

**AN ANNOTATED CHECKLIST OF THE BIRDS  
OF MANUSELA NATIONAL PARK - SERAM  
(BIRDS RECORDED ON THE OPERATION RALEIGH EXPEDITION)**

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(First draft received 2 April 1988)

**Introduction**

Manusela National Park is located in central Seram at 129 deg E, 3 deg S and covers an area of 186 000 ha, about 11% of the surface area of Seram. The Park contains a broad selection of the habitats present in Seram, stretching from the north coast to within 5 km of the south coast. It includes a large portion of the Binaia-Merkele limestone massif with the highest mountain on Seram, Gunung (G). Binaia, at 24.90m, as well as the lower parallel ridge of Gunung (G). Kobipoto (1500 m) to the north, together with a broad section of the lowland alluvial plain where three wide rivers, the Wae Toluorang, Mual and Isal drain northwards to the sea (see fig.1).

Observations were made by the authors between 20 July and 25 September 1987 as part of the ornithological research work conducted under the auspices of Operation Raleigh, Seram expedition. The official report for the expedition (in prep.) contains more-detailed information on the avifauna of Seram, and is obtainable from the Operation Raleigh HQ at Alpha Place, Flood Street, Chelsea, London SW3 5SZ.

**Survey Area**

The area surveyed includes a large portion of the Park, with relatively lengthy observations from bases above Kineke at an altitude of 700 m (27 July to 12 August), and at Solea at 100 m (22 August to 4 September). Altitudinal ranges were noted on the north face of the Merkele ridge to the summit of G. Binaia and on both north and south faces of G. Kobipoto.

Habitats not present in the Park, such as plantation areas and coral islets, were studied along the north coast from Ai Sole in the east to Sawai in the west from 5 to 24 September, with migration studies based at Air Besar inlet and Pulau Sawai.



## Habitats

The vegetation of the Manusela National Park was studied intensively by the Operation Raleigh botanists and their findings are included in the expedition report (in prep).

Less than 10% of the Park area has been disturbed by logging activities and broad areas of virgin primary forest remain. The northern alluvial plain supports tall lowland rainforest, large areas of which are inundated during the wet season. Eucalyptus trees are common, particularly along the rivers where they form dominant stands. Areas that have been cleared, particularly near the coast, support coarse *Imperata* grass while scrubby secondary forest predominates between Solea and Air Besar.

Lower montane rainforest appears at around 1000m on G. Binaia with different species predominating including 'oaks' (*Lithocarpus* and *Castanopsis*), 'meranti', and conifers, (*Agathis* and *Dacrydium*), all covered in a thick layer of moss and ferns. Above 2500m upper montane forest occurs with stunted 'elfin' woodland, dominated by ericaceous shrubs and tree ferns, which gradually thin out to the virtually bare summit peaks above 2800m.

There is an enclave valley between the Kobipoto and Merkele ridges with large garden areas of the indigenous Alifuru people, and much of the adjoining forest in this area is secondary to varying extent.

Outside the Park, coconut plantations extend along moat coastal areas and mangroves are confined to a narrow strip at the sea edge and on offshore islands.

## **Results**

During the survey, 170 species were recorded, of which 53 (mostly coastal or migratory species) were recorded only outside the National Park. All of Seram's endemic species were observed within the Park's boundaries, some for the first time this century, while the following species were added to the avifaunal list for Seram, including two also recorded earlier in the year by D.A. Holmes (pers. comm).

<i>Oceanites ocaanicua</i>	<i>Tringa glareola</i>
<i>Oceanodroma matsudairae</i>	<i>Numenius minutus</i>
<i>Aquila gurneyi</i>	<i>Numenius madagascariensis</i>
<i>Falco severus</i>	<i>Chlidonia hybridus</i>
<i>Amaurornis phoenicurus</i>	<i>Gelochelidon nilotica</i>
<i>Irediparra gallinacea</i>	<i>Sterna fuscata</i>
<i>Calidris tenuirostris</i>	<i>Sterna albifrons</i>
<i>Calidris subminuta</i>	<i>Cuculus variolosus</i>
<i>Calidris ferruginea</i>	<i>Eudynamis cyanocephala</i>
<i>Calidris alba</i>	<i>Aerodramus vanikorensis</i>
<i>Tringa totanus</i>	<i>Halcyon saurophaga</i>
<i>Tringa nebularia</i>	

Descriptive information is included here only where relevant to the discussion. Brief clarifying descriptions of new species and of Wallacean endemics are given in the official Operation Raleigh report (in prep). The latter report also contains chapters on parrot density studies, altitudinal distribution, mixed species flocks, migration and breeding records.

Conservation proposals specifically for the avifauna include an immediate ban on the capture and exportation of the Salmon-crested Cockatoo *Cacatua moluccensis* from Seram, and population monitoring both of this species and of the Purple-naped Lory *Lorius domicella*. In the systematic list that follows, nomenclature and sequence follow rigidly that of White & Bruce (1986).

Resident species that were not observed are : *Gallinula tenebrosa*, *Columba vitiensis*, *Ptilinopus melanospila*. *Pitta elagans*, *Zosterops kuehni* and *Erythrura trichroa*.

### **SPECIES ACCOUNTS**

#### **Two-wattled Cassowary *Casuaris casuaris***

Reported to be not uncommon in the lowlands, but absent from the higher hills and not reported from the enclave. We failed to observe the species in the wild, but found fresh footprints at Solealama and also droppings quite frequently in the less disturbed areas of the Mual Plains. Captive young birds were seen in Air Besar and are taken as pats from the forest close to the coast; it is reported that adults are also hunted near Pasahari.

#### **Streaked Shearwater *Calonectris leucomelas***

Several hundred shearwaters were observed off the north coast in September, especially following periods of NW winds. Most were beyond the reefs and could not be identified, but six birds observed at close quarters from the Ambon ferry on 23 September, a short distance off the north coast, were identified as *C. leucomelas*.

These were large shearwaters, much larger than adjacent Common Terns *Sterna hirundo*, with a comparatively short and stocky body for a shearwater, and a rather short tail, rounded at the tip. The wings were broad-based, and slightly bent when gliding. The mantle, wings and tail were dark brown, with a slightly darker trailing edge to the wings. The crown and sides of the face behind the eye were dark, with a conspicuous pale forehead, and whitish lores joining with the underparts, which were white from chin to vent. The underwing coverts were white, with dark brown being confined to the trailing edge, primaries and carpal joints. The bill was large and pale.

#### **Wilson's Storm-Petrel *Oceanites oceanicus***

Four followed the Ambon ferry a short distance off the north coast on 25 September. This is the second record for Seram waters, following four at the mouth of Ambon Bay on 14 July 1987 (D.A. Holmes, pers. comm).

This was a small petrel, with a rather short square tail (with slightly rounded corners at the tip). The wings were rather short.

The legs were quite long, dangling when almost alighting on the water, but trailing beyond the tail in flight. The flight was very erratic, weak and fluttering, with the birds often dropping back behind the ferry before flying back alongside the boat. The plumage was mainly black above and below, with a prominent squarish white rump and a pale bar on the wing coverts. The yellow soles of the feet were not seen in the field, but were reported from another specimen that was picked up alive from the Ambon ferry at night on 27 Sept.

**Matsudaira Storm-Petrel *Oceanodroma matsudairae***

Four separate birds flying westwards, out from the straits between Seram and Ambon on 19 July are the first record for Seram.

These were large petrels with long, slim body, wings and tail, the latter with a very pronounced fork. The general appearance was slim and elegant, with graceful, fairly direct flight, low over the sea with a steady wing beat, occasionally gliding on slightly bent wings. Mainly sooty black or very dark brown above and below, except for a pale bar along the base of the secondaries (on the wing coverts), and a diffuse white patch at the base of the primaries observable only at very close range.

**Red-throated Little Grebe *Tachybaptia ruficollis***

Observed only at Red Lake, west of Wahai, with a maximum of 18 on 18 September; all were adult and could be specifically identified by the rufous-chestnut cheeks and throat, uniformly dark wings in flight and dark iris.

**Great Frigatebird *Fregata minor***

Large flocks of frigatebirds, sometimes more than 300, congregated each evening above Pulau Sawai in mid September. Most of these were juveniles; among the adults, *F. minor* was less common than *F. ariel*.

**Lesser Frigatebird *Fregata ariel***

Among the adult birds at Pulau Sawai, this species outnumbered *F. minor*; it was also occasionally observed well inland.

**Little Black Cormorant *Phalacrocorax sulcirostris***

An uncommon coastal species encountered much less frequently than *P. melanoleucos*, observed only singly off Wahai, but a flock of 19 in flight at Pulau Sawai on 18th Sept.

**Little Pied Cormorant *Phalacrocorax melanoleucos***

A common species on the coast, and on inland rivers up to 700 m. Maxima of 24 in mangroves near Air Besar on 7 Sept and 28 on Pulau Rajah on 13 Sept. No observed signs of breeding.

**Red-footed Booby *Sula sula***

Six birds were observed feeding off Air Besar on 5 Sept, following strong on shore winds.

**Brown Booby *Sula leucogaster***

A total of six birds seen off the coast in September, including one perched on a buoy off Pulau Lusaolate on 10 Sept.

**Australian Pelican *Pelicanus conspicillatus***

A single adult bird feeding in shallow water between Pulau Sawai and Pulau Rajah, seen on 11 and 18 Sept.

**Great-billed Heron *Ardea sumatrana***

A single adult bird seen feeding in shallow water at the mangrove edge off Pulau Rajah at dusk on 17 Sept is the first sighting since 1872 (*vide* White and Bruce 1986).

**Great Egret *Egretta alba***

Fairly common on the coast, feeding along reefs and in mangroves. Maximum of 30 near Air Besar on 7 Sept.

**Short-billed Egret *Egretta intermedia***

One to three birds at Air Besar and Ai Sele in September.

**Little Egret *Egretta garzetta***

Common on the coast, with parties of up to 20 birds, and occasionally seen along inland rivers to 200m.

**Pacific Reef Egret *Egretta sacra***

Common only along the coast particularly in the vicinity of onshore coral reefs and on coral islands, with dark phase birds predominating. Small breeding colony located on Lusaolate in mid-September, with six nests, one containing three fledglings.

**Little Heron *Butorides striatus***

A common bird along inland rivers, also seen frequently on the coast in muddy areas and mangroves. Several nests with eggs located in mangroves on Pulau Sawai were attributed to this species.

**Nankeen Night-Heron *Nycticorax caledonicus***

A coastal species present in small numbers in mangroves but secretive and rarely seen.

**Black Bittern *Ixobrychus flavicollis***

Only seen on three occasions at separate localities, on 11, 19 and 31 August; two along forest rivers and one in primary forest not close to any river.

**Australian Ibis *Threskiornis moluccus***

Common on the coast. Groups of up to 12 flying to roost in the mangroves at Air Besar. Two parties of 34 and 35 were seen near Wahai on 7 Sept. A few birds penetrate inland to 150m elevation along the larger rivers. Local people stated that a small mangrove swamp at Air Sele may be a breeding site; a party of 8 seen on 7 Sept included 3 imm, but no breeding was confirmed.

**Osprey *Pandion haliaetus***

Observed commonly along the coast.

**Crested Baza *Aviceda subcristata***

Reasonably common, seen often from the coast to 200m, mainly in open and secondary forest areas. Four seen together near Solea on 9 Sept. A pair was seen in display flight over Wae Toluorang on 1 Sept, the birds flying up then descending rapidly with wings held vertically above body.

**Brahminy Kite *Haliastur indus***

Common along the coast and in cleared areas up to 1200m.

**White-bellied Sea-Eagle *Haliaeetus leucogaster***

Common on the coast and seen occasionally inland along the major rivers to 200m.

**Variable Goshawk *Accipiter novaehollandiae***

Only observed in the lowlands, this species was occasionally seen hunting along the forest edge and rivers. It was comparatively small, mid-grey above and solid, unstreaked rufous below; the tail was mid-grey and unbarred, and the cere and feet were orange-yellow.

**Rufous-necked Sparrowhawk *Accipiter erythrauchen***

Uncommon but inconspicuous in sub-montane forest on the lower slopes of the northern aspect of G. Binaia. We only made five sightings during early August, all between 650 and 650m. The forest at this altitude appeared to be little disturbed, and like many other forest sparrowhawks, it may occur naturally at rather low densities. Some of the sightings were in traditional garden areas at the edge of the forest, while one was observed hunting along a forest-lined creek. Most sightings were made at dusk or on dull cloudy days, suggesting this species may be partially crepuscular. It was the same size as *A. novaehollandiae* which it appears to replace in the hills. The upperparts, head and chin were slate-grey, with a chestnut throat and breast, and white belly barred black on the flanks. The medium length tail was grey-brown below with a dark sub-terminal band. The cere and base of the bill were

orange-red.

**Meyer's Goshawk *Accipiter mayerianus***

Seen uncommonly in lowland forest, this species appears to occur at low densities, but it is unobtrusive and difficult to observe through the dense canopy. An adult with two fully fledged immatures was observed near Solea on 17 August. The largest of the three sparrowhawks, this bird is not unlike the male of *A. gentilis*, but with a dark eye and lacking a pale supercilium. It was very dark grey above, white below finely streaked darker. The tail was broadly barred black and dark grey with a pale tip. The feet were yellow.

**Black Eagle *Ictinaetus malayanensis***

Quite common from 800m to the of the highest peaks, and occasionally observed at lower altitude, down to 200m.

**Gurney's Eagle *Aquila gurneyi***

Two individuals, a dark adult and a pale immature, were observed soaring together over an area of *Imperata* grassland at the edge of coastal forest east of Air Besar on 4 Sept. This is the first confirmed record for this species on Seram, an earlier sighting being questioned by White & Bruce (1986).

These were massive eagles with large, very broad wing, 'bulging' at the secondaries to give a 'S' shaped trailing edge. In shape they recalled a large *Buteo*. The primaries projected finger-like at the tips forming a rounded end to the wing. The tail, of moderate length, was often fanned when soaring, giving a rounded impression of the tip. The wings were held level when soaring, or very slightly above the vertical. The head appeared quite large.

The adult was mainly dark brown or blackish, with concolorous mantle, rump and tail. There was a distinct whitish area at the base of the primaries on the underside, contrasting strongly with the blackish under wing coverts and primaries. The pale feet contrasted with the dark underparts. The bill was not obviously pale. The presumed immature was much paler, generally a pale sandy brown. The wing coverts and secondaries, above and below, were pale and sandy brown, with slightly darker flight feathers. The head was pale, with a slightly darker, more tawny mantle. There was no obvious pale rump, but the tail was slightly darker than the mantle on the upper side, but paler on the under side. The breast and belly were a uniform buffy brown with no obvious dark streaks

**Spotted Kestrel *Falco moluccensis***

Common in open areas and along rivers from the coast to 700m, this was most often seen hunting over areas of *Imperata* grassland and at the edge of plantations near Air Besar.

**Oriental Hobby *Falco severus***

Two individuals seen, one near Kineke at 700m on 1 August at the interface of lower montane forest and garden areas, and the second at



the at Air Besar inlet on 21 and 22 Sept., chasing small shorebirds. This is the first record for Seram. The second bird had been chasing *Calidris ruficollis* but then caught a large grasshopper in the air, and proceeded to devour it on the open grass less than 50m from the storage hut on Air Besar quay.

It was identified by its slatey blue-black upperparts with all black crown and cheek, bright orange-yellow legs and feet, bright yellow eyering and cere with small dark beak. The underparts were rich, unstreaked rufous from breast to vent, with a whitish throat. Its small size was very apparent, with moderately long wings but quite short tail.

The similar *F. longipennis* is larger, with proportionally longer wings and tail, paler upperparts, and legs rich rufous below with dark mottles and streaks. The cere and eyering are bluish and the legs less brightly coloured. Photographic evidence was obtained of the second bird.

#### **Spotted Tree-Duck *Dendrocygna guttata***

Infrequently seen; mostly encountered at dusk flying in small groups along forested rivers. Regular in moderate numbers at Red Lake with a group of 66 present on 6 Sept.

#### **White-headed Shelduck *Tadorna radjah***

Seen occasionally on the coast in mangroves and commonly along rivers to 200m, usually encountered in pair or small family groups.

#### **Orange-footed Scrubfowl *Megapodius reinwardt***

Moderately common in the lowlands, in both primary and secondary forest. Encountered most frequently in scrubby secondary forest, and especially in coastal scrub at Air Besar, where four groups of 3-5 birds were encountered in an area of at least 16 ha in late September.

#### **Moluccan Scrubfowl *Megapodius wallacei***

Only one was positively identified, in coastal scrub at Air Besar on 7 September.

This was similar to the previous species in shape and actions, but noticeably smaller. The whitish bill and dark feet and legs compared with the dark bill and orange-pink feet and legs of the Orange-footed. The plumage was less uniform, being broadly barred above, while the blackish underparts contrasted strongly with the whitish vent. Megapodes were reported to breed on exposed sandy beaches to the west of Wahai, but we could not find any sign of this in September. They are believed to be a bird of the hills, descending to the beaches to breed (White & Bruce 1986), but we failed to find it in the interior.

#### **Blue-breasted Quail *Coturnix chinensis***

More often heard than seen, this was found from the coast up to 100m in areas of open *Imperata* grassland; common in the vicinity of Pasahari.

**Buff-banded Rail *Gallirallus philippensis***

A single record of a female in mangroves on Pulau Sawal in 12 Sept.

**Bush-Hen *Amaurornis olivaceus***

One seen at Ai Sete on 7 Sept running through long grass and into cover.

**White-breasted Waterhen *Amaurornis phoenicurus***

Two birds observed in muddy pools fringing the Wae Toluorang near Solea on several occasions in early Sept. At least four birds, all adults, at Red Lake on 8 Sept. A recent addition to the Seram list, with the first observed near Pasahari on 17 July 1967. (D. A. Holmes pers. comm.)

**White-browed Crake *Porzana cinerea***

A secretive bird of the lowland marshes. An immature was observed feeding along the muddy fringe of the Wae Toluorang near Solea on 29 August and at least four birds were seen at Red Lake on 8 Sept.

**Purple Swamphen *Porphyrio porphyrio***

One flushed on the Wae Toluorang river on 23 Sept near Solea, another (possibly the same bird) on 28 Sept.

**Comb-crested Jacana *Irediparra gallinacea***

Five birds, two adults and three immatures, seen at Red Lake near Wahai on 5 and 8 Sept. This is a new record for Seram and the presence of immature birds may be an indication of breeding.

**Pacific Golden Plover *Pluvialla fulva***

Often observed along the coast in September in both summer and winter plumage; most numerous at Air Besar with a maximum of 15 on 6 Sept.

**Grey Plover *Pluvialis squatarola***

Common on the coast in September; most birds in winter plumage but some still in partial plumage with black on the face and underparts. A maximum of 32 at Pulau Sawai on 14 September.

**Greater Sand-Plover *Charadrius leschenaultii***

Moderately common on the coast, with a maximum of 15 at Pulau Sawai on 14 Sept.

**Mongolian Plover *Charadrius mongolus***

Common on the coast, with a maximum of 16 at Air Besar on 8-9 Sept.

**Ruddy Turnstone *Arenaria interpres***

Fairly common along the coast, with a maximum of 12 at Pulau Sawai on 14 Sept.

**Great Knot *Calidris tenuirostris***

One at Air Besar on 6-9 Sept; one at Pulau Sawai on 12 Sept, followed by three on 19 Sept. A new record for Seram.

**Rufous-necked Stint *Calidris ruficollis***

Only seen in small numbers, with a maximum of 13 at Pulau Sawai on 15-18 Sept and 12 at Air Besar on 19 Sept.

**Long-toed Stint *Calidris subminuta***

One at Red Lake on a Sept is the first record for Seram. (Field notes have been submitted, Ed.).

**Curlew Sandpiper *Calidris ferruginea***

One at Air Besar on 8 Sept in winter plumage is the first record for Seram.

**Sanderling *Calidris alba***

One at Air Besar on 19 and 24 Sept is the first record for Seram.

**Red-necked Phalarope *Phalaropus lobatus***

Flocks of at least 70 seen 800m offshore along the north coast in sheltered bays with a total of 315 observed in Seram waters in September, first recorded on 10 Sept. group of 44 in Ambon harbour on 1 October. All observed birds were immatures or adults in winter plumage. (Field notes have been submitted, Ed).

**Common Redshank *Tringa totanus***

Fairly comon along the coast, also seen at Red Lake. A maximum of 35 at Pulau Sawai on 14 Sept. Firat records for Seram.

**Common Greenshank *Tringa nebularia***

One on the Was Toluorang above Solea on 29 August, two at Air Besar in Sept and one at Red Lake on 8 Sept. First records for Seram.

**Marsh Sandpiper *Tringa stagnatilis***

One seen on 8 Sept at Air Besar.

**Mood Sandpiper *Tringa glareola***

One by the Wae Toluorang near Solea on 29 August followed by three on 5 Sept, and five at Red Lake on 8 Sept . First records for Seram.

**Terek Sandpiper *Xenus cinareus***

Common on the coast, with a maximum at 25 on Pulau Sawai on 12 Sept.

**Grey-tailed Tattler *Heteroecelus brevipes***

Common on the coast, with a maximum of 71 at Pulau Sawai on 14 Sept. A disyllabic 'tu-wit' call was heard on a few occasions.

**Common Sandpiper *Actitis hypoleucos***

Common in ones and twos along the rivers inland and along the coast with a maximum of nine at Air Besar on 8 Sept. One at 700m near Solemena on 13 August.

**Little Curlew *Numenius minutus***

Four at Air Besar on 20 July and a single bird at Pulau Sawai on 18 Sept. First records for Seram.

**Whimbrel *Numenius phaeopus***

Very common on the coast with maximum counts of 106 at Pulau Sawai on 11 Sept. and 100 roosting at Air Besar on 7 Sept.

**Far Eastern Curlew *Numenius Madagascariensis***

Uncommon, with a maximum of five at Pulau Sawai from 11 to 18 Sept. First records for Seram.

**Bar-tailed Godwit *Limosa lapponica***

Small numbers at Air Besar and Pulau Sawai and occasionally observed in small group flying east along the coast In September.

**Beach Thick-Knee *Burhinus neglectus***

Two observed together on Pulau Lusaolate on 10 and 21 Sept. We failed to record it from the mainland and also from Pulau Sawai and Pulau Rajah.

**Whiskered Tern *Chlidonias hybridus***

Fairly common on the coast both in summer and winter plumage first recorded on 8 Sept. Recorded daily 11-25 Sept with a maximum of 32 at Pulau Sawai shortly after strong winds on 18 Sept. First records for Seram.

**White-winged Black Tern *Chlidonias leucoptoruB***

Flocks of up to 50 in mainly winter plumage in sheltered bays along the north, coast and in Ambon harbour, first recorded on 23 Sept.

**Gull-billed Tern *Gelochelidon nilotica***

Nine at Pulau Sawai on 18 and four at Air Besar on 19 Sept are the first records for Seram.

**Common Tern *Sterna hirundo***

Common along the coast. At least 25 on Pulau Sawai on 18 Sept. and several hundred off Pulau Lusaolate on 16 Sept. Both immatures and adults in transitional or winter plumage were seen.

**Black-naped Tern *Sterna sumatrana***

Common along the coast usually in small groups, with a maximum of 52 at Pulau Lusaolate on 16 Sept. At least two pairs were observed nesting on coral atolls near Sawai on 14 Sept.

**Bridled Tern *Sterna anaethetus***

Five in Sawai Bay on 14 Sept.

**Sooty Tern *Sterna fuscata***

Two off Wahai on 20 July are the first records for Seram. Identified by lack of a pale collar in the all black upper-parts.

**Little Tern *Sterna albifrons***

Four at Sawai on 18 Sept, two off Pulau Lusaolate on 19 Sept, seven seen from the Ambon ferry on the north coast on 25 Sept. First records for Seram.

**Great Crested Tern *Sterna bergii***

Common on the coast with a maximum of 26 at Air Besar and 20 at Ai Sete on 23 Sept.

**Feral Pigeon *Columba livia***

Only seen in the village of Sawai.

**Spotted Dove *Streptopelia chinensis***

Fairly common in disturbed habitats along the coast and on small offshore islands; most numerous on Pulau Sawai with at least 20 birds present.

**Slender-billed Cuckoo-Dove *Macropygia amboinensis***

Fairly common from 100-750m, often seen in open garden areas in the enclave; also seen in primary forest when less easy to observe but frequently heard.

**Long-tailed Cuckoo-Dove *Reinwardtoena reinwardtii***

A sub-montane species which we found commonly within a restricted altitudinal range between 650 and 950m both on G. Kobipoto and G. Binaia. Observed both in primary and secondary forest, and a frequent visitor to garden areas in the enclave.

**Green-winged Pigeon *Chalcophaps indica***

Small numbers were observed in primary lowland rainforest near Solea and in coastal scrub at Air Besar, apparently absent from the hills.

**Nicobar Pigeon *Caloenas nicobarica***

Only three sightings all inland; one injured immature on 25 July near Roho and two adults flushed in sub-montane forest near Kineke at 700m and one at 950m. None of the off-shore islands visited carried habitat suitable for this species.

**Superb Fruit-Dove *Ptilinopus superbus***

Inconspicuous but moderately common in lowland rainforest and secondary scrub on the coast, often visiting fruiting tree in garden plots at the forest edge.

**White-breasted Fruit-Dove *Ptilinopus rivoli***

Fairly common in primary forest from 700-1200m, but inconspicuous and

easily overlooked.

**Scarlet-breasted Fruit-Dove *Ptilinopus viridus***

Only recorded from Putau Sawai with at least six birds present in relict coastal forest at the eastern tip of the island in mid Sept. A very unobtrusive and wary species, easily overlooked.

**White-eyed Imperial Pigeon *Ducula perspicillata***

Common to abundant in lowland forest from the coast to 150m; frequently encountered in garden areas near Wahai and observed to fly along the coastal mangrove belt in small flocks.

**Description:** A large stocky and strongly built pigeon with a very rounded head due to a broad area of frontal feathers adjoining the cere. Mantle, rump and upper wing dark metallic green, showing a lustrous golden or bronze hue in direct light; primaries almost blackish. Medium length tail, broad and rectangular, darker metallic green appearing blackish in poor light. Underparts pale ash grey, becoming paler and slightly mottled on the belly. Head, chin and throat paler grey. Bill - moderate length and fine, horn-grey. Eyes-dark reddish-brown, in contrast to the colour implied by the name. Legs-dark, with a reddish tint. Call a deep, rolling, single note, "wooo", repeated at infrequent intervals.

**Blue-tailed Imperial Pigeon *Ducula concinna***

Pigeons showing the characteristics of this species replaced the previous species inland from 150m to at least 850m on G. Binaia. They were identified as this species from examination of a skin in the Bogor Zoological Museum, but White & Bruce (1986) state this to be a small island species, with no records from mainland Seram. Description: Very similar to *perspicillata*, differing in :

- noticeably dark under tail coverts, a rich chestnut contrasting with the ash grey underparts. All birds above 200m showed this characteristic.
- tail appeared blackish, with no trace of green (or blue).
- head appeared less rounded, particularly at the front of the crown owing to the frontal feathers joining the cere in a point.
- some but not all birds showed a distinct blackish line from the eye along the lower part of the cere to the cere.
- upperparts generally less green, more bronzy.
- call a distinct consistent deep rolling double note: "Woo Woo".

**Pied Imperial Pigeon *Ducula bicolor***

Common in coastal areas and offshore islands, in mangroves, garden areas and forest. Also numerous in lowland rainforest concentrating at favoured fruiting trees. Less common at higher altitudes and not recorded above 700m.

**Long-tailed Mountain-Pigeon *Gymnophaps mada***

A fairly common montane species, occurring in flocks of over 20 birds

on G. Binaia between 1200-2250m. Also present in fair numbers on the lower ridge of G. Kobipoto above 1200m.

**Salmon-created Cockatoo *Cacatua moluccensis***

A severely threatened endemic species. Formerly recorded as common in the lowlands (White & Bruce 1986), we found it to be very scarce with the lowest-encounter rate of any parrot species. Recorded 0.3/hour of search effort in lowland rainforest around Solea and 0.1/hour at 600-900m in the Kineke area (cf. the encounter rates for the Red Lory, Red-cheeked Parrot and Eclectus Parrot). The authors had only 54 sightings of wild cockatoos in 40 days of fieldwork in the Manusela National Park, and these probably referred to not more than 20 individuals, a disturbingly low total. In addition birds were observed either singly or in pairs, never in flocks. The bird is extensively trapped for the parrot trade, and we estimate that some 4000-9000 may be leaving the Island each year, from the north coast alone, on the weekly ferries to Ambon. Such a figure is clearly not sustainable and the species is already endangered even deep within the National Park.

If this trade is not stopped at once, the population will fall to beyond recovery level. The Cockatoo would make an ideal emblem for the Manusela National Park.

**Red-flanked Lorikeet *Charmocyna placentis***

Fairly common in the lowlands, especially in riverside palms and eucalyptus. We did not observe it along the coast. Often found in small flocks particularly at favoured feeding trees, but rather patchy in distribution. The flight calls were sharp 'skeesk' notes.

**Purple-naped Lory *Lorius domicellus***

Another threatened endemic species. Fair numbers are trapped and kept as pets by the local villagers, we observed the species at an encounter rate of only 0.7/hour in submontane forest near Kineke. It has a restricted altitudinal range, between 400 and 900m and seemingly has always occurred at low densities, as Stresemann found it to be uncommon in 1914 (vide White & Bruce 1986). It makes an attractive and popular pet and any external trading in this species would pose a serious threat to its survival.

**Blue-eared Lory *Eos semilarvata***

This little known endemic was found to be common above 1200m on G. Binaia with an average encounter rate of 1.8/hour, but locally abundant with 3.8/hour recorded on G. Kobipoto. The species ranges to the bare peak of Binaia itself, feeding at the flowers of the highest tree heathers. A nectar feeder, it was locally abundant at certain flowering trees and was seen occasionally as low as 800m.

**Red Lory *Eos bornea***

Abundant in the lowland forest from the coast to 650m in the hills, often in small flocks of up to 20 birds; the most abundant parrot at Solea study site with an encounter rate of 10.3/hour.

Pairs observed inspecting nest holes on several occasions mid-August to September, including one at a nest hole at 550m on the north slope of G. Kobipoto on 18-19 Aug.

**Rainbow Lorikeet *Trichoglossus haematodus***

An abundant species, common from the coast to 700m and occasionally as high as 1400m. Most frequently observed in the forest edge and along rivers, occurring in flocks of up to 100 though normally in smaller groups. Found in all forested habitats and a frequent visitor to garden areas and plantations. The second most abundant parrot in lowland rainforest, with an encounter rate near Solea of 9.8/hour.

**Red-breasted Pygmy-Parrot *Micropsitta bruijnii***

One observed at 700m on G. Kobipoto on 18 Aug. in the upper canopy of dense hill forest.

**Moluccan King-Parrot *Alisterus amboinensis***

An elusive species frequenting the dense forest canopy in both primary and secondary forest from the lowlands to at least 1200m, occasionally seen at the edge of gardens and plantations. In lowland rainforest at Solea (100m) we recorded this species at an encounter rate of 0.1/hour and it would appear to be generally uncommon.

**Red-cheeked Parrot *Geoffroyus geoffroyi***

Common on the coast and up through the lowlands to 700m, both in primary and secondary forest, as well as in garden and coconut plantation areas, and on small offshore islands. 4.5 were recorded per hour in lowland rainforest near Solea but less numerous at higher altitudes.

**Eclectus Parrot *Eclectus roratus***

Moderately common in all wooded habitats from the coast to 800m. Present in coastal scrub and garden areas but most often encountered in primary lowland forest with an encounter rate of 2.2/hour near Solea. Less numerous at higher altitudes. Pair frequenting a nest hole at Solea. 28 Aug - 3 Sept, with mating observed on 28 Aug.

**Great-billed Parrot *Tanygnathus megalorhynchus***

Moderately common in plantation edge and garden areas in the lowlands, but most numerous in primary lowland rainforest with an encounter rate of 2.4/hour near Solea. Usually observed in pairs, or small flocks when flying to roost. Recorded up to 700m. Pairs frequenting nest holes late Aug-Sept. One pair at nest hole at Solea c. 60m from the nest hole of the previous species?

**Oriental Cuckoo *Cuculus saturatus***

One at Solea on 5 Sept, another at Pulau Lusaolate on 10 Sept. Very similar to *Cuculus canorus*, the upperparts were browner, and the barring on the underparts was broader.



### **Indonesian Cuckoo *Cuculus sepulcralis***

Common from 600 to 1300m, its song heard everywhere; less common in the lowlands. It differed from the following species by having a dark grey crown and back, paler grey throat and upper breast, dark rufous or chestnut belly and vent. and bright yellow eye ring.

### **Brush Cuckoo *Cuculus variolosus***

One on Pulau Sawai, 12 Sept, and one at Air Besar, 24 Sept. These differed from *sepulcralis* by appearing very pale, with grey head, throat and breast, greenish-olive upper-parts, buff belly. None were heard calling. These birds were assumed to be migrants, and appear to be the first record for mainland Seram.

### **Koel spp. *Eudynamis scolopacea/cyanocephala***

The authors are certain of the presence of both these species, although in view of the continuing taxonomic uncertainties (*vide* White & Bruce, 1986), both are discussed under one heading.

**Scolopacea:** restricted to plantation and garden areas along the north coast, where fairly common, seen in the Wahai/Air Besar region on first arrival in late July, and again in the same region in September. Usually seen in pairs, though no calling noted. Very closely resembled this species seen previously by JB in Java and Peninsular Malaysia.

**Description:** Males glossy blue-black with pale green bin and dark red iris. Female buffy brown, darker above with large orange-rufous spots on the lower mantle and wing coverts. Paler buff below, becoming rich orange-buff towards the vent. No obvious dark barring below, but a varying degree of black appearing as indistinct patches on the throat. Crown warm brown, streaked paler, and the cheeks, chin and background of the throat were pale creamy buff.

**cyanocephala:** fairly common on off-shore islands, secondary forest and forest gardens bordering intact forest, in the lowlands, also forest on the shore at the base of the Sawai cliffs, with records from 2 to 18 Sept. At least 6 birds were located on Pulau Sawai, including the only two males observed.

**Description:** Male glossy blue-black, including one that had pate buff spots on the chest and pale brown inner webs to the primaries, and the second had quite large buffy patches on the breast and flanks with darker fringes, and pale brown inners to both the primaries and some of the tail feathers.

The females differed markedly from *scolopacea*, Conspicuous black crown, chin and throat with a distinct broad buffy matar stripe, seen as rusty in a good light. The black of the crown extended to well below the eye, to form a distinct black cap. Upperparts dark brown, extensively spotted with small pale buff spots. Large tail feathers are brown distinctly barred with thin black lines. Underparts rusty cinnamon, paler just below the black of the throat, with the lower breast and belly irregularly barred dark reddish brown, more strongly on the flanks. Other females all showed the same distinctive features to varying degrees.

**calls:** in contrast to *scolopacea*, these birds were vociferous, with harsh, raucous squawks from the females, and the full koel "bubbling" calls uttered by the males.

Further studies are required to establish whether *cianocephala* is migrant, or whether the two species are sympatric. If *cianocephala* is migrant, it would imply that it is vocal in its winter quarters.

**Channel-Billed Cuckoo *Scythrops novaehollandiae***

Seen in small parties passing over Wahai and Air Besar. particularly in the early morning or evening, sometimes perching in tall mangrove trees. All recorded. in September with a maximum of 20 on 6 Sept.

**Lesser Coucal *Centropus bengalensis***

Seen infrequently, usually in scrubby areas bordering *Imperata* grassland in the lowlands.

**Moluccan Scops-Owl *Otus magicus***

We failed to find this species on Seram, although an expedition entomologist gave a good description of a small owl that he flushed during trapping work in lowland forest near Solea. Unidentified owl calls in lowland forest were attributed to this species, a harsh single "kruk" repeated at intervals.

**Moluccan Hawk-Owl *Ninox squamipila***

Two seen near Solea in primary forest and commonly heard at dusk in the same area. The call is a far-reaching, mellow "wooo wooo wu wu wu wu".

**Large-tailed Nightjar *Caprimulgus macrurus***

Several seen in clearings along the Wae Toluorang near Solea, where an incubating female was located in late August. Also heard at 600m in the enclave gardens at Solemena. The call consisted of a series of far-reaching. almost metallic 'chonk-chonk....' notes, sometimes up to 15 notes in a series.

**Moustached Tree-Swift *Hemiprocne mystacea***

Moderately common in open areas from the mangrove on the coast to 600m, and particularly along the larger rivers.

**White-bellied Swiftlet *Collocalia esculenta***

Common from the coast to the highest altitudes, particularly in more open habitats, and at the summit of G. Binaia.

**Moluccan Swiftlet *Aerodramus infuscatus***

Found from the coast to 2500m on G. Binaia and to the summit of Kobipoto. Common, but most abundant in the hills around 700m, in flocks of 10 to 20 birds. Readily identified by its white rump.

**Uniform Swiftlet *Aerodramus vanikorensis***

Small numbers observed often with other swiftlets from the coast to 700m and particularly at dusk; apparently a new species for mainland Seram.

**Common Paradise-Kingfisher *Tanysiptera galatea***

Fairly common in lowland forest near Solea; also in coastal scrub at Air Besar in Sept, with up to six present in a narrow degraded strip of forest of less than 16 ha.

**Lazuli Kingfisher *Halcyon lazuli***

This endemic species was found to be distinctly local and generally uncommon. Stresemann stated that it occurred in mangroves and lowland swampy woodland (vide White & Bruce, 1986). However, we found it only in areas of partially cleared forest and in secondary growth with cultivation. The species was always observed perched in dead trees in pairs and was thought to be nesting at the time of study. (An agitated pair was observed visiting a hollowed-out termite nest built on the side of a coconut palm near Wahai on 20 July).

Only five pairs were located during the study period, all in the region between Wahai and Solea, and three of which were in highly disturbed plantation edge areas close to Wahai. The species appears tolerant to secondary and man-made habitats but the removal of dead forest trees from the coconut plantations may reduce available nest and perching sites.

**Collared Kingfisher *Halcyon chloris***

Fairly common on the coast but restricted to areas in or adjacent to mangrove forest.

**Beach Kingfisher *Halcyon saurophaga***

A single bird at Pulau Sawai from 12 to 16 Sept. The first record for Seram. Description: white, with a dark smudge around eye, and bluish green wings, back and tail; bill black.

**Sacred Kingfisher *Halcyon sancta***

Common on the coast and inland to 200m along the major rivers, but also in drier scrub areas.

**Variable Kingfisher *Ceyx lepidus***

Infrequently encountered but not uncommon in primary lowland forest and along forested rivers to at least 700m. One pair caught in mist nets near Solea.

**Common Kingfisher *Alcedo atthis***

Common along lowland rivers, with daily records from 21 August, the date when studies commenced in the lowlands; only occasionally on the more sheltered parts of the coast.

**Rainbow Bee-eater *Merops ornatus***

Common from the coast to 200m in open areas and along rivers; flock of at least 40 near Solea on 3 Sept.

**Dollarbird *Eurystomus orientalis***

Common in the lowlands and on the coast; at least 17 feeding together at dusk on 19 Sept at Air Besar.

**Papuan Hornbill *Rhyticeros plicatus***

Common in all habitats from the coast to around 1000m.

**Blue-breasted Pitta *Pitta erythrogaster***

Two records: One at 750m near Camp C on 11 August, on a steep slope in primary forest with a dense ground layer, and another near Solea at 100m on 27 August, on a level riverine terrace in dense forest.

**Barn Swallow *Hirunda rustica***

Fairly common on the coast to 200m. First recorded on 31 Aug. amongst a flock of Pacific Swallows near Solea.

**Pacific Swallow *Hirundo tahitica***

Common in open areas and along rivers in the lowlands, often nesting on man-made coastal structures.

**Black-faced Cuckoo-Shrike *Coracina novahollandiae***

Only one record: three adults in lowland rainforest at Solea, on 28 August.

**Moluccan Cuckoo-Shrike *Coracina atriceps***

In contrast to Stresemann, we failed to find this species in mangrove areas (*vide* White & Bruce 1986), and indeed it appeared to be absent from the coastal areas. We found it in lowland rainforest at Solea at c.100m although it was less common here than in the hills. It ranges up to 1100m on G. Binaia and 1200m on G. Kobipoto. It appeared to be most common on steep north-facing slopes at around 1000m on both mountains.

**Common Cicadabird *Coracina tenuirostris***

Generally uncommon in primary and secondary forest from the lowlands to at least 1000m. Most frequently encountered at the forest edge.

**Pale Cicadabird *Coracina ceramensis***

Fairly common. Observed mostly in forest from the coast to 1750m on Binaia and to at least 900m on Kobipoto. Usually observed in mixed species foraging flocks, often quite high in the canopy. Once seen in mangroves near Air Besar.

**Golden Bulbul *Ixos affinis***

A common and widespread bird, occurring in forested areas from the coast up to 850m on G. Binaia and 950m on G. Kobipoto. This species was

particularly abundant in the enclave gardens at around 600m, but was not seen in coastal plantations. A regular participant in mixed feeding parties.

**Spangled Drongo *Dicrurus bracteatus***

Common in primary and secondary forest and open areas in the lowlands, with a group of nine near Solea on 5 Sept.

**Grey-collared Oriole *Oriolus forsteni***

A secretive and elusive endemic species but widespread, judging from its distinct call, occurring in forest from the coast to 850m on G. Binaia and recorded at 1100m on G. Kobipoto. Nowhere abundant but recorded most frequently in the lowland rainforest near Sotea. The call is a flutey, two note "whee-whooh", with the second note lower than the first.

**Slender-billed Crow *Corvus enca***

Common, often in small groups, from the coast to 1000m in all habitats.

**Moluccan Thrush *Zoothera dumasi***

Apparently very rare with only one record, though skulking and easily overlooked when not calling. The single record was of three birds in dense moss forest at 1280m on G. Kobipoto on 16 August. They were uttering thin "tseep" calls, very thin but audible from ca.50m. Imitation of the call brought the birds into view, hopping on the ground and logs, flicking their wings and occasionally calling. This was the only occasion on which the call was heard.

**Description:** A medium sized thrush, similar in shape, size and actions to *Zoothera interpres* on Java. Compact build with a short tail, they appeared quite rounded on the ground, but with medium length wings in flight. Flights were performed with quite rapid and noisy wing beats. The general appearance was of a uniformly dark grey-brown bird, but when observed in a moderately good light at close quarters through 10x50 binoculars, they were found to be boldly marked.

The upperparts from the crown and nape through to rump and tail were concolorous warm olive-brown. The same colour on the lesser and median wing coverts contrasted with the black greater wing coverts, secondaries and primaries. A large white spot was very prominent on the alula. The face, forehead, ear coverts and sides of the neck, through to the chin, throat, foreneck and breast were black. By contrast the belly was white but irregularly and broadly barred black, the bars thicker on the flanks, thinning out and disappearing mid-ventrally. The under tail coverts were noticeably pure with no trace of black. Bill moderately heavy for a thrush, quite long and glossy black. Eye very dark with no obvious eye-ring. Legs appeared rather long and pale greyish.

Despite extensive searching, this species was not located on G. Binaia where, above 1800m, we found the Island Thrush *Turdus poliocephalus*. It is significant to note that the description given above differs from that of the holotype of the Seram race *joiceyi* as given in White & Bruce

(1986).

**Island Thrush *Turdus poliocephalus***

Only observed on G. Binaia where it is moderately common from 1800m to the summit in both upper montane forest and in the tree heather zone on the highest peaks. Fully fledged immatures were noted in August.

**Chestnut-backed Bush-Warbler *Bradypterus castaneus***

A skulking montane species, observed fairly frequently both on G. Binaia and Kobipoto. From its call it would appear to be fairly common, particularly in areas of dense bamboo growth on clayey subsoil and less so in areas of sparse undergrowth on thin limestone soil. It is common in a fairly narrow altitudinal band from 1000 to 1750m, but ranges as low as 850m on G. Binaia. The normal call is an off-repeated "zit-oh-zit". An adult seen collecting grubs for a fully-fledged imm. on 7 Aug called very softly a continuous "chit-chit-chit....."

**Arctic Warbler *Phylloscopus borealis***

One bird seen on Pulau Sawai on 15 Sept.

**Island Leaf-Warbler *Phylloscopus poliocephalus***

A common bird found from 700m to 2000m in primary forest and in secondary forest bordering garden areas in the enclave. A frequent and common member of bird parties.

**Mountain Tailorbird *Orthotomus cuculatus***

Common from 1200 to 1950m on G. Binaia and at the summit of Kobipoto, particularly in areas of dense bamboo growth; both adults and immatures seen.

**Golden-headed Cisticola *Cisticola exilis***

Restricted to open areas along the coast and along river edges dominated by coarse grass. Not uncommon in similar habitat inland as far as Solea.

**Snowy-browed Flycatcher *Ficedula hyperythra***

Common in primary forest from 1000 to 2000m but recorded less frequently to as low as 700m. Many immatures present in mid-August.

**Cinnamon-chested Flycatcher *Ficedula buruensis***

Fairly common but elusive in sub-montane forest and in garden areas near Kineke at 650-850m, but not recorded from large areas of the Park. An adult was seen at 200m at the foot of Kobipoto and an immature bird at 100m in lowland rainforest near Solea. Although having a mainly montane distribution, it appears to wander to lower attitudes.

**Little Pied Flycatcher *Ficedula westermanni***

Fairly common from 1200-2250m on G. Binaia, and observed at 1200m on G. Kobipoto.

**Island Verditer Flycatcher *Eumyias panayensis***

Uncommon in both primary and secondary forest from 200-1150m, usually observed singly in mixed foraging flocks.

**Slaty Monarch *Myiagra galeata***

Fairly common, but confined to the lowlands, below 150m, except for one bird recorded at 850m. Often found in bird parties and usually in pairs, this species was most frequently seen in coastal areas, occurring in coastal scrub at Air Besar and in mangroves and coconut at Pulau Sawai. It also occurs in lowland forest but as it frequents the upper canopy, it was most obvious along the river edges.

**Spectacled Monarch *Monarcha trivirgata***

Common from the lowlands to around 800m in all forested areas including the enclave gardens, but absent from coastal areas. A regular member of bird parties both in the lowlands and in the hills.

**Island Monarch *Monarcha cinerascens***

Only recorded from the offshore islands of Pulau Sawai and Rajah. At least 20 birds on Pulau Sawai in relict coastal forest and coconut plantations. One recorded in mangroves on the adjacent Pulau Rajah which has mostly been converted to coconut cultivation.

**Streaky-breasted Fantail *Rhipidura dedemi***

A common endemic species, absent from the coast but abundant in the lowland forest, occurring also up to 2200m on G. Binaia and present on the summit ridge of G. Kobipoto at 1340m. One of the most conspicuous birds of the forest, and a regular member of bird parties.

**Northern Fantail *Rhipidura rufiventris***

Found in primary forest from 100-900m but generally scarce and only common in garden edge areas in the enclave at around 700m, where it is a frequent member of bird parties.

**White-browed Fantail *Rhipidura leucophrys***

Common on the coast and on offshore islands. Many nests found with eggs in September in mangroves and on mooring posts.

**Golden Whistler *Pachycephala pectoralis***

Present from 100-1170m in primary and secondary forest but most common above 650m where it was a frequent member of bird parties.

**Drab Whistler *Pachycephala griseonota***

An inconspicuous bird, frequenting the upper canopy and seldom seen. However, it has a very loud and distinctive song and it was found to be thinly distributed but not uncommon in forest. Absent from the coast but ranging up to 1100m on G. Binaia and 1000m on G. Kobipoto. Widespread but nowhere abundant. The song is a prolonged and loud, cheery warble of about 15 seconds, repeated at intervals. It is an

unvarying and repetitive song which becomes tedious. It sings well into the day from the middle to upper storey, where it is difficult to locate being somewhat ventriloquial.

**Yellow Wagtail *Motacilla flava***

Small numbers observed flying east along the coast between Wahai and Ai Sole in September.

**White-breasted Woodswallow *Artamus leucorhynchus***

Fairly common in open areas along the coast, "hawking over areas of *Imperata* grass; also recorded on Pulau Lusaotote.

**Island Starling *Aplonis mysolensis***

A patchily distributed species, locally abundant at colony sites. Restricted to the hills, it is apparently replaced by the next species in the lowlands and coastal areas. This species was recorded in a narrow band between 300 and 650m, occurring both in areas of primary forest and more commonly at the forest edge. A highly gregarious species, colonies were widely but sparingly distributed in the forest. Distinguished from the next species by wedge-shaped tail, dull reddish-brown eye and dull, dark green gloss.

**Shining Starling *Aplonis metallica***

A common species occurring in large flocks along the coast in mangroves and plantation areas; also found inland in the lowlands particularly in forest edge habitats. Distinguished from the previous species by narrow, pointed tail, bright red eye, rich metallic green gloss and, in a good light, a reddish-purple gloss on the breast and around the head.

**Long-crested Myna *Basilornis corythaix***

Found unevenly from 200m to around 900m, this endemic was absent from large areas, but locally numerous especially in the enclave garden near Kineke at 700m and along river edges at Soleaiama. Often seen with flocks of Island Starling in the enclave.

**Grey-necked Friar-bird *Philemon subcorniculatus***

A very common and conspicuous species, its call heard everywhere from the mangroves and coconut plantations on the coast to disturbed and primary forest as high as 950m on G. Binaia and 1100m on G. Kobipoto. One of the most common birds in Seram. The call is a single, explosive "pprow" or "prrrt" repeated at intervals.

**Olive Honeyeater *Lichmera argentauris***

One record, an adult on Pulau Lusaolate on 16 Sept. This was the type locality of the race *patasiwa* as described by Stresemann in 1912 (Vide White & Bruce 1986) and appears to be the only confirmed location for the species on Seram. Lusaolate is less than one hectare in area and consists of a few coconut palms with coastal scrub in between and one Casuarina tree in which the bird was found to be feeding. The bird was



certainly not present on a previous visit to the island on 10 Sept. and the individual concerned was observed to fly towards the mainland (about one kilometer distant) at midday.

Clearly the species occurs in coastal North Seram, but it has yet to be recorded on the mainland.

**Spectacled Honeyeater *Lichmera monticola***

A common montane endemic, abundant on G. Binaia above 1200m and common on G. Kobipoto, where it was found as low as 1000m. Particularly abundant in the tree heather zone near the summit of Gunung Binaia but also common in lower montane forest, occurring wherever their foodplants are found, ericaceous trees and shrubs.

**Drab Honeyeater *Myzomela blasii***

A curiously scarce endemic which was recorded very infrequently. Found at 2200m on G. Binaia and 850m on G. Kobipoto, and as low as 150m near Solea, but seldom between these elevations. Being an inconspicuous tree-top species, it is easily overlooked. Most records were at flowering trees in the Kineke region at 650-700m, but even here it was seen only infrequently.

**Scarlet Honeyeater *Myzomela sanguinolenta***

Fairly common from 700-1400m in primary and secondary forest on both G. Binaia and G. Kobipoto. An infrequent member of mixed feeding parties.

**Black Sunbird *Nectarinia aspasia***

Common from the coast to around 700m, occurring mainly in secondary forest, garden plots and more open areas; also recorded in mangroves on Pulau Sawai. Several occupied nests in the forest edge and secondary scrub at Solea in late August to September.

**Olive-backed Sunbird *Nectarinia jugularis***

Common in the lowlands and on the coast and offshore islands, mainly in secondary forest, garden areas and plantations.

**Ashy Flowerpecker *Dicaeum vulneratum***

A common endemic, occurring much lower than indicated by White & Bruce (1986). Found in coastal forest at Sawai and highly disturbed plantation edge forest at Air Besar, less than one kilometer from the coast. It is common in lowland forest but perhaps more abundant in the hills, in primary forest and disturbed garden areas. It occurs as high as 1375m on G. Binaia and up to 1100m on G. Kobipoto. Sometimes found in bird parties and usually in pairs.

**Mountain White-Eye *Zosterops montanus***

Common from 700m to 2200m, often in large flocks both in primary forest and in garden plots within the enclave.

**Black-fronted White-Eye *Zosterops atrifrons***

Common near Kineke in forest edge gardens and in secondary forest at 650-860m; less common in the lowlands down to 100m.

**Bicoloured White-Eye *Tephrozosterops stalker***

This endemic was found to have a very restricted altitudinal range, far more so than White & Bruce (1986) suggest. It was recorded only between 650 and 850m on G. Binaia, but up to 950m on G. Kobipoto. Within its range it is inconspicuous, inhabiting dense secondary growth in clearings and at the forest edge. It was most abundant in overgrown garden areas above Kineke on the edge of the enclave at around 700m, where it frequently occurred in bird parties. The Kobipoto record was of an adult feeding young in a bird party in primary forest.

**Grey-hooded White-Eye *Lophozosterops pinaiae***

A moderately common but apparently locally distributed montane species on G. Binaia. It ranged from 1150m up to 2450m but is unobtrusive and was not recorded in many areas. It was most abundant in the higher montane forest at 2400m, but was absent from the treeless zone above. On G. Kobipoto, recorded only once in a bird party at 1100m on the north side.

**Black-faced Munia *Lonchura molucca***

Fairly common in open habitats in the lowlands. Apparently absent from gardens in the hills, it was locally common in open areas of a *Imperata* grassland along the coast, in recently cleared areas and along rivers with rank growth at the edges.

### **Acknowledgements**

The authors extend their thanks to the Operation Raleigh Organisation and its members in the field in Seram, without which none of our research would have been possible. We would also like to thank the sponsors of the Operation Raleigh Seram expedition, and Derek Holmes and David Bishop for providing support and constructive criticism on an early draft.

We are also indebted to the Directorate-General of Forest Protection and Nature Conservation (PHPA) in Bogor, Ambon and Seram for their support and assistance.

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