

A review of historic and recent bird records from Lombok, Indonesia

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The birds of Lombok, in the Lesser Sunda islands of Indonesia, are relatively poorly known owing to few observers having visited the island, both in recent years and in the past. The limited number of available historical records are summarised here and compared with all available modern day records. A total of 180 species have been recorded on the island, including 13 threatened, Near Threatened or restricted-range species. Thirty-six species have not been recorded since 1930, including the globally threatened Flores Green Pigeon *Treron floris* and the Near Threatened Cinnamon-collared Kingfisher *Todiramphus australasia*. The Critically Endangered Yellow-crested Cockatoo *Cacatua sulphurea* has only been reported on two occasions since 1973. The present status on Lombok of many of these species is unclear, and more survey effort is required, especially within the important Gunung Rinjani National Park.

INTRODUCTION

Lombok (4,619 km²) is the westernmost island of the Northern Nusa Tenggara Endemic Bird Area, which also includes the islands of Sumbawa, Komodo, Flores and Alor (Stattersfield *et al.* 1998). Lombok lies c.35 km east of Bali, from which it is separated by the Lombok Straits. It is roughly circular in shape, with Gunung Rinjani (3,726 m), the third highest peak in Indonesia, located approximately in the central north. It is a very large and active volcano, and the source of all the rivers on Lombok (Monk *et al.* 1997). Dry deciduous monsoon forest is found in the lowlands, giving way to moist deciduous forest in the foothills, semi-evergreen rainforest on the slopes, and evergreen montane forest on the upper reaches of the mountain. Above 2,100 m the vegetation is dominated by *Casuarina* sp. At c.2,500 m the forest becomes more open, with a unique type of *Rhododendron* sp. forest at

2,600–2,900 m grading into low montane scrub (Coates and Bishop 1997, Monk *et al.* 1997, SDM personal observations). Gunung Rinjani National Park, which was established by the Dutch prior to Indonesia's independence (FAO/UNDP 1982), covers 1,590 km² (Morrison 2001), representing c.29% of the island's area. It is the only national park on Lombok, and protects much of the remaining evergreen hill and montane forest.

Apart from a significant tract of forest on the southwest peninsula at Batu Gendang, forest elsewhere has been cleared for logging and agriculture, especially rice fields (Monk *et al.* 1997). Human pressures on Lombok are severe. Since the mid-nineteenth century the population of Nusa Tenggara (Lesser Sundas) has increased exponentially (Monk *et al.* 1997), from less than one million in 1840, to eight million in the 1990s. The present population of Lombok is approximately 4.3 million: an increase of c.500% since the mid-



Figure 1. Map of Lombok, Indonesia, with localities mentioned in the text.

1800s. The rural population density of the island is one of the highest in the region, at 101–250 people per km² (Monk *et al.* 1997).

The UNDP/FAO National Conservation Plan for Indonesia identified five areas of conservation potential on Lombok, including Gunung Rinjani National Park (UNDP/FAO 1982). The plan also proposed a 150 km² wildlife sanctuary covering Batu Gendang on the south-west peninsula of Lombok to protect extensive lowland forest and cliffs where seabirds breed. Monk *et al.* (1997) noted that this was one of the few remaining areas of primary lowland forest in Nusa Tenggara Barat, and RePPPProt (1989) identified it as a priority conservation area. Very little information is available for the area, and it would appear that no ornithologists have visited it in recent times.

Avifauna

Alfred Russel Wallace was the first to note the differing nature of the Lombok avifauna in comparison to that of Bali to the west and Sumbawa and Flores to the east. Wallace noted 'the great contrast between the two divisions of the archipelago is nowhere so abruptly exhibited as on passing from the island of Bali to that of Lombok [*sic*], where the two regions are in closest proximity.' He found barbets, bulbuls and woodpeckers to be absent on Lombok despite occurring on Bali, and noted the appearance of cockatoos, honeyeaters and scrubfowls. He noted 'while there is a great preponderance of the forms of the Australian region in Timor, they decrease going westward, till in Lombok [*sic*] they are equalled by the Indian forms'. Mayr (1944) subsequently found that the percentage of birds of Asian origin was 73% on Lombok compared to 63% in Flores and 87% in Bali. Wallace marked the straits between Bali and Lombok (and between Borneo and Sulawesi) as the geographic boundary between the Oriental and the Australian biogeographic zones, and this boundary has been subsequently referred to as 'Wallace's Line'.

At least five species occur in Wallacea only on Lombok: Wedge-tailed Green Pigeon *Treron sphenura*, Mangrove Whistler *Pachycephala grisola*, Scarlet Minivet *Pericrocotus flammeus*, Ashy Drongo *Dicrurus leucophaeus* and Olive-backed Tailorbird *Orthotomus sepium*. However, Lombok is also notable for those species which appear to be absent from the island, including several species that occur on Bali to the west and Sumbawa to east, e.g. Yellow Bittern *Ixobrychus sinensis*, Javan Plover *Charadrius javanicus*, Common Kingfisher *Alcedo atthis*, Short-tailed Starling *Aplonis minor*, Hill Myna *Gracula religiosa* and Oriental White-eye *Zosterops palpebrosus*.

According to Stattersfield *et al.* (1998), seven restricted-range birds occur on Lombok, but none is endemic to the island, compared to 23 restricted-range species and four single-island endemics on Flores and 28 and ten respectively on Timor (Monk *et al.* 1997). The paucity of endemics on Lombok is partly a function of its proximity to Bali, comparatively small size and relatively recent connection to Sumbawa.

In general, Lombok has been infrequently visited by ornithologists, and consequently its avifauna is rather poorly known. Appendix 1 provides details of all known ornithological visits, where available. Most

recent observers have spent only brief periods of time on the island and have concentrated their efforts on the evergreen rainforests on the slopes of Gunung Rinjani. The paucity of recent visits can be explained by fact that the island holds no single-island endemics and only a small sample of the endemic and near-endemic birds of northern Nusa Tenggara.

METHODS

SDM visited Lombok during 25–29 September 1995 and conducted a brief survey of Gunung Rinjani National Park, in addition to visiting a number of locations along the west coast and in the central district. These records were collated together with historical and recently published data and unpublished information from several birders who have visited the island in recent times. As no records could be traced between Kuroda's visit in 1929 and Lincoln's in 1973 (apart from three species recorded by Horst [1935]), we used 1930 as a cut-off date to define species that have not been recorded in recent times. Taxonomy follows Inskipp *et al.* (1996) except where we note historical names/synonyms. Global conservation status follows BirdLife International (2004, 2005). Restricted-range status follows Stattersfield *et al.* (1998).

RESULTS

A total of 180 species have been recorded on Lombok (Appendix 2), plus five species which require further confirmation (Common Kingfisher, White-throated Needletail *Hirundapus caudacutus*, Nicobar Pigeon *Caloenas nicobarica*, Black Eagle *Ictinaetus malayensis* and Grey-headed Canary Flycatcher *Culicicapa ceylonensis*) and Java Sparrow *Lonchura oryzivora* which is almost certainly introduced. Thirty-six species have not been recorded since 1930, and 42 species have been added in recent years. The total includes seven restricted-range species: Flores Green Pigeon *Treron floris*, Dark-backed Imperial Pigeon *Ducula lacernulata*, Cinnamon-collared Kingfisher *Todiramphus australasia*, White-rumped Kingfisher *Caridonax fulgidus*, Chestnut-backed Thrush *Zoothera dohertyi*, Scaly-crowned Honeyeater *Lichmera lombokia* and Red-chested Flowerpecker *Dicaeum maugei*. Flores Hawk Eagle *Spizaetus floris* was given specific status by Gjershaug *et al.* (2004) subsequent to the classification of restricted-range species by Stattersfield *et al.* (1998), and will no doubt also qualify as a restricted-range species. Five species are categorised as globally threatened: Yellow-crested Cockatoo *Cacatua sulphurea* (Critically Endangered), Flores Green Pigeon (Vulnerable), Flores Hawk Eagle (Endangered), Christmas Island Frigatebird *Fregata andrewsi* (Critically Endangered) and Black-winged Starling *Sturnus melanopterus* (Endangered). A further three species are classified as Near Threatened: Malaysian Plover *Charadrius peronii*, Cinnamon-collared Kingfisher and Chestnut-backed Thrush. Thus a total of 12 species are threatened, Near Threatened or restricted-range.

Here we discuss these species, plus those that have not been recorded recently (identified as 'Pre-1930'), and others of particular interest. Unconfirmed and introduced species are listed in square brackets.

ORANGE-FOOTED SCRUBFOWL *Megapodius reinwardt*
Pre-1930. Collected by Wallace (1863); Everett collected a specimen at 900 m but found no nest mounds (Hartert 1896b). There appear to be no further records of this species on Lombok. Although it is a mobile species that may never have been resident, it seems very unlikely that such a large and relatively vocal species could be overlooked. A survey of lowland sites is required to confirm its status.

GREEN JUNGLEFOWL *Gallus varius*
Most observers prior to 1930 recorded this species, but it has only been reported once since then, at c.600 m on Gunung Rinjani (Myers 1995). Historical records document the species from 400–1,515 m. In 1896, Everett reported that it was 'not infrequently' brought into Ampenan for sale by local people (Hartert 1896b). During 1995, SDM observed a pair in a cage at a house in Mataram. This species has a large range from Java through to Sumba and Alor, and although described as common, it is thought to be declining in many areas (Coates and Bishop 1997).

PACIFIC BLACK DUCK *Anas superciliosa*
Pre-1930. A single male was collected in breeding condition during April 1896 by Everett (Hartert 1896b). Surprisingly, there appear to be no subsequent records. The species is widespread and locally common elsewhere in the Lesser Sundas (Coates and Bishop 1997) and Bali (KDB personal observations, MacKinnon and Phillipps 1993).

BARRED BUTTONQUAIL *Turnix suscitator*
Pre-1930. Two females and a male were collected by Everett in the lowlands near Ampenan (Hartert 1896b). Rensch (1931) collected a number of specimens from Swela and Ekas and observed the species up to 400 m, suggesting that the species was quite common. That it has not been recorded since then implies that the species has either declined dramatically, or more likely has been overlooked by recent observers.

BLUE-EARED KINGFISHER *Alcedo meninting*
Pre-1930. This species is known from Lombok only from a single specimen collected by Wallace (1863). Elsewhere in the region this species is found in high-quality riparian habitat, including mangrove forests (personal observations).

ORIENTAL DWARF KINGFISHER *Ceyx erithacus*
Pre-1930. Specimens were collected by Wallace (1863), Everett (a male and two females: Hartert 1896b) and Rensch (1931; one at Narmada). There appear to be no subsequent records.

STORK-BILLED KINGFISHER *Halcyon capensis*
Pre-1930. This species is known on Lombok from a single specimen collected by Wallace (1863). Although it is a large and conspicuous species, it is possible that

it has been overlooked by recent observers, who do not appear to have visited areas with suitable habitat.

CINNAMON-COLLARED KINGFISHER *Todiramphus australasia*

Near Threatened; restricted-range; pre-1930. Doherty found this attractive endemic up to 610 m (Hartert 1896a), and Rensch (1931) recorded it at Swela. Although there are no subsequent records, it is inconspicuous and easily overlooked (Coates and Bishop 1997). It occurs on Lombok, Sumba, Timor and the Banda Islands where it is found up to 700 m in lowland monsoon forest (BirdLife International 2001). This distribution is notable in that Lombok is the only known locality in the northern Lesser Sundas. On Lombok, forest clearance and the practice of setting fires in the dry season are serious threats to this species. Further surveys may reveal the continuing presence of this species on Lombok.

WHITE-RUMPED KINGFISHER *Caridonax fulgidus*
Restricted-range. This species was recorded by four collectors prior to 1930 and by three observers subsequently (see Appendix 2). It is restricted to Lombok, Sumbawa, Flores (Coates and Bishop 1997) and Adonara (Trainor 2002b). It is apparently common on Flores and Sumbawa (Verhoeve and Holmes 1999), utilising a variety of habitats including village scrub with tall trees and lightly wooded cultivation (Coates and Bishop 1997). It is classified as Least Concern, but its biology and status are poorly known (del Hoyo *et al.* 2001). Further surveys for this species are needed on Lombok.

RUSTY-BREASTED CUCKOO *Cacomantis sepulcralis*
Pre-1930. Specimens were collected by Doherty at 300 m (Hartert 1896a), Everett at 455–600 m (Hartert 1896b), and Rensch (1931; a female at Sembalun). In 1988, it was recorded from Tetebatu (Andrews 1989).

SHINING BRONZE CUCKOO *Chrysococcyx lucidus*
Pre-1930. This species was collected only by Wallace (1863).

HORSFIELD'S BRONZE CUCKOO *Chrysococcyx basalis*
This species was first recorded for Lombok in May 1990 when van Balen (in Johnstone *et al.* 1993) observed two birds at Bayan, near Batu Koq. This Austral migrant is generally uncommon throughout Wallacea (Coates and Bishop 1997). However, observations by a resident observer on Flores found it common during April–May and less common during June–August (Verhoeve and Holmes 1999), suggesting that the species may be overlooked elsewhere in the Lesser Sundas.

ASIAN KOEL *Eudynamis scolopacea*
Pre-1930. The only record for Lombok is of a specimen collected by Wallace (1863). This species is locally moderately common on Flores (Verhoeve and Holmes 1999) but otherwise uncommon, rare or overlooked in Wallacea (Coates and Bishop 1997). Although it gives loud vocalisations at certain times of the year, it is otherwise very inconspicuous and thus easily overlooked.

YELLOW-CRESTED COCKATOO *Cacatua sulphurea*

Critically Endangered. In 1856, Wallace (1863) found this species to be abundant and 'their loud screams, conspicuous white colour and pretty yellow crests rendered them a very important feature in the landscape'. He collected a specimen from Labuan Tring, south of Ampanan during June/July. Vorderman (1895) collected this species in October 1894 at Pringgabaya, Kalijaga and between Pancor and Tandjong (Tanjung) and noted that the species was found in flocks of 8–10 individuals in the interior. Doherty (Hartert 1896a) obtained two female and three male specimens from 300–1,500 m. Everett collected a pair at an unknown locality during June 1896 (Hartert 1896b). Rensch (1931) collected specimens near Narmada (200 m), Swela (400–700 m) and Sembalun (1,200 m) during March 1927, and regarded this species as 'not rare'. Judging from these records, the species was common or even abundant as recently as the late 1920s. Lincoln (1975) reported that 'cockatoos were relatively scarce on the islands'. C. R. Trainor (in BirdLife International 2001) reported one bird at an unstated location during 2000, and V. Nijman (*in litt.* 2004) reported a provisional sight record of a single bird in forest on the northern slopes of Gunung Rinjani in August 2001. The species has suffered a catastrophic population decline throughout its range since the 1970s, largely as a result of trapping for the pet trade, exacerbated by ongoing habitat destruction (BirdLife International 2001).

[ELECTUS PARROT *Electus ororatus*

Everett stated that *Electus* sp. incert. was 'sometimes brought into the town of Ampanan by the hill natives, who declare it is not uncommon in places, and that it flies wild in the jungle' but he saw only one bird brought in by the local people and considered 'whether this parrot is one of the more eastern species which has escaped from captivity or is an endemic species'. Given that the species is now known to occur no further west than Sumba, it is clear that these were birds traded from further east.]

EDIBLE-NEST SWIFTLET *Collocalia fuciphaga*

White and Bruce (1986) pointed out that the nests and two juveniles reported by Rensch (1931) are 'clearly not of this species and its presence there is not clear'. The first unambiguous record of this species on Lombok would appear to be by Thomas (1994), who found it to be common between Pos II and Batu Koq on the slopes of Gunung Rinjani. Myers (1995) saw it on all dates in a variety of habitats. Garcia (1997) recorded small flocks over forest on the north-west foothills of Gunung Rinjani. This species occurs throughout the Lesser Sundas (Coates and Bishop 1997), it is common on neighbouring Sumbawa (Butchart *et al.* 1996) and very common on Flores (Verhoeve and Holmes 1999).

[WHITE-THROATED NEEDLETAIL *Hirundapus caudacutus*

Rensch (1931) observed some large 'hirundids' on the outer northern slopes of Gunung Rinjani. He noted that they showed a bright throat and brown underparts but he was unable to collect specimens. The

record is unconfirmed, but included here to alert other observers to the possibility of this species's presence.]

ASIAN PALM SWIFT *Cypsiurus balasiensis*

SDM recorded this species on 25 September 1995 in a coconut palm plantation in the Mataram area. Subsequently, Garcia (1997) saw two individuals over a coconut palm grove south of Pemenang during 1997.

GREY-RUMPED TREESWIFT *Hemiprocne longipennis*

This species was first recorded in 1990 by Johnstone *et al.* (1993). Subsequently, it has been recorded by many observers. Given the conspicuous behaviour of this species, it is unlikely that earlier ornithologists overlooked it. It may be a recent colonist, possibly following the clearance of lowland forest resulting in more suitable lightly wooded farmland. Lombok is currently the only island within the Lesser Sundas on which this species has been recorded (Coates and Bishop 1997). Grey-rumped Treeswift is moderately common and widespread on nearby Bali (MacKinnon and Phillipps 1993), the presumed source of the Lombok birds if they have recently colonised.

BARN OWL *Tyto alba*

Pre-1930. The only record from Lombok appears to be that of Rensch (1931) who collected a male and a female near Swela (400 m) in 1927. This species is rather poorly known throughout Wallacea and appears to be very local and uncommon, but possibly overlooked (Coates and Bishop 1997, Verhoeve and Holmes 1999).

SAVANNA NIGHTJAR *Caprimulgus affinis*

Pre-1930. Everett collected a 'fine series' of this species (Hartert 1896b). He found it to be common at Ampanan, but did not hear it at any of the 'inland stations'. This species is generally very tolerant of human disturbance (personal observations) but there has been a lack of survey effort on Lombok at dusk/night in particular.

ROCK PIGEON *Columba livia*

Lansley (1986) observed a flock of ten or more at Ampanan in December 1986. SDM subsequently saw this species in small numbers flying over cultivated areas on the west coast in 1995. It is present in most towns in Wallacea, but curiously there are no other records for Lombok.

METALLIC PIGEON *Columba vitiensis*

This inconspicuous species was reported on five occasions on Lombok prior to 1930, but only twice since then: by Gibbs (1990) and Garcia (1997). All records appear to be from 455–1,220 m on the slopes of Gunung Rinjani. The distinctive *metallica* race of this species is restricted to the Lesser Sundas, where it is described as generally uncommon.

ISLAND COLLARED DOVE *Streptopelia bitorquata*

Pre-1930. One female specimen was collected by Rensch at Ekas (1931). The species was also collected by Everett (Hartert 1896b) and Wallace (1863), but no details were given. In addition to being affected by

habitat loss, this species may have suffered as a result of hunting.

LITTLE CUCKOO DOVE *Macropygia ruficeps*

Pre-1930. Everett collected one male at 760 m (Hartert 1896b). A shy and retiring species that is infrequently seen (Coates and Bishop 1997), it may have been overlooked in recent years.

PEACEFUL DOVE *Geopelia striata*

Pre-1930. Two females were collected by Everett (Hartert 1896b), and Wallace (1863) also collected the species. The lack of recent records is curious, as this is a conspicuous species that is tolerant of disturbed habitats (personal observations).

[**NICOBAR PIGEON** *Caloenas nicobarica*

Near Threatened. This species has been claimed only once on Lombok, by Horst (1935), who found one along with Black-naped Fruit-Dove *Ptilinopus melanospila* and several other unidentified species in the collection of a bird hunter at Sembalun, on the slopes of Gunung Rinjani. Given the anecdotal nature of Horst's article, and the fact that he was unable to identify other species in the hunter's possession, this record should be treated as unconfirmed.]

FLORES GREEN PIGEON *Treron floris*

Vulnerable; restricted-range; pre-1930. This species was collected by Doherty at 610 m (Hartert 1896a) but, notably, not by Everett (see Hartert 1896b). There is a specimen of a female in the Natural History Museum, Tring, U.K., that is labelled by Hartert as *griseicauda* (Rensch 1931) and this would appear to be the specimen collected by Doherty. This specimen appears to have been overlooked by Birdlife International (2001) presumably because it was labelled as *griseicauda*. *T. floris* has previously been treated by some authorities as conspecific with *griseicauda* and *pompadora* (Inskipp *et al.* 1996). Birdlife International (2001) cites Rensch (1931) as documenting a specimen collected from Bayan ('Batjan'), at 200 m, during April 1909. The specimen appears to have been collected by J. Elbert in 1909 (Rensch 1931, Elbert 1911) and is currently housed in the Seckenburger Museum, Frankfurt, Germany. Flores Green Pigeon thus appears to be known from Lombok on the basis of just two specimens and has not been recorded by any recent observers. It is possible that this species was never common on Lombok (Coates and Bishop 1997, Birdlife International 2001) although a recent summary of what is known about this species elsewhere suggests it is often overlooked because of its seasonal movements in response to the presence or absence of fruiting fig trees (see Birdlife International 2001). It inhabits lowland moist deciduous monsoon forest from Lombok to Alor (Coates and Bishop 1997). This habitat is highly threatened on Lombok. It has been recorded infrequently on Flores in recent years, where it is described as uncommon and patchily distributed (Verhoeye and Holmes 1999, Trainor and Lesmana 2000, BirdLife International 2001). On Sumbawa there are only two recent records (Butchart *et al.* 1996, Trainor 2002a). On Lombok, the

species is still common where suitable habitat remains Trainor (2003).

WEDGE-TAILED GREEN PIGEON *Treron sphenura*

Pre-1930. Everett collected an adult male of 'this rare pigeon' from Bendera on Gunung Rinjani at 1,220 m (Hartert 1896b). The only other record appears to be a male collected by Rensch (1931) at Pelawangan, also on Gunung Rinjani, at 2,500–2,900 m in rhododendron forest. Lombok is the only island in Wallacea on which this species has been recorded (Coates and Bishop 1997). The distinctive subspecies *korthalsi*, to which the Lombok population belongs, also occurs on neighbouring Java, where it is common in mountains (MacKinnon and Phillipps 1993). The lack of recent records is difficult to explain; more rigorous surveys at high elevations will presumably find the species, as suitable habitat remains.

BLACK-NAPED FRUIT DOVE *Ptilinopus melanospila*

This species is described as common in Wallacea (Coates and Bishop 1997), but while there are many records on Lombok prior to 1930, it has only been reported once in recent times, by Lansley (1986) from forest north of Mataram.

DARK-BACKED IMPERIAL PIGEON *Ducula lacernulata*

Restricted-range. This species has been observed on Lombok by at least three recent observers (see Appendix 2), mostly at higher altitudes. It is found from West Java east to Flores. Interestingly, it is the only restricted-range species from the Lesser Sundas that also occurs to the west of Wallace's Line. Although it is clearly still quite common, it is sensitive to human disturbance and hunting (del Hoyo 1997, Trainor 2002b). The distinctive endemic *sasakensis* subspecies from Lombok, Sumbawa and Flores may prove to be a distinct species (Butchart *et al.* 1996), and a review of its status is required.

PIED IMPERIAL PIGEON *Ducula bicolor*

Two birds were observed on Gili Air, off the north-west coast of Lombok in 1985 (Nash and Nash 1986). This was until recently the only record of this species anywhere in the Lesser Sundas, but it has now also been recorded on Komodo and Flores (Coates and Bishop 1997, Bishop in prep.). It is generally a highly mobile small-island species and requires coastal forests with fruiting trees (Wells 1999).

RED-LEGGED CRAKE *Rallina fasciata*

Pre-1930. The only record from Lombok appears to be that of a female collected by Everett at 460 m (Hartert 1896b). The status of this secretive species in Wallacea is unclear, although it has been reported breeding on Flores, where it is apparently common (Schmutz 1977). Birds from Flores may disperse widely (Coates and Bishop 1997), and it is possible that migrants from southern Asia also occur (see Wells 1999, Marchant and Higgins 1993).

SLATY-BREASTED RAIL *Gallirallus striatus*

One was recorded foraging in mangroves in Lembar harbour in October 1991 by Johnstone *et al.* (1993). The species may be only a vagrant to the Lesser

Sundas, with just one other record: from Sawu, east of Sumba, in August/September 1896 (Coates and Bishop 1997). Large numbers have been observed during August in degraded mangroves on the south coast of neighbouring Bali (KDB personal observations), suggesting that the species may in fact be a regular migrant as far as Wallace's Line, at least.

WHITE-BROWED CRAKE *Porzana cinerea*

Pre-1930. This species is known on Lombok only from an adult male and a juvenile male collected by Rensch (1931) from Labuhan Haji.

COMMON MOORHEN *Gallinula chloropus*

Pre-1930. This species is known on Lombok only from a specimen, apparently belonging to the race *orientalis*, collected by Wallace (1863).

PIN-TAILED SNIPE *Gallinago stenura*

Pre-1930. Rensch (1931) collected a male at Narmada (undated) and stated that the species was previously known as a winter visitor only as far as Bali.

MALAYSIAN PLOVER *Charadrius peronii*

Near Threatened; pre-1930. One was collected by Everett (Hartert 1896b) but no details are given. This is a scarce species throughout the region, which is found on undisturbed sandy beaches (Hayman *et al.* 1986), a habitat that, on Lombok, has suffered recently owing to increasing human pressures.

GREATER PAINTED-SNIPE *Rostratula benghalensis*

Pre-1930. Van Bemmelen (1940) (*contra* White and Bruce 1986) listed a specimen collected on 18 December 1939 near Mataram by 'E. G. A. Lapre?'. Until recently, there were very few records of this species in the Lesser Sundas with the only other definite records being from Sumbawa and Flores (Coates and Bishop 1997, Verhoeve and Holmes 1999). However, it has now been reported as locally abundant on Timor (C. R. Trainor *in litt.* 2005). Recently it has been proposed that the Australian taxon is sufficiently distinct to be elevated to specific status: Australian Painted-snipe *R. australis* (Lane and Rogers 2000). If this is valid, the Lesser Sundas would represent the eastern limit of the distribution of *R. benghalensis sensu stricto*, possibly accounting for its scarcity in the region, something that seems to have puzzled White and Bruce (1986), despite the species being easy to overlook.

OSPREY *Pandion haliaetus*

Pre-1930. Rensch (1931) collected a male at Ekas and found this species breeding on Lombok during April. Common in the Sulawesi and Maluku regions of Wallacea but less so in the Lesser Sundas (Coates and Bishop 1997).

PACIFIC BAZA *Aviceda subcristata*

Pre-1930. The only record for Lombok appears to be a male collected at 460 m by Everett (Hartert 1896b). Lombok represents the western limit of its range; it is uncommon on neighbouring Flores (Verhoeve and Holmes 1999), while the present status on Sumbawa is uncertain.

ORIENTAL HONEY-BUZZARD *Pernis ptilorhynchus*

This species was first recorded on Lombok on 20 August 1997 when one flew in from the Lombok Strait over Senggigi on the west coast (Garcia 1997). Two birds were recorded near Bangko Bangko on 30 December 2004 (C. R. Trainor *in litt.* 2005). The relatively large number of recent records from the Lesser Sundas, especially during October–April (Coates and Bishop 1997), suggests that this region is an important non-breeding area for the migrant race *orientalis*. The species is an abundant migrant through Bali during October and early May (Ash 1984, 1993), and was therefore to be expected on Lombok.

BLACK KITE *Milvus migrans*

Pre-1930. Everett collected a specimen, but no other details are given (Hartert 1896b). Although it is locally common on Sulawesi and Timor, this species is considered to be generally uncommon in Wallacea (Coates and Bishop 1997).

BROWN GOSHAWK *Accipiter fasciatus*

Pre-1930. One bird was collected by Wallace (1863). Rensch (1931) gave Lombok as part of the species's distribution, although he did not collect a specimen himself. The species is sparsely distributed in Wallacea, although locally common on Sumba and Flores (Coates and Bishop 1997); Lombok represents the westernmost part of its range.

[BLACK EAGLE *Ictinaetus malayensis*

Myers (1995) had an unconfirmed record at Senaru. Given its distribution throughout South-East Asia, Sulawesi and the Moluccas (White and Bruce 1986), the species's presence on Lombok would not be unexpected.]

FLORES HAWK EAGLE *Spizaetus floris*

Endangered. Gjershaug *et al.* (2004) recently proposed specific status for this taxon; it was previously treated as a subspecies of Changeable Hawk Eagle *S. cirrhatus*, and BirdLife International now treat it as Endangered (BirdLife International 2005). It was previously known from Lombok only by one unconfirmed sight record (Kuroda 1930). V. Nijman (*in litt.* 2004) reported a displaying pair from the northern slopes of Gunung Rinjani during August–September 2001. In September 2002, Gjershaug *et al.* (2004) recorded this species at four sites on the border of Gunung Rinjani National Park. The species is otherwise found on Sumbawa (where there are very few records) and Flores (where it appears to be uncommon), plus the satellite islands of Satonda and Rinca (Gjershaug *et al.* 2004). Using an estimate of territory size and the area of remaining forest, Prawiradilaga *et al.* (*in prep.*, cited in BirdLife International 2005) have estimated that the breeding population consists of fewer than 100 pairs. The species is threatened by habitat loss and human persecution, processes which are of particular concern on the heavily populated island of Lombok. Determining more accurately the status of the species on Lombok is an urgent priority.

AUSTRALIAN HOBBY *Falco longipennis*

Pre-1930. Everett collected one specimen of the race *hanieli* from Baian (Bayan) at 214 m on Gunung Rinjani (Hartert 1896b). Hartert (1896b) commented 'this is, I think, the most western locality where this species has ever been found'. This would appear to be correct more than a century later, with no records of either the resident or Austral migrant race west of Wallace's Line (Coates and Bishop 1997, MacKinnon and Phillipps 1993).

LITTLE GREBE *Tachybaptus ruficollis*

Pre-1930. This species is known from Lombok only from single male and female specimens collected at 2,000 m on Segara Anak, Gunung Rinjani (Rensch 1931). It is otherwise a locally common resident in the Lesser Sundas (Coates and Bishop 1997) and Java and Bali (MacKinnon and Phillipps 1993).

WHITE-FACED HERON *Egretta novaehollandiae*

Pre-1930. Rensch (1931) collected two males at Swela and a juvenile female at Labuhan Haji, stating that the species is found at 0–400 m. Everett collected two skins (Hartert 1896b). Coates and Bishop (1997) stated the species breeds on Flores, Sumba, Roti and 'probably Lombok'. However, there are no recent records from Lombok.

PACIFIC REEF EGRET *Egretta sacra*

Pre-1930. One juvenile and an adult male were collected at Tanjung Luar by Rensch (1931). This species is described as widespread and locally common in Wallacea (Coates and Bishop 1997), and it is surprising that there have been no recent records on Lombok.

GREY HERON *Ardea cinerea*

There have been three recent records: two were seen at a small (2 ha) tidal wetland behind fishponds in the far south-west of Lombok in June 2000; one was seen at Bangko Bangko in December 2004; and one was recorded at Gili Meno in December 2004 (C. R. Trainor *in litt.* 2005). This species has previously been recorded from Sumba (Verhoeve and Holmes 1999) and Sumbawa (Grantham 2000c, White and Bruce 1986), and it is common from Bali westwards in the Greater Sundas (personal observations).

CINNAMON BITTERN *Ixobrychus cinnamomeus*

Pre-1930. Everett (Hartert 1896b) collected one specimen and Rensch (1931) recorded one at Swela. Although this is not an especially secretive species (SDM personal observations), there are no recent records on Lombok.

CHRISTMAS ISLAND FRIGATEBIRD *Fregata andrewsi*

Critically Endangered. A female was reported in Lembar harbour in 1988 by Johnstone *et al.* (1993). This species has its sole breeding site on Christmas Island but ranges widely as far the Andaman Sea and Hong Kong (Marchant and Higgins 1990).

ELEGANT PITTA *Pitta elegans*

Doherty collected specimens from 300–1,200 m (Hartert 1896a), while Everett's specimens were from

'the low country' to 900 m (Hartert 1896b). Rensch (1931) heard this species at Ekas in coastal lowlands of the south-east. There are two recent records from the middle slopes of Gunung Rinjani (Myers 1995, Thomas 1994). This Wallacean near-endemic is locally common to rare throughout its range (Coates and Bishop 1997).

SCALY-CROWNED HONEYEATER *Lichmera lombokia*

Restricted-range. This montane species was recorded by most collectors prior to 1930 and by most subsequent observers. It also occurs on Sumbawa and Flores, and is generally common in wooded habitats above 800 m (Coates and Bishop 1997, Stattersfield *et al.* 1998).

MANGROVE WHISTLER *Pachycephala grisola*

In Wallacea, this species occurs only on Lombok, where it is described as common in a variety of habitats (Coates and Bishop 1997). It was recorded by all but one pre-1930 observer, but only by two recent observers, presumably because of a lack of effort outside forested areas.

SCARLET MINIVET *Pericrocotus flammeus*

This is another species known in Wallacea only from Lombok. Coates and Bishop (1997) indicated that there were no recent records. However, there are unpublished observations by Lansley (1986), Myers (1995), Garcia (1997) and Thomas (1994) from mid-altitudes on the slopes of Gunung Rinjani.

PIED FANTAIL *Rhipidura javanica*

This species is listed for Lombok following a single record of a bird at Sengiggi (M. D. Bruce in Andrew 1992). There are no other Wallacean records.

ASHY DRONGO *Dicrurus leucophaeus*

This species is known from Wallacea only on Lombok, where all pre-1930 observers except Kuroda (1930) recorded the species. It appears to be moderately common on Gunung Rinjani, as it has been recorded by all recent visitors. White and Bruce (1986) stated that the species occurs up to 396 m, but Everett (Hartert 1896b) found it up to 1,220 m and Thomas (1994) and SDM (1995) both observed it at 1,550 m on Gunung Rinjani.

CHESTNUT-CAPPED THRUSH *Zoothera interpres*

Pre-1930. This species was collected by Wallace (1863), Everett obtained a 'very fine series of old and young birds' (Hartert 1896b), and Rensch (1931) collected an adult and a juvenile male at Narmada at 200 m. There is an unconfirmed report of a sighting in 1988 at Tetebatu by Andrews (1989), but no further details were provided. Elsewhere in the region it has been recorded on Java, Sumbawa and Flores (very common at some sites: KDB personal observations). It appears to inhabit a wide range of habitats from lowland to montane forests and degraded or fragmented woodlands (Clement and Hathway 2000) and even lightly wooded villages (KDB personal observations).

SUNDA THRUSH *Zoothera andromedae*

Pre-1930. This species was collected by Wallace (1863) and Everett (Hartert 1896b) who recorded 'a number of young birds only', mostly from c.360 m. Unfortunately, no locality was given, but presumably the records were from Gunung Rinjani. The species is notably shy and may well have been overlooked by recent observers.

CHESTNUT-BACKED THRUSH *Zoothera doherlyi*

Near Threatened; restricted-range. This species is referred to as 'probably already extinct on Lombok' in BirdLife International (2000, 2001) and in Clement and Hathway (2000). However, there have been a number of recent sightings. During 1994, Thomas (1994) recorded two pairs and two singles, including individuals courtship feeding and carrying nest material on Gunung Rinjani below Pos II, c.10 around Pos II where a nest was found and a pair was observed carrying food, and 15 individuals between Pos II and Batu Koq. Myers (1995) observed two birds at close range near Pos II at 1,570 m. Garcia (1997) flushed one from the forest floor above Senaru on Gunung Rinjani during August 1997. Elsewhere this beautiful thrush occurs in primary hill and montane forest on Sumbawa, Flores, Sumba and Timor (Coates and Bishop 1997, Clement and Hathway 2000). There has been intensive trapping pressure on Lombok and Sumbawa during the 1990s; hundreds were found in Mataram markets in 2000, with individual birds selling for 10,000–20,000 Indonesian Rupiahs (C. R. Trainor *in litt.* 2005).

RUFIOUS-CHESTED FLYCATCHER *Ficedula dumetoria*

Near Threatened. Although described in Coates and Bishop (1997) as moderately common on Sumbawa and Flores, but rare or absent elsewhere, this species has been recorded regularly on Lombok, both historically and recently. Doherty found it at 300–600 m (Hartert 1896a), while Everett recorded it up to 450 m (Hartert 1896b). Myers (1995) and Thomas (1994) both found it below 600 m on Gunung Rinjani.

[GREY-HEADED CANARY FLYCATCHER *Culicicapa ceylonensis*

Rensch (1931) heard the song of a bird on Lombok that he was not able to identify at the time. Later, on Bali he heard a similar song and obtained specimens of Grey-headed Canary-Flycatcher. On this basis, he postulated that the species possibly occurs on Lombok.]

BLACK-WINGED STARLING *Sturnus melanopterus*

Endangered. Everett (1896b) collected a 'small series of both sexes' from the lowlands. Rensch (1931) did not find it on Lombok (although it was very common on Bali), and suggested that Everett's records may have referred to introduced or vagrant birds, but the fact that one taken in June 1896 by Everett was a juvenile suggests local resident status (White and Bruce 1986). One was recorded at Senggigi in June 1993 by G. M. Bass (*in litt.* 1993 to BirdLife International 2001).

WHITE-VENTED MYNA *Acridotheres cinereus*

Garcia (1997) found this species on the west coast, where he observed two near Senggigi and two near Pemenang during 1997. One was seen on Gili Meno on 31 December 2004 (C. R. Trainor *in litt.* 2004).

OLIVE-BACKED TAILORBIRD *Orthotomus sepium*

Coates and Bishop (1997) described this species as a common resident, and indeed nearly all observers in historical and recent times have recorded it. It occurs in Java and Bali, but in Wallacea it has been recorded only on Lombok.

RED-CHESTED FLOWERPECKER *Dicaeum maugaei*

Restricted-range. Both historically and recently this species has been found to be common on Lombok in a variety of habitats at 0–600 m. It has an unusual, disjointed distribution, being found only on Lombok in the northern Lesser Sundas, but also on Timor and satellite islands and on some of the small Banda Islands (White and Bruce 1986, Coates and Bishop 1997).

BROWN-THROATED SUNBIRD *Anthreptes malacensis*

This species has been recorded on Lombok only by Johnstone at Kuta in 1988 and by van Balen on the north-west coast in 1990 (Johnstone *et al.* 1993). Both records are from areas rarely visited by recent observers.

YELLOW WAGTAIL *Motacilla flava*

R. W. R. J. Dekker (in Johnstone *et al.* 1993) recorded c.50 birds at Sekotong in 1991. Myers (1995) saw c.20 birds in paddyfields near Belanting in September 1995. This species is regularly recorded during the northern winter throughout Wallacea (White and Bruce 1986, Coates and Bishop 1997), although it has not previously been listed for Lombok.

GREY WAGTAIL *Motacilla cinerea*

Pre-1930. Rensch (1931) collected a male at Narmada and a female at Poesock. He found the species to be numerous in the mountains of Java and Lombok in open uninhabited areas, with flocks of 10–20 birds at Sembalun, and even a flock at 3,000 m on Gunung Rinjani. Elsewhere in Wallacea, Grey Wagtail is widespread and common to very common in montane areas from mid-August to early May (Coates and Bishop 1997).

TAWNY-BREASTED PARROTFINCH *Erythrura hyperythra*

Pre-1930. Everett collected a 'fine series' from 457–900 m (Hartert 1896b). In Wallacea, this species is found in montane forest on Sulawesi (KDB personal observations), Sumbawa and Flores (Verhoeve and Holmes 1999), where it ranges from very rare to moderately common (Coates and Bishop 1997, personal observations). The absence of recent records on Lombok probably reflects the lack of observer effort at higher altitudes.

[JAVA SPARROW *Lonchura oryzivora*

Vulnerable; introduced; pre-1930. This species was recorded by Wallace (1863) and Rensch (1931) who recorded single females at Narmada, Ekas and Swela.

Coates and Bishop (1997) noted that the species was probably introduced into the western Lesser Sundas. It is classified as Vulnerable owing to intense trapping pressure (BirdLife International 2001).]

DISCUSSION

Although Lombok is the fifth largest island in the Lesser Sundas (albeit considerably smaller than the first four), it supports a comparatively modest avifauna, comprising 180 species recorded to date (Appendix 2). Given Lombok's close proximity to Bali to the west, and Sumbawa to the east, and the fact that it has the highest mountain in Wallacea (Gunung Rinjani at 3,726 m), this seems somewhat surprising, but it probably reflects to some degree the more limited survey effort on Lombok.

Thirty-six species have not been recorded on Lombok since 1930. Many have probably been simply overlooked. A number are dependent upon freshwater and/or brackish swamps and marshes, e.g. Stork-billed Kingfisher, White-browed Crake and Common Moorhen. They have almost certainly declined with the extensive drainage and consequent disappearance of their habitat, but most are widespread and generally adventitious and it is likely that they still occur. Others are forest or woodland species, but are not dependent on lowland forest and hence are unlikely to have disappeared, e.g. Wedge-tailed Green Pigeon (known from 1,220–2,900 m), Little Cuckoo Dove (750 m), Chestnut-capped Thrush (200–1,300 m), Sunda Thrush (460–920 m) and Tawny-breasted Parrotfinch (from hills up to 1,220 m). Other forest- or woodland-dependent species may be of greater concern, e.g. Orange-footed Scrubfowl, Pacific Baza, Red-legged Crake, Island Turtle Dove, Peaceful Dove, and Blue-eared, Small Blue, Oriental Dwarf and Stork-billed Kingfishers. These species have likely been affected not only by the clearance of Lombok's lowland forests and woodlands, but also by hunting, egg-collecting or trapping for the cage-bird trade. The recently unrecorded species of greatest concern are the globally threatened Flores Green Pigeon and the Near Threatened Cinnamon-collared Kingfisher. These species are dependent upon forest and woodland, especially at low elevations, for their survival, and this habitat has been almost entirely cleared from Lombok.

A total of 42 species have been added to the Lombok list in recent years. This total includes three pelagic seabirds, nine Palaearctic migrant shorebirds, six terns (largely migrants from the Palaearctic), one Palaearctic migrant landbird and one Austral landbird migrant, reflecting the preoccupation of the early collectors with resident landbirds. The status on Lombok of several of these species is not yet clear, e.g. Slaty-breasted Rail and Pied Imperial Pigeon. However, Asian Palm Swift, Grey-rumped Treeswift, Golden Whistler, Brown-throated Sunbird and White-vented Myna may all have recently colonised the island in response to the development of open habitats and plantations which now predominate in the lowlands.

A number of species, including Dark-backed Imperial Pigeon, Flores Hawk Eagle, White-rumped Kingfisher, Chestnut-backed Thrush, Scaly-crowned

Honeyeater and Red-chested Flowerpecker, are dependent to varying degrees on the semi-evergreen rainforest and montane forest in Gunung Rinjani National Park. Clearly, this one national park on Lombok is of paramount importance for conservation of the island's birds. However, many of the species of conservation priority are reliant to various extents on habitat that lies outside the national park, and this requires protection too.

This review highlights the lack of recent thorough surveys on Lombok: only a handful of ornithologists have visited the island in recent years, and usually only for a short duration. As an illustration of the potential for birdwatchers to add to our current knowledge of birds on the island, Ash (1984, 1993) showed that significant numbers of diurnal raptors migrate eastwards over Bali towards Lombok, including Japanese Sparrowhawk *Accipiter gularis* and Chinese Sparrowhawk *A. soloensis*, but neither of these species has yet been confirmed to occur on Lombok.

We recommend that future surveys should focus on species of conservation importance and those species not recorded in recent years, on Gunung Rinjani (including its full altitudinal range) and in any remaining lowland forest or woodland areas, such as Batu Gendang forest. Key wetlands including Segara Anak crater lake, Praya reservoir, Gili Meno lake, Batu Gendang cliffs, Lembar mudflats and other beaches and mudflats should be targeted for migrant shorebirds and other waterbirds. Migrating Palearctic raptors should be systematically surveyed during September–November.

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APPENDIX 1

A summary of ornithological visits to Lombok

| Author | Year | Details | No. species recorded |
|--|------|---|----------------------|
| A. R. Wallace | 1856 | Collected for 2.5 months | 63 |
| A. G. Vorderman | 1894 | 14 days in October collecting on east coast | 51 |
| W. Doherty | 1896 | Two weeks in June. Mainly collecting in montane forests; a few specimens taken from lowland areas | 64 |
| A. Everett | 1896 | Collected a number of birds in Lombok from May to early July; material examined by Ernst Hartert | 101 |
| B. Rensch | 1927 | The most thorough study of the avifauna both in historical and recent times, from an expedition to the Sundas from March to August | 136 |
| N. Kuroda | 1929 | Three days in June collecting at Narmada | 19 |
| O. Horst | 1935 | A week in July, incidental bird observations | 3 |
| P. L. Lansley | 1986 | One day in Lombok Straits, forest N. of Mataram, Sesaot, S. of Gn. Rinjani, and mangroves at Pamenang | 39 |
| G. A. Lincoln | 1973 | General ecological observations; few bird species specifically mentioned | – |
| P. Ames | 1988 | One day around Sekotok | 15 |
| R. J. Johnstone, S. van Balen and R. W. R. J. Dekker | 1988 | Two visits in May and Oct 1988 to Lombok and Alas Straits, and Gn. Rinjani | 17 |
| D. Gibbs | 1990 | One day at Tetebatu, two days on Gn. Rinjani below 2,000 m | 38 |
| R. D. Thomas | 1994 | Three days from Mataram to Batu Kog; Gn. Rinjani below 1,550 m | 37 |
| S. D. Myers | 1995 | Five days at Sendang Gila waterfall, Gn. Rinjani to Segara Anak; Tetebatu, via the N.W. coast, Belanting | 76 |
| E. F. J. Garcia | 1997 | Ten days on E., N., and W. coasts; Tetebatu; Rinjani forest reserve; Gn. Rinjani from Batu Kog; Rinjani forest reserve Sembalunlawang; Monkey forest; Lombok Strait | 58 |
| Miscellaneous | | Somidikarta and Holmes (1979); Nash and Nash (1988); Andrews (1988); Burton (1989); Boon (1996); Grantham (2000); Sangster and Rozendaal (2004); Trainor (2004) | 53 |

APPENDIX 2

List of all species recorded on Lombok

| | Status | Pre-1930 | | | | | | Recent | | | | | | | | | |
|---|--------|----------|---|---|---|---|---|--------|---|---|---|---|---|---|---|------|---|
| | | W | V | D | E | R | K | Misc | L | A | J | T | M | G | B | Misc | |
| ORANGE-FOOTED SCRUBFOWL <i>Megapodius reinwardt</i> | | + | | | + | + | | | | | | | | | | | |
| BLUE-BREASTED QUAIL <i>Coturnix chinensis</i> | | | | | + | + | | | | | | | | + | | | |
| RED JUNGLEFOWL <i>Gallus gallus</i> | | + | | + | + | + | | | | | | + | + | | | | |
| GREEN JUNGLEFOWL <i>Gallus varius</i> | | + | | + | + | + | + | | | | | | | + | | | |
| PACIFIC BLACK DUCK <i>Anas superciliosa</i> | | | | | + | + | | | | | | | | | | | |
| SUNDA TEAL <i>Anas gibberifrons</i> | | | | | | + | | | | | | | | | | | + |
| HARDHEAD <i>Aythya australis</i> ¹ | | | | | | | | | | | | | | | | | |
| BARRED BUTTONQUAIL <i>Turnix suscitator</i> | | | | | + | + | | | | | | | | | | | |
| SUNDA PYGMY WOODPECKER <i>Dendrocopos moluccensis</i> | | + | | + | + | + | | | | | | | | + | | | + |
| DOLLARBIRD <i>Eurystomus orientalis</i> | | + | | | + | + | | | | | | | | + | | | |
| [COMMON KINGFISHER <i>Alcedo atthis</i>] ² | | | | | | | | | | | | | | | | | |
| BLUE-EARED KINGFISHER <i>Alcedo meninting</i> | | + | + | | | + | | | | | | | | | | | |
| CERULEAN KINGFISHER <i>Alcedo coerulescens</i> | | + | + | | | + | | | | + | | | | | | | |
| ORIENTAL DWARF KINGFISHER <i>Ceyx erithacus</i> | | + | + | | + | | | | | | | | | | | | |
| STORK-BILLED KINGFISHER <i>Halcyon capensis</i> | | + | + | | | + | | | | | | | | | | | |
| COLLARED KINGFISHER <i>Todiramphus chloris</i> | | + | + | + | + | + | + | | | + | | + | + | + | + | | + |
| CINNAMON-COLLARED KINGFISHER <i>Todiramphus australasia</i> | NT rr | + | | + | + | + | | | | | | | | | | | |
| SACRED KINGFISHER <i>Todiramphus sanctus</i> | | + | | | + | + | | | | | | | | + | + | | |
| WHITE-RUMPED KINGFISHER <i>Caridonax fulgidus</i> | rr | + | | + | + | + | | | | | | + | + | | | + | |
| BLUE-TAILED BEE-EATER <i>Merops philippinus</i> | | | | + | + | + | | | | + | | | | + | + | | |
| RAINBOW BEE-EATER <i>Merops ornatus</i> | | + | | | + | + | | | | | | | | + | + | + | |
| ORIENTAL CUCKOO <i>Cuculus saturatus</i> | | | | | + | + | + | | | | | | | | | + | + |
| RUSTY-BREASTED CUCKOO <i>Cacomantis sepulcralis</i> | | | | | + | + | + | | | | | | | | | | + |
| SHINING BRONZE CUCKOO <i>Chrysococcyx lucidus</i> | | + | | | | + | | | | | | | | | | | |
| HORSFIELD'S BRONZE CUCKOO <i>Chrysococcyx basalis</i> | | | | | | | | | | | | + | | | | | |
| ASIAN KOEL <i>Eudynamis scolopacea</i> | | + | | | | + | | | | | | | | | | | |
| LESSER COUCAL <i>Centropus bengalensis</i> | | + | + | + | + | + | | | | + | + | | + | + | + | + | |
| RAINBOW LORIKEET <i>Trichoglossus haematodus</i> | | | | | + | + | + | | | | | | | + | | + | |

| | Status | Pre-1930 | | | | | Recent | | | | | | | | | | | |
|--|--------|----------|----|----|-----|-----|--------|------|----|----|----|----|----|----|----|------|-----|---|
| | | W | V | D | E | R | K | Misc | L | A | J | T | M | G | B | Misc | | |
| SUNDA THRUSH <i>Zoothera andromedae</i> | | + | | + | + | + | | | | | | | | | | | | |
| SCALY THRUSH <i>Zoothera dauma</i> | | | | | + | + | + | | | | | + | + | | | | | |
| LESSER SHORTWING <i>Brachypteryx leucophrys</i> | | | | | + | + | + | | | | | | + | + | | | + | |
| SNOWY-BROWED FLYCATCHER <i>Ficedula hyperythra</i> | | | | | + | + | + | | | | | + | + | | | | + | |
| RUFOUS-CHESTED FLYCATCHER <i>Ficedula dumetoria</i> | NT | + | | | + | + | + | | | | | + | + | | | | | |
| LITTLE PIED FLYCATCHER <i>Ficedula westermanni</i> | | | | | + | + | + | | | | | + | + | | | | | |
| [GREY-HEADED CANARY FLYCATCHER <i>Culicicapa ceylonensis</i>] | | | | | | | | | | | | | | | | | [+] | |
| PIED BUSHCHAT <i>Saxicola caprata</i> | | + | | | + | + | + | | | | | | | + | + | | | |
| SHORT-TAILED STARLING <i>Aplonis minor</i> | | + | + | + | | | + | | | | | | | | | | + | |
| BLACK-WINGED STARLING <i>Sturnus melanopterus</i> | EN | | | | | + | + | | | | | | | | | | | + |
| WHITE-VENTED MYNA <i>Acridotheres cinereus</i> | | | | | | | | | | | | | | | | | | + |
| GREAT TIT <i>Parus major</i> | | + | + | + | + | + | + | + | | + | | + | + | + | + | + | + | + |
| BARN SWALLOW <i>Hirundo rustica</i> | | | | | | | + | | | + | | | | + | + | | | |
| PACIFIC SWALLOW <i>Hirundo tahitica</i> | | + | + | | | + | + | | | + | | | | + | + | | | |
| STRIATED SWALLOW <i>Hirundo striolata</i> | | | | | | + | + | | | | | + | + | + | | | | |
| YELLOW-VENTED BULBUL <i>Pycnonotus goiavier</i> | | + | + | + | + | + | + | + | | + | + | + | + | + | + | + | + | |
| ZITTING CISTICOLA <i>Cisticola jumcidis</i> | | + | | | + | + | + | | | | | | | + | + | | | |
| BRIGHT-HEADED CISTICOLA <i>Cisticola exilis</i> | | + | + | + | | | + | | | | | + | | | | | + | + |
| MOUNTAIN WHITE-EYE <i>Zosterops montanus</i> | | | | | + | + | + | | | | | + | + | + | + | + | + | + |
| LEMON-BELLIED WHITE-EYE <i>Zosterops chloris</i> | | + | + | + | + | + | + | | | + | | | | + | + | + | + | + |
| SUNDA BUSH WARBLER <i>Cettia vulcania</i> | | | | | | | + | | | | | + | + | + | + | + | | |
| ORIENTAL REED WARBLER <i>Acrocephalus orientalis</i> | | + | + | | | + | + | | | | | | | | | | | + |
| OLIVE-BACKED TAILORBIRD <i>Orthotomus sepium</i> | | + | + | + | + | + | + | + | | + | | + | + | + | + | + | + | + |
| ARCTIC WARBLER <i>Phylloscopus borealis</i> | | | | | | | + | | | + | | | | + | | | | |
| MOUNTAIN LEAF WARBLER <i>Phylloscopus trivirgatus</i> | | | | | + | + | + | | | | | + | + | + | + | + | + | + |
| AUSTRALASIAN BUSHLARK <i>Mirafra javanica</i> | | | | | | + | + | | | | | | | | | | | + |
| RED-CHESTED FLOWERPECKER <i>Dicaeum maugei</i> | rr | + | | | + | + | + | | | + | | + | + | + | + | + | + | + |
| SCARLET-HEADED FLOWERPECKER <i>Dicaeum trochileum</i> | | | | | + | | + | + | + | | | | | + | + | | | |
| BROWN-THROATED SUNBIRD <i>Anthreptes malacensis</i> | | | | | | | | | | | | | | | | | | + |
| OLIVE-BACKED SUNBIRD <i>Nectarinia jugularis</i> | | + | + | + | + | + | + | | | + | | + | + | + | + | + | | |
| EURASIAN TREE SPARROW <i>Passer montanus</i> | | | | | | | + | + | | + | | | | + | + | | | + |
| YELLOW WAGTAIL <i>Motacilla flava</i> | | | | | | | | | | | | + | | + | | | | |
| GREY WAGTAIL <i>Motacilla cinerea</i> | | | | | + | | | + | | | | | | | | | | |
| PADDYFIELD PIPIT <i>Anthus rufulus</i> | | + | | | + | + | + | | | | | | | + | + | | | |
| RED AVADAVAT <i>Amandava amandava</i> | | | | | + | | + | | | | | | | + | + | | | |
| ZEBRA FINCH <i>Taeniopygia guttata</i> | | | | | + | + | + | + | | | | | | | | | | + |
| TAWNY-BREASTED PARROTFINCH <i>Erythrura hyperythra</i> | | | | | + | + | + | | | | | | | | | | | |
| JAVAN MUNIA <i>Lonchura leucogastroides</i> | | | | | + | + | + | + | | + | | + | + | + | + | + | + | |
| SCALY-BREASTED MUNIA <i>Lonchura punctulata</i> | | + | + | + | + | + | + | | | + | | + | + | | | | | + |
| FIVE-COLORED MUNIA <i>Lonchura quincolor</i> | | + | | | + | + | + | | | | | | | + | | | | |
| PALE-HEADED MUNIA <i>Lonchura pallida</i> | | + | + | + | + | + | + | | | + | | | | + | + | | | |
| [JAVA SPARROW <i>Lonchura oryzivora</i>] | VU | + | + | | + | + | | | | | | | | | | | | |
| TOTAL | | 63 | 51 | 64 | 101 | 136 | 19 | 2 | 39 | 15 | 17 | 37 | 76 | 58 | 38 | 53 | | |

Key

Square brackets indicate unconfirmed or introduced species

Status: CR: Critically Endangered; EN: Endangered; VU: Vulnerable; DD: Data Deficient; NT: Near Threatened; rr: restricted-range.

Pre-1930: W: Wallace (1856); V: Vorderman (1894); D: Doherty (1896); E: Everett (1896); R: Rensch (1927); K: Kuroda (1929); Misc: miscellaneous sources.

Recent: L: Lansley (1986); A: Ames in 1988 (P. Ames *in litt.* 1989); J: Johnstone, van Balen and Dekker in 1990 (Johnstone *et al.* 1993); T: Thomas in 1994 (Thomas 1994); M: Myers (1995); G: Garcia (1997); B: Gibbs (1990); Misc: miscellaneous sources.

¹Grantham (2000a)

²White and Bruce (1986) give sources for records from Sulawesi and Sula and say 'it probably occurs more widely in Wallacea', but this appears to be unsubstantiated, and its presence on Lombok requires confirmation.

³Sangster and Rozendaal (2004)

⁴Boon (1996)

⁵Burton (1989)

⁶Somidikarta and Holmes (1979)

⁷Grantham (2000b)