

AN ANNOTATED CHECKLIST OF THE BIRDS OF TANJUNG PUTING
NATIONAL PARK, CENTRAL KALIMANTAN

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INTRODUCTION

Tanjung Puting National Park is located near the south-western corner of the island of Borneo, in Central Kalimantan province at 112 deg E, 3 deg S, and covers an area of 296,800 hectares. The park contains the largest and best representation of south western Borneo's original coastal plain habitats, particularly the predominant heath and peat swamp forests, which occupy a much larger extent here than in any other protected area in Borneo.

Tanjung Puting is considered to be of World Heritage Quality (IUCN 1985), and in 1977 was approved as a UNESCO Man and the Biosphere reserve, an example of one of the world's major eco-systems (Robertson 1985). In Indonesia's National Conservation Plan the park is singled out as an area of particular conservation importance for the country (FAO 1981), yet for all its importance and potential, the faunal diversity of the park had never been examined in detail, through systematic faunal surveys. Under the World Wildlife fund Project 1687, in association with the Directorate General of Forest Protection and Nature Conservation (PHPA), the authors surveyed the birds in representative areas both inside the park and in some cases, outside, for the purpose of starting a faunal data bank on which future management strategies may be based. Occurrence and distribution data collected in these surveys are presented herewith.

The observations presented here are entirely our own records, obtained between May and September 1986, and no reference is made to previous records of other observers (see Galdikas *et al*, 1985, Bohap & Galdikas, 1987). A much more detailed account of the Park's ornithology is given in Nash & Nash (1986).

METHODS

Information on the birdlife of the park and its surrounding area was gathered in two ways : compiling continuous field observations, and conducting a systematic bird capture-and-release program, in as many of the park's principal habitat/vegetation types as was possible. Between the months of May and September 1986, observations were made on

109 days, amounting to well over 3000 man-hours of observation time. Netting was carried out on 80 days, in 31 localities of which 6 were outside the present park boundaries. Twelve to fifteen standard mist-nets were used, for just over 6200 net-hours (a net-hour is equal to opening a standard 12-meter net for one hour).

SURVEY AREA

The survey area was as follows (see figure 1) : from the village of Kumai to the mouth of the Sekonyer river; the Sekonyer river past Tanjung Harapan to the main fork; the right fork as far as the Orangutan Research and Conservation study site; the left branch past Natai Lengkuas and Natai Pelanduk to Gedung Sintuk and the grass swamps beyond; from the mouth of the Sekonyer south along the coast to Teluk Pulai, and to the Buluh Kecil river; up the Buluh Kecil river approximately 20 kilometres; from the mouth of the Buluh Kecil south to the Buluh Besar river; up the Buluh Besar river for approximately 15 kilometres; from the mouth of the Buluh Besar south to the Arutebal river. Occasional observations were made on Kumai Bay, and at the west side of the Kumai estuary, at Tanjung Keluang and Tanjung Kubu. Observations made in the forests were not usually farther than 3 kilometers away from the river.

HABITATS AND VEGETATION

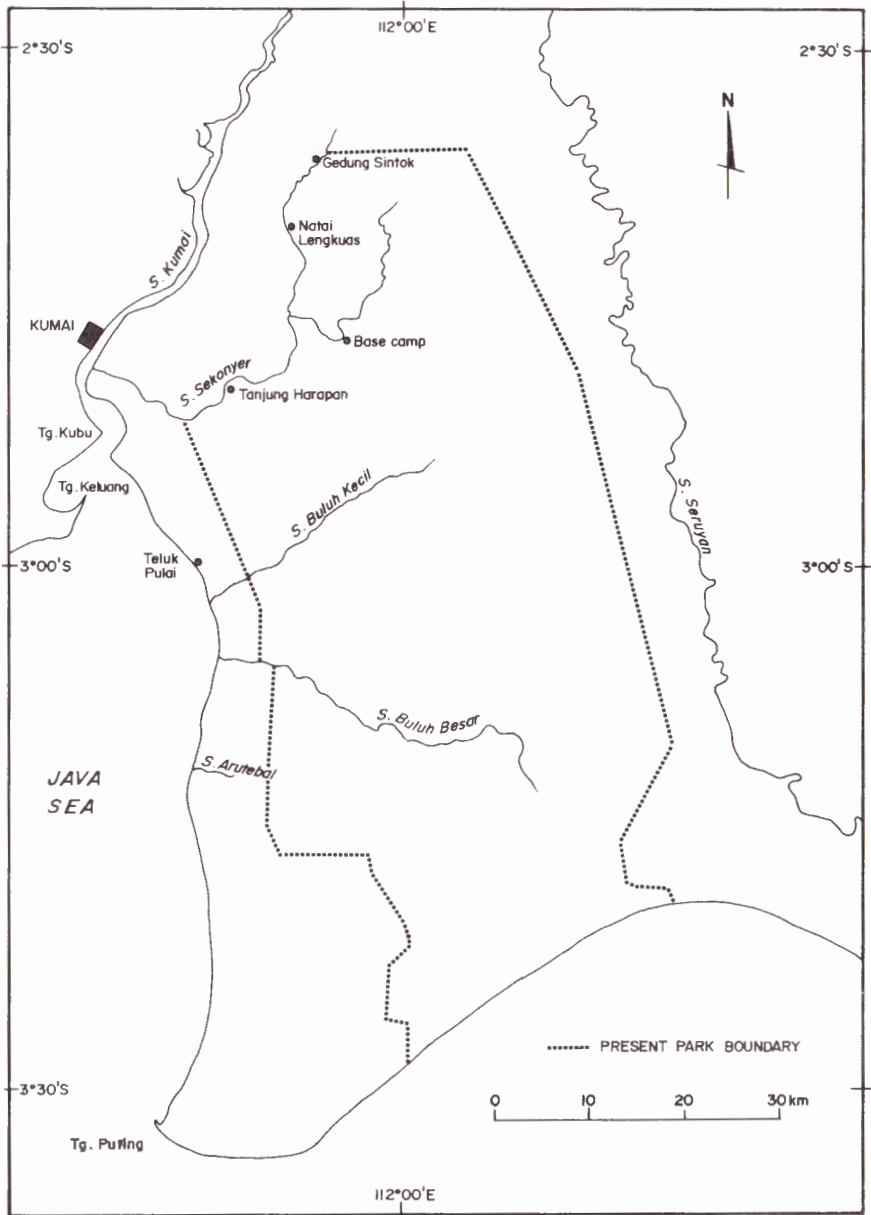
Habitats and vegetation types for the Tanjung Puting areas have recently been described in Nash and Nash (1986). Those covered in the survey are freshwater swamp forests (combining the immediate riparian growth along the river systems, alluvial swamp forest, and peat basin margins; true peat swamp was not surveyed), mature kerangas (tropical heath forest), young (pole stage) kerangas, fire-padang scrubland (degraded kerangas), ladang (reclaimed cultivation), grass swamp, nypa-mangrove, coastal fringe (heavily degraded mangrove), and cultivation plots (coconut, etc.). Tanjung Puting habitats not surveyed are true peat swamp forest, true beach vegetation, and alang-alang grassland.

RESULTS

During the survey, 207 species of 48 families were recorded within the park's boundaries and the immediate region, composed of 200 resident species (46 families) and 7 seasonal visitors and migrants. Specifically, 160 species were recorded in swamp forest, 102 species in mature kerangas, 69 species in young kerangas, 78 species in fire-padang scrubland, 29 species in ladangs, 61 species in grass swamp, 68 species in coastal fringe forest, and 23 species in (coastal) cultivated land. The netting program yielded 1367 captures (92 species).

LOCATION MAP

Figure. 1



SPECIES ACCOUNTS

Included in the species accounts is information on relative abundance, distribution, breeding records and chronology, and behavioural notes, where relevant. For the abundance rating, "common" indicates that the species would usually be encountered in the course of a day in appropriate habitat; "uncommon" indicates that the species would be occasionally encountered, in appropriate habitats, over a period of several days or weeks.

The following habitat symbols are used against each species
S = swamp forest, k = mature kerangas, k = young kerangas, FP = fire-padang scrub, L = Ladang, Cf = coastal fringe, G = Grass swamp, C = cultivated land. Both edge and aerial species are included within these classes. Rivers are considered part of swamp forest.

Oriental Darter *Anhinga melanogaster* S, Cf, G
Uncommon. Found singly along all the major rivers, and regularly at the coast, also in groups of 2 or 3.

Dusky-Grey Heron *Ardea sumatrana* Cf
Recorded only once, a single bird at the coast near the Arutebal river, on 16 August. Being a bird of mud flats and nipa (Batchelor 1959, Smythies 1981), this species is probably not found south of the Arutebal river on the western side of the point.

Purple Heron *Ardea purpurea* S,G
Uncommon. Usually seen singly in riparian edge and grass swamp.

Little Heron *Butorides striatus* S, Cf, G
Common. Recorded along the main river systems and along the coastal mud flats and mangrove.

Large Egret *Egretta alba* Cf,G
Recorded three times, single birds in the Sekonyer river headwaters grass swamp, and the estuaries of the Buluh Besar and Buluh Kecil rivers. This species is believed to breed in the 'bird lake' south of the Buluh Besar river (Galdikas *et.al* 1985), but evidence of a large still active breeding population is lacking.

Common Night-Heron *Nycticorax nycticorax* S
Recorded only once, along the Sekonyer river at Natai Lengkuas on 3 July.

Black Bittern *Dupetor flavicollis* G
Recorded only once, two separate birds along the upper reaches of the Sekonyer river in grass swamp and Pandanus edge, on 4 August. As this sighting is too early for migrant birds (see Nash and Nash 1986), these birds may represent a resident population.

Storm's Stork *Ciconia stormi* S

Uncommon. Found singly, or in 2's or 3's along the main rivers. One pair seen daily near the Buluh Kecil PHPA guard post in August, apparently feeding along the mud banks of the river. On 7 August, 4 birds seen soaring high over the Buluh Kecil river (these did not include the usual pair).

Lesser Adjutant *Leptotilus javanicus* Cf

One seen on 16 August, 3 km south of the mouth of Buluh Besar river, at the coast. Also, on 2 August, one seen soaring over Gedung Sintuk.

Wandering Whistling Duck *Dendrocygna arcuata* G

One group of 25-30 birds was found on 23 June in the flooded grass swamp at the headwaters of the left branch of the Sekonyer river.

Crested Honey-Buzzard *Pernis ptilorhynchus* FP, G

Single birds recorded twice in fire-padang at Gedung Sintuk.

Bat Hawk *Machaerhamphus alcinus* S,G

Single birds twice seen at Buluh Kecil river PHPA guard post, and once at Gedung Sintuk.

Brahminy Kite *Haliastur indus* S, Cf, G

Common. Occasionally seen inland, but most common along the coast.

White-bellied Sea-Eagle *Haliaeetus leucogaster* S, Cf

Uncommon. Several sightings from the upper Sekonyer river, but most common along the coast.

Lesser Fish-Eagle *Ichthyophaga nana* S

Uncommon. Seen only along the major river systems, and markedly less common than the following species.

Grey-headed Fish-Eagle *Ichthyophaga ichthyaetus* S, Cf, G

Uncommon. Seen along the major rivers, and occasionally along the coast.

Crested Serpent Eagle *Spilornis cheela* S,K,k

Common. Usually seen near a river's edge, but also encountered well inland.

Japanese Sparrow-hawk *Accipiter gularis* S

One bird believed to be this species seen on 14 Sept, in alluvial swamp forest (Sekonyer river).

Crested Goshawk *Accipiter trivirgatus* S, K

Common. Found in all forested areas.

Black Eagle *Ictinaetus malayensis*

Uncommon. Only seen soaring very high over forested areas.

Black-thighed Falconet *Microhierax fringillarius* S, FP
A single bird recorded only twice, along the Sekonyer river at Tanjung Harapan. This species should be common, but it is noticeably absent from all suitable habitats. We have no explanation for this.

Black Wood-Partridge *Melanoperdix nigra* K,k
Uncommon. One pair with hatchlings was seen on 19 July, with several young present, but only one well seen, being completely downy, with an overall rufous colour. Another male was seen 75 m away at the same time the pair was watched. One nest was found on 12 Sept, containing one infertile egg and a piped egg shell. The complete egg measured 38.5 x 32.3 mm, was a broad ellipse, with a dull white ground colour. The nest was a simple depression 13 cm across, lined with dead leaves. A pair of adults was seen close to the nest, but had evidently abandoned it. We presume the clutch hatched approximately the previous day. This is the first description of the nest of this species, and only the sixth nest known to science (see Coomans de Ruiter 1946, Robinson and Chasen 1936). The young mentioned above, with this nest, represent the only breeding records for Kalimantan south of Pontianak.

Crested Wood-Partridge *Rollulus rouloul* K
One male seen in kerangas-alluvial forest transition, at Natai Lengkuas.

White-breasted Waterhen *Amaurornis phoenicurus* G
Recorded only once, at the riverine edge of grass swamp along the upper Sekonyer.

Lesser Golden Plover *Pluvialis dominica* CF
Two birds in winter plumage seen on 16 August along the coast near Arutebal river; 3 birds seen on 19 August at Teluk Pulai, of which one was in partial breeding plumage (black face, centre of breast black).

Common Redshank *Tringa totanus* CF
1 to 5 birds at Teluk Pulai, 19-23 August.

Common Sandpiper *Actitis hypoleucos* S,Cf
First recorded on 6 August, found along the main rivers and the coast.

White-winged Tern *Chlidonias leucopterus* G
Two birds seen on 22 May in flooded grass swamp near the headwaters of the Sekonyer river, in mainly winter plumage.

Little Tern *Sterna albifrons* Cf
Commonly seen around Kumai Bay.

Great Crested Tern *Sterna bergii* Cf
Commonly seen around Kumai Bay.

Thick-billed Pigeon *Treron curvirostris* S
Occasionally seen in riparian habitats along the Sekonyer river at Natai Lengkuas.

Cinnamon-headed Pigeon *Treron fulvicollis* S,K,k,FP,L,Cf
Common. Favours swampy areas as well as open scrub.

Little Green Pigeon *Treron olax* S
Uncommon. Only a few sightings from the Natai Lengkuas area. This species is said to prefer sub-montane localities (Smythies 1981), perhaps explaining its scarcity in the park.

Pink-necked Pigeon *Treron vernans* S,FP,Cf
Common. Recorded in most forest areas.

Large Green Pigeon *Treron capellei* S
Occasionally seen around open habitats along the Sekonyer river, near Natai Lengkuas. Usually only single birds seen. Banks (1935) suggested that *T. capellei* replaces *Ducula aenea* in some areas. The large numbers of the latter species in the area may explain the scarcity of the former.

Jambu Fruit-Dove *Ptilinopus jambu* S
Uncommon. Recorded only in alluvial forest edge at Natai Lengkuas, in fruiting shrubs.

Green Imperial Pigeon *Ducula aenea* S,K,k,FP, Cf
Very common. Found in most habitats. One nest found in coastal fringe vegetation at Teluk Pulai on 21 August. An adult was flushed from the nest, but the contents were not seen. Nuptial flights commonly observed.

Spotted Dove *Streptopelia chinensis* FP,Cf,G,C
Common only in the open areas and fire-padangs of the upper Sekonyer river, and near villages (Tanjung Harapan, Teluk Pulai). Three nests were found on 1 August at Gedung Sintuk, two with 2 eggs, one with 1 egg.

Emerald Dove *Chalcophaps indica* S, FP
Uncommon in drier forest areas and scrub edges.

Long-tailed Parakeet *Psittacula longicauda* S,K,k,FP,Cf,G.
Very common. Generally small groups of less than 20 seen, but during the month of June at Natai Lengkuas, groups of 40-60 were common, and from 28 June to 2 July morning and evening flights totalled over 800 birds each day, but by 7 July only the regular small groups were seen. One active nest was found on 1 June adjacent to open grass swamp, occupied by an adult female. One pair was seen exploring a nest cavity on 23 June.

Blue-rumped Parrot *Psittinus cyanurus* S,K,k
Uncommon. Observed mainly in dry forest areas, kerangas.

Blue-crowned Hanging Parrot *Loriculus galgulus* S,K,k,Cf
Common. Seen in most forested areas. One male seen displaying on 1 July at the edge of open scrub. One pair seen inspecting a nest hole on 9 June.

Indian Cuckoo *Cuculus micropterus* S
Uncommon. Only heard in the peaty alluvial forests of the Buluh Kecil area.

Plaintive Cuckoo *Cacomantis merulinus* S,k,FP,G,C
Common. One female with an unshelled egg felt in its oviduct on 5 June. One fledged young seen in alluvial forest edge on 25 May and 7 July.

Violet Cuckoo *Chrysococcyx xanthorhynchus* S,K,k,FP,L,G.
Common in the Natai Lengkuas area.

Drongo Cuckoo *Surniculus lugubris* S,k,FP,L
Common in the Natai area.

Chestnut-bellied Malkoha *Phaenicophaeus sumatranus* S,k,FP
Common. One adult with 2 fledged young on 26 July at Tanjung Harapan near the PHPA guard post (park side) in dense riparian growth over a small stream. Both young with near-adult plumage were begging food from the adult. One bird seen depositing a faecal sac on 12 July in young kerangas at Natai Lengkuas.

Raffles' Malkoha *Phaenicophaeus chlorophaeus* S,FP,G
Common. On 23 June one male seen carrying food in flooded riverine forest.

Red-billed Malkoha *Phaenicophaeus javanicus* S,L,G
Uncommon but regular in the Natai Lengkuas area.

Chestnut-breasted Malkoha *Phaenicophaeus curvirostris* S,Cf
Uncommon. Recorded in forest areas and in coastal vegetation.

Greater Coucal *Centropus sinensis* S,FP,Cf,G
Common, especially along the Sekonyer river banks.

Lesser Coucal *Centropus bengalensis* G,C
Uncommon. A resident of ladangs and cultivated areas.

Reddish Scops-Owl *Otus rufescens* S
Uncommon. Recorded only in the Natai Lengkuas area in alluvial swamp forest (voice records only).

Collared Scops-Owl *Otus bakkamoena* S,L,G,C
Common. Most easily found in the alluvial forests of Natai Lengkuas.

Barred Eagle-Owl *Bubo sumatranus* S
Uncommon, but possibly overlooked. Records from the
Natai Lengkuas area only.

Buffy Fish-Owl *Ketupa ketupu* S
Recorded only in one area, near the Buluh Besar PHPA
guard post, 1 bird regularly heard at dusk and early
evening.

Brown Hawk-Owl *Ninox scutulata* S, FP
Uncommon. Heard at night in the Natai Lengkuas area in
association with the ladang and other open areas. Also
heard at the Buluh Kecil PHPA guard post.

Brown Wood-Owl *Strix leptogrammica* S
Uncommon. Recorded around the Buluh Kecil PHPA guard
post only, but very regularly. Circumstantial evidence
suggests that this species will eat birds.

Large Frogmouth *Batrachostomus auritus* K
Status uncertain. Two birds were flushed from low
perches at the edge of kerangas forest on 28 June,
Natai Lengkuas.

Javan Frogmouth *Batrachostomus javensis* S
Status uncertain. Single birds heard at night in
alluvial swamp forest at Natai Lengkuas on 26 and 27
June and 21 July were identified at this sp. from the
call (all presumed males).

Malaysian Eared Nightjar *Eurostopodus temminckii* S,k,FP,L,G
Common, though more so around Natai Lengkuas than in
any other area surveyed. One roosting bird was flushed
from young kerangas vegetation.

Edible-nest Swiftlet *Collacalia fuciphaga* S,Cf,C
Common, but more so along the coast. Identified from
the deeply forked tail.

White-bellied Swiftlet *Collocalia esculenta* S
Uncommon. Observed in the Natai Lengkuas area only, but it
may have been overlooked.

Brown Needletail *Hirundapus giganteus* S
Recorded only once on 26 June over the Sekonyer river at
Natai Lengkuas (one bird).

Silver-rumped Swift *Rhaphidura leucopygialis* S,k,FP,L,G
Common, usually over water.

House Swift *Apus affinis* S,FP,L,Cf,G,C
Occasional near buildings or seen in flight. One nest
found on 6 July containing 2 young attended by 2
adults, in the eaves of the PHPA Buluh Kecil guard

post. This nest was found destroyed on 27 August, but one bird was seen rebuilding on the same spot.

Asian Palm-Swift *Cypsiurus batasiensis* Cf
Recorded only once, a population roosting in the coconut plantations of Teluk Pulau.

Crested Treeswift *Hemiprocne longipennis* S,K,k,FP,Cf,G
Common. Recorded over most habitats, but most common along the coast. On 17 August, 2 adults with fledged young were seen in coastal fringe vegetation, the young begging food from the adults.

Whiskered Treeswift *Hemiprocne comata* S,G
Uncommon. Recorded only in the Natai Lengkuas area, and markedly less common than *H. Longipennis*.

Red-naped Trogon *Harpactes kasumba* S,K
Uncommon in forest areas. One newly-fledged young netted on 27 June in kerangas.

Diard's Trogon *Harpactes diardii* S,K
Uncommon, in forest areas.

Scarlet-rumped Trogon *Harpactes duvaucelii* S,K
Uncommon to common, in most forest areas. One immature male netted on 28 August.

Blue-eared Kingfisher *Alcedo meninting* S,K,k,FP,Cf,G
Common, in almost all habitats. One nest in kerangas on 2 June, the adult flushed from the nest burrow. Interestingly, the burrow was dug into almost level ground. Fledged young were netted on 30 May and 1 July, and 1 was seen on 27 May in swampforest.

Black-backed/Rufous-backed Kingfisher *Ceyx erithacus*/
Ceyx rufidorsus S,K,k,Cf.
Common. Recorded in all forest habitats, including the coastal fringe. One juvenile mostly *erithacus* seen on 5 June. Virtually all individuals seen were *erithacus-rufidorsus* hybrids, showing greater affinity to one or the other principal form. Voous (1961) and Thompson (1966) state that hybrids are very common in Borneo, and Smythies (1957) declared that 58% of museum specimens were hybrids.

Stork-billed Kingfisher *Pelargopsis capensis* S,FP,Cf,G
common. Found along all rivers and the coast. On 10 Sept 2 immatures were observed.

Ruddy Kingfisher *Halcyon coromanda* S,Cf
Uncommon. Netted in coastal fringe vegetation at Teluk Pulau (wing=100 mm, endemic Sunda race *minor*), and observed in riparian swamp forest at the Buluh Kecil PHPA guard post.

Collared Kingfisher *Halcyon chloris* Cf, G
Uncommon to common. Occasionally seen inland in the grass swamps, but most common at the coast.

Sacred Kingfisher *Halcyon sancta* Cf, C
Migrant. On 17 August, 2 birds were seen in coastal fringe vegetation south of the Buluh Besar river. One bird seen in scrub around Teluk Pulai on 21 August.

Blue-throated Bee-Eater *Merops viridis* S,K,k,FP,L,Cf,G
Common. On 3 June a fledged young was seen begging food from an adult.

Bushy-crested Hornbill *Anorrhinus galeritus* S,K,k
Common in all inland forest areas. The most frequently encountered group size was 7.

Wrinkled Hornbill *Rhyticeros corrugatus* S
Uncommon. Occasional around Natai Lengkuas. Overall, the least often encountered hornbill.

Black Hornbill *Anthracoceros malayanus* S,K,k
Uncommon, though regular around Natai Lengkuas.

Southern Pied Hornbill *Anthracoceros convexus* S,k
Common. Found in all riparian habitats of the interior.

Rhinoceros Hornbill *Buceros rhinoceros* S,K,FP
Common. Recorded in all inland forest areas, including peat swamp.

Red-crowned Barbet *Megalaima rafflesii* S,K,k,FP,L
Very common in most areas, though uncommon in mature kerangas.

Red-throated Barbet *Megalaima mystacophanos* K
Uncommon. Recorded only in kerangas forest, where it appears to displace the preceding species.

Blue-eared Barbet *Megalaima australis* S,K,k,FP
Very common. Heard in all inland forest habitats. One adult was seen excavating a nest cavity in kerangas forest on 15 June.

Brown Barbet *Calorhamphus fuliginosus* S,K
Uncommon. Occasionally observed in forest areas.

Rufous Piculet *Sasia abnormis* S,K,k,FP,L,Cf,G
Common in all forest and scrub areas. One adult was seen carrying food on 31 May. In all, 8 juveniles were netted between 19 June and 23 August.

Rufous Woodpecker *Micropternus brachyurus* S
Very uncommon. Only one record, of a pair seen excavating a nest cavity on 24 August, in swamp forest.

Crimson-winged Woodpecker *Picus puniceus* S
Uncommon. Recorded only in the Natai Lengkuas area, in forest.

Banded Woodpecker *Picus miniaceus* K,Cf.
Uncommon, but less so than the preceding species, in forest areas.

Common Goldenback *Dinopium javanense* Cf
Common, but along the coast only.

Olive-backed Woodpecker *Dinopium rafflesii*; S
Very uncommon. Recorded only once in swamp forest, at Natai Lengkuas.

Buff-rumped Woodpecker *Meiglyptes tristis* S
Very uncommon, but possibly overlooked. Recorded in alluvial swamp forest at Natai Lengkuas.

Buff-necked Woodpecker *Meiglyptes tukki* S,K,k,FP
Common. Recorded in all inland forest areas. One fledged young seen begging food from 2 adults on 27 June.

Great Slaty Woodpecker *Mulleripicus pulverulentus* S,k
Common. Mostly found in the Natai Lengkuas area. One male was seen excavating a nest cavity on 27 June, in a large tree on the edge of a ladang.

White-bellied Woodpecker *Dryocopus javensis* S,K
Common. Usually associated with riverine swamp forests.

Brown-capped Woodpecker *Picooides moluccensis* FP,Cf,G
Uncommon. Recorded only in the grass swamp areas near standing dead trees, and along the coast. One bird seen carrying a faecal sac out of a nest cavity on 14 June; one bird seen entering a nest cavity on 14 June (not the same bird as just mentioned); one nest found on 23 June in grass swamp, and another nest found at the edge of scrub on 27 July (contents of both not seen).

Grey-and-Buffer Woodpecker *Hemicircus concretus* S,K,k
Uncommon, but possibly overlooked. One active nest was found on 9 June in swamp forest edge.

Orange-backed Woodpecker *Chrysocolaptes validus* S,K
Uncommon. Occasionally seen in the Natai Lengkuas area in kerangas and swamp forest.

Black-and-Red Broadbill *Cymbirhynchus macrorhynchus*
S,K,k,FP,Cf,G.
Common in all riparian habitats and the sea coast. On 21 May along the Sekonyer river 2 separate nests were seen with adults leaving, and 1 nest with an adult