

**BIRD RECORDS FROM DANJUGAN ISLAND,
NEGROS OCCIDENTAL, PHILIPPINES**

Tony King^{1,2+}, Simon Tyler^{1,2Ψ}, Craig Turner¹,
Roger O'Malley^{1,2*}, & Peter Raines¹

¹Coral Cay Conservation, The Tower, 125 High Street, Colliers Wood, London, SW19 2JG, UK.

²Negros Rainforest Conservation Project, c/o Negros Forests & Ecological Foundation Inc,
South Capitol Street, Bacolod, Negros Occidental, Philippines.

⁺ current address: Projet Protection des Gorilles, BP 13977, Brazzaville, Republic of Congo.

^{*} current address: Aeon Corp, Kumamoto, Kyushu Region, Japan

^Ψ current address: 28 Church Street, Braunston, Oakham, Rutland, LE15 8QT

Abstract

The bird fauna of Danjungan island which forms part of one of the most globally threatened Endemic Bird Areas (EBA 152) was recently surveyed as part of a wider biodiversity survey programme completed by Coral Cay Conservation and the Philippine Reef and Rainforest Conservation Foundation, Inc. Observation studies were completed over a four-month period and recorded a number endemic, migrant, and resident species of conservation interest. These include the Black-chinned Fruit-dove (*Ptilinopus leclancheri*), the Philippine Leaf-warbler (*Phylloscopus olivaceus*), the Rufous Night-heron (*Nycticorax caledonicus*), the Red-necked Phalarope (*Phalaropus lobatus*), and the Oriental Cuckoo (*Cuculus saturatus*). These preliminary results highlight the potential importance of the island as a refuge for a diverse avian fauna and in light of the islands protective designation locally focussed conservation and research recommendations are proposed.

Introduction

The Philippine Archipelago, consisting of over 7000 islands, exhibits one of the highest levels of species endemism in the world (e.g. 33% for birds, Collar *et al.* 1999), and boasts nine regions designated by BirdLife International as Endemic Bird Areas (EBAs) (Stattersfield *et al.* 1998). One of these (EBA 152), located in the central Philippines and comprising of the islands of Negros, Guimaras, Panay, Masbate and Ticao has been ranked as one of the 12 highest-ranking EBAs worldwide, in terms of biological importance and threat level (Bibby *et al.* 1992; Brooks *et al.* 1992) and is classified as priority critical for conservation (Stattersfield *et al.* 1998).

With forest cover on Negros island having been reduced from approximately 80% to just 4% in the last one hundred years (Heaney and Regalado 1998), Danjungan Island, lying 3km off the west coast of Negros, opposite the village of Bulata, is one of very few areas within EBA 152 that is protected from further habitat loss. The island has recently been designated reserve status as the Danjungan Island Marine Reserve and Sanctuaries (DIMRS) by the municipal government of Cauayan and provincial government of Negros Occidental in February 2000, and has been managed by the Philippines Reef and Rainforest Conservation Foundation Incorporated (PRRCFI) since 1995 (Ledesma *et al.*, 1999). This small island of just 43 hectares supports a variety of habitats, including relatively undisturbed mixed-species limestone forest, rapidly regenerating secondary forest, beach and cliff scrub, extensive mangrove stands, open and closed salt-water lagoons, and tidal mud-flats (Harborne *et al.* 1996, Turner *et al.* 2002). The conservation of these habitats, coupled with the protection from hunting pressures, provides a small but significant haven for the local populations of several migrant, endemic, and threatened bird species', as illustrated by a number of brief and unpublished surveys (see Turner *et al.* 2002). However, this report, based on part of the Danjungan Island Biodiversity Survey conducted by PRRCFI and Coral Cay Conservation (CCC) (Turner *et al.* 2002), describes the first extensive observations of the bird fauna of Danjungan Island, and highlights several species of particular conservation concern.

Observations were made between June and November 2001 using a Mackinnon list method (Bibby *et al.* 1998), and with continuous presence on the island from late June

to early October, followed by irregular visits. A full list of species identified is given in an Appendix, while records of particular interest are described below. Observers for specific sightings are given as two-letter codes in parentheses (GE-Gareth Ellis; JB-James Benares; RM-Roger O'Malley; ST-Simon Tyler; TK-Tony King). Identification in the field was based on du Pont (1971) and Kennedy *et al.* (2000). Nomenclature and taxonomy follows Sibley and Monroe (1990), while systematic order follows Dickinson *et al.* (1991) and Brooks *et al.* (1992). All locations referred to are detailed in Figure 1.

Species endemic to the Philippines

Ptilinopus leclancheri, Black-chinned Fruit-dove

Recorded infrequently throughout the island, and throughout the survey period. Always observed as singletons or pairs, and sometimes associated with *T. vernans* at large fruiting trees, such as the strangler fig at Typhoon Beach (TK).

Centropus viridis, Philippine Coucal

Seen and heard throughout the island, but most frequently in the high-canopy mixed species forest surrounding, and north of, Typhoon Beach.

Ninox philippensis, Philippine Hawk-owl

Heard at night throughout the island, and seen during the day on two occasions. The sightings, on 4 and 18 August, were both of a single bird perched in the mid-story of mixed species forest, and were both at the same location near the north-east corner of Lagoon 1 (JB and RM).

Phylloscopus olivaceus, Philippine Leaf-warbler

Recorded on only two occasions during the survey period. The first record, at 0900 hrs on 29 September, was of a pair observed foraging for over 10 minutes amongst flowers of the mangrove *Xylocarpus granatum*, along the south-east border of Lagoon 2 (TK). The second sighting was of a singleton on 13 October, again in mangroves in Lagoon 2 (TK).

Species resident in the Philippines, but not endemic

Treron vernans, Pink-necked Green-pigeon

Commonly observed throughout the island and throughout the survey period. Often in small flocks of upto 5 or 6 individuals, feeding in the canopies of fruiting trees. Larger numbers (10-15) observed over a period of several days at the end of November (23-28/11/2001) feeding in the canopy of a large strangler fig (Moraceae, *Ficus* sp.) at Typhoon Beach (TK).

Nycticorax caledonicus, Rufous Night-heron

Observed throughout the survey period, most frequently at Lagoons 5, 6 and 1, occasionally at Lagoon 4, and rarely at Lagoon 3. They were not recorded from lagoon 2 or from other habitat types. During June and July they were generally observed in small family groups, often of two adults and two immatures, while subsequent observations tended to be of singletons.

Megapodius cumingii, Tabon Scrubfowl

Singletons and pairs were sighted frequently throughout the island and throughout the survey period. Fresh excavations were often observed at the communal nesting mound behind Tabon beach, and were particularly frequent from 20 August. A group of 5 chicks were recorded during the first week of July on a beach in the south-west corner of the island (JB, RM, ST).

Haliaeetus leucogaster, White-bellied Sea-eagle

Two adults and an immature were sighted throughout the survey period, although were absent between 26 July and 22 August. Their old nest, in a tall tree near Typhoon Beach, was lost during high winds at the beginning of July, but an adult was observed back in the tree on 27 September (GE, JB, TK), and the nest was rebuilt during the course of the following two months (TK).

Sterna sumatrana, Black-naped Tern

Commonly observed around the perimeter of the island upon arrival in June. Three pairs appeared to be nesting on a single rock off Tabon Beach, with a juvenile seen flying on 3 July (TK). Additional pairs may have been nesting in other, less conspicuous sites. By 20 July all terns had left, and were not observed on the island again during the course of the survey.

Gerygone sulphurea, Golden-bellied Flyeater

This species was commonly observed and heard throughout the island, and throughout the survey period. The very conspicuous song was still heard at the end of November (TK).

Migrant species

Actitis hypoleucos, Common Sandpiper

First recorded on 1 August from a beach on the west side of the island, when a singleton was disturbed from low rocks at 1200 hrs (TK). Subsequently recorded frequently as singletons or pairs, and occasionally in groups of up to 4 individuals, on all western beaches, on exposed rocks at low-tide, and in Lagoons 1, 2 and 5. The species was still present at the end of November.

Phalaropus lobatus, Red-necked Phalarope

A single sighting, on 4 September at Lagoon 1, the most northern lagoon on the island, and one with a westward-facing opening to the sea. A singleton in non-breeding plumage, the bird was observed for over an hour, swimming along the steep and rocky perimeter of the lagoon, apparently foraging, and allowing observers to swim to within 3 metres of it (ST, TK).

Cuculus saturatus, Oriental Cuckoo

A single, unconfirmed sighting, on 14 August at Bamboo-bridge Trail, a grassy clearing between two hills of mixed-species forest. From 1700 hrs, an unidentified long-tailed bird was observed several times flying across the clearing between the 2 hills (GE, TK). At dusk (1800 hrs) the bird settled in a large *Terminalia cattapa* tree at the eastern end of the clearing. With a powerful spotlight, the bird was observed until 18:30 hrs, as it remained perched in the tree (ST, TK). Field characters noted were a plain throat, a barred breast and belly, a darker back, and of a size slightly larger than *Aplonis panayensis*. Although some doubt remains due to the poor light, *Cuculus saturatus* seems the most reasonable identification. No calls were heard.

Alcedo atthis, Common Kingfisher

First recorded on 20 September in Lagoon 3, a lagoon open to the sea on the east side of the island. The singleton was observed for several minutes while perched motionless on low rocks extending into the lagoon, before flying low across the lagoon and into an area of mangroves (TK). Two further sightings, both of singletons, on 2 October, again at lagoon 3 (TK), and on 13 October at Lagoon 2, a closed lagoon with extensive areas of mangroves (TK).

Hirundo rustica, Barn Swallow

First recorded on 6 August from Tabon Beach, on the south-west coast of the island, when a singleton with a long tail was observed flying low over an area of beach-scrub and coconut trees (TK). The species was subsequently recorded on five other occasions, at locations throughout the island.

Monticola solitarius, Blue Rock-thrush

First recorded on 13 September from Turtle Beach, on the west of the island. A single male was observed for 15 minutes while perched on a rock at the northern end of the beach (ST). At the same location on the 15 September, at midday, three males were disturbed from a single coastal rock, and were subsequently observed for 10 minutes as they perched in nearby scrub vegetation (JB). At 0800 hrs on the 16 September, a single male was again observed perching still, while looking around, on a bamboo railing at Lagoon 3, a lagoon on the east of the island (JB). Singletons (males and females) and pairs were subsequently observed fairly frequently along the western coast of the island, from the entrance to the most northern lagoon to the southern tip of Tabon Beach in the south. Usually the birds were observed perched on coastal rocks, remaining motionless for lengthy periods of time. At the end of November, a male and female were observed on Tabon Beach exhibiting what was believed to be courtship behaviour, as they stood on the beach within a metre of each other, both upright and with their necks extended upwards, making short calls to each other (TK). Occasionally moving a short distance, this behaviour continued for over ten minutes, before they flew about 30 metres to a rocky area of shoreline, where they continued to behave in a similar manner.

Lanius cristatus, Brown Shrike

First recorded on 14 September, perched in a tree and singing, in a clearing within an area of mixed-species forest (ST). The species became commonly observed and heard

during the second half of September and the beginning of October. They were still present at the end of November, but in low numbers (TK).

Discussion

Danjungan island was found to support particularly large numbers of frugivorous birds, particularly pigeons (Columbidae). Two species from this family, *Treron vernans* and *Ptilinopus leclancheri*, are endemic to the Philippines, and appear to take advantage of the high density of figs (Moraceae, *Ficus* spp.) present in the limestone forest. Two other endemic species were also recorded regularly, *Centropus viridis* and *Ninox philippensis*, and are likely to breed on the island. A third, *Phylloscopus olivaceus*, was observed just twice and was a new record for the island, suggesting it may be a transient species.

Of the non-endemic residents, the lack of hunting on the island may be attributed to the continued abundance of *Megapodius cumingii*, and the lack of disturbance for the annual nesting of a pair of *Haliaeetus leucogaster* and of several pairs of *Nycticorax caledonicus*. As such, the island may be considered of major significance to the breeding capacity of the local populations of these three [endangered/threatened/rare] species. Further notable observations included the completion of breeding of *Sterna sumatrana* by the first week in July, and the prolonged period of singing of *Gerygone sulphurea*, which was still heard at the termination of the survey period in late November. Both observations confirm the tentative suggestions made regarding these species by Kennedy *et al.* (2000). An area of concern, however, may be the presence of *Streptopelia chinensis*, even at apparently low densities, a species with a history of gradually replacing other columbids (e.g. *Treron vernans* and *Ptilinopus leclancheri*) as it expands its geographical range (Brooks and Dutson 1997).

The timing of the survey ensured that several migrant species were recorded as they arrived on the island. A number of these were recorded on dates very close to the earliest recorded sightings for the species in the Philippines. For example, the single sighting of a *Phalaropus lobatus* (on 4 September) was within 2 days, the first of *Actitis hypoleucos* (1 August) within one day, and the first of *Monticola solitarius* (13

September) was eight days earlier than the earliest recorded sightings given in Kennedy *et al.* (2000), while the unconfirmed sighting of *Cuculus saturatus* (14 August) was almost a month earlier. These early sightings, plus the presence of other migrant species, indicate that Danjungan provides an important site for migrant birds newly-arrived in the Philippines. It is likely to be of particular importance for those arriving from the west, given its geographical position as the first island east of Borneo and Palawan.

Recommendations

Although far from being a comprehensive survey of the birds of Danjungan island several issues of particular conservation concern have been uncovered. Considering that the island is already designated as Danjungan Island Marine Reserve and Sanctuaries (DIMRS), and the area is managed for wildlife conservation and sustainable resource-use, the following recommendations can be made specifically regarding the bird fauna.

1. Ensure protection of remaining areas of mixed-species forest as habitat for resident populations of several species endemic to the Philippines, including *Treron vernans*, *Ptilinopus leclancheri*, *Centropus viridis* and *Ninox philippensis*.
2. Minimise disturbance at Lagoons 5, 6 and 1, especially during breeding season of *Nycticorax caledonicus*.
3. Minimise disturbance to nesting sites of *Megapodius cumingii* and *Haliaeetus leucogaster*.
4. Complete inventory of bird species utilising the island through regular surveying through-out the year.
5. Determine breeding season of *Sterna sumatrana*, and ensure protection of nesting sites.
6. Determine breeding seasons of all other resident endemic or rare species.
7. Record yearly arrival and departure dates for migrant species.
8. Undertake quantitative monitoring of bird populations, through point-counts and other standard methods.

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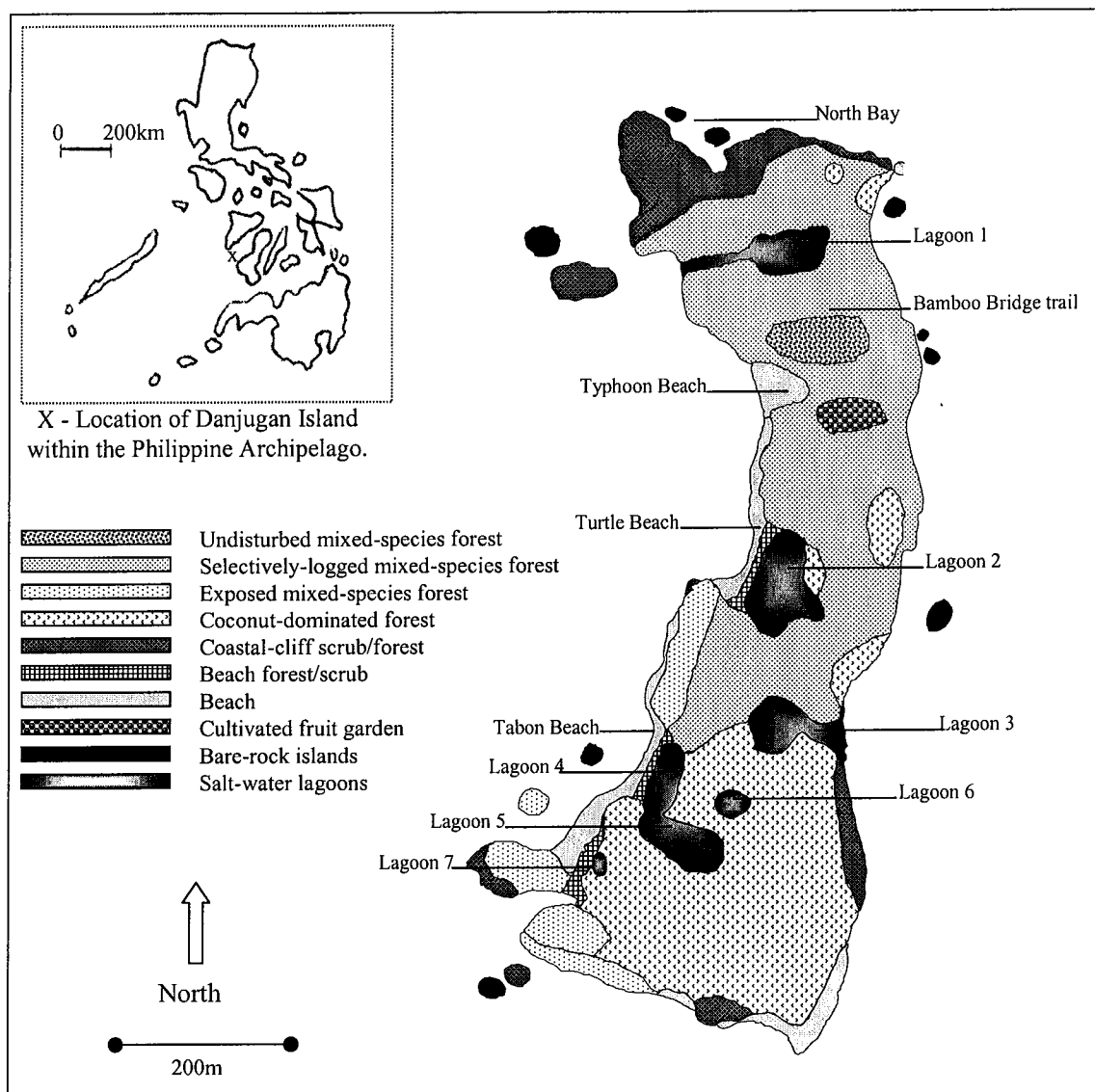


Figure 1. Location of Danjungan island within the Philippine Archipelago, and distribution of major habitat types on the island (modified from Turner *et al.* 2002).

Appendix 1

Summary of species recorded on Danjungan Island during the four month survey period.

Species name	English name	Status	Comments
<i>Fregata ariel</i>	Lesser Frigatebird	M	Observed frequently between 14/Aug/01 and 01/Sept/01, singly or in groups of up to 7 birds.
<i>Butorides striatus</i>	Little Heron	M	Commonly observed in lagoons and on exposed off-shore rocks or corals at low-tide.
<i>Nycticorax caledonicus</i>	Rufous Night Heron	R	See text
<i>Haliastur indus</i>	Brahminy Kite	R	A single sighting on 13/Sept/01, flying over 3rd lagoon.
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	R	See text
<i>Megapodius cumingii</i>	Tabon Scrubfowl	R	See text
<i>Porzana cinerea</i>	White-browed Crane	R	Two sightings, both at 5th lagoon, 24/Aug/01 and 28/Aug/01. Probably largely over-looked due to secretive behaviour.
<i>Actitis hypoleucos</i>	Common Sandpiper	M	See text
<i>Phalaropus lobatus</i>	Red-necked Phalarope	M	See text
<i>Sterna sumatrana</i>	Black-naped Tern	R	See text
<i>Treron vernans</i>	Pink-necked Green-Pigeon	E	See text
<i>Phapitreron leucotis</i>	White-eared Brown-Dove	E	Often heard but never seen.
<i>Ptilinopus leclancheri</i>	Black-chinned Fruit-Dove	E	See text
<i>Streptopelia chinensis</i>	Spotted Dove	R	Most frequently recorded from the north of the island.
<i>Chalcophaps indica</i>	Common Emerald-Dove	R	Secretive, first recorded from mist-nets 04/Aug/01, then sighted occasionally.
<i>Cuculus saturatus</i>	Oriental Cuckoo	M	See text
<i>Eudynamys scolopacea</i>	Common Koel	R	First sighted 30/Aug/01 on Tabon Beach, then regularly for the remainder of the survey period.
<i>Centropus viridis</i>	Philippine Coucal	E	See text
<i>Ninox philippensis</i>	Philippine Hawk-Owl	E	See text
<i>Collocalia esculenta</i>	Glossy Swiftlet	R	Very commonly seen everywhere. 14 individuals were mist-netted flying in and out of the main bat-cave at 3rd lagoon, between 1720 and 1755, 12/Sept/01.

Species name	English name	Status	Comments
<i>Alcedo atthis</i>	Common Kingfisher	M	See text
<i>Halcyon capensis</i>	Stork-billed Kingfisher	R	Recorded from all lagoons and beaches.
<i>Halcyon chloris</i>	White-collared Kingfisher	R	Common and conspicuous throughout island.
<i>Hirundo rustica</i>	Barn Swallow	M	See text
<i>Hirundo tahitica</i>	Pacific Swallow	R	First sighted 02/Aug/01, then occasionally from then on.
<i>Lalage nigra</i>	Pied Triller	R	Common but relatively inconspicuous.
<i>Oriolus chinensis</i>	Black-naped Oriole	R	Very common and conspicuous.
<i>Corvus macrorhynchos</i>	Large-billed Crow	R	Occasional sightings.
<i>Copsychus saularis</i>	Oriental Magpie-Robin	R	Recorded throughout survey period, but seemingly becoming more conspicuous at the end of September.
<i>Monticola solitarius</i>	Blue Rock-Thrush	M	See text
<i>Gerygone sulphurea</i>	Golden-bellied Flyeater	R	See text
<i>Phylloscopus olivaceus</i>	Philippine Leaf-Warbler	E	See text
<i>Megalururus timoriensis</i>	Tawny Grassbird	R	An unconfirmed record from 5th lagoon, 06/Aug/01, then confirmed sightings from North Bay 18/Aug/01 and Bamboo-bridge Trail, 14/Sept/01.
<i>Cyornis rufigastra</i>	Mangrove Blue Flycatcher	R	Rarely seen, but mist-netted several times (particularly immatures) in forest areas.
<i>Rhipidura javanica</i>	Pied Fantail	R	Commonly recorded and netted in all habitats of the island.
<i>Artamus leucorhynchus</i>	White-breasted Wood-Swallow	R	Commonly recorded throughout the island, often harassing the sea-eagles.
<i>Lanius cristatus</i>	Brown Shrike	M	See text
<i>Aplonis panayensis</i>	Asian Glossy Starling	R	Commonly observed in small groups throughout the island.
<i>Nectarinia jugularis</i>	Olive-backed Sunbird	R	Common and conspicuous, often seen feeding from flowers of coconut.

R: resident; M: migrant; E: endemic (Kennedy *et al.* 2000).