

**AN ANNOTATED CHECKLIST OF THE BIRDS OF THE
TANIMBAR ISLANDS.**

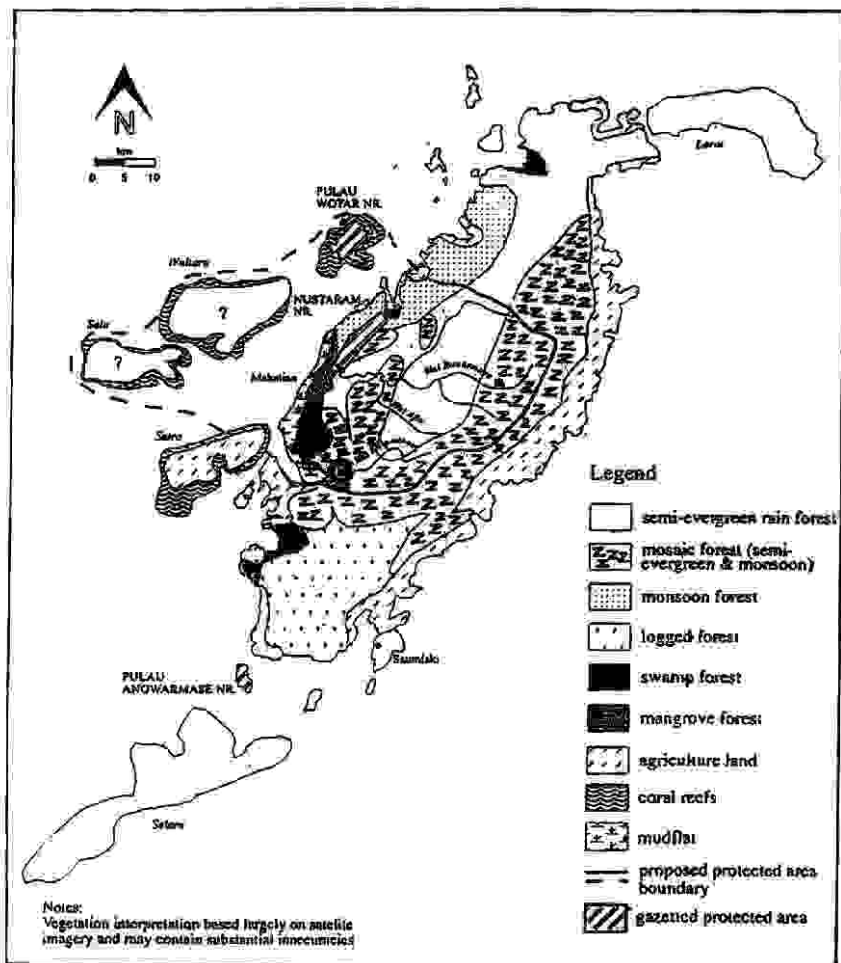
by
David Bishop and Nick W. Brickle

Wallacea, after years of seeming ornithological neglect, has recently come to the fore (see White & Bruce 1986, Coates & Bishop 1997). Since about 1981 there has been an increasing number of bird watchers and expeditions to the region resulting in the rediscovery of a number of 'fearedextinct' and little known species. Most of the islands or island groups have by now received at least a cursory visit during the last 17 years. As a result many species previously known only from collections have been rediscovered, and others thought to be threatened have, thankfully, been shown not to be (see Coates & Bishop 1997). One of the few exceptions to this coverage is the Tanimbar Islands.

The Tanimbar Islands, lying in the extreme south east of Wallacea c. 7° 30' S, 131° 30' E, are located approximately midway between the islands of Timor and New Guinea. They comprise a small (c. 5,058 sq km) uplifted coralline archipelago, including Yamdena, the largest island, together with Larat and Selaru and approximately 60 other small associated islands. Despite Kuhn's remarks to the contrary (in Hartert 1901), analysis based on satellite imagery, aerial observations and ground truthing (Jepson 1995, K. D. Bishop personal observations Jan. 1996, World Bank aerial survey for the MACONAR project per D. A. Holmes) reveal that the Tanimbar Islands, including Selaru and Larat, are still predominantly covered with tall, primary looking forest.

The Tanimbar Is. have received relatively scant attention from zoological collectors and field ornithologists. The first ornithological expedition to visit these islands was made by H. O. Forbes from July to September 1882. Forbes collected mainly on Mulu and the northern tip of Yamdena. (listed as Loetoe or Lutu), together with the smaller islands of Mulu (Moloe) and Kirimoen. Forbes' collection is described in Sclater (1883a, b) and Forbes (1883) while Forbes (1885) provides an excellent general account of the island and its peoples and summarizes what was then known about the birds. During 1882, indigenous collectors obtained specimens on behalf of J. G. F. Riedel, a resident of Ambon (Buttikofer 1886, Meyer 1884). From December 1900 to February 1901, Heinrich Kuhn, working for Lord Rothschild, collected on Larat and Yamdena. Kuhn's collections, together with those of William Doherty, who collected for a few days on Yamdena and Selaru, are described in Hartert (1901). Figure 1

Adapted from Jepson (1995). A map of the Tanimbar Islands showing the broad vegetation community boundaries and the location of the proposed protected area.



During 1924 F. Kopstein collected a few specimens on Yamdena (Stresemann 1934). The birds of the Tanimbar Is. were not surveyed again for 57 years, until 1981 when Fred Smiet (1985) made some brief but important observations, mainly on Yamdena (see White & Bruce 1986, FAO 1981). During 23 August to 8 November 1985 Frank Rozendaal made extensive collections on Yamdena, obtaining the previously undescribed Tanimbar Bush warbler *Celtia carolinae* (Rozendaal 1987, see also Collar *et al* 1988). The remainder of this collection has never been published. During November 1992 Alan Lewis and Neil Bostock made a brief visit to the Saumlaki area (Yamdena) (Lewis 1993, Lewis pers comm). The following year Yusup Cahyadin (Cahyadin 1993), Nick Brickie (NWB) and Berti Mannopo spent approximately one month (28 April to 27 May 1993) on Yamdena undertaking field work on behalf of Birdlife International Indonesia Programme. To determine a suitable location for a reserve on Yamdena, bird surveys were made in various habitat types, principally in central Yamdena (Jepson 1995). In particular, the Birdlife Indonesia team conducted intensive surveys of populations of the endemic Blue streaked Lory *Eos reticulata* and Tanimbar Corella *Cacatua goffini* (Cahyadin *et al* 1994). During 27 July to 4 August 1994 Filip Verbelen (unpubl.) visited the area around Saumlaki. From 27 January to 3 February 1996 K. David Bishop (KDB), together with Dr. Hugh Buck, Dr. Martin Edwards and Mrs. Phoebe Snetsinger, spent seven days birdwatching in southern Yamdena. During this time a wide range of habitats was surveyed, from coastal, mangroves and mudflats to tall, undisturbed semi evergreen forest.

Jepson (1995) presents a map of the major habitat types of Yamdena and four satellite islands Seira, Selu, Wuliaru and Wofar and this is adapted and reproduced in Figure 1. Drier, less floristically complex Monsoon Forest tends to dominate in the west of the island, gradually merging into the more floristically diverse Semi evergreen Forest on the slightly wetter east coast. Important swamp forest and mangrove communities occur along the west coast, especially in the southern half of the island. Jepson (1995) noted that Yamdena supports the most extensive tracts of Monsoon and Semi evergreen Forest (for a description of these forest types see Monk *et al* 1997) east of Sumbawa. In view of Monsoon Forest being the most threatened tropical forest type in Wallacea, the Tanimbar Is. provide a critical opportunity to protect and conserve this distinctive forest community. Whether or not these forest types represent the 'original' climax vegetation on the Tanimbar Is. is unclear; however, it is clear is that these forests appear to be little altered by man.

Nevertheless, this *status quo* could change rapidly as evidenced by activities in southern Yamdena. Here the predominantly Semi evergreen Forest is being selectively logged. Much of this forest has not yet been severely degraded and as a consequence, extensive stands of lowland, bird rich forest still cover much of southern Yamdena. A number of new migrant settlements at the periphery of this forest, and the relatively easy access that the logging roads now provide for hunting and collection of forest resources, such as Rattan *Calamus* spp (KDB pers obs), does not bode well for the future. Until now the availability of fresh water has restricted the human settlements to the eastern seaboard, where much of the coastal habitats have been modified or converted to agriculture. Even within this relatively heavily farmed area, extensive areas of tall, semi primary and secondary forest persist.

The Tanimbar Is. are recognized by Birdlife International as an important center of avian endemism. Stattersfield *et al.* (1998) includes the archipelago in the Banda Sea Island Endemic Bird Area (EBA 165). However, as pointed out by Sujamika *et al.* (1995) the Tanimbar Is. constitute an obvious sub unit. In view of the richness and distinctiveness of the avifauna it is unfortunate that its importance is potentially obscured by being merged with a disparate collection of other islands. In our opinion the conservation interests of the Tanimbar Is. would be better served by treating them as an EBA in their own right.

This relatively tiny archipelago supports a total of at least 86 resident land and freshwater birds including at least 10 endemic species, 16 endemic sub-species and five Restricted range species. Eleven species are currently categorized as Near threatened (Collar *et al.* 1994). It is perhaps a reflection of the relatively pristine nature of these islands that no species, especially none of the Tanimbar Is. endemics, is considered threatened (Collar *et al. loc cit*). Located relatively close to the north west coast of Australia, these islands have hosted at least 15 Australian migrants and 13 Palearctic migrants. At least one species, Common Dollarbird *Eurystomus orientalis*, may be represented by both migrant and resident populations.

The near pristine, environmental state of the Tanimbar Is. presents an excellent opportunity to protect an area that encompasses the full range of its ecosystems, from coral reef through to hill forest. Such a reserve would be of compelling international importance in view of the global significance of its biodiversity. Consequently the Tanimbar Is. afford a rare conservation opportunity. For details of the proposed reserve, see Jepson (1995).

A total of 131 species have now been recorded from the Tanimbar Is. including 27 species for which details are presented here for the first time (note; many of these records were included in Coates & Bishop 1997). Of special note is the rediscovery of the poorly known Lesser Masked Owl *Tyto sororcula*, discovery of a relict population of Bonelli's Eagle *Hieraetus fasciatus* and the addition of as many as 10 resident species. The remaining additional species are mainly migrants.

Much work remains in clarifying species limits among taxa already collected and described from the Tanimbar Is. and for those species, especially putative resident species, added here to the Tanimbar Is. list. Our observations increase the number of species known from these islands by c. 35%. It is hard to imagine that additional species will not be added in the future, including undescribed taxa. Clearly, careful documentation of observations, and the collection of sound recordings and specimens will play an important part in our ongoing appreciation of the significance of the biodiversity of these fascinating islands.

In view of the paucity and fragmented nature of the information on the birds of the Tanimbar Is. and the long term threat of logging, we have produced an annotated checklist of all species recorded. Hopefully such a list will provide a useful database for future work, especially concerning the conservation of this archipelago's distinctive avifauna.

In the following species accounts, English and scientific names follow Coates & Bishop (1997). A preliminary assessment of status is shown in bold at the beginning of each account.

Annotated List

Black throated Little (Australasian) Grebe *Tachybaptus novaehollandiae* (Stephens) 1826. **Austral Vagrant.** First recorded on 2 Feb. 1996. KDB observed a single bird in breeding plumage, swimming on a small freshwater pond alongside the newly constructed east coast road, c. 40 km north of Saumlaki, within an area of man induced grassland and open *Melaleuca* Woodland. A single bird was also recorded by Verbelen, possibly at the same site.

Marchant & Higgins (1990a) suggest northern Australian populations might be migratory, with vagrants wandering north and west to Indonesia. The scarcity and apparent incidental nature of this species' distribution in Wallacea appears to support this contention. These appear to be the first records of this species for Wallacea for many years (Coates & Bishop 1997).

[Red tailed Tropicbird *Phaethon rubricauda* Boddaert 1783]. Not reported specifically from the Tanimbar Is. Breeds on small islands off the north west coast of Australia and in the Banda Sea (Indonesia) (Coates & Bishop 1997). Both adults and juveniles disperse widely, suggesting it almost certainly occurs close to the Tanimbar Is.

[White tailed Tropicbird *Phaethon lepturus* Daudin 1802]. Not reported specifically from the Tanimbar Is. 'Breeds on small islands off the north west coast of Australia and probably the Banda Sea (Indonesia) (Coates & Bishop 1997). Both adults and juveniles disperse widely and this species tends to occur closer inshore than the preceding species, suggesting it almost certainly occurs close to the Tanimbar Is. Two sub species may occur, including the distinctive *u/vu.s* or golden form.

Great Frigatebird *Fregata minor* subspecies? (Gmelin) 1789. **Visitor.** One individual collected by Riedel's hunters (Buttikofer 1886). Listed in FAO (1981). In November 1992 Lewis (1993) observed this species circling over Saumlaki Bay. During July and August 1994, Verbelen found it common along the coast of Yamdena.

Lesser Frigatebird *Fregata oriel* (G. R. Gray) 1845. **Visitor.** Collected by Kuhn from Yamdena (Hartert 1901). Listed in FAO (1981). In November 1992, Lewis (1993) observed this species, together with Great Frigatebirds, circling over Saumlaki Bay. NWB occasionally observed small groups of up to six at sea whilst travelling by boat along the west and east coasts. KDB observed small numbers (1-10) circling daily over Saumlaki Bay. Similar numbers of unidentified frigatebirds were observed at the same time and may have included individuals of Great Frigatebird.

Little Black Cormorant *Phalacrocorax sulcirostris* (Brandt) 1837. **Austral Vagrant.** In 1981 Smiet found this species common (in White & Bruce 1986). Listed in FAO (1981). There appear to be no other records of this species from these islands.

The above records would appear to be in keeping with this species being eruptive within Australia, with birds dispersing to coastal areas and overseas after drought following a wet period inland (Marchant & Higgins 1990b). Although present in Wallacea all year round, the status of this species in the region is unclear (Coates & Bishop 1997).

Little Pied Cormorant *Phalacrocorax melanoleucos* (Vieillot) 1817. **?Austral Migrant**. In 1981 Smiet found this species common (in White & Bruce 1986). Listed in FAO (1981). A single bird was observed by Verbelen near the village of Sangliat Dol and KDB recorded a daily maximum of two birds, perched at the margins of degraded mangroves near Saumlaki. Records from these islands may refer to visitors from Australia rather than elsewhere in Indonesia (Marchant & Higgins 1990b, Coates & Bishop 1997).

Brown Booby *Sula leucogaster* (Boddaert) 1783. **Visitor**. Smiet (in White & Bruce 1986) recorded this species for the first time during October 1981. Listed in FAO (1981). Most subsequent observers found this species in the shallow coastal waters off southern Yamdena. There are no known breeding colonies in the immediate vicinity of the Tanimbar Is (Coates & Bishop 1997).

Australian Pelican *Pelecanus conspicillatus* Temminck 1824. **Austral Migrant**. Apparently a regular visitor to Yamdena, occasionally in large numbers. Observed commonly on the west coast of Yamdena and listed as "Introduced" in FAO (1981). During November, 1992, Lewis (1993) noted more than 100 along the fringe of Saumlaki Bay. In May 1993, NWB noted just three individuals on mudflats near Makatian. During July to August, 1994, Verbelen noted "several hundreds seen from the boat about 50-30 minutes before we arrived at Saumlaki (Yamdena)." On 31 January 1996 KDB observed a group of 12 resting on rock stacks a short distance offshore, east of Saumlaki.

Great billed Heron *Ardea sumatrana* Raffles 1822. **?Resident**. First recorded by Forbes, who secured a single specimen from Larat (Sclater 1883a). Listed in FAD (1981). Subsequently recorded by most observers to visit southern Yamdena.

Collar et al (1994) categorize this species as 'Near threatened'. However, it is widespread, albeit sparsely distributed, throughout Wallacea and can be expected to be recorded from most islands in the region (KDB pers obs).

Great Egret *Egretta alba* (Linnaeus) 1758, **?Austral Migrant**. First recorded by NWB, during May 1993, when as many as six birds were seen foraging on the mudflats at Makatian. Verbelen observed singles along the coast, whilst KDB observed two or three birds daily, foraging along the edge of mudflats, c. 20 km north of Saumlaki.

Australian populations are dispersive (Marchant & Higgins 1990b) and birds occurring in SE Wallacea are most likely derived from this source.

Pied Heron *Egretta picata* (Gould) 1845. **Austral Migrant.** First recorded by Riedel's hunters (Buttikerfer 1886). Tentatively listed in FAO (1981). We subsequently recorded ones and twos just north of Saumlaki in rough, coastal pasture.

Within Wallacea, this species is only known to breed in S Sulawesi (Coates & Bishop 1997), Apparently, however, Australian populations regularly move north to New Guinea and Indonesia during the start of the northern Australia dry season (March to May) and return at the start of the wet season (December to February) (Marchant & Higgins 1990b). Birds recorded in the Tanimbar Is. are almost certainly visitors from Australia.

Intermediate Egret *Egretta intermedia* (Wagler) 1829. **?Status.** First recorded by Smiet in Oct. 1981 (in White & Bruce 1986). Listed in FAO (1981). Small numbers have been recorded in coastal areas by all subsequent observers.

The status of this species in Wallacea is unclear except in Sulawesi where breeding has been confirmed (Coates & Bishop 1997). In Australia this species' movements are irregular and birds in the Tanimbar Is. may be migrants from almost anywhere in Australia, New Guinea or even the Moluccas.

White faced Heron *Egretta novaehollandiae* Latham 1790. **?Resident.** Listed in Forbes (1885) and subsequently collected by Kopstein, May 1924 (Stresemann 1934). Listed in FAO (1981). Two feeding on mudflats near Makatian (NWB) and a single bird seen in flight (Verbelen) are the only other records of this species from the Tanimbar Is..

Although this species is resident further to the west in the Lesser Sunda Is., its status in the Tanimbar Is. is unclear and it may be a migrant from Australia (Marchant & Higgins 1990b, Coates & Bishop 1997).

Little Egret *Egretta garzetta nigripes* (Temminck) 1840. **Austral Migrant.** First recorded by Smiet in October 1981 (in White & Bruce 1986). Listed in FAO (1981). One was flushed by NWB from mangroves near Makatian and several were observed by Verbelen.

These birds almost certainly belong to the race *nigripes* and the above records refer to migrants from Australia (Marchant & Higgins 1990b, Coates & Bishop 1997).

Pacific Reef egret *Egretta sacra sacra* (Gmelin) 1789. **Resident.** First collected by Forbes from Larat (Sclater 1883a) and subsequently by Kuhn from the islet of Leiingloean (Hartert 1901). Listed in FAO (1981). Since 1993, both white and dark morphs have been observed by all observers, in small numbers, in coastal areas of southern Yamdena.

Cattle Egret *Bubulcus ibis* sub species? (Linnaeus) 1758. **?Status.** First recorded on 27 January and thereafter to 2 February 1996 when KDB observed a group of 2 10 ten birds daily in rough coastal pasture, feeding among domestic cattle, just north of Saumlaki.

This species has now been recorded on most islands in Wallacea, except the Kai Is (Coates & Bishop 1997) where it surely can be expected to occur. The occupation of Wallacea by this species reflects the remarkable expansion of Cattle Egret's range throughout Australia (Marchant & Higgins 1990b) and indeed throughout the world.

Striated Heron *Butorides striatus* subspecies? (Linnaeus) 1758. **Resident.** First recorded by Smiet in Oct. 1981 (in White & Bruce 1986). Listed in FAO (1981). NWB found it common around, mangroves and along large rivers and Verbelen observed it regularly. Determination of the sub specific identity of this taxon must await collection of specimens.

Rufous Night heron *Nycticorox caledonicus hilli* Mathews 1912. **?Resident.** Listed in Forbes (1885) and subsequently collected by Kuhn from Larat (Hartert 1901). Listed in FAO (1981). The only recent record appears to be of one immature flushed from an area of forest adjacent to a swampy basin in south west Yamdena (NWB).

This species is widespread in Wallacea where it is a breeding resident supplemented with, possible migrants from Australia (Coates & Bishop 1997, Marchant & Higgins 1990b). The status of birds on the Tanimbar Is. is unclear although the presence of an immature bird may suggest breeding.

Australian White Ibis *Threskiornis molucca* subspecies? (Cuvier) 1829. **Austral Vagrant.** The sole record of this species from the Tanimbar Is. is that of an observation by Smiet during 1981 (in White & Bruce 1986). Listed in FAO (1981).

Osprey *Pandion haliaetus cristatus* (Vieillot) 1816 **?Resident.** Only known from a single specimen collected by Forbes from the islet of Kirimoen (Sclater 1883a). Listed in FAO (1981). This species has been recorded infrequently by all recent observers, in coastal areas of southern Yamdena.

The paucity of records of this species in the Tanimbar Is. is surprising but nevertheless in keeping with its general scarcity in the Lesser Sunda Is. further to the west (Coates & Bishop 1997).

Pacific Baza *Aviceda subcristata timorlaensis* (Meyer) 1884. **Resident.** Collected by Riedel's hunters (Meyer 1884). Listed in FAO (1981). Subsequently recorded by Verbelen and KDB in southern Yamdena but surprisingly not by NWB. KDB found this distinctive raptor, which is relatively easy to observe, moderately common at the edge of tall Semi evergreen Forest and over lightly wooded, coastal farmland.

Oriental Honey buzzard *Pernis ptilorhynchus* (Terruninck) 1821. **Paleartic Migrant.** The first and only record from the Tanimbar Is. is of a putative juvenile, observed at length by KDB on 2 February 1996. It was perched in a remnant tree within ceastal farmland and permitted a good Questar telescope study: broadly barred upperparts and wings with pale grey patches in the wings and on the mantle; a

finely barred tail with dark tip and broad sub terminal bar the head distinctly pigeon like with a relatively long neck and weak looking bill.

On present knowledge this species appears to be only a rare, possibly uncommon, Palearctic winter visitor to Wallacea although there may be local resident populations on Sumbawa and Flores (Coates & Bishop 1997). Ash (1994, 1993) observed relatively large numbers migrating eastwards from Java high over Bali during September and October. The steady increase in records of this species, especially within the Lesser Sunda Is., although reflecting the recent increased number of observers to the region, almost certainly confirms the Lesser Sunda islands as part of the winter quarters for a presently unknown proportion of this species population.

Brahminy Kite *Haliaeetus intermedius* Blyth 1865. ?**Resident**. First recorded by Forbes on Larat (Sclater 1883a) and subsequently observed by Kuhn on Yamdena (Hartert 1901). Listed in FAO (1981). The apparent lack of recent observation of this species in the Tanimbar Is. is striking and suggests that it really is uncommon, or perhaps confined to inaccessible or unvisited coastal

White bellied Sea eagle *Haliaeetus leucogaster* (Gmelin) 1789. **Resident**. First collected by Riedel's hunters (Meyer 1894) and subsequently observed by Kuhn (Hartert 1901). Listed in FAO (1981). Found commonly about the coast of southern Yamdena by all recent observers. On 3 May NWB observed a single immature, 15 km from Tutekemboon.

Variable Goshawk *Accipiter hiogaster polionotus* (Salvadori) 1890. **Resident**. First collected by Riedel's hunters (Meyer 1884). Subsequently a female was collected by Kuhn from Larat (Hartert 1901). Listed in FAO (1991). Recorded moderately commonly by all recent observers. On Yamdena this species inhabits lightly wooded farmland, selectively logged Semi evergreen Forest and the edge of primary Monsoon and Semi evergreen Forest.

It is unfortunate that Coates & Bishop (1997) did not adopt the proposal of Schodde (1977, see also Wattle 1973), that populations of the (key Goshawk *A. novaehollandiae* outside Australia and Tasmania be treated as a separate species. Wattle (1973) points out that the only reason for treating *novaehollandiae* as conspecific: with populations in New Guinea, Melanesia and Wallacea, is the existence of leucistic forms in both the Australian (common) and New Guinea (rare) populations. Schodde (1977) suggested that the abruptness of change between north Australia and south New Guinea indicates an absence of intergradation when the species would have met during the Pleistocene. Furthermore, Australian birds are notably larger than all other populations and, unlike the latter, lack any rufous in their plumage.

The continued treatment of populations outside Australia as *A. novaehollandiae* will tend to obscure our understanding of these birds. We therefore propose that birds in Wallacea, New Guinea and Melanesia be treated as a polytypic species *A. hiogaster*, appropriately named Variable Goshawk

Bonelli's Eagle *Hieraaetus fasciatus cf renschi* Stresemann 1932. **Resident.** Recorded for the first time during July to August 1994 (Verbelen). KDB observed a single adult on 1 February 1996 and, subsequently, a pair in flight, low over a mosaic of tall sub coastal primary and secondary Semievergreen Forest and woodland, c. 20 km north of Saumlaki, Yamdena.

This distinctive species is represented in Wallacea by a relict population recorded from just six islands: Sumbawa, Komodo, Flores, Timor, Wetar and Luang (Coates & Bishop 1977). The presence of this species in the Tanimbar Is. extends its range c. 300 km eastwards. The species is absent from the Greater Sundas and tropical SE Asia (King & Dickinson 1975), and in view of the remarkable isolation of the endemic sub species *renschii*, in addition to its sedentary nature and small size, this taxon may be better treated as a separate species.

Spotted Kestrel *Falco moluccensis microbalia* (Oberholser) 1917. **Resident.** First collected by Forbes from Loetoe (Sclater, 1883a) and subsequently, three mates were collected by Kuhn from. Larat (Hartert 1901). Listed in FAO (1981). Found to be moderately commonly by all recent observers to these islands, where it inhabits lightly wooded farmland and open areas such as *Imperata cylindrica* grasslands. The status of this species in the Tanimbar Is. contrasts to many areas in its range such as Java, Bali and Sulawesi where it appears to have undergone a very rapid and recent decline. The use of pesticides in these areas may be implicated (KDB pers obs, D. A. Holmes pers comm).

Australian Hobby *Falco longipennis* subspecies? Swainson 1837. **?Resident.** First recorded on 27 January and thereafter to 2 February 1996 during which time KDB observed three or four individuals in flight and perched near Saumlaki. All observations were made within a mosaic of low scrub, lightly wooded cultivation and low scrubby woodland.

January and February are summer months in Australia, which is the breeding season for the Australian subspecies *longipennis*. This population migrates northwards to Wallacea during the Austral winter (May to September) and returns to Australia during September to May (Marchant & Higgins 1993). Consequently, it is likely that these were resident birds belonging to the sub species *hanieli*, which is endemic to the Lesser Sunda Is., rather than the migrant *longipennis* (see Coates & Bishop 1997).

Peregrine Falcon *Falco peregrinus cf calidus* Latham 1790. **Palaearctic Migrant.** First recorded 28 January 1996 when KDB observed at length a single adult of what appeared to be the distinctive subspecies *calidus*. Identification was confirmed with the aid of a Questar telescope when the bird perched in an isolated tall dead tree within a garden, c. 15 km north of Saumlaki. The species is poorly known in Wallacea and the Palaearctic migrant *calidus* is only previously known with certainty from Ternate (Coates & Bishop 1997).

Spotted Whistling duck *Dendrocygna gultata* Sthlepel 1866. **Resident.** First collected by Forbes on Larat (Sclater 1883a) and subsequently there by Kuhn (Hartert 1901). Listed in FAO (1981). Recorded from Yamdena for the first time on 4 May 1993 when three were seen flying from coastal mangroves near Lorenboon (NWB). On 28 January 1996 KDB observed two birds flush from a pool within a recently cut area of Semi evergreen Forest.

In Wallacea this species is widespread although sparsely distributed throughout the Sulawesi and Moluccan regions, but is absent from the Lesser Sundas west of the Tanimbar Is. (Coates & Bishop 1997).

White headed Shelduck *Tadorna radjah radjah* (Lesson) 1812. **Resident.** First collected by Forbes on Larat (Sclater 1883a) and by Riedel's hunters (Buttikofer 1886). During 1981, Smief observed this species on Yamdena (FAO 1981) and NWB observed it on mudflats on Selaru. Pairs of birds were flushed from a small creek and a pool within recently created garden areas adjacent to forest, just north of Saumlaki, during July to August 1994 (Verbelen). On 30 January 1996 KDB observed a pair in flight, low over an area of recently cleared Semi evergreen Forest with small pools.

The status of this species in the Tanimbar Is. is unclear, however, the presence of birds during the Australian breeding season suggests that it may be resident in the Tanimbar Is., *contra* Marchant & Higgins (1990b).

Green Pygmy goose *Nettapus pulchellus* Gould 1842. **?Resident.** The only specimen collected is that by Forbes on Larat (Sclater 1883a). On 29 January 1996 KDB flushed a pair from a small pool at 05.00 hrs (one hour before dawn) at the periphery of tall Semi evergreen Forest.

The latter observation represents the first record for Wallacea since 1922 (see Coates & Bishop 1997). Although resident in New Guinea and northern Australia this species appears to be either overlooked in Wallacea, an extremely local resident, and/or a vagrant to the region. The only other records since 1922 are from Flores (see Verhoeve & Holmes, this issue).

'**Grey Teal**' *Anas* sp. Observations, not distinguished as to species, were recorded by Smiet during 1981 (in White & Bruce 1986) and on Selaru by Cahaydin (pers comm to NWB). White & Bruce (1986) note that the two species. Grey Teal *A. gracilis* and Sunda Teal *A. gibberifrons*, may overlap in the Tanimbar Is.

Brown Quail *Coturnix ypsilophorus* sub species? **Resident.** First recorded by NWB during May 1993 when individuals were occasionally flushed from open scrub, grassland and disused agricultural land around Saumlaki. On 29 Jan. 1996 KDB flushed a pair from the edge of a Tapioc garden within *Imperata cylindrica* grassland, c. 20 km north of Saumlaki.

The presence of this species in the Tanimbar Is. fills an illogical gap in its known distribution throughout the Lesser Sunda Is. east to the Aru Is., New Guinea and Australia. As elsewhere in Wallacea it is presumably resident in these islands (Coates & Bishop 1997).

Tanimbar Scrubfowl *Megapodius tenimbarensis* Sclater 1883. **Endemic Species.** First collected by Forbes from Larat (Sclater 1883a) and subsequently by Kuhn from Larat and Yamdena (Hartert 1901). Listed under *M. reinwardtii* in FAO (1981). The first field observations of this species were made by Lewis (1993) who found the species shy in old logged forest, southern Yamdena. NWB found it present throughout forest, more commonly in the lower coastal plains. Although birds were seen infrequently, mounds (many of them active) were regularly found. Also recorded by Verbelen who noted it was very vocal during the early morning. From 27 Jan. to 2 Feb. 1996 KDB found three active mounds and, at one, a very territorial pair of birds. They responded dramatically to tape playback by rushing towards him.

KDB also found a number of snares and the unmistakable sign of human predation of nesting mounds. Local informants stated that this species is regularly trapped and its eggs taken for food. This species appears to be sparsely distributed in primary, old selectively logged and tall secondary Semi evergreen Forest in the south of Yamdena. Populations of this species, within moderately easy access of Saumlaki and coastal villages, are almost certainly affected by continued human predation and may be locally extirpated.

Jones *et al's* (1995) comprehensive review of the genus *Megapodius* clearly reveals that the Tanimbar Scrubfowl should be treated as a full species. Sound recordings of this taxon made by KDB during 1996 appear to confirm this conclusion.

Red necked Crake *Rallina tricolor* Gray 1858. **Resident.** Only known from the single specimen collected by Kuhn on 18 Dec. 1901 from Larat (Hartert 1901). Hartert considered this population to represent a distinctively small sub species, underscoring the likelihood that this species is resident in these islands. There have been no subsequent records from the Tanimbar Is. and there appear to be no recent records from Wallacea (Coates & Bishop 1997).

Rail sp. On 2 Feb. 1996 KDB briefly observed a medium sized rail together with 3 4 small black chicks, scurrying off a road into *Imperata cylindrica* grassland, c. 20 km north of Saumlaki. The most likely identity of this bird, from its general size and shape, is Barred Rail *Gallirallus torquatus*.

Pale vented (Common) Bush hen *Amaurornis (olivaceus) moluccanus* (Wallace) 1865. **?Resident.** First recorded on 2 February 1996. KDB observed this species in the grassy margins between road and Semi evergreen Forest, c. 20 km north of Saumlaki. At least one pair was heard duetting and a single freshly killed adult bird was found on the road. Although widespread throughout the Moluccas this species is unknown further to the west in the Lesser Sunda Islands (see Coates & Bishop 1997). The decisions reached in the recent taxonomic review of the bush hen group (Lambert 1998) are adopted here.

Purple Swamphen *Porphyrio porphyrio* sub species? (Linnaeus) 1758. The sole record from the Tanimbar Is. appears in a list in Forbes (1885).

Pied Oystercatcher *Haematopus longirostris* Vieillot 1817. **Austral ? Vagrant.** The only record for the Tanimbar Is. is of a single bird recorded by Cahyadin during May 1993 on Selaru (pers comm to NWB). This species has been recorded breeding on Ree I. in South east Wallacea. It has also been recorded as an apparently irregular migrant from Australia, to the neighbouring Tayandu Is., Kai Is., and islands of Luang and Babar. (Coates & Bishop 1997).

Masked Lapwing *Vanellus (fioplopterus) miles miles* (Boddaert) 1783. **Austral migrant.** The first and only specimen was collected by Forbes on Larat (Sclater 1883a). Listed in FAO (1981). On 3 May 1993 NWB heard two at night on the coast at Saumlaki.

Pacific Golden Plover *Pluvialis julva* (Gmelin) 1789. **Paleartic Migrant.** Collected by Forbes on Maroe (Sclater 1883a). Listed in FAO (1981). Verbelen observed several along the coast near Sangliat Dol. KDB observed groups of 5-10 on the airstrip at Saumlaki and ones and twos along nearby beaches.

Greater Sand plover *Charadrius leschenaulti* subspecies? Lesson 1826. **Paleartic Migrant.** Listed in FAO (1981).

Whimbrel *Numenius phaeopus variegatus* (Linnaeus) 1758. **Paleartic Migrant.** Collected by Forbes on Larat (Sclater 1883a) and by Kuhn from Yamdena (Hartert 1901). Small numbers have been recorded along the coast by all recent observers.

Far Eastern Curlew *Numenius madagascariensis* (Linnaeus) 1766. **Paleartic Migrant.** The only record from the Tanimbar Is. is a group of 12 observed by NWB on mudflats near Makatian, although **also listed in FAO (1981).**

Common Greenshank *Tringa nebularia* (Gunnerus) 1767. **Paleartic Migrant.** The only record from the Tanimbar Is. is a single bird observed by NWB on mudflats at Makatian, although also listed in FAO (1981).

Common Sandpiper *Actitis hypoleucos* (Linnaeus) 1758. **Paleartic Migrant.** Small numbers seen along the coast by most recent observers.

Grey tailed Tattler *Heteroscelus brevipes* (Vieillot) 1816. **Paleartic Migrant.** The only record from the Tanimbar Is., is a single specimen collected by Forbes on Moloe (Sclater 1883a). Listed in FAO (1981).

White headed Stilt *Himantopus himantopus cf leucocephalus* Gould 1837. **?Vagrant.** The only record from the Tanimbar Is. is in observation by Smiet during October 1981 (in White & Bruce 1986). Listed in FAO (1981).

Although present in Wallacea throughout the year and breeding locally (Coates & Bishop 1998) the presence of this species in the Tanimbar Is. is probably as a vagrant from Australia.

Beach Thick knee *Esacus neglectus* (Vieillot) 1818. **?Resident.** Only known from the Tanimbar Is. from a single specimen collected by Forbes on Larat (Sclater 1883b). Listed in FAO (1981). For the use of the specific name *neglectus* in preference to *magnirostris* see Christidis and Boles (1994).

Australian Pratincole *Stiltia isabella* (Vieillot) 1816. **Austral Migrant.** First recorded by NWB who observed 25 on Saumlaki airstrip on 27 May 1993. Verbelen recorded 10+ at the same location during June to August 1994..These dates are in keeping with this species being an Australian winter visitor to Wallacea (Coates & Bishop 1997).

Black naped tern *Sterna sumatrana* Raffles 1822. **?Resident.** Verbelen observed several from the ferry near Saumlaki. Listed in FAO (1981).

Bridled Tern *Sterna anaethetus anaethetus* Scopoli 1786. **?Status.** Collected by Forbes on Maloe (Sclater 1883a). NWB observed one individual, in a group of terns that may also have been this species, at sea near Wobar.

Great Crested Tern *Sterna bergii cf cristata* Stephens 1826. **?Resident.** Frequently observed in Saumlaki Bay and several terns seen at sea were likely to be this species (NWB). Verbelen found it common between the Tanimbar and Kai Is. KDB observed only a single bird in non breeding plumage in Saumlaki Bay together with other fishing terns.

Brown Noddy *Anous stolidus*. **?Status.** Listed in FAO (1981).

Rose crowned Fruit dove *Ptilinopus regina xanthogaster* (Wagler) 1827. **Resident.** First collected by Forbes on Larat (Sclater 1883a) and Loetoe (Sclater 1883b) and subsequently by Kuhn from Larat (Hartert 190 1). Listed in FAO (198 1). All recent observers have recorded the distinctive grey headed race *P. r. xanthogaster* on Yamdena. NWB recorded it in all habitats, the highest concentration being in low, open forest. NWB also found it common in mangroves, and tall, closed forest. KDB too found it common and widespread, perhaps more common than for any island he has visited within its Wallacean range. Usually singly or in twos, it was often very vocal and thus easy to detect. Nevertheless, it was not easy to observe as it frequently fed in the dense leafy canopy or midstorey.

Wallace's Fruit dove *Ptilinopus wallacii* Gray 1858. **Resident.** First collected by Forbes on Larat (Sclater 1883a) and Loetoe (Sclater 1883b) and subsequently by Kuhn, also from Larat (Hartert 1901). Listed in FAO (1981). NWB observed this species occasionally in mangroves and open patches of secondary woodland and scrub around Sifnana near Saumlaki. Conversely Verbelen recorded this species commonly, often 15-20 together in fruiting trees. KDB also found it common, with 50-100 recorded daily, usually singly or in small groups in primary, selectively logged and tall secondary Semi evergreen Forest. He also observed it in relatively low secondary woodland, scrub and mangroves.

This spectacular species is notably quiet and thus possibly under recorded. Learning the vocalizations would be a valuable objective for any birder visiting these islands.

Yellow eyed (Blue tailed) Imperial Pigeon *Ducula concinna* (Wallace) 1865. **Resident.** Collected by Forbes from Larat (Sclater 1883a) and Maroe (Sclater 1883b). Subsequently collected by Kuhn from Larat and by Doherty from Selaru (Hartert 1901). Listed in FAO (1981). Observed to be common on Yamdena by all recent observers. NWB noted this species as being most common in the inland forests, particularly areas of taller, denser forest. KDB observed it daily, singly and in groups of 2-20, often in roadside trees or feeding at fruiting *Ficus* sp trees within primary and selectively logged Semi evergreen Forest. KDB found this species notably confiding and conspicuous. The population density of this large imperial pigeon exceeded anything KDB had experienced during the previous 15 years, on any other island in Wallacea. The healthy status of this species is notable especially in view of hunting by local residents.

Pink headed Imperial Pigeon *Ducula rosacea* (Temminck) 1835. **Resident.** Collected by Forbes from Loetoe and Maroe (Sclater 1883a) and by Kuhn from Larat (Hartert 1901). Listed in FAO (1981). NWB found this species common around the forest edge and scrubby agricultural areas, particularly common in patches on low forest around Wobar. Verbelen recorded it daily but found it less common than *D. concinna*. KDB observations concur with those of Verbelen. However, this species is not as demonstrative as *D. concinna* and may be under recorded.

Pied Imperial Pigeon *Ducula bicolor bicolor* (Scopoli) 1786. **Resident.** Collected by Forbes on the satellite island of Kirimoen (Sclater 1883a); a single specimen was collected by Riedel's hunters from an unknown locality (Buttikofer 1886). Listed in FAO (1981). NWB saw and heard this species throughout the inland forests, also in woody patches of regrowth in cleared areas. Not recorded by Verbelen. KDB found it moderately common, with daily maxima of ten within Semi evergreen Forest.

The occurrence of this generally gregarious, small island species on the main island of Yamdena may fluctuate with the availability of food on offshore islands, where it presumably breeds. Hence the apparent absence of this species during the visit of Verbelen.

Rock Pigeon *Columba livia*. **Introduced.** KDB observed semi domestic and possibly feral elements of this species commonly in small flocks about the town of Saumlaki, 27 Jan to 3 Feb 1996.

Barred necked Cuckoo dove *Macropygia magna timorlaensis* Meyer 1884. **Endemic sub species.** First collected by Forbes (Sclater 1883a, b) and subsequently by Kuhn (Hartert 1901) from Larat. Collected by Doherty from Selaru (Hartert 1901). Also collected by Riedel's hunters (Buttikofer 1886). Listed in FAO (1981). Lewis (1993) notes it being much more common than on Timor. NWB saw and heard it regularly around forest edge and woody patches of regrowth in cleared areas. Verbelen found it quite common including near habitation and in palm plantations. KDB recorded this species on most days in small numbers within the midstorey and lower crown of primary and selectively logged Semi evergreen and Monsoon Forest.

Recently, Inskipp *et al* (1996) merged *M. magna* with *M. amboinensis*, *M. phasianella*, and *M. emiliana* on the basis of Schodde's (1988) description of an intermediate race, in North Queensland, Australia, between *phasianella* and *amboinensis*. However, most contemporary authors consider that a great deal further study of this group is required (see Christidis & Boles 1994, Higgins and Davies 1996). A preliminary review of the vocalisations; of these various taxa suggests to us that the various forms are best treated as allospecies and not merged as races of one large polyphyletic species (see Coates & Bishop 1997).

Barred Dove *Geopelia maugei* (Temminck) 1811. **Resident.** Collected by Forbes on Larat and, Loetoe (Sclater 1883a, b) and subsequently by Kuhn from Larat (Hartert 1901). Also collected by Riedel's hunters (Buttikofer 1886). Listed in FAO (1981). Found commonly by all recent observers typically within in lightly wooded farmland and at the edge of Semi evergreen Forest and Monsoon Woodland. NWB observed it roosting in mangroves near Sifnana.

Emerald Dove *Chalcophaps indica longirostris* (Linnaeus) 1758. **Resident.** First collected by Forbes (Sclater 1883a) and subsequently by Kuhn on Larat (Hartert 1901). Listed in FAO (1981). NWB noted it occasionally in forest and at the forest edge. Verbelen observed it daily and noted a number of birds kept in captivity. KDB found this species moderately common in and at the edge of selectively logged Semi evergreen Forest.

Blue streaked Lory *Eos reticulata* (Muller) 1841. **Restricted Range Resident.** Classified as Near threatened (Collar *et al* 1994). First collected by Forbes on Larat (Sclater 1883a) and subsequently by Kuhn (Hartert 1901). During October 1981 Smiet found this species to be "very common" oil Yamdena, mostly in mangroves, plantations and secondary forest, but also inland in primary forest (Smiet 1985). During 7 to 24 May 1993, NWB, together with Cahyadin, conducted two census transects of all resident parrot species laterally across Yamdena. Details of the methodology and results are presented in Cahyadin *et al* (1994). They estimated that the population of this species on Yamdena

in May 1993 was 220,000 + 52,000 (s.e) and that it is a common forest bird. As these data refer to the end of the rainy season it is likely that these estimates are swollen by the addition of large numbers of juvenile birds. NWB and Cahyadin recorded this species in disturbed and undisturbed monsoon, semi evergreen and mangrove forest and occasionally agricultural land. Verbelen found it common in pairs and small groups in all wooded habitats in addition to Sagu *Metraqylon* sp and Coconut plantations. In January to February: 1996 KDB also recorded this species commonly, in flocks of 5-30 either in flight over or feeding within the crown of tall Semi evergreen Forest and tall secondary woodland.

This attractive species is only found on three other island groups: Babar, Damar and the Kai Is. (Coates & Bishop 1997). Neither Babar nor Damar have been ornithologically surveyed for approximately one hundred years and consequently there are no modern records from these islands. However, this species was not recorded during a recent survey of the Kai Is. (Bishop & Diamond, pers obs 1988). Thus, subject to surveys of the tiny islands of Babar and Damar, the sole or at least primary conservation hope for this species lies in the Tanimbar Is., and therefore its classification as Near Threatened is fully justified.

Tinimbar Corella *Cacatua goffini* (Finsch) 1863. **Endemic species.** Classified as Near Threatened (Collar *et al* 1994). First collected by Forbitts on Larat (Sclater 1893b) and by Riedel's hunters (Buttikofer 1886). Subsequently collected by Kuhn (Hartert 1901) also on Larat. Listed in FAO (1981). Found commonly by all recent observers to Yamdena. This species appears to be most common in undisturbed and selectively logged Semi evergreen and Monsoon forest. It also occurs at lower densities in tall secondary forest and woodland and, occasionally, in lightly wooded farmland. Although large groups often forage in the forest canopy much larger groups congregate and converge to feed on corn crops at appropriate times of the year.

Partly as a result of the aforementioned behaviour, large numbers of corellas have been trapped and sold to the cage bird trade. However, the large numbers of this endemic species being trapped (>14,000 in one year, Inskipp & Corrigan 1992) was of sufficient magnitude that there were fears for the continued survival of the species. As a consequence it was placed on CITES Appendix I which forbids all international trade in the species. In order, however, to provide a more objective analysis of this species population, its potential as a 'pest species', and its conservation needs, a detailed study was undertaken during 1992 (Cahyadin, 1993, Cahyadin *et al* 1994). Subsequent to this study the logging in Yamdena's south has continued apace. It is unclear what impact this disturbance to the forest will have on this species.

Eclectus Parrot *Eclectus roratus riedeli* Meyer 1882. **Endemic sub species.** First described by Meyer (1881) based on a single specimen collected by Riedel's hunters. Subsequently collected by Forbes (Sclater 1883a) and by Kuhn (Hartert 1901) on Larat. Listed in FAO (1991). Recorded by all recent observers to southern Yamdena. The Eclectus Parrot in the Tanimbar Is. generally occurs singly, in pairs or, occasionally, in small groups, it is most frequently observed at the forest edge and within

lightly wooded farmland (KDB pers obs). It is apparently uncommon within forested habitats. NWB observed a group of 12 feeding at a banarfa palm, within a forest clearing, 5 km inland from Tutekemboon. KDB regularly observed small groups either perched at the edge of native gardens or feeding on or near the ground within a variety of crops such as Tapioc and Papaya.

Red checked Parrot *Geoffroyus geoffroyi timorlaoensis* Meyer 1884. **Endemic sub species.**

First described by Meyer (1884) on the basis of specimens collected by Riedel's hunters. Also collected by Forbes from Loetoe and Larat (Sclater 1883a) and subsequently by Kuhn from Larat (Hartert 1901). Listed in FAO (1981). This conspicuous and vocally distinct species was found commonly by all recent observers in all wooded and forested habitats including mangroves. KDB also found it moderately common in lightly wooded farmland.

Great billed Parrot *Tanygnathus megalorhynchus subaffinis* Sclater 1883. **Resident.** First collected by Forbes from Larat (Sclater 1883a). Also collected by Kuhn on Larat and Yamdena (Hartert 1901). Listed in FAO (1981). NWB heard it infrequently in forest, particularly low forest. Verbelen only observed one bird, c. 20 km north of Saumlaki. KDB saw or heard ones and twos daily, usually of individuals calling in flight, as they flew over the canopy of tall Semi evergreen Forest. As appears to be characteristic of this genus he also heard several individuals calling at night.

Oriental Cuckoo *Cuculus saturatus saturatus* Blyth 1843. **Paleartic Migrant.** First recorded 30 Jan. 1996 when KDB observed an adult at the edge of selectively logged Semi evergreen Forest, south Yamdena. At least two additional individuals were seen on subsequent days, along roads within tall secondary forest. These birds were almost certainly nominate *saturatus* which is a regular Palearctic winter visitor to Wallacea (Coates & Bishop 1997), New Guinea (Beehler *et al* 1986) and Australia (Pizzey 1980), and its occurrence was not unexpected in these islands.

Brush Cuckoo *Cacomantis variolosus* subspecies? (Vigors & Horsfield) 1827. **Resident.** First definitively recorded on 28 Jan. 1996 by KDB, although its presence on the Tanimbar Is. was earlier alluded to by NWB. KDB heard this species, daily, uttering both songs from the crown of tall trees within selectively logged Semi evergreen Forest. Identification was confirmed by calling the bird into view with the aid of tape play back and a detailed study of the individual with the aid of a Questar telescope. The presence of this species on the Tanimbar Is. fills an illogical gap in the known distribution between Kisar and Timor to the west and the Kai Is. to the east and north (see Coates & Bishop 1997). Subspecific identity of this taxon must await the collection of specimens.

Pied Bronze Cuckoo *Chrysococcyx crassirostris* (Salvadori) 1878. **Restricted Range ?Resident.**

First collected by Kuhn from Larat (Hartert 1901). Listed in FAO (1981). Not recorded again in the Tanimbar Is. until November.1992 when Lewis (1993, pers comm 18 April 1994) heard and saw several birds in roadside regrowth and secondary woodland, including one individual feeding on a caterpillar, c. 20 km north of Saumlaki. Not recorded by NWB during May 1993 but observed there by

Verbelen during July to August 1994. KDB observed a very vocal pair and at least one other single individual in similar habitat to that described by Lewis (1993).

The vocalisations, as described by KDB in Coates & Bishop (1997), are distinctive, especially the high pitched *pi pi* song. However, they are sufficiently characteristic of several members of the genus as to clearly indicate the relationships of this species. The acquisition of tape recordings of the songs of the neighbouring and seemingly closely related *Chrysococcyx rufomerus* should be instructive. Further evidence of the distinctiveness of this taxon was illustrated by the male which flew back and forth, over KDB's head, in response to tape playback of its song. As the male flew by on widely spread, quivering wings it displayed a broad, clear white patch in the midst of the primaries. This character, here used in display, appears to be unique for the genus *Chrysococcyx* (KDB pers obs) although some individuals of *rufomerus* do exhibit white primary fringes (Parker 1981). Parker suggested that this species was confined to low, coralline islands, and its distribution (see Coates & Bishop 1997) would appear to confirm this. Similarly, Parker (1981) suggested that the breeding ranges of *crassirostris* and the closely related *rufomerus* were determined by the distribution of Rufous sided Gerygone *Gerygone dorsalis*, which they almost certainly parasitize. Parker also postulated that the absence of *crassirostris* during some months of the year implied migration away from its regularly inhabited islands. Given, however, that members of this genus can be difficult to detect, especially when not vocalizing, we suspect that they are more likely overlooked than absent through migration.

Australian Koel *Eudynamys cyanocephala* sub species? (Lafham) 1801. **?Status.** The only record of this species from these islands is a listing by Smiet (FAO 1981), presumably based on his visits there during 1981 (in White & Bruce 1986). The taxonomy of Wallacean populations of pale billed koels remains unresolved and clearly requires a thorough review (see White & Bruce 1986, Christidis & Boles 1994, Coates & Bishop 1997). As a consequence Tanimbar Is. birds are only tentatively assigned to this species.

Channel billed Cuckoo *Scythrops novaehollandiae* sub species? Latham 1790. **?Breeding Ausiral visitor.** One male collected by Kuhn from Larat on 20 February 1901 (Hartert 1901). Listed in FAO (1981). NWB observed a group of three flying over coastal mangroves near Sifnana at dusk, 28 March 1993. Verbelen observed singles during July to August 1994. KDB heard and observed this species on 31 January and 1 February 1996, including a flock of six in flight over tall Semi evergreen Forest.

The status of this species in the Tanimbar Is. is unclear. Mason and Forrester (1996) suggest that Tanimbar Is. birds are most probably Austral winter visitors, however specimen material is insufficient to be conclusive. An alternative possibility is that Tanimbar birds, together with birds in southern New Guinea, form another sub species, as yet undescribed, which breeds in these areas (lan Mason pers comm). Resolution of this question lies with careful, targeted collection of specimens from

the Moluccas, Tanimbar Is. and New Guinea, and perhaps the Lesser Sundas (see also Verhoeve & Holmes (this issue) and Linsley *et al.* (this issue).

Lesser Coucal *Centropus bengalensis* sub species? **Resident**. First recorded by Verbelen during July to August 1994 in "open areas". KDB recorded several individuals of this species daily, in areas of *Imperata cylindrica* grassland such as at the Saumlaki airport, along the edge of roads and within overgrown farmland.

The presence of this species in the Tanimbar Is. extends its known distribution in Wallacea further to the east from Timor and its satellite islands. This fills an illogical gap in the known distribution, with the Kai Coucal *C. spilapterus* occupying a similar niche in the neighbouring Kai Is to the north and east (KDB; pers obs, Coates & Bishop 1997). Determination of sub specific identity must await collection of specimens.

Barn Owl *Tyto alba* sub species? **?Resident**

First recorded on 30 January 1996. KDB observed a single adult bird perched within a mosaic of coconut trees and scrubby coastal woodland at the edge of a small village. This is the sole record of., this species from the Tanimbar Is. and one of the few recent records of this species from Wallacea (see Coates & Bishop 1997).

Lesser Masked Owl *Tyto sororcula sororcula* Sclater 1883. **Endemic sub species**. Collar *et al* (1994) categorize the global status of this species as 'data deficient'. Previously known from the Tanimbar Is. from a female, collected by Forbes on 24 September 1882, on the island of (Sclater 1883a), and a female collected by Kopstein on 22 April 1923 (Stresemann 1934). Listed in FAO (1981). Two specimens belonging to the subspecies *cayelii* were subsequently collected on Buru (Bishop 1989). The only other record of this species is a photograph of a bird taken in the wild, on Seram, October 1987 (Coates & Bishop 1987). On 29 January 1996 at c. 05.15 hrs KDB observed a single adult bird with the aid of a spotlight in the lower crown of a c. 30 m tall tree. The tree was, covered with vines and epiphytes, alongside a well defined dirt road, within selectively logged Semi evergreen Forest. The observation of a Barn Owl only 30 mins. earlier (see above) provided a valuable and virtually immediate comparison.

The Lesser Masked Owl, in essence, resembles a small Masked Owl *Tyto novaeholiandiae* of Australia and New Guinea. This is perhaps not surprising given that some authors have treated it as a sub species of the Masked Owl (see White & Bruce 1986). NWB heard calls, presumed to be from a nocturnal bird, at night around agricultural clearings within low forest near Wobar on the west coast. The calls, three rapid screeched whistles over a period of two seconds, sometimes preceded by 3-4, slower more drawn out higher pitched screeches may have been referable to this species.

Moluccan Hawk owl *Ninox squamipila forbesi* Sclater 1883. **Endemic sub species**. First collected by Forbes from Loetoe and then described as a distinct species. (Sclater 1883a). Subsequently collected

by Kuhn from Larat (Hartert 1901). Listed in FAO (1981). This species distinctive calls have been recorded by all recent observed. KDB heard and saw this species at the edge of selectively logged Semi evergreen Forest and tall secondary forest.

This taxon has distinctive characters, and its status as a sub species of *squamipila* may require reappraisal in view of ongoing studies of the Australasian *Ninox* group (see Norman *et al* 1998, Norman pers comm).

Large tailed Nightjar *Caprimulgus macrurus schlegelii* Meyer 1874. **?Resident**. Although listed in Forbes (1885) the only confirmed record of this species from the Tanimbar Is. is of a female specimen collected on Yarridena, 8 January 1901 (Hartert 1901). Listed in FAO (1981).

(**Uniform Swiftlet** *Collocalia vanikorensis*]. Swiftlets listed in Coates & Bishop (1997) under this species were observed by both of us. However, the difficulty of separating Edible nest Swiftlet *C. fuciphaga*, which occurs on Timor to the west, from Uniform Swiftlet which occurs in the Kai Is. (Coates & Bishop 1967) was perhaps underestimated. Given the need for further study of this difficult and complex group, assignment to species is best awaited until specimens become available.

Glossy Swiftlet *Collocalia esculenta* subspecies? **Resident**. Listed in FAO (1981). First definitively recorded by NWB who observed it regularly on Yamdena in small numbers. Also recorded by Verbell KDB observed this species daily in small numbers, characteristically flying low along roads within forest or over clearing within broken forest, woodland or farmland where they abutted forest. Usually observed in small numbers (2-6). Although listed by Comes & Bishop (1997) under the subspecies *perneglecta* which occurs on nearby Damar, confirmation of this taxon's sub specific identity should await availability of specimens.

Azure Kingfisher *Alcedo azurea ruficollaris* (Bankier) 1841. **Resident**. First collected by Kuhn on Yamdena (Hartert 1901). Listed in FAO (1981). Recorded by all recent observers along creeks and streams within Semi evergreen and Monsoon forest.

Forest Kingfisher *Halcyon macleayi incincta* Gould 1838. **Austral Migrant**. First collected by Kopstein near Saumlaki, Yamdena, May 1924; (Stresemann 1934). Listed in FAO (1991). NWB observed one in a clearing within low forest, 13 May 1993 and Verbelen observed one in roadside scrub during June to August 1994. Typically, this Australian winter migrant was absent KDB's visit, Jan. to Feb. 1996.

Cinnamon banded Kingfisher *Halcyon australasia odites* Peters 1945. **Endemic sub species**. First described by Meyer (1884) based on specimens collected by Riedl's hunters. It was subsequently collected by Kuhn from Larat and Yamdena (Hartert 1901). Listed in FAO (1981). Although recorded by all recent observers, apparent lack of familiarity with this species' infrequently Uttered call, coupled

with its generally undemonstrative behaviour, has almost certainly resulted in it being overlooked. Most observations appear to be of individuals perched quietly at the edge of forest clearings (NWB, Verbelen). KDB, however, observed a pair foraging quietly 1 2 in above the floor of primary Semi evergreen Forest. In view of this species' relatively broad distribution, and apparent under recording, the classification as Near threatened (Collar *et al* 1994) is probably unwarranted.

Sacred Kingfisher *Halcyon sancta sancta* Vigors & Horsfield 1827. **Austral Migrant.** Listed by Forbes (1885). Listed in FAO (1981). Verbelen found this species "quite common" during July to August 1994. However, neither of us recorded this species, perhaps underscoring that it is an uncommon Austral winter migrant to these islands (see Coates & Bishop 1997).

Collared Kingfisher *Halcyon chloris chloris* (Boddaert) 1783. **Resident.** First collected by Forbes on Larat (Sclater 1883a) and subsequently by Kuhn (Hartert 1901). Listed in FAO (1981). Recorded commonly by all recent observers in coastal mangroves and lightly wooded farmland, usually near the coast. Verbelen noted great variation in the colour of the back.

Rainbow Bee eater *Merops ornatus* Latham 1801. **Austral Migrant.** Tentatively listed in FAO (1981). Confirmed for the first time in the Tanimbar Is. by NWB who observed it commonly in open country, but only around Saumlaki. Verbelen noted it as common. Not recorded by KDB during Jan. to Feb. 1996.

Common Dollarbird *Eurystomus orientalis pacificus* (Latham) 1801. **?Resident and ?Austral Migrant.** Listed in Forbes (1885) presumably based on specimens collected by Riedel's hunters (Meyer 1884). Subsequently collected by Kuhn from Larat (Hartert 1901) and Kopstein (in White & Bruce 1986). Listed as a "new record" in FAO (1981). All recent observers have recorded this species in small numbers (<6) in lightly wooded areas. The status of this species in the Tanimbar Is. is unclear. That it has been recorded at widely differing times of the year suggests that it is resident. However, it is unclear whether these populations are supplemented by migrant populations from Australia during the Austral winter.

Elegant Pitta *Pitta elegans vigorsii* Gould 1838. **?Resident.** Not collected by Forbes during July to September (Forbes 1885, Sclater 1883a, b). First collected by Riedel's hunters (Meyer 1884) during the same year as Forbes' visit, although the dates of collection of these specimens are unknown. A large series was subsequently collected by Kuhn from Larat during Dec. 1900 to Feb. 1901 (Hartert 1901). Listed in FAO (1981). Verbelen failed to find this species during July to Aug. 1994. During ,f May 1993, NWB occasionally saw or heard it in open forest and forest edge particularly along the west coast, but never commonly. In contrast KDB found it common, confiding and very vocal during late January and February 1996 with many birds heard and seen daily within primary and selectively logged Semi evergreen Forest.

In his recent monograph, including the Pittidae, Lambert (Lambert & Woodcock (1996) states that the race *P. e. vigorsii* is probably a rare migrant to the Tanimbar Islands and that it is primarily confined to small islands. It is unclear on what basis these statements were made. This taxon appears to be common during December, January and February, as evidenced above; a time coinciding with the period of highest rainfall. As rainfall declines and the forest floor begins to dry and harden, this species appears to be less common, as observed during the month of May (NWB). During the main part of the dry season (June to October), when rainfall is low and the ground is at its hardest, this species appears to be absent. White & Bruce (1986) suggest this taxon may migrate to other islands at this time. However, there are no direct data to support this suggestion. Nevertheless, other species of pittas do migrate locally, e.g. Red bellied Pitta *P. erythrogaster* migrates from southern New Guinea to the Cape York Peninsula, NE Queensland, Australia at the start of the Australian wet season (Pizzey 1980). The reasons for these migrations are not clear but they may be in response to the relative difficulty of foraging on a hard substrate during the dry season (KDB pers obs); however, as KDB has observed in other species of pittas elsewhere, this species may stop calling during the dry season and thus become difficult to detect.

Barn Swallow *Hirundo rustica* sub species?. **Palaearctic Migrant.** KDB recorded this species for the first time in the Tanimbar Is. and noted it as common, often associating with Pacific Swallow, in small foraging groups along the coast or along roads within relatively open habitat.

Pacific Swallow *Hirundo tahitica cf javanica* Span man 1789. **Resident.** Listed in Porbes (1885) and FAO (1981) but apparently never collected from the Tanimbar Is. Nevertheless, all recent observers have found it common, especially in coastal areas.

Tree Martin *Hirundo nigricans* sub species? **Austral Migrant.** The sole record of this species for the Tanimbar Is. is of a single bird, observed by NWB, feeding over fields, near Lorolung, Yamdena 25 May 1993. In the absence of other records it would appear that this species occurs only as an Australian migrant in the Tanimbar Is.

Yellow Wagtail *Motacilla flava* sub species? Palaearctic migrant. Only recorded from the Tanimbar Is. by Kuhn, who collected three males on Larat during January 1901 (Hartert 1901).

Wallacean Cuckoo shrike *Coracina personata unimodus* (Sclater) 1883. **Endemic sub species.** First collected by Forbes who obtained a single female on Larat (Sclater 1883a). Subsequently, collected by Kuhn from Larat (Hartert 1901). Listed in FAO (1981). NWB observed this species frequently in partially wooded open areas. Verbelen also found it quite common. KDB heard and/or observed it daily in the crown of tall selectively logged Semi evergreen Forest.

Ripley (1941) treated this taxon, together with populations in the Kai Is., as a separate species *C. pollens*. White (in White & Bruce 1996) considered that Ripley's reasoning was unsound and treated

it as a subspecies of *C. personata*. White's opinion notwithstanding, the cuckoo shrikes of Wallacea appear to have had a complex evolutionary history and are in need of a thorough field and museum study to bring clarity to their taxonomic status. We propose that this taxon, together with Kai Is. birds, be treated as a separate species viz. *Coracina pollens pollens* on the Kai Is. and *C. p. unimodus* on the Tanimbar Is., in order to avoid obfuscation of its conservation, taxonomic and evolutionary significance. We propose the name Sooty Cuckoo shrike.

Black faced Cuckoo shrike *Coracina novaehollandiae melanops* (Latham) 1801. **Austral Migrant.** First collected by Forbes on Larat (Sclater 1883b) and subsequently observed by Kuhn (Hartert 1901). Also collected by Riedel's hunters (Buttikofer 1886), NWB observed this species in coastal farmland near Wobar, including a group containing four juveniles on 4 May. Verbelen noted several present in July to Aug. KDB noted just a single adult in scrubby, lightly wooded savanna near Saumlaki airport.

As is the case throughout Wallacea, this species is almost entirely an Australian winter migrant (Coates & Bishop 1997), with individuals exceptionally being recorded during the Austral summer.

White bellied Cuckoo shrike *Coracinapapuensis hypoleuca* (Gould) 1848. **Austral Migrant.** The only record of this species from the Tanimbar Is. is a group of seven specimens collected by Riedel's hunters in 1883 (Meyer 1884a: 199, White & Brace 1986). Listed in FAO (1981).

Kai Cicadabird *Coracina dispar* (Salvadori) 1878. **Restricted Range Resident.** The only specimen collected from the Tanimbar Is. appears to be the single male collected by Kuhn from Larat (Hartert 1901). Listed in FAO (1981). NWB observed this species at the forest edge, particularly near Wobar. KDB only recorded one individual, an adult male, foraging actively by gleaning along medium sized branches, slender twigs and on the under side of leaves in the mid storey and lower crown of selectively logged, tall Semi evergreen Forest. During this period KDB; recorded the call described in Coates & Bishop (1997). It was not observed by either Lewis (pers comm) or Verbelen (unpubl.), and in view of the paucity of specimens and observations, this species would appear to be genuinely rare on the Tanimbar Is. However, it may also be easily overlooked. Further work on this taxon is needed.

Tanimbar (Black browed) Triller *Lalage (atrovirens) moesta* Sclater 1883. Endemic species. First collected by Forbes during 1882. The original label of the single type specimen was lost, however, shortly thereafter and the exact island from which it was collected in the Tanimbar Is. is unknown (Sclater 1883a). Also collected by Riedel's hunters (Buttikofer 1886) and by Kuhn from Larat (Hartert 1901). Listed in FAG (1981). Lewis (1993, pers comm to KDB) found this species common, usually in ones and twos in secondary forest and mangroves in southern Yamdena. NWB heard and saw it in mangroves, in addition to low, open forest and occasionally tall forest. Verbelen noted it as common. KDB, recorded it daily, with a maxima of c. 10 per day, at the edge of and within selectively logged Semi evergreen Forest and tall secondary forest and woodland.

This taxon was first described by Sclater (1883a: 55) as a new species *Lalage moesta* and this arrangement was followed by Buttkofer (1886) and Hartert (1901). Peters *et al* (1960), without comment, then treated it as a subspecies of *L. atrovirens* and this was followed by White and Bruce (1986). However, the latter authors noted that the white brow of Tanimbar Is. birds "is shared with the allied but more different *L. aurea*." Sibley and Monroe (1990) also follow White and Bruce (1986). Coates and Bishop (1997) point out the Tanimbar taxon represents a well differentiated form and is perhaps best treated as a separate species. We concur.

Nominate *L. atrovirens* occurs throughout the lowlands and hills of northern and western New Guinea and the Aru Is. A well differentiated form, *leucoptera*, is confined to the satellite island of Biak. (Mayr 1941, Rand and Gilliard 1967). On New Guinea this species inhabits coastal mangroves and lowland forest up to 1,400 m (Beehler *et al* 1986, Coates 1990). In contrast, *moesta* is isolated on the oceanic Tanimbar Is., being separated from the continental island of New Guinea and its land bridge Aru islands by c. 230 km of ocean. In addition Varied Triller *L. leucomela keyensis*, endemic to the Kai Is., is juxtaposed between New Guinea and the Tanimbar Is. Preliminary analysis of vocalisations of *L. atrovirens* from New Guinea, *L. moesta*, and *L. aurea* from Halmahera indicates that these taxa appear to be significantly different from one another (KDB pers obs, unpublished sound recordings). Clearly the taxonomic status of Tanimbar Is. *moesta* requires further study and this is currently in progress. However, there appears to be little doubt that *moesta* is a well differentiated form and that for the time being it is best treated as a separate species.

Wallacean Drongo *Dicrurus densus kuehni* Hartert 1901. **Endemic sub species.** First collected by Forbes on Larat (Sclater 1883a) and subsequently by Kuhn on Larat (Hartert 1901). Listed in FAO (1981) under *D. hottentottus*. Recorded moderately commonly by all recent observers at the margins of Semi evergreen Forest and secondary woodland. K.DB noted only single individuals and occasionally pairs in the midstorey. Unlike elsewhere this drongo was not observed associating with mixed species flocks.

The taxonomy of drongos in Wallacea and South east Asia is clearly in need of revision. For example, as Coates and Bishop (1997) point out, eastern populations of *D. densus* such as those on the Tanimbar Is., may be separable from those in the west.

Black faced Oriole *Oriolus bouroensis decipiens* (Sclater) 1883. **Endemic sub species.** First collected by Forbes on Larat (Sclater 1883b). Also collected by Riedel's hunters (Meyer 1884). Subsequently collected by Kuhn from Larat (Hartert 1901). Listed in FAO (1981). Reported by all recent observers, but the extreme similarity between this species and *Philemon moluccensis* may have been overlooked. Consequently our perception of the status and distribution of this species is unclear. Definitive records were made of this species at the edge of primary Semi evergreen Forest, secondary woodland and within selectively logged forest. For a discussion of the mimicry of friarbirds by orioles see (Diamond 1982).

Torresian Crow *Corvus orru latirostris* Meyer 1884. **Resident.** First collected by Forbes on Kirimoen (Sclater 1883a) and Maroe (Sclater 1883b) and by Riedel's hunters (Meyer 1 N)* Recorded by all recent observers in southern Yamdena where it appears to be uncommon and sparsely distributed. KDB observed groups of 2-5 foraging on the road and in roadside trees at the margins of secondary woodlands and farmland.

Slaty-backed Thrush *Zoothera schistacea* (Meyer) 1884. **Endemic species.** First described by Meyer (1884) on the basis of specimens collected by Riedel's hunters. Subsequently collected by Kuhn from Larat (Hartert 1901). Listed in FAO (1981). Lewis (1993) observed this species in tall forest, c. 35 km north of Saumlaki and noted that it spends most of its time in the sub-canopy. NWB observed just one individual in low forest inland from Wobar. Verbelen recorded several individuals; species was always quite high up in trees. KDB heard and/or observed this very attractive species in degraded forest near an area of cultivation c. 20 km north of Saumlaki. He too noted that this daily within selectively logged and undisturbed Semi-evergreen Forest. He found this species exceptionally vocal and conspicuous for a *Zoothera* thrush. Most of the birds observed by KDB were single individuals, initially seen or heard on the forest floor but, apparently in response to his presence, they quickly flew up to and perched in the leafy mid-storey and lower crown of sub-canopy and canopy trees. Individuals were observed singing from both the ground and within the forest mid-storey (for a description of the song recorded by KDB, see Coates & Bishop 1997). The high-pitched "zee" noted by Lewis (1993) and others appeared only to be given in alarm as birds flew from the forest floor.

Zoothera thrushes are notoriously difficult to observe, in part because most species appear to sing rarely. However, most ornithologists and birders tend to avoid the wet season especially in areas of monsoonal climate. It is our contention that more field work in the wet season may reveal species, such as *Z. schistacea* more common than previously perceived.

Fawn-breasted Thrush *Zoothera machiki* (Forbes) 1883. **Endemic species.** First discovered by Forbes who collected an adult male and immature, presumably on Larat (the labels are lost) (Forbes 1883). Subsequently collected by Kuhn on Larat (Hartert 1901). Listed in FAO (1981). It was not recorded again until November 1992 when Lewis (1993) observed this species commonly on Yamdena, regularly venturing on to the road to feed, c. 20 km north of Saumlaki. Lewis (1993) also noted that they skulk in dense scrub and appear to favour burnt areas. In May 1993, NWB observed it regularly but infrequently in forest. Verbelen observed this species on three occasions, always on the ground or low down, hopping over fallen trees. Despite an exhaustive search, KDB failed to locate this species.

Rufous-sided Gerygone *Gerygone dorsalis dorsalis* Sclater 1883. **Endemic sub-species.** First collected by Forbes from Larat, Loetoe and Moloe (Sclater 1883b). Subsequently collected by Kuhn from Larat and Yamdena (Hartert 1901). Listed under *G. inornata* in FAO (1981). NWB heard and observed it regularly

throughout Yamdena, particularly in low forest, semi cleared areas and mangroves. Both Lewis (1993) and Verbelen noted this species as common. KDB heard and/or observed the gerygone commonly, at the edge of and within primary and selectively logged Semi evergreen Forest, tall and low secondary woodland and low, frequently rather scrubby, lightly wooded farmland. This species is easy to detect and one of the commonest birds in the Tanimbar Is., being a characteristic component of mixed species flocks.

Tanimbar Bush warbler *Cettia carolinae* Rozendaal (1987). **Endemic species.** First collected by Rozendaal from north west of Saumlaki, southern Yamdena on 10 October 1985. A series of seven specimens was eventually collected and other individuals observed in dense undergrowth in primary monsoon forest, secondary forest, bamboo thickets and scrub in cleared areas (Rozendaal 1987). Subsequently, Lewis (1993) observed a single bird foraging close to the ground in association with a small mixed species flock. However, NWB observed this species regularly in the center of Yamdena, within tall, closed forest. Verbelen only observed one individual but noted that it is "probably common when you know its song." KDB heard and/or observed this species daily within dense understorey at the edge of primary and selectively logged Semi evergreen Forest. At the time of KDB's visit this species appeared to be notably vocal and its song formed a characteristic sound of the forest. These and others observations would appear to confirm the suggestion by Rozendaal (1987) that this species breeds and is more vocal during the wet season.

Tawny Grassbird *Megalurus timoriensis* sub species? **Resident.** First recorded by NWB who observed this species regularly in the Open scrub and along along grassland *Imperata cylindrica* around Saumlaki. Verbelen subsequently found it common in grassy areas. On 29 January 1996 KDB observed at least three pairs shortly after dawn, c. 20 km north of Saumlaki, at the margins of the road, within one meter high grassland. Attention was initially drawn by the grassbirds' loud and distinctive song. KDB subsequently observed this species commonly in appropriate habitat and on several occasions observed individuals conducting song flight displays.

This species is notably sparsely and patchily distributed in Wallacea and it is unclear if this pattern reflects a true picture or whether it has previously been overlooked (see Coates & Bishop 1997). Determination of the sub specific identity of this taxon will require the collection of specimens.

Arctic Warbler *Phylloscopus borealis* sub species?. **Palaearctic Migrant.** Listed in FAO (1981).

Golden headed Cisticola *Cisticola exilis* sub species? **?Resident.** Listed in FAO (1981). Vocalisations recorded by KDB, in scrubby *Imperata cylindrica* grassy margins along the road c. 20 km north of Saumlaki, Yamdena were subsequently identified as belonging to this species. There appear to be no other records from these islands, although it can be rather inconspicuous outside the breeding season.

Rufous-chested Flycatcher *Ficedula dunieloria riedeli* (Buttikofer) 1886. **Endemic sub-species.** First described by Buttikofer (1886) based on collections made by Riedel's hunters. Subsequently collected by Kuhn from Larat (Hartert 1901). Listed in FAO (1981). NWB saw this species commonly in forest and at the forest edge. A recently fledged individual was mist netted within bamboo, inland from Tutenkemboon, on 6 May (NWB). Verbelen observed only two individuals. KDB heard and/or saw this species on most days, along logging tracks and trails within primary and selectively logged Semi evergreen Forest. All observations pertain to single individuals, mostly mates, which were encountered within the understorey, <2 m above the forest floor. The high pitched song is relatively muted and probably results in this species being overlooked.

White-naped Monarch *Monarcha pileatus castus* Sclater 1883. **Resident.** First described by Forbes from a single specimen from Loetoe (1883a). Subsequently collected by Kuhn from Larat and by Doherty from Selaru (Hartert 1901). Listed in FAO (1981). NW13 observed this species regularly, in forest. KDB observed it daily in low numbers (<10 per day) in the midstorey and canopy of primary and selectively logged Semi evergreen Forest. All recent observers have noted that this species is one of the commonest or at least most frequently encountered member of mixed species flocks, albeit relatively undemonstrative.

Sibley and Monroe (1990) treat the Tanimbar Is. population *castus* as a full species, stating that White and Bruce (1986) regard the three forms of *M. pileatus*, whilst generally considered conspecific, are better treated as allospecies. However, White and Bruce (1986) do not discuss taxonomic relationships, but point out that this is a very little known species with very few specimens representing any of the three subspecies. Our preliminary observations of this species on the Tanimbar Is. coupled with KDB's somewhat more extensive experience of the nominate form on Halmahera, in addition to a comparison of sound recordings of the voice of these two taxa, suggest that they are best retained as sub species within the same species. As it is relatively common on Tanimbar, Halmahera (KDB pers obs) and Buru (Jepson 1993), listing of it by Collar *et al* (1994) as Near Threatened is probably unwarranted.

Black-bibbed Monarch *Monarcha mundus* Sclater 1883. **Endemic species.** First collected by Forbes, the single type specimen for which the label is lost (Sclater 1883a). Subsequently collected by Kuhn from Larat and by Doherty from Selaru (Hartert 1901). Lewis (1993) found this species one of the commonest members of mixed species flocks on Yamdena. He likened its feeding behaviour to that of a nuthatch (Sittidae), "gleaning from the underside of branches and leaves with its up turned dagger like bill." NWB saw it regularly in mangroves and forest, usually in pairs or small groups. Both NW13 and Verbelen observed this species most often as part of a mixed species flock. KDB found this species sparsely distributed, usually in mixed species flocks in the midstorey of primary and selectively logged Semi evergreen Forest.

Island Monarch *Monarcha cinerascens cf cinerascens*. ?**Resident**. Listed in FAO (1981). Lewis (1993) observed several individuals on the islet of Nus Tabon in Saumlaki Bay. Interestingly neither NWB nor Verbelen recorded this species. However, during January to February 1996 KDB observed several individuals with mixed species flocks at the edge of selectively logged Semi evergreen Forest, southern Yamdena.

Broad billed Flycatcher *Myiagra ruifcollis fulviventris* Sclater 1883. **Endemic sub species**. First collected by Forbes, a single male specimen from Larat (Sclater 1883a). Subsequently collected by Kuhn from Larat and Yamdena and by Doherty from Selaru (Hartert 1901). Listed in FAO (1981). Lewis (1993) found this one of the commonest members of mixed species flocks. NWB saw and heard it regularly in mangroves and inland forests. Verbelen noted just single birds. K.DB observed this species infrequently and only in pairs, either solitarily or with mixed species flocks within the **lower** crown and midstorey of Semi evergreen Forest.

When excited the male raises the feathers of its crown peak into a short crest and fans its tail in very exaggerated manner. This attractive species perches horizontally on vertical vines from where it sallies for flying invertebrates. It also perches sideways on the trunks of large trees like an Australo Papuan Robin (Petroicidae) (KDB pers obs).

Coates and Bishop (1997) suggest that this distinctive taxon is perhaps better treated as a separate species. Unlike other populations of *ruifcollis*, the Tanimbar Is. *fulviventris* is not confined to mangrove forests and appears to be moderately widespread and common within low forest and Semi evergreen Forest on Yamdena. The absence of another forest dwelling *Myiagra* appears to permit the ecological niche expansion of this taxon. *fulviventris* appears to be morphologically and vocally distinct (KDB unpublished sound recordings), which raises the question as to whether these differences are sufficient to warrant treatment as a full species.

Shining Flycatcher *Piezorhynchus alecto longirostris* Mathews 1928. **Endemic sub species**. First collected by Forbes from Larat (Sclater 1883a) and Moloe (Sclater 1883b). Subsequently collected by Kuhn from Larat (Hartert 1901). Listed in FAO (1981). NWB found this species regularly in forest, at the forest edge and within mangroves. Conversely, Verbelen only recorded one singing male in a small forest patch near the east coast and KDB only observed one pair along a narrow freshwater stream within primary Semi evergreen Forest. This species is often rather undemonstrative and consequently easily overlooked.

Cinnamon tailed Fantail *Rhipidura fusciorufa* Sclater 1883. **Restricted Range Resident**. First collected by Forbes from Loetoe, Larat and Moloe. (Sclater 1883b). Subsequently collected by Kuhn from Larat and by Doherty from Selaru (Hartert 1901). Listed in FAO (1981). Recorded commonly by all recent observers on Yamdena, within primary and selectively logged Semi evergreen Forest. Also

occasionally recorded in secondary woodland and near human habitation. It is a regular component of mixed species flocks where it regularly sallies for flying invertebrates in the midstorey.

Long tailed Fantail *Rhipidura opistherythra* Sclater 1883. **Endemic species.** First collected by Forbes from Larat and Maroc (Sclater 1883b). Subsequently collected by Kuhn from Larat who also found a nest containing two eggs on 13 January (Hartert 1901). Listed in FAO (1981). Recorded on Yamdena by all recent observers who have found this species moderately common but a relatively shy and inconspicuous inhabitant of the understorey of the interior of primary and tall secondary forest. It occasionally associates with mixed species flocks. KDB regularly observed individuals hawking for flying insects very close to the forest floor.

Rufous Fantail *Rhipidura rufifrons hamadryas* Sclater 1883. **Endemic sub species.** First collected by Forbes from Larat (Sclater 1883a) and subsequently collected by Doherty, also from Larat (Hartert 1901). Listed in FAO, (1981). Recorded by all recent observers on Yamdena where it is common in primary and selectively logged Semi evergreen and tall secondary forest. KDB noted this species as a conspicuous and regular member of mixed species flocks, usually foraging in the lower midstorey.

The sympatry on Yamdena of five species of Monarchine flycatchers and three species of fantails is remarkable for so small an area. A detailed study of their ecology would be very interesting.

Golden bellied Flycatcher *Microeca hemixantha* Sclater 1883. **Endemic species.** First collected by Forbes from Loetoe and Larat. (Sclater 1883a) and subsequently by Kuhn from Larat (Hartert 1901). Listed in FAO (1981). Recorded on Yamdena by all recent observers. NWB recorded it as notably common in mangroves and much less common in tall forest. KDB observed this species daily in moderate numbers; individuals or pairs often perched conspicuously. on dead branches in the forest and woodland canopy or on power and telegraph lines, often at the edge of forest or secondary woodland. Individuals occasionally made horizontal sallies for flying invertebrate prey.

Common Golden Whistler *Pachycephala pectoralisjiiscoflava* Sclater 1883. **Endemic silb species.** First collected by Forbes from Larat (Sclater 1883b). Subsequently collected by Kuhn from Larat and Yamdena (Hartert 1901). Listed by FAO (1981). We found this species commonly in primary and selectively logged Semi evergreen Forest, Mangroves and lightly wooded farmland, but surprisingly Verbelen did not. Although often very vocal this distinctive sub species was surprisingly difficult to observe, remaining deep within the shadows of the forest midstorey.

White bellied Whistler *Pachycephala (leucogastra) arctitorquis* Sclater 1883 **Endemic species.** First collected by Forbes on Larat, Loetoe and Moloe (Sclater 1883a). Subsequently collected by Kuhn on Larat and Yamdena and by Doherty on Selaru (Hartert 1901). Listed under *P. rufiventris* in FAO (1981). Recorded by all recent observers to Yamdena where it is a common and conspicuous inhabitant

of mangroves, lightly wooded farmland, secondary woodland, dry monsoon woodland and the margins of Semi evergreen Forest.

Although originally described under the specific name *arctitorquis* (Sclater 1883a) this taxon has, until recently, generally been treated as a sub species of Rufous Whistler *P. rufiventris* of Australia and New Guinea (Mayr 1967). However, until now this taxon, and closely related taxa elsewhere in Wallacea and New Guinea, have remained little known in life; in view of the paucity of information it may have been somewhat premature to combine, under one species, these distinctive and rather widely separated populations. As a consequence we propose that Tanimbar Is. birds are treated as a separate species, with the English name Black girdled Whistler.

White breasted Woodswallow *Artamus leucorhynchus musschenbroeki* Meyer 1884. **Resident.** First collected by Forbes from Larat and Kirimoen (Sclater 1883b) and subsequently by Kuhn (Hartert 1901). Listed in FAO (1981). Found by all recent observers to be widespread and moderately common in open areas in southern Yamdena.

Tanimbar Starling *Aplonis crassa* Sclater 1883. **Endemic Species.** First collected by Forbes on Larat and Moloe (Sclater 1883a, b) and subsequently by Kuhn from Larat (Hartert 1901). Listed in FAO (1981). Recorded by all recent observers to Yamdena. Moderately common to very common, usually in noisy flocks of several individuals to c. 200 (KDB pers obs), most frequently seen in flight over Semi evergreen Forest.

Metallic Starling *Aplonis metallica circumscripta*. **Resident.** This distinctive sub species, apparently confined to the Tanimbar Is. and Damar (Coates & Bishop 1997, White & Bruce 1986) was first collected by Forbes from Maroe (Sclater 1883a) and subsequently by Riedel's hunters (Meyer 1884) and by Kuhn from Larat (Hartert 1901). Listed in FAO (1981). It has not been observed subsequently. Despite KDB specifically searching for this species during his visit to Yamdena he was unable to locate it. The seeming absence of this taxon from Yamdena suggests it is either confined to the island of Larat, utilizes a habitat not yet visited or present in southern Yamdena, or is perhaps confined to small offshore islands.

It is perhaps worth quoting an earlier reference to this taxon by Forbes (1885 p. 385) "I have a large series of skins in my collection, and that they belong to a species distinct from *C. metallica* (= *Aplonis metallica*) is undoubted, and as Dr Meyer observes, they can, when mixed up with any number of species of *Calornis*, be unhesitatingly picked out by the colouration of the throat.

Black faced Friarbird *Philemon moluccensis plumigenis* Gray 1858. **Resident.** First collected by Forbes on Larat (Sclater 1883a) and Loetoe (Sclater 1883b). Also collected by Riedel's hunters (Buttikofer 1886). Subsequently collected by Kuhn from Larat (Hartert 1901). Listed in FAO (1981). Reported by all recent observers, but the extreme similarity between this species and its mimic *Oriolus*

bowoensis may have been overlooked. Consequently our perception of the status and distribution of this species is unclear. Definitive records were made of this species at the edge of primary Semi evergreen Forest, secondary woodland and within selectively logged forest. For a discussion of the mimicry of friarbirds by orioles see Diamond (1982).

Scaly-breasted (White-tufted) Honeyeater *Lichmera sqummata* (Salvadori) 1878. **Restricted Range Resident.** First collected by Forbes on Larat, Loetoe and Moloe (Sclater 1883b) and by Riedel's hunters (Buttikofer 1886). Listed in FAO (1981). Recorded by all recent observers who have noted it as one of the most common species on Yamdena. NWB observed large numbers in plantations; we also recorded this species in mangroves, secondary woodland, lightly wooded farmland and, in lower numbers, within selectively logged Semi evergreen Forest. Regularly observed by KDB in small groups (2-5) feeding noisily at inconspicuous flowers in the forest canopy and midstorey. Occasionally associates with mixed species flocks.

Scarlet Myzomela *Myzomela sanguinolenta annabellae* Sclater 1883. **Endemic sub-species,** First collected by Forbes from Loetoe (Sclater 1883a) and subsequently by Kuhn from Yamdena and by Doherty from Selaru (Hartert 1901). Listed in FAO (1981). Recorded moderately commonly by all recent observers within lightly wooded farmland, secondary woodland and selectively logged Semi evergreen Forest.

Sibley and Monroe (1990) treat Tanimbar Is. birds together with those of Babar and the Banda Is. as a separate species from other populations in Wallacea, *M. boiei* (see also Coates and Bishop 1997). Further study of this poorly understood superspecies is required.

Olive-backed Sunbird *Nectarinia jugularis*. **Status?** The sole record of this species for the Tanimbar Is. is presented in FAO (1981). The lack of subsequent records is intriguing and warrants further investigation. Sclater (1883b) notes that Forbes' collection contained specimens of the honeyeater that were in such bad condition that they were initially mistaken as a Sunbird *Nectarinea* sp.

Mistletoebird *Dicaeum hirundinaceum filgidum* Sclater 1883. **Endemic sub-species.** First collected by Forbes from Larat and Loetoe (Sclater 1883a). Also collected by Riedel's hunters (Buttikofer 1886) and subsequently by Kuhn from Larat (Hartert 1901). Listed in FAO (1981). Most recent observers have recorded this species on Yamdena, although no one found it common. We observed it in the canopy of all wooded habitats.

Ashy-bellied White-eye *Zosterops citrinellus albiventris* Reichenbach 1852. **Resident.** First collected by Forbes from Larat, Loetoe and Moloe (Sclater 1883b). Subsequently collected by Kuhn from Larat and by Doherty from Selaru (Hartert 1901). Two nests with two and three eggs were found 13 and 14 Jan (Hartert 1901). Listed in FAO (1981). Found commonly by all recent observers on Yamdena. Usually

seen in small flocks (10–29 individuals) that forage noisily in scrubby farmland, secondary growth and woodland and forest edge.

Tricoloured Parrot finch *Erythrura tricolor* (Vicillot) 1817. **Resident** First collected by Forbes on Loetoe (Sclater 1883a) and subsequently by Kuhn on Larat (Hartert 1901). Listed in FAO (1981). Recorded on Yamdena by all recent observers. This species is notably common in southern Yamdena, with as many as 10–20 individuals foraging together in loose flocks in dense roadside thickets, either as mono-specific flocks or, occasionally, together with feeding flocks of munias (*Lonchura spp.*).

Black faced Munia *Lonchura molucca* (Linnaeus) 1766. **Resident**. The only specimens of this species from the Tanimbar Is. appear to be those collected by Forbes from Larat (Sclater 1983a). Listed in FAO (1981). The only recent record is of several groups of 6–16 birds, observed by KDB foraging at the scrubby margins of selectively logged Semi evergreen Forest and within the grassy margins of farmland.

Scaly breasted Munia *Lonchura punctulata blasii* (Stresemann) 1912. **Resident**. First collected by Kuhn from Larat (Hartert 1901). Listed in FAO (1981). Found to be common, by all recent observers to Yamdena, in roadside scrub and scrubby farmland.

Five coloured Munia *Lonchura quificalar*. **Resident**. Although not previously recorded from the Tanimbar Is (White & Bruce 1986) recent observations suggest this species is a moderately common resident in suitable habitat in southern Yamdena. During April to May 1993 NWB encountered small flocks feeding in open cultivated areas. During 1994 Verbelen recorded it in small numbers in roadside scrub, sometimes together with Tricoloured Parrot finches. KDB observed mono-specific flocks of 3–4 birds or in mixed flocks together with Black faced Munias in rank *Imperata cylindrica* grass scrub at the edge of monsoon forest or at the margin of smallholder cultivation.

This species has previously been found on the neighboring island of Babar c. 150 km to the west of the Tanimbar Is. Thus, this little known Wallacean endemic is now known to range from Lombok in the west throughout the Lesser Sanda Island eastwards to the Tanimbar Is (Coates & Bishop 1997), confirming the decision to remove its status as threatened (Collar *et al* 1994, see also Collar & Andrew 1988).

Acknowledgements

KDB would like to thank Hugh Buck, Martin Edwards and Phoebe Snetsinger for their company during his trip to southern Yundena; also Alan Lewis and Filip Verbelen for generously sharing their field notes with us; Carol Cantrell of the Australian Museum Library for help in obtaining obscure references, Paul Jepson for his comments on an early draft, Ian Mason for helpful comments on Channel billed Cuckoos, and Linda Bishop for reading the entire manuscript. The Harapan Indah Hotel provided warm and generous hospitality and were very helpful in providing a vehicle and driver. NWB would like

to thank Yusup Cahyadin for his company in the field and the Indonesian department of forest protection (PHPA) in Ambon and Saumlaki. NWB visited the Tanimbar Is. as part of a larger project by Birdlife International Indonesia Programme.

References

- Ash, J. S. 1984. Bird observations on Bali. *Bull. Brit. Orn. Cl.* 104(1): 24 35.
- Ash, J. S. 1993. Raptor migration on Bali, Indonesia. *Forktail* 9: 3 11.
- Beehler, B. M., Pratt, T. K. and D. A. Zimmerman. 1986. *Birds of New Guinea*. Princeton, New Jersey, USA. Princeton University Press.
- Bibby, C. J., Collar, N. J. Crosby, M. J., Heath, M. F., Imboden, Ch., Johnson, T. H., Long, A. J., Stattersfield and S. J. Thirgood. 1992. *Putting biodiversity on the map: priority areas for global conservation*. Birdlife International, Cambridge.
- Bishop, K. D. 1989. Little known *Tyto* owls of Wallacea. *Kukila* 4(1 2):37 43.
- Buttikofer, J. 1886. On a collection of birds from the Tenimbar Islands. *Notes Leyden Mus.* 8: 58 68.
- Cahyadin, Y. 1993. Tanimbar Corella on Yamdena. *Oriental Bird Cl. Bull.* 18: 55 56.
- Cahyadin, Y., Jepson, P. and B. I. Manoppo. 1994. *The status of Cacatua goffini and Eos reticulats. on the Tanimbar Islands*. Bogor, Indonesia. Birdlife Indonesia Programme.
- Christidis, L. and W. E. Boles. 1994. *The Taxonomy and Species of Birds of Australia and its Territories*. Hawthorn East, Victoria, Australia. R. A. O. U. Monograph 2.
- Coates, B. J. 1990. *The Birds of Papua New Guinea, Vol. 2. Passerines*. Alderley, Brisbane, Australia. Dove Publications.
- Coates, B. J. and K. D. Bishop. 1997. *A Guide to the Birds of Wallacea. Sulawesi, The Moluccas and Lesser Sunda Islands, Indonesia*. Alderley, Brisbane, Australia. Dove Publications.
- Collar, N. J. and P. Andrew. 1988. *Birds to Watch. The ICBP world checklist of threatened birds*. ICBP Technical Publ. 8.
- Collar, N. J., Crosby, M. J. and A. J. Stattersfield. 1994. *Birds to Watch 2. The World List of Threatened Birds*. Birdlife Conservation Series no. 4. Cambridge, UK. Birdlife International.
- Diamond, J. M. 1982. Mimicry of Friarbirds by Orioles. *The Auk* 99: 187 196.
- FAO. 1981. *Results of feasibility studies and proposals for conservation areas in Maluku Tenggara*. Field Report of UNDP/FAO National Parks Development Project INS/78/061.
- Forbes, H. O. 1883. On a new species of Thrush from Timor Laut, with remarks on some rare Birds from that Island and from the Moluccas. *Proc. Zool. Soc. Lond.* 51: 588 589.
- Forbes, H. O. 1885. *A naturalist's wanderings in the Eastern Archipelago, a narrative of travel and exploration from 1878 to 1883*. London: Sampston Low, Marston, Searle and Rivington.
- Hartert, E. 1901. On a collection of birds from the Timorlaut islands. *Novit. Zool.* 8: 163 176.
- Higgins, P. J. and S. J. J. F. Davies. 1996. *Handbook of Australian, New Zealand & Antarctic Birds. Volume 3 Snipe to Pigeons*. Melbourne, Australia. Oxford University Press.
- Inskipp, T. and H. Corrigan (Editors). 1992. *Review of Significant Trade in Animal Species Included in CITES Appendix 11*. Cambridge. World Conservation Monitoring Center.

-
-
- Inskipp, T., Lindsey, N. and W. Duckworth. 1996. *An Annotated Checklist of the Birds of the Oriental Region*. Sandy, Bedfordshire: Oriental Bird Club.
- Jepson, P. 1993. Recent ornithological observations from Buru. *Kukila* 6(2): 85-109.
- Jepson, P. 1995. *Summary Report of an Evaluation of Boundaries for a Protected Area in the Tanimbar Islands, South east Maluku*. Bogor, Indonesia: Birdlife Indonesia Programme.
- Jones, D. N., Dekker, R. W. R. and C. S. Roselaar. 1995. *The Megapodes Megapodiidae*. Oxford, UK: Oxford University Press.
- King, B. F. and E. C. Dickinson. 1975. *A Field Guide to the Birds of South east Asia*.
- Collins. Lambert, F. and M. Woodcock. 1996. *Pittas, Broadbills and Asities*. UK: Pica Press.
- Lambert, F. 1998. A new species of *Amaurornis* from Talaud Islands, Indonesia, and a review of taxonomy of bush hens occurring from the Philippines to Australasia. *Bull. Brit. Orn. Club* 118(2): 67-82.
- Lewis, A. 1993. Birding in Tanimbar and Kai. *Bull. Brit. Orn. Club* 18: 52-54.
- Marchant, S. & P. J. Higgins (Co ordinators). 1990a. *Handbook of Australian, New Zealand & Antarctic Birds. Volume 1 Ratites to Ducks. Part A Ratites to Petrels*. Melbourne, Australia, Oxford University Press.
- Marchant, S. & P. J. Higgins (Co ordinators). 1990b. *Handbook of Australian, New Zealand & Antarctic Birds. Volume 1 Ratites to Ducks. Part B Australian Pelican to Ducks*. Melbourne, Australia. Oxford University Press.
- Marchant, S. & P. J. Higgins (Co ordinators). 1993. *Handbook of Australian, New Zealand & Antarctic Birds. Volume 2 Raptors to Lapwings*. Melbourne, Australia. Oxford Uni. Press.
- Mason, I. J. and R. I. Forrester. 1996. Geographical differentiation in the Channel billed Cuckoo *Scythrops novaehollandiae* Latham, with description of two new sub species from Sulawesi and the Bismarck Archipelago. *Emu* 96(4): 217-233.
- Mayr, E. 1941. *List of New Guinea Birds. A systematic and faunal list of the birds of New Guinea and adjacent islands*. New York: Amer. Mus. Nat. Hist.
- Mayr, E. 1967. Subfamily Pachycephalidae. Pp 3-51 in R.A. Paynter, Jr. Ed. *Check list of birds of the world*, 8. Cambridge, Massachusetts: Museum of Comparative Zoology.
- Monk, K. A., De Fretes, Y. and G. Reksodiharjo Lilley. 1997. *The Ecology of Nusa Tenggara and Maluku*. Singapore: Periplus Editions.
- Meyer, A. B. 1881. On a new species of *Eclectus* from the Timorlaut Islands. *Proc. Zool. Soc. Lond.* 9:17-9:18.
- Meyer, A. B. 1884. Über neue und ungenugend bekannte Vogel, Nester und Eier aus dem Ostindischen Archipel im Konigl. Zoologischen Museum Dresden. *Abh. Naturwiss Ges. Isis Dreden* 1:3-64.
- Meyer, A. B. 1884a. Über neue und ungenugend bekannte Vogel im Konigl. Zoologischen Museum zu Dresden. *Zeitschr. Ges. Orn.* 1: 193-219.
- Norman, J. A., Christidis, L. Westerman, M. and F. A. Richard Hill. 1998. Molecular data confirms the species status of the Christmas Island Hawk Owl *Ninox natalis*. *Emu* 98(3): 197-208.
- Parker, S. A. 1981. Prolegomenon to further studies in the genus *Chrysococcyx 'malayanus'* group (Aves, Cuculidae). *Zool. Verh.* 187: 1-56.

-
-
- Peters, J. L. 1960. In: Mayr, E. & J.C. Greenway Jr. (Editors), *Check list of Birds of the World. Vol IX*. Cambridge, Mass. Museum of Comparative Zoology.
- Pizzey, G. 1980. *A Field Guide to the Birds of Australia*. Sydney, Australia: Collins.
- Rand, A. L. and E. T. Gilliard. 1967. *Handbook of New Guinea Birds*. London, UK: Weidenfeld and Nicolson.
- Ripley, S. D. 1941. Notes on the genus *Coracina*. *Auk* 58: 381 395.
- Rozendaal, F. G. 1987. Description of a new species of bush warbler of the genus *Cettia* Bonaparte, 1834 (Aves: Sylviidae) from Yardenia, Tanimbar Islands, Indonesia. *Zool. Meded.* 61: 177 202.
- Schodde, R. 1977. *Contributions to Papuan Ornithology. VI. Survey of the birds of southern Bougainville Island, Papua New Guinea*. CSIRO Aust. Div. Wildl. Res. Tech. Pap. 34: 1 103.
- Schodde, R. 1988. New subspecies of Australian birds. *Canberra Bird News* 13: 119 122.
- Sclater, P. L. 1883a. On birds collected in the Timor Laut or Tanimbar Group of Islands by Henry O. Forbes. *Proc. Zool. Soc. Lond* 1883: 48 58.
- Sclater, P. L. 1883b. Additional notes on birds collected in the Timor Laut, or Tanimbar group of islands by Mr Henry O. Forbes. *Proc. Zool. Soc. Lond.* 1883: 194 200.
- Sibley, C. G. and B. L. Monroe. 1990. *Distribution and Taxonomy of Birds of the World*. New Haven, USA. Yale University Press.
- Smiet, F. 1985. Notes on the Field Status and Trade of Moluccan Parrots. *Biol. Cons.* 34: 181 194
- Stattersfield, A. J., Crosby, M. J., Long, A. J. and D. C. Wege. 1998. *Endemic Bird Areas of the World. Priorities for Biodiversity Conservation*. Cambridge, UK: Birdlife International.
- Stresemann, E. 1934. Über Vogel, gesammelt von Dr F. Kopstein auf den Sud Molukken und I Tenimber 1922 1924. *Zool. Meded.* 17:15 19
- Sujatmika, Jepson, P., Soehartono, T. R., Crosby, M. J. and A. Mardiatuti. 1995. *Conserving Indonesian Biodiversity: The Endemic Bird Area Approach*. Jakarta, Indonesia: Birdlife Indonesia Programme.
- Verbelen, F. [1996]. *Birding in Seram, Kai and Tanimbar (Indonesia) (24.06 '94 12.08.'94)*. Unpublished trip report.
- Wattell, J. 1973. Geographical Differentiation in the genus *Accipiter*. Cambridge, Massachusetts: *Publications of the Nuttall Ornithological Club*, No. 13.
- White, C. M. N. & M. D. Bruce. 1986. *The birds of Wallacea (Sulawesi, the Moluccas and Lesser Sunda Islands, Indonesia)*. Brit. Orn. Union Check list No. 7.

Addresses

K. D. Bishop, P.O. Box 6068, Kincumber, NSW 2251, Australia. E mail: kdbishop@ozemail.com.au
Corresponding author: N. Brickle, Flat 3, 17 Fourth Ave., Hove, East Sussex, BN3 2PL, UK