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February / février 2010

A RECENT SURVEY OF THE BIRDS OF PAGALU (ANNOBON)

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Received 18 May 1989
Revised 8 November 1989

INTRODUCTION

The island of Pagalu (formerly Annobon), the smallest and most remote of the Gulf of Guinea Islands, was visited by the author on 5 March 1989. A two-day visit to Pagalu (by sea, the only means of access to the island) was planned, but unfavourable winds resulted in only a single but highly fruitful day ashore.

Although brief, the visit was important because of the scarcity of ornithological information about Pagalu. The first collections were made by Francisco Newton in November 1892 to January 1893 (Bocage 1893), followed by Leonardo Fea in April-May 1902 (Salvadori 1903) and Boyd Alexander in February 1909 (Bannerman 1915). After a one-day visit by W.P. Lowe in December 1910, there was a long gap until Aurelio Basilio (1957) visited during the period of peak breeding activity, between August and November 1955, followed by C.H. Fry (1961) in July and August 1959.

Since that time, no ornithological accounts of Pagalu have been published. Fry (1961) noted some instability in the land-bird populations, comparing his and Basilio's (1957) observations with the turn-of-the-century records. Information from the present visit, 30 years later, throws further light on these changes.

PAGALU

The four main islands in the Gulf of Guinea are Bioko (formerly Fernando Po), Principe, São Tomé, and Pagalu. Bioko and Pagalu form part of Equatorial Guinea (Figure 1). The islands comprise part of the Cameroon line of Tertiary volcanoes, which extends from the Cameroon highlands (including Mt Cameroon) south-east into the Atlantic Ocean. Unlike Bioko, which lies on the continental shelf and has probably been linked with continental Africa in the past, Principe, Sao Tomé and Pagalu are true oceanic islands, surrounded by seas 1800-3000 m deep. This isolation has led to a typically poor oceanic avifauna with low diversity and a high degree of endemism.

Pagalu (1°25S, 5°37E) is the outermost island in the chain, lying 180 km SSW of São Tomé and 340 km from the nearest mainland, in Gabon. It is also the smallest, measuring 7 x 2.5 km, yet has three distinct peaks, the highest rising to 655 m (2150 ft). The Pico del Fuego (455 m; 1490 ft), an imposing volvanic plug, dominates the dry grasslands in the north of the island, and the only town, Santo Antonio, where the island's population of about 1500 is concentrated. Alexander in 1909 described the large Roman Catholic mission (established in 1865) as dominating the view of Santo Antonio as one arrives by sea (Bannerman 1915), a view that remains unchanged today. The human population also remains much the same; it was reported as 1300 by Alexander.

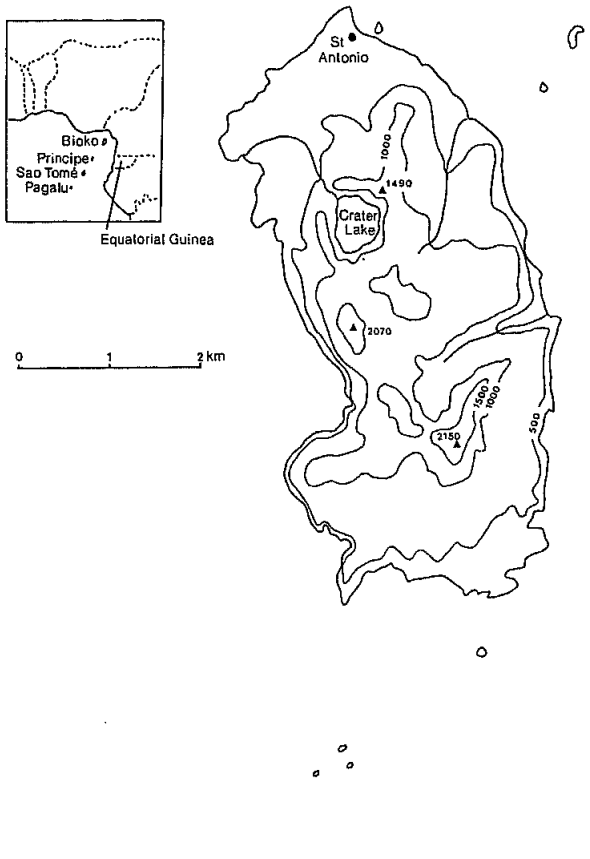

Fig. 1. Topographic map of Pagalu. Contours and spot heights in feet. Inset: the Gulf of Guinea islands.

Because it falls under the island's rainshadow from the prevailing southerly weather, the north is dry and covered by a savanna-like formation of grassland and scattered bushes. Fry (1961) gives annual rainfall as about 1000 mm, but gives no indication of the south to north gradient that is such a dominant feature of the climate of São Tomé and Príncipe (Jones and Tye 1988).

Although the vegetation on the island has to some extent been modified by people, the changes are not nearly as extensive as on São Tomé and Príncipe. The north has been most affected, with plantations of cassava, cocoyam, yams, bananas, oil-palm, sugar cane, jack-fruit and mango. The mango is self-sustaining, forming quite extensive 'forests'. There is little sign of the coffee and cocoa that was once commonly cultivated. Many plantations are now abandoned and being recolonized by the abundant kapok (Ceiba pentandra), oil palm (Elaeis guineensis), mango (Mangifera indica) and the typically savanna baobab (Adansonia digitata), tamarind (Tamarindus indica), and yellow plum (Spondias mombin).

Towards the centre of the island, at about 270 m altitude, is a crater lake about 600 m in diameter and only a few meters deep (Plate 1). The water is clear, the bottom muddy, and although no fish were seen, Fry (1961) reported three species inhabiting the lake. At least one species, Gambusia affinis, was introduced to control mosquitoes (F. White pers. comm. to P. Jones). The forested walls of the crater rise up to 100 m above the lake, although the water flows out in a stream at the low north-west side. On the flatter south and east, a fringe of marsh ferns (Polypodium sp.) grows some 10 m out into the lake. Oil palms also grow at their greatest density in these marshy areas.

On the north wall of the crater grows dry Steganthus- and Lannea-dominated forest, and on the southern walls and covering the south of the island, grows taller mist-forest. This has been described by Exell (1944) based on Mildbraed's botanical work in 1910-11. Most flat land within the crater is now cultivated, apart from areas with extensive boulders. In many areas the steep walls are partially cleared of forest and cultivated right up to the rim, although on other parts of the crater wall the forest appears little disturbed.

Habitat alteration may have affected some of the birds in the past. During the early part of this century the lake-edge vegetation was cleared in an effort to control mosquitos and this may have contributed to the extinction of the Moorhen Gallinula chloropus (Fry 1961). The apparently increasing use of the crater for cultivation, and the resulting deforestation and disturbance, may be influencing those birds which rely especially on the lake-side habitats.

OBSERVATIONS

During my visit I covered the north and central parts of the island, including the crater lake, but not the sea cliffs and offshore islets, nor the southern forests. Apart from the birds detailed below, other fauna observed (all unidentified) included a single turtle that surfaced briefly 100 m off Santo Antonio beach, a single rat in a dry streambed in the north, a very common small greenish skink in the secondary forest understorey and a small dark green snake at the lake edge.

Plate 1. The crater lake on Pagalu, dominated by Pico del Fuego (455 m).

Breeding residents

Yellow-billed Tropicbird Phaethon lepturus. Fry (1961) reported 50 breeding pairs on inland cliffs and tall trees. I saw one group of five birds over the forest around the crater lake. On leaving the island, I saw three over the ocean, 70 km SSW of the São Tomé coast, calling and flying towards São Tomé, suggesting some interchange between the islands. Tropicbirds are probably still frequent to common on Pagalu, as they are on São Tomé (Jones and Tye 1988).

Western Reef Heron Egretta gularis. Fry (1961) reported a colony of 50 on the crater lake, some of these occasionally seen feeding on the sea shore. They were conspicuous during his visit but not recorded by Newton or Fea at the turn of the century, so were assumed to be recent colonists. I saw one pair of dark-phase birds (with white wing-patches) and a single white-phase bird (all white, with heavy dark grey bill, not a Little Egret (E. garzetta). Only three reef herons seen around the crater lake during five hours of observation suggests that few birds remain. Notably, the lake water is now clear, with little surface matting of vegetation, and may be a poor fishing-ground for herons. The species is common on São Tomé (Jones and Tye 1988).

Helmeted Guineafowl Numida meleagris. Fry (1961) reported these as common in open and cultivated country in the north of the island. The species was probably introduced, and has been present since at least 1848 (Fry 1961). I heard three or four birds calling as they flew away through secondary forest on the crater wall, and I flushed another bird from the ground near the lake edge. Guineafowl apparently remain common.

Moorhen Gallinula chloropus. This was last collected in 1909 and was considered extinct on Pagalu by Fry (1961). None was seen during the present visit.

Bridled Tern Sterna anaethetus; Common Noddy Anous stolidus; White-capped Noddy A. minutus. According to Fry (1961) these species were common (the last abundant) on cliffs and offshore islets. I did not visit the islets but during arrival and departure off Santo Antonio, no seabirds were seen except for a single Brown Booby (Sula leucogaster). The same was true for São Tomé and Principe at this time of year (February), where seabirds were very rare along the islands' shores.

São Tomé Bronze-naped Pigeon Columba malherbii; Lemon Dove C. larvata. Briefly on two occasions I saw a single bird which by its large size and dark slatey blue-grey colour suggested the Bronze-naped Pigeon, although its call (and one other pigeon/dove call heard) resembled neither species, both familiar to me on São Tomé. The call was a long 'crrrrrrrr rising and falling in pitch, followed by a rapidly shortening series of 'crrrrr crrr crr cr cr cr'. This appears similar to one call of the Bronze-naped Pigeon on Principe as described by Keulemans (1866). Whichever species it was, columbids are not common on the island, in contrast to earlier reports.

Scops Owl Otus scops. The endemic subspecies feae was found to be abundant at higher altitudes (400-500 m) by Fea (Salvadori 1903). Neither Fry (1961) nor I saw this owl, although Basilio (1957) reported it rare in thick forest.

Emerald Cuckoo Chrysococcyx cupreus. This was noted on Pagalu in 1909 (Bannerman 1915) and heard by Basilio (1957) in November, but not by Fry in July-August, although it was well-known locally (Fry 1961). I neither heard nor saw it, although its characteristic call was commonly heard on São Tomé and Principe at this time of year.

Annobon Paradise Flycatcher Terpsiphone smithii. An endemic species, found by Fry (1961) to be common and well distributed on the island. I found it common to abundant in cultivated areas, secondary forest and higher moist forest. Its scolding 'churr' is very similar to that of the São Tomé Paradise Flycatcher T. atrochalybeia. The Pagalu species is far more common that its counterpart on São Tomé, and the colours of the male very bold and striking. The birds show typical flycatcher behaviour in their insect-catching sallies. The popululation appears to be similar to what it was in the 1950s.

Annobon White-eye Zosterops griseovirescens. Another endemic species, reported by Newton to be common throughout the island in 1892 (Bocage 1893), and by Fry (1961) to be abundant. I found it very abundant everywhere with cover, including dry forest, cultivation, secondary forest, oil palm swamp/lake fringe and moist forest. Its constant chittering calls, similar to those of the São Tomé White-eye Z. ficedulina, and its flight call (described by Fry as 'plic-plic-plic' were ever-present, the dominant bird call on the island. Birds were commonly in parties of 2-10, gleaning insects from leaves, twigs and branches at all heights in the forest. Fledglings were common. Basilio (1957) reported nesting in November. Like the endemic flycatcher, the white-eye population appears stable, or possibly even growing as more vegetation is disturbed. One bird was netted in abandoned cultivation (weight 11 g, wing 60 mm; see Plate 2).

Plate 2. Annobon White-eye Zosterops griseovirescens.

Non-residents

Several species were listed by Bocage (1893), Salvadori (1903), Basilio (1957) and/or Fry (1961) as migrants to or through Pagalu, or as vagrants. Of them I saw only the Brown Booby.

Madeiran Storm-Petrel Oceanodroma castro. This oceanic bird of the tropical Pacific and eastern Atlantic has not been recorded off Pagalu, though it breeds on Atlantic islands possibly including Sao Tomé and Principe. I saw this petrel frequently, in ones and twos, 'dancing' on the water over deep ocean between São Tomé and Pagalu.

Brown Booby Sula leucogaster. A single bird was seen offshore at Santo Antonio. Basilio (1957) reports these very common at sea in October, but departing for Principe in the early wet season (November) to nest. This is unlikely to account for their scarcity around Pagalu during my visit, as Brown Boobies were rare on all three islands then. Two birds were seen during five weeks on São Tomé. Over the ocean between São Tomé and Pagalu, two pairs were seen during three days at sea. In a complete circumnavigation of Principe, the supposed target of migrant boobies from Pagalu, I counted only seven pairs, all on Principe's offshore islets. This was two weeks before the Pagalu visit, which suggests a reduction in population since 1955.

DISCUSSION

Pagalu provides a good example of the poverty of the fauna on isolated oceanic islands, where most of the bird population is made up of well-established endemic species. The Annobon Paradise Flycatcher and the Annobon White-eye, both endemic species and the only two passerines on the island, are the dominant species, with abundant populations occupying many available habitats. During a total of only eight months residence by ornithologists over the last century, there are records of seven migrant or vagrant land-bird species that were potential residents. Despite the poverty of the local avifauna, and the wide variety of habitats on the island, only one of these, the Western Reef Heron, has become established.

Fry (1961) speculated that the Palm Swift (Cypsiurus parvus) might in due course invade Pagalu, as it had São Tomé and Principe in recent times, but no swifts were seen in 1989. Amadon (1953) concluded that most of Pagalu's avifauna is derived from São Tomé and Principe, as is suggested from the presence of Columba malherbii. However, most others could equally have originated directly from continental Africa, while Otus scops and Terpsiphone smithii almost certainly did so.

The instability inherent in populations of birds on isolated islands was demonstrated by Fry (1961) who noted changes from turn-of-the-century records. Some further developments can be added from the 1989 visit. Reef Herons were absent last century, first recorded in 1909, common in the 1950s, and now apparently less common again. This may be due to changes in the food chain in the freshwater lake, or increasing disturbance from people.

There may also have been changes in the dove populations. While the Lemon Dove was rare at the turn of the century, the Bronze-naped Pigeon was very common, especially in the higher forests, its 'guttural call, of wearying monotony, repeated incessantly from dawn to dusk' (Fea in Salvadori 1903). In the 1950s, Fry reported the Lemon Dove to be common, especially around the crater lake, and the Bronze-naped Pigeon rarer, but he had difficulty separating the two. The apparent reversal in status of the two species is not easily explained. The supposition that they cannot coexist (Fry 1961) is difficult to accept. On São Tomé, where the Bronze-naped Pigeon is frequent to common and the Lemon Dove abundant, their niches are distinct, the Bronze-naped Pigeon preferring the canopy of taller trees in less disturbed forest, whereas the Lemon Dove is most common on or near the ground in dense secondary forest (Jones and Tye 1988). Although I saw neither species commonly on Pagalu, it remains possible that the Bronze-naped Pigeon, at least, is still common in the less disturbed southern forests.

ACKNOWLEDGMENTS

This visit became possible during a longer mission to São Tomé and Principe for the International Council for Bird Preservation. I gratefully acknowledge their support. Helpful comments on the manuscript were made by Peter Jones and Alan Tye.

SUMMARY

A brief survey of the birds of Pagalu Island in the Gulf of Guinea was conducted in March 1989. This is the first ornithological report from the island for 30 years, and one of only a handful of such accounts ever made. A description of the island and its avifauna is given. Some changes in bird populations were noted. The avifauna shows little diversity, is dominated by endemic species, and some populations are unstable, all features which are characteristic of small isolated oceanic islands.

RÉSUMÉ

Un bref relevé des oiseaux de l'île de Pagalu, au Golfe de Guinée, était effectué en mars 1989. C'est le premier rapport ornithologique sur cette île depuis 30 ans, et l'une des rares études de ce genre. Une description de l'île et de son avifaune y est présentée. Quelques changements dans les populations d'oiseaux sont notés. La faible diversité de l'avifaune où les endémiques dominent et l'instabilité de certaines populations sont autant de traits caractéristiques de petites îles océaniques isolées.

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