
THE BIRDS OF THE ISLANDS OF FLORES A REVIEW

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Summary

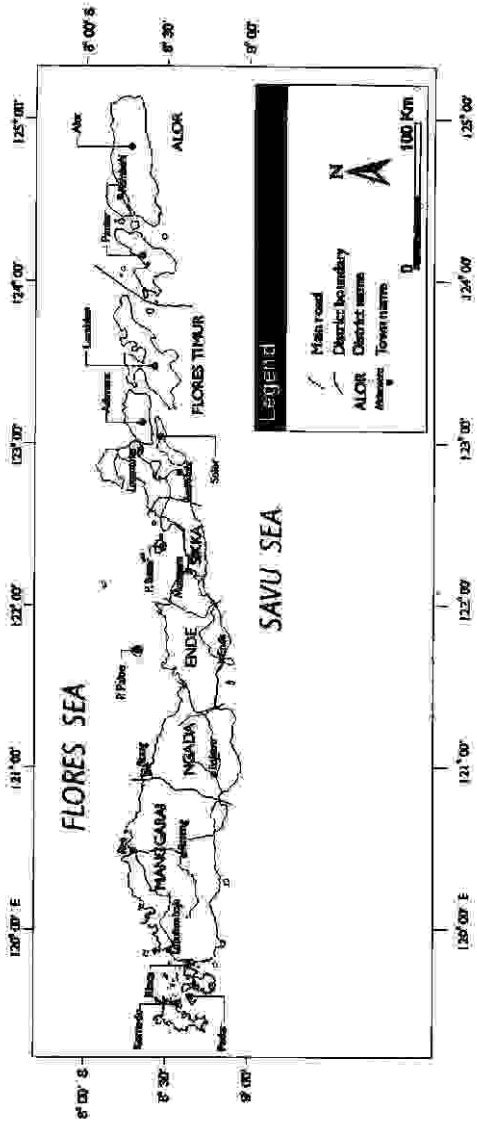
The avifauna of the island of Flores and its satellite islands from Komodo to Alor is reviewed, combining historical data with recent observations. Recent surveys have added substantially to the data base, especially of the resident forest species, and endangered and endemic taxa, as well as adding a number of migrant and maritime species to the island list. Of particular interest are the rare forest endemics Wallace's Hanging parrot *Lariculus floscutus*, the almost unknown Flores Scopsowl *Otus alfredi*, Flores Monarch *Monarcha sacerdotum* and Flores Crow *Corvus florensis*. An appeal is made for further surveys over the eastern part of the island and the eastern island chain.

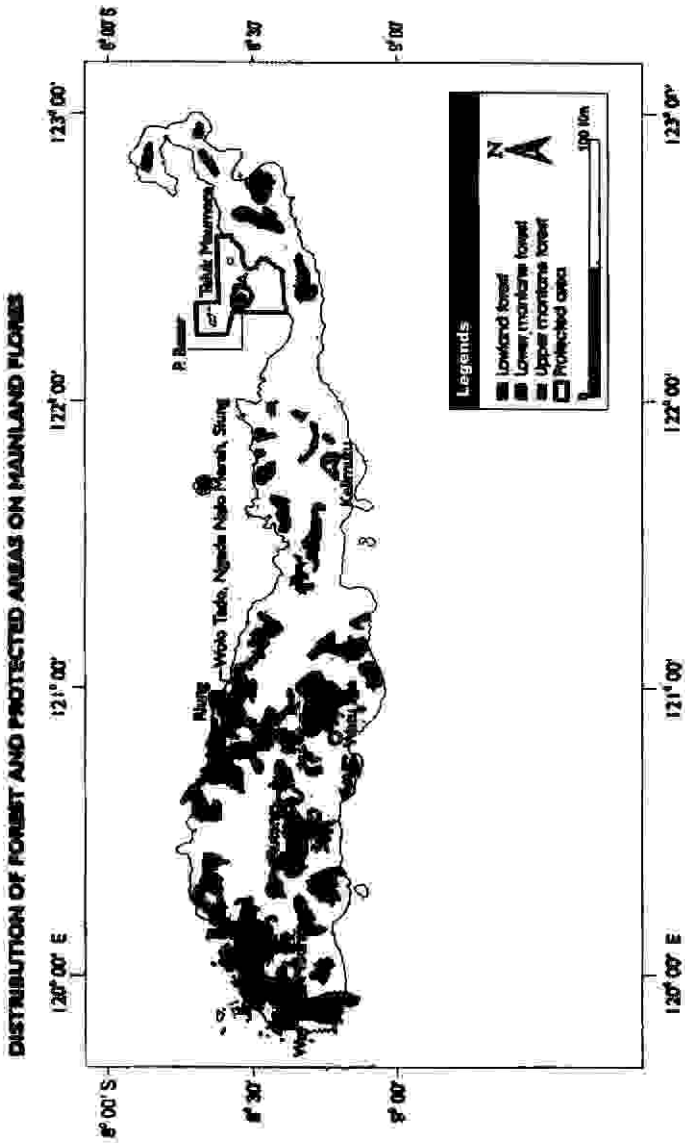
Introduction

The island of Flores lies in the volcanic inner arc of the Lesser Sundas, running east from Lombok through to Alor and Wetar and beyond. Prone to volcanic eruptions and earthquakes, it is perhaps the most beautiful of these islands. It is an island of contrasts. The mountains of Manggarai in the west, rising to a peak of 2400 m on Kanaka above Ruteng, experience high rainfall (over 3500 mm per annum, with a dry season of only two months). The montane forests are as verdant as those of the Wet Tropics further west in Indonesia. Conversely the coastal regions and offshore islands are often arid, even those in Manggarai, with annual rainfall below 1000 mm and an eight month dry season. Dryness increases eastwards, where the volcanic mountains take the form of isolated cones, without large blocks of intervening highland terrain.

Approximately 15% of Flores and its associated islands (the islands between Komodo in the west and Alor in the east, comprising six administrative districts Map 1) was forest covered in the mid 1980s (RePPProT 1989 see Map 2), equal to ca. 3,000 sq. km. Almost all this forest was on the main island of Flores. This includes 500 sq. km. of submontane forest (altitude 1000–2000 m) and 650 sq. km. of scrubby forest on calcareous rocks. Consequent upon the local climate, the lowland forests range from semi evergreen rain forest (mainly in the south west) to moist deciduous and finally dry deciduous forest and thorn scrub. Substantial areas, some 2,500 sq. km., have been mapped as savanna (RePPProT 1989), a largely man made vegetation type that is characteristic of monsoon climates the world over. Over 10,000 sq. km. were mapped as secondary growth: scrub, savanna grassland etc. The diversity of the avifauna varies according to the vegetation cover, which is why it is the western districts that have received the most attention from ornithologists.

Map 1. THE FLORES GROUP OF ISLANDS





Historical synopsis

It was well into the 19th Century before early naturalists paid attention to the Flores group of islands (see historical synopsis in White & Bruce 1986), although J.R.C. Quoy and J.P. Gaimard had called at Alor prior to 1820. Wallace himself (1856 61) did not visit Flores (but did stop briefly in Solor), leaving this to his assistant C. Alien. This was followed by C.E. von Martens in 1863, O. Beccari in 1871 76, J.W. van Lansberge in 1880 83 (Flores and Alor), M.W.C. Weber in 1888 89, H.F.C. ten Kate in 1891 92 (Flores and Adonara), A.H. Everett in 1895 97 (Pantar, Flores and Alor), W. Doherty in 1897 98 (Lomblen only), H. Rolle in 1898 (Alor), J. Elbert in 1909 10, hunters for K.W. Dammerman in 1925, V. von Plessen beginning in 1927 (Flores, Lomblen and Alor), B. Rensch in 1927, J.K. de Jong in 1929, W.C. van Heurn in 1930, and A. Hoogerwerf in 1953 (Komodo, Padar and Rinca only). Lomblen was visited by Doherty in the 1890s, and Adonara by ten Kate.

More recently, J.A.J. Verheijen and E. Schmutz were resident missionaries from 1946 and 1968 respectively, through to the early 1980s. Schmutz' privately published manuscript (1977 with additions in 1978) has been a major source of information for subsequent studies. Verheijen visited the small island of Paloe (off the north coast) in 1960, and also visited Komodo. Verheijen (1964) tabulates months of breeding records. P. Pfeffer in 1956 was the first of the visiting ornithologists in the recent period (Komodo, Rinca and Flores), followed by G.A. Lincoln and others in 1973 (Komodo), while J.T. Marshall sought the owls of Flores in 1973 and 1975. The number of visitors expanded rapidly during the 1980s, both as individuals and commercial bird watching tours.

The first author was resident on Flores from July 1986 until December 1990, living at Watuneso (Ende district) and Paga (Sikka district). The second author made seven visits to Flores between July 1993 and August 1994, traversing the length of the island and making incidental observations during the course of surveys for agricultural and water resource development. Unfortunately many of the second author's records were destroyed in a hotel fire in April 1994, although a previously compiled summary was preserved. He briefly visited Alor in December 1994.

The Cambridge Flores/Sumbawa Conservation Project 1993 spent nearly a month on Flores during August September 1993, studying at a range of elevations in Manggarai, as well as on the islands of Komodo and Pulau Besar (off Maumere) (Butchart *et al.* 1994, 1996). This was followed by the Flores '97 Expedition of the University of East Anglia (Pilgrim *et al.* 1997), which surveyed in four sites in Manggarai and Ngada during July to September 1997. The records of other visitors, whether published formally or informally, or privately circulated, are included in the following accounts where appropriate, and their contributions are gratefully acknowledged.

Most recent records, from visitors and expeditions, are derived from areas of intact habitat, particularly some of the better known localities of Manggarai, and this may sometimes give a false impression of habitat preference and tolerance to habitat degradation. Records from outside these favoured locations are particularly sought from future surveys.

Protected areas

The main protected areas, gazetted or under preparation, are (from west to east):

-  Komodo National Park, includes the islands of Komodo, Padar and Rinca, and the Wae Wuul Mburak Wildlife Sanctuary (3000 ha on adjacent mainland Flores), together with the surrounding marine areas.
-  Tanjung Kerita Mese Wildlife Sanctuary (proposed, lowland and hill forests of SW Flores).
-  Ruteng Nature Reserve. Includes the montane forests of the volcanic peaks close to Ruteng, and is the focus of a study funded through the Asian Development Bank for the establishment of a managed recreational park (pilot site for Integrated Protected Areas Systems). Includes the Rana Mese reserve.
-  Watu Ata Nature Reserve.
-  Wolo Tado, Ngede Nalo Merah and Siung Nature Reserves (forested north coastal strip near Riang, the eastern limit of the Komodo Dragon *Varanus komodoensis*).
-  Kelimutu National Park.
-  Gunung Ambulombo (Abu Lombo) Nature Reserve (Ngada).
-  Teluk Maumere marine recreation park, and Pulau Besar Tourist Park.
-  Adonara Nature Reserve (the highest peak on Pulau Adonara).
-  Hadakewa Labelakang Forest (proposed Nature Reserve or Wildlife Sanctuary includes lower montane forests).
-  Gunung Muna Nature Reserve (forested highlands on Pulau Alor).

The source for these locations is Monk *et al.* (1997). The existing mainland reserves are shown on Map 2. It should be noted that the BirdLife International Indonesia Programme with PHPA is actively engaged in evaluating the protected area system on Flores, with assistance through funding from the Ford Foundation.

The systematic list

The review covers Flores island and all the islands in the Flores group. The main off shore islands, from west to east, are (with abbreviations): Komodo (Kom.), Padar (Pad.), Rinca (Rinc.), Paloe (off the north of Ende district), Besar (off the north of Sikka district), Solor (Sol.), Adonara (Adon.), Lomblen (Lomb.), Pantar (Pant.) and Alor. Otter islands mentioned are Sabolan Besar (off the NW tip of Flores), Pangabatang (near Pulau Besar), Serbetti (off the NE tip of Flores). However, the focus of the review is mainland Flores, and all discussion refers to Flores except where other islands are specified.

Appendix 2 tabulates the records for mainland Flores and for each of the main islands. The small islands of Sabolan Bessar and Serbetti are not included, while Pangabatang is included with Pulau Besar. Geographical coordinates are listed in Appendix 1.

In the list that follows, for each species the previously known distribution is first given as per White & Bruce (1986 hereafter annotated as W&B) and Bruce (1987). The latter reference lists some species

from the islands of Paloe, Solor, Adonara, Lomblen and Alor (and one from mainland Flores) that were omitted from W&B. The basis for new island records listed in Coates & Bishop (1997 hereafter annotated as C&B) is given in this text. Islands having new species records are added in the list for each species and underlined.

The main statement on status for each species is derived mainly from the first author (JV), with supplementary notes supplied in some cases by the second author (DH). Restricted range species (ICBP 1992) and threatened species (Collar *et al.* 1994) are identified in the text.

Bulwer's Petrel *Bulweria bulwerii*. Kom., Flores.

First records for Flores: loose flock of 7 off Komodo on 4 Sep and 7 singles off NE Flores on 20 Sep 1993 (Butchart *et al.* 1994) (see Argeloo & Dekker 1996). 7 west of Labuhanbajo on 26 Sep 1997 (Pilgrim *et al.* 1997).

Streaked Shearwater *Calonectris leucomelas*. Flores, Kom.

First reported from Flores by Smeenk (1985). Further records are: *ca.* 50 off Maumere on 12 Jul 1989 (JV); one off north coast of Flores, 29 May 1993 (Mason 1993). First record for Komodo: scattered individuals off the north coast, late September 1989 (K.D. Bishop, pers. Comm.).

Wedge tailed Shearwater *Puffinus pacificus*. Kom., Flores.

First records from Flores: Two tentative records by JV: 2 off Maumere 19 Oct 1987, and *ca.* 10 off Paga 29 Aug 1990. 'Numerous' birds north of Komodo on 19 Sep 1989 (Bishop 1992), and several between Sumbawa and Komodo on 6 7 Jul 1992 (K.D. Bishop pers. Comm.).

Wilson's Storm petrel *Oceanites oceanicus*. Kom., Flores.

First record from Flores: Observed off the south coast of Flores and Komodo on 15 June 1990 (Bishop 1992), and 4 6 individuals between Sumbawa and Komodo on 6 7 Jul 1992 (K.D. Bishop pers. comm.). 15 off the south coast (south of Ende) on 31 Jul 1997 with a further 7 on 5 Aug 1997 (Pilgrim *et al.* 1997).

Matsudaira's Storm petrel *Oceanodroma matsudairae*. Kom., Flores.

First records from Flores: 8 at Selat Sape (Komodo) 18 Jul 1986 and 1 or 2 at Gosong Bone (Sikka), 12 Jul 1989 (JV). 4 off the south coast (south of Ende) on 31 Jul 1997 (Pilgrim *et al.* 1997).

Black throated Little Grebe *Tachybaptus novaehollandiae*. [Flores], Alor. T

He only record from Flores is of one bird collected on Wai Sano in January by Schmutz (1977), who originally identified it as Red throated Little Grebe. Six months later, on seeing the latter species, he re-identified his specimen as *novaehollandiae*, apparently on the basis of remembering the iris to be golden yellow. No other plumage details are given, and we would prefer not to accept this species of the

Flores list on present evidence. The presence on Alor is based on a specimen collected in 1927 (see W&B).

Red throated Little Grebe *Tachybaptus ruficollis* Flores.

JV describes this as very common on the Tiwu Bowu lake, present throughout the year, with breeding confirmed (sitting on the nest) on 4 Feb 1990. Schnnitz found the species common most of the year at Wai Sano, but did not confirm breeding and numbers were apparently reduced during February March. One in breeding plumage at Danau Ruia Mese, 6 Jul 1989 (Bishop 1992). At least 200 present on Danau Asmara on 2 Oct 1993, in breeding plumage, some carrying nesting material, others displaying in pairs and trilling loudly (DH). Rarely, Little Grebes are seen in non breeding plumage during Jul Aug on ditches and small pools in riceland (JV), suggesting either local dispersion or possibly austral migrants (species?).

White tailed Tropicbird *Phaeton lepturus*. Flores.

First record for Flores: One, Pulau Wire, near Riung, 5 Jan 1995 (Cox & Mano, in prep.). [Identified as *P. l. dorothea*, but no reports of this subspecies have yet been published for the region]. The Red tailed Tropicbird *P. rubricauda* has been recorded been Sumbawa and Komodo, and south west of Wetar, at the limits of the are* under review (C&B).

Great Frigatebird *Fregata minor*. Flores.

First record for Flores: common along the coast, present throughout the year (JV). Also reported in Oct 1990 by Mason (1991) and May 1993 (Mason 1993).

Lesser Frigatebird *Fregata oriel*. Flores, Kom., Paloe. V

ery common along the coast, present throughout the year but most numerous Aug Dec (JV).

Little Black Cormorant *Phalacrocorax sulcirostris*. Flores.

Uncommon on freshwater lakes, occasionally on the coast, present throughout the year, usually singly or in small parties (JV). Highest count: 12 at Nangalili on 28 Sep 1977 (Schmutz 1977).

Little Pied Cormorant *Phalacrocorax melanoleucos*. Flores. Pangabatang, Alor.

Common on freshwater lakes and ponds, uncommon on large rivers, regular on shallow reefs. Present throughout the year in small parties of up to 20 (JV). 5 on Ranamese (1200m), Aug 1993 (Verbelen 1993) is a new altitude record for the island. New island records: ca. 80 on Pangabatang, 6 Oct 1990 (Mason 1991), Alor, 11 Dec 1994 (Holmes 1995).

Masked Booby *Sula dactylatra*. Flores.

One record, north of Flores, 5 birds on 1 Jul 1964 (in W&B).

Red footed Booby *Sula sula*. Kom., Flores, Alor.

First records from Flores: occasional along the north coast, sometimes in parties of up to 10 (JV). Observed along the south coast of Flores and Komodo, mid June 1990 (Bishop 1992), and 3 off Komodo on 4 Oct (Mason 1991). Several off Alor, 17 Oct 1990 (Mason 1991), are the first record for that island.

Brown Booby *Sula leucogaster*. Flores. Alor.

Common along both north and south coasts, generally seen singly (JV, K.D. Bishop pers. comm.). One record, Alor, 11 Dec 1994 (Holmes 1995).

Australian Pelican *Pelecanus conspicillatus*. Flores.

Prior to the irruption into Indonesia in 1978 (Somadikarta & Holmes 1979), there was only a single record from Flores: one on the south coast in Sep 1990 (Voous 1967). During 1978 it occurred widely between April and September (Schmutz 1977). Subsequently, there has been one record: 26 flying west along the coast at Nangahure, 30 Jim 1990 (JV).

Great billed Heron *Ardea sumatrana*. Kom., Pad., Rinc., Flores. Pangabatang, Lomb.

Uncommon around the coast, always seen singly (JV), east to Lewotobi Sept 1989 (Bishop 1992). One on Komodo, 7 Jul 1992 (K.D. Bishop pers. comm.). 4 singles seen on islets between Labuhanbajo and Komodo 4 Sep 1993 (Butchart *et al.* 1994). Schmutz (1977) reports eggs collected in March by Father Verheijen, and he himself observed a fill grown nestling in the nest in mangroves on 14 Sep (1971 or 1972). First record for Lomblen, several at Telok Lewaling, 7 Oct, and also 1 on Pulau Pangabatang, 14 Oct 1990 (Mason 1991). Further records from Lomblen, 18 May 1993 (Mason 1993). Classified as Near threatened in Collar *et al.* (1994).

Purple Heron *Ardea purpurea*. Flores.

Common in ricefields, small marshes and freshwater lakes, usually singly or in pairs (JV).

Great Egret *Casmerodius albus*. Flores.

Locally common in brackish water fishponds, mangroves and on tidal mud, uncommon in freshwater; present from early May to late Oct. Most birds in October were in breeding plumage, implying austral migrants (JV).

Intermediate Egret *Egretta intermedia*. Flores.

Common on freshwater lakes, uncommon in small marshes and ricefields; present early Apr to Nov. All birds in November were in breeding plumage and appeared to belong to the Australian subspecies '*plumifera*' on the basis of yellow tibia (JV).

White faced Heron *Egretta novaehollandiae*. Flores, Kom.

Uncommon in ricefields and freshwater swamps, occasionally in small parties, highest count of 20 (JV). First record for Komodo, one on 4 Oct 1990 (Mason 1991). Has bred at Benteng Jawa and Dampok in Manggarai, July August 1957 (Verheijen 1952), and K.D. Bishop (pers. comm.) observed a nesting pair above Labuhanbajo in October 1984.

Little Egret *Egretta garzetta*. Flores. Pangabatang.

Uncommon in freshwater marshes and intertidal mud; present April to late October. Many in October were in breeding plumage and identified as *immaculate* (synonymous with *nigripes*, see Marchant & Higgins 1990) on the basis of yellow soles to the feet (JV). 42 on Pangabatang, 6 Oct 1990 (Mason 1991).

Reef Egret *Egretta sacra*. Kom., Pad., Rinc., Paloe, Flores. Pangabatang, Serbetti, Lomb., Alor.

Common on rocky shores and reefs, usually in small numbers but locally numerous where extensive areas of intertidal mud and reef flats co exist (eg Tg. Darat and P. Damhila). The following are first island records: ca.50 on Pangabatang, 6 Oct, and 1 on Lomblen, 15 Oct 1990 (Mason 1991), and 18 May 1993 (Mason 1993), also present Serbetti, 21 Sep 1989 (Bishop 1992). First record from Alor, 11 Dec 1994 (Holmes 1995).

Cattle Egret *Bubulcus ibis*. Flores.

Locally common in ricefields and freshwater swamps where parties of up to 30 are seen regularly; absent from many smaller irrigated areas (JV). Highest count >50, Nggorang, 10 Oct 1993 (DH).

Javan Pond heron *Ardeola speciosa*. Flores.

First records from Flores: locally very common in irrigation schemes along the north coast eg Reo, Mbai, Tiwu Bowu (JV). Also recorded inland at Langka, Aug Sep 1993 (Butchart *et al.* 1994), and Soa in irrigated rice. Mar 1994 (DH).

Striated Heron *Bulorides striatus*. Kom., Rinc., Flores, Alor. Common in mangroves and in dense vegetation fringing estuaries along the north coast, but rare on south coast where suitable habitat is lacking. One inland record, 1 at the craterlake (Sano Nggong) at Nunung in July 1969 (Schmutz 1977).

Black crowned Night heron *Nycticorax nycticorax*. Flores, Paloe (?).

Known from Flores from a single record in the last century. C&B do not include Paloe because Verheijen (1961) questioned the record.

Rufous Night heron *Nycticorax caledonicus*. Flores.

Three records: one, near Cancar, 19 May 1957 (Paynter 1963); one near Nunung, a juvenile male, 27 Jul 1969 (Schmutz 1977a), one near Kandang (Nunung), 5 Dec 1969 (Schmutz 1977a). Presumably it is an occasional migrant to Flores.

Yellow Bittern *Ixobrychus sinensis*. Flores.

Very common in ricefields and freshwater swamps early November to early June, with occasional records of overwintering birds: 29 Jul and 19 Aug 1990 at Paga, the latter bird an immature, possibly indicative of breeding (JV).

Cinnamon Bittern *Ixobrychus cinnamomeus*. Flores.

W&B consider that Sulawesi and Lombok mark the southeastern limit of the range of the species, the only previous Flores record (Verheijen 1964) perhaps being a vagrant. There are three subsequent records: 1 near Lembor 17 Apr 1978 (Schmutz 1978), 1 near Magepanda 4 May 1989 (JV) and 2 near Mbai 18 Sep 1993 (DH). These records, with others from the region, suggest that the species is in fact a regular migrant in small numbers to these islands, [see Noske & Ueda (1996) for a record from Timor, and Bishop (1992) and Linsley *et al.* (1998) for records from Sumba],

Woolly necked Stork *Ciconia episcopus*. Flores.

Perhaps more common in West Flores where Schmutz (1977a) found it 'very numerous, often in flocks' at Kenari on the west coast (south of Labuhanbajo) during the dry season (early June 1969). Generally rather uncommon now, in irrigated valleys and other alluvial terrain. Usually in pairs but sometimes parties of up to 10 in fallow ricefields, e.g Magepanda (JV, DH).

Glossy Ibis *Plegadis falcinellus*. Flores.

First record for Flores: 1 3 birds at Tiwu Bowu, 30 Jun 1 Jul 1990 (JV). The status of this species is presumably that of an occasional migrant from Australia. One in ricefields at Caper, near Labuhanbajo, 18 Sep 1997 (Pilgrim *et al.* 1997).

Royal Spoonbill *Platalea regia*. Flores.

Three records only: 9 near Nangalili 1 Aug 1969 (Schmutz 1977a), and 1 near Paga on 10 Nov 1986 and 22 Apr 1988 (JV). Presumably an occasional migrant.

Osprey *Pandion haliaetus*. Kom., Pad., Rinc., Flores, Alor. Besar. Rare. 2 on Komodo Jun 1953 (Hoogerwerf 1955); also reported there Dec 1989 (Gibbs 1990) and Sep 1993 (Butchart *et al.* 1994); 1 or 2 near Magepanda 24 Jun 1990 (JV); a pair near Bola 23 Sep 1993 (DH). Present on Pulau Besar, 19 Sep 1993 (Butchart *et al.* 1994). On Alor (see Bruce 1987), a pair seen 11 Dec 1994 near Tulta (DH).

Presumed resident (the birds at Bola had characteristics of the subspecies *cristatus*), and one was observed carrying a fish to a nest site on Komodo, 7 All 1992 (K.D. Bishop pers. Comm.).

Pacific Baza *Aviceda subcristata*. Flores, Alor.

Uncommon in woodland and wooded cultivation near sea level (JV); also reported from Tanjung Kerita Mese during Aug Sep 1993 (Butchart *et al.* 1994).

[Oriental Honey buzzard *Pernis ptilorhynchus*].

Verhoeve & King (1990) list records of honey buzzards on five occasions, with observations in March, August and October, 1987 and 1989 (Maumere, Paga, Moni Ende, and Rana Mese). These are considered as possibly referring to migrant *P. ptilorhynchus*, although birds seen in montane forest in Manggarai in August (Aug 18 and 22, 1987) 'might either be very early migrants or could belong to a resident *Pernis* population that has been overlooked hitherto'. [*Contra* C&B, Verhoeve & King (1990) do not actually confirm the identity of the birds on Flores. It is worth noting that it is an abundant migrant through Bali in October early November (Ash 1984, 1994). There were two records from Sumbawa in August 1993 (Butchart *et al.* 1994)].

Black winged Kite *Elanus caeruleus*. Flores, Alor.

Moderately common in cultivated plains with scattered trees near sea level, occasionally up to 1000 M (JV).

Brahmuy Kite *Haliastur indus*. Kom., Pad., Rilic., Flores, Paloe, Ator. Pangahatnng. Besar, Lomb

Common in cultivated areas from sea level to 800 m, occasionally to 1600 m (eg in the Bajawa Ende areas) (JV/DH). New island records: Pangabatang, 6 Oct and Lomblen, 7 Oct 1990 (Mason 1991), and Pulau Besar, 19 Sep 1993 (Butchart *et al.* 1994).

White bellied Sea eagle *Haliaeetus leucogaster*. Kom., Pad., Rinc., Paloe, Flores, Alor. Sabotan Besar, Pangabatang, Serbetti, Lomb.

Widely distributed in coastal areas, perhaps especially on the steeper coasts where less disturbed (JV). Present Pulau Serbetti, 21 Sep 1989 (Bishop 1992), Pulau Pangabatang, 6 Oct. and Lomblen, 7 Oct 1990 (Mason 1991), and Sabolan Besar, 20 May 1993 (Mason 1993).

Short toed Eagle *Circaetus gallicus*. Flores. Kom., Besar, Lomb., Alor.

Widely distributed in lightly wooded farmland near sea level, occasionally up to 1000 m (JV). One of the more common raptors (DH). First records from Komodo reported in Bishop (1992). Probable singles on Lomblen, 16 Oct, and Alor, 17 Oct 1990 (Mason 1991, without supporting details). Also present Pulau Besar 19 Sep 1993 (Butchart *et al.* 1994). It is presumed to be resident.

Chinese Goshawk *Accipiter soloensis*. Flores.

Only one confirmed record, 16 Oct 1972, near Look in the west (Schmutz 1977a). A winter visitor that may be overlooked.

Brown Goshawk *Accipiter fasciatus*. Flores, Alor. Kom., Lomb.

Common in cultivated areas with scattered trees, near sea level (JV). First records from Komodo on 12 Oct, and Lomblen, 16 Oct 1990 (Mason 1991), and again from Komodo, 3 Jun 1993 (Mason 1993).

Grey Goshawk *Accipiter novaehollandiae*. Kom., Rinc., Flores, Pant., Alor. Besar.

Common in wooded cultivation and woodland, from sea level to 500 m; a vocal species (JV). Present Pulau Besar, 19 Sep 1993 (Butchart *et al.* 1994). The sub species *sylvestris* is endemic to the Sumbawa and Flores region.

Japanese Sparrow hawk *Accipiter gularis*. Flores.

Uncommon migrant in farmland from sea level to 1600 m, including a flock of 12 on 24 Oct 1989 near Maumere; several records of small sparrow hawks may refer to either this species or *A. soloensis* (JV). Mark van Biers (*in litt. to 3. Pilgrim*) reported a flock of ca. 20 birds emerging through the low cloud covering Golo Lusang on 27 Oct 1996.

Besra *Accipiter virgatus*. Flores.

The two specimens from the mountains of Manggarai from the last century (see C&B) remain the only record from Nusa Tenggara, and the only record of the distinctive sub species *quinquefasciatus*.

Bonelli's Eagle *Hieraetus fasciatus*. Kom., Flores, Besar. Verhoeve & King (1990) reports 14 observations from Sikka, Ende and Manggarai, in cultivated and wooded hills from sea level to 1000 m. Subsequent records include: 1, Ruteng airport, Oct 1984 (K.D. Bishop, pers. comm.), 2 at Nanga Rawa, 11 Jan 1990 (Gibbs 1990), a probable pair near Lembor on 11 Oct 1993 (DH), and records from Komodo, the Paku region, G. Repok and G. Kanaka, Kisol and Pulau Besar in Aug Sep 1993 (Butchart *et al.* 1994).

Rufous bellied Eagle *Hieraetus kienerii*. Flores

Verhoeve & King (1990) describe four observations from Ende and Manggarai. Subsequent records are: one imm. at Rana Mese, 30 Apr 1990 and 5 May 1990, one bird near Ruteng 8 Aug 1990 (King 1991); two records at Mata Wae Ndae late Aug 1993 and one at G. Repok early Sep 1993 (Butchart *et al.* 1994); two over open country north of Soa, 7 Aug 1997 (Pilgrim *et al.* 1997); cultivated hills and montane forest, 800 1500 m.

Changeable Hawk eagle *Spizaetus cirrhatus*. Flores, Paloe.

Common in cultivated hills and woodland from sea level to 1000 m, more often heard than seen (JV). However, Butchart *et al.* (1994) failed to record this species. Gibbs (1990) recorded one at Nanga Rawa, 1 Jan 1990.

Spotted Kestrel *Faico moluccensis*. Kom., Pad., Rinc., Flores, Paloe, Lomb., Pant., Alor. Besar.

Common in lightly wooded farmland from sea level to 800 m, occasionally 1600 m (JV); probably the commonest raptor (DH). Present Pulau Besar, 19 Sep 1993 (Butchart *et al.* 1994).

Australian Kestrel *Falco cenchroides*. Flores.

The single record quoted in White & Bruce (1986) was from Reo in 1911 (Rensch 193 la).

Australian Hobby *Faico longipennis*. Rinc. (?), Flores, Paloe (?), Pant.. Kom., Sabolan Besar.

Uncommon in wooded cultivation from sea level to 1600 m (JV). Described as breeding at Wai Raja near the coast on 23 Nov 1974 by Schmutz (1977). New island records: one on Komodo on 17 Jun 1990 (Bishop 1992). One on Sabolan Besar, 20 May 1993 (Mason 1993), described as 'ver small indeed and must have been race *hanieli* which is resident'. However, C&B consider that the nominate migrant form cannot be distinguished from *hanieli* in the field. [The Rinca and Paloe records listed by W&B were not confirmed].

Peregrine Falcon *Falco peregrinus*. Flores, Pangabatang, Besar.

First records from Flores: 17 Oct 1987, Keli Mutu (JV); 20 Dec 1989, near Labuhanbajo (Gibbs 1990); a very dark and heavily barred bird (identified as resident *ernesif*) on Pulau Pangabatang, 6 Oct 1990 (not seen 14 Oct) (Mason 1991); 1 Nov 1990, Pantai Koka (JV); 2, Golo Lusang, 15 Aug 1993 (Veibelen 1993); pairs of *emesti* at G. Ranaka 12 Sep and Pulau Besar 19 Sep 1993 (Butchart *et al.* 1994).

Wandering Whistling duck *Dendrocygna arcuata*. Flores.

Common in swamps and marshy lakes, in flocks of up to 40 birds (JV). Not recorded by DH. co.400 at Danau Dolat on 3 Sep 1993 (Butchart *et al.* 1994).

Lesser Whistling duck *Dendrocygna javanica*. Flores.

Rare or very local, recorded only from the west, where Schmutz reported it at Rana Kulan and Joneng Nangalili, and King (1987) and JV at Nangarawa. However, there were ca 150 at Nangarawa on 19 Aug 1987 (Buck 198X) and 220 at Danau Dolat on 3 Sep 1993 (Butchart *et al.* 1994), who also reported it from Nangarawa.

Green Pygmy Goose *Nettapus pulchellus*. Flores

First records from Flores: visitor to swamps and marshy ponds from early June to late November, uncommon and recorded regularly only at Tiwu Bowu, where up to 7 (30 Jun 1990) (JV). The first record was from Paga on 12 Oct 1987.

Sunda Teal *Anas gibberifrons*. Flores.

Very common in swamps and marshy lakes, in flocks up to 40; occasional in mangrove or tidal mudflats (JV). The breeding record from Flores in August (W&B) probably refers to a record of a male with swollen gonads (Schmutz 1977)? *ca.* 90 at Danau Dolat on 3 Sep 1993 (Butchart *et al.* 1994). Three at Ranamese (1200m), 20 Aug 1993, is a new altitude record for Flores. In view of the separation of *gracilis* at species level (see below), all records of this species now require review.

Grey Teal *Anas gracilis*. Kom.

The Grey Teal has only recently been separated at species level, and it seems likely that it has been overlooked. Five were present on a small pool behind the beach on Komodo on 7 Jul 1992 (K.D. Bishop pers. Comm.).

Pacific Black Duck *Anas superciliosa*. Flores. Kom.

Very common in swamps, marshy lakes, and wet ricefields, from sea level to Danau Ranamese at 1200 m where flocks of 40 to up to 200 are reported (Bishop 1992, DH, Verbelen 1993). Presumed to breed (see W&B). *ca.* 180 at Danau Dolat on 3 Sep 1993 (Butchart *et al.* 1994). New island record: a flock of 8 on Komodo, 12 Oct 1990 (Mason 1991).

Garganey *Anas querquedula*. Flores

First records for Flores: visitor to swamps from late October to mid March, common only at Tiwu Bowu, where up to 20 birds recorded on 17 Mar 1990 (JV). The first record was of 6 at Paga on 10 Nov 1987.

Australian Pochard *Aythya australis*. Flores

The first record for Flores and for Nusa Tenggara was of one male at the Tiwu Bowu lake from 28 Jan to 17 Nov 1990 (JV).

Orange footed Scrubfowl *Megapodius reinwardt*. Kom., Pad., Rinc., Flores, Paloe, Lomb., Pant., Alor. Besar.

Occurs in woodland from sea level to 1000 m, locally common in the few large areas of undisturbed forest that remain. There is circumstantial evidence that it has declined or disappeared in many areas following clearing of woodland and perhaps excessive egg collection (JV). Reported widely by Butchart *et al.* (1994) in Aug Sep 1993, at: Paku, Komodo (common), Nangarawa and Pulau Besar. Also commonly recorded at Golo Bilas (Pilgrim *et al.* 1997).

Brown Quail *Coturnix ypsophora*. Flores, Alor. Besar.

Apparently not recorded by Schmutz, and JV has no confirmed records. A small covey was flushed from the edge of cultivation above Lewotobd, 21 Sep 1989 (K.D. Bishop pers. comm.). DH has records from grassland in Upper Wae Mokel, and from monsoon woodland on the north coast of Ngada and at Magepanda. However it is not as common on Flores as in Timor (DH pen. obs.). Present at Pulau Besar, Sep 1993 (Butchart *et al.* 1994).

Blue breasted Quail *Coturnix chinensis*. Flores.

Apparently uncommon but easily overlooked. Described as 'not rare' in tall grassland in central Flores 800-1200 m (Rensch 1931) and collected in west Flores by Schmutz (1977a). Not recorded by JV, and only once by DH, from near Daoau Asmara.

Green Jwaglefowl *Gallus varius*. Horn., Rinc., Flores, Paloe, Alor. Besar.

Common in a variety of woodland habitats from sea level to 1500 m. Common on Komodo, and present Pulau Besar, Sep 1993 (Butchart *et al.* 1994).

Red backed Button quail *Turnix maculosa*. Flees, Kom., Pad., Alor. Lomb.?

Not observed by Schmutz in west Flores (1977a, KM next species), but JV suspected this species to be common from sea level to 1200 m in wooded cultivation in central and east Flores. Confirmation is now required. CAB adds a record from Lomblen (without source). The sub species *floresiana* is endemic to the Sumbawa and Flores groups of islands.

Barred Button quail *Turnix suscitator*. Flores, Paloe, Lomb., Alor. Besar Common in wet Flores (Schmutz 1977a), with two observed by King (1991) near Ruteng on 23 Aug 1987. Several records at Wolo Tado ana Oolo Btlas (Pilgrim *et al.* 1997). Lack of knowledge of distribution and status of *Turnix* spp reflects difficulties of obtaining identifiable views in the field. Present. Pulau Besar. 19 Sep 1993 (Butchart *et al.* 1994).

Lewia's Rail *Rallus pectoralis*. Flores.

Known in Wallacea only from the four y tiw collected in west Flores in the last century and 1958-59 (see White & Bruce 1986). The presence of an isolated, sub-specifically distinct population (*exsul*) of this Australo-Papuan species on Flores is notable. A shy bird, probably it is readily overlooked.

Buff banded Rail *Gdirlallus philippensis*. Flores, Alor.

Very common in wet ricefields and small swampy areas (JV). The sub species *wi/tocofri* is endemic to Flores, while nominate *philippensis* is reported from Alor.

Red legged Crane *Rallina fasciata*. Flores, Alor.

Described by Schmutz (1977a) as very common in west Flores, in forest and *Eupatorium* scrub from sea level to 650 m, but numbers fluctuate, being very common in some years, rare or absent in others. He found a nest with six eggs in mid March 1978. However, there is only one other record, one collected near Maumere in 1888 or 1889 (Weber, in Schmutz *op cit.*), and more recent information is now required. See Holmes (1995) for first record on Alor, dated 9 Dec 1994.

Baillon's Crane *Porzana pusilla*. Flores.

A presumed migrant (some of the dated records suggest it might breed, but there is no confirmatory evidence). Apparently rare, or overlooked, known records are: late April 1956 and late April/mid May 1957 from Tjara and Wangjung (Paynter 1963), and 1 Feb 1974 at Nunung and 17 Apr 1976 at Rangot Lema (Schmutz 1977a).

Ruddy breasted Crane *Porzana fusca*. Flores.

W&B date the Flores records as June and November, but 2 were collected in Manggarai in October (?) 1896 (see Hartert 1898). Two recent records: 1 at Tambak Koliaduk 17 18 Nov 1990 (JV), and near Langka, Sep 1993 (Butchart *et al.* 1994). Status undetermined, presumed resident.

White browed Crane *Poliolimnas cinerea*. Flores.

Common in swamps and marshy lakes (JV).

White breasted Waterhen *Amaurornis phoenicurus*. Flores, Paloe, Alor.

Very common in wet ricefields and swampy areas (JV), recorded up to 1200m (Danau Ranamese, Buck 1988). At the height of the dry season, one was flushed from a nearly dry river bed in a barren plain near the upper Wai Mokel at *ca.* 800 m in Ngada (DH).

Watercock *Gallicrex cinerea*. Flores.

Common in small swamps from Dec to May (JV). Presumed to be a palearctic winter migrant only.

Dusky Moorhen *Gallinula tenebrosa*. Flores.

Only one record, collected probably in east Flores during the 19th century (Wallace, in Rensch 1931).

Common Moorhen *Gallinula chloropus*. Flores.

Breeding resident. Very common in wet ricefields, swamps and marshy lakes (JV). Common at Danau Asmara in Oct 1993 where inunatures present (DH). 200 at Danau Dolat on 3 Sep 1993 (Butchart *et al.* 1994).

Purple Swamphen *Porphyrio porphyrio*. Flores.

Present in wide irrigated valleys with small swamps, but common only at Tiwu Bowu (JV). Recorded from Mbai by DH.

Common Coot *Fulica atra*. Flores.

First record for Flores and for Nusa Tenggara: present at Tiwu Bowu from early April to late November 1990, with a maximum of 3 during July August (JV). Status unknown.

Comb crested Jacana *Irediparra gallinacea*. Flores.

Previously known only from an observation of a single bird at Pota on 6 Jun 1974 (Schmutz 1977a), it was found to be a common year round resident with several tens of pairs at Tiwu Bowu (JV). A fully grown juvenile was observed on 23 Sep 1990.

Greater Painted Snipe *Rostratula hengkhalensis*. Flores.

One record only, a breeding bird collected in west Flores in July (Paynter 1963) is one of very few records from Wallacea (see C&B).

Grey Plover *Pluvialis squatarola*. Flores, Pangabatang, Alor.

First records for Flores: one at Mauloo on 9 Jan 1987 (JV). Also Oct 1990 (Mason 1991); 2 at Mbai 18 Sep 1993 (DH). ca. 40 on Pangabatang, 6 Oct 1990 (Mason 1991), with > 100 at the same location on 29 May 1993 (Mason 1993). First record for Alor, 11 Dec 1994 (Holmes 1995).

Pacific Golden Plover *Pluvialis fulva*. Flores. Alor.

Very common migrant to the coast, early August to at least mid April (JV). A small party also present inland at Soa (ca. 600 m, irrigated area) on 26 Feb 1994 (DH). First record for Alor, 11 Dec 1994 (Holmes 1995).

Little Ringed Plover *Charadrius dubius*. Kom., Pangabatang.

The Pasir (Komodo) record quoted in C&B and a party of at least 8 on Pulau Pangabatang on 29 May 1993 (Mason 1993) constitute the first records for the Flores region. The dated records for Wallacea (see W&B) were February and March, and August to October.

Malaysian Plover *Charadrius peronii*. Kom?, Flores, Pangabatang, Alor. First records from Flores:

Darat Pantai (near Maumere), 11 July 1987 (JV), and Nangarawa, Aug 1987 (Buck, 1988). Subsequent records: Pulau Pangabatang, 6 Oct 1990 (Mason 1991) and 29 May 1993 (Mason 1993), on the beach at Mbai, 18 Sep 1993 (DH), Nangarawa, up to 7 daily, mid Sep 1993 (Butchart *et al.* 1994), and at least 4 at Riung, 3 and 29 Aug 1997 (Pilgrim *et al.* 1997). A pair at Mali, 11 Dec 1994, is the first record for Alor (Holmes 1995). C&B also lists Komodo (without source). Classified as Near threatened in Collar *et al.* (1994).

Lesser Sand plover *Charadrius mongolus*. Flores.

First record from Flores: 2 at Waiara on 6 Oct 1989 (JV).

Greater Sand plover *Charadrius leschenaultii*. Flores, Kom.

A common visitor to the coast (JV).

Oriental Plover *Charadrius veredus*. Flores.

First records from Flores: 7 Dec 1989, 2 at Magepanda; 21 Oct 1990, 20 near Tiwu Bowu, with 6 there on 25 Oct; 23 Dec 1990, 1 in Tambak Koliaduk (JV).

Little Curlew *Numenius minutus*. Flores.

First record from Flores: 21 Oct 1990, 2 at Tiwu Bowu (JV see van Balen 1996).

Whimbrel *Numenius phaeopus* Flores, Rinc., Alor. Kom., Pwng., Lomb.

Very common visitor to the coast, early August. until at least mid April (JV). First island records: Komodo on 23-24 Dec 1989 (Gibbs 1990), >100 on Pangabatang, 6 Oct 1990, and present Lomblen, 7 Oct 1990 (Mason 1991).

Eurasian Curlew *Numenius arquata*. Rinc. (?). Kom.

W&B (1986) questions the record from Rinca, but overlooks a record from Komodo in June 1953 (Hoogerwerf 1955).

For Eastern Curlew *Numenius madagascariensis*. Flores, Pangabatang.

First records from Flores: 5 near Darat Pantai, 14 Jan 1988, and 7 on Pulau Pangabatang, 21 Mar 1989 (JV), where also observed 6 Oct 1990 (Mason 1991); present near Larantuka, 1-2 Oct 1993 (DH). Classified as Near threatened in Collar *et al.* (1994).

Bar tailed Godwit *Limosa lapponica*. Flores. Pangabatang.

A winter visitor to muddy shores (JV). ca 40, Pangabatang, 6 Oct 1990 (Mason 1991).

Common Redshank *Tringa totanus*. Flores, Rinc. (?), Pangabatang, Alor.

W&B (1986) questions the existing records from Flores and Rinca. However, it is now confirmed to be a common visitor to the coast of Flores from mid August until at least mid April (JV, DH, Butchart *et al.* 1994). Other islands: ca. 30, Pulau Pangabatang, 6 Oct 1990 (Mason 1991), where also present on 29 May 1993 (Mason 1993); also recorded on Alor, 11 Dec 1994 (Holmes 1995).

Marsh Sandpiper *Tringa stagnatilis*. Flores.

First record from Flores: one 24 Dec 1989 in pools of standing water along the Magepanda river (JV).

Common Greenshank *Tringa nebularia* Flores. Pangabatang, Alor.

Common visitor to the coast. New island records: ca. 50, Pangabatang, 6 Oct 1990 (Mason 1991); Alor, 11 Dec 1994 (Holmes 1995).

Wood Sandpiper *Tringa glareola* Flores.

Recorded commonly in wet ricefields in west Flores (K.D. Bishop pers. comm.), but uncommon in the central and east regions, where recorded regularly only at Tiwu Bowu, August–January QV). Common in ricefields at upper Wee Mokol (Manggarai Ngada border) mid-September and at Reo 14 Apr (DH).

Terek Sandpiper *Xenus cinereus* Flores. Alor.

First records from Flores: 1 in Tambak Koliaduk 24 Sep 1990; 1 at Waiara, 28 Oct 1990 (JV); Pulau Pangabatang, 6 Oct 1990 (Mason 1991); several near Larantuka, 1 Oct 1993 (DH); mid-2 at Riung, 9 Aug 1997 (Pilgrim *et al.* 1997). First record for Alor, 11 Dec 1994 (Holmes 1995).

Common Sandpiper *Actitis hypoleucos*. Flores, Rinc., Paloe, Alor. Kom., Besar, Lomb.

Very common visitor to coasts and large rivers, records early August to at least mid-April (JV–DH). First records from Komodo, 19 Sep 1999 (Bishop 1992), and Lomblen, 7 Oct 1990 (Mason 1991), Pulau Besar, 19 Sep 1993 (Butchart *et al.* 1994).

Grey-tailed Tattler *Heteroscelus brevipes*. Flores. Pangabatang, Alor.

First records from Flores: common visitor to the coasts mid-August to mid-April (JV); 32, Pulau Pangabatang, 6 Oct 1990 (Mason 1991), where also present on 9 May 1993 (Mason 1993); several near Larantuka, Oct 1993 (DH). Also recorded on Alor, 11 Dec 1994 (Holmes 1995).

Ruddy Turnstone *Arenaria interpres*. Rinc., Flores, Adon. Alor.

Uncommon visitor to the coast, observed in March QV). First record for Alor, 11 Dec 1994 (Holmes 1995).

Plated Snipe *Gallinago stenura*. Flores.

The Flores records consist of a 'long series' collected in west Flores (Paynter 1963).

Swinhoe's Snipe *Gallinago megala*. Flores. Alor.

The Flores records consist of 3 specimens collected in west Flores (Paynter 1963). Schmutz (1977a) notes that 'snipe spp' are not rare in west Flores, but there are few records elsewhere.

Sanderling *Calidris alba* Flores. Pangabatang.

First records from Flores: 1 new Mauloo, 23 Dec 1996; 1 on Pulau Pangabatang, 21 Mar 1989 (JV).

Rufous necked Stint *Calidris ruficollis* Flores. Pangabatang.

Common visitor to coastal areas (JV). Ca. 100 on Pulau Pangabatang, 6 Oct 1990 (Mason 1991).

Sharp tailed Sandpiper *Calidris acuminata* Flores.

First records from Flores: 2 at Tiwu Bowu, 17 Nov 1990; 2 in Tambak Koliaduk with I at TiwU Bowu, 25 Nov 1990 (JV).

Curlew Sandpiper *Calidris ferruginea* Flores.

First record from Flores: reported at Nangarawa 14 15 Sep 1993 (Butchart et al. 1994).

White headed Stilt *Himantopus leucocephalus*. Flores, Alor.

Present in small numbers in wet ricefields, swamps and marshy lakes, with records throughout the year but with a sharp increase during April to June (JV). [The Australasian taxon *leucocephalus* is here considered a separate species, see C&B].

Red necked Phalarope *Phalaropus lobatus*. Flores. Kom., Lomb.

Very common visitor from mid August to January, but especially August – October, in flocks of several thousand offshore (JV); present off both north and south coasts but perhaps especially the latter. On 29 Aug 1990 a continuous stream totalling probably tens of thousands was seen flying low over the sea towards the east off Paga. JV also quotes a report from Father Schouten that several tens of phalaropes were grounded on the missionary grounds of Watublapi during a rainstorm, a site in the mountains halfway between the north and south coasts. New island records: Komodo, 19 Sep 1989 (Bishop 1992), 12 Oct 1990 (Mason 1991) and early Sep 1993 (Butchart et al. 1994), and off Lomblen, Oct 1990 (Mason 1991).

Beach Thick knee *Esacus magnirostris*. Flores, Kom., Pad., Rinc., Pangabatang etc.

Sparsely distributed along quiet beaches especially on inaccessible coral islets and reefs, with records for example from Darat Pantai, Pulau Pangabatang, Pulau Damhila and Pulau Kondo on the north coast of Sikka, and from Paga (Sikka) and near Nangarawa (Manggarai) on the south coast (JV).

Australian Pratincolle *Stiltia isabella*. Flores, Alor.

Rare austral migrant. Records: Dec 1969 near Joneng (Manggarai) in December 1969 and near Nisar 23 Nov 1974 (Schmutz 1977a); 4 near Waioti, 8 23 Sep 1987 (JV); 1 at Lembor, 30 Jul 1993 (DH).

Oriental Pratincolle *Glareola maldivarum* Flores

First records from Flores: 4 at Kali Wajo, 10 14 Nov 1987; and the following records from Tambak Koliaduk: 17 Nov 1990 (10), 3 Dec 1990 (85), 8 9 Dec 1990 (6), 23 Dec 1990 (1) (JV).

Pomarine Jaeger *Stercorarius pomarinus*. Flores.

First records from Flores, all from the north coast: 19 Apr 1987, ca. 5 near Waiara; 25 Mar 1989, >10 near Waioti; 10 Apr 1988, 2 near Nangahure; 19 Oct 1988, >4 near Maurnere; 29 Oct 1988 ca 5 near Maumere; 27 29 Dec 1999, 2 3 daily in Bay of Maumere; 6 Oct 1989, ca 10 near Waisra.; and 29 Oct 1990, 3 near Waiar* (JV). One off North Flom 20 Sep 1993 (Butchart *et al.* 1994). Probably more common than records suggest. These records add substantially to those listed in van Balen (1991). The December observations indicate that this species may occasionally winter in Wallacea.

Arctic Jaeger *Stercorarius arasiticus*. Flores.

This species was believed present in a flock of ca. 50 unidentified jaegers near the north coast of Komodo on 19 Sep 1999 (Bishop 1992). Also I reported off Nangamwa, 16 Sep and 7 off north Flores, 20 Sep 1993 (Butchart *et al.* 1994), and 3 pale phase adults west of Labuhanbajo on 26 Sep 1997 (Pilgrim *et al.* 1997).

[Long tailed Jaeger *Stercorarius longicaudus*]

Although outside the limit of the review area, a record is included of ca. 200 observed flying cast between Komodo and Surribawa, 15 Sep 1990 (Roseveare & Allen 1991).

Whiskered Tern *Chlidonias hybridus*. Flores.

First records from Flores: Mauniere, 12 Oct 1996 (M. Very common at sea, mid October to April, often in flocks of several hundreds. Small numbers, probably immature birds, present at sea and on Tiwu Bowu, June to August. All records were of birds in winter plumage. Presumably both northern and austral migrants are involved. Thus 5 in winter plumage at Reo on 14 Apr were likely to be newly arrived austral migrants (DH).

White winged Tern *Chlidonias leucopterus* Sabolabesar, Flores.

First record from Flores: one near Paga, 10 Oct 1937, but others may have been overlooked in the flocks of the previous species (QV); also reported at Maumere, 14 Oct 1990 (Mason 1991X and near Sabolabesar, 20 May 1993 (Mason 1993).

Gull billed Tern *Gelochelidon nilotica* Kom., Flores, Pangabatang, Alor

First records from Flores: 2 3 near Mamiere, 1 12 Oct 1996; 1 at Pulau Pangabatang, 19 Oct 1997; 4 in breeding plumage at Pulau Pangabatang, 16 Apr 1, 1988, with a further record of a single bird there on 21 Mar. 1989; 2 near Tambak Koliaduk, 7 Oct 1990 (JV). Also reported Maumere and Pulau Pangabatang, 14 Oct 1990. Other first island records: Komodo, 12 Oct 1990, and Alor, 17 Oct 1990 (Mason 1991).

Common Tern *Sterna hirundo* Flores.

First record for Flores: 3 near Minxinre, 30 Mar 1988 (N).

Black naped Tern *Sterna sumatrana*. Kom., Rinc.?, Flores, Pant.?, Alor?

First records from Flores: very common on the coast from mid August to at least January, occasionally in flocks of several tens. Also reported at Komodo, Dec 1989 (Gibbs 1990). Bishop (1992) quotes a record of Tim Andrews of > 1000 being flushed from a rocky stack near Komodo on 30 Apr 1988 (probably Pulau Tiga, see Mason 1993). Numerous at Komodo, 7 8 Jul 1992, many carrying fish (K.D. Bishop pers. comm.). C&B also lists Rinca, Pasir (Komodo), Pantar and Alor (without sources).

Bridled Tern *Sterna anaethetus*. Flores, Kom., Besar, Alor?

First record from Flores: I off Paga, 19 Nov 1989, but possibly others present in the off shore flocks of the next species (JV). >100 in Teluk Oka, 3 Oct 1993 (DH). Present off Komodo, 19 Sep 1989 (Bishop 1992), where 'hundreds' on 14 Aug 1993 (Verbelen). Also reported from Komodo, Nangarawa and Pulau Besar, September 1993 (Butchart *et al* 1994), and very common on Pulau Tiga, 21 May 1993 (Mason 1993). C&B also lists Pasir (Komodo) and Alor (without sources).

Sooty Tern *Sterna fuscata*. Kom., Flores, Alor.

First records from Flores: common at sea in flocks (JV). Also reported Oct 5 1990 off west Flores (Mason 1991). C&B lists only Komodo and 'off N Alor'.

Little Tern *Sterna albifrons*. Flores.

Although recorded as common in west Flores (Schmutz 1977a), there appear to be no recent records.

Great Crested Tern *Sterna bergii*. Flores, Alor. Kom.: Pangabatang, Lomb.,

Very common around the coast, occasionally in flocks of up to 100, eg Paga on 10 Nov 1987 (JV). New island records: Komodo, 2 3 24 Dec 1989 (Gibbs 1990), 4 Oct 1990 (Mason 1991) and Sep 1993 (Butchart *et al.* 1994), >100 at Pangabatang, 6 & 14 Oct 1990 (Mason 1991), and Lomblen, 7 Oct 1990 and 18 May 1993 (Mason 1991, 1993).

Lesser Crested Tern *Sterna bengalensis*. Kom., Flores, Pangabatang.

First records from Flores: 45 at Pulau Pangabatang, 21 Mar 1989, of which several in breeding plumage; 1 at Paga, 25 Oct 1990 (JV). Also 2 at Komodo, 23 24 Dec 1989 (Gibbs 1990), where numerous on 7 8 Jul 1992 (K.D. Bishop pers. Comm.).

Flores Green Pigeon *Treron floris*. Flores, Sol., Lomb., Pant., Alor. Besar.

This restricted range species, endemic to the islands from Lombok to Alor, is uncommon on Flores in wooded cultivation from sea level to 1000m, but flocks of >20 sometimes gather at fruiting figs (IV). Schmutz (1977a) rarely met with it. Several feeding in fig trees above Lewatobi, 21 Sep 1989 (K.D. Bishop pers. comm.). Encountered by Butchart *et al* (1994) only at Nangarawa and on Pulau Besar,

Sep 1993 (six small parties at the latter location). Normally unobtrusive, it is conspicuous when feeding in figs (Butchart *et al.* 1994). Pilgrim *et al.* (1997) observed a flock of 6 in dry savanna forest near Ria, and one individual in Wolo Tado. It is listed as near threatened (Collar *et al.* 1994X and suspected to be declining. Its apparent scarcity in the wetter regions and semi evergreen rain forest is noteworthy. Classified as Near threatened in Collar *et al.* (1994).

Black backed Fruit dove *Ptilinopus cinctus*. Flores, Pant., Alor. Besar.

Common in Flores in undisturbed forest above 1000m (JV), but as low as 100 in on Pulau Bessr, Sep 1993 (Butchart *et al.* 1994). Observed on Alor at ca 500m in Doc 1994 (DH). The sub species albocinctus occurs from Lombok to Flores, while everetti is endemic to Pantar and Alor.

Rose crowned Fruit dove *Ptilinopus regina* Flores.

One record only, a bird collected near Mannue (Ekterter 1897). This lowland species, of "coastal woodlands or Tiverain cover" (W&B), was perhaps never more than a straggler to mainland Flores. It should perhaps be looked for on small islands off shore (see C&B).

Black naped Fruit dove *Phlinopus melanospila* Kam, Flores, Palm Lomb., Pant, Alor. Besar.

Described by JV as "uncommon in wooded cultivation at low altitude in west Flom", DH also has a voice record from 700m near Bajawa, 19 Sep IM. JV never recorded it from central or east Flores. so the record of Butchart *et al.* (1994) of several sightings on Pulau Besar in the east is of particular interest. Reconfirmed on Lomblen, 16 Oct 19" (Mason 1991). Commonly observed at Gollo Billas, and less common at Wolo Tado (Pilgrim *et al.* 1997).

Green Imperial Pigeon *Ducula aenea* Flores, Kom., Pad., Rinc., Pant, Atm. Besar, Lomb.

Bruce (1987) also lists Patoe (omitted in W&B). Uncommon in wooded cultivation and woodland at low altitudes in Flores, but common at Golo Bilas and Wallo Tado (Pilgrim *et al.* 1997). First record from Lomblen, 16 Oct 1990 (Mason I "I). Common on Komodo, and also reported on Pulau Besar, Aug Sep 1993 (Butchart *et al.* 1"4. K.D. Bishop pers. comm.). Recent voice record from Alor, Dec 1994 (DH).

Pink headed Imperial Pigeon *Ducula rosacea* Flarm Pant., Alor. Besar

Known from mainland Flom only from two specimens collected in 1863 (Rensch 193 1) and two observed near Pain, JW 1974 (Schmutz 1977a). Observed on Pulau Bessr, Sep 1993 (Butchart *et al.* 1994), and at ca 200 in new the coast of Alor in Doc 1994 (DH). Restricted range species.

Dark backed Imperial Pigeon *Ducula lacernulata* Flores.

Common in wooded cultivation and woodland. Elevations given as 400 to above 1600m (QV), or 550 but scarce below 850m, at which level there is slight overlap with *D. aenea* (Butchart *et al.* 1994). Restricted range species.

Pied Imperial Pigeon *Ducula bicolor*. Kom., Flores.

M&W could find no documented confirmation of a record from Komodo reported by Pfeffer (1958). The observation there of 7 on 4 Sep and 3 on 5 Sep 1993 (Butchart *et al.* 1994) therefore becomes the first documented record for the Flores region. The first record from mainland Flores is of a single bird observed by Cox (in prep) at Riung, 10 Jan 1995.

Metallic Pigeon *Columba vitiensis*. Flores, Besar?

A record from Flores was overlooked by W&B: a female in breeding condition was collected at 900m on Golo Ponto on 21 Jun 1972 (Sclunetz, 1977a). Subsequently one was sighted on Gunung Repok on 27 Aug 1987 (King 1990), and a total of 18 was seen in montane forest near Ruteng, 7 11 Aug 1991 (King 1991). Also reported Aug Sep 1993 at Mata Wae Ndae and Langka as well as on G. Repok (Butchart *et al.* 1994), and Golo Lusang, 15 Aug 1993 (Verbelen 1993). C&B also lists Pulau Besar (without source).

Barred Cuckoo dove *Macropygia unchall*. Flores.

Recently found to be common in montane forest at >I 1000m. Formerly there were only two published records of this species (W&B, Bishop 1992).

Ruddy Cuckoo dove *Macropygia emiliana*. Flores, Paloe.

Uncommon in wooded cultivation and woodland from sea level to 1200m; recorded at higher elevations around Ruteng by Butchart *et al.* (1994).

Dusky Cuckoo dove *Macropygia magna* Alor.

There are no recent observations of this restricted range species from the Flores region.

Little Cuckoo dove *Macropygia ruficeps*. Kom., Flores, Pant.

Uncommon in wooded cultivation and woodland at >700m.

Island Collard Dove *Streptopelia bitorquata*. Flores, Paloe, Kom.

Uncommon in cultivated valleys near sea level (JV), with records (DH) from coastal tamarinds near I Lantuka and mangrove at Reo; also from Komodo (K.D. Bishop, pers. comm., Butchart *et al.* 1994).

Spotted Dove *Streptopelia chinensis*. Kom., Rine., Flores, Paloe, Alor., Lomb.

Common in Flores in cultivation up to 1600m. First record from Lo len, 15 Oct 1990 (Mason 1991).

Barred Dove *Geopelia maugei*. Kom., Pad., Rine., Flores, Paloe, Sol., Pant., Alor. Besar, Lomb.

On Flores, very common at the edge of mangroves, in grassland and cultivated plains with scattered trees at low elevation. Elsewhere uncommon up to 400m, occasionally 1200m (Danau Ranamese, Buck 1998). Common on Pulau Besar, 19, Sep 1993 (Butchart *et al.* 1994). First record from Lomblen, 15 Oct 1990 (Mason 1991).

Emerald Dove *Chalcophaps indica* Kom., Flores, Paloe, Alor. Besar

On Flores, common in woodland and wooded cultivation from sea level to 1100m. Present on Pulau Besar 19 Sep 1993 (Butchart *et al.* 1994).

Nicobar Pigeon *Caloenas nicobarica* Kom., Rinc., Pad., Flores.

Stated by Pfeffer (1958) that Hoogerwerf found it on Rinca, although Hoogerwerf (1955) recorded 2 on Komodo in Jun 1953. It seems likely that little suitable habitat remains on any of the off dove islands suitable for this species. The first record from mainland Flores was a single bird flushed at 700m at Mata Wae Ndae on 28 Aug 1993 (Butchart *et al.* 1994). Classified as Near threatened in Collar *et al.* (1994).

Rainbow Lorited *Trichoglossus haematodus*. Flores.

Described by JV as uncommon below 400in, but locally very common at higher altitudes. K.D. Bishop (pers. comm.) observed ones and twos at Poco Ndeki, on the coast, in July 1989. Smith (1975) has proposed species status for weberi, the taxon confined to Flores.

Olive headed Lorikeet *Trichoglosma euteles*. Pant., Lomb., Alor.

The very few and brief visits that have been made by ornithologists to these three islands in recent years failed to report this species, although green lorikeets observed by DH on Alor in Dec 1994 were assumed to be this species. It is a restricted range species, also known from Timor and islands to the east

Yellow crested Cockatoo *Cacatua sulphurea* Kom., Pad., Rinc., Flores, Pant., Alor.

Described as very common all over Flores up to the early 1980s, it is now exterminated in most areas by the excesses of trade, with extremely few records, mostly from Manggarai. For example, Butchart *et al.* (1994) encountered only 3 birds on Flores (at Nangaraws). The population on Alor is also reported to have been decimated (DH). Probably farmers were only too pleased to find that a valuable market existed for a bird they regarded as a serious pest to maize crops. The national park of Komodo is the only known location where possibly viable populations still survive in the region (Bishop 1992 and several observers), although at least 14 were observed at Ria on 22 Aug 1997 (Pilgrim *et al.* 1997).

Red checked Parrot *Geoffroyus geoffroyi*. Flores. Besar.

Uncommon in wooded cultivation, but locally common in undisturbed woodland, from sea level to 1000m. Recorded by Butchart *et al.* (1994) at all mainland study sites as well as on Pulau Besar (Sep 1993).

Great billed Parrot *Tanygnathus megalorhynchus*. Flores.

Uncommon in wooded cultivation from sea level to >600m in west Flores, rare in central Flores. In the 1970s, Schmutz (1977a) recorded mixed roosting flocks of this species and Yellow crested Cockatoo numbering several hundred birds. All recent sightings concern single birds or small parties, indicating a considerable decline (JV; also B. King verbally to Butchart *et al.* 1993) as a result of trapping, but Pilgrim *et al.* (1997) observed at least 33 in a roosting flight at Golo Bilas on 20 Sep 1997.

Wallace's Hanging parrot *Loriculus flosculus*. Flores.

Known only from the type, from eastern Flores, collected prior to 1863 (Rensch 1931), until its rediscovery was reported in moist evergreen forest at Mats Wae Ndae, 1035m, on 25 May 1978 (Schmutz 1978). JV later reported it from closed canopy forest at below 1000m. on Gunung Egon, on 14 Jun 1987. Its distribution is therefore known from two widely separated montane areas (western Mangarai and eastern Sikka). Subsequently, it was found to be common at Mata Wae Ndae, at 450 980m but mainly above 850m, where parties of 2 10, once 20, were observed on fruiting fig trees (Butchart *et al.* 1994). A further new location is Goio Bilas, where groups of up to 7 were regularly observed in 1997 (Pilgrim *et al.* 1997). It is classified as Vulnerable (Collar *et al.* 1994).

Oriental Cuckoo *Cuculus saturatus*. Flores, Pant..

Very common resident (presumed lepidus) in montane forest >1000m, and uncommon migrant (presumed *saturatus*) in open country at low elevation, November February or later. Six or seven were seen along the Maumere Magepanda road at sea level on 17 Nov 1990 (JV).

Pallid Cuckoo *Cuculus pallidus*. Flores.

The one Flores record of this austral migrant is from Joneng Nangalili, 26 Oct 1969 (Schmutz 1977a).

Rusty breasted Cuckoo *Cacomantis sepulcralis*. Flores. Alor.

Common in scrub and woodland at 400 1400m, rare at lower elevations. DH comments that the species tends to be silent through the dry season and readily overlooked. The first record from Alor, on 10 Dec 1994, is reported in Holmes (1995). The reference to host species for Brush Cuckoo *C. variolosus* on Flores in C&B should refer to this species.

Honfield's Bronze Cuckoo *Chrysococcyx basalis*. Flores. Kom.

Visitor during the austral winter to grassland and cultivation with scattered trees at low elevation common in April May, when occasionally in parties of up to 10, but low frequently observed June August. One at Kisol, mid September 1993 (Butchart *et al.* 1994) extends the known period in Flores. The first record for Komodo is of a single bird on 17 Jun 1990 (Bishop 1992).

Shining Bronze Cuckoo *Chrysococcyx lucidus* Flores. Kom.

The only recent records of this uncommon austral winter visitor are one at Kisol, 19 Aug 1997 (King 1987), and one observed on Komodo on 7 Jul IM K.D. Bishop pers. comm.) the latter being the first record for that island.

Gould's Bronze Cuckoo *Chrysococcyx russatus* Flores.

Described as occurring in woodland and dense bamboo thickets, especially common at 800 1000m (Ottow & Verheijen 1969), but the only recent records are by Pdgrim of at. (1997), who saw and heard small numbers at Riung, both on the coast and inland, in 1997. DH comments that although familiar with the song, he failed to hear it anywhere on Flores.

Aska Koel *Eudynamys scolopacea malayana* Flores, Paloe**Australian Kod** *Eudynamis cyanocephala*. KoaL, Alor. Besar, Lomb. (sp?)

Pending further elucidation, we prefer so am these as conspecific, with malayana a resident while cyanocephala is presumably an austral migrant. The former is moderately common on Mass in woodland from sea level to 300m, rarely to 700m. The first koel recorded for LambiIm was heard on 16 Oct 1990 (Mason 1991). Three separate Wtds heard on Alor, on 12 Dec 1994 (Holmes 1995) am perhaps more likely to be referable to malayana (hitherto not recorded from Alor). Also reported at Pulau Besar, 19 Sep 1993 (Butchart *et al.* 1994). The first records for Lombok and Near were described respectively a cyanocephala and scolopacea, but without supporting data.

Channel billed Cuckoo *Seydrops novaehollandiae* Flores, Paloe, Akio.

Commonly encountered in woodland and wooded, cultivation October February, in east Flom and along the north coast of central Flom, but more along the south coast and in the west (JV). However there seem to be few other recent records.

JV reports that it is always observed in am Flom after the first rains normally in October, and indeed it is associated with the onset of the rainy season by the local people, at which time it is conspicuous and noisy. Status is indeterminate and while breeding has been reported (Ottow & Verheijen 1969), many birds are HWY to be migrants. The evidence would want to suggest that this is a 'reverse', moving into northern Australia and Wallacea to take advantage of the wet season, unless it is only during that season that it becomes conspicuous.

Lesser Coucal *Centropus bengalensis*. Kom., Pad., Rinc., Flores, Paloe, Pant., Alor. Besar.

Described by JV as common in cultivation and woodland up to 1500m, although DH considered it rather uncommon. Also present on Pulau Besar, Sep 1993 (Butchart *et al.* 1994).

Barn Owl *Tyto alba*. Flores, Paloe (?), Alor. Besar.

In Flores, uncommon in cultivation and in towns near sea level. Reported on Pulau Besar, 19 Sep 1993 (Butchart *et al.* 1994).

Eastern Grass owl *Tyto longimembris*. Flores.

Known from one specimen collected near Ruteng in Mar 1956 (Paynter 1963, and Schmutz 1977a). Verheijen (per JV) reported being given a set of eggs collected in grassland near Ruteng that were thought to belong to this species.

Flores Scopsowl *Otus alfredi*. Flores.

Sibley & Monroe (1993) assign this as a red morph of Moluccan Scopsowl, and consequently it is no longer given threatened status in Collar *et al.* (1994). However, until the taxonomic status is clarified, it seems advisable to continue to treat this as an endangered taxon (Butchart *et al.* 1994). Known from just three specimens, from montane forest on Gunung Repok "and other hills" over 1000m (Hartert 1897) in Manggarai, subsequent searches failed to rediscover it (Marshall 1978, K.D. Bishop, B. King verbally to Butchart 1993, Butchart *et al.* 1994), until a specimen was obtained on 15 May 1995 at 1400m on Poco Mandawsawu (Widodo *et al.* unpublished, quoted in Rasmussen 1998, who notes that it belongs to the *O. spilocephalus* group). Pilgrim *et al.* (1977) report the observation of one individual at close range beside Rana Mese at 21.55 hrs on 9 Sep 1997.

Moluccan Scopsowl *Otus magicus*. Flores, Lomb. Besar.

Very common in woodland and wooded cultivation, sea level - 450m, but with one voice record from the summit of Keli Mutu (JV). Marshall (1978) encountered it in 'the wildest secondary growths namely wooded ravines within farming areas', as well as a tract of coastal swamp forest, with the birds using both mangroves as well as village fruit trees. Also reported from Pulau Besar, 19 Sep 1993 (Butchart *et al.* 1994) without comment.

Wallace's Scopsowl *Otus silvicola*. Flores.

This restricted range species, confined to Sumbawa and Flores, is uncommon in woodland and wooded cultivation at 100-1000m, sometimes in relics of woodland in cultivated terrain. It occurs alongside *magicus* but is less tolerant of degraded terrain (JV). DH heard one in Bajawa, 1100m, in September, presumably from one of the bamboo covered small hills that surround the town. Marshall (1978) gives a wider altitudinal range, from the same ravines as those frequented by *magicus* near Maumere, to 1600m above Ruteng, and Pilgrim *et al.* (1997) heard it commonly near Ranamese in Sep 1997.

Butchart *et al.* (1994) recorded it widely, at 400–1450m, mostly from semi evergreen rain forest, but once in degraded habitat (cf the record above by DH). It is listed as near threatened (Collar *et al.* 1994).

Southern Boobook *Ninox novaeseelandiae*. Alor.

There are no recent records of the endemic subspecies (*plesseni*) from Alor.

Brown Boobook *Ninox scutulata* Flores.

A palaeartic migrant to Flores, previously known from one specimen collected by Wallace in east Flores (Rensch 1931), and a record from Nunung, 19 Dec 1976 (Schmutz 1977). One at Watuneso, 24 Feb 1987 (JV). Being silent in winter quarters, it is perhaps overlooked.

Large tailed Nigbija *Caprimulgus macrurus* Flores.

Common along the forest edge and in wooded cultivation from sea level to >300m in the west, rare in central Flores, and never heard in the east (JV). DH encountered this only on a scrub covered hill behind Labuhanbajo, where it was common in October; the call was a rather soft 'wilp' or JV note, usually only one to three notes at a time, without the harshness of the 'chonk' that is the usual call of this species throughout the region (K.D. Bishop *in litt.*). Butchart *et al.* (1994) did not encounter the species, but Pilgrim *et al.* (1997) have records from Wolo Tado.

Savanna Nightjar *Caprimulgus affinis*. Flores, Alor. Kom.

Common in grassland with scrub and in lightly wooded cultivation from sea level to 600m (M. DH encountered it only on barren coastal hills at Mbai. However, there are records from Ruteng at > 1200m (Buck 1998). First record from Komodo: one heard, 4 Sep 1993 (Butchart *et al.* 1994).

Edible nest Swiftlet *Aerodramus fuciphagus*. Flores. Kom., Besar.

Very common from sea level to >200m in the Uva (King 1987, 1991), probably overlooked elsewhere as edible nests are known from caves on the south coast (reported to be near Panud Koka). First reported observation from Komodo, 4 Oct 1990 (Mason 1991), was replicated by K.D. Bishop (pers. comm.), 7 Jul 1992. Also reported from PWan Dow, Sep 1993 (Butchart *et al.* 1994).

Glassy Swiftlet *Collocalia esculenta* Flores, AJor. Besar.

Very common from sea level to >1600m. Reconfirmed in Alor, Dec 1994 (DH). Also reported from Pulau Besar, Sep 1993 (Butchart *et al.* 1994).

Fork tailed Swift *Apus pacificus*. Flores, Paine (?).

JV reports passage from mid August to mid April, common September–November and ohm in Imp flocks, while small numbers are seen December–March. The passage of swifts in the genus *Apus* through Flores and Timor is described by Holmes (1994). C&B omit the unconfirmed sight record from Paloe quoted in Bruce (1987).

Little Swift *Apus affinis*. Flores

Very local along the south coast near seaside cliffs, sometimes in flocks of up to 30, with records for May, June, November and December; rare along the north coast (JV). The presence of a few birds in migrating parties of the previous species is described by Holmes (1994). In Nov 1990, 2 pairs were early visiting disused nests of Striated Swallows near Paga (JV), indicating either breeding or prospective breeding. [The practice of occupying swallows' nests has been reported previously (Ali & Ripley 1970)].

[Asian Palm Swift *Cypsiurus balasiensis*. *Kom* (?), *Rinc* (?), Flores

W&B questions the records of Pfeffer (1958) and of Hoogerwerf (1955) from Rinca, Komodo and Flores and there seems to be no confirmed record from Nusa Tenggara [Coates & Bishop (1997) also quote an unconfirmed record from Timor].

Common Kingfisher *Alcedo atthis*. Flores, Alor. Besar.

The resident race floresiana is very common in mangroves and along rivers up to 200m. DH also encountered it at qa. 600m along the Wae Mokel (Ngada), Sep 1993. Present on Pulau Besar, Sep 1993 (Butchart *et al.* 1994).

Small Blue Kingfisher *Alcedo caeruleascens*. Flores.

One present in mangroves at Riung on 5 and 7 Aug 1997 (Pilgrim *et al.* 1997) is the first record for Flores (previously recorded east only as far as Lombok and Sumbi

Oriental Dwarf Kingfisher *Ceyx erithacus*, Flores.

A rare resident, known from a series collected in the lowlands of west Flores (Hartert 1897), until recently only recorded at Mate Wac Ndae (Butchart *et al.* 1994). The status, in Flores, of this lowland forest specialist is a cause for concern in view of the loss of its preferred habitat.

Stork billed Kingfisher *Pelargopsis capensis*. Flores.

Uncommon along rivers, lakes and in mangroves and ricefields in west Flores, rare in central and east Flores (JV). Probably now a rare bird mainly of coasts and mangroves, one record Teluk Oka near Larantuka, Oct 1993 (DH). The maximum altitude of 1200 m quoted in C&B is derived from a record of one that flew into a window at Ruteng (Schmutz 1977).

Sacred Kingfisher *Halcyon sancta*. *Kom.*, *Rinc.*, Flores, Paloei Alor. Besar.

Austral migrant to Flores from late April to late October, very common in mangroves, common in wooded cultivation to 100m occasionally to 1000m. Also reported from Pulau Besar, Sep 1993 (Butchart *et al.* 1994).

Collared Kingfisher *Halcyon chloris*. Kom., Pad., Rinc., Flores, Paloc, Alor. Besar, Lomb.Sol?
Adon.?

Common resident in Flores in mangroves, common in wooded grassland and cultivation to 800m, occasionally 1600m; (eg common at Ruteng). Also reported from Pulau Serbetti (Bishop 1992), Pulau Besar, Sep 1993 (Butchart *et al.* 1994), and a fast record from Lombok 7 Oct 1990 (Mason 1991). C&B also lists Solor and Adonara (without source)

White rumped Kingfisher *Caridonax fulgidus*. Flores. Besar.

A restricted range species, from Lombok, Sumbawa and Flores, it is common in woodland from sea level to 1300m, with records up to 1700m (McKean 1989); adapts well to degraded habitat and commonly occurs in small, isolated patches of woodland. Typically it is very vocal for a period at dawn and dusk. Butchart *et al.* (1994) recorded the species as most common in primary semievergreen rainforest, but also occurring in moor deciduous monsoon forest, and degraded forest edge and village scrub with tall trees. Also present on Pulau Besar, Sep 1993 (Butchart *et al.* 1994).

Blue tailed Bee cater *Merops philippinus*. Kom., Rinc., Flores, Paloe.

Present throughout the year in lightly wooded grassland and cultivation but numbers increase quickly from August indicating that Most are winter visitors. Breeding confirmed on 24 Oct 1974 in Manggarai (Schmutz 1977a) and suspected on 13 Dec 1989 in central Flores (JV), when birds were visiting some fifteen holes excavated in a steep roadside bank on the road north to Mbai at about 400m elevation.

Rainbow Bee cater *Merops ornatus*. Flores Lombok., Alor. Besar.

An austral migrant, common in lightly wooded grassland and cultivation from early April to late September (also observed early October, DH). Also reported from Pulau Besar, 19 Sep 1993 (Butchart *et al.* 1994).

Common Dellarbird *Ewyslomus orientalis*. Flores, Kom., Paloe, Alor. Besar.

Uncommon in wooded cultivation and woodland edges from sea level to >700m on FIOML Present year round and presumed resident. A19D reported & WhKomodo, 23-24 Dec 1999 (Gibbs 1990) and Pulau Besar, Sep 1993 (Butchart *et al.* 1994). C&B WW lists Komodo (without source).

Brown capped Woodpecker *Dendrocopos moluccensis* Kom., Rinc., Flores, Lombok., Alm. Besar.

Resident on Flores in woodland and wooded cultivation rare at lower altitudes, common >1000m (JV). However, two of three records of DH were in coastal woodland, and K.D. Bishop (pers. comm.) reports persistent drumming and calling in, tall semi evergreen forest near Kisol, at ca. 400 m elevation. Also confirmed on Alor, in low foothills, Dec: 1994 (DH). Butchart *et al.* (1994) encountered it at all study sites and altitudes including Pulau Besar on 19 Sep 1993.

Elegant Pitta *Pitta elegans*. Flores, Adon., Lomb., Alor.

Described as common on Flores in scrub and woodland from sea level to 800m (JV). Bishop (1992) found that the species was notably common in monsoon woodland at Lewotobi in September, but they were much less vocal and obtrusive in June. Butchart *et al.* (1994) concluded that the species appears to be able to tolerate a wide range of forested habitats up to a maximum altitude of ca. 1400m, but that it appears to be commoner in logged forest.

Singing Bush lark *Mirafra javanica*. Kom., Pad., Rinc., Flores.

Common in Flores in dry grasslands from sea level to >500m (JV). DH also reported it from lowland ricefields.

Barn Swallow *Hirundo rustica* Flores. Kom?, Lomb., Alor.

A palaeartic winter visitor from mid August to late April, common September to late March. Local roosts may number several hundred e.g. Tiwu Bowu, 30 Apr 1990 (JV). First reported on Lomblen and Alor, Oct 1990 (Mason 1991) and also observed on Alor in Dec 1994 by Holmes (1995). C&B list Komodo, without source.

Pacific Swallow *Hirundo tahitica*. Kom., Pad., Flores. Lomb., Alor.

Common resident in villages and small towns. First reported on Lomblen and Alor, Oct 1990 (Mason 1991) and reconfirmed on Alor in Dec 1994 by Holmes (1995).

Striated Swallow *Hirundo striolata*. Rinc., Flores, Alor. Kom.

Common on Flores near sea cliffs and in hilly country with rocky outcrops; also seen in parties of up to 40 over grassland and gardens (JV). All records of DH were of birds feeding over coastal ricefields. Schmutz (1977a) describes the irregularity of occurrence, common one day, absent the next, and mentions also an observation by Verheijen of 25 nests in November, with no further details. First record from Komodo, 1 on 5 Sep 1993 (Butchart *et al.* 1994).

Tree Martin *Cecropis nigricans*. Flores. Alor

An apparently rare austral visitor to Flores, all records are appended: one was collected by Allen in the last century (Wallace coll. BMNH), and one observed west Flores mid November (year not given) I (Schimitz 1977a); ca. 20 hunting over ricefields near Nobo, 12 Jun 1989 (JV); one near Ruteng 26-28 Dec 1989, an unusual date (Gibbs 1990); one, Bajawa, 15 Sep and one, Mbai, 18 Sep 1993 (DH); 2 near Ruteng, 15 Aug 1993 (Verbelen 1993); present Kisol, mid Sep 1993 (Butchart *et al.* 1994).

The first record from Alor, 10 Dec 1. 994, apparently of a breeding colony, is described in Holmes (1995). Evidence of breeding should be sought elsewhere.

Yellow Wagtail *Motacilla flava*. Flores. Besar.

Common winter visitor in cultivation from 800m upwards, occasionally at lower elevations, usually in flocks of up to 20 (JV). Probably particularly common in ricefields, at any elevation (DH). Not observed by Schmutz (1977a). Several hundred were found roosting inside the caldera of Keli Mutu on 17-18 Jan 1999 (JV). Also reported Pulau Besar, Sep 1993 (Butchart *et al.* 1994). The subspecies reported from Flores is *simillima* (W&B, C&B).

Grey Wagtail *Motacilla cinerea* Flores. Alor.

Common winter visitor from early October to late April, usually singly in ditches and streams from sea level to 1600m. First record for Alor, December 1994 (Holmes 1995).

Richard's Pipit *Anthus novaeseelandiae* Kom., Pad., Rinc., Flores.

Common on Flores in short grassland from sea level to 1600m (JV) and in riceland (DH).

Pechora Pipit *Anthus gustavi*. Flores.

The omission from W&B, of two specimens from Manggarai, Oct 1896 (Hartert 1897), was corrected by Bruce (1987).

WaUacean Cuckoo shrike *Coracinapersonala*. Kom., Rinc., Flores, Lomb., Alor. Besar.

A common resident in Flores, ranging from lightly wooded cultivation to denser woodland, from sea level to 1400m (IV, DH). Butchart *et al.* (1994) described it as "reasonably common in moist forest, dry forest and scrub". Also encountered Pulau Besar, Sep 1993 Butchart *et al.* (1994).

Black faced Cuckoo shrike *Coracina novoehollandiae*. Flores, Alor. Kom, Lomb.

A very common austral migrant to Flores from early May to early November, in grassland with scattered trees and in lightly wooded cultivation from sea level to >700m (JV). First record for Komodo, 21 Sep 1989 (Bishop 1992) and for Lemblen. 16 Oct 1990 (Mason 1991).

Common Cicadabird *Coracina tenuirostris*. Lomb.

There are no further records of this species which is known from Lemblen from one immature male, referred to *timoriensis* which is otherwise endemic to Timor (W&B). Further information is required.

Pale shouldered Cicadabird *Coracina doherthyi* Flores.

A restricted range species, endemic to Sumbik Sumbawa and Flores, this is uncommon in woodland and wooded cultivation at 400-1400m (JV), and up to 1700m on Gunting Ranaka (K.D. Bishop peace comm.). Reported by Butchart *et al.* (1994) from semi evergreen rainforest most commonly at SW 1100m, but also in moist deciduous monsoon forest at Poco Ndeki at 200-400m. Another lowland site where it was found to be common is Wolo Tado, August 1997 (Pilgrim *et al.* 1997). Classified as near threatened (Collar *et al.* 1994). Classified as Near threatened in Collar *et al.* (1994).

White shouldered Triller *Lalage sueurii*. Flores, Paloe, Alor, Besar' Lomb.

In Flores, common in lightly wooded grassland and cultivation, from sea level to 200m; in central Flores, it appears to be confined to the north coast (JV, DH), but it extends along the west coast in west Flores (Schmutz 1977), and at Nangalili on the south coast (JV). The only recent record from the east, and the only record of Butchart *et al* (1994), was from Pulau Besar, Sep 1993. First record from Lomblen, Oct 1990 (Mason 1991).

Little Minivet *Pericrocotus lansbergei*. Flores.

This attractive regional endemic (Sumbawa and Flores) is uncommon in forest from 800m upward, rarely as low as 200m (Schmutz 1977a) (JV). Butchart *et al* (1994), however, encountered the species in a variety of woodland habitats from near sea level (Kisol) to 1820m, but most commonly below 500m, in groups of 2-5. There are also sea level records from Labuhanbajo, Dec 1989 (Gibbs 1990) and Golo Bilas, as well as Wolo Tado where it was found to be common (Pilgrim *et al.* 1997).

Brown Shrike *Lanius cristatus*. Flores.

A vagrant or rare palearctic winter visitor, ail records are appended: Nov 1896, 4 collected west Flores (Hartert 1897); 20 Oct 1969, 1 collected near Nangalili (Schmutz 1977a); 25 Nov 1990, 1 near Tiwu Bowu OV).

Long tailed Shrike *Lanius schach*. Alor.

There are no recent records of this species from the Flores region.

[Lesser Shortwing *Brachypteryx leucophrys*. Alor?]

See Holmes (1995) for a record from Alor, the sole record of this species from the Flores region. Although this remains unconfirmed, being a voice record only, DH is familiar with the songs of both this species and *montana*, from Java and elsewhere, and is confident of its validity.

White browed Shortwing *Brachypteryx montana* Flores.

Uncommon in montane forest, forest edges and *Eupatorium* scrub from 600 m to 1900 m (C&B). *floris* is an isolated race endemic to Flores.

Pied Bush chat *Saxicola caprata*. Kom., Rinc., Flores, Paloe, Lomb., Alor.

In Flores, very common (JV) in grassland and cultivation with scattered scrub and trees, from sea level to 1600m. W&B gives the breeding season as July–November (the dry season), confirmed by DH who reported adults carrying food on 18 Sep and 4 Oct (in both cases in irrigated ricefields).

Chestnut capped Thrush *Zoothera interpres* Flores.

Uncommon in wooded lowlands, occasionally in rather degraded and isolated patches of woodland in the middle of cultivation; young birds being fed, Watuneso, 25 Feb 1987 (JV). Butchart *et al.* (1994) encountered the species at the Mata Wae NdaC JAngka and Kisol sites, often in close sympatry with the next species, even sometimes feeding in the same fruiting trees, and the ecological separation is not clear. K.D. Bishop (pers. obs. in C&B) reports that it is locally common around villages, occasionally even perching on the roofs of houses.

Chestnut backed Thrush *Zoothera dohertyi* Fkwes.

Occurs in woodland at 700 1200m, occasionally in snail and isolated pockets of woodland (N). Butchart *et al.* (1994) encountered the species from 350m to 1550m, but especially 750 950m, mainly in closed canopy semi evergreen rainforest at the Uinta Wae Ndae and G. Repok sfts, Them is a strong preference for primary forest JuvenilesIvare encountered 25 Aug 1 Sep one near Itumomese (1200m), Aug 1993 (Verbelen 1993) and Sep 1997 (Pilgrim *et al.* 1997). A restricted range species.

Sunda Thnish *Zoothera andromedae* Flores.

Apparently rare in montane forest but probably overlooked, and the vocalizations of this species remain unknown (C&B). AD records are annotated: 4 collected west Flores 1896 (Hartart 1897); 1 collected near Ruteng by Verheijen Dec 1969 (Schmutz 1977a); I observed new Ruteng 18 Aug aid 4 on G. Repok 24 Aug 1997 (King 1987); Mata Wae Ndae, Aug Sep 1993 (Buicivirt *et al.* 1994); 2, Golo Lusang, 15 Aug 1993 (Verbelen 1993).

Eye browed Thrusli *Turdus obscurus* Flores.

Apparently a vagrant to Flores. Since the one collected Dear Ruteng on 12 Apr 1976 (Schmutz 1977a), there is one remarkable record of ca 30 on Keli Mutu at 1600m on 19 19 Apr 1988 (JV). Some 30 thrush like birds were first observed at sunset in the tops of *Cassuarina* trees at the summit. The following morning, ca 10 Eye browed Thrushes were observed at exactly the same location, resting in the *Casuarina* trees and feeding in the *Vaccinium* scrub probably on the berries. Now were observed during other visits to. the summit. This record appears to be the latest migration doe recorded in Indonesia (see Wells 1989).

Pygnty Wren babbler *Pnoepyga pusilla* Flores

Very common in montane forest and Esparmtwx scrub at above 1200m, occurring from 900m upwards. The race everetti is endemic to Flores

Russet capped Tesia *Tesia everetti* Flores.

This restricted range species, endemic to Sumbawa and Flores, is very common in scrub and woodland from son level to 1400m, and very well adapted to degraded habitats QV). Butchart *et al.* (1994) reported a wider altitudinal range (we level to 2140m) and broad habitat tolerance provided that a shady

understorey is available. Schmutz (1977a) also reports observations by Verheijen at 1800m. The nominate form is endemic to Flores.

[Oriental Reed warbler *A crocephalus orientalis*. Flores?].

First record from Flores, described as an uncommon winter visitor early November to mid April in mangroves, reedbeds and scrub near sea level (JV). DH describes the subdued song of a 'Great Reedwarbler' from Eupatorium scrub at Ruteng airport (1100m) at midday on 13 Oct 1993, (perhaps representing the song of a migrant orientalis establishing a winter territory on arrival?). In view of the problems of field identification of Acrocephalus warblers, we prefer not to admit this to the Flores list pending more definitive evidence.

Zitting Cisticola *Cisticolajuncidis*. Kom., Pad., Rine., Flores, Paloe, Lomb., Alor. Besar:

On Flores, very common in dry and degraded short grasslands up to 1000m or above. Also reported on Pulau Besar, Sep 1993 (Butchart *et al.* 1994).

Golden headed Cisticola *Cisticola exilis*. Flores.

Common in tall grassland (eg *Imperata cylindrica* and *Saccharum spontaneum*) up to 1600m. DH noted a tendency for *juncidis* to occur in irrigated wetlands while *exilis* was mainly in dryland, but the ecological separation is not always clear.

Mountain Tailorbird *Orthotoni cuculatus*. Flores.

Very common in Eupatorium scrub and degraded montane forest at 900 to 1806 in (the altitude limits in C&B are based on observations by K.D. Bishop on G. Ranaka, 6 Jul 1989. The race *everetti* is endemic to Flores.

Arctic Leaf warbler *Phylloscopus borealis*. Flores, Alor. Kom., Rine.?

On Flores, a very common visitor to woodland and wooded cultivation up to 1000m from November to early May; very conspicuous from March when it is in song (JV). First record for Komodo, 23-24 Dec 1989 (Gibbs 1990). C&B list a record from Rinca, without source.

Timor Leaf warbler *Phylloscopus presbytes*. Flores.

Endemic to Flores and Timor, this is very common in montane forest at 1200-1600m, also recorded from Casuarina and other slightly degraded montane forest (IV). Butchart *et al.* (1994) encountered the species in montane forest and somewhat degraded habitats (including secondary scrub) at 1100-2140m, generally seen in mixed species parties.

Yellow breasted Warbler *Seicercus montis*. Flores.

Common in the undergrowth of montane forest at 1200-1500m, e.g. Keli Mutu (JV). The race *floris* is endemic to Flores.

Russet backed Rhinomyias *Rhinomyias oscillans* Flores.

A restricted range species, found on Sumba, Sumbawa and Flores, this is uncommon in forest, and rare in degraded areas, at >1000m (JV). Butchart *et al.* (1994) encountered the species only in primary semi evergreen rainforest, at 370 1500m. Owing to its intolerance of forest degradation, it is classified as Near Threatened (Collar *et al.* 1994). The nominate form was considered endemic to Flores (W&B), but the subspecific identity of birds recently discovered on Sumbawa. (Butchart *et al.* 1994) has not been determined.

Snowy browed Flycatcher *Ficedula hyperythra* Flonz.

Uncommon in montane forest at above 1200m, but inconspicuous and perhaps under recorded. Encountered above Ruteng, 1998 (T. Andrew *in litt.*) and at G. Repok, Sep 1993 (Butchart *et al.* 1994).

Rufous chested Flycatcher *Ficedula dumetoria* Fbares.

Apparently rare, in woodland between 600m mid 1000m (C&B quote a range of 600 to 1900 m). In 1896, described as 'not unfrequent in the lowlands of south Flores' (Hartert 1897), one sight record, Cereng, 12 Sep 1971 (Schmutz 1977a); a pair at Moni 9 10 Nov 1990 (JV); encountered only at the Mara Wae Ndac site by Duchart *et al.* (1994)

Little Pied Flycatcher *Ficedula westermanni*. Flores, Alor.

On Flores, common in montane forest at 1000 1600m.

Grey headed Flycatcher *Culicicapa ceylonensis* Flores.

Uncommon in woodland and wooded cultivation up to 600m, only recorded from west Flores (JV), eg Tanjung Kerita Mese and Poco, Ndeld (Butchart *et al.* 1994), or Golo Bilas and Wolo Todo (Pilgrim *et al.* 1997). The race *sejuncta* is believed to be endemic to Flores.

Flyeater *Gerygone sulphurea* Flores, Sol., Alor, Besar.

On Flores, common in every type of wooded: habitat from sea level to 1200m. Reported Pulau Besar Sep 1993 (Butchart *et al.* 1994). [Mason (1991) reported a flyeater on Lomblen which was presumably this species, but commented that it was a very pale bird cf. Plain Flyeater *G. Inornata*. Nest reported at Ruteng 1 Apr (Schmutz 1977a).

Black naped Memaich *Hypothymis azurea*. Kom., Rinc., Flores, Alor. Besar.

On Flores, common in wooded cultivation and woodland from sea level to 700m. Also encountered on Pulau Besar, Sep 1993 (Butchart *et al.* 1994).

Asian Paradise flycatcher *Terpsiphone paradisi* Flores, Lomb., Alor. Besar.

On Flores, uncommon in wooded cultivation and woodland from sea level to 500m. (800m is quoted by Schmutz, 1977a). Also encountered on Pulau Besar, Sep 1993 (Butchart *et al.* 1994).

Island Monarch *Monarcha cinerascens*. Flores, Paloe.

The only record known to us of this small island species is one bird collected, on Pulau Paloe (Verheijen 1961), where breeding was reported in April May (Verheijen 1964). The Flores listing in W&B is likely to refer to off shore islands (see C&B), possibly the Paloe record.

Flores Monarch *Monarcha sacerdotum*. Flores.

This was previously considered to be endemic to the Tanjung Kerita Mese region of SW Flores, since its discovery at Mata Wae Ndae, Cereng and Sesok (Paku Langka area) in undisturbed forest at 400 1000m (Schmutz 1977a, 1978). Borchert *et al.* (1994) encountered this species in primary semi evergreen rainforest at 350 970m, mostly at 700 900m. "suggesting an intolerance of moist deciduous, monsoon forest (at the lower altitudinal range) and lower montane forest". Population density was estimated at 2.34/ha (Butchart 1993). A recently fledged chick was observed on 26 Aug and an imm. on 28 Aug. Subsequently the species has been observed by F. Verbelen (1993) and F. Lambert (verbally to Butchart, 1994) close to the main Labuhanbajo Ruteng road near Paku, 33 km east of Labuhanbajo. Classified as Endangered in Collar *et al.* (1994).

More recent records, by Pilgrim *et al.* (1997), at Cems, near Wangkung (Pota Wangka) on 17 Sep 1997, and subsequently at Golo Bilas (a site along a road some 9 km east of Labuhanbajo) extend the known range outside the Tanjung Kerita Mese region.

Spectacled Monarch *Monarcha trivirgatus*. Flores, Lomb., Alor.

On Flores, reported to be uncommon in lowland forest in SW Flores, observed at 400m in rainforest at Mata Wae Ndae (Schnitz 1977a). K.D. Bishop (pers. comm.) reported a few individuals some three to five metres above ground in tall secondary growth near Poco Ndeki, 7 Jul 1989. Not definitely reported by Butchart *et al.* (1994), but Verbelen (1993) also reports its presence on the slopes of Poco Ndeki, while Pilgrim *et al.* (1997) reported it from Golo Bilas.

Broad billed Flycatcher *Myiagra ruficollis*. Alor. Lomb..

Mason (1991) reported the first record from Lomblen on 7 Oct 1990, in mangroves at Telok Lewaling.

Brown capped Fantail *Rhipidura diluta*. Flores, Lomb

Endemic to Sumbawa and the Flores region, this is common on Flores in woodland from sea level to 1000m and very common above 1000m; regularly recorded in degraded habitat (JV). Encountered by Butchart *et al.* (1994) at all the mainland sites from sea level to 2140m, in both undisturbed and much degraded forest types.

Rufous Fantail *Rhipidura rufifrons* Flores, Paloe, Alor. Lomb

On Flores, common in mangroves and adjacent scrub, and rare in lowland forest. Also encountered on Pulim Beser, Sep 1993 (Butchart *et al* 1994). First record for Lomblen, 16 Oct 1990 (Mason 1991).

Common Goldft Whistler *Pachycephala pectoralis*. Kom., Rinc., Flores, Lomb., Adam, Pont., Alor. Besar

On Flores, common in wooded cultivation mid woodland from sea level to 1000m (JV), but skulking and more often heard than seen (DH). Also encountered on Pulau Besar, Sep 1993 (Butchart *et al* 1994). The race endemic to Sumbawa and the Fkwes region is *fulvotincta*.

Bare throated Whistler *Padiricephala nudigula* Flores.

A restricted range species, endemic to Sumbawa and Flores, this is very common and vocal in montane forest in west Flores at above 1000m, also recorded in Cassuarina and slightly degraded forest (JV). Butchart *et al.* (1994) encountered this species from 400 to 2000m. in semi evergreen forest but especially along rivers and in montane forest. DH concluded a greater tolerance to substantial habitat degradation than assumed by other observers, for example along the main road east from Ruteng. Schmutz (1977a) reports a rather local distribution, not present on all mountains above 1000m. The only reports from outside Manggarai appear to be from Keli Mutu (JV, T. Andrews in 1&. 1988, Gibbs 1990), and the species should be sought on mountains further east. The nominate form is endemic to Flores.

Great Tit *Parus major* Kom., Rinc., Flores, Paloe, Alor. Lomb

Very common in mangroves and wooded cultivation near sea level, and common in montane forest at above 1000m, but rare in the intermediate altitudinal zones (JV). First record from LombIM 16 Oct 1990 (Mason 1991).

Golden rumped Flowerpecker *Dicaeum annae*. Flores. Besar

A restricted range species endemic to Florewand Sumbewa, this is common in cultivation from am level to 1200m (Ruteng DAH, T. Andrews *in litt.* 1988, Gibbs 1990, Verbelen 1993), Schmutz quotes a record from 1500m. A nest reported on I May (Schmutz 1977a). Butchart *et al.* (1994) found it common in all closed cam" semi evergreen forest sites, recorded from sea level (Pulau Besar) to 1800m, but rare at sites with only moist deciduous monsoon forest or degraded forest it was only encountered outside closed canopy forest on the clewed lower dopes of POCO Ranoka between 1180 and 1570m, in scattered trees, or in patchy degraded forest on Pulau Besse.

Thick billed Flowerpecker *Dicaeum agile*. Flores, Alor. Besar, Lomb.?

On Flores, this species is rare or overlooked, and was not recorded by JV. Recent records are as follows: 5 on 19 Aug and I on 21 Aug 1987 near Kisol (King 1987); 3 on 7 Aug and I on 8 Aug 1991 near Ruteng (King 1991); 1 on 14 Sep 1993 near Bajawa at 650m (DH); Mata Wae Ndae, Kisol and Pulau Besar, Sep 1993 (Butchart *et al.*, 1994). C&B also lists Lomblen, without source.

Black fronted Flowerpecker *Dicaeum igniferum*. Kom., Flores, Pant., Alor. Besar.

A restricted range species, also known from Sumbawa; on Flores, common in cultivation and woodland from sea level to 750m (JV). K.D. Bishop (pers. comm.) observed birds in song in degraded monsoon woodland above Lewotobi at *ca.* 150m elevation. Butchart *et al.* (1994) reported a preference for degraded habitats, being commonest in large clearings or heavily degraded forest, with records up to much higher elevations although rare above 1200m; also present Pulau Besar. Both Gibbs (1990) and Verbelen (1993) reported the species at higher elevations above Ruteng. First record for Lomblen, at Batanglolo, 16 Oct 1990 (Mason 1991). Female carrying nest material at Wolo Tado on 2 Sep 1997 (Pilgrim *et al.* 1997).

Blood breasted Flowerpecker *Dicaeum sanguinolentum*. Flores.

Common in montane forest, also recorded from *Casuarina* forest and severely degraded woodland (JV). The race *rhodopygale* is endemic to Flores.

Brown throated Sunbird *Anthreptes malacensis*. Kom., Pad., Flores, Lomb., Adon., Pant., Alor. Besar.

On Flores, common in cultivation from sea level to >500m (JV). Present Pulau Besar 19 Sep 1993 (Butchart *et al.* 1994).

Olive backed Sunbird *Nectarinia jugularis*. Rinc., Flores, Paloe, Lomb., Kom., Sabolan Besar, Besar.

On Flores, very common near sea level and in mangroves, common to >700m, in cultivation (JV), but also present above Ruteng 1988 (T. Andrews *in litt.* 1988) and Dec 1989 (Gibbs 1990 altitude not stated). New island records: Komodo, 20 Sep 1989 (K.D. Bishop *in litt.*), Dec 1989 (Gibbs 1990) and Oct 1990 (Mason 1991); Pulau Sabolan Besar, 20 May 1993 (Mason 1993); Pulau Besar, 19 Sep 1993 (Butchart *et al.* 1994).

Flame breasted Sunbird *Nectarinia solaris*. Flores, Lomb., Alor. Kom., Besar.

A restricted range species, also known from Sumbawa, Timor and Wetar. On Flores, common in cultivation, from <700m. to 1000m. (JV). Butchart *et al.* (1994) encountered this species commonly at all sites from sea level to 900m, including Pulau Besar, also observing it in dry scrub. First records from Komodo: 21 Sep 1989 (Bishop 1992), confirmed Dec 1989 (Gibbs 1990) and 12 Oct 1990 (Mason 1991).

Oriental White eye *Zosterops palpebrosus*. Flores.

Common in wooded cultivation and forest at between 500 and 1200m (JV, Butchart et al 1994).

Mountain White eye *Zosterops montanus* Flora.

Common in wooded cultivation and forest at above 1000m (JV), but ecological separation from previous species not determined.

Yellow spectacled White eye *Zosterops wallacei* Kom., Rinc., Flores, Lomb., Besar.

A restricted range species, also known from Suartbawa and Sumba. On Flores, this distinctive species is common in wooded cultivation and forest from sea level to 800m. A also regularly recorded in severely degraded habitats (JV). Butchart *et al* (1994) encountered the species at all lowland sites from sea level to 1050m, commonest in low bushes and scrub, forest edge and heavily degraded forest, and tolerant of very dry habitat; it was abundant on Pulau Besar. Young were being fed, and also courtship feeding observed, at Wolo Tado, Aug 1997 (Pilgrim *et al*. 1997).

Lemon bellied White eye *Zosterops clitoris*. Kom, Rinc., Flores, Paloe. Sabolan Besar, Besar.

Very common in mangroves and wooded cultivation near sea level, but not recorded from the south coast (JV). Present on Pulau Sabolan Besar, 20 May 1993 (Mason 1993) and Pulau Besar 19 Sep 1993 (Butchart et al. 1994). C&B quotes the altitude range on Flores as being up to 1200m.

Ashy bellied White eye *Zosterops citrinellus* Alor. Lomb.

First record for Lomblen: in mangroves at Teluk Lewaling, 7 Oct 1990 (Mason 1991). The current status on Alor is not known. The race *harteri* is endemic to Alor, but may be the identity of the form discovered on Lomblen.

Yellow browed Darkeye *Lophozosterops superciliaris* Flores.

Restricted to Sumbawa and Flores, this species is common in montane forest, and also occurs in Cantarina forest but not in moire degraded habita (JV), although DH encountered parties in scrub and forest margins at above 1100m near Ruteng, and Schmutz (1977a) also reported seeing it commonly in very thin secondary growth. Butchart et al (1994) found the species to be common at 1100 2140m, and tolerant of logged and naturally degraded forest; generally in small grows but gum was one record of a flock of 56, and the species was commonly present in mixed species flocks. The nominate form is endemic to Flores.

Crested Darkeye *Lopharosterops dohertyi*. Flores.

Restricted to Sumbawa (and Satonda) sod Flores. Common in forest al 700 1000m, recorded uncommonly in wooded farmland and scrub (JV). Butchart *et al*. (1994) encountered this species commonly at sites with closed canopy forest from 300m (rare Kisol) to 1300m, and considered that it

was replaced by the previous species above 1200m. They had only a single record from scrub habitat, at 1300m, although Schmutz (1977a) describes the habitat as including very thin secondary growth. By contrast, Pilgrim *et al.* (1997) found it common at Golo Bilas in degraded forest at 250–350 m. The nominate form is endemic to Flores. It is listed as Near threatened by Collar *et al.* (1994).

Thick billed Darkeye *Heleia crassirostris*. Flores.

Restricted to Sumbawa and Flores, this species is uncommon at 300–1200m in scrub and forest. It occupies a broad range of habitats, including very degraded sites such as *Eupatorium* scrub; it also occurs in a wide altitudinal zone, but apparently only in very low densities (JV). Butchart *et al.* (1994) encountered the species in semi evergreen forest and moist deciduous forest, but with moderate tolerance of degraded forest edge habitat and dry forest, at 50–1400m, while Pilginn *et al.* (1997) also encountered it in the lowlands at Wolo Tado and Golo Bilas.

Scaly crowned Honeyeater *Lichmera lombokia*. Flores.

Restricted to Lombok, Sumabawa and Flores, it is common in montane forest at above 1000m, uncommon down to 700m (JV). Recorded by Butchart *et al.* (1994) at 950m (rare) to 2140m, becoming commoner with increasing altitude, in forest and degraded forest, in pairs and small groups.

Brown Honeyeater *Lichmera indistincta*. Flores, Alor. Kom., Lomb.

JV was unable to confirm this species on Flores, reporting only the presence of a *Lichmera* sp other than *lombokia* as being common at above 1000m in *Eucalypt* forest in east Flores. Butchart *et al.* (1994) encountered the species only at Kisol, a lowland site. C&B gives a somewhat ambiguous picture of altitudinal range, implying that it occurs mainly above 1000m. Further information is now required. First island records are: Komodo, 20–21 Sep 1989 (Bishop 1992), reconfirmed 12 Oct 1990 (Mason 1991); Lombok, 7 Oct 1990 (Mason 1991). The sub species occurring in the Lesser Sundas is *limbata*.

Helmeted Friarbird *Philemon buceroides*. Kom., Rinc., Flores, Lomb., Pant., Alor. Besar.

On Flores, common in woodland from sea level to 700m, occasionally also in mangroves and in montane forest up to 1500m (JV). Also reported on Pulau Besar, Sep 1993 (Butchart *et al.* 1994).

Red Avadavat *Amandava amandava*. Flores.

Common in grasslands and cultivation at 800–1000m, occasionally recorded at sea level, usually in small flocks of <10 birds (JV). Also present at higher elevations near Ruteng (Verbelen 1993).

Zebra Finch *Taeniopygia guttata*. Kom., Pad., Flores, Paloe, Alor. Lomb.

Common to very common in dry grassland and cultivation near sea level (JV). First record for Lombok: Batanglolo, 16 Oct 1990 (Mason 1991).

Tawny breasted Parrot Much *Erythrura hyperythra*. Flores.

Rare in montane forest. Subsequent to the specimen of Rensch (1928), records are as follows: several collected (without date) in montane forest near Ruteng (Schmutz 1977a); 2 near Ruteng 22 Avg 1987 (King 1997); 1 on Ketu Mutu 16 Mar 1998, &W above Ruteng 1998 (T. Andrews *in litt.* 1988) and 26 28 Dec 1989 (Gibbs 1990); Golo Lusang Avg 1993 (Verbelen 1993) and Oct 1996 (Mark von Beim *in litt.* to J. Pilgrim); G. Rawl Sep 1993 (Butchart *et al.* 1994); single at Rana Mese on 9 Sep 1997 (Pilgrim *et al.* 1997).

Black faced Munk *Lowhwa molucca*. Flores, Paloe, Pant.. Kom., Besar, Alor.

On Flores, common in cultivation from sea level to above 1000m, usually in small flocks of <20 birds (JV). First island records: Komodo, 7 Jul 1992, being common with many immature birds (K.D). Bishop, peo. comm.), reconfirmed with 6 on 4 Sep and 30 on 5 Sep 1993 (Butchart *et al.* 1994); Pulau Besar, Sep 1993 (Butchart *et al.* 1994); Alor, 10 Dec 1994 (Holmes 1995).

Scally breasted Musix *Lonchura punctulata* Flores, Lomb.

On Flores, very common in cultivation from sea level to >1000m, occasionally in large flocks of >100 birds (JV). Also recorded at higher altitude above Ruteng, Dec 1989, Gibbs 1990).

Five colloured Munis *Lonchura quinticolor*. Flores, Alor.

On Flores, uncommon in cultivation from sea level to > 1000m; usually in pairs or small parties of <5 but occasionally in flocks of up to 150 (in ricefields bordering mangrove at Tambak Koliaduk) (JV). Observed above Ruteng at >1200m, Aug 1993 (Verbelen 1993).

Pale headed Munis *Lonchura pallida*. Flores, Paloe, Alor.

On Flores, uncommon in cultivation up to >1000m, but locally very common near sea level along the north coast (JV). DH only encountered it in irrigated rice at sea level.

Tree Sparrow *Passer montanus* Flores, Kom.

Very common in the main towns (Ruten& Endle, Maumere Laramuka) and also smaller urban such as Aimere, and the seminaries of Kisol; and Uxlacro (JV). Described by Schmutz (1977a) as present for the past 23 years, first in the harbour towns and in Ruteng. Also present on Komodo (various observers).

Short tailed Starling *Apronis minor* Flores, Paine.

On Flores, common in montane forest in the west. Schmutz (1977a) describes records from 130 1200m. There appear to be no records outside Maunggarai.

White vented Myna *Acridotheres javanica*. Flores

Presumably introduced up to 3 present 30 Jun to 23 Dec 1990, Tambak Koliaduk (N).

Hill Myna *Gracula religiosa*. Flores, Pant., Alor. Lomb., torn sea level to 600m.

The young are often taken On Flores, locally common in wooded cultivation f from the nest for trade, and farmers confirm a considerable recent decline (JV). The first record from Lomblen was at Batanglolo, 16 Oct 1990 (Mason 1991).

Black naped Oriole *Oriolus chinensis*. Kom., Rinc., Flores, Paloe, Lomb., Pant., Alor. Besar.

On Flores, common in wooded cultivation and woodland from sea level to 1000m (JV). Present Pulau Besar, Sep 1993 (Butchart *et al.* 1994).

Wallacean Drongo *Dicrurus densus*. Kom., Rinc., Flores, Pant., Alor. Besar Lomb.

On Flores, common from sea level to 1650m (DAH), in habitats ranging from lightly wooded cultivation to undisturbed forest (JV). Present Pulau Besar Sep 1993 (Butchart *et al.* 1994). First record for Lomblen: Teluk Leba Leba, 18 May 1993 (Mason 1993).

White breasted Wood swallow *Artamus leucorhynchus*. Rinc., Flores, Paloe, Alor. Kom., Sabolan Besar. Besar.

On Flores, very common in lightly wooded cultivation from sea level to 1700m (JV). New island records: Komodo, Sep 1989 and Jun 1990 (Bishop 1992); Pulau Besar, Sep 1993 (Butchart *et al.* 1994); Pulau Sabolan Besar, 20 May 1993 (Mason 1993).

Flores Crow *Corvus florensis*. Flores.

The type specimen of this distinctive endemic was collected near Maumere at the end of the 19th century (Buettikofer in Rensch 1931); this area was densely forested at the time (Metzner 1982), although now long since totally deforested. It has probably always been uncommon, as indicated by the fact that Rensch never encountered it. It is a bird of lowland forest, up to 700m (950m, Butchart *et al.* 1994), probably now confined to the western half of the island. Locally common in undisturbed forest, it is occasionally encountered in small relict patches of forest and even in lightly wooded terrain. Thus DH has a voice record from open scrub near Reo. Butchart *et al.* (1994) recorded it from semi evergreen rainforest to degraded moist deciduous forest especially along water courses. Recent records are from the west only, east to Kisol and Nangarawa (Manggarai several observers) on the south coast, and Mbai (Ngada DH) and Mausambi (Ende Jepson & Bowe 1997) on the north coast. However well wooded habitats are still quite widespread in northern Ende, a region that has never received an ornithological survey (DH). Up to 15 were reported on Poco Ndeki, Kisol, in August 1987 (Buck 1988), and 10 in Aug 1991 (S. Smith *in litt.* 1991 to Butchart). Pilgrim *et al.* (1997) recorded it as frequent in 1997 at Wolo Tado and Golo Bilas. As the species primarily requires wooded lowland habitats, it should be considered as one of Flores' most vulnerable endemics (JV). Classified as Vulnerable (Collar *et al.* 1994).

Large billed Crow *Corvus macrorhynchos* Kom., Pad., Rinc., Flores, Paloe, Lomb., Alor, Besar. Uncommon in open cultivation from sea level to 1000m (JV). A loose party of crows seen in the undergrowth of a coconut plantation along the road to Danau Asmara in the cam was assumed to be this species (DH). Present Pulau Besar Sep 1993 (Butchart *et al.* 1994). [The record of Slender billed Crow *C. enca* in Bishop (1992) is an error (ILD. Bishop, pers. Comm.)].

Conclusions

The remarkable discovery of three raptor species on Flores, presumed resident, only in the last decade, is an indication of the state of knowledge of this island's avifauna, although enormous progress has been made by recent expedition. A lot of basic survey work still remains to be done. For example, the isolated population of Lewia's Rail was reconfirmed as recently as the 1950s but very little is known about it. The biggest mystery bird still remains the Flores Scopsowl, dismissed by some as a morph of the Moluccan Scopsowl, but it is to be hoped that this will be resolved.

Most bird watchers seeking the island's endemic species will have the best chance of success along the road from Labuhanbajo via Ruteng to Ende, and a few will continue rapidly on to Kefimutu and Mainnere (see *Birding Indonesia*, Jepson & Oumsted 1997). However, it must be emphasized that the first author was resident in, and obtained most of his records from, the eastern part of the island, and that the type specimen of Wallace's Hanging parrot was collected in the east, where its presence was reconfirmed in 1987. Likewise the type specimen of the Flores Crow was collected in the now totally deforested Maunere region. A perusal of Map 2 will show that most of the remaining forests lie in the west, but there has actually been very little survey work in the lowland forests lying in the north of this region. The University of East Anglia expedition in 1997 focussed on these (east to Riung), but those remnants lying in the north of Ende district and in the east of the island urgently await further surveys.

Likewise, the eastern islands have been sadly neglected, yet extremely brief recent visits to some of these added many new species to the island lists. Alor is of sufficient size and variety to carry a distinctive fauna, and the voice record of a Lesser Shortwing, and a breeding colony of Tree Martins, are indicative of the discoveries that await an enterprising visitor. Very brief stopovers on Lombok from a cruise vessel produced no less than 27 new species for the island, but by no means were most of these migrant species. A perusal of Appendix 2 will reveal how little is known of the birds of Solor, Adonara and Pantar.

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APPENDIK 1. COORDINATES

The single letter after the name is an abbreviation for the district name (*kabupaten*):
 M = Manggarai, N Ngada, E = Ende, S = Sikka, T = Flores Timur (East), A = Alor.
 The prefix P. (Pulau = island) is used only for the small off shore islands.
 Tg = Tanjung (Promontory)

Airnere (N) OrSO'S, 120°5 VE	: Look (M) Og'41'S, 119°51'E
Adonara (T) 08°25'S, 123°10'E	Magepanda (S) OnTS, 122°03'E
Alor (A) 08°25'S, 124°30'E	~ Wae Ndae (M) OV4O'S, 11 9°55'E
Bajawa (N) 08°47'S, 120°58'E	Mmdoo (S) 08047'S, 122013'E
Batanglolo, Lomblen (T) 08°33'S, 123° YE	Maumere (S) 08°37'S, 122°1 YE
Benteng Jawa (M) 08°27'S, 120°34'E	Mhai (N) 08°35'S, 121°14'E
Bola (S) 08°44'S, 122°1 WE	Mborong (M) 08°48'S, 120°37'E
Cancar (M) 08°35'S, 120°23'E	Moni (E) OS45'S, 12 1'S 1'E
Cereng (M) 08°40'S 11 9°54'E	Nangahure (S) OrWS, 122°10'E
Dampeki (M) 08° 1 8'S, 120°36'E	Nangalili (M) 08°46'S, 120°09'E
Danau Asmara (7) Or 1 VS, 122°47'S	Nangarawa (M) OrSO'S, 12(r40–E
Danau Dolat (Labuhanbajo) (M)	Nggorang (M) (south of Labuhanbajo)
Ende (E) 08°5 VS, 12 MWE	Nisar (M) 08°47'S, 11 9158'E
Golo Bilas (M) 0r3 1'S, 11 9MSTE	Nobo (M) 08o34'S, 120°00'E
Golo Lusang (pass S of Ruteng) (M)	Nunung (M) 08°47'S, 120°0 VE
Golo Ponto (M)	Padar (M) OS'45'S, 11 9'35'E
Gosong Bone (S) 08°23'S, 122°14'E	Paga (S) 08o47'S, 122003'E
Gunung Egon (S) 0r40'S, 12227'E	Paku (M) 08°38'S, 11 957'E
Gunung Repok (No 09°44'S, 12(Y2 VE	Panteá Koka (S) 08°48'S, 122°02'E
Joneng (M)	Pantar (A) 08°25'S, 1249 O'E
Kali Wajo (S) 0r46'S, 122°04'E.	Poco Ndeki (near Kiwi) (M)
Kandang (M) (Nunung)	Poco Ranaka M 08°38'S, 120°33'E
Keli Mutu (E) Og'46'S, 121°49'E	:P~ (M) OnO'S, 120MWE
- Kisol (M) 08°47'S, 120°39'E	P. Besar (S) OnTS, 12227'E
Komodo (W) OnYS, 119°28'E	P. ~la (S) OMWS, 122°23'E
Labuhanbajo (M) 08° 1 4'S, 11 9~53'E	P. Palue (S) OMO'S, 121°43'E
l~ (near Mata Wae Ndae) (M)	P. Pangabatang (S) Or 29'S, 122' 28'E.
Larantuka (T) Or21'S, 122°59'E	P. Sabolan Besar (M) Or24'S, 1 1949'E.
Ledalero (S) 08°40'S, 122°1 1'E	P. Serbetti (T) 08109'S, 123102'E.
Lembor (M) (08°45'S, 120°09'E	P. Tiga (M) 08°36'S, 11 gv'35'E.
Lewotobi (1) 08130'S, 122146'E	Rana Kulan (M) 08o27'S, 120°42'E
Lomblen (T) Og'25'S, 123°30'E	Ram Mese (M) 08°38'S, 12(r34'E

Rangot- Lema (M)	Tanjung Lopez (T) 08*27'S, 122'52'E
Reo (M) 08° 8'S, 120'29'E	Teluk Leba Leba (T) 08'20'S, 123'22'E
Ria (M) 08'30'S, 12T58'E	Tiwu Bowu (S) 08'3 VS, ? 12 1'02'E
Rinca (M) 08'45'S, 11 945'E	Tjara (M)
Riung (N) 08'26'S, 121'02'E	Waiara (S) 08'3 g'S, 122'1 9'E
Ruteng (M) 08'36'S, 120'28'E	Wai Mokol (N) 08'40'S, 120'5 VE
Sesok (M) 08'46'S, 120'03'E	Waioti (S) 08038'S~ 122015'E
Sika (S) 08'45'S, 1229 TE	Wai Sano (M) 08'42'S, 120'00'E
Soa (N) 08*42'S, 12 1'02'E	Wangkung (M) 08*3 VS, 120'01'E
Tambak Koliaduk (S) 08'36'S, 122'1 TE	Watuneso (E) 08'47'S, 12 1'5 8'E
Tanjung Barat (S) 08'2TS, 122'29'E	Wolo Tado (N) 08'28'S, 121'22'E
Tanjung Kerita Mese (Mata Wae Ndae) (M)	

APPENDIX 2.
CHECKLIST OF SPECIES TABULATED BY ISLAND.

i

Every species is tabulated according to island from which it has been reported. The first column (Flor) refers to the mainland of Flores (from Labuhanbajo in the west to Larantuka in the east), while the other columns are self explanatory (Komodo, Padar, Rinca, Besar, Solor, Adonara, Lomblen, Pantar and Alor). Not listed here are the small islands of Sabolan Besar, Paloe and Serbetti, which are given in the main text where relevant. Pulau Pangabatang is included under Pulau Besar, in Maumere Bay, but the records from Pangabatang are marked in brackets.

x (lower case) signifies that the species has been recorded but not recently; X (upper case) signifies a record over the past three decades; and N signifies a new island record (since the publication of White & Bruce 1986).

	Flor	Kom	Pad	Rinc	Besar	Sol	Adon	Lomb	Pant	Alor
<i>Cacomantis sepulcralis</i>	X									N
<i>Chrysococcyx basalis</i>	X	N								
<i>Chrysococcyx lucidus</i>	X	N								
<i>Chrysococcyx russatus</i>	x									
<i>Eudynamys sp</i>	x	x			N			N		N
<i>Scythrops novaehollandiae</i>	x									x
<i>Centropus bengalensis</i>	x	x	x	x	N				x	X
<i>Tyto alba</i>	x				N					x
<i>Tyto longimembris</i>	x									
<i>Otus alfredi</i>	X									
<i>Otus magicus</i>	X				N			x		
<i>Otus silvicola</i>	X									
<i>Ninox novaeseelandiae</i>										x
<i>Ninox scutulata</i>	X									
<i>Caprimulgus macrurus</i>	X									
<i>Caprimulgus affinis</i>	X	N								x
<i>Aerodramus fuciphagus</i>	X	N			N					
<i>Collocalia esculenta</i>	X				N					X
<i>Apus pacificus</i>	X									
<i>Apus affinis</i>	N									
<i>Alcedo atthis</i>	X				N					x
<i>Alcedo caerulescens</i>	N									
<i>Ceyx erithacus</i>	X									
<i>Pelargopsis capensis</i>	X									
<i>Halcyon sancta</i>	X	X		x	N					x
<i>Halcyon chloris</i>	X	X			N	?	?	N		X
<i>Caridonax fulgidus</i>	X									
<i>Merops philippinus</i>	X	X		x						
<i>Merops ornatus</i>	X				N			X		x
<i>Eurystomus orientalis</i>	X	N			N					x
<i>Dendrocopos moluccensis</i>	X	x		x	N			x		X
<i>Pitta elegans</i>	X						x	x		x
<i>Mirafra javanica</i>	X	x	x	x						
<i>Hirundo rustica</i>	X	?						N		N
<i>Hirundo tahitica</i>	X	x	x					N		N
<i>Hirundo striolata</i>	X	N		x						x
<i>Cecropis nigricans</i>	X									N
<i>Motacilla flava</i>	X				N					

	Flor	Kom	Pad	Rinc	Besar	Sol	Adon	Lomb	Pant	Alor
<i>Motacilla cinerea</i>	X									N
<i>Anthus novaeseelandiae</i>	X	X	x	x						
<i>Anthus gustavi</i>	x									
<i>Coracina personata</i>	X	X		x	N			x		X
<i>Coracina novaehollandiae</i>	X	N						N		x
<i>Coracina tenuirostris</i>								x		
<i>Coracina dohertyi</i>	X									
<i>Lalage sueurii</i>	X				N			N		x
<i>Pericrocotus lansbergei</i>	X									
<i>Lanius cristatus</i>	X									
<i>Lanius schach</i>										x
<i>Brachypteryx leucophrys</i>										?
<i>Brachypteryx montana</i>	X									
<i>Saxicola caprata</i>	X	X		x				X		X
<i>Zoothera interpres</i>	X									
<i>Zoothera dohertyi</i>	X									
<i>Zoothera andromedae</i>	X									
<i>Turdus obscurus</i>	X									
<i>Pnoepyga pusilla</i>	X									
<i>Tesia everetti</i>	X									
<i>Acrocephalus orientalis</i>	?									
<i>Cisticola juncidis</i>	X	X	x	x	N			x	x	
<i>Cisticola exilis</i>	X									
<i>Orthotomus cuculatus</i>	X									
<i>Phylloscopus borealis</i>	X	N		?						x
<i>Phylloscopus presbytes</i>	X									
<i>Seicercus montis</i>	X									
<i>Rhinomyias oscillans</i>	X									
<i>Ficedula hyperythra</i>	X									
<i>Ficedula dumetoria</i>	X									
<i>Ficedula westermanni</i>	X									x
<i>Culicicapa ceylonensis</i>	X									
<i>Gerygone sulphurea</i>	X				N	x				x
<i>Hypothymis azurea</i>	X	X		x	N					X
<i>Terpsiphone paradisi</i>	X				N			x		x
<i>Monarcha cinerascens</i>	X									
<i>Monarcha sacerdotum</i>	X									
<i>Monarcha trivirgatus</i>	X							x		x

	Flor	Kom	Pad	Rinc	Besar	Sol	Adon	Lomb	Pant	Alor
<i>Myiagra ruficollis</i>								N		X
<i>Rhipidura diluta</i>	X							x		
<i>Rhipidura rufifrons</i>	X							N		X
<i>Pachycephala pectoralis</i>	X	X		x	N		x	x	x	x
<i>Pachycephala nudigula</i>	X									
<i>Parus major</i>	X	X						N		x
<i>Dicaeum annae</i>	X				N					
<i>Dicaeum agile</i>	X				N			?		x
<i>Dicaeum igniferum</i>	X	X			N				x	X
<i>Dicaeum sanguinolentum</i>	X									
<i>Anthreptes malacensis</i>	X	X	x		N		x	x	x	x
<i>Nectarinia jugularis</i>	X	N		x	N			X		
<i>Nectarinia solaris</i>	X	N			N			x		X
<i>Zosterops palpebrosus</i>	X									
<i>Zosterops montanus</i>	X									
<i>Zosterops wallacei</i>	X	X		x	N			x		
<i>Zosterops chloris</i>	X	X		x	N					
<i>Zosterops citrinellus</i>								N		X
<i>Lophozosterops superciliaris</i>	X									
<i>Lophozosterops dohertyi</i>	X									
<i>Heleia crassirostris</i>	X									
<i>Lichmera lombokia</i>	X									
<i>Lichmera indistincta</i>	X	N						N		X
<i>Philemon buceroides</i>	X	X		x	N			X	x	X
<i>Amandava amandava</i>	X									
<i>Taeniopygia guttata</i>	X	X	x					N		X
<i>Erythrura hyperythra</i>	X									
<i>Lonchura molucca</i>	X	N			N				x	N
<i>Lonchura punctulata</i>	X							x		
<i>Lonchura quincticolor</i>	X									X
<i>Lonchura pallida</i>	X									x
<i>Passer montanus</i>	X	N								
<i>Aplonis minor</i>	X									
<i>Acridotheres javanicus</i>	N									
<i>Gracula religiosa</i>	X							N	x	X
<i>Oriolus chinensis</i>	X	X		x	N			X	x	X
<i>Dicrurus densus</i>	X	X		x	N			N	x	X
<i>Artamus leucorhynchus</i>	X	N		x	N					x
<i>Corvus florensis</i>	X									
<i>Corvus macrorhynchos</i>	X	X	x	x	N			x		X