoon. Locally supposed to breed throughout much of the year.

Dromas ardeola Crab Plover

Flocks of up to several hundred feed on exposed sand and mud over the reef in the west and in the lagoon. Not locally thought to breed.

3. Non-Breeding Migrants, Visitors and Vagrants

The following species occur in large numbers in the creeks and pools of the mangrove around Bras Takamaka and elsewhere, and sometimes around the outer coast and in the lagoon at low tide: Turnstone Arenaria interpres, Whimbrel Numenius phaeopus, Sanderling Crocethia alba. Less common are the Greenshank Tringa nebularia, the Common Sandpiper Actitis hypoleucos, the Curlew Sandpiper Erolia testacea, and the Wood Sandpiper Tringa glareola. The Turnstone is probably the only species present throughout the year.

Other species of sea birds reported include the Sooty Tern Sterna fuscata, the Lesser Black-backed Gull Larus fuscus, and possibly the Blue-faced and Brown Boobies Sula dactylatra melanops and Sula leucogaster (Fryer 1911, and local reports).

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