

# New additions to the avifauna of Obi island, Indonesia, with comments on migration and breeding seasonality of Moluccan birds

ANDREW HART REEVE, JOHN C. MITTERMEIER, PIERRE-HENRI FABRE, IRFAN ROSYADI,  
JONATHAN D. KENNEDY & TRI HARYOKO

Obi is a remote island in the endemic-rich northern Moluccas region of Wallacea. Despite recent ornithological expeditions in 2010 and 2012, much remains to be learned about its avifauna in terms of distribution, migration patterns, and breeding phenology. We made a collecting trip to Obi in November–December 2013, and here describe noteworthy observations made during our visit. Six migratory species not previously known from Obi were recorded, including the first Middendorff's Grasshopper Warbler *Locustella ochotensis* for the Moluccas and the first Siberian Blue Robin *Luscinia cyane* for Wallacea. Our observations, in conjunction with those of previous visitors, help elucidate the seasonal breeding patterns of a number of resident birds, including Moluccan Woodcock *Scolopax rochussenii* and several rails. We also include records that expand the known altitudinal ranges of four resident species, as well as notes on species infrequently recorded from Obi, such as Sulawesi Myzomela *Myzomela chloroptera* and Metallic Pigeon *Columba vitiensis*. Although ornithological knowledge of Obi has increased dramatically in recent years, the very highest reaches of the island, as well as the eastern lowlands, remain mostly unsurveyed and should be targeted by future visitors.

## INTRODUCTION

The Moluccas are part of the biogeographic region of Wallacea, a hotspot of avian endemism and a point of interchange between Asian and Australo-Papuan faunas (Wallace 1869, White & Bruce 1986, Coates & Bishop 1997). The northern Moluccas are notable for hosting a large number of threatened and endemic birds (Stattersfield *et al.* 1998), but ornithological knowledge of these islands is still very limited (Coates & Bishop 1997, Monk *et al.* 1997). In recent years, however, expeditions to the north Moluccan island of Obi in March 2010 (Thibault *et al.* 2013) and July–August 2012 (Cottee-Jones *et al.* 2013, Mittermeier *et al.* 2013) have greatly improved our understanding of its previously little-known avifauna, rediscovering the enigmatic Moluccan Woodcock *Scolopax rochussenii*, clarifying distribution patterns, and recording at least 17 species on the island for the first time.

We visited Obi during November–December 2013, working at four sites previously surveyed in July–August 2012 by Mittermeier *et al.* (2013). Seasonal rainfall patterns in the Moluccas are complex, varying from island to island. Our trip during the boreal winter coincided with Obi's dry season, when the island experiences a period of light rainfall. The timing of our expedition with respect to other recent visits allows for cross-seasonal comparisons of bird activity, yielding some of the first information on seasonal changes in abundance and breeding behaviour of birds in the north Moluccas. We were also able to make notes on visiting northern migrants, the occurrence of which is poorly known in the region. Here we report these findings together with several new and interesting records for the island.

## STUDY AREA AND METHODS

From 16 November to 11 December, AHR, PHF, JDK, and TH collected bird specimens in northern and southern Obi; JCM joined the team in the northern lowlands from 4 to 11 December, after visiting the area separately with IR on 25–28 November. This work was part of an ongoing collecting effort in the region by the Natural History Museum of Denmark. Birds captured in mist-nets were photographed, measured and prepared as study skins. Tissue samples and specimens are held at Museum Zoologicum Bogoriense

(Indonesia) and the Natural History Museum of Denmark. Mist-netting operations were based in two main areas in the north and south of Obi. In the south, work was carried out on Gn Sere, north of Tapaya village, in logged forest of varying quality on sandy, nutrient-poor soil. Work at altitudes from 700–1,000 m from 20 to 28 November was based around a camp (1.624°S 127.709°E) at 870 m, and at altitudes of 200–350 m from 28–29 November at a camp (1.651°S 127.714°E) at 270 m. Rainfall was sporadic, occurring semi-daily at significantly lower levels than experienced here by JCM during July–August 2012. Work in Obi's northern lowlands (40–60 m) was conducted from 2 to 10 December in the Cabang Kiri River area south of Jikotamo, at Cabang Kuning (1.378°S 127.659°E) and Cabang Sumbali (1.398°S 127.649°E). Detailed descriptions of these localities can be found in Mittermeier *et al.* (2013). Rainfall was relatively light here, and forest near Cabang Kuning which was flooded in July–August 2012 was dry in December 2013. Mist-netting efforts were supplemented by audio-visual surveys and opportunistic observations beginning just before dawn and continuing until after dusk; nets were left open overnight to maximise the detection of nocturnal and crepuscular species. Additional short surveys were carried out at two sites—the south coast near Tapaya village (1.699°S 127.695°E), along a beach flanked by degraded forest and coconut plantations, on 30 November, and the Jikotamo-Sembiki road just inland from the north coast (1.357°S 127.670°E), which passes through various degraded and human-modified habitats (Mittermeier *et al.* 2013), on 17 November and 10 December.

## RESULTS

### Selected species accounts

#### Radjah Shelduck *Radjah radjah*

This species appears to be uncommon in Wallacea, and its status in the region is unclear (Coates & Bishop 1997); its presence on Obi may be seasonal. Recent records from Obi are from July 1982 (one collected by Y. Momou and R. Tatu on behalf of the Smithsonian Institution), December 1989 (Linsley 1995), and February 1992 (Lambert 1994). On 7 December, JCM & JDK observed a pair of these ducks feeding in a wet, grassy field along the river near Cabang Kuning. A single individual was observed at the same locality by

AHR, JCM and JDK on 9 December. Mittermeier *et al.* (2013) did not record this species in 2012 despite spending time at Cabang Kuning. Local residents reported that Radjah Shelducks were shot and it seems likely that the species is often hunted in coastal areas.

#### **Metallic Pigeon *Columba vitiensis***

The few birds observed by Thibault *et al.* (2013) were the first records from Obi in over a century. Mittermeier *et al.* (2013) found only one individual. The timing of our visit, however, coincided with the onset of fruiting of several tree species in secondary forest along the Cabang Kiri River which attracted significant numbers of Metallic Pigeon. One was seen on 27 November, with another 4–6 individuals recorded daily from 5 to 8 December; on 9 December a flock of 23 was seen perched in an exposed tree, and a separate congregation of 20–40 was observed feeding noisily in a fruiting tree.

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

This species is common in the Obi lowlands, with records up to 500 m (Thibault *et al.* 2013). A single female was captured at 850 m on Gn Sere on 22 November, and a male was caught nearby at 700 m on 25 November. In Wallacea, it has been recorded up to 1,200 m on both Buru and Seram (Coates & Bishop 1997, Lansley *et al.* 2011).

#### **Moustached Treeswift *Hemiprocne mystacea***

This species was found to be fairly common in the lowlands, with a single additional record from 920 m on Gn Sere, where two birds were seen circling over the forest canopy on 21 November. It had not previously been recorded above 600 m on Obi (Thibault *et al.* 2013), and the upper altitudinal limit in the Moluccas, a record from Seram, is given as '750+ m' (Coates & Bishop 1997).

#### **White-throated Needletail *Hirundapus caudacutus***

There are records throughout Wallacea of this uncommon migrant from late September to early April; it may possibly overwinter in the region (Coates & Bishop 1997). Thibault *et al.* (2013) observed nearly 200 birds in March 2010, the first record for Obi. JCM observed about 10 circling high overhead in a mixed flock with Uniform Swiftlets *Aerodramus vanikorensis* near Cabang Sumbali on 4 December, and another two birds in a mixed *Aerodramus* flock near Cabang Kuning the next day.

#### **Cuckoos *Cacomantis* sp.**

As noted by previous authors, the taxonomy of *Cacomantis* cuckoos in the Moluccas is poorly understood (e.g. Tebb *et al.* 2008, Mittermeier *et al.* 2013). Thibault *et al.* (2013) provided detailed descriptions and sonograms of Moluccan Cuckoo *Cacomantis aeruginosus heinrichi* (previously *C. heinrichi*), and observed a juvenile being fed by Island Leaf Warblers *Phylloscopus poliocephalus* in logged forest at 1,200 m, indicating that this taxon breeds on Obi. Mittermeier *et al.* (2013) also documented Moluccan Cuckoo, providing images and sonograms similar to those of Thibault *et al.* (2013), as well as Brush Cuckoo *C. variolosus*, which they noted differs from Moluccan Cuckoo in terms of habitat, vocalisations, the extent of rusty colouration of the underparts, and the absence of a yellow eye-ring. The fact that Thibault *et al.* did not observe Brush Cuckoo in March 2010, whereas Mittermeier *et al.* detected them frequently in July–August 2012, suggests a migratory pattern with birds present only during the austral winter. During our 2013 visit, we observed both Moluccan and Brush Cuckoos. Moluccan Cuckoo was found in montane forest near Gn Sere as well as in the swamp-forest around Cabang Kuning, where birds were substantially less vocal than during the 2012 rainy season, and were only heard on two occasions. In contrast, Brush Cuckoos were found vocalising in comparable numbers to the previous year, with 1–5 individuals heard daily in the agricultural land and coconut

plantations north of Cabang Kuning. On 9 December, we collected a juvenile cuckoo north of Cabang Kuning which appeared to be a Brush Cuckoo on the basis of habitat (open scrub in a coconut plantation) and vocalisations (the bird appeared in response to playback of a recording of Brush Cuckoo made moments earlier at the same spot). These findings would seem to suggest that both Moluccan and Brush Cuckoos are breeding residents on Obi, but further research is required to clarify this situation.

#### **Red-necked Crake *Rallina tricolor***

In Wallacea this species is only known from Ambon and Tayandu in the Moluccas and Damar, and Tanimbar in the Lesser Sundas (Coates & Bishop 1997). White & Bruce (1986) considered birds recorded from Ambon in June–July to be seasonal migrants from New Guinea. Mittermeier *et al.* (2013) recorded this species for the first time on Obi, finding it to be common and vocal around Cabang Kuning and on the Jikotamo–Sembiki road in August 2012. However, it was not observed at these places during the dry season between 26 November and 10 December 2013. Only one individual was recorded, on 4 December, calling in the forest along the river edge at Cabang Sumbali. These records indicate that Red-necked Crake occurs on Obi in both wet and dry seasons, although it is substantially less vocal, or less common, during the latter.

#### **Drummer Rail *Habroptila wallacii***

This species, previously known only from Halmahera, was first recorded on Obi in 2012 near Cabang Kuning in flooded forest (Mittermeier *et al.* 2013). Despite targeted searches in this area in 2013, we did not find the species, although several local people in the area were familiar with it. It is hard to assess whether this was due to seasonal variation in behaviour, or because we simply missed the birds.

#### **Bare-eyed Rail *Gymnocrex plumbeiventris***

This species was first found on Obi in 2012 near Cabang Kuning in swamp-forest (Mittermeier *et al.* 2013). In 2013, single birds were observed at the same location on 27 November (JCM & IR) and 6 December (JCM), but in contrast to the previous year it was not heard giving territorial calls. On 8 December, a local farmer brought us a Bare-eyed Rail that had been caught in a snare. This adult bird did not appear to differ morphologically from birds of the nominate subspecies, which occurs on neighbouring islands in the north Moluccas.

#### **White-browed Crake *Amaurornis cinerea***

First reported from Obi at Cabang Kuning and the Danau Sagu area, August 2012 (Mittermeier *et al.* 2013). At the time, the species was essentially silent and appeared to be uncommon at Cabang Kuning, with only one seen. However, between 5–9 December 2013, the species was very vocal at Cabang Kuning, with 4–6 individuals recorded daily around the rice paddies. On 5 December, a local farmer brought us a fledgling found in a house on the rice paddy (Plate 1), indicating recent breeding activity.

#### **Moluccan Woodcock *Scolopax rochussenii***

After last being collected on Obi by R. Tatu and Y. Momou in August and September 1982, this species disappeared for nearly 30 years before being rediscovered in March 2010 by Thibault *et al.* (2013); it was subsequently found at 11 locations around the island in July–August 2012 (Cottee-Jones *et al.* 2013). Given the frequency with which it was found by these later observers, it at first appears surprising that it went undetected in December 1989 (Linsley 1995) and February 1992 (Lambert 1994). Between 25 November and 10 December 2013, we carried out dawn and dusk point surveys along the Jikotamo–Sembiki road (2), at Cabang Kuning (11), and at Cabang Sumbali (17), locations where in July–August 2012 the



**Plate 1.** White-browed Crake *Amaurornis cinerea* chick at Cabang Kuning, 5 December 2013.



**Plate 2.** Unidentified snipe *Gallinago* sp. on the Jikotamo–Sembiki road, 25 November 2013.



**Plate 3.** Middendorff's Grasshopper Warbler *Locustella ochotensis* caught at Cabang Kuning on 8 December 2013.

species was recorded displaying every day at dawn and dusk; but birds were never heard calling or seen performing display flights in 2013. However, on 26 November 2013, JCM and IR observed two Moluccan Woodcock at dusk along the river at Cabang Sumbali. One individual walked out onto the exposed gravel by the river's edge and then flew silently up to perch on a horizontal branch in the canopy, where it was observed for several seconds before flying off over the forest, while a second flew silently over the river nearby. Single birds were flushed in the nearby forest understorey by AHR on 7 December and PHF on 9 December. These observations suggest that the woodcocks are present in the same areas year round, but that they only call and perform roding displays during the wet season between March and August.

#### Snipe *Gallinago* sp.

Three or four *Gallinago* snipe species may occur in the north Moluccas during the boreal winter, but species-level

identification of free-flying birds is virtually impossible; only Swinhoe's Snipe *G. megala* has been positively identified in the region (Coates & Bishop 1997). JCM and IR observed six snipe fly into an open pasture along the Jikotamo–Sembiki road at dusk on 25 November (Plate 2) and one snipe was present in the rice paddies at Cabang Kuning on 26 November and 7–9 December—the first evidence that at least one snipe species occurs on Obi at this time of year.

#### Migratory shorebirds

On 11 November, about 10 Pacific Golden Plover *Pluvialis fulva* and 10 Grey-tailed Tattler *Tringa brevipes* were seen on the south coast near Tapaya, the first records of these species on Obi. Both are widespread winter visitors to Wallacea (Coates & Bishop 1997), and their presence on Obi is not surprising. Whimbrel *Numenius phaeopus* was also observed near Tapaya, with up to five birds daily on 18 and 30 November and 1 December. It was

first reported for Obi by White & Bruce (1986), but had not been seen in the past three decades. Wood Sandpiper *T. glareola*, first recorded by Mittermeier *et al.* (2013), was seen daily between 26 and 28 November and from 5 to 9 December (3–5 individuals) in the rice paddies around Cabang Kuning. Large numbers of wintering Red-necked Phalaropes *Phalaropus lobatus* were in the straits between Obi and Bacan; during ferry crossings, we recorded about 200 birds on 16 November and about 250 on 25 November, in small flocks of 10–40 individuals, but an impressive raft of about 600 was observed just east of Pulau Bisa on 11 December. This species was also seen in large numbers along Obi's west coast between Jikotamo and Tapaya with 50–100 birds seen on both 18 November and 1 December.

#### Chinese Sparrowhawk *Accipiter soloensis*

A regular visitor to Wallacea during the boreal winter (Coates & Bishop 1997, Robson 2009), this species's winter range was recently found to extend as far as Papua (Germi *et al.* 2013). We obtained an adult female from a local hunter, who shot it near sea-level at Tapaya on 29 November—the first documented record for Obi. Identification was made from the following characters: grey upperparts with no hindneck collar; dark- and light-grey bands on tail; rufous breast; bright yellow legs, iris and cere; pale underwings with only very limited faint barring, with broad black tips to the primaries.

#### Common Paradise-kingfisher *Tanysiptera galatea*

A lowland species not previously known above 600 m on Obi (Coates & Bishop 1997). We had three records from above this altitude on Gn Sere: an adult at 900 m on 21 November, an adult female caught at 890 m on 24 November, and a juvenile female caught at 900 m on 25 November.

#### Sulawesi Myzomela *Myzomela chloroptera*

There are just three confirmed records from Obi of a myzomela from the former *M. sanguinolenta* species complex. It was first collected by Y. Momou and R. Tatu in 1982, and subsequently observed twice in 2010 at 950 m by Thibault *et al.* (2013), who suggested that this population may be an undescribed subspecies of Sulawesi Myzomela. We had only one very brief view of this taxon: on 21 November a single male was seen in a mixed flock at 900 m on Gn Sere, moving through the mid-storey of degraded secondary forest edge.

#### Slaty Monarch *Myiagra galeata*

Mittermeier *et al.* (2013) first described the nesting habits of this species on Obi, when they found incubating birds in July 2012. On 12 December 2013 we found a pair which appeared to be incubating eggs near Cabang Kuning, indicating that the species may breed year-round on Obi.

#### Middendorff's Grasshopper Warbler *Locustella ochotensis*

This species is a rare visitor to the region during the northern winter, with only four previous records from Wallacea: three from Sulawesi and one from Luang in the Lesser Sundas (Coates & Bishop 1997). A single *Locustella* warbler, probably this species, was flushed from rice fields at Cabang Kuning by JCM on 5 December 2013, and possibly the same individual was seen in tall wet grass around the edge of the paddy on the following day. On 8 December a single individual was mist-netted nearby (Plate 3), and identified as Middendorff's Grasshopper Warbler, the first record from the Moluccas. Pallas's Grasshopper Warbler *L. certhiola*, another rare visitor from mainland Asia, is likely to be the greatest cause of confusion; four birds observed in 1999 on a small island off Flores are the only confirmed record for Wallacea (Robson 2000). Coates & Bishop (1997) consider three claimed *L. certhiola* specimens

from Sulawesi to be misidentified *L. ochotensis*, and a fourth from Sulawesi to be a possible *L. certhiola* × *L. ochotensis* hybrid. The identification of our specimen was based primarily on the weakly patterned upperparts: *L. certhiola* shows distinct blackish centres to the crown and mantle feathers, wing-coverts, and tertials (Kennerley & Pearson 2010), which the present specimen lacks. The upperparts of the Obi specimen are relatively strongly patterned within the range of variation found in *L. ochotensis*, but this appears to be weaker than that found in any of the five *L. certhiola* subspecies. In addition, the rump and uppertail-coverts of the Obi specimen are a shade warmer than the mantle and lack the dark feather centres found in *L. certhiola*.

#### Siberian Blue Robin *Luscinia cyane*

This boreal migrant winters in southern China and South-East Asia, regularly reaching Sumatra and Borneo, with a few records from the Philippines and Java (Luijendijk & Scharringa 1998, Collar 2005). Coates & Bishop (1997) noted that the species might be a future addition to the Wallacean avifauna. On 26 November, we caught a single first-winter male in tall secondary forest at 900 m on Gn Sere. Identification was based on the following characters: dull dark-blue upperparts with dull brown crown and nape, relatively short tail, long pale pink legs, and white underparts with buffy scalloping on the throat and upper breast. Two or three subspecies of Siberian Blue Robin are generally recognised, with birds occurring in the Greater Sundas and Philippines typically being assigned to the race *bochaiensis* (Kennedy *et al.* 2000, Collar 2005). Although this race is said to have darker upperparts than the nominate (Collar 2005), we cannot confidently identify our specimen to subspecies.

## DISCUSSION

Our records add five species to Obi's known avifauna, with a sixth taxon, *Gallinago* sp., not yet identified to species level. The fact that all of our new records are migrant species suggests that documentation of Obi's resident avifauna may be nearing completion. Our records of Siberian Blue Robin and Middendorff's Grasshopper Warbler are the first for Wallacea and the Moluccas respectively, and indicate how little is known about the occurrence of boreal migrants in the region. Given the inconspicuous habits of these two species on their wintering grounds, and the relatively low coverage of Wallacea by birdwatchers and ornithologists, we suspect that these species may be regular visitors in small numbers, rather than true vagrants.

Moluccan Woodcock showed a striking variation in seasonal behaviour. Some rail species also showed seasonal behavioural changes but most of them have only recently been recorded for the first time on Obi (Mittermeier *et al.* 2013). Based on their vocal activity, the breeding of Red-necked Crake and Bare-eyed Rail seems closely aligned with seasonal flooding of lowland swamp-forest. Pale-vented Bush Hen *Amaurornis moluccana*, although vocal throughout the year, also called more during the rainy season in the lowlands. In contrast, White-browed Crake, which inhabits paddyfield edges rather than swamp-forest, appears to breed during the dry season.

Only four resident species were recorded outside previously known altitudinal ranges, suggesting that those of the majority of resident species are now fairly well understood. The main exception is the highest part of the island from about 1,200–1,550 m; apart from a brief visit by Mittermeier *et al.* (2013) the hard-to-reach summit area remains unexplored. As recent ornithological work has been concentrated in the western part of the island, avian distribution in eastern Obi is essentially unknown, and therefore offers potential for future exploration.

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- Andrew H. REEVE**, Center for Macroecology Evolution and Climate at the Natural History Museum of Denmark, University of Copenhagen, Universitetsparken 15, DK-2100 Copenhagen Ø, Denmark. Email: a.reeve@snm.ku.dk
- John C. MITTERMEIER**, Museum of Natural Science and Department of Biological Sciences, 119 Foster Hall, Louisiana State University, Baton Rouge, LA, 70803, USA. Email: john.mittermeier@gmail.com
- Pierre-Henri FABRE**, (a) Institut des Sciences de l'Evolution (ISEM, UMR 5554 CNRS), Université Montpellier II, Place E. Bataillon - CC 064 - 34095 Montpellier Cedex 5, France. (b) Departments of Organismic and Evolutionary Biology, Harvard University, Cambridge, MA 02138, USA. Email: phfmourade@gmail.com
- Irfan ROSYADI**, Burung Indonesia, Jl. Dadali No. 32, Bogor 16161, Indonesia. Email: hcyanoventris@gmail.com
- Jonathan D. KENNEDY**, Center for Macroecology Evolution and Climate at the Natural History Museum of Denmark, University of Copenhagen, Universitetsparken 15, DK-2100 Copenhagen Ø, Denmark. Email: jonathan.kennedy@bio.ku.dk
- Tri HARYOKO**, Museum Zoologicum Bogoriense, Research Center for Biology, Indonesian Institute of Sciences, Jl. Raya Jakarta-Bogor KM. 46, Cibinong 16911, Indonesia. Email: trih007@gmail.com