

MONOGRAPH 3

Indian BIRDS



A checklist of birds of the Maldives
—R. Charles Anderson & Mohamed Shimal



Indian BIRDS

www.indianbirds.in

MONOGRAPH 3

DATE OF PUBLICATION: 28 NOVEMBER 2020

ISSN 0973-1407

EDITOR: Aasheesh Pittie
editor.indianbirds@gmail.com

ASSOCIATE EDITORS: V. Santharam, Praveen J.

EDITORIAL BOARD

Maan Barua, Sahas Barve, Anwaruddin Choudhury
Bill Harvey, Farah Ishtiaq, Rajah Jayapal, Girish Jathar
Ragupathy Kannan, Madhusudan Katti
R. Suresh Kumar, Taej Mundkur, Rishad Naoroji
Prasad Ganpule, Suhel Quader
Harkirat Singh Sangha, C. Sashikumar
Manoj Sharma, S. Subramanya, K. S. Gopi Sundar

LAYOUT & COVER DESIGN: Sindu Graphics
OFFICE: P. Rambabu

NEW ORNIS FOUNDATION

Registration No. 314/2004

FOUNDER TRUSTEES
Zafar Futehally (1920–2013)
Aasheesh Pittie, V. Santharam

TRUSTEES
Aasheesh Pittie, V. Santharam, Rishad Naoroji,
Taej Mundkur, S. Subramanya,
Suhel Quader, Praveen J.

AIMS & OBJECTIVES

- To publish a newsletter that will provide a platform to birdwatchers for publishing notes and observations primarily on birds of South Asia.
- To promote awareness of birdwatching amongst the general public.
- To establish and maintain links/liason with other associations or organized bodies in India or abroad whose objectives are in keeping with the objectives of the Trust (i.e. to support amateur birdwatchers with cash / kind for projects in ornithology).

Bank details for advertisements & donations:

Name: New Ornis Foundation

Bank: Canara Bank

Branch: Banjara Hills Branch, Hyderabad

Account No: 1181201000865

IFSC: CNRB0001181

PDFs of both, individual papers,
and entire issues can be downloaded
from www.indianbirds.in.

Address for correspondence:
New Ornis Foundation, 2nd Flr, BBR Forum, Rd. No. 2,
Banjara Hills, Hyderabad 500034, India.

CONTENTS

3	Introduction
4	Methods
7	Birds of the Maldives
23	Historical background
30	Discussion
33	Box 1. Endemic subspecies
36	Box 2. Breeding birds of the Maldives
37	Box 3. Protected species and areas
38	Acknowledgements
39	References
44	Appendix: Checklist of birds of the Maldives
50	Photo gallery

FRONT COVER: Eurasian Curlew *Numenius arquata* Kolhufushi Island, Meemu Atoll, 16 October 2017

PHOTOGRAPHER: Syed Abbas

BACK COVER: Black-naped Tern *Sterna sumatrana* Rangali Island, South Ari Atoll, 27 May 2006

PHOTOGRAPHER: Charles Anderson

A checklist of birds of the Maldives

R. Charles Anderson

and

Mohamed Shimal

Indian BIRDS Monographs

2020

Charles Anderson



Frontispiece. Maldivian islet of Kandufushi in Thaa Atoll.

Recommended citation: Anderson, R. C., & Shimal, M., 2020. A checklist of birds of the Maldives. *Indian BIRDS Monographs* 3: 1–52A.

Abstract

A critical review, and an historical overview, of the birds of the Maldives are presented. 203 species are recorded, including 194 species regarded as confirmed, four known to occur but for which some uncertainly remains over identification, and five introduced / feral species. Just eight species can be considered to be widespread, regular breeders, with another eight breeding more locally, while a few others have bred occasionally. About half of all species recorded are northern winter migrants. There are no endemic species, although five endemic subspecies have been described.

Introduction

The Maldives is a string of coral islands in the tropical Indian Ocean, south-westwards of India and Sri Lanka. All of the 1,200-odd islands are small, low sandy cays (Frontispiece), with no high, rocky islands. The islands sit atop a series of some 26 coral atolls, forming the central and largest section of the Chagos-Lakshadweep Ridge.

The Maldives atolls are of the order of 55 million years old, but the present islands are very much younger. This is because the atoll tops have been repeatedly exposed and eroded during periods of lowered sea level (during Ice Ages), and subsequently completely flooded when sea levels returned to higher levels. Coral reef growth ensures that the eroded atoll tops return to sea level following inundation, after which coral cays can develop. After the last glacial maximum (about 21,000 years ago) the present Maldivian islands started forming just $\pm 3,000$ years ago. As a result of this geological history, the Maldivian Islands have never had any direct continental connection, are of very young geological age, and have a very small land area with limited habitat diversity.

Given this background, and the burgeoning human population (estimated at 407,660 in the 2014 census, with an annual growth rate of 1.65%), it is not surprising that the birds of the Maldives are neither diverse nor abundant. It is not uncommon for foreign birders visiting a resort island to record fewer than a dozen species during their stay; indeed anyone visiting during the northern summer may see no more than a handful. Even island residents may see no more than a score of species during the course of a year. This lack of diversity and numbers has not encouraged much ornithological interest, and relatively few studies have been published. The more important ones include Phillips & Sims (1958b), Phillips (1964), Strickland & Jenner (1978), and Shafeeg (1993), with Ash & Shafeeg (1995) providing the last major review. More recent updates include Anderson & Baldock (2001), Anderson (2007), and Anderson et al. (2011b, 2017, 2019).

Nevertheless, there is much of interest. Some species occur seasonally in large numbers, there are a handful of endemic varieties (see Box 1), and a total of just over 200 species has been recorded. Seabirds are plentiful and seasonally abundant (although gulls are noticeable by their absence), with regular visitors from elsewhere in the tropical and subtropical Indian Ocean, from the western Pacific and from the Southern Ocean. For terrestrial birds, Maldives lies at the southern end of the great Central Asian Flyway, and every year the islands receive numerous northern birds that have flown southwards into South Asia to avoid the northern winter (Newton 2007; BirdLife International 2010b).

The aim of this report is to present a modern, critically reviewed list of the birds of the Maldives, mainly from previously published reports. A total of 203 species are documented here. This represents a significant increase since the last major review of the birds of the Maldives by Ash & Shafeeg (1995), which recorded 150 species. By way of comparison, 129 species have been recorded from the Chagos Archipelago to the south of Maldives (Carr 2011, 2014, 2015, 2019), and nearly 120 from Lakshadweep to the north (Kurup & Zacharias 1995; Santharam et al. 1996; Prince 2011; Khan 2017; Aju & Sreenath 2020).

Methods

This study is a critical review of published reports. It does not include new records of known species, except where they help to clarify problems of identification or status. Historical records, i.e., those reviewed by Ash & Shafeeg (1995), which were backed by specimens, photos, or detailed notes are accepted. Historical records questioned by Rasmussen & Anderton (2005, 2012) were reassessed on a case-by-case basis. Some additional information on birds reported by W.W.A. Phillips, which was not presented in his published papers (Phillips & Sims 1958; Phillips 1964) has been gleaned from his unpublished Maldives notebooks, which were given to RCA by his daughter Eileen Wynell-Mayow in 2003. For recent records, acceptance here requires photographs or detailed descriptions from at least two observers (including information on provenance for captive birds).

Subspecies are only considered in cases where (1) relevant information is available, which is normally when (2) more than one subspecies occurs in the Maldives and can be identified in the field, or (3) where endemic subspecies have been described.

The order of presentation and nomenclature used here follow that in Praveen et al. (2020), which is itself based upon the 4th edition of *The Howard and Moore complete checklist of the birds of the world* (Dickinson & Remsen 2013; Dickinson & Christidis 2014). IUCN Red List status (IUCN 2012) follows BirdLife International (<http://datazone.birdlife.org/species>) with the following categories applying to birds recorded from the Maldives:

- LC: Least Concern (not threatened; widespread and abundant)
- NT: Near Threatened (likely to qualify for a threatened category in the near future)
- VU: Vulnerable (facing a high risk of extinction in the wild)
- EN: Endangered (facing a very high risk of extinction in the wild)
- CR: Critically Endangered (facing an extremely high risk of extinction in the wild)

The birdlife of the Maldives has not been studied well enough to provide any more than rough estimates of abundance and crude indications of status. For the purposes of this review, the approximate indicators of abundance used are as follows (bearing in mind that many will be subject to change as more information becomes available):

- Vagrant: Just one or two records
- Rare: No more than ten records
- Uncommon: More than ten records but unlikely to be seen during any one-week visit
- Regular: Might be seen during a one-week visit (in the right atoll and season)
- Locally common: Restricted to just one or a few atolls, but should be seen there during any one-week visit
- Common: Should be seen during a one-week visit (in the right season)

Maldives claims a 200 nautical mile exclusive economic zone (hereinafter EEZ). The Maldives EEZ adjoins those of India to the north and the Chagos Archipelago (British Indian Ocean Territory) to the south. The northern boundary (median line) has been agreed with India (Anon. 1978). An archipelagic baseline was established in 1996 (Maritime Zones of Maldives Act No. 6/96). The southern boundary has not been agreed with the UK, although the UK declared a 200 nautical mile Environment (Protection and Preservation) Zone in 2003 (Anon. 2004). A chart showing the Maldives EEZ (including the non-ratified, pre-2003 southern boundary) is provided by Flanders Marine Institute (2018). All bird records within that zone are considered to be from the Maldives, with the provisos that nothing presented here should be taken to imply any legal standing, that boundaries are subject to revision, and that the southern-most waters may be disputed.

A map of the Maldives, showing atoll outlines is provided in Fig. 1. Some of the larger geographical atolls are split into smaller units for administrative purposes, while some of the smaller geographical atolls are lumped into larger administrative units. There are a total of 26 geographical atolls and 20 administrative atolls (with Malé City being counted as the twenty-first administrative unit). Each administrative atoll has two names: a traditional name and a modern name, the latter based on the letters of the Maldivian alphabet. There are some 1,200 islands in the Maldives, several sharing the same name. To avoid confusion it is standard practice to write the modern atoll abbreviation with every island. Thus, the island of Hithadhoo in Seenu Atoll might be written as S. Hithadhoo, to differentiate it from the island of Hithadhoo in Laamu Atoll, which would be written as L. Hithadhoo. However, this practice is not obvious to many people, e.g., with the abbreviations for Noonu and Seenu Atolls (N and S) often being misinterpreted as north and south. For that reason, atoll names are spelt out for each island referred to here.

An understanding of the seasons is necessary to understand the occurrence of birds in the Maldives and their movements. Roughly half of all bird species recorded are northern winter migrants. Their arrival and departure are linked to the ebb and flow of the northern and southern seasons. However, in the tropical Maldives, day length and temperature do not vary much throughout the year. Instead, the seasons manifest themselves in the monsoons, the biannual changes of wind direction. The northeast monsoon lasts from about December to March and corresponds with the northern winter; the southwest monsoon, from about May to October, corresponds roughly with the northern summer and southern winter. April and November are inter-monsoon months, equivalent to spring and

autumn. Marine productivity throughout most of the Maldives is intimately linked to the monsoons (Anderson et al. 2011a). So too is the breeding of resident seabirds, e.g., Black-naped Tern *Sterna sumatrana* **11**, which tends to breed on the seasonally changing productive side of the atoll chain (RCA pers. obs.). In addition, the particularly strong northeasterly winds associated with the start of the northeast monsoon season in December and January often sweep terrestrial migrants (heading southwards into southern India and on towards Sri Lanka during their southward passage) to the Maldives.



Charles Anderson

1 (136). Black-naped Tern. Rangali Island, South Ari Atoll, 27 May 2006.

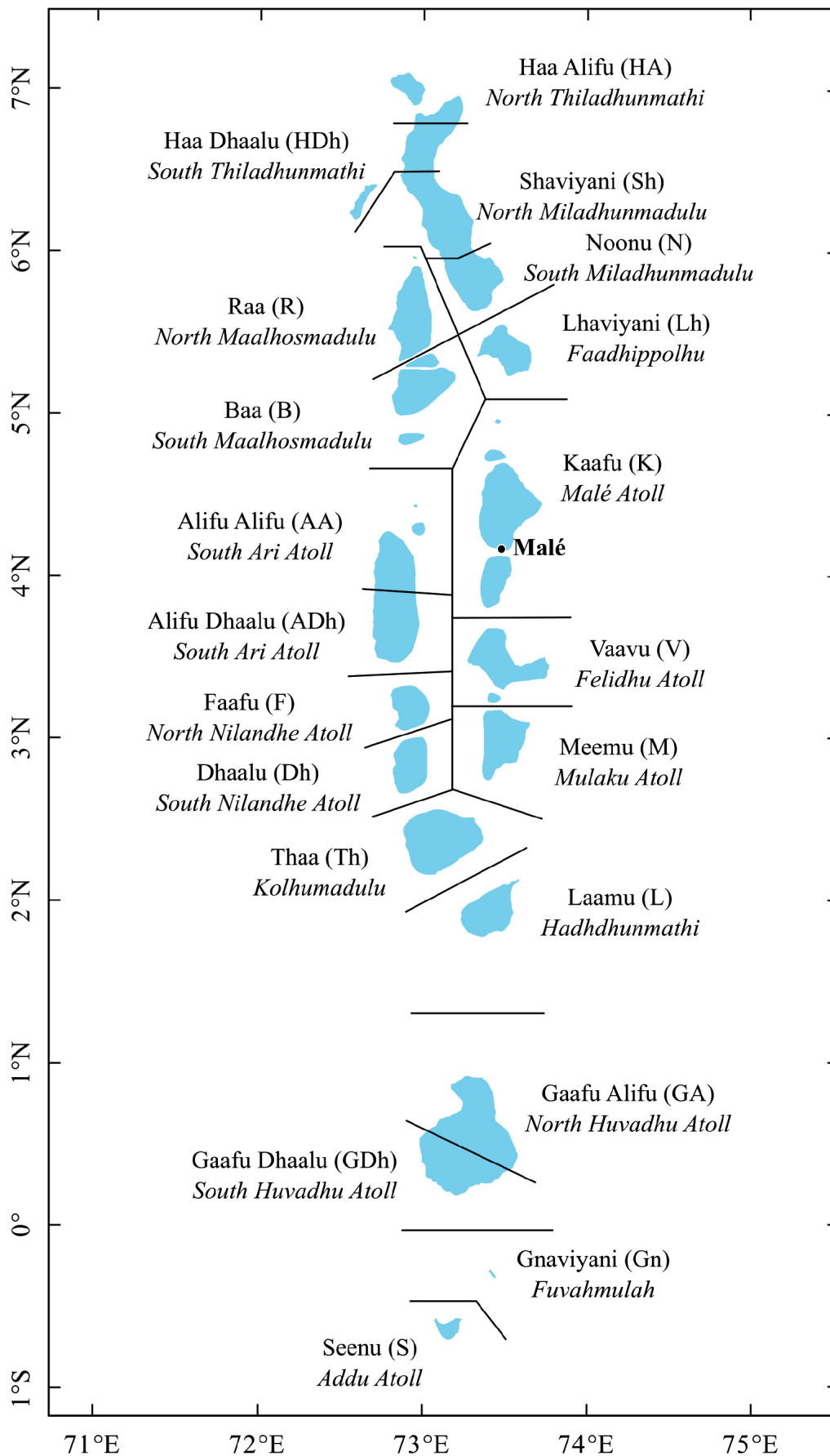


Fig. 1. Map of the Maldives, showing outlines of atolls. The black lines indicate administrative atoll boundaries. Traditional names in italics. Scale: 1° latitude = 60 nautical miles = 111km

Birds of the Maldives

A complete list of bird species occurring in the Maldives is provided in Appendix 1. The list is divided into three sections: Confirmed species; unconfirmed species, (i.e., species that do occur but for which there remains some uncertainty over correct identification); and introduced or feral species. In addition, a fourth category (unaccepted species) is discussed at the end of this section but is not included in Appendix 1.

1. Confirmed species

The first part of Appendix 1 includes all species accepted onto the national list. This section of the text does not discuss all of those listed species, only (1) historical records that have been questioned but for which additional information supporting inclusion is presented, (2) other known species for which additional information revising nomenclature or status is presented, and (3) species not previously recorded from the Maldives.

Cotton Teal *Nettapus coromandelianus* (Gmelin, 1789)

There are only two Maldives records, both recorded as Cotton Pygmy-goose. The first of these was a specimen collected by Phillips (1964) on Gan Island, Addu Atoll, on 08 December 1958 (and now at the Natural History Museum, Tring, NHMUK 1960.12.21, along with all of Phillips' specimens). The second report, also from Addu Atoll, was of a sighting, without further details, of 'several during October 1965' (Strickland & Jenner 1978). Rasmussen & Anderton (2012) questioned whether the birds reported from the Maldives might have been imported. However, it is clear from Phillips' original notebooks that the individual he collected was a wild bird. There have been no subsequent reports from the Maldives, although this species was recently recorded from the Chagos Archipelago (Carr 2019).

Indian Cuckoo *Cuculus micropterus* Gould, 1838

There are just two previously published reports (Fitter 1981; Ash & Shafeeg 1995). Rasmussen & Anderton (2012) suggested that occurrence in the Maldives required verification. The report by Fitter (1981) does not provide any identification details, but does note that one bird was 'seen frequently' during his one week stay on Vilingili Island, North Malé Atoll, in February 1981. Fitter would have been very familiar with the Common Cuckoo *Cuculus canorus*, the most likely confusion species. Ash & Shafeeg (1995) reported that 'Ahamed Shafeeg states that it occurs most years either singly or in groups of two or three, arriving in easterly winds' and also that he distinguished Common Cuckoo. Indian Cuckoo is a regular northern winter migrant to Sri Lanka (Warakagoda et al. 2012), so its occasional occurrence in the Maldives is to be expected. We retain this species on the national list.

White-throated Needletail *Hirundapus caudacutus* (Latham, 1801)

There are two published records from the Maldives: a single bird in Addu Atoll in October 1970 (Strickland & Jenner 1978) and another single bird in North Malé Atoll in November 1996 (Anderson 2007). A third sight record from Felidhoo Island, Vaavu Atoll, 23 November 2007, was of two large, short-tailed, dark-brown swifts, with white throat and vent patches, and pale dorsal patch; the birds were seen clearly and identification was not in doubt (RCA pers. obs.).

Indian Swiftlet *Aerodramus unicolor* (Jerdon, 1840)

First reported from the Maldives as *Collocalia brevirostris*, the Himalayan or Edible-nest Swift, with sightings in November, December, and January (Phillips & Sims 1958b; Phillips 1964; Strickland & Jenner 1978). That species is now considered (as *Aerodramus brevirostris*) to be confined to the Himalayas and areas further east. Very similar swiftlets in south-western India and Sri Lanka, previously treated as conspecific with *brevirostris*, are now believed to be a separate species, *A. unicolor*. Rasmussen & Anderton (2005) noted that 'Swiftlets reported as *brevirostris* several times ... in Maldives perhaps most likely [*unicolor*], although not considered migratory.' A subsequent sight record in February 2004 was identified as *unicolor* (Anderson 2007). There are also sight records of Indian Swiftlets reported on eBird: from Naifaru Island, Lhaviyani Atoll, with one on 03 February 2017 (Stiebl 2017a) and three on 22 March 2019 (Stiebl 2019b); and two on Olhuvelifushi Island, Lhaviyani Atoll, on 11 March 2019 (Stiebl 2019a). All records to date are from November–March, during the northeast monsoon when winds blow (sometimes strongly) from India and Sri Lanka, so the occasional occurrence of Indian Swiftlets in the Maldives at this time of year is not unexpected, even if this species is indeed largely non-migratory.

Common Swift *Apus apus* (Linnaeus, 1758)

There has been some uncertainty regarding the status and subspecific identity of the Common Swift in the Maldives. Phillips (1964) reported a single sighting from Gan Island, Addu Atoll, on 01 November 1958. Reviewing the birds of Addu Atoll, Strickland & Jenner (1978) noted that Common Swift was 'a regular winter visitor, with records between September and November.' They did not give details of individual records, beyond noting that sightings of this species were often of solitary birds, 'but up to five birds together during September 1975.' Ash & Shafeeg (1995), in their national review, noted that the Common Swift was 'a regular visitor, ix-xi and iv-v, to S. Gamu' (i.e. Gan Island, Addu Atoll). We know of no records from April–May. The only reference cited by Ash & Shafeeg (1995), in addition to Phillips (1964) and Strickland & Jenner (1978), was Ali & Ripley (1987). However, the latter simply reported the Common Swift as a straggler to the Maldives citing Phillips. Rasmussen & Anderton (2012: map in Vol. 1, page 176) indicated a two-way migration through the Maldives, presumably based on the report of Ash & Shafeeg (1995).

The subspecies involved had not been determined, although Ali & Ripley (1987) implied that the Maldives birds were eastern Common Swifts *A. a. pekinensis*. That has now been confirmed in one case at least, with an exhausted bird photographed in the hand **[2]** on Vaadhoo Island, South Malé Atoll, 18 August 2003 (Izumi & Tokihiko Sakamoto, *in litt.*, e-mails dated 17 & 30 November 2010), and recently identified as a first-winter *A. a. pekinensis* (Justin Jansen & Gerald Driessens, *in litt.*, e-mail dated 25 June 2020). This is consistent with the recent study of Aju & Sreenath (2020) who noted several records of *A. a. pekinensis* from southern India, including Lakshadweep, during September–February.

More recently there have been a small number of additional Maldives sightings, including three unpublished records by RCA (*pers. obs.*). A single bird was seen over the north-eastern corner of Malé Island, North Malé Atoll, on 23 July 2018. The following day three birds were seen together at the same site (north-eastern corner of Malé Island, 24 July 2018). These birds were all seen, without binoculars, to a distance of about 50 m and were identified at the time as probable *A. apus*. Subsequently, two birds were seen together on Hulumalé Island, North Malé Atoll, on 30 October 2018. These birds were observed with binoculars to a distance of <50 m and were positively identified at the time as *A. apus*, although subspecific identification was not possible. Stiebl (2019c) reported a single individual on eBird as *A. apus* (from Naifarú Island, Lhaviyani Atoll, on 17 March 2019) noting 'observation distance < 20 m (flew directly over me multiple times). Completely brown swift with brown upperparts. No pale coloration visible around throat and forehead (excludes *A. pallidus*)'. While this information strongly suggests *A. apus* it does not definitively rule out all other possibilities, so we regard this record as probable not confirmed, a position supported by the observer (Sebastian Steibl, *in litt.*, e-mail dated 19 October 2020).

It has now been established that eastern Common Swifts, which breed in Beijing, China, spend the non-breeding season in southern Africa, migrating north of the Himalayas both ways (Birding Beijing 2015). We speculate that some eastern Common Swifts breeding in East Asia, southwards of the latitude of Beijing, may migrate to southern Africa by a more southerly route, transiting South-east Asia (e.g. Pierce et al. 2015; The Flyway Foundation Thailand 2018), crossing the Arabian Sea (cf Anderson 2009) and appearing occasionally in Chagos, and Seychelles (Carr 2011 & 2015; Skerrett & Disley 2011). Other bird species that use the same trans-oceanic route in autumn may return by a slightly more northerly route in spring (Moreau 1972; Anderson 2009), so the lack of Common Swift records from the Maldives and southern India at that time is not unexpected.

In summary, the Common Swift appears to be an uncommon but regular autumn migrant, mostly from August to November, but with additional probable records from July and March. There are no known records to support the assertions of Ash & Shafeeg (1995) and Rasmussen & Anderton (2012) that it also occurs on spring migration in April–May.



2 (22). Common Swift Exhausted bird, Vaadhoo Island, South Malé Atoll, 18 August 2003.

Pallid Swift *Apus pallidus* (Shelley, 1870)

There are two reports from Addu Atoll: one sighting on 03 October 1970, and another examined in the hand on 20 September 1975 (Strickland & Jenner 1978). The 1975 individual was confidently identified at the time as *A. pallidus* (distinctly pale appearance, no 'sooty' aspect to the plumage, forehead almost white). Both records were accepted by Ash & Shafeeg (1995), while Rasmussen & Anderton (2012) considered the Maldives records to be valid, as we do, based on the in-hand report. In addition, a third individual identified at the time as *A. pallidus* was seen in flight in the company of a Little Swift *Apus affinis* at Lohifushi, North Malé Atoll, on 07 January 1999 by Justin Jansen (Anderson 2007; Justin Jansen, *in litt.*, e-mail dated 22 September 2002). However, the identification of Pallid Swift, particularly in flight, is not straightforward, since it is not easily separated from an eastern Common Swift *A. a. pekinensis* (e.g., Lewington 1999; Ahmed & Adriaens 2010; Roberts & Campbell 2015; Aju & Sreenath 2020). For the 1999 Lohifushi sighting, the observer recently indicated that he did not eliminate the possibility of *A. a. pekinensis* at the time and therefore withdrew the record (Justin Jansen, *in litt.*, e-mails dated 24 July 2017 & 8 June 2020; Praveen et al. 2017). Because of the potential uncertainty in separation of *A. pallidus* and *A. a. pekinensis*, due care should be taken with identification of any future sightings.

Blyth's Swift *Apus leuconyx* (Blyth, 1845)

A single sighting was reported (as Fork-tailed Swift *Apus pacificus*) by Anderson & Baldock (2001). Identification as '*Apus pacificus*' was not in doubt. However, that species comprised several subspecies, which have subsequently been recognized as four separate species (Leader 2011; Rasmussen & Anderton 2012; Kirwan et al. 2020). The Maldives sighting was not identified to subspecies, but the only one of the newly accepted taxa recorded from Peninsular India is Blyth's Swift *Apus leuconyx*, which breeds in the Himalayas between Pakistan and north-eastern India, and winters in the southern Indian Subcontinent (Leader 2011; Rasmussen & Anderton 2012; Kirwan et al. 2020). It is likely that the Maldives' sighting refers to that taxon. More recently, there has been one other sight record of two Blyth's Swifts, from Dhidhoo Island, South Ari Atoll, on 05 September 2018 (Roelen 2018).

Sociable Lapwing *Vanellus gregarius* (Pallas, 1771)

There is just one record: a single bird on Addu Atoll, 24–25 September 1975 (Strickland & Jenner 1978). Although no further details are available, this record was regarded as 'beyond doubt' by Strickland & Jenner (1978), and 'certain' by Ash & Shafeeg (1995). An earlier report based on hearsay (Phillips & Sims 1958) was discounted by Phillips (1964).

South Polar Skua *Catharacta maccormicki* Saunders, 1893

and

Brown Skua *Catharacta antarctica* (Lesson, 1831)

The current understanding is that two species of large southern skua occur in northern Indian Ocean waters, mainly during the southern winter: South Polar Skua and Brown Skua (Rasmussen & Anderton 2012; Praveen et al. 2013b). Ash & Shafeeg (1995) noted at least eleven birds, suggesting that two were Subantarctic Skua *Catharacta lonnbergi* Mathews, 1912; that is now considered to be a subspecies of *C. antarctica* (Dickinson & Remsen 2013; Furness et al. 2019). Most birds recorded have been captive, with few identified to species; among those identified, most have been Brown Skuas, with just a few South Polar Skuas recognized (Mörzer-Bruyns & Voous 1965; Ash & Shafeeg 1995; Anderson & Baldock 2001; Anderson 2007; Praveen et al. 2013b). Weimerskirch et al. (2015) studied wintering distribution of South Polar Skuas from breeding colonies in the Antarctic, with at least one bird passing by Maldivian waters during the southern winter.

White-eyed Gull *Larus leucophthalmus* Temminck, 1825

There are two records from the Maldives. The first, a single specimen collected in June 1879 during the voyage of the Italian ship *Vettor Pisani* was recorded by Salvadori & Giglioli (1889). That record has been questioned because: the *Vettor Pisani* passed through the Red Sea and collected birds in Somalia (where this species is a common resident) before visiting the Maldives, and it is possible that the collecting locality may have been misrecorded; this was the only bird collected in the Maldives even though this species had not been recorded anywhere else in South Asia; and there is also a possibility that the bird's passage to the Maldives may have been ship-assisted (Rasmussen & Anderton 2012; Praveen et al. 2014). Regarding the second point, a White-eyed Gull has recently been recorded from India (Jamalabad 2016). The second Maldives record was of a locally captured bird photographed in 1983 by Ahmed Shafeeg (Ash & Shafeeg 1995).

Heuglin's Gull *Larus fuscus heuglini* Bree, 1876

and

Steppe Gull *Larus fuscus barabensis* H.C. Johansen, 1960

The taxonomy of the *Larus fuscus* / *argentatus* (Lesser Black-backed / Herring Gull) complex has been in a state of flux for decades. For South Asian 'large white-headed gulls' Praveen et al. (2014) provide a recent summary of nomenclatural changes. In the Maldives there are records of at least two taxa, one with a darker grey back the other with a paler grey back, which have been recorded under at least four different names at different times (Strickland & Jenner 1978; Ash & Shafeeg 1995; Anderson & Baldock 2001; Anderson 2007).

Current understanding (Rasmussen & Anderton 2012; Burger et al. 2019) is that these two forms are both subspecies of *Larus fuscus*: Heuglin's Gull *L. f. heuglini*, and Steppe Gull *L. f. barabensis*.

Brown Noddy *Anous stolidus* (Linnaeus, 1758)

Noddies are the common seabirds of the Maldives. Two species occur: Brown Noddy and Lesser Noddy *Anous tenuirostris*. Despite their abundance, neither noddy species breeds in any numbers. For Brown Noddy **[3]**, there are two records of breeding from Addu Atoll: Phillips (1964) noted one instance in April 1959, while Duncan (1973a) stated that it was 'seen nesting on buoys and sand bars in June and July'. In addition, Shafeeg (1993) recalled taking a Brown Noddy egg from a nest on Aahuraa Island, Vaavu Atoll, in August 1952, hatching it under a chicken and keeping the bird as a pet for about a year.

Lesser Noddy *Anous tenuirostris* (Temminck, 1823)

The Lesser Noddy occurs throughout the Maldives but appears to be commonest in the north. It occurs in particularly large numbers (many thousands) in the far north of Maldives during the northeast monsoon season (Anderson & Baldock 2001; Anderson 2007), and in consequence that area has been recognized as an Important Bird Area (IBA) by BirdLife International (2004). These Lesser Noddies roost in great numbers on Gallandhoo Island, Haa Alifu Atoll **[4]**, and spend their days at sea in enormous flocks. One dense flock of presumed Lesser Noddies (in the 8-degree Channel at 7°14'N, 73°53'E; on 23 March 1999) was measured by ship's radar to be 2 cables, c.350 m, in diameter (Howe & Casement 2005). As with Brown Noddy, this species does not breed in any numbers in the Maldives, despite being perhaps the commonest seabird locally. The only published record of Lesser Noddy breeding appears to be that of Gadow & Gardiner (1903) who reported breeding on 'Mabaru Island' Baa Atoll in November 1899. There is no Mabaru Island in Baa Atoll now, but Gardiner (1903: 4–5) noted that Mabaru is the eastern-most point of Maalhosmadulu Atoll; that is now known as Maabeyru Faru, a reef currently without an island. Three specimens (two mature females and a nestling) were collected by Gardiner, but their current location (if they still exist) is unknown. They are not at the University of Cambridge Museum of Zoology (Mike Brooke, *verbally*, 07 June 2019), nor at the Natural History Museum (Hein van Grouw, *in litt.*, e-mail dated 17 June 2019). Phillips (1964: 552) suggested that this 1899 record of breeding might refer to a Brown Noddy, but only because he had not recorded the Lesser Noddy from the Maldives. There is also an unconfirmed recent report of small numbers of Lesser Noddy breeding on Boadhoo Island, North Huvadhoo Atoll (Samee Rasheed, *verbally*, dated 03 March 2005). Where the majority of Maldivian Lesser Noddies breed is unknown, although the Chagos and Seychelles Archipelagos are possibilities. For example, Lesser Noddies are abundant off the far north of the Maldives in the northeast monsoon season (December–April); the bulk of egg-laying on Aride Island (the largest breeding colony in the Seychelles) takes place during late May to late June (Ramos et al., 2004).

Sandwich Tern *Thalasseus sandvicensis* (Latham, 1787)

There is just one record, a sighting inside Addu Atoll (at about 0°41'S, 73°09'E) on 31 March 2018, reported by Jonathan Taylor (2018a,b; *in litt.*, e-mail dated 20 July 2019). The single bird was seen well, from a dive boat, in good light, with binoculars and close enough (to within about 8 m) to identify with the naked eye. The bird was in winter plumage, white overall, with outer four primaries strongly dark-edged, posterior half of crown black with slightly rearward-facing tuft, and bill black with a dull yellow tip. Sandwich Terns migrate southwards to south-western India, and Sri Lanka for the northern winter (Ali & Ripley 1987; Rasmussen & Anderton 2012; Warakagoda et al. 2012), so are expected to appear in the Maldives occasionally.



Charles Anderson

3 (118). Brown Noddy. Off east Meemu Atoll, 14 November 2014.



Ahmed Shan

4 (119). Lesser Noddy. Roosting site at Gallandhoo Island, Haa Alifu Atoll, 10 February 2019. (Environmental Protection Agency, Maldives courtesy of Farah Ali).

White-tailed Tropicbird *Phaethon lepturus* Daudin, 1802

The White-tailed Tropicbird is a widespread breeding resident in the Maldives, although it is declining and now mostly absent from the more densely populated central atolls. Local birds are of the typical white form [5]. However, Maclean (1979) recorded a single golden-orange tinged individual, which was assumed to have been of subspecies *P. l. fulvus* from Christmas Island in the eastern Indian Ocean.

Leach's Storm-petrel *Oceanodroma leucorhous* (Vieillot, 1818)

Inclusion of this species on the Maldives list is based on a single well-documented sighting by Robert L. Pitman and RCA (Anderson & Baldock 2001). Because this is a single sight record, without photographic support, it was omitted from the checklist of birds of South Asia (Praveen et al., 2013a), although there are records from the UAE (Laphorn et al. 1970; Campbell & Smiles 2019), and the Red Sea (Granit 2016).

Band-rumped Storm-petrel *Oceanodroma castro* (Harcourt, 1851)

There is a single Maldives record by Hadoram Shirihai and RCA, reported by Anderson (2007), with additional details of the sighting provided in Praveen et al. (2017). Although this record was accepted by the latter authors, they cautioned that on-going splitting of the polytypic *Hydrobates castro* (e.g., Smith et al. 2007; Bolton et al. 2008; Carboneras et al. 2019c; Howell & Zufelt 2019) would make specific identification of sightings increasingly problematic. Similarly, Rasmussen & Anderton (2012) cautioned that the specific identity of this record, within the *Hydrobates castro* complex, was unknown.

Matsudaira's Storm-petrel *Oceanodroma matsudairae* Kuroda, 1922

A small flock of seven storm-petrels was seen and photographed [6] (by RCA and Paul Bench) in the Veymandhoo Channel (between Thaa and Laamu Atolls, at 2°12.0'N, 73°17.5'E) on 06 October 2014. The birds were all sitting on the water when first seen, and flew off when we approached (by boat) within about 40 m. At the time of sighting the birds were identified as Matsudaira's Storm-petrels: almost all dark-brown, with paler brown upper wing bands and (in at least some individuals) bold white primary flashes, and forked tails. However, subsequent examination of photos revealed that not all of the birds had extensive white forewing patches, raising the possibility that they might have been Swinhoe's Storm-petrels *Oceanodroma monorhis*. There were no other birds nearby when these storm-petrels were seen, so relative size could not be estimated. Despite consulting several others, no consensus could be reached on the identification of these birds at that time. Re-examination of the photos during the preparation of this report and additional consultations have, however, now confirmed identification as Matsudaira's Storm-petrel. The photos show that in all birds primary moult was nearly complete, with only the outermost primaries unmoulted. This suggests that all the birds were in the same age group, likely adults. Swinhoe's Storm-petrel adult wing moult occurs roughly between November–December and March–April. In contrast, Matsudaira's Storm-petrel adult wing moult occurs roughly between July–August and November–December. Birds towards the end of primary moult in October are therefore Matsudaira's (Howell & Zufelt 2019; additional moult information and identification courtesy of Justin Jansen and Robert Flood, *in litt.*, e-mail dated 26 June 2020). The lack of well-developed white primary flashes in some of the birds seen might also be explained by their recent primary moult. This is the first record of Matsudaira's Storm-petrel for the



Micky Maher

5 (15). White-tailed Tropicbird. Baraveli Kandu, North of Lhaviyani Atoll, 24 April 2016.

Maldives and the Indian Subcontinent. Matsudaira's Storm-petrels breed on islands off south-eastern Japan in about January–August, migrating southwards into the Indian Ocean, where they spend their non-breeding season, mostly in equatorial waters, during about July–December (Bailey et al. 1968; Harrison 1983; Carr 2014; Howell & Zufelt 2019; Carboneras et al. 2020). The occurrence of this species in the equatorial waters of the Maldives is therefore not expected. Indeed, even in the absence of previous records, several authorities included the south of Maldives within the range of Matsudaira's Storm-petrel in their distribution maps (e.g. Harrison 1983; Howell & Zufelt 2019; Carboneras et al. 2020).

Trindade Petrel *Pterodroma arminjoniana* (Giglioli & Salvadori, 1869)

Within the Indian Ocean, the Trindade Petrel breeds on Round Island off Mauritius, from where birds have been tracked using data loggers. The petrels disperse widely in the Indian Ocean, including into Maldivian waters (Nicoll et al. 2017). Relatively small numbers of Kermadec Petrel *P. neglecta* and Herald Petrel *P. heraldica* also breed on Round Island, with all three species inter-breeding there (Booth Jones et al. 2017). Some authorities consider *P. arminjoniana* and *P. heraldica* to be conspecific. It is likely that all the individuals tracked into Maldivian waters were indeed Trindade Petrels, but it is possible that some individuals of the other species were also included amongst those tracked (Malcolm Nicoll, *in litt.*, e-mail dated 17 June 2020). There have been no confirmed sightings of Trindade Petrel (or indeed Kermadec or Herald Petrel) from the Maldives.

Streaked Shearwater *Calonectris leucomelas* (Temminck, 1836)

There is only a single published Maldives record, from 24 February 1999 (Anderson & Baldock 2001). Despite this, it has frequently been asserted that Streaked Shearwaters in the Indian Ocean occur as far west as the Maldives (e.g., Harrison 1983; van den Berg et al. 1991; Enticott & Tipling 1997). That statement appears to have originated with Bourne (1960), not Phillips & Sims (1958b) as stated by van den Berg et al. (1991). Bourne (1960) did not report the evidence for his statement that this species is 'seen west to the Maldives,' but it appears to have come from Willem Mörzer-Bruyns. A personal letter from Bill Bourne to Bill Phillips, dated 13 June 1959, was among papers in the possession of Eileen Wynell-Mayow (Phillips' daughter), seen by RCA in August 2002; it mentioned 'a Dutchman who claims he has seen *Puffinus leucomelas* off both Ceylon and the Maldives.' In addition, an unpublished and undated (probably 1959) manuscript entitled 'Distribution of Shearwaters, Petrels and Prions' marked 'Duplicate for Dr. Bourne' is among Mörzer-Bruyns' papers in the Natural History Museum, Tring, and noted that 'Whitefaced Shearwater, *Puffinus leucomelas*' occurred in numbers off Ceylon (Sri Lanka) with three sighted 'on the northeast coast of the Maldives Febr. 22nd.' In addition to that report there are three other Maldives sightings. One individual was seen south of Baa Atoll at 4°43'N, 72°47'E on 11 March 2008 by Niels Dreyer and Adam Riley (*verbally*, dated 11 March 2008). Another bird seen off the far north of Maldives, in the 8 Degree Channel at 7°18'N, 72°45'N on 02 May 2013, by RCA and Libby Eyres, was initially thought to be a Streaked Shearwater, but had an all-brown upper head, so may have been Cory's Shearwater *Calonectris borealis*. Unfortunately, the bird flew past rapidly and was not photographed or seen for long enough to confirm identification. Cory's Shearwater is an Atlantic species, with no earlier records from the Arabian Sea, although its presence was predicted (Harrison 1983) and has recently been confirmed (Praveen et al. 2013c; Campbell et al. 2013). A third bird identified as Streaked Shearwater was seen flying to the SE off South Malé Atoll at 4°04'N, 73°33'E on 10 April 2018 by RCA (*pers. obs.*).



6 (37). Matsudaira's Storm-petrel. One of seven individuals, Veymandhoo Channel, 06 October 2014.

Wedge-tailed Shearwater *Ardenna pacifica* (Gmelin, 1789)

Wedge-tailed Shearwater occurs in both dark and pale phases, the former all brown, and the latter with white underparts. Although regional field guides (with the exception of Rasmussen & Anderton 2005, 2012) mostly depict both phases, all those seen in the Maldives have been dark-phase birds (the senior author has seen many hundreds if not thousands in Maldivian waters). Pale phase birds appear to occur mostly in the North Pacific (Howell & Zufelt 2019). Within the Indian Ocean, Bourne (2000) reported the sighting of one pale phase individual among twelve Wedge-tailed Shearwaters off Oman (17.8°N, 56.5°E) on 03 March 2000, noting that the pale phase did not appear to have been recorded in the Arabian Sea before. All of the birds seen in Maldivian waters are believed to be southern hemisphere breeders, dispersing northwards in their non-breeding season. Starting in the second half of April, many birds are seen heading northwards through the Maldives, presumably en route to the area of seasonal upwelling off Somalia and Arabia. However, in early April a few birds are seen each year heading southwards. As noted by Anderson (2007) the status and destination of these birds is unknown, but it may be that they are out-of-phase southern winter breeders, possibly heading for the Chagos Archipelago.

Oriental Darter *Anhinga melanogaster* Pennant, 1769

There are just two records, both photographed. The first was of a single bird in Vaavu Atoll in 2009 (Anderson et al. 2011). The second record was of another single bird, on the uninhabited island of Vadinolhu in Laamu Atoll, 29 December 2016, reported somewhat incongruously in a note on Yellow-bibbed Fruit Dove *Ptilinopus solomonensis* in the Solomon Islands (Hiney 2018).

Little Cormorant *Microcarbo niger* (Vieillot, 1817)

There is just one record: a single bird photographed [7] by Syed Abbas at Kolhufushi Island, Meemu Atoll, on 5 January 2017 (Abbas 2017; Syed Abbas, *in litt.*, e-mail dated 03 June 2020).

Great White Pelican *Pelecanus onocrotalus* Linnaeus, 1758

One of the very first birds reported from the Maldives was a pelican seen by Pyrad (1887–1890) in about 1605, and subsequently identified as a probable Great White Pelican (see below). Shafeeg (1993) photographed one Great White Pelican on Hinnavaru, Lhaviyani Atoll in 1974 (apparently not Shaviyani Atoll as reported by Ash & Shafeeg 1995), and also noted two others seen in 1962 (but without further details).

Spot-billed Pelican *Pelecanus philippensis* Gmelin, 1789

There have been a few unconfirmed records (Ash & Shafeeg 1995; Anderson & Baldock 2001) and two published records for which identification was confirmed. Shafeeg (1993) recorded one Grey (=Spot-billed) Pelican on Guraidhoo, Thaa Atoll, in 1962. Anderson (2007) recorded another individual, captured on Thuladhoo in Baa Atoll in January 2001. In addition, one locally captured individual was photographed [8] on Dhiffushi, North Malé Atoll, on 25 March 2008, by RCA (*pers. obs.*).



Syed Abbas

7 (73). Little Cormorant Kolhufushi Island, Meemu Atoll, 5 January 2017. This is the only record for the Maldives.

Western Reef Egret *Egretta gularis* (Bosc, 1792)

'Ahmed Shafeeg states one arrived with Cattle Egrets in 1990 and was photographed on B. Thulhaashoo; others had been reported elsewhere earlier. The photograph has not been examined and no description is available' (Ash & Shafeeg, 1995). That unconfirmed report appears to be the basis for the tentative inclusion of this species in subsequent publications including Grimmett et al. (1998), Lamsfuss (1998), Kazmierczak (2000), and its unqualified acceptance by Lepage (2019). However, that record was not accepted by Rasmussen & Anderton (2005, 2012). Nevertheless, the Western Reef Egret is a northern winter visitor to southern India, and Sri Lanka (Rasmussen & Anderton 2005, 2012; Warakagoda et al. 2012). Furthermore, Casement (1983) noted a dark-phase 'Reef Heron *Egretta sacra*' (at 8°47'N 69°26'E) on 09 December 1982. Although this was reported to be 200 nautical miles west of the Maldives, the position given is actually more than 200 nautical miles north-westwards of the Maldives, and just outside of the current Maldivian EEZ. Western Reef Egret is included in the list of protected species of the Maldives, having received protection under ordinance 10-ERC/2003/20 of 22 May 2003 (EPA 2016). Its inclusion on this list was probably based on the work of Ahmed Shafeeg (Ibrahim Naeem, Director EPA, *in litt.*, e-mail dated 12 June 2019). Recently there have been two sightings reported on eBird (www.ebird.org). The first was of a single dark-phase bird, photographed [9] on Naifaru Island, Lhaviyani Atoll, on 26 February 2017 (Stiebl 2017b). The second was of a single white-phase bird (uncollaborated but with basic notes) seen on Maamingili Island, South Ari Atoll, on 18 January 2019 (Hogenbirk 2019).

Eurasian Spoonbill *Plataea leucorodia* Linnaeus, 1758

Ash & Shafeeg (1995) reported just two Eurasian Spoonbills, both captive birds, in Vaavu Atoll. To this can be added three other reports. First, five juveniles that came on board ship, 150 nautical miles east of the Maldives at 5°N, 75°E on 10 November 1995 (Casement 1996). Second, two locally-caught captive birds which were photographed [10] on Hithadhoo Island, Laamu Atoll in September 2014 by Riyaz Jauharee (*verbally*, dated 19 May 2016 and *in litt.*, e-mail dated 15 June 2019). Third, a bird photographed by Ali Rilwan on Baarah Island, Haa Alifu Atoll, which had been captured locally in 2015 (Bluepeace 2017; Ali Rilwan, *in litt.*, e-mail dated 07 July 2019).

Pallid Scops Owl *Otus brucei* (Hume, 1872)

One individual was found on Gulhifalhu sandbank, North Malé Atoll (4°14.9'N, 73°22.6'E), on 28 November 2018 by members of the Maldives Biodiversity Association (Maldives Biodiversity 2018; Ahmed Khalid, *in litt.*, e-mail dated 08 June 2019). The bird was held in captivity for one night before being released. Photos [11] were taken by Ahmed Samaan and reported online as Eurasian Scops Owl *Otus scops*. However, this bird was a Pallid Scops Owl: pale grey and finely streaked overall; face plain grey, lacking any rufous; no visible cross bars on underparts; scapulars with a hint of brown; upper parts with contrasting thin streaks, lacking blotches (Chandran et al. 2016). Within South Asia, the Pallid Scops Owl has been considered to winter in Pakistan and parts of northern India only as far southward as Maharashtra (Rasmussen & Anderton 2012). Recent sightings from Kerala and Tamil Nadu (Chandran et al. 2016; Praveen J., *in litt.*, e-mail dated 14 June 2019), demonstrate that this species does migrate into the southern-most parts of peninsular India during the northern winter. Its occurrence in the Maldives is therefore not entirely unexpected.



Charles Anderson

8 (49). Spot-billed Pelican Locally captured bird, Dhiffushi Island, North Malé Atoll, 25 March 2008.



Sebastian Stiebl

9 (63). Western Reef Egret. Naifaru Island, Lhaviyani Atoll, 26 February 2017.

Short-eared Owl *Asio flammeus* (Pontoppidan, 1763)

The Short-eared Owl was reported to be an 'irregular northern winter visitor, sometimes in considerable numbers' by Ash & Shafeeg (1995). However, the only records of this species from the Maldives are those of Gadow & Gardiner (1903), who reported one specimen and five other sightings between October 1899 and April 1900. There have been no other reports since, and W.W.A. Phillips did not see it, although he did suggest that Maldivians knew this species (Phillips & Sims 1958b; Phillips 1964). Thus the only actual records to date appear to be from what may have been a single irruption, in 1899–1900.

Blue-cheeked Bee-eater *Merops persicus* Pallas, 1773

A major irruption occurred in October–November 2007 (Ali 2007; RCA *pers. obs.*). The only other confirmed record is of two birds, photographed [12] on Kolhufushi Island, Meemu Atoll, 13 May 2016 (Syed Abbas, *in litt.*, e-mail dated 28 April 2017).

European Bee-eater *Merops apiaster* Linnaeus, 1758

There is just one sight record: 'Party of 3 (an adult and 2 sub-adults) visited Gan (Addu) from 10 January to 31 March 1959; they lived mainly upon dragonflies' (Phillips 1964). No details of identification were provided, however, W.W.A. Phillips would have been very experienced with bee-eaters from Sri Lanka. Furthermore, in his unpublished notebooks Phillips recorded: 'January 10 ... I was able to approach close enough to identify them, with certainty with aid of field glasses' and again 'January 11 ... I watched them closely & there can be no question as to their identity.'

Indian Golden Oriole *Oriolus kundoo* Sykes, 1832

This taxon was previously considered to be a subspecies of the Eurasian Golden Oriole *Oriolus oriolus*, but was split by Rasmussen & Anderton (2005) and is now widely considered to be a distinct species (e.g. Shirihai & Svensson 2018b; Walther & Jones 2020). There are three records of golden orioles from the Maldives. Two females from RAF Gan on 10 October 1970 and 22 October 1975 were both recorded as *O. oriolus* (Strickland & Jenner 1978). Rasmussen & Anderton (2012) suggested that those records were probably of *O. kundoo* but might refer to *O. oriolus*. The third record is of another single female or immature, on Hurasdhoo Island, South Ari Atoll (3°40'N, 72°47'E), on 22 September 2010. A series of photographs forwarded by Zaha Waheed (*in litt.*, e-mail dated 28 September 2010) allowed identification as *O. kundoo*: bill relatively long, and dark eyeline extending well beyond eye (but not onto nape). The occurrence of the Eurasian Golden Oriole in Maldives is possible (it occurs regularly in the Seychelles: Skerrett & Disley 2011), but remains uncertain.

Brown Shrike *Lanius cristatus* Linnaeus, 1758

There are about six records of Brown Shrike from Addu Atoll (Phillips 1964; Strickland & Jenner 1978; Ash & Shafeeg 1995). Although these birds were not identified to subspecies, they have been considered to belong to the nominate subspecies, Northern Brown Shrike



10 (65). Eurasian Spoonbill. Locally captured birds, Hithadhoo Island, Laamu Atoll, 5 September 2014.



11 (149). Pallid Scops Owl. Gulhifalhu sandbank, North Malé Atoll, 28 November 2018 (wild bird held overnight).

L. c. cristatus (Ali & Ripley 1987; Rasmussen & Anderton 2012). This subspecies does indeed occur in the Maldives: one other bird seen on Malé on 24 December 2003 had a brown, not grey, head and was identified as an immature Northern Brown Shrike (RCA, *pers. obs.*). However, grey-headed individuals, identified as Philippine Brown Shrike *L. c. lucionensis* have also been recorded. This taxon breeds in East Asia, with some individuals crossing the Bay of Bengal to winter in the Andaman and Nicobar Islands, southern India, and Sri Lanka (Ali & Ripley 1987; Rasmussen & Anderton 2005, 2012; Warakagoda et al. 2012). One grey-headed individual was recorded on Gan Island, Addu Atoll, on 12–13 March 2000 (Anderson & Baldock 2001). A second was photographed [26] on Kolhufushi Island, Meemu Atoll, on 25 January 2017 by Syed Abbas (*in litt.*, e-mail dated 10 January 2020). And a third bird identified as *L. c. lucionensis* was present on Naifaru Island, Lhaviyani Atoll, on several dates between 19 March and 19 April 2019 (Steibl 2017; Sebastian Steibl, *in litt.*, e-mail dated 01 August 2019).

Sykes's Short-toed Lark *Calandrella dukhunensis* (Sykes, 1832)

Reported by Anderson et al. (2016) and Frommeyer (2017) as Greater Short-toed Lark *C. brachydactyla*, of which *C. dukhunensis* was considered to be a subspecies (e.g., Ali & Ripley 1987; Rasmussen & Anderton 2005). Subsequently split following Stenvander et al. (2016), and del Hoyo & Collar (2016). Also known as Eastern Short-toed Lark.

Grasshopper Warbler *Locustella naevia* (Boddaert, 1783)

Lepage (2019) listed Pallas's Grasshopper Warbler (=Rusty-rumped Warbler, *Locustella certhiola*) from the Maldives. That record was based on a photo supplied to Lepage by Amir Rasheedh (*in litt.*, e-mail dated August 2019). However, the bird photographed [13] appears to have been a (Common) Grasshopper Warbler rather than a Pallas's Grasshopper Warbler: it lacked a rust-coloured rump and did not have a particularly prominent supercilium. Although no additional information was provided by Lepage (2019), that bird was photographed by Mohamed 'Tombe' Saeed on Kuda Watteru, North Malé Atoll (4°16'N, 73°22'E) (Amir Rasheedh, *in litt.*, e-mail dated 25 July 2019). Grasshopper Warbler is a regular winter visitor to the Western Ghats in south-western India (Grimmett et al. 1998; Rasmussen & Anderton 2012).

Sand Martin *Riparia riparia* (Linnaeus, 1758)

The identification of this species is not straightforward, due to the likelihood of confusion with Pale Martin *Riparia diluta* (e.g., Grimmett et al. 1998; Kazmierczak 2000; Rasmussen & Anderton 2005, 2012). Indeed, Pale Martin was formerly considered a subspecies of *R. riparia* (e.g., Ali & Ripley 1987). Anderson (2007) reported several sightings from the Maldives that were identified as *R. riparia*. Whether *R. diluta* also occurs in the Maldives is unknown. In a review of recent photographic records from southern India, Chandran (2017) was able to identify several as *R. riparia*, while the identity of several others remained uncertain (either *riparia* or *diluta*). Confirmed records of *R. riparia* from Kerala are summarized by Chandran & Praveen (2019). All records of sand martins from the Seychelles have been reported as *R. riparia* (Skerrett & Disley 2011).



Syed Abbas

12 (45). Blue-cheeked Bee-eater. One of two birds, Kolhufushi Island, Meemu Atoll, 13 May 2016.



Mohamed 'Tombe' Saeed courtesy Amir Rasheedh

13 (181). Grasshopper Warbler. Kuda Watteru Island, North Malé Atoll, 9 December 2018.

Garden Warbler *Sylvia borin* (Boddaert, 1783)

We have a single record: a photo posted online on 06 October 2014 (Waheed 2014) [13a]. The photographer has confirmed that the photo was taken in Malé on 03 October 2014 (Ali Waheed, *in litt.*, e-mail dated 27 June 2020). This photo was shared locally (e.g., Bluepeace 2014) and is the source of a report of Icterine Warbler *Hippolais icterina* in the Maldives checklist of Lepage (2019). However, the photo shows a Garden Warbler: primaries with dark centres, white tips and long projection; tertials evenly coloured; belly paler; undertail white; eye dark with broken pale eye-ring and ill-defined supercilium; bill thick and greyish with dark tip; legs dark; tail square; in addition, the paler edge on the tail feathers and overall greyish plumage are suggestive of the eastern subspecies *S. b. woodwardi* (identification courtesy Justin Jansen, Nils van Duivendijk, and Arend Wassink, *in litt.*, e-mail dated 25 June 2020). The only previous reports from the Indian Subcontinent are four birds recorded in Ladakh (Delany et al. 2014; Singh 2017). The Garden Warbler breeds in Europe and western central Asia, spending the non-breeding season in sub-Saharan Africa. Eastern birds (subspecies *woodwardi*) migrate southwards through the Middle East in the northern autumn. Birds cutting across the north of the Arabian Sea might sometimes be blown off course. The Garden Warbler has been recorded as a vagrant from the Seychelles (Skerrett & Disley 2011).

Common Starling *Sturnus vulgaris* Linnaeus 1758

There is just one record, of a bird observed closely in Addu Atoll on 22 October 1975 (Strickland & Jenner 1978). An earlier sighting reported by Phillips (1964) was of a bird on board ship near Minicoy, Lakshadweep, India (Jany 1955), close to, but not within, Maldivian waters. Considered to be a vagrant to the Maldives by Rasmussen & Anderton (2012).

2. Unconfirmed species

This section of the national list includes birds that are known to have occurred in the Maldives, in some cases not infrequently, but for which identification is still to be confirmed. It is considered likely that they will be seen again, and positively identified, in the near future. Species for which identification is uncertain, have been recorded only once, and therefore cannot be assumed to be seen again, are not included here, but in Section 4: Unaccepted Species.

Unidentified storm-petrel *Fregetta* sp.

There is a single published report of the White-bellied Storm-petrel *Fregetta grallaria* from the Maldives (Ash & Shafeeg 1995), which has been considered 'hypothetical' by Rasmussen & Anderton (2012). That report was based on a sighting by RCA in the 1½ Degree Channel in August 1994. Although identified as a White-bellied Storm-petrel at the time, later review of field notes suggested that the two birds seen could have been Black-bellied Storm-petrels *Fregetta tropica*. The belly appeared all-white, but may not have been seen clearly enough to rule out the possibility of some median black. Furthermore, the black on the chest, which was specifically noted in a sketch at the time, extended posteriorly beyond the wing insertion, suggesting *F. tropica* rather than *F. grallaria*. Furthermore, there are very few records of White-bellied Storm-petrel from the region with none from South Asia, whereas current understanding is that the Black-bellied Storm-petrel is an uncommon but regular visitor to the northern Indian Ocean, including to waters adjacent to the Maldives (e.g. Bailey 1962; Bailey & Bourne 1963; Pepper & Hettige 2008; Rasmussen & Anderton 2012; Carboneras et al. 2019a,b). We therefore suggest that Maldives sightings of *Fregetta* sp. (we have two additional unpublished reports) are most likely to be of Black-bellied Storm-petrel, but this will require further sightings for confirmation. We also note that recent studies suggest that what has been known as White-bellied Storm-petrel is a complex of closely related species, the taxonomy of which is still unresolved (Robertson et al. 2016; Howell & Zufelt 2019).

Unidentified phalarope *Phalaropus* sp.

There are two phalarope records: one from the north of Haa Alifu Atoll (at 7°21'N 72°49'E) on 21 February 1999 (Anderson 2007), the other from the east side of Noonu Atoll (at 5°44'N 73°26'E) on 13 November 2003 (RCA, *pers. obs.*). Neither sighting was identified to species, but it is likely that both were Red-necked Phalarope *Phalaropus lobatus*, a common winter visitor to the northern and western Arabian Sea which occasionally wanders further southwards (Ali & Ripley 1987; Grimmett et al. 1998; Rasmussen & Anderton 2012; Warakagoda et al. 2012; van Bemmelen et al. 2016, 2019), and has indeed been recorded from both Seychelles, and the Chagos Archipelago (Skerrett et al. 2006, 2017; Carr 2015). The only other phalarope occurring in the region is the Red Phalarope *P. fulicaria*, which has been recorded as a vagrant from inland wetlands on the Indian Subcontinent (Rasmussen & Anderton 2012; Rawal et al. 2013; Sangha et al. 2013). Although there are only two records from the Maldives to date, and so this species is listed here as a vagrant, there has been very little ornithological study at sea in the far north of the Maldives during December–January when the Red-necked Phalarope is most likely to occur. It seems likely that further study in the far north during these months would produce additional sightings and allow specific identification. For this reason the phalarope is listed in this section rather than as unaccepted.

Unidentified honey buzzard(s) *Pernis* sp. / spp.

First recorded by Phillips (1964), who collected a specimen that he identified as a Siberian Honey Buzzard *Pernis apivorus orientalis* from Gan Island, Addu Atoll, on 04 December 1958 (specimen now at the Natural History Museum, Tring, NHMUK 1960.12.32). Subsequent sight records by Strickland & Jenner (1978) and Fitter (1981) were identified as (Eurasian) Honey Buzzard *Pernis apivorus*. However,

that species has now been split, into European Honey Buzzard *P. apivorus* and Oriental (or Crested) Honey Buzzard *P. ptilorhynchus*. All Indian Subcontinent honey buzzards are now classified as *P. ptilorhynchus* (e.g. Ali & Ripley 1987; Rasmussen & Anderton 2005; Naoroji 2006), although there has been a recent report of *P. apivorus* from the Chagos Archipelago (Carr 2014, 2015). All Maldivian records were treated as *P. ptilorhynchus* by Ash & Shafeeg (1995), Lamsfuss (1998) and Lepage (2019). However Rasmussen & Anderton (2005) noted that for the Maldives the 'long-term confusion over ID renders most reports questionable ... further study needed.' To add to the uncertainty, a recent photographic record of a honey buzzard from Dhangethi Island, South Ari Atoll (02 November 2018, by RCA), shows a bird with features of both *apivorous* (distinct underwing carpal patch) and *ptilorhynchus* (six primary 'fingers'). Furthermore, the Phillips (1964) specimen from Addu Atoll may indeed be *apivorus*, although that requires further study for confirmation (Hein van Grouw, *in litt.*, e-mail dated 24 June 2019). In short, the specific identity of Maldivian honey buzzards is uncertain.

Unidentified buzzard(s) *Buteo* sp. / spp.

The field identification of buzzards in South Asia is not straightforward. Not only are there several species, for which the taxonomy is still to be definitively resolved, but also most species show much variation in plumage. Records of buzzards from the Maldives include those of Phillips (1964) and Strickland & Jenner (1978), who both reported sightings as *Buteo* sp. In addition, from RAF Gan, Court-Smith (1971) reported one large buzzard-like raptor in January 1971, while Davison (1976) reported four unidentified buzzards in November 1975. The *Buteo* sp. sightings were subsequently considered to be possible *Buteo buteo* by Ash & Shafeeg (1995) and Lamsfuss (1998), while both Naoroji (2006) and Lepage (2019), in their reviews (i.e., without additional records), reported the presence of *Buteo buteo* in the Maldives without qualification. Rasmussen & Anderton (2012) reviewed regional records and noted that buzzards occurring in the Maldives might be one or both of Steppe Buzzard *Buteo buteo vulpinus* (which winters in south-western India) or Himalayan Buzzard *Buteo refectus* (formerly *burmanicus*, and which was thought to winter in Sri Lanka). More recently, the birds wintering in Sri Lanka have been considered to be Eastern Buzzard *B. j. japonicus* (del Hoyo et al. 2019c, 2019d). While it is likely more than one species occur in the Maldives, no Maldivian buzzard sighting has yet been identified to species. Nevertheless, 'Common Buzzard' *Buteo buteo* was given legal protection in the Maldives on 20 August 2013 under the Environment Protection and Preservation Act (4/93), *iulaan* 438-PPIRS/438/2013/135. We suggest that Steppe Buzzard, and possibly one other species, will be confirmed from the Maldives in due course.

3. Introduced species

Maldivians are fond of keeping birds as pets. Traditionally, islanders have been adept at catching birds, and have many methods to trap or snare them (Crowe 1957; Gregory 1971; Shafeeg 1993). Captured birds were typically wing-clipped and allowed to roam within home compounds. Several first records of birds from the Maldives were of such captives (Ash & Shafeeg 1995; Anderson & Baldock 2001; Anderson 2007; Anderson et al. 2011). However, Maldivians also import birds as pets, often illegally. Therefore due care is required to ensure that unusual records are indeed of originally wild birds. Some resort islands maintain aviaries and allow some birds to fly free. For example, for many years Thulusdhoo Island (North Malé Atoll) has kept large numbers of Budgerigars *Melopsittacus undulatus*, which fly freely around the island, while Bandos Island (also North Malé Atoll) has free-flying parrots the most obvious of which have been Red Lories *Eos bornea*. Five species of birds are (or were) well established and are included in section 3 of the main list as introduced or feral species:

Domestic Chicken (Red Junglefowl) *Gallus gallus*
 Feral Pigeon (Rock Dove) *Columba livia*
 Rose-ringed Parakeet *Psittacula krameri*
 Common Myna *Acridotheres tristis*
 House Sparrow *Passer domesticus*

Common Mynas were noted by Ash & Shafeeg (1995) to have been introduced to Malé prior to 1939, but they died out during the Second World War due to the acute local food shortage. Ash & Shafeeg (1995) noted just a single report since then (Fitter 1981). However, a small number of Common Mynas were again introduced into Malé in late 1998 or early 1999 (Anderson & Baldock 2001), and that population continues to thrive. Common Mynas are also seen on several other islands, particularly in Malé Atoll. Whether they have spread from the population in Malé or represent additional introductions is unknown.

In contrast to the situation for Common Myna, a population of House Sparrows introduced to Malé in 1962 (Ash & Shafeeg 1995), continued to thrive until about 2010, but now appears to be locally extinct (RCA *pers. obs.*). However, several subsequent sightings of House Sparrows from other islands suggest that it spread from Malé or that additional introductions may have occurred.

Feral chickens and pigeons, as well as Rose-ringed Parakeet are all well established. Other free-flying species seen by the authors, which are believed to be escapees, are listed below. None of these are included in the national list because their distribution is, at least at present, limited to just one or two islands and it is not clear that they have established self-sustaining populations.

Diamond Dove *Geopelia cuneata*
 Plum-headed Parakeet *Psittacula cyanocephala*
 Blue-and-gold Macaw *Ara ararauna*
 Hyacinth Macaw *Anodorhynchus hyacinthinus*
 Red Lory *Eos bornea*

Budgerigar *Melopsittacus undulatus*
 Yellow- or Sulphur-crested Cockatoo *Cacatua galerita/sulphurea*
 Bank Myna *Acridotheres ginginianus*
 Jungle Myna *Acridotheres fuscus*
 Javan Myna *Acridotheres javanicus*
 Red-vented Bulbul *Pycnonotus cafer*
 Red-whiskered Bulbul *Pycnonotus jocosus*
 White-eared Bulbul *Pycnonotus leucotis*
 Black-crested Bulbul *Pycnonotus flaviventris*
 Scaly-breasted Munia *Lonchura punctulata*
 Black-throated Munia *Lonchura kelaarti*
 Green Avadavat *Amandava formosa*
 Java Sparrow *Lonchura oryzivora*

4. Unaccepted species

This section includes species that have been reported from the Maldives, for the most part only once or twice, but for which adequate proof of correct identification or details of provenance (in the case of captive birds) are lacking. Some of these species are likely to be confirmed in the near future, while others are probable cases of misidentification which are unlikely to be repeated.

Fulvous Whistling Duck *Dendrocygna bicolor* (Vieillot, 1816)

Included in the list of protected species on 20 August 2013 under the Environment Protection and Preservation Act (4/93), *iulaan* 438-PPIRS/438/2013/135. However, there is no known record for Fulvous Whistling Duck; the inclusion of this species may be an error for Lesser Whistling Duck, *Dendrocygna javanica*, which has been recorded once (Anderson & Baldock 2001).

Indian Spot-billed Duck *Anas poecilorhyncha* Forster, 1781

Rasmussen & Anderton (2012, Vol.1, map on page 44) indicated a Maldivian record for Indian Spot-billed Duck. However, that was in error; there is no such record (Pamela Rasmussen, *in litt.*, e-mail dated 15 June 2019).

Rain Quail *Coturnix coromandelica* (Gmelin, 1789)

There are two unpublished sightings of Rain Quail. The first was a single bird seen on Lohifushi Island, North Malé Atoll, 09 January 1999 (Jansen 1999; Justin Jansen, *in litt.*, e-mail dated 23 September 2002). The second was another single bird seen on Heenfaru Island, North Ari Atoll, 24 February 2007 (RCA *pers. obs.*). However, neither sighting was supported by photographs (although in both cases identification seemed secure), and in neither case was the possibility excluded that the bird seen had been imported (both sightings were on tourist islands).

Spotted Dove *Streptopelia chinensis* (Scopoli, 1786)

Included in the review of Ash & Shafeeg (1995) on the basis of a bird heard but not seen. In the original report (Ash et al. 1994) this record was bracketed (i.e., considered doubtful). Rasmussen & Anderton (2012) noted that verification was needed; we concur. The subspecies of the Indian Subcontinent, sometimes recognised as a distinct species, is the Western Spotted Dove *Streptopelia chinensis suratensis* (Gmelin, 1789) (del Hoyo et al. 2019b).

Asian Emerald Dove *Chalcophaps indica* (Linnaeus, 1758)

Fitter (1981) noted that on 08 February 1981 on Vilingili Island, North Malé Atoll, 'Mrs. M. S. Fitter briefly saw a bird which could have been a Bronze-wing pigeon *Chalcophaps indica* (blue on head and nape clearly seen), but unfortunately the bird was not seen again.' Treated as 'possible' by Ash & Shafeeg (1995) but not accepted by Rasmussen & Anderton (2012).

Banded Bay Cuckoo *Cacomantis sonneratii* (Latham, 1790)

There is a single record, in Strickland & Jenner (1978), who noted that a 'bird fitting the description of this species, was seen and photographed one autumn during the late 1960's. Little detail is available, so perhaps the record is best treated with caution'. Ash & Shafeeg (1995) considered this record to be unconfirmed, while Rasmussen & Anderton (2005: 227) considered it to be unverified, and 'perhaps more likely to be the migratory Grey-bellied' (*Cacomantis passerinus*).

Lesser Cuckoo *Cuculus poliocephalus* Latham, 1790

A single photo of a cuckoo, identified as a Common Cuckoo *Cuculus canorus*, is included, without further information, on the website of Maldives Biodiversity (2019). The bird showed a dark eye, and an undertail pattern consistent with Lesser Cuckoo. This species breeds

in Asia and winters in Africa, and is believed to cross the Arabian Sea in the autumn (Moreau 1972; Anderson 2009), so its occurrence in the Maldives would not be unexpected. However, with just the one image (which may show deceptive eye colouration), some disagreement over identification among those authorities with whom the image was shared, and a lack of information regarding date and location of photograph (probably Hithadhoo in Addu Atoll, but no further details available, Mohamed 'Tombe' Saeed., *in litt.*, e-mail dated 09 July 2020), we consider this record to be inconclusive.

Alpine Swift *Tachymartia melba* (Linnaeus, 1758)

A large, medium-brown swift with obvious white underparts was seen at Dhidhoofinolhu Island in South Ari Atoll (at the time, Whitesands Resort) and provisionally identified as Alpine Swift by Susan Anderson on 05 May 2005 (Susan Anderson, *verbally*, dated 05 May 2005). In the absence of photographs or a second observer this record is treated as tentative. This sighting occurred after three days of strong westerly winds, raising the possibility that the bird had arrived from the west, i.e., from Africa. [In a separate incident, a small, dark brown swift or swiftlet was seen at Meedhufushi Island, Dhaalu Atoll, on 06 July 2004 (RCA *pers. obs.*). That was after five days of very strong westerly winds, again raising the possibility that this bird had arrived from Africa.]

Blacksmith Lapwing *Vanellus armatus* Burchell, 1822

A single Blacksmith Lapwing was seen and photographed by members of the Environmental Research Centre in 2002, on an island in the north of Maldives. On the basis of this record, Blacksmith Lapwing was given the local name *thileyru dhooni* by the National Centre for Linguistic and Historical Research in 2007. While there seems little doubt that a Blacksmith Lapwing was indeed present in the Maldives in 2002, details have since been lost (Farah Ali, *in litt.*, e-mail dated 05 November 2010). It is not known if this bird was locally captured, imported, or ship-assisted, nor on which island it was seen. The Blacksmith Lapwing is widespread throughout southern Africa, but it has not been recorded from the Seychelles nor other islands of the south-western Indian Ocean (Sinclair & Langrand 1998; Skerrett & Disley 2011), with the exception of a single immature bird recorded from Europa Island in the Mozambique Channel (Le Corre & Probst 1997).

Spoon-billed Sandpiper *Calidris pygmaea* (Linnaeus, 1758)

Ash & Shafeeg (1995) reported three sightings from 1964 by Ahmed Shafeeg, but noted that 'no photographs or further details are available, so the records are unacceptable'.

Jack Snipe *Lymnocyptes minimus* (Brünnich, 1764)

The Jack Snipe is included in the list of protected species of the Maldives, having received protection under ordinance 10-ERC/2003/20 of 22 May 2003 (EPA, 2016). Perhaps on the basis of this listing it is also included by Factor & Shafeega (2010), and Lepage (2019). However, there are no known records of Jack Snipe from the Maldives. The Environmental Protection Agency currently has no record of the basis for inclusion of Jack Snipe on its list of protected species (Ibrahim Naem, *in litt.*, e-mail dated 12 June 2019).

Black Noddy *Anous minutus* Boie, 1844

For several decades the received wisdom was that of the two smaller species of dark-brown noddy, Lesser Noddy was found in the Indian Ocean, while Black Noddy *A. minutus* occurred in the Atlantic and Pacific (e.g., Harrison 1983). Thus the assumption has been that all the smaller noddies seen in the Maldives are *A. tenuirostris* (e.g. Ash & Shafeeg 1995; Lamsfuss 1998). However, while most in the Maldives are indeed Lesser Noddies, the situation is not so simple: both of the smaller species breed in the eastern Indian Ocean (Stokes & Hinchey 1990; Clarke et al. 2011), and a specimen in the Natural History Museum, Tring (NHMUK 1891.5.20.754), collected near Minicoy in Lakshadweep, just north of Maldives, has been identified as *A. minutus* (Bourne 1997; Rasmussen & Anderton 2012; Praveen et al. 2014; Hein van Grouw, *in litt.*, e-mail dated 03 June 2019). Clarification of this situation has not been helped by the fact that most field guides illustrate Lesser Noddy with extensive white and pale grey covering the head and neck, while Black Noddy is illustrated with a pale crown of more limited extent. In the Maldives, while some smaller noddies do appear to be 'typically' patterned for Lesser Noddy, most appear more akin to Black Noddy with limited pale on the head. The latter have been assumed to be juvenile or non-breeding *A. tenuirostris*, although *A. minutus* may also be present. Very few birds have been inspected closely enough to confirm identification. Among a flock of Lesser Noddies resting on a sandbank in Vaavu Atoll photographed by RCA on 08 November 2019, one individual had dark lores and appeared closer to Black Noddy than Lesser Noddy. However, despite wide consultation, identification was not confirmed, and this individual might best be treated as one of the 'rare examples of [Lesser Noddy which] have dark gray lores' (Howell & Zufelt 2019). Whatever the case in this particular instance, it is likely that the occasional Black Noddy does occur in Maldivian waters. It should also be mentioned that the limited pale on the top of the head of most (non-breeding or juvenile) Maldivian Lesser Noddies encourages misidentification as Brown Noddy.

Tahiti Petrel *Procellaria rostrata* Peale, 1848

A single petrel, identified immediately after the sighting as Tahiti Petrel, was seen by RCA outside Vaavu Atoll (3°25'N 73°50'E) on 05 April 2012 (not 2014 as reported by Carr 2015). Because the bird was neither photographed nor seen by another observer, this record is

regarded as tentative. This species breeds on Pacific Ocean islands, with some individuals migrating during the non-breeding season into the eastern Indian Ocean (Dunlop et al. 1988; Marchant & Higgins 1990; Onley & Scofield 2007). From the western Indian Ocean, there are sight records from Mozambique (Lambert 2004) and from west of Sri Lanka (van den Berg et al. 1991), as well as a photographic record from the Chagos Archipelago on 23 November 2012 (Carr 2014, 2015).

Black-headed Heron *Ardea melanocephala* Children & Vigors, 1826

The Black-headed Heron is included in the list of protected species of the Maldives, having received protection under ordinance 10-ERC/2003/20 of 22 May 2003 (EPA, 2016). However, this is a bird of sub-Saharan Africa (Martínez-Vilalta et al. 2019a), which is no more than a vagrant to the islands of the south-western Indian Ocean (Sinclair & Langrand 1998) and which has not been recorded from the Seychelles (Skerrett et al. 1996, 2001, 2006, 2011, 2017). It therefore seems unlikely to have occurred naturally in Maldives. The Environmental Protection Agency (EPA) currently has no record of the basis for inclusion of Black-headed Heron on its list of protected species (Ibrahim Naeem, *in litt.*, e-mail dated 12 June 2019).

Squacco Heron *Ardeola ralloides* (Scopoli, 1769)

Recorded from Gan Island, Addu Atoll, by Duncan (1973a) who noted that this species was 'resident and plentiful on the island. Birds in breeding plumage have been seen throughout my stay on Gan.' There have been no other reports from Addu Atoll (Phillips 1964; Strickland & Jenner 1978), from elsewhere in the Maldives (Ash & Shafeeg 1995), nor indeed from elsewhere in the Indian Subcontinent (Rasmussen & Anderton 2012; Praveen et al. 2019). It seems likely that this was a case of misidentification, although since Duncan (1973a) also reported breeding populations of Pond Heron *Ardeola grayii philippisi* and Little Heron *Butorides striata albidula* on Gan, it is not clear to which other species he could have been referring.

Rufous Night-heron *Nycticorax caledonicus* (Gmelin, 1789)

A single Rufous (or Nankeen) Night-heron was reported on the OrientalBirding egroup on 14 August 2000 (<http://groups.yahoo.com/group/orientalbirding>). The bird was photographed on Huvahendhoo Island (Lily Beach Resort), South Ari Atoll, during the preceding two weeks by Marcus Lawson. However, no further details were provided.

Eleonora's Falcon *Falco eleonora* Gene, 1839

Two birds identified as Eleonora's Falcon were recorded from Gan Island, Addu Atoll, in 1972 by Duncan (1973a). He noted that both 'were found in the same week in December. Both were in an emaciated and exhausted condition and died shortly after being found. One of the birds was very badly infected with lice'. It is possible that identification was correct, since both birds were presumably inspected in the hand. Nevertheless, these birds were considered to be Peregrine Falcons *F. peregrinus* by Strickland & Jenner (1978), a position followed by Ash & Shafeeg (1995).

Layard's Parakeet *Psittacula calthrapae* (Blyth, 1849)

Gadow & Gardiner (1903) reported a sight record of 'a pair of green parakeets a little bigger than a thrush and of a brilliant green colour all over' seen on Hululhe Island, North Malé Atoll, in December 1899, which they identified as Layard's Parakeet. However, the description was insufficient to confirm identification and the possibility of the birds being imported was not ruled out (Phillips 1964; Anderson & Baldock 2001). Unidentified parakeets were also mentioned by Ash & Shafeeg (1995).

Unidentified drongo Dicuridae

Casement (1983) reported a Crow-billed Drongo (*Dicurus annectans*) on board ship at 7°17'N 74°55'E (about 100 nautical miles east of Haa Alifu Atoll) on 03 November 1980. *D. annectans* occurs in eastern Asia, with some birds breeding as far westwards as the eastern Himalayas (Rasmussen & Anderton 2012). It seems most unlikely to be found off the western coast of India. Two species of drongo that do migrate into southern India and Sri Lanka for the northern winter are Black Drongo *D. macrocerus* and Ashy Drongo *D. leucophaeus*.

Red-tailed (or Turkestan) Shrike *Lanius phoenicuroides* (Schalow, 1875)

or

Isabelline Shrike *Lanius isabellinus* Hemprich & Ehrenberg, 1833

There is a single report from Addu Atoll: under Brown Shrike, Strickland & Jenner (1978) noted that 'Birds seen during 1975 were of the race *phoenicuroides*, the Rufous Shrike.' Ash & Shafeeg (1995), Grimmett et al. (1998), and Kazmierczak (2000) all treated this as Rufous-tailed Shrike *Lanius isabellinus* (of which *phoenicuroides* was until recently considered to be a subspecies). Rasmussen & Anderton (2005, 2012) suggested this report was likely to have been of *L. phoenicuroides*. These two sibling species are very similar in appearance and easily confused in most plumages (Shirihai & Svensson 2018b; Justin Jansen, *in litt.*, e-mail dated 08 June 2020), so we prefer to consider the identification of this record as undecided.

Booted Warbler *Iduna caligata* (M.H.C. Lichtenstein, 1823)

or

Sykes's Warbler *Iduna rama* (Sykes, 1832)

Anderson et al. (2019) reported a single bird that was either a Booted Warbler *Iduna caligata* or Sykes's Warbler *Iduna rama*. The bird was seen well and several photos were taken, but identification between these two closely-related species could not be determined.

Grey-throated Martin *Riparia chinensis* Gray, 1830

There is a single published record, from Addu Atoll on 30 November 1967, without further details (Strickland & Jenner 1978; Ash & Shafeeg 1995). That was reported as Plain Martin *R. paludicola*, from which *R. chinensis* has recently been split (del Hoyo et al. 2019a). This species is resident in the northern Indian Subcontinent and into East Asia. Regarding its occurrence in the Maldives, Rasmussen & Anderton (2012) noted that verification was needed. In southern India, where there have also been only a few reports, a recent review of photographic records has shown that several birds identified as *R. chinensis* were in fact Streak-throated Swallow *Petrochelidon fluvicola* (Praveen J., *in litt.*, e-mail dated 08 June 2020). In the absence of compelling evidence, we consider the single Maldives record to be unconfirmed.

Unidentified warbler *Phylloscopus* sp.

A single *Phylloscopus* warbler was seen in Addu Atoll on 10 October 1974, and 'considered by the observer to be *P. trochilis*, the Willow Warbler' (Strickland & Jenner 1978). This identification was considered 'very unlikely to be correct' by Ash & Shafeeg (1995). Their conclusion still stands, given that there is no confirmed record of Willow Warbler from the Indian subcontinent, while 35 other species of *Phylloscopus* have been recorded in the region (Praveen et al. 2019).



Ali Waheed

13a (187). Garden Warbler. Malé, 3 October 2013.

Historical background

The first report from the Maldives of an identifiable bird appears to be that of Ibn Battuta, the Muslim traveller, who visited in 1343–1344 and 1346 CE. Arriving near one small island, he noted two crows, which flew out and circled his sailing vessel (Ibn Battuta 1883), in the same way that House Crows *Corvus splendens* still do today.

Another early report is that of François Pyrard (of Laval in Brittany, France, c.1578–c.1623) who was shipwrecked in Maldives in 1602 and remained until 1607. He noted (Pyrard 1887–1890) that some uninhabited islands and sand banks were covered with dense breeding colonies of seabirds (see below for further details). Pyrard also provided an excellent description of a pelican, which ‘landed upon one of the islands, of prodigious form and size’. This sighting was listed by Buffon (1781) as a pelican, and by Gray (in Pyrard 1890, on the advice of ornithologist P. L. Sclater) as a probable Great White Pelican.

The only bird species named from the Maldives is the Oriental Pratincole *Glareola maldivarum*. It was first described by the French naturalist, adventurer, and colonial administrator Pierre Sonnerat (1748–1814), who visited or passed by the Maldives perhaps in 1774 or 1781. Sonnerat (1782: 216–217) described a specimen, apparently still in Muséum National d’Histoire Naturelle Paris, MNHN 13098 (Justin Jansen, *in litt.*, e-mail dated 08 June 2020), which ‘a été pris en pleine mer par la latitude des îles Maldives; il a vécu près d’un mois, se nourrissant de mouches & de pain trempé dans l’eau’. Subsequently, Sonnerat’s account was recycled by John Latham (1740–1837), an English physician and inveterate compiler of bird descriptions. He published ‘A General Synopsis of Birds’ in three volumes, each with two parts. In volume 3 part 1 (i.e., section 5, on page 224), Latham (1785) provided a translation of Sonnerat’s description noting that ‘this was taken at open sea, in the latitude of the Maldivia Isles. It lived a month on flies and bread soaked in water.’ Neither Sonnerat nor Latham provided a Linnean binomial for this species, Sonnerat referring to it as a variety of Perdrix de Mer (Pratincole, literally Sea Partridge) while Latham listed it as Austrian Pratincole Var. B. Maldivian Pratincole. The first Linnean binomial, and therefore the first valid name, was provided by Johann Reinhold Forster (1729–1798), a naturalist of mixed Scottish and middle-European descent, who, among other things, accompanied Captain James Cook on his second voyage around the world. Forster published a synopsis of the fauna of India (which was an edited and expanded version of an earlier work by John Latham and Hugo Davies) in which he listed this species as *Glareola (Pratincola) Maldivarum*, referring the reader to ‘Lath. Syn V. 224’ for a description (Latham et al. 1795).

Edgar Leopold Layard (1824–1900) was a British colonial administrator with a passion for birds. He obtained a specimen of a young Red-footed Booby *Sula sula* [14] from the Maldives, which was reported (as *Sula piscator*) as having been collected by ‘E. L. Layard, Esq. (1848)’ by Blyth (1852: 297). Layard was based in Ceylon (Sri Lanka) from 1848 to 1854 (Pethiyagoda 2007), but how he obtained his Maldives booby is unknown. Blyth’s record was repeated by Blanford (1898: 347), who in turn was copied by Gibson-Hill (1953).



Saamee Rasheed

14 (70). Red-footed Booby. Locally captured bird, Rakeedhoo Island, Vaavu Atoll, 25 June 2009.



Tommy P. Pedersen

15 (24). Asian Koel. Hulule Island, North Malé Atoll, 20 December 2018.

Harry Charles Purvis (H.C.P.) Bell (1851–1937), the renowned archaeologist, visited the Maldives in 1882, in order to inspect a shipwreck, in his capacity as Ceylon customs officer. He recorded ‘the scavenger crow’, ‘the half-wild domestic fowl’, Asian Koel *Eudynamys scolopaceus* [15], Turnstone *Arenaria interpres*, and Brown Noddy, as well as noting that terns were ‘numberless’, that pigeons and parrots were ‘occasionally met with, but are migratory’ and that ‘a variety of teal come over from the continent in large flocks at certain seasons’ (Bell 1883).

Francis Henry Hill Guillemard (1852–1933), the explorer and naturalist, undertook a voyage to Kamchatka and New Guinea, departing England in January 1882, and reaching ‘Colombo April 24th, having touched at Socotra and Oolegaum Island, one of the Maldivian group, on [our] way from Aden’ (Guillemard 1886). The University of Cambridge Museum of Zoology contains a skin (UMZC 19/Cuc/16/a/23) of an Asian Koel, *Eudynamys scolopaceus*, collected on ‘Oolegaum Island’ (presumably Uligam Island, Haa Alifu Atoll) on 22 April 1882, and received from H. Guillemard (Mike Brooke, *in litt.*, e-mail dated 10 June 2019).

Salvadori & Giglioli (1889) reported on the bird collection of the Italian *Vettor Pisani* Expedition of 1879–1881. This expedition was a private venture to Japan and China under the leadership of Tommaso di Savoia Duke of Genova, which passed through the Maldives in June 1879 (not to be confused with a later round-the-world voyage, 1882–1885). The expedition’s biological collections were deposited in the Museo Zoologico in Firenze (Florence) and an account of the expedition was provided by Tommaso (1881). The single Maldivian bird reported by Salvadori & Giglioli (1889) was a White-eyed Gull (see discussion of this specimen, above).

The Deutsche Tiefsee Expedition (German Deep-sea Expedition) explored the Atlantic and Indian Oceans during 1898–1899, on the steamer *Valdivia* under the leadership of Carl Chun (1852–1914). Vanhöffen (1901) reported on the birds of the expedition, noting White Terns [16] *Gygis alba candida*, tropicbirds (presumably White-tailed Tropicbirds) and an ‘unidentifiable *Corvus* species’ from Huvadho Atoll, which they visited in February 1899. One crow specimen, collected by crewmember Edelmann on 20 February (Steinheimer 2009), was subsequently described by Reichenow (1904) as a new subspecies of House Crow *Corvus splendens maledivicus*.

John Stanley Gardiner (1872–1946), the University of Cambridge zoologist, led a two-man expedition to Minicoy and the Maldives in 1899–1900. Results were presented in a series of papers, which were compiled in two substantial edited volumes (Gardiner 1903, 1906), with the birds reported by Gadow & Gardiner (1903). Twenty-six species were recorded, but that included two which were not from the Maldives: Barn Swallow *Hirundo rustica* [17] from Minicoy (Lakshadweep) on 1–4 September 1899, and ‘*Sterna bernsteini*’. The latter does not appear to have been seen or collected in the Maldives, since the only comment is a reference to Saunders & Salvin (1896: 96). Saunders (in Saunders & Salvin 1896) does indeed refer to *Sterna bernsteini* (currently *Thalasseus bernsteini* Chinese Crested Tern, which is unknown from the Indian Ocean, but which is presumed to have been used for Great Crested Tern *Thalasseus bergii*). However, Saunders (in Saunders & Salvin 1896: 96) did not mention the Maldives, reporting this tern from the Chagos Archipelago and elsewhere in the region. Some skeletal specimens from the Maldives collected during the Gardiner expedition are at the University of Cambridge Museum of Zoology (www.museum.zoo.cam.ac.uk/collection/online).

Alexander Agassiz (1835–1910), the American scientist, visited the Maldives from 25 December 1901 to 22 January 1902, aboard a chartered steamer, the *Amra* (Agassiz 1903). He travelled the length of the country, to investigate island, reef, and atoll structure and formation. A single Little Heron collected in Huvadho Atoll was described by Bangs (1913) as a new subspecies *Butorides striata albidula* (see Box 1).



16 (120). White Tern. Gan Island, Addu Atoll, 8 July 2010.

Professor Paulus Edward Pieris (P.E.P.) Deraniyagala (1900–1976), the Sri Lankan scientist, made a brief visit to the Maldives in December 1932. Some information on his minor collection was eventually published much later (Deraniyagala 1956), publication perhaps being prompted by the imminent Maldives visit of W. W. A. Phillips (see below). Four birds were noted: White-tailed Tropicbird, Lesser Frigatebird *Fregata ariel* [18], Grey Heron *Ardea cinerea* [19], and feral chicken.

The Natural History Museum, Tring, UK, holds twelve bird specimens donated by Commander R. Southern R.N., collected at or near Uligam Island, Haa Alifu Atoll, in the far north of Maldives in December 1933 and January 1934. These comprise one White-tailed Tropicbird, three Asian Koels, two Little Herons, one Common Sandpiper, one Greater Crested Tern, one Common Kestrel, and three House Crows. No other collection details are known, although it is assumed that Southern visited the Maldives aboard a Royal Navy ship during one of their regular tours at that time.



Syed Abbas

17 (185). Barn Swallow. Kolhufushi Island, Meemu Atoll, 15 October 2016.



Ahmed Zahid, courtesy Zaha Wahneed

18 (67). Lesser Frigatebird (female below, male above). Hithaadhoo Island, Gaafu Alifu Atoll, 2 December 2010.



Charles Anderson

19 (58). Grey Heron. Dhiffushi Island, North Malé Atoll, 3 April 2008.

Philip Kingsland Crowe (1908–1976), the US Ambassador to Ceylon, visited the Maldives in late 1953. On Himmafushi Island in North Malé Atoll he 'noticed two duck-like birds pinwheel in and land on the lagoon. They were, in fact, a type of pintail which during the north-west monsoon migrates from India to the Maldives. The islanders have no guns but have evolved a unique manner of taking the quarry. They fashion a type of basket which fits over their heads and then stalk the birds under this camouflage, being careful never to show any of their persons above water. The ducks are used to seeing fishing baskets anchored on the tidal flats and pay no attention to them. When the islanders have approached within grabbing distance, they reach up under the water and, seizing the ducks by the feet, pull them under the water and drown them. A good morning's duck-stalking can account for a dozen birds. ... Apart from ducks, there are green pigeon on some of the islands' (Crowe 1957).

William (Bill) Watt Addison Phillips (1892–1981) **[20]**, the British tea planter, soldier, and naturalist, made two visits to the Maldives, the first from December 1956 to February 1957 on his retirement from Ceylon (Wynell-Mayow 2002). He was based on Malé, and was able to visit several islands in North Malé Atoll. Phillips made quite an impression: Mohamed 'Aquarium' Haleem (*verbally*, 2013 exact date unknown) recalls as a very young boy seeing what appeared to him to be a giant Englishman striding around Malé in search of birds, clasp a shotgun. Times have changed! Phillips became known in Malé by the nickname 'dhooni-be' (bird-man) or 'dhooni hifaa-be' (bird catcher). Remarkably, over forty years later this latter epithet earned Phillips a place in the first English-Maldivian dictionary (Reynolds 2003: 174). Phillips was able to collect 128 bird specimens (all deposited at the UK Natural History Museum, Tring) and to observe many more. He recorded his ornithological findings in two papers. The first described two new subspecies from the Maldives (Phillips & Sims 1958a; see Box 1) while the second provided an annotated national bird list (Phillips & Sims 1958b).

At the time of Phillips' first visit to Malé, the British government was developing the Royal Air Force (RAF) station on Gan in Addu Atoll (the southernmost island of the Maldives). This was in operation until 1976, and its presence was a major influence on the advance of ornithological knowledge in the Maldives. Phillips was invited to return to the Maldives as an advisor to the RAF, and was based on Gan from May 1958 to April 1959. He published notes on the nesting of Black-naped Tern and the first record of Bulwer's Petrel *Bulweria bulwerii* in the Indian Ocean (Phillips 1959a,b), and then an updated review of the birds of the Maldivian Islands (Phillips 1964). Subsequent reports from RAF Gan included Court-Smith (1971), Hourston (1972), Duncan (1973a, 1973b), and Davison (1976). Hourston also donated the skeleton of a Roseate Tern *Sterna dougalli*, which died after being found exhausted on Gan on 20 November 1967, to the Natural History Museum, Tring, UK (S/2019.14.1, ecat: 9004865). Following the closure of RAF Gan in 1976, Strickland & Jenner (1978) provided a final review for the birds of Addu Atoll. This spate of reports resulted in more birds being recorded from Gan, the southern-most island of the Maldives, than anywhere else in the country. This was a somewhat ironic situation, since many of the terrestrial birds recorded in the Maldives come as winter migrants from India and elsewhere in central or northern Asia, so are expected to be more frequent in the north of Maldives than the south. Gadow & Gardiner (1903) were the first to note this trend, for birds of prey.

The *Xarifa* Expedition of 1957–1958, led by Hans Hass (1919–2013), was the first diving expedition to visit the Maldives, arriving in Addu Atoll in December 1957 (Hass 1965; Köhler & Garcia 2018). Expedition biologist Georg Scheer (1910–2004) described a new subspecies of Indian Pond Heron, from specimens collected by expedition member Ludwig Franzisket (1917–1988) and by W. W. A. Phillips, naming it for the latter: *Ardeola grayii phillipsi* (Scheer 1960). See Box 1 for further details.

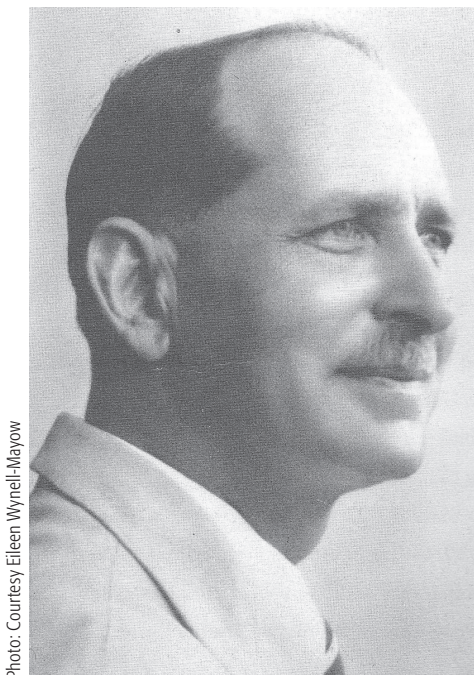


Photo: Courtesy Eileen Wynell-Mayow

20. W. W. A. (Bill) Phillips.

Phillips' contribution to the documentation of Maldivian ornithology remains unrivalled. He documented 80+ first records for the Maldives (a total that can surely never be surpassed) as well as details of breeding and migration. His remains the only major collection of birds from the Maldives, and is still of immense value. For example, his Maldivian specimens have been used in a series of studies to resolve the taxonomic identity of the small, local Tropical Shearwater *Puffinus bailloni* **[21]**, previously known as Audubon's Shearwater *Puffinus lherminieri* (Jouanin 1970; Bretagnolle et al. 2000; Austin et al. 2004), and also of Saunders's Tern *Sternula saundersi* (Feare & Bourne 1978). His reports of breeding status remain the main source for the Maldives and have been widely cited, for example for Sooty Tern by Feare (1984) and Feare et al. (2007).

Soon after the *Xarifa's* visit, several other research cruises passed through and by the Maldives, during the International Indian Ocean Expedition (IIOE) 1959–1965. Seabird publications that mention records from the Maldives include Wallace (1966), Gill (1967), Bailey (1968), and Bailey et al. (1968). Other ship-based observations have been reported through the British Royal Navy Birdwatching Society (www.rnbws.org.uk). Two ships' visits to Addu Atoll are described briefly by Morris (1964) and Bourne (1966b). Other sightings are summarized in Table 1. Tuck (1980) summarised many of the RNBWS sightings in narrative form, providing a brief mention of the seabirds likely to be seen around the Maldives.

The Dutch sea captain Willem Mörzer-Bruyns (1913–1996) passed through or by the Maldives on several occasions in the 1950s and 1960s, mostly on the merchant ship *Singkep* (Justin Jansen, *in litt.*, e-mail dated 08 June 2020). He made a major contribution to the understanding of cetaceans in the region (Mörzer-Bruyns 1971) and also recorded seabirds (e.g., Mörzer-Bruyns & Voous 1965). Many of his unpublished seabird records are at the UK Natural History Museum, Tring, as well as in Amsterdam and at Naturalis, Leiden in the Netherlands (Voous 1995; Justin Jansen, *in litt.*, e-mail dated 08 June 2020).

The Maldivian scholar Ahmed **[22]** (sometimes transcribed as Ahamed) Shafeeg (1928–2015) worked as an atoll chief during the 1960s and 1970s, which gave him opportunities to record details of birds, particularly seabirds, on islands and to photograph large numbers of captive birds. Shafeeg corresponded with other atoll chiefs to document seabird occurrence and breeding in all atolls, and later published the results of this study (Shafeeg 1991, 1993). He also corresponded with Sálím Ali in India, who made use of several of Shafeeg's Maldivian observations in his seminal publication (Ali & Ripley 1987). In addition, many of Shafeeg's photos were reviewed by John Ash (see below) and Ali Shafeeg (Ahmed Shafeeg's son), providing the basis for numerous records (including several first records) of birds from the Maldives (Ash & Shafeeg 1995).

Professional ornithologist John Ash **[23]** (1925–2014) visited the Maldives twice, in 1983 as part of a pest control programme, and in 1993 as part of a fruit bat and bird survey team (Ash 1984; Ash et al. 1994; Collar & Potts 2014). On his second visit he was accompanied by renowned ornithologists Richard Howard (1936–2017) and Alick Moore (1931–1995). Ash's review of the birds of the Maldives with Ali Shafeeg (Ash & Shafeeg 1995) provided a modern groundwork for future ornithological studies in the Maldives. A total of 150 species were recorded (although that was reported as 147, perhaps as a result of miscounting and/or differences in classification).

The advent of mass tourism, starting in the early 1970s, allowed increasing numbers of foreign visitors into the Maldives, with a consequent rise in the number of bird reports. Published accounts and photos are provided by Fitter (1981), Moutou (1985a, b), Voightmann et al. (1987), and Webb (1988). Unpublished birding reports are available online at sites such as www.cloudbirders.com



Charles Anderson

21 (44). Tropical Shearwater. Off northwest Thaa Atoll, 4 November 2015.

Table 1. Records of birds from the Maldives from the Royal Navy Birdwatching Society

Species	Date	Location	N	Source
White-tailed Tropicbird <i>Phaethon lepturus</i>	31 January 1973	2°15'N 75°10'E	1	Bourne (1985: 39)
White-tailed Tropicbird <i>Phaethon lepturus</i>	24 February 1974	4°30'N 72°45'E	1	Bourne (1985: 39)
White-tailed Tropicbird <i>Phaethon lepturus</i>	04 February 1962	4°12'N 71°20'E	1	Bourne (1964: 28, 39)
White-tailed Tropicbird <i>Phaethon lepturus</i>	10 July 1978	6°02'N 70°08'E	1	Maclean (1979: 44)
White-faced Storm-petrel <i>Pelagodroma marina</i>	16 July 1964	0°30'S 76°00'E	2	Bourne (1966a: 22)
Flesh-footed Shearwater <i>Puffinus carneipes</i>	02 August 1980	1°46'N 72°31'E	Few	Chapman (1982: 13)
Tropical Shearwater <i>Puffinus bailloni</i>	24 February 1974	4°30'N 72°45'E	60	Bourne (1984: 53)
Tropical Shearwater <i>Puffinus bailloni</i>	21 July 1987	1°30'N 73°00'E	1	Bourne (1989: 16)
Tropical Shearwater <i>Puffinus bailloni</i>	January 1992	5°00'N 75°00'E	1	RNBWS database
Bulwer's Petrel? <i>Bulweria bulwerii</i>	07 January 2000	7.5°N 73.8°E	1	Bourne (2000: 10)
Jouanin's Petrel? <i>Bulweria fallax</i>	21 July 1987	1°30'N 73°00'E	1	Bourne (1989: 13)
Grey Heron? <i>Ardea cinerea</i>	27 September 1985	7°N 75°E	2	Casement (1986: 55)
Eurasian Spoonbill <i>Plataea leucorodia</i>	08 November 1995	5°N 75°E	5	Casement (1996: 54)
Frigatebirds <i>Fregata</i> sp.	31 January 1953	c 5°00'N 75°00'E	Group	Hamond (1953: 7)
Frigatebird <i>Fregata</i> sp.	17 July 1964	1°S 74°E	1	Bourne (1966a: 27)
Lesser Frigatebird <i>Fregata ariel</i>	21 July 1987	1.7°N 73.6°E	Groups	Bourne (1989: 23)
Great Frigatebird <i>Fregata minor</i>	07 November 1968	2°N 74°E	3	Bourne & Dixon (1973: 52)
Great Frigatebird <i>Fregata minor</i>	21 July 1987	1.7°N 73.6°E	Groups	Bourne (1989: 21)
Red-footed Booby <i>Sula sula</i>	31 January 1953	c 5°00'N 75°00'E	1	Hamond (1953: 7)
Red-footed Booby <i>Sula sula</i>	21 July 1987	1.7°N 73.6°E	Several	Bourne (1989: 20)
Red-footed Booby <i>Sula sula</i>	08 November 1968	2.0°S 71.0°E	14	Bourne & Dixon (1973: 50)
Brown Booby <i>Sula leucogaster</i>	27 February 1974	0°03'S 72°55'E	1	Bourne (1985: 41)
Skua <i>Catharacta</i> sp.	21 July 1987	1.7°N 73.6°E	1	Bourne (1989: 24)
Brown Noddy <i>Anous stolidus</i>	21 July 1987	1.7°N 73.6°E	Many	Bourne (1989: 30)
Lesser Noddy <i>Anous tenuirostris</i>	23 March 1999	7°14'N 73°53'E	Flock	Howe & Casement (2005: 42)
Sooty Tern <i>Onychoprion fuscatus</i>	April 1953	5°N 70°E	A few	Hamond (1953: 7)
Sooty Tern <i>Onychoprion fuscatus</i>	07 November 1968	2°N 74°E	100	Bourne & Dixon (1973: 58)
Common Hoopoe <i>Upupa epops</i>	19 October 1987	7°36'N 74°02'E	1	Casement (1988: 39)
Crow-billed Drongo <i>Dicrurus annectans</i>	03 November 1980	7°17'N 74°55'E	1	Casement (1983: 36)

and www.fatbirder.com. Recently the websites www.ebird.com (Sullivan et al. 2009; eBird 2019) and iNaturalist.org have provided a platforms for birders to record sightings, including from the Maldives. The tourist market also supports a variety of magazines, which provide an outlet for popular articles (e.g., Naif 2016; Rasheed 2017; Adam 2018).

The Maldives has a traditional pole-and-line tuna fishery. Fishermen use the presence of feeding flocks of seabirds to locate schools of tuna. Reports on this important interaction include Shafeeg (1991, 1993), Adam (1994), Anderson (1996), Bluepeace (1996), and Jauharee & Adam (2012). Seabird bycatch in the pole-and-line fishery has been documented by Miller et al. (2016), while the relatively minor offshore longline fishery has been reported to have zero seabird bycatch (Ali 2015).

Among other recent updates, Lamsfuss (1998) produced a useful checklist of the birds of the Maldives, albeit without references. Several lists purporting to provide summaries of the birds of the Maldives are available online; most are entirely inadequate but one exception is that of Avibase (avibase.bsc-eoc.org; Lepage 2019). Saleem & Nileysha (2003) provided a list of birds found in mangroves. Anderson & Baldock (2001) and Anderson (2007) recorded several first records and notes on other species. Other first records of various species were provided by Ali (2007), Anderson et al. (2011, 2016, 2019) and Maldives Biodiversity (2018). Pittie (2020) compiled an extensive online bibliography of South Asian ornithology, including numerous works covering the Maldives. Romero-Frías (2012) documented many Maldivian folk tales, including several relating to birds. Other relevant publications include Ali (2009), Factor & Shafeega (2010), and Frommeyer (2017).



Photo: courtesy Ali Shafeeg

22. Ahmed Shafeeg photographed in about 2014.

Photo: courtesy Caroline Ash

23. John Ash photographed in the 1950s with a Goldcrest *Regulus regulus*.

Ringling and satellite tracking studies elsewhere in the region have started to reveal insights into the origins of seabirds visiting the Maldives. Weimerskirch et al. (2006) satellite-tracked one female Great Frigatebird *Fregata minor* that flew 4,400 km from Europa Island in the Mozambique Channel to Hithaadhoo Island in north Huvadhoo Atoll, a known frigatebird roosting site. Subsequently, Weimerskirch et al. (2017) tracked additional Great Frigatebirds from Europa, and some again visited the roost at Hithaadhoo (not the adjacent island of Kolamaafushi, as stated). Another satellite tracking study demonstrated that Great Frigatebirds regularly transit across Maldivian waters while on extended feeding excursions during the SW monsoon season (Weimerskirch et al. 2016). Several studies (Catry et al. 2009; Le Corre et al. 2012; Weimerskirch et al. 2015; Jaeger et al. 2017; Nicoll et al. 2017; Lavers et al. 2019) employed data loggers to map the pelagic distributions of Indian Ocean seabirds. Wedge-tailed Shearwater, Flesh-footed Shearwater *A. carneipes* [24], Trindade Petrel, White-tailed Tropicbird, Red-tailed Tropicbird *P. rubricauda*, Sooty Tern *Onychoprion fuscatus*, and South Polar Skua from colonies in the southern Indian Ocean were all found to spend time in Maldivian waters during their non-breeding seasons. Kavanagh et al. (2017) reported the results of tern ringing in the Arabian Gulf: two Lesser Crested Terns *Thalasseus bengalensis* ringed on a breeding island off Bahrain (in June 2012 and June 2014) were recovered in the Maldives (in January 2013 and October 2014).



Charles Anderson

24 (42). Flesh-footed Shearwater. Off northeast North Malé Atoll, 28 April 2009.

Discussion

The list of birds of the Maldives currently totals 203 species. Some of the subspecies listed may in due course be recognized as full species. The criteria for accepting species records have been applied fairly but not absolutely consistently. Such subjectivity is an almost inevitable result of the list having just two compilers. It seems that the time is right for the formation of a Maldives Bird Records Committee. It is also the case that uncertainty over the status of several species will only be resolved with additional records. The growth of interest in local biodiversity in general, and birds in particular, together with the spread of digital photography and the increasing use of social media should all ensure a continuing rise in the number of species known from the Maldives (Fig. 2).

Among the 203 species recorded from the Maldives, breeding residents constitute a relatively small group. Just eight species can be considered to be widespread, regular breeders, with another eight breeding more locally (Box 2). An additional handful have bred once or twice, with a few more having been reported, mostly with little evidence, to have bred.

In contrast, northern winter terrestrial migratory visitors make up the largest category of Maldivian birds. Indeed, at least half of all birds recorded from Maldives fall into this category. Most of the ducks, waders, raptors, and passerines recorded in the Maldives are species that breed further north in Asia, and fly south for the winter. Many have major wintering grounds in southern India and Sri Lanka. Some visit the Maldives regularly and in good numbers (with a few staying over during the northern summer), but many are stragglers, occurring irregularly and in small numbers. With much of the ornithological study in the Maldives having been centred on Gan in Addu Atoll (the southernmost island in the country), it is likely that further study in the northern atolls during the northern autumn and early winter will produce additions to this category. Passerines seem to be particularly poorly represented at present. Nearly all of these winter visitors migrate along the Central Asian Flyway (BirdLife International 2010b), of which the Maldives is often considered to form the southern terminus. A few of these birds may continue further southwards to the Chagos Archipelago (Phillips 1964; Carr 2014, 2015), and so might be considered to be passage migrants rather than winter visitors.

Other passage migrants also appear in the Maldives occasionally. From the East Asia–East Africa Flyway (BirdLife International 2010a) several autumn passage migrants cross the Arabian Sea from India to East Africa, with some touching down in the Maldives while en route. Birds following this route (which might be termed the Arabian Sea Flyway) include European Roller *Coracias garrulous*, Blue-cheeked Bee-eater, Eurasian Cuckoo *Cuculus canorus*, Amur Falcon *Falco amurensis* [25], Eurasian Hobby *Falco subbuteo*, and Lesser Kestrel *Falco naumanni* as well as, perhaps, eastern Common Swift, Tree Pipit *Anthus trivialis*, Barn Swallow, and Sand Martin. All of these species have long been known to make the crossing of the Arabian Sea (Moreau 1938, 1972). They are now also known to occur more-or-less regularly in the Seychelles and potentially to be associated with the annual transoceanic migration of dragonflies (Skerrett et al. 2001; Anderson 2009).

Finally for terrestrial migrants, the Philippine Shrike *Lanius cristatus lucionensis* [26] may be the sole representative from the East Asia–Australasia Flyway (BirdLife International 2010c), which more-or-less regularly visits the Maldives.

In contrast to terrestrial migrant birds, which appear to visit the Maldives almost entirely from the north, seabirds pass through the Maldives from all directions. Some are indeed Eurasian breeders that visit during the northern winter (e.g., most gulls, several terns, and

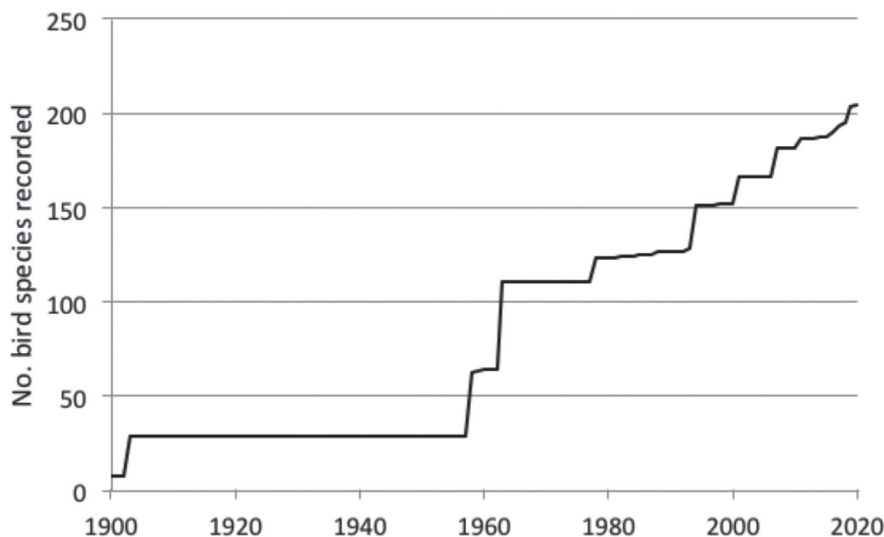


Fig. 2. Timeline of numbers of bird species recorded from the Maldives. The contributions of Gadow & Gardiner (1903), Phillips & Sims (1958b), Phillips (1964), Strickland & Jenner (1978), and Ash & Shafeeg (1995) are all clearly discernible.

the three species of northern skua/jaeger). Relatively small numbers breed in the northwest Indian Ocean (e.g., Jouanin's Petrel *Bulweria fallax*, Red-billed Tropicbird, and Lesser Crested Tern *Thalasseus bengalensis*), while others arrive from the western Pacific (e.g., Bulwer's Petrel and Swinhoe's Storm-petrel). Some breed elsewhere in the tropical Indian Ocean (e.g., Lesser Frigatebird, Great Frigatebird, Brown Noddy, Lesser Noddy, Sooty Tern, Bridled Tern *Onychoprion anaethetus* [27], and all four species of booby). Others still pass through Maldivian waters during the southern winter, many of them on their way to and from the great seasonal upwelling off Somali and Arabia. These include not only birds that breed in southern subtropical and temperate regions (e.g., Wedge-tailed Shearwater, Flesh-footed Shearwater, and Sooty Shearwater *Ardenna grisea*) but also birds that breed even further southwards in the Southern Ocean (e.g., Wilson's Storm-petrel *Oceanites oceanicus*, South Polar Skua, and Brown Skua).

While recording visitors, especially rare visitors, is of interest, a more pressing need is to understand the ecology and conservation status of more common, resident species. Several reports have mentioned that populations of Maldivian birds are under threat (Ash & Shafeeg 1995; Anderson 1996; Anderson & Baldock 2001). However, there have been no systematic surveys of bird numbers in the Maldives, and there are no estimates of population sizes or trends. Despite this it seems clear that some breeding birds (notably breeding seabirds, Tropical Shearwater, White-tailed Tropicbird, and Black-naped Tern) are declining in numbers, largely due to disturbance of nesting islands (by humans and rats). Rat eradication and appropriate protection on some islands might be expected to result in population increases.

There is also the issue of bird catching. Maldivians have traditionally caught birds, both to eat and to keep as pets. A large variety of traps, snares, and nets were employed. A series of legal directives have, in recent years, banned the capture, sale and keeping of most local and migratory birds (Box 3). As a result, the intensity of bird catching has decreased significantly, although there is a lack of enforcement and some catching continues. The main targets are birds that visit the islands during the northern winter. For bird-catchers targeting these birds, *dhooni moosum* (bird season) started in about September and lasted for several weeks. Seabirds have also been caught, by fishermen at sea, on roosting islands at night, and (specifically on Fuvahmulah) as they soar along the island's edge (Shafeeg 1993; Ash & Shafeeg 1995; Anderson 1996). The habit of catching birds for pets has resulted in many first records for the Maldives (Ash & Shafeeg 1995; Anderson & Baldock 2001; Anderson 2007; Anderson et al. 2011, 2019). As for seabirds, the habit of catching them for food (and taking their eggs) may have wiped out the breeding colonies of some species. The Frenchman, François Pyrad, who was in the Maldives from 1602–1607 (see above), noted that some uninhabited islands and sand banks were covered

'with numbers of birds called pinguy, which lay there their eggs and young, and in quantities so prodigious that one could not (and I have often tried it) plant one's foot without touching their eggs or young, even the birds themselves, for they fly not away at the sight of men. For all that, the islanders eat them not, good eating though they be; they are as large as pigeons, and of a black and white plumage' (Pyrad 1887–1890).



Alexander Schmidt

25 (160). Amur Falcon. Exhausted wild bird, aboard ship near Dhigufinolhu Island, South Ari Atoll, 6 Dec 2017.



Syed Abbas

26 (167b). Philippine Shrike. Kolhufushi Island, Meemu Atoll, 25 January 2017.

The French word *pingouin* (from which the English word penguin was derived) refers to auks (family Alcidae). There are neither auks nor penguins in the Maldives. The birds referred to by Pyrard may have been black-and-white Sooty Terns, which breed in dense colonies in the Seychelles and Chagos. They do not breed in the Maldives now; reports to the contrary all apparently originate from the unconfirmed anecdotal note of Phillips & Sims (1958) that 'it was reported to breed during March and April'. Nevertheless, Sooty Terns (and other seabird species) may have bred in relatively small numbers relatively recently (Shafeeg 1993) and in larger numbers in the more distant past. Fosberg (1957) visited the Maldives briefly in April 1956, at which time he visited the island of Kuda Bandos in North Malé Atoll. He found fragments of what he identified as phosphate rock and noted that it was 'likely that a thousand years of close human occupation would have eliminated ... the birds that supplied the guano for the phosphate.' Mohamed Ali (former head of the Environment Research Centre) reported that he had found phosphate rock, suggestive of large seabird colonies, on Isdhoo Island in Laamu Atoll and Maadhoo Island in Baa Atoll (Mohamed Ali, *verbally*, dated 15 May 2002).

There are now no major breeding colonies of any seabird. The obvious deduction is that species which may have bred in large colonies were wiped out. Changing habits since the time of François Pyrard, perhaps associated with a growing human population, presumably encouraged the eating of seabirds and their eggs. The species that survive as resident breeders now all spread their breeding effort out over tens or even hundreds of islands. In former times this would have been a sensible strategy to minimize loss. If one island were washed over by a storm, invaded by rats, or visited by hungry fishermen, there would still be many other islands on which breeding was successful. But this same strategy means that there are now no outstanding islands with large colonies of hundreds of breeding pairs. As a result there is little incentive to protect any one particular breeding island, and indeed not one island has been protected because of its breeding seabirds (the islands of Olhugiri in Baa Atoll and Hithadhoo in Gaafu Alifu Atoll were protected to safeguard their *roosting* frigatebirds).

For the same reason, there is no national inventory of breeding islands, although the compilation of Shafeeg (1993) provides an excellent starting point. Nor is there any information on population trends of wintering shorebirds, which also appear to be declining in abundance. In this case the annual Asian Waterbird Census provides a potential framework for future study, although there seems to have been only one contribution to date (Li & Mundkur 2007).

A potential threat for the future is global warming. Increasing temperatures might lead to increased ocean stratification, possibly reducing feeding opportunities for seabirds. Alternatively, increasing temperatures might lead to increased frequency of storms, promoting greater mixing and higher productivity. In either case, sea level rise might be expected to erode at least some nesting and roosting islands. The provision of nesting platforms for Black-naped Terns (currently being trialled) is one step towards mitigating breeding habitat loss for this one species.



Charles Anderson

27 (128). Bridled Tern. Off northeast North Malé Atoll, 27 April 2016.

Box 1. Endemic subspecies

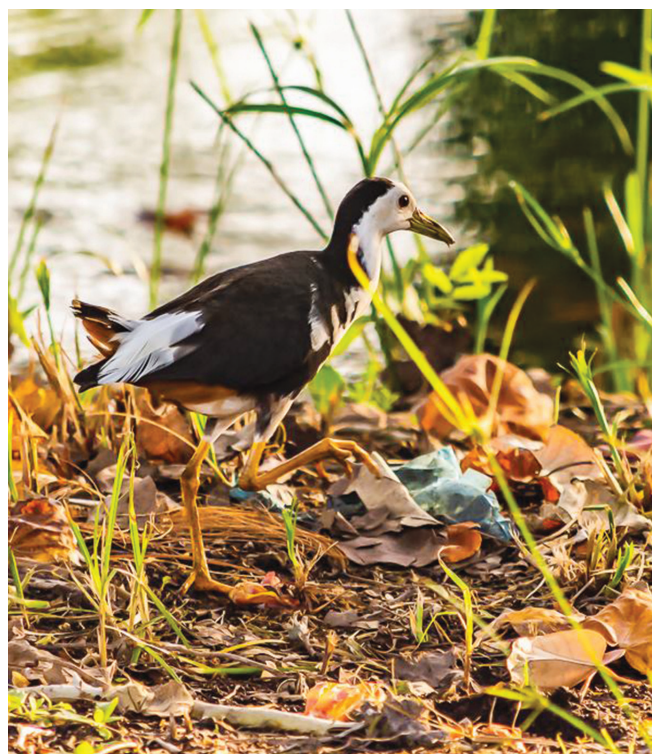
There are no endemic Maldivian bird species, which is a reflection of the relatively young age of the islands of the Maldives. However, five endemic subspecies have been described from the Maldives, although only two of these (*Butorides striata albidula* and *B. s. didii*) are widely accepted as valid. Nevertheless, all five 'endemic varieties' of birds were protected in the Maldives by Public Notice 10C/00/24 of 11 July 1999, under the Environment Protection and Preservation Act (4/93).

Maldivian White-breasted Waterhen *Amaurornis phoenicurus maldivus* Phillips & Sims, 1958

Described from nine specimens collected in North Malé Atoll in December 1956 and January 1957 by W. W. A. Phillips. The type series is at the Natural History Museum, Bird Section, Tring, UK, including the holotype, BMNH1957.16.31 from Hulule Island (Warren 1966: 175). Compared to birds from India and Sri Lanka, '*maldivus* has broader white forehead, slatier back, more extensive white below, and paler rufous underparts; partial albinos frequent' (Rasmussen & Anderton 2005). Said by Phillips & Sims (1958a,b) to occur throughout the archipelago, but subsequently Phillips (1964) found that birds from Addu Atoll [28] were 'so similar to typical *phoenicurus* from Ceylon that I am unable to separate them.' He therefore revised the suggested distribution of *A. p. maldivus* to 'North and South Malé Atolls and their vicinity' with *A. p. phoenicurus* suggested to occur throughout the rest of the Maldives (Phillips 1964). Such a limited and incongruous range for *maldivus* seems unlikely, particularly for a bird that, despite appearances, is capable of migrating substantial distances. The relatively high frequency of partial albinism noted for *maldivus* by Phillips & Sims (1958) is a feature of several other island populations (Taylor 1998). The subspecies *maldivus* was not recognized by Ripley et al. (1977), Ali & Ripley (1987), nor Taylor (1998, 2019).

Southern Maldivian Little Heron *Butorides striata albidula* Bangs, 1913

Little Heron *Butorides striata* (also known as Green or Striated Heron) is a widespread species with numerous subspecies described (Martínez-Vilalta et al. 2019c), including two from the Maldives, one from the southern atolls the other from the north, both of which are widely recognized as a valid (Hancock et al. 1978; Ali & Ripley 1987; Martínez-Vilalta et al. 2019c). An exception, however, was provided by Kushlan & Hancock (2005), who considered, without explanation, that all Maldivian Little Herons belonged to the subspecies *B. s. albolimbata* Reichenow, 1900, which was described from Diego Garcia, Chagos Archipelago. If Southern Maldivian Little Heron is accepted as valid, it is presumed to be restricted to the southernmost atolls of Addu and Huvadho (Ash & Shafeeg 1995). It is paler than the widespread subspecies of India and Sri Lanka (*B. s. chloriceps*) but darker than the subspecies found further north in the Maldives (*B. s. didii*). The single type specimen of *B. s. albidula* is an adult female which was collected by Henry Bigelow on Dandhoo Island, Huvadho Atoll on 02 January 1902. It is housed at the Museum of Comparative Zoology, Harvard, USA (MCZ Ornithology 39356).



28 (28). White-breasted Waterhen. Hithadhoo Island, Addu City, Seenu Atoll, 12 Sep 2020



29 (55b). Northern Maldivian Little Heron. Kolhufushi Island, Meemu Atoll, 22 Oct 2016.

Northern Maldivian Little Heron *Butorides striata didii* Phillips and Sims, 1958

Northern (or Central or Paler) Maldivian Little Heron [29] was described from a series of ten specimens collected by W. W. A. Phillips in North Malé Atoll in December 1956 and January 1957 (Phillips & Sims 1958a), including the holotype BMNH1957.16.17 collected at Malé Island (Warren 1966: 81). This subspecies was named for the then Maldivian Prime Minister, Hon. Ibrahim Ali Didi, and the type series was deposited at the Natural History Museum, Bird Section, Tring, UK. It is presumed to occur throughout the northern and central Maldives, from the far north to Laamu Atoll (Ash & Shafeeg 1995). However, Phillips (1964) noted, without presenting any evidence, that a darker form occurs in the north of Maldives, and suggested that this may be the subspecies of India and Sri Lanka, which he referred to as *B. s. javanicus*, but which is now recognized as *B. s. chloriceps*. For this reason he referred to *B. s. didii* as the Central Maldivian Little Heron (Phillips 1964). We have just one sight record of two darker Little Herons from the north of Maldives (Hanimaadhoo Island, Haa Dhaalu Atoll, 11 November 2003) which were presumed to be migrant *B. s. chloriceps* (RCA pers. obs.). In addition there are two specimens labelled at *B. s. javanicus*, collected in the far north at Uligam Island, Haa Alifu Atoll, in December 1933, and donated by Commander R. Southern (NHMUK 1934.3.17.11&12); these may be the source of Phillips' (1963) information about this subspecies in the north of Maldives.

Maldivian Pond Heron *Ardeola grayii phillipsi* Scheer, 1960

There is a resident population of Pond Heron [30] in the south of Maldives (Addu Atoll and perhaps also Fuvahmulah and Huvadhoo Atoll). This was described as a distinct subspecies by Scheer (1960), and named in honour of W. W. A. Phillips, who had collected most of the type specimens. The holotype is held at the Hessisches Landesmuseum Darmstadt, Germany, with paratypes at the Senckenberg Naturmuseum Frankfurt and the Landesmuseum (now LWL-Museum) für Naturkunde Münster, both in Germany, and the Natural History Museum, Tring, UK. This subspecies was recognized by Phillips (1964), Hancock et al. (1978), Ali & Ripley (1987), and Ash & Shafeeg (1995). However, it was not recognized as a distinct subspecies by Kushan & Hancock (2005), Rasmussen & Anderton (2005, 2012), or Martínez-Vilalta et al. (2019b). The differences between *A. g. phillipsi* and the nominate subspecies *A. g. grayii* are minimal. Hancock et al. (1978) noted that *phillipsi* has 'a somewhat incongruous trio of diagnostic characteristics ... longer and deeper bill in the male, shorter tarsus in the female and the outermost three or four primaries pure white, instead of being dusky-tipped or (in the case of the tenth) wholly dusky with a dark shaft. The differences are marginal, the bill and foot measurements in fact overlapping with those of the nominate subspecies, but the wing-tip colouration seems to be a reliable feature.' Kushan & Hancock (2005) later considered any differences described for *phillipsi* to be 'within the overall range of variation' for the species. What are presumed to be migrant *A. g. grayii* occur occasionally in the northern and central atolls, with over 30 records to date, mostly between mid-October and early April (Ash & Shafeeg 1995; www.ebird.org; RCA pers. obs.). One specimen included in the type series by Scheer (1960) was collected at 'Dhiffuri' (=Dhiffushi Island) in Fadippolhu (Lhaviyani) Atoll in the north of Maldives by *Xarifa* Expedition member



Ludwig Franzisket on 01 April 1958. Despite listing this specimen as a paratype, Scheer (1960) noted that this was the only example seen in Fadippolhu, that this atoll is closer to India than to Addu Atoll, and that the specimen's measurements suggested that it was of the continental population, not the new subspecies. As a result, Scheer (1960) did not include the northern specimen in his analysis of the new subspecies. Phillips (1964) also considered that specimen to belong to *A. g. grayii*. In the south, if *A. g. phillipsi* is accepted as a valid subspecies, the inclusion of Huvadho Atoll within its range requires confirmation. Scheer's (1960) inclusion of Huvadho was based on sight records by himself, by Phillips and by Franzisket. Phillips' sighting was of a single bird seen flying near Fiyori Island (South Huvadho Atoll) on 23 March 1959 (W. W. A. Phillips, unpublished notes in the senior author's possession). Details of other sightings (by Scheer and Franzisket) are unknown, but the *Xarifa* Expedition passed through Huvadho Atoll in February 1958. The fact that these Huvadho sightings were all in the northern winter raises the possibility that they could have been migrant *A. grayii grayii*.

Maldivian House Crow *Corvus splendens maledivicus* Reichenow, 1904

This is the common crow **[31]** of the Maldives, found throughout the country with the exception of Addu Atoll, where it is excluded by White Terns *Gygis alba*. It is the first bird species to have been recognisably recorded from the Maldives (Ibn Battuta 1883). Maldivian birds were described as a separate subspecies, *C. s. maledivicus* by Reichenow (1904). The type specimen (ZMB 99.2243) was collected in Suvadiva (=Huvadho) Atoll in February 1899 and is at the Institut für systematische Zoologie, Museum für Naturkunde der Humboldt-Universität zu Berlin (formerly Zoologisches Museum, Berlin, ZMB) (Dickinson et al. 2004; Steinheimer 2009). Maldivian House Crows have been accepted as a distinct subspecies by Goodwin (1986) and by Ash & Shafeeg (1995). However, differences from *C. s. protegatus* (the subspecies of southwest India and Sri Lanka) are minimal, and *maledivicus* is considered likely to be conspecific with *protegatus* by some authorities (Ali & Ripley 1987; Rasmussen & Anderton 2005; Madge 2019).



Charles Anderson

31 (169). Maldivian House Crow. Fulidho Atoll, Vaavu Atoll, 8 November 2015.

Box 2. Breeding birds of the Maldives

The breeding status of several Maldivian birds is not well known. This is perhaps not unexpected given that there are some 1,200 islands, and very little serious ornithological study has been carried out in the country. Current understanding, which is subject to change as new information becomes available, is summarized here.

Widespread resident breeding birds:

Asian Koel *Eudynamis scolopaceus*
 White-breasted Waterhen *Amaurornis phoenicurus*
 Black-naped Tern *Sterna sumatrana*
 White-tailed Tropicbird *Phaethon lepturus*
 Tropical Shearwater *Puffinus bailloni*
 Grey Heron *Ardea cinerea*
 Striated Heron *Butorides striata didii* & *B. s. albidulus*
 House Crow *Corvus splendens*

Breeding locally:

White Tern *Gygis alba*
 Saunders's Tern *Sternula saundersi*
 Roseate Tern *Sterna dougallii*
 Greater Crested Tern *Thalasseus bergii*
 Indian Pond Heron *Ardeola grayii phillipsi*

Recent reports of regular breeding in small numbers in the southernmost atolls:

Common Moorhen *Gallinula chloropus*
 Black-crowned Night Heron *Nycticorax nycticorax*
 Black-winged Kite *Elanus caeruleus*

Breeding reported once or just a few times:

Watercock *Gallicrex cinerea*
 Brown Noddy *Anous stolidus*
 Lesser Noddy *Anous tenuirostris*
 Sooty Tern *Onychoprion fuscatus*
 Lesser Frigatebird *Fregata ariel*

Breeding reported once but not confirmed:

Common Teal *Anas crecca*
 Common Snipe *Gallinago gallinago*
 Oriental Pratincole *Glareola maldivarum*
 Cattle Egret *Bubulcus ibis*

Breeding reported as possible but not confirmed or considered likely:

Crab-plover *Dromas ardeola*
 Bridled Tern *Onychoprion anaethetus*
 Gull-billed Tern *Gelochelidon nilotica*
 Lesser Crested Tern *Thalasseus bengalensis*
 Red-footed Booby *Sula sula*

Introduced / feral species that do or have bred:

Red Junglefowl *Gallus gallus*
 Rock Pigeon *Columba livia*
 Rose-ringed Parakeet *Psittacula krameri*
 Common Myna *Acridotheres tristis*
 House Sparrow *Passer domesticus*

Sources: Gadow & Gardiner (1903), Phillips & Sims (1958), Phillips (1964), Duncan (1973), Ikram (2004), Strickland & Jenner (1978), Shafeeg (1993), Ash & Shafeeg (1995), Lamsfuss (1998), RCA unpublished observations and notes.

Box 3. Protected species and areas

Birds have traditionally been hunted in the Maldives, both for food and to keep as pets. Under the umbrella of the Environment Protection and Preservation Act (Law 4/93) a number of legal directives (*iulaan*) have been issued, which together protect all native and migrant bird species (with the exception of House Crow). Their capture, trade and keeping in captivity are prohibited. The relevant directives are:

- 05 June 1996: *iulaan* 1-/96/34, protection of White Tern, *Gygis alba*.
- 11 July 1999: *iulaan* 10C/99/24, protection of 22 species (17 seabirds and 5 'endemic varieties').
- 22 May 2003: *iulaan* 10-ERC/2003/20, protection of 47 species.
- 22 Aug 2013: *iulaan* 438-PPIRS/438/2013/135, protection of 33 species.
- 21 Aug 2014: Regulation 2014/R-169, protection of all migratory bird species.

In addition, 61 protected areas have been declared, mostly small reef areas to protect marine life. However, two were declared specifically to protect Frigatebird roosting islands (Olhugiri in Baa Atoll and Hithaadhoo in North Huvadho Atoll). And a further 22 were declared to protect sandbanks, islands and mangrove areas, where birds are a significant component of the local biodiversity. The 24 protected areas of importance for birds, listed in geographic order from north to south, are:

- Bileydhoo Thila, including Innafinolhu (Haa Alifu Atoll). 17 June 2019, 438-ENV/438/2019/150. Reef area; the associated islet of Innafinolhu is an important seabird roosting and breeding site.
- Gallandhoo (Haa Alifu Atoll). 17 June 2019, 438-ENV/438/2019/150. Well vegetated, uninhabited island; important seabird roosting site, especially for Lesser Noddy.
- Kelaa Mangrove Area (Haa Alifu Atoll). 17 June 2019, 438-ENV/438/2019/150. Important mangrove area, also important for both resident and migratory birds.
- Baarah Mangrove (Haa Alifu Atoll). 30 December 2018, 438-ENV/438/2018/322. A large mangrove area also important for wading birds such as Common Greenshank.
- Innafushi (Haa Dhaalu Atoll). 17 June 2019, 438-ENV/438/2019/150. Important seabird roosting and breeding site.
- Keylakuna (Haa Dhaalu Atoll). 30 December 2018. 438-ENV/438/2018/322. An uninhabited island with important mangroves and nesting White-tailed Tropicbird.
- Neykurendhoo Mangrove Area (Haa Dhaalu Atoll). 30 December 2018, 438-ENV/438/2018/322. An uninhabited island with important mangrove area also important for migratory birds.
- Bolissafaru (Shaviyani Atoll). 17 June 2019, 438-ENV/438/2019/150. Important bird roosting and nesting site.
- Naalahura (Shaviyani Atoll). 17 June 2019, 438-ENV/438/2019/150. Important bird roosting and nesting site.
- Fodhiparu (Noonu Atoll). 17 June 2019, 438-ENV/438/2019/150. Important bird roosting and nesting site.
- Kendhikulhudhoo Mangrove Area (Noonu Atoll). 17 June 2019, 438-ENV/438/2019/150. A large mangrove and wetland area, with several resident bird species.
- Mendhoo Region (Baa Atoll). 5 June 2011, 138-FS2/1/2011/35. Includes Nibiliga Island, a roosting site for many birds including Brown Noddy, Greater Crested Tern and Black-naped Tern.
- Olhugiri Island (Baa Atoll) 14 June 2006, 174-AB1/2006/13. One of just two islands where Frigatebirds roost.
- Goidhoo Koaru (Baa Atoll). 5 June 2011, 138-FS2/1/2011/35. The largest area of mangrove in Baa Atoll, and a regular roosting site for migratory birds.
- Mathifaru Hura (Baa Atoll). 5 June 2011, 138-FS2/1/2011/35. An area of reef and rocky islets, important for roosting site for terns.
- Rasfari Region (North Malé Atoll). 1 Oct 1995, E/95/32 2447. Roosting site for migratory birds
- Hura Mangrove (North Malé Atoll). 14 June 2006, 174-AB1/2006/13. A large mangrove area also important for other species including birds.
- Mathifaru Hura Island and Reef (North Ari Atoll). 5 June 2009, 138-FS2/1/2011/35. A roosting site for birds such as Black-naped Tern, Brown Noddy and Lesser Noddy.
- Bathala Region (North Ari Atoll). 8 June 2009, 138-FS2/1/2011/35. Includes islets which are important roosting sites for Black-naped Terns.
- Hurasdhoo Island (South Ari Atoll). 14 June 2006, 174-AB1/2006/13. An island with unique geomorphological features, where migratory birds roost.
- Hithaadhoo Island (North Huvadho Atoll). 14 June 2006 174-AB1/2006/13. One of just two islands where Frigatebirds roost.
- Dhandhimau Kilhi (Fuvahmulah). 18 June 2012, 438-PPIR/438/2012/2. One of two large freshwater wetlands on Fuvahmulah, with a rich biodiversity including Maldivian White-breasted Waterhen.
- Bandaara Kilhi (Fuvahmulah). 18 June 2012, 438-PPIR/438/2012/2. One of the largest freshwater wetland areas in the country, with rich biodiversity including Common Moorhen and Maldivian White-breasted Waterhen.
- Eedhigali Kilhi (Addu Atoll). 7 Dec 2004, 20-H3/2004/97. One of the largest wetland areas in the country; a breeding and roosting site for numerous birds, including many migratory species.
- In addition, Birdlife International (2004) recognized Haa Alifu Atoll (North Thiladhunmathi Atoll) as an Important Bird Area (IBA) for its internationally significant, non-breeding concentrations of Lesser Noddy. The birds feed mostly in the Eight Degree Channel, and roost in particularly large numbers on Gallandhoo Island (protected from 17 June 2019).

Sources: EPA (2016, 2019), both available from www.epa.gov.mv

Acknowledgements

Helpful insights and information were provided by many individuals, including Abdulla Naseer, Adam Riley, Adrian Skerrett, Ahmed Hafiz, Ahmed Khalid, Ahmed Samaam, the late Ahmed Shafeeg, Ahmed Shan (EPA), Alexander Schmidt, Ali Mahir, Ali Rilwan (Bluepeace Maldives), Amir Rasheedh, Anke Hofmeister, Arend Wassink, Atul Jain, Bill Bourne, Bob Flood, Deepal Warakagoda, Dipu Karuthedathu, Ed Drewitt, Eileen Wynell-Mayow, Farah Ali (EPA), Gerald Driessens, Guenther Lamsfuss, Hussein Zahir, Ian Robinson, Ibrahim Nadheeh, Ibrahim Naeem (EPA), Izumi Sakamoto, Jan Knight, Jem Babbington, Jerry Knights, the late John Ash, the late John Brodie Good, Jonathan Taylor, Justin Jansen, Libby Eyres, Malcolm Nicoll, Marcus Lawson, Micky Maher, Mike Baldock, Mike Blair, Mike Pointon, Mohamed Ali, Mohamed Haleem, Mohamed Saeed 'Tombe', Mohamed Saleem, Mohamed Shiham Adam, Nick Bray, Nils van Duivendijk, Omar Maniku, Pamela Rasmussen, Paul Bench, Pete Carr, Praveen J., Ragupathy Kannan, Reinhard Kikinger, Rex De Silva, Riyaz Jauharee (MRC), Robert Ulph, Saamee Rasheed, Sebastian Steibl, Shaahina Ali, Stan Howe, Stephen Akester, Stuart Thomas, Susan Anderson, Syed Abbas (who provided the greatest number of excellent photos), Taej Mundkur, Terry Goble, Tim Sykes, Tokihiko Sakamoto, Tommy Pedersen, Tony Davison, and Zaha Waheed (Minister of Fisheries, Marine Resources and Agriculture). Special thanks to Eileen Wynell-Mayow, Ali Shafeeg and Caroline Ash for providing photographs of their fathers. For assistance with museum specimens, thanks to Robert Prŷs-Jones, Hein van Grouw and Alex Bond (Natural History Museum, Bird Section, Tring, UK), Michael Brooke (University of Cambridge Zoology Museum) and John Wilson (Liverpool Museums). For library assistance, thanks to Carole Showell (librarian, British Trust for Ornithology, Thetford), Jane Acred (librarian, University of Cambridge Zoology Department), the staff of the University of Cambridge main library, the staff of the Moore Library, Cambridge, Jerry Knights and Bill Francis (RAF Ornithological Society), and Tim Pierce (Assistant Librarian, RAF College Cranwell). For reviewing drafts of this report we are grateful to Adrian Skerrett, Ibrahim Naeem (EPA), Ilham Atho Mohamed (Ministry of Environment), and Praveen J., and especially to Justin Jansen and Nigel Collar for their particularly diligent reviews, as well as to Aasheesh Pittie for his assiduous editing. This study was funded through Project Regenerate, a Government of Maldives project implemented by IUCN and funded by USAID, the US Agency for International Development. Project support was provided by Ahmed Basheer, Najfa Shaheem Razeed, and Shafiya Naeem.

References

- Abbas, S., 2017. Website URL: ebird.org/view/checklist/S63032970. [Accessed on 10 January 2020.]
- Adam, M. S., 1994. Kandumathi dhooniai masverikan [Seabirds and the tuna fishery]. *Rasain* (Annual Fisheries Journal of the Maldivian Ministry of Fisheries Agriculture and Marine Resources) 14: 64–69. (In Dhivehi).
- Adam, M., 2018. White Tern (dhondheeni) the white angel soaring the skies beyond the equator. *Breeze* 7: 30–33. URL: www.cococollection.com. [Accessed on 1 July 2019.]
- Agassiz, A., 1903. The coral reefs of the Maldives. *Memoirs of the Museum of Comparative Zoology, Harvard* 29: xxv + 1–168 & 82 plates.
- Ahmed, R., & Adriaens, P., 2010. Common, Asian Common and Pallid Swifts: colour nomenclature, moult and identification. *Dutch Birding* 32: 97–105.
- Aju K. R., & Sreenath K. R., 2020. 'Eastern' Common Swift *Apus apus pekinensis* in the Lakshadweep Archipelago, with identification notes on juvenile birds. *Indian BIRDS* 15 (5): 143–144.
- Ali, A. F., 2007. Blue Cheeked Bee-eater's first stopover in the Maldives. *Pemphix* (Newsletter of Environment Research Centre, Malé) 7: 1&5.
- Ali, A. F., 2009. *Assessment of the population, habitat preference and breeding success of White Tern, Gygis alba, in S. Feydhoo, Maldives*. Unpublished M.Sc. thesis, University of East Anglia, UK. 40pp.
- Ali, K., 2015. Status of the shark fishery ban in the Maldives and the implementation of the National Plan of Action on Sharks - an update with notes on turtles and seabirds. *Indian Ocean Tuna Commission, IOTC-2016-WPEB-20*: 1–12.
- Ali, S., & Ripley, S. D., 1987. *Compact handbook of the birds of India and Pakistan together with those of Bangladesh, Nepal, Bhutan and Sri Lanka*. 2nd ed. Delhi: Oxford University Press. Pp. i–xlii, 1 l., 1–737, 52 ll.
- Anderson, R. C., 1996. Seabirds and the Maldivian tuna fishery. *Rasain* 15: 134–147.
- Anderson, R. C., 2007. New records of birds from the Maldives. *Forktail* 23 (August): 135–144.
- Anderson, R. C., 2009. Do dragonflies migrate across the western Indian Ocean? *Journal of Tropical Ecology* 25: 347–358.
- Anderson, R. C., Adam, M. S., & Goes, J. I., 2011a. From monsoons to mantas: seasonal distribution of *Manta alfredi* in the Maldives. *Fisheries Oceanography* 20: 104–113.
- Anderson, R. C., & Baldock, M., 2001. New records of birds from the Maldives, with notes on other species. *Forktail* 17: 67–73.
- Anderson, R. C., Bray, N., Thomas, S., & Maher, M., 2016. First records of three seabirds for the Maldives. *BirdingASIA* 26: 129–131.
- Anderson, R. C., Rasheed, S., Rilwan, A., & Hofmeister, A., 2011b. First records of five species for the Maldives. *BirdingASIA* 16: 41–43.
- Anderson, R. C., Sakamoto, I., Sakamoto, T., Jauharee, A. R., Abbas, S., Rilwan, A., & Drewitt, E., 2019. First records of birds for the Maldives. *BirdingASIA* 31 (June): 102–105.
- Anon., 1978. Maritime boundary: India-Maldives and Maldives' claimed "Economic Zone". Limits in the Seas. No. 78. Washington D.C.: US Department of State, Office of the Geographer. Pp. 1–13.
- Anon., 2004. Law of the Sea. Bulletin No. 54. Division for Ocean Affairs and the Law of the Sea Office of Legal Affairs. New York: United Nations. Pp. 1–154.
- Ash, J. S., & Shafeeg, A., 1995. Birds of the Maldivian Islands, Indian Ocean. *Forktail* 10: 3–31 (1994).
- Ash, J. S., 1984. Vertebrate pest management (pest and crow control). Ministry of Agriculture, Maldives and FAO, Rome. TCP/MDV/2307. Pp. 1–8.
- Ash, J.S., Howard, R., & Moore, A., 1994. Bird observations and recommendations for bird conservation. (Pp. 24–28). In: *The Maldives Archipelago, Indian Ocean. A report on an investigation of fruit bats and birds, November 1993*. Holmes, M., Hutson, A. M., & Morris, J. M. (eds). London: Bat Conservation Trust. Pp. 1–32.
- Austin, J. J., Bretagnolle, V., & Pasquet, E., 2004. A global molecular phylogeny of the small *Puffinus* shearwaters and implications for systematics of the Little-Audubon's Shearwater complex. *The Auk* 121 (3): 847–864.
- Bailey, N., & Bourne, W. R. P., 1963. Some records of Petrels handled in the northern Indian Ocean. *Journal of the Bombay Natural History Society* 60 (1): 256–259.
- Bailey, N., 1962. Birds visiting the flight-deck of an aircraft carrier. *Sea Swallow* 15: 30.
- Bailey, R. S., 1968. The pelagic distribution of sea-birds in the western Indian Ocean. *Ibis* 110 (4): 493–519.
- Bailey, R. S., Pocklington, R., & Willis, P. R., 1968. Storm-petrels *Oceanodroma* spp. in the Indian Ocean. *Ibis* 110: 27–34.
- Bangs, O., 1913. The Green Heron of the Maldives. *Proceedings of the Biological Society of Washington* 26: 93–94.
- Bell, H. C. P., 1883. *The Maldivian Islands: an account of the physical features, climate, history, inhabitants, productions and trade*. Colombo, Ceylon: Frank Luker. Pp. i–iv, 1–137.
- Birding Beijing (2015) Out of Africa! The Beijing Swift's incredible journey charted at last. Website: birdingbeijing.com/the-beijing-swift-project. [Accessed 7 October 2020]
- BirdLife International. 2004. *Important Bird Areas in Asia: key sites for conservation*. 1st ed. Cambridge, UK: BirdLife International. Pp. i–xvi, 1–297+3.
- BirdLife International. 2010a. East Asia / East Africa. BirdLife Flyway Factsheet 6. Cambridge, UK: BirdLife International. URL: http://datazone.birdlife.org/userfiles/file/sowb/flyways/6_East_Asia_East_Africa_Factsheet.pdf. [Accessed on 15 July 2019.]
- BirdLife International. 2010b. Central Asia / South Asia. BirdLife Flyway Factsheet 7. Cambridge, UK: BirdLife International. URL: http://datazone.birdlife.org/userfiles/file/sowb/flyways/7_Central_Asia_Factsheet.pdf. [Accessed on 15 July 2019.]
- BirdLife International. 2010c. East Asia / Australasia. BirdLife Flyway Factsheet 8. Cambridge, UK: BirdLife International. URL: www.birdlife.org/sites/default/files/attachments/8_East_Asia_Australasia_Factsheet.pdf. [Accessed on 15 July 2019.]
- Blanford, W. T., 1898. *The fauna of British India, including Ceylon and Burma (Birds)*. London: Taylor and Francis. Vol. IV of 4 vols. Pp. i–xxi, 1–500.
- Bluepeace. 1996. Anumathi dhooni biruveri kamuge thereegai (Seabirds in danger). *Dhanfulhi* (Malé) Sept 1996: 4–5.
- Bluepeace. 2014. Photo posted 25 October 2014. Website URL: www.facebook.com/birdsofmaldives. [Accessed on 20 December 2014 & 28 June 2020.]
- Bluepeace. 2017. Photo posted 11 May 2017. Website URL: www.facebook.com/BluepeaceMaldives. [Accessed on 6 July 2019.]
- Blyth, E., 1852. *Catalogue of the birds in the Museum Asiatic Society (sic)*. 1st ed. Calcutta The Asiatic Society. Pp. i–xxxiv, 1–405.
- Bolton, M., Smith, A. L., Gómez-Díaz, E., Friesen, V. L., Medeiros, R., Bried, J., Roscales, J. L., & Furness, R. W., 2008. Monteiro's Storm Petrel *Oceanodroma monteiroi*: a new species from the Azores. *Ibis* 150: 717–727.
- Booth Jones, K. A., Nicoll, M. A., Rainsin, C., Dawson, D. A., Hipperson, H., Horsburgh, G. J., Groombridge, J. J., Ismar, S. M., Sweet, P., Jones, C. G. & Tatayah, V., 2017. Widespread gene flow between oceans in a pelagic seabird species complex. *Molecular Ecology* 26: 5716–5728.
- Bourne, W. R. P., 1960. The petrels of the Indian Ocean. *Sea Swallow* 13: 26–39.
- Bourne, W. R. P., 1964. Observations of sea birds. *Sea Swallow* 16: 9–40.
- Bourne, W. R. P., 1966a. Observations of sea birds. *Sea Swallow* 18: 9–36.
- Bourne, W. R. P., 1966b. Observations on islands in the Indian Ocean. *Sea Swallow* 18: 40–43.
- Bourne, W. R. P., 1989. Seabird reports received in 1987 and 1988. *Sea Swallow* 38: 7–30.
- Bourne, W. R. P., 1997. The smaller noddies of the Indian Ocean. *Sea Swallow* 46: 79–80.
- Bourne, W. R. P., 2000. Observations of seabirds. *Sea Swallow* 49: 6–26
- Bourne, W. R. P., & Dixon, T. J., 1973. Observations of seabirds 1967–1969. *Sea Swallow* 22: 29–60.
- Bretagnolle, V., Attie, C., & Mougeot, F., 2000. Audubon's shearwaters *Puffinus lherminieri* on Reunion Island, Indian Ocean: behaviour, census, distribution, biometrics and breeding biology. *Ibis* 142: 399–412.
- Buffon, G. L. L., 1781. *Histoire Naturelle des Oiseaux*. Tome VIII. Paris: L'Imprimerie

- Royale. Pp. i–viii, 1–498, i–xlii.
- Burger, J., Gochfeld, M., Kirwan, G. M., Christie, D. A., & de Juana, E., 2019. Lesser Black-backed Gull (*Larus fuscus*). In: *Handbook of the Birds of the World Alive*. del Hoyo, J., Elliott, A., Sargatal, J., Christie, D. A., & de Juana, E. (eds). Barcelona: Lynx Edicions. URL: <https://www.hbw.com/node/53986> [Accessed on 1 June 2019.]
- Campbell, O., & Smiles, M., 2019. A Leach's Storm-petrel *Hydrobates leucorhous* off the United Arab Emirates. *Sandgrouse* 41: 32–35.
- Campbell, O., Flood, R. L., Al Dhaheri, K., & Talbot, G., 2013. The first confirmed records of Cory's Shearwater *Calonectris (diomedea) borealis* for the United Arab Emirates and Oman, in 2011. *Sandgrouse* 35: 126–131.
- Carboneras, C., Jutglar, F., & Kirwan, G. M., 2019a. White-bellied Storm-petrel (*Fregatta grallaria*). In: *Handbook of the Birds of the World Alive*. del Hoyo, J., Elliott, A., Sargatal, J., Christie, D. A., & de Juana, E. (eds). Barcelona: Lynx Edicions. URL: <https://www.hbw.com/node/52587> [Accessed on 25 June 2019.]
- Carboneras, C., Jutglar, F., & Kirwan, G. M., 2019b. Black-bellied Storm-petrel (*Fregatta tropica*). In: *Handbook of the Birds of the World Alive*. del Hoyo, J., Elliott, A., Sargatal, J., Christie, D. A., & de Juana, E. (eds). Barcelona: Lynx Edicions. URL: <https://www.hbw.com/node/52586> [Accessed on 25 June 2019.]
- Carboneras, C., Jutglar, F., & Kirwan, G. M., 2019c. Band-rumped Storm-petrel (*Hydrobates castro*). In: *Handbook of the Birds of the World Alive*. del Hoyo, J., Elliott, A., Sargatal, J., Christie, D. A., & de Juana, E. (eds). Barcelona: Lynx Edicions. URL: <https://www.hbw.com/node/52592> [Accessed on 21 May 2019.]
- Carboneras, C., Jutglar, F., Kirwan, G. M., & Sharpe C. J., 2020. Matsudairas Storm-Petrel (*Oceanodroma matsudairae*). In: *Birds of the World*. del Hoyo, J., Elliott, A., Sargatal, J., Christie, D. A., & de Juana, E. (eds). Cornell Lab of Ornithology, Ithaca, NY, USA. Website: <https://doi.org/10.2173/bow.masp2.01>. [Accessed 25 June 2020.]
- Carr, P., 2011. *A guide to the birds of the British Indian Ocean Territory*. Newbury, UK: Pisces Publications, for RSPB. Pp. i–vi, 1–110.
- Carr, P., 2014. New and interesting bird records from the British Indian Ocean Territory (BIOT). *Sea Swallow* 63: 78–86.
- Carr, P., 2015. Birds of the British Indian Ocean Territory, Chagos Archipelago, central Indian Ocean. *Indian BIRDS* 10 (3&4): 57–70.
- Carr, P., 2019. New and interesting avifaunal records from the Chagos Archipelago, British Indian Ocean Territory. *BirdingASIA* 31 (June): 94–97.
- Casement, M. B., 1983. Landbirds from ships at sea 1981–82. *Sea Swallow* 32: 23–41.
- Casement, M. B., 1986. Landbirds from ships at sea. *Sea Swallow* 35: 46–58.
- Casement, M. B., 1988. Landbirds from ships at sea. *Sea Swallow* 37: 29–42.
- Casement, M. B., 1996. Landbirds from ships at sea in 1995. *Sea Swallow* 45: 47–55.
- Catry, T., Ramos, J. A., Le Corre M., & Phillips, R. A., 2009. Movements, at-sea distribution and behaviour of a tropical pelagic seabird: the wedge-tailed shearwater in the western Indian Ocean. *Marine Ecology Progress Series* 391: 231–242.
- Chandran, A., 2017. Identification of Sand Martins in southern India. *Malabar Trogon* 15 (3): 26–35.
- Chandran, A., & Praveen, J., 2019. Kerala state bird checklist: Additions during 2015–May 2019. *Journal of Threatened Taxa* 11 (7): 13941–13946. doi: <http://10.11609/jott.4904.11.7.13941-13946>.
- Chandran, A., Rasmussen, P. C., Jahan, S., & Praveen J., 2016. The Pallid Scops Owl *Otus brucei* in south-western India, with notes on its identification. *Indian BIRDS* 12 (2&3): 56–63.
- Chapman, S. E., 1982. Notes on seabird reports received 1980–1981. *Sea Swallow* 31: 5–24.
- Clarke, R. H., Carter, M., Swann, G., & Thomson, J., 2011. The status of breeding seabirds and herons at Ashmore Reef, off the Kimberley coast, Australia. *Journal of the Royal Society of Western Australia* 94(2): 365–376.
- Collar, N. J., & Potts, G. R., 2014. John Ash (1925–2014). *Ibis* 156: 907–910.
- Court-Smith, D. St. J., 1971. Large Raptor on Gan. *RAF Ornithological Society Newsletter* 15: 12–13.
- Crowe, P. K., 1957. *Diversions of a Diplomat in Ceylon*. New York: D. Van Nostrand Company. Pp. 1–344.
- Davison, A., 1976. A birders notes on Royal Air Force Gan, August 1975 – November 1975. Unpublished report. Pp. 1–2.
- del Hoyo, J., Collar, N. J., Christie, D. A., Elliott, A., Fishpool, L. D. C., 2014. *HBW and BirdLife International Illustrated Checklist of the Birds of the World. Volume 1. Non-passerines*. Barcelona, Spain and Cambridge UK: Lynx Edicions and BirdLife International. Pp. 1–904.
- del Hoyo, J., & Collar, N. J., 2016. *HBW and BirdLife International illustrated checklist of the birds of the world. Volume 2: Passerines*. Barcelona: Lynx Edicions. Vol. 2 of 2 vols. Pp. 1–1013.
- del Hoyo, J., Collar, N., & Kirwan, G. M., 2019a. Asian Plain Martin (*Riparia chinensis*). In: *Handbook of the Birds of the World Alive*. del Hoyo, J., Elliott, A., Sargatal, J., Christie, D. A., & de Juana, E. (eds). Barcelona: Lynx Edicions. URL: <https://www.hbw.com/node/1343903>. [Accessed on 26 May 2019.]
- del Hoyo, J., Collar, N., Kirwan, G. M., & Garcia, E. F. J., 2019b. Western Spotted Dove (*Spilopelia suratensis*). In: *Handbook of the Birds of the World Alive*. del Hoyo, J., Elliott, A., Sargatal, J., Christie, D. A., & de Juana, E. (eds). Barcelona: Lynx Edicions. URL: <https://www.hbw.com/node/467132>. [Accessed on 15 May 2019.]
- del Hoyo, J., Collar, N., & Marks, J. S., 2019c. Eurasian Buzzard (*Buteo buteo*). In: *Handbook of the Birds of the World Alive*. del Hoyo, J., Elliott, A., Sargatal, J., Christie, D. A., & de Juana, E. (eds). Barcelona: Lynx Edicions. URL: www.hbw.com/species/eurasian-buzzard-buteo-buteo. [Accessed on 31 May 2019.]
- del Hoyo, J., Collar, N., Marks, J. S., & Kirwan, G. M., 2019d. Japanese Buzzard (*Buteo japonicus*). In: *Handbook of the Birds of the World Alive*. del Hoyo, J., Elliott, A., Sargatal, J., Christie, D. A., & de Juana, E. (eds) Barcelona: Lynx Edicions. URL: www.hbw.com/species/japanese-buzzard-buteo-japonicus. [Accessed on 01 June 2019.]
- Delany, S., Garbutt, D., Williams, C., Sulston, C., Norton, J., & Denby, C., 2014. The Southampton University Ladakh Expeditions 1976–1982: Full details of nine species previously unrecorded in India and four second records. *Indian BIRDS* 9 (1): 1–13.
- Deraniyagala, P. E. P., 1956. Zoological collecting at the Maldives in 1932. *Spolia Zeylanica* 28: 7–15.
- Dickinson, E. C., & Christidis, L., (eds.) 2014. *The Howard and Moore complete checklist of the birds of the world: 2. Passerines*. 4th ed. Eastbourne, UK: Aves Press. Vol. 2 of 2 vols. Pp. i–lii, 1–752.
- Dickinson, E. C., & Remsen, J. V. J., (eds.) 2013. *The Howard and Moore complete checklist of the birds of the world: 1. Non-passerines*. 4th ed. Eastbourne, UK: Aves Press. Vol. 1 of 2 vols. Pp. i–l, 1–461.
- Dickinson, E. C., Dekker, R. W. R. J., Eck, S., & Somadikart, S. 2004. Systematic notes on Asian birds. 45. Types of the Corvidae. *Zoologische Verhandelingen, Leiden* 350: 111–148.
- Duncan, J., 1973a. The Birds of Gan. *RAF Ornithological Society Newsletter* 19: 4–7.
- Duncan, J., 1973b. Gan bird-strike hazard. *RAF Ornithological Society Newsletter* 20: 5.
- Dunlop, J. N., Cheshire, N. G., & Wooller, R. D., 1988. Observations on the marine distribution of tropicbirds, sooty and bridled terns, and gadfly petrels from the eastern Indian Ocean. *Records of the Western Australian Museum* 2: 237–247.
- eBird, 2019. eBird: An online database of bird distribution and abundance [web application]. eBird, Cornell Lab of Ornithology, Ithaca, New York. URL: <http://www.ebird.org>. [Accessed June–July 2019].
- Enticott, J., & Tipling, D., 1997. *Photographic handbook to the seabirds of the world*. 1st ed. London and Cape Town: New Holland. Pp. 1–234.
- Factor, A., & Shafeega, F., 2010. *Common Birds of the Maldives*. Malé: Live & Learn Environmental Education. Pp. 1–49.
- Feare, C. J., & Bourne, W. R. P., 1978. The occurrence of 'Portlandica' Little Terns and absence of Damara Terns and British Storm Petrels in the Indian Ocean. *Ostrich* 49: 64–66.
- Feare, C. J., 1984. Seabird status and conservation in the tropical Indian Ocean. (Pp. 457–471). In: *Status and conservation of the World's seabirds*. Croxall, J. P., Evans, P. G., & Schreiber, R. W. (eds). Cambridge, UK: International Council for Bird Preservation (Technical Publication 2).
- Feare, C. J., Jaquemet, S., & Le Corre, M., 2007. An inventory of Sooty Terns (*Sterna fuscata*) in the western Indian Ocean with special reference to threats and trends. *Ostrich* 78: 423–434.
- Fitter, R. S. R., 1981. A note on the birds of the Maldive Islands. *Bulletin of the British Ornithologists' Club* 101 (4): 386–387.
- Flanders Marine Institute, 2018. Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 10. URL: www.marineregions.org and doi.org/10.14284/312. [Accessed on 17 June 2019.]
- Fosberg, F. R., 1957. The Maldive Islands, Indian Ocean. *Atoll Research Bulletin* 58: 1–37.
- Frommeyer, B., 2017. From the Field, Maldives. *BirdingASIA* 28: 123.
- Furness, R. W., Boesman, P., & Garcia, E. F. J., 2019. Brown Skua (*Catharacta antarctica*). In: *Handbook of the Birds of the World Alive*. del Hoyo, J., Elliott, A., Sargatal, J.,

- Christie, D. A., & de Juana, E. (eds). Barcelona: Lynx Edicions. URL: <https://www.hbw.com/node/53956>. [Accessed on 11 June 2019.]
- Gadow, H., & Gardiner, J. S., 1903. Aves. In: Gardiner, J. S., (ed.). *The fauna and geography of the Maldive and Laccadive Archipelagoes*. Cambridge: Cambridge University Press. Vol. 1. Pp. 368–373.
- Gardiner, J. S., (ed.) 1903. *The Fauna and Geography of the Maldive and Laccadive Archipelagoes, Being the Account of the Work carried on and of the Collections made by and Expedition during the years 1899 and 1900. Volume 1*. Cambridge: Cambridge University Press. Pp. 1–471 & 25 plates.
- Gardiner, J. S., (ed.) 1906. *The Fauna and Geography of the Maldive and Laccadive Archipelagoes, Being the Account of the Work carried on and of the Collections made by and Expedition during the years 1899 and 1900. Volume 2*. Cambridge: Cambridge University Press. Pp. 473–1079 & 75 plates.
- Gibson-Hill, C. A., 1953. Notes on the sea birds of the orders Procellariiformes and Pelecaniformes recorded as strays or visitors to the Ceylon coast. *Spolia Zeylanica* 27 (1): 83–102.
- Gill, F. B., 1967. Observations on the pelagic distribution of seabirds in the western Indian Ocean. *Proceedings of the United States National Museum* 123(3605): 1–33.
- Goodwin, D., & Gillmor, R. 1976. *Crows of the World*. 2nd Edition. London: British Museum (Natural History). Pp. 1–354.
- Granit, B., 2016. Storm Petrels in Israel. Israel Birding Portal. Website URL: <https://www.birds.org.il/en/article/Barak-Storm-Petrels-in-Israel> [Accessed on 20 June 2019.]
- Gregory, J., 1971. Singapore Seawatch. *RAF Ornithological Society Newsletter* 15: 8–12.
- Grimmett, R., Inskipp, C., & Inskipp, T., 1998. *Birds of the Indian Subcontinent*. 1st ed. London: Christopher Helm, A & C Black. Pp. 1–888.
- Guillemard, F. H. H., 1886. *The cruise of the Marchesa to Kamschatka and New Guinea with notices of Formosa, Liu-Kiu, and various islands of the Malay Archipelago*. Vol. 1 of 2. London: John Murray. Pp. 1–284.
- Hamond, C. E., 1953. Notes on reports. *Sea Swallow* 6: 6–7.
- Hancock J., Elliott H., Gillmor R. & Hayman, P., 1978. *Hérons of the World*. London: London Editions. Pp. 1–304.
- Harrison, P., 1983. *Seabirds: An identification guide*. 1st ed. London & Wellington: Croom Helm Limited & A.H. and A.W. Reed Ltd. Pp. 1–448.
- Hass, H., 1965. *Expedition to the Unknown*. London: Hutchinson. [Originally published in German in 1961 as 'Expedition ins Unbekannte']. Pp. 1–167.
- Hiney, T., 2018. Yellow-fronted Fruit Dove, Honiara, Solomon Islands. *Sea Swallow* 67: 66–67.
- Hogenbirk, P., 2019. Website URL: ebird.org/view/checklist/S51814736. [Accessed on 08 August 2019.]
- Hourston, I. M., 1972. Maldivian miscellany. *Animals* 14(7): 307–313.
- Howe, S., & Casement, M. B., 2005. Landbirds from ships at sea 1997–1999. *Sea Swallow* 54: 41–43.
- Howell, S. N. G., & Zufelt, K., 2019. *Oceanic birds of the world: A photo guide*. New Jersey, USA: Princeton University Press. Pp. 1–360.
- Ibn Battuta, 1883. Ibn Battuta in the Maldives and Ceylon. Translated from the French of M.M. Defremery and Sanguinetti by Albert Gray. *Journal of the Ceylon Branch of the Royal Asiatic Society* 1882 (Extra Number): 1–59.
- Ikram, A., 2004. Only known breeding visitor to Maldives: Watercock needs protection. URL: www.bluepeacemaldives.com. [Accessed on 23 August 2004.]
- IUCN, 2012. IUCN Red List Categories and Criteria: Version 3.1. Second edition. Gland, Switzerland and Cambridge, UK: IUCN. Pp. i–iv, 1–32.
- Jaeger, A., Feare, C. J., Summers, R. W., Lebarbenchon, C., Larose, C. S., & Le Corre, M., 2017. Geolocation reveals year-round at-sea distribution and activity of a superabundant tropical seabird, the Sooty Tern *Onychoprion fuscatus*. *Frontiers in Marine Science* 4(394): 1–10.
- Jamalabad, A., 2016. Records of a White-eyed Gull *Ichthyophaga leucophthalmus*, and a Black Tern *Chlidonias niger* from the Karwar coast, Karnataka, India. *Indian BIRDS* 12 (1): 12–14.
- Jansen, J., 1999. Republic of Maldives 6 till 20 January 1999. Unpublished report: 1–7.
- Jany, E., 1957. Star (*Sturnus vulgaris*) überquert die Arabische See. *Die Vogelwarte* 19: 140–142.
- Jauharee, A. R., & Adam, M. S., 2012. Significance of seabirds to the Maldivian tuna fishery. *Indian Ocean Tuna Commission, IOTC-2012-WPEB08-39*: 1–5.
- Jouanin, C., 1970. Note taxonomique sur les petits puffins *Puffinus Iherminieri* de l'Océan Indien occidental. *L'Oiseau et la Revue Française d'Ornithologie* 40: 303–306.
- Kavanagh, B., Babbington, J., & Proven, N., 2017. Movements of Lesser Crested *Thalasseus bengalensis* and Bridled Tern *Onychoprion anaethetus* bred in the Arabian Gulf, based on ringing recoveries. *Sandgrouse* 39(1): 30–38.
- Kazmierczak, K., 2000. *A field guide to the birds of India, Sri Lanka, Pakistan, Nepal, Bhutan, Bangladesh and the Maldives*. 1st ed. London: Pica Press / Christopher Helm. Pp. 1–352.
- Khan, A. N., 2017. First record of Oriental Pratincole *Glareola maldivarum* from Lakshadweep Archipelago. *Journal of the Bombay Natural History Society* 114: 38–39. doi: <http://10.17087/jbnhs/2017/v114/114164>.
- Kirwan, G. M., Chantler, P., & de Juana, E., 2020. Blyth's Swift (*Apus leuconyx*), version 1.0. In: S. M. Billerman, B. K. Keeney, P. G. Rodewald & T. S. Schulenberg (eds). *Birds of the World*. Cornell Lab of Ornithology, Ithaca, NY, USA. doi.org/10.2173/bow.blyswi1.01
- Köhler, J., & Garcia, F. H., 2018. DARMSTADT: The Zoological Collections of the Hessische Landesmuseum Darmstadt. (pp 237–243). In: *Zoological Collections of Germany: The Animal Kingdom in its Amazing Plenty at Museums and Universities*. Beck, L. A. (ed.) Cham: Springer International Publishing AG.
- Kushlan, J. A., & Hancock, J. A., 2005. *Hérons*. 1st ed. Oxford: Oxford University Press. Pp. i–xvii, 1–433.
- Kurup, D. N., & Zacharias, V. J., 1995. Birds of Lakshadweep Islands, India. *Forktail* 10: 49–64 (1994).
- Lambert, K., 2004. Does the Tahiti Petrel *Pseudobulweria rostrata* visit the western Indian Ocean? *Marine Ornithology* 32: 183–184.
- Lamsfuss, G., 1998. *The birds of the Maldive Islands: A systematic checklist*. Provisional ed. Published by the author. Pp. 1–8.
- Laphorn, J., Griffiths, R. G., & Bourne, W. R. P., 1970. Leach's Storm-petrel *Oceanodroma l. leucorhoa* from the Indian Ocean and Sharjah, Persian Gulf. *Ibis* 112: 260–261.
- Latham, J., 1785. *A General Synopsis of Birds*. Vol. 3, Part 1. London: Leigh and Sotheby. Pp. i–iii, 1–320.
- Latham, J., Davies, H., & Forster, J. R., 1795. *Faunula Indica id est Catalogus Animalium Indiae Orientalis quae hactenus Naturae Curiosos innotuerunt; concinnatus a Joanne Latham, Chirurgo Dartfordiae Cantii, et Hugone Davies, Pastore in Aber Provinciae Caernarvon*. Halae ad Salam (Halle an der Saale): Gebauerus. Pp. 1–38.
- Lavers, J. L., Lisovski, S., & Bond, A. L., 2019. Preliminary survival and movement data for a declining population of Flesh-footed Shearwater *Ardenna carneipes* in Western Australia provides insights into marine threats. *Bird Conservation International* 29(2): 327–337.
- Le Corre, M., & Probst, J. M., 1997. Migrant and vagrant birds of Europa Island (southern Mozambique Channel). *Ostrich* 68: 13–18.
- Le Corre, M., Jaeger, A., Pinet, P., Kappes, M. A., Weimerskirch, H., Catty, T., Ramos, J. A., Russell, J. C., Shah, N., & Jaquemet, S., 2012. Tracking seabirds to identify potential Marine Protected Areas in the tropical western Indian Ocean. *Biological Conservation* 156: 83–93.
- Leader, P. J., 2011. Taxonomy of the Pacific Swift *Apus pacificus* Latham, 1802, complex. *Bulletin of the British Ornithologists' Club* 131 (2): 81–93.
- Lepage, D., 2019. Checklist of the birds of the Maldives. Avibase, the world bird database. Website URL: <https://avibase.bsc-eoc.org/checklist.jsp?region=MV> [Accessed on 15 May 2019.]
- Lewington, I., 1999. Separation of Pallid Swift and *pekinensis* Common Swift. *Birding World* 12: 450–452.
- Li, Z. W. D., & Mundkur, T., 2007. *Numbers and distribution of waterbirds and wetlands in the Asia-Pacific region. Results of the Asian Waterbird Census: 2002–2004*. Kuala Lumpur, Malaysia: Wetlands International. Pp. 1–224.
- Macleán, A., 1979. Christmas Island Tropic-bird. *Sea Swallow* 28: 44.
- Madge, S., 2019. House Crow (*Corvus splendens*). In: *Handbook of the Birds of the World Alive*. del Hoyo, J., Elliott, A., Sargatal, J., Christie, D. A., & de Juana, E. (eds). Barcelona: Lynx Edicions. URL: www.hbw.com/node/60770. [Accessed on 25 May 2019.]
- Maldives Biodiversity, 2018. December 1, 2018. Scops Owl. Website: www.facebook.com/MaldivesBiodiversity. [Accessed on 30 May 2019.]
- Maldives Biodiversity, 2019. Common Cuckoo. Website: www.maldivesbiodiversity.org/Species/Details/3111. [Accessed 30 December 2019.]
- Marchant, S., & Higgins, P. J. (eds) 1990. *Handbook of Australian, New Zealand and Antarctic Birds*. Vol. 1. Part A: Ratites to Petrels. Melbourne: Oxford University Press. Pp. 1–735.

- Martínez-Vilalta, A., Motis, A., & Kirwan, G. M., 2019a. Black-headed Heron (*Ardea melanocephala*). In: *Handbook of the Birds of the World Alive*. del Hoyo, J., Elliott, A., Sargatal, J., Christie, D. A., & de Juana, E. (eds). Barcelona: Lynx Edicions. Website: www.hbw.com/node/52678. [Accessed on 28 May 2019.]
- Martínez-Vilalta, A., Motis, A. & Kirwan G.M., 2019b. Indian Pond-heron (*Ardeola grayii*). In: *Handbook of the Birds of the World Alive*. del Hoyo, J., Elliott, A., Sargatal, J., Christie, D. A., & de Juana, E. (eds). Barcelona: Lynx Edicions. Website: www.hbw.com/node/52699. [Accessed on 28 May 2019.]
- Martínez-Vilalta, A., Motis, A., Christie, D. A., & Kirwan, G. M., 2019c. Green-backed Heron (*Butorides striata*). In: *Handbook of the Birds of the World Alive*. del Hoyo, J., Elliott, A., Sargatal, J., Christie, D. A., & de Juana, E. (eds). Barcelona: Lynx Edicions. Website: www.hbw.com/node/52704. [Accessed on 08 June 2019.]
- Miller, K. I., Jauharee, A. R., Nadheeh, I., & Adam, M. S., 2016. Interactions with endangered, threatened and protected (ETP) species in the Maldivian pole-and-line tuna fishery. *International Pole-and-Line Foundation Technical Report 7*: 1–28.
- Moreau, R. E., 1938. Bird-migration over the north-western part of the Indian Ocean, the Red Sea, and the Mediterranean. *Proceedings of the Zoological Society of London Series A* 1938: 1–26.
- Moreau, R. E., 1972. *The Palaearctic-African bird migration systems*. London: Academic Press. Pp. i–xvi, 1–384.
- Morris, R. O., 1964. The birds of Addu Atoll, Maldive Islands. *Sea Swallow* 16: 77–79.
- Mörzer-Bruyns, W. F. J., & Voous, K. H., 1965. Notes on sea birds. 9. Great Skuas (*Stecorarius skua*) in Northern Indian Ocean. *Ardea* 53: 80–81.
- Mörzer-Bruyns, W. F. J., 1971. *Field Guide of Whales and Dolphins*. Amsterdam: C.A. Meese. Pp. 1–249.
- Moutou, F., 1985a. Briefly: the Maldive Islands. *Oryx* 19: 232–233.
- Moutou, F., 1985b. Les Îles Maldives. *Le Courrier de la Nature* 96: 29–33.
- Naif, M., 2016. Birds in Paradise. *Breeze* 3: 12–17. Website: www.cococollection.com. [Accessed on 1 July 2019]
- Naoroji, R., 2006. *Birds of Prey of the Indian Subcontinent*. London: Christopher Helm. Pp. 1–692.
- Newton, I., 2007. *The migration ecology of birds*. London: Academic Press. Pp. 1–984.
- Nicoll, M. A., Nevoux, M., Jones, C. G., Ratcliffe, N., Ruhomaun, K., Tatayah, V. & Norris, K., 2017. Contrasting effects of tropical cyclones on the annual survival of a pelagic seabird in the Indian Ocean. *Global Change Biology* 23: 550–565.
- Onley, D., & Scofield, P., 2007. *Field guide to the Albatrosses, Petrels and Shearwaters of the world*. 1st ed. London: Christopher Helm. Pp. 1–240.
- Pepper, T., & Hettige, U., 2008. A first record of Black-bellied Storm-petrel *Fregetta tropica* in Sri Lankan waters. *BirdingASIA* 10: 92.
- Pethiyagoda, R., 2007. *Pearls, spices and green gold: an illustrated history of biodiversity exploration in Sri Lanka*. 1st ed. Colombo: WHT Publications (Private) Limited. Pp. 1–241.
- Phillips, W. W. A., & Sims, R. W., 1958a. Two new races of birds from the Maldivian Archipelago. *Bulletin of the British Ornithologists' Club* 78 (3): 51–53.
- Phillips, W. W. A., & Sims, R. W., 1958b. Some observations on the fauna of the Maldivian Islands. Part III - Birds. *Journal of the Bombay Natural History Society* 55 (2): 195–217.
- Phillips, W. W. A., 1959a. Note on occurrence of Bulwer's Petrel (*Bulweria bulwerii*) in Indian Ocean. *Bulletin of the British Ornithologists' Club* 79 (6): 100–101.
- Phillips, W. W. A., 1959b. Notes on the nesting of the Blacknaped Tern, *Sterna sumatrana mathewsi* Stresemann, in the Maldivian Islands. *Journal of the Bombay Natural History Society* 55 (3): 567–569 (1958).
- Phillips, W. W. A., 1964. The birds of the Maldivian Islands, Indian Ocean. *Journal of the Bombay Natural History Society* 60 (3): 546–584 (1963).
- Pierce A. J., Hansasuta C., & Sutasha K., 2015. The first record of Common Swift *Apus apus* for Thailand and South-East Asia. *BirdingASIA* 24: 139–140.
- Pittie, A., 2020. Bibliography of South Asian Ornithology. Website URL: <http://www.southasiaornith.in>. [Accessed on 10 January 2020.]
- Praveen J., Jayapal, R., & Pittie, A., 2013a. Notes on Indian rarities—1: Seabirds. *Indian BIRDS* 8 (5): 113–125.
- Praveen, J., Karuthedathu, D., Prince, M., Palot, M. J., & Dalvi, S., 2013b. Identification of South Polar Skuas *Catharacta maccormicki* in the Arabian Sea and Indian Ocean. *BirdingASIA* 19: 83–88.
- Praveen, J., Palot, M. J., & Karuthedathu, D., 2013c. Recovery of a Cory's Shearwater *Calonectris borealis* from Thakadapuram beach, Kasaragod district, Kerala. *Indian BIRDS* 8(6): 152–153.
- Praveen J., Jayapal, R., & Pittie, A., 2014. Notes on Indian rarities—2: Waterfowl, diving waterbirds, and gulls and terns. *Indian BIRDS* 9 (5&6): 113–136.
- Praveen, J., Jayapal, R., Inskipp, T., Warakagoda, D., Thompson, P. M., Anderson, R. C., & Pittie, A., 2017. Birds of the Indian subcontinent: Species not recorded from India. *Indian BIRDS* 13(4): 93–101.
- Praveen, J., Jayapal, R., Inskipp, T., Warakagoda, D., Thompson, P. M., Anderson, R. C., & Pittie, A., 2019. Checklist of the birds of the Indian subcontinent (v3.0). Website: www.indianbirds.in/indian-subcontinent [Accessed on 6 May 2019].
- Praveen J., Jayapal, R., Inskipp, T., Warakagoda, D., Thompson, P.M., Anderson, R.C., Carr, P., Rasmussen, P.C. & Pittie, A., 2020. Checklist of the birds of South Asia (v6.1). Website URL: www.indianbirds.in/south-asia [Date of publication: 25 July 2020].
- Prince, M., 2011. Some observations from Lakshadweep and the Laccadive Sea off Kerala. *Indian BIRDS* 7 (3): 63–65.
- Pyrard, F., 1887–1890. *The voyage of Francoise Pyrard of Laval to the East Indies, the Maldives, the Moluccas and Brazil. From the third French edition of 1619*. Gray A. (ed.). Hakluyt Society first series, nos 76, 77 & 80 (vol 1, 1887; vol 2 part 1, 1888; vol 2 part 2, 1890). London: Hakluyt Society.
- Ramos, J. A., Maul, A. M., Bowler, J., Monticelli, D., & Pacheco, C., 2004. Laying date, chick provisioning, and breeding success of Lesser Noddies on Aride Island, Seychelles. *The Condor* 106: 887–895.
- Rasheed, A. A., 2017. Kings in the sky: the Lesser Frigatebirds. *Breeze* 4: 34–37. Website: www.cococollection.com. [Accessed on 1 July 2019]
- Rasmussen, P. C., & Anderton, J. C., 2005. *Birds of South Asia: the Ripley guide*. 1st ed. Washington, D.C. and Barcelona: Smithsonian Institution and Lynx Edicions. 2 vols. Pp. 1–378; 1–683.
- Rasmussen, P. C., & Anderton, J. C., 2012. *Birds of South Asia: the Ripley guide*. 2nd ed. Washington, D.C. and Barcelona: Smithsonian Institution and Lynx Edicions. 2 vols. Pp. 1–383; 1–684.
- Rawal, T. S., Kumar, H., & Shukla, K., 2013. Red Phalarope *Phalaropus fullicaria*: an addition to the avifauna of peninsular India. *Indian BIRDS* 8 (4): 103–104.
- Reichenow, A., 1904. Uebersicht der auf der deutschen Tiefsee-Expedition gesammelten Vögel. *Wissenschaftliche Ergebnisse der Deutschen Tiefsee-Expedition auf dem Dampfer 'Valdivia' 1898–1899*, 7: 343–358 & 2 plates.
- Reynolds, C., 2003. *A Maldivian Dictionary*. London and New York: Routledge-Curzon. Pp. 1–412.
- Ripley, S. D., 1977. *Rails of the World: A monograph of the family Rallidae*. 1st ed. Boston: David R. Godine. Pp. i–xx, 1–406.
- Roberts, H., & Campbell, O., 2015. Proving the occurrence of Common Swift *Apus apus peginensis* in the United Arab Emirates. *Sandgrouse* 37: 79–86.
- Robertson, B. C., Stephenson, B. M., Ronconi, R. A., Goldstien, S. J., Shepherd, L., Tennyson, A., Carlile, N., & Ryan, P. G., 2016. Phylogenetic affinities of the *Fregetta* storm-petrels are not black and white. *Molecular Phylogenetics and Evolution* 97: 170–176.
- Roelen, B., 2018. Website URL: www.ebird.org/view/checklist/548315118. [Accessed 10 August 2019.]
- Romero-Frias, X., 2012. *Folk Tales of the Maldives*. Copenhagen: Nordic Institute of Asian Studies Press. Pp. i–xxxv, 1–300.
- Saleem, A., & Nileysha, A., 2003. Characteristics, status and need for conservation of mangrove ecosystems in the Republic of Maldives, Indian Ocean. *Journal of the National Science Foundation of Sri Lanka* 31(1&2): 201–213.
- Salvadori, T., & Giglioli, E. H., 1889. Uccelli raccolti durante il viaggio della corvetta *Vettor Pisani* negli anni 1879, 1880 e 1881. *Memorie della Reale Accademia della Scienze di Torino (Serie Seconda)* 39: 99–143.
- Sangha, H. S., Sharma, M., Poonia, S. S., Sridhar, S., Bhatnagar, G., & Jain, A., 2013. Red Phalarope *Phalaropus fullicaria* at Tal Chhapar, Churu district, Rajasthan: the fourth record for the Indian Subcontinent. *Indian BIRDS* 8 (4): 99–100.
- Santharam, V., Mathew, D. N., Mathew, G., & Gandhi, T., 1996. Recent additions to the birds of the Lakshadweep Islands. *Journal of the Bombay Natural History Society* 93 (1): 95–97.
- Saunders, H., & Salvin, O., 1896. *Catalogue of the Gaviæ and Tubinares in the Collection of the British Museum. Gaviæ (terns, gulls, and skuas) by Howard Saunders. Tubinares (petrels and albatrosses) by Osbert Salvin*. London: British Museum of Natural History. Vol. XXV of 27 vols. Pp. i–xv, 1–475.
- Scheer, G., 1960. Eine neue Rasse des Teichreihers *Ardeola grayii* (Sykes) von den

- Malediven. *Senckenbergiana Biologica* 41: 143–147.
- Shafeeg, A., 1991. Dhivehi masveringe ainumathi ekuverin (Maldivian fishermen's friends above the tuna schools). *Rasain* 11: 74–81. (In Dhivehi)
- Shafeeg, A., 1993. *Dhivehi raajegai... kandumati dhooni* (Maldivian Seabirds). Malé: Association of Writers for the Environment. (In Dhivehi). Pp. 1–189.
- Shirihai, H., & Svensson, L., 2018a. *Handbook of Western Palearctic birds. Volume I. Passerines: Larks to Phylloscopus Warblers*. London, UK: Helm. Vol. 1 of 2 vols. Pp. 1–648.
- Shirihai, H., & Svensson, L., 2018b. *Handbook of Western Palearctic birds. Volume II. Passerines: Flycatchers to Buntings*. London, UK: Helm. Vol. 2 of 2 vols. Pp. 1–623.
- Sinclair, I., & Langrand, O., 1998. *Birds of the Indian Ocean Islands*. Cape Town: Struik Publishers. Pp. 1–184.
- Singh, R., 2017. Garden Warbler *Sylvia borin* in Hanle, Ladakh. *Indian BIRDS* 13 (5): 138.
- Skerrett, A., & Seychelles Bird Records Committee, 1996. The first report of the Seychelles Bird Records Committee. *Bulletin of the African Bird Club* 3: 45–50.
- Skerrett, A., Bullock, I., & Disley, T., 2001. *Birds of Seychelles*. 1st ed. London: Christopher Helm. Pp. 1–320.
- Skerrett, A., & Seychelles Bird Records Committee, 2001. The second report of the Seychelles Bird Records Committee. *Bulletin of the African Bird Club* 8: 23–29.
- Skerrett, A., Betts, M., Bullock, I., Fisher, D., Gerlach, R., Lucking, R., Phillips, J. & Scott, B. 2006. Third report of the Seychelles Bird Records Committee. *Bulletin of the African Bird Club* 13: 170–177.
- Skerrett, A., Betts, M., Bowler, J., Bullock, I., Fisher, D., Lucking, R., & Phillips, J., 2011. Fourth report of the Seychelles Bird Records Committee. *Bulletin of the African Bird Club* 18: 182–192.
- Skerrett, A., & Disley, T., 2011. *Birds of Seychelles*. 2nd ed. London: Christopher Helm. Pp. 1–176.
- Skerrett, A., Betts, M., Bowler, J., Bullock, I., Fisher, D., Lucking, R., & Phillips, J., 2017. Fifth report of the Seychelles Bird Records Committee. *Bulletin of the African Bird Club* 24: 63–75.
- Smith, A. L., Monteiro, L., Hasegawa, O., & Friesen, V. L., 2007. Global phylogeography of the band-rumped storm-petrel (*Oceanodroma castro*; Procellariiformes: Hydrobatidae). *Molecular Phylogenetics and Evolution* 43 (3): 755–773.
- Sonnerat, P. 1782. *Voyage aux Indes Orientales et la Chine, fait par ordre du Roi, depuis 1774 jusqu'en 1781. Livre cinquième. Objets nouveaux relatifs à l'Histoire Naturelle*. Paris: By approval and privilege of the King. Pp. 95–286.
- Steinheimer, F. D., 2009. The type specimens of Corvidae (Aves) in the Museum für Naturkunde at the Humboldt-University of Berlin, with the description of a new subspecies of *Dendrocitta vagabunda*. *Zootaxa* 2149: 1–49.
- Stervander, M., Alström, P., Olsson, U., Ottosson, U., Hansson, B., & Bensch, S., 2016. Multiple instances of paraphyletic species and cryptic taxa revealed by mitochondrial and nuclear RAD data for *Calandrella* larks (Aves: Alaudidae). *Molecular Phylogenetics and Evolution* 102: 233–245.
- Stiebl, S. 2017a. Website URL: <https://ebird.org/checklist/S53207614>. [Accessed on 20 June 2020 & 14 October 2020.]
- Stiebl, S., 2017b. Website URL: www.ebird.org/view/checklist/S53125523. [Accessed 08 August 2019.]
- Stiebl, S., 2019a. Website URL: www.ebird.org/view/checklist/S53769272. [Accessed on 07 July 2019.]
- Stiebl, S., 2019b. Website URL: www.ebird.org/view/checklist/S54121372. [Accessed on 07 July 2019.]
- Stiebl, S. 2019c. Website URL: <https://ebird.org/checklist/S53920177>. [Accessed on 20 June 2020.]
- Stokes, T., & Hinchey, M., 1990. Which small Noddies breed at Ashmore Reef in the Eastern Indian Ocean? *Emu-Austral Ornithology* 90(4): 269–271.
- Strickland, M. J., & Jenner, J. C., 1978. A report on the birds of Addu Atoll (Maldivian Islands). *Journal of the Bombay Natural History Society* 74 (3): 487–500.
- Sullivan, B. L., Wood, C. L., Iliff, M. J., Bonney, R. E., Fink, D., & Kelling, S., 2009. eBird: a citizen-based bird observation network in the biological sciences. *Biological Conservation* 142: 2282–2292.
- Taylor, B., 1998. *Rails. A Guide to the Rails, Crakes, Gallinules and Coots of the World*. 1st ed. East Sussex, UK: Pica Press. Pp. 1–600.
- Taylor, B., 2019. White-breasted Waterhen (*Amaurornis phoenicurus*). In: *Handbook of the Birds of the World Alive*. del Hoyo, J., Elliott, A., Sargatal, J., Christie, D. A., & de Juana, E. (eds). Barcelona: Lynx Edicions. Website: www.hbw.com/node/53652. [Accessed on 30 May 2019.]
- Taylor, J., 2018a. Notes on a short trip to Maldives March 29th to April 1st 2018. Unpublished report. Pp. 1–5.
- Taylor, J., 2018b. Website URL: <https://ebird.org/checklist/S59392605>. [Accessed: 9 July 2019.]
- The Flyway Foundation Thailand, 2018. Common Swift. *BirdingASIA* 30: 124.
- Tommaso di Savoia, 1881. *Viaggio della R. Corvetta 'Vettor Pisani' (1879-1881)*. Roma: Tipografia Barbèra. Pp. 1–233.
- Tuck, G., 1980. *A Guide to the Seabirds of the Ocean Routes*. London: Collins. Pp. 144.
- van Bemmelen, R. S., Hungar, J., Tulp, I., & Klaassen, R. H., 2016. First geolocator tracks of Swedish Red-necked Phalaropes reveal the Scandinavia-Arabian Sea connection. *Journal of Avian Biology* 47: 295–303.
- van Bemmelen, R. S., Kolbeinsson, Y., Ramos, R., Gilg, O., Alves, J. A., Smith, M., Schekkerman, H., Lehtikoinen, A., Petersen, I. K., Pórisson, B., & Sokolov, A.A., 2019. A migratory divide among Red-necked Phalaropes in the Western Palearctic reveals contrasting migration and wintering movement strategies. *Frontiers in Ecology and Evolution* 7(86): 1–17.
- van den Berg, A. B., Smeenk, C., Bosman, C. A. W., Haase, B. J. M., van der Niet, A. M., & Cadée, G. C., 1991. Barau's Petrel *Pterodroma baraui*, Jouanin's Petrel *Bulweria fallax* and other seabirds in the northern Indian Ocean in June–July 1984 and 1985. *Ardea* 79: 1–13.
- Vanhöffen, E., 1901. Bericht über die bei der deutschen Tiefseeexpedition beobachteten Vögel. *Journal für Ornithologie* 49: 304–322.
- Voightmann, H., Thonig, M., & Ritter, H., 1987. *Maldives*. Nuremberg, Germany: Bloom Verlag. Pp. 1–208.
- Voous, K. H., 1995. *In de Ban van Vogels [Under the Spell of Birds]*. Utrecht: Scheffers. Pp. 1–603.
- Waheed, A., 2014. Photo posted 6 October 2014. www.facebook.com/aliwaheedfonifoni. [Accessed on 20 December 2014 & 28 June 2020.]
- Wallace, R. A., 1966. Nesting and defensive behavior of the Black-naped Tern in the Maldivian Islands. *The Auk: Ornithological Advances* 83(1): 138.
- Walther, B., & Jones, P., 2020. Indian Golden Oriole (*Oriolus kundoo*). In: *Birds of the World*. J. del Hoyo, J., Elliott, A., Sargatal, J., Christie, D. A. & de Juana, E. (eds). Cornell Lab of Ornithology, Ithaca, NY, USA. Website URL: <https://doi.org/10.2173/bow.ingori.01>. [Accessed 20 June 2020.]
- Warakagoda, D., Inskipp, C., Inskipp, T., & Grimmett, R., 2012. *Birds of Sri Lanka*. 1st ed. London: Christopher Helm. Pp. 1–224.
- Warren, R. L. M., 1966. *Type-specimens of birds in the British Museum (Natural History). Non-passerines. Publication 651*. London, UK: Trustees of the British Museum (Natural History). Vol. 1 of 3 vols. Pp. i–x, 1–320.
- Webb, P. A., 1988. *Maldives: People and Environment*. Bangkok: Media Transasia. Pp. 1–120.
- Weimerskirch, H., Bishop, C., Jeanniard-du-Dot, T., Prudor, A., & Sachs, G., 2016. Frigate birds track atmospheric conditions over months-long transoceanic flights. *Science* 353(6294): 74–78.
- Weimerskirch, H., Borsa, P., Cruz, S., De Grissac, S., Gardes, L., Lallemand, J., Le Corre, M., & Prudor, A., 2017. Diversity of migration strategies among great frigatebirds populations. *Journal of Avian Biology* 48(1): 103–113.
- Weimerskirch, H., Le Corre, M., Marsac, F., Barbraud, C., Tostain, O., & Chastel, O., 2006. Postbreeding movements of frigatebirds tracked with satellite telemetry. *The Condor* 108(1): 220–225.
- Weimerskirch, H., Tarrow, A., Chastel, O., Delord, K., Cherel, Y., & Descamps, S., 2015. Population-specific wintering distributions of adult South Polar Skuas over three oceans. *Marine Ecology Progress Series* 538: 229–237.
- Wynell-Mayow, E., 2002. *W. W. A. Phillips: a naturalist's life*. 1st ed. Colombo: WHT Publications (Private) Limited. Pp. 1–84.

Appendix 1. Checklist of Birds of the Maldives

	English Name	Scientific Name	Authority	Dhivehi Name	Abundance	Status	IUCN
Anseriformes: Anatidae (Ducks)							
1	Lesser Whistling Duck	<i>Dendrocygna javanica</i>	(Horsfield, 1821)	Reyru	Vagrant		LC
2	Ferruginous Duck	<i>Aythya nyroca</i>	(Güldenstädt, 1770)	Rathu reyru	Rare	N winter visitor	NT
3	Tufted Duck	<i>Aythya fuligula</i>	(Linnaeus, 1758)	Odi reyru	Uncommon	N winter visitor	LC
4	Garganey	<i>Spatula querquedula</i>	(Linnaeus, 1758)	Kunburu reyru	Regular	N winter visitor	LC
5	Northern Shoveler	<i>Spatula clypeata</i>	(Linnaeus, 1758)	Samsa reyru	Regular	N winter visitor	LC
6	Northern Pintail	<i>Anas acuta</i>	Linnaeus, 1758	Ilifathi reyru	Uncommon	N winter visitor	LC
7	Common Teal	<i>Anas crecca</i>	Linnaeus, 1758	Kurehi reyru	Uncommon	N winter visitor	LC
8	Cotton Teal	<i>Nettapus coromandelianus</i>	(Gmelin, 1789)	Reyru	Vagrant		LC
Galliformes: Phasianidae (Partridges and Quails)							
9	Common Quail	<i>Coturnix coturnix</i>	(Linnaeus, 1758)		Vagrant		LC
Phoenicopteriformes: Phoenicopteridae (Flamingoes)							
10	Greater Flamingo	<i>Phoenicopterus roseus</i>	Pallas, 1811	Gudugudaa dhooni	Rare	N winter visitor	LC
Columbiformes: Columbidae (Pigeons and Doves)							
11	European Turtle Dove	<i>Streptopelia turtur</i>	(Linnaeus, 1758)	Kotharu	Vagrant		VU
12	Oriental Turtle Dove	<i>Streptopelia orientalis</i>	(Latham, 1790)	Kotharu	Rare	N winter visitor	LC
Phaethontiformes: Phaethontidae (Tropicbirds)							
13	Red-billed Tropicbird	<i>Phaethon aethereus</i>	Linnaeus, 1758	Dhandifulhu dhooni	Rare	Straggler	LC
14	Red-tailed Tropicbird	<i>Phaethon rubricauda</i>	Boddaert, 1783	Dhandifulhu dhooni	Rare	Straggler	LC
15	White-tailed Tropicbird	<i>Phaethon lepturus</i>	Daudin, 1802	Dhandifulhu dhooni	Common	Breeding resident	LC
Caprimulgiformes: Caprimulgidae (Nightjars)							
16	Jungle Nightjar	<i>Caprimulgus indicus</i>	Latham, 1790		Vagrant		LC
Caprimugiformes: Apodidae (Swifts)							
17	White-throated Needletail	<i>Hirundapus caudacutus</i>	(Latham, 1801)	Forikey	Rare	N winter visitor	LC
18	Indian Swiftlet	<i>Aerodramus unicolor</i>	(Jerdon, 1840)	Forikey	Rare	N winter visitor	LC
19	Blyth's Swift	<i>Apus leuconyx</i>	(Blyth, 1845)	Forikey	Rare	N winter visitor	LC
20	Indian House Swift	<i>Apus affinis</i>	(J.E. Gray, 1830)	Forikey	Rare	N winter visitor	LC
21	Pallid Swift	<i>Apus pallidus</i>	(Shelley, 1870)	Forikey	Vagrant		LC
22	Common Swift	<i>Apus apus</i>	(Linnaeus, 1758)	Forikey	Uncommon	Autumn passage?	LC
Cuculiformes: Cuculidae (Cuckoos)							
23	Chestnut-winged Cuckoo	<i>Clamator coromandus</i>	(Linnaeus, 1766)		Vagrant		LC
24	Asian Koel	<i>Eudynamis scolopacea</i>	(Linnaeus, 1758)	Koveli	Common	Breeding resident	LC
25	Grey-bellied Cuckoo	<i>Cacomantis passerinus</i>	(Vahl, 1797)		Vagrant		LC
26	Indian Cuckoo	<i>Cuculus micropterus</i>	Gould, 1838		Vagrant		LC
27	Common Cuckoo	<i>Cuculus canorus</i>	Linnaeus, 1758		Uncommon	Autumn passage	LC
Gruiformes: Rallidae (Rails and Coots)							
28	White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	(Pennant, 1769)	Kumbili	Common	Breeding resident	LC
29	Watercock	<i>Gallicrex cinerea</i>	(Gmelin, 1789)	Kulhi kukulhu	Uncommon	N winter visitor, may breed	LC
30	Common Moorhen	<i>Gallinula chloropus</i>	(Linnaeus, 1758)	Kulhi kumbili	Uncommon	Breeds in far south	LC
31	Common Coot	<i>Fulica atra</i>	Linnaeus, 1758	Salvaa dhooni	Vagrant		LC
Procellariiformes: Oceanitidae (Southern Storm-petrels)							
32	Wilson's Storm-petrel	<i>Oceanites oceanicus</i>	(Kuhl, 1820)	Kandu kabaa	Common	S winter, offshore migrant	LC
33	White-faced Storm-petrel	<i>Pelagodroma marina</i>	(Latham, 1790)	Kandu kabaa	Rare	S winter, offshore migrant	LC
Procellariiformes: Hydrobatidae (Northern Storm-petrels)							
34	Band-rumped Storm-petrel	<i>Hydrobates castro</i>	(Harcourt, 1851)	Kandu kabaa	Vagrant		LC

Appendix 1. Checklist of Birds of the Maldives

	English Name	Scientific Name	Authority	Dhivehi Name	Abundance	Status	IUCN
35	Leach's Storm-petrel	<i>Hydrobates leucorhous</i>	(Vieillot, 1818)	Kandu kabaa	Vagrant		VU
36	Swinhoe's Storm-petrel	<i>Hydrobates monorhis</i>	(Swinhoe, 1867)	Kandu kabaa	Uncommon	Offshore migrant	NT
37	Matsudaira's Storm-petrel	<i>Hydrobates matsudairae</i>	(Kuroda, 1922)	Kandu kabaa	Uncommon	Offshore migrant	VU
Procellariiformes: Procellariidae (Shearwaters and Petrels)							
38	Trindade Petrel	<i>Pterodroma arminjoniana</i>	(Giglioli & Salvadori, 1869)	Hoagula	Rare	S winter, offshore	VU
39	Wedge-tailed Shearwater	<i>Ardenna pacifica</i>	(Gmelin, 1789)	Bondu hoagulha	Common	Offshore migrant	LC
40	Short-tailed Shearwater	<i>Ardenna tenuirostris</i>	(Temminck, 1836)	Hoagulha	Vagrant		LC
41	Sooty Shearwater	<i>Ardenna grisea</i>	(Gmelin, 1789)	Hoagulha	Rare	April, offshore migrant	NT
42	Flesh-footed Shearwater	<i>Ardenna carneipes</i>	(Gould, 1844)	Maa hoagulha	Common	S winter, offshore migrant	NT
43	Streaked Shearwater	<i>Calonectris leucomelas</i>	(Temminck, 1836)	Hoagulha	Rare	N winter, offshore migrant	NT
44	Tropical Shearwater	<i>Puffinus bailloni</i>	Bonaparte, 1857	Dhivehi hoagula	Common	Breeding resident	LC
45	Persian Shearwater	<i>Puffinus persicus</i>	Hume, 1872	Hoagulha	Vagrant		LC
46	Bulwer's Petrel	<i>Bulweria bulwerii</i>	(Jardine & Selby, 1828)	Hoagulha	Uncommon	N winter, offshore migrant	LC
47	Jouanin's Petrel	<i>Bulweria fallax</i>	Jouanin, 1955	Hoagulha	Uncommon	Offshore migrant	NT
Pelecaniformes: Pelecanidae (Pelicans)							
48	Great White Pelican	<i>Pelecanus onocrotalus</i>	Linnaeus, 1758	Hudhu girunbaa dhooni	Rare	Straggler	LC
49	Spot-billed Pelican	<i>Pelecanus philippensis</i>	Gmelin, 1789	Alhi girunbaa dhooni	Rare	Straggler	NT
Pelecaniformes: Ardeidae (Herons and Egrets)							
50	Eurasian Bittern	<i>Botaurus stellaris</i>	(Linnaeus, 1758)	Ran raabondhi	Rare		LC
51	Yellow Bittern	<i>Ixobrychus sinensis</i>	(Gmelin, 1789)	Dhon raabondhi	N winter visitor	Straggler	LC
52	Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>	(Gmelin, 1789)	Raabondhi	Rare	Straggler	LC
53	Black Bittern	<i>Ixobrychus flavicollis</i>	(Latham, 1790)	Kalhu Raabondi	Rare	N winter visitor	LC
54	Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	(Linnaeus, 1758)	Raabondi	Uncommon	May breed in south	LC
55a	Little (=Striated) Heron	<i>Butorides striata chloriceps</i>	(Linnaeus, 1758)	Raabondhi	Rare	N winter visitor	LC
55b	Northern Maldivian Little Heron	<i>Butorides striata didii</i>	Phillips & Sims, 1958	Dhivehi raabondhi	Local	Breeding res, N & centre	
55c	Southern Maldivian Little Heron	<i>Butorides striata albidula</i>	Bangs, 1904	Dhivehi raabondhi	Local	Breeding resident in south	
56a	Indian Pond Heron	<i>Ardeola grayii grayii</i>	(Sykes, 1832)	Raabondhi	Regular	N winter visitor, N & centre	LC
56b	Maldivian Pond Heron	<i>Ardeola grayii philippsi</i>	Scheer, 1960	Huvadhu raabondhi	Local	Breeding resident in south	
57	Cattle Egret	<i>Bubulcus ibis</i>	(Linnaeus, 1758)	Iruvaa hudhu	Common	N winter visitor	LC
58	Grey Heron	<i>Ardea cinerea</i>	Linnaeus, 1758	Alhi maakanaa	Common	Breeding resident	LC
59	Purple Heron	<i>Ardea purpurea</i>	Linnaeus, 1766	Dhanbu maakanaa	Rare	N winter visitor	LC
60	Great Egret	<i>Ardea alba</i>	Linnaeus, 1758	Laganaa	Uncommon	N winter visitor	LC
61	Intermediate Egret	<i>Ardea intermedia</i>	Wagler, 1829	Laganaa	Rare	Straggler	LC
62	Little Egret	<i>Egretta garzetta</i>	(Linnaeus, 1766)	Kuda laganaa	Uncommon	N winter visitor	LC
63	Western Reef Egret	<i>Egretta gularis</i>	(Bosc, 1792)	Bondu raabondi	Vagrant		LC
Pelecaniformes: Threskiornithidae (Ibises and Spoonbills)							
64	Black-headed Ibis	<i>Threskiornis melanocephalus</i>	(Latham, 1790)	Boakalhu bulhithumbi	Vagrant		NT
65	Eurasian Spoonbill	<i>Platalea leucorodia</i>	Linnaeus, 1758	Dheyfaiy dhooni	Rare	N winter visitor	LC
66	Glossy Ibis	<i>Plegadis falcinellus</i>	(Linnaeus, 1766)	Kalhu bulhithumbi	Rare	N winter visitor	LC
Suliformes: Fregatidae (Frigatebirds)							
67	Lesser Frigatebird	<i>Fregata ariel</i>	(Gray, 1845)	Hoara	Common	Non-breeding visitor	LC
68	Great Frigatebird	<i>Fregata minor</i>	(Gmelin, 1789)	Maa hoara	Common	Non-breeding visitor	LC
Suliformes: Sulidae (Boobies)							
69	Abbott's Booby	<i>Papasula abbotti</i>	(Ridgway, 1893)	Maadhooni	Vagrant		EN
70	Red-footed Booby	<i>Sula sula</i>	(Linnaeus, 1766)	Rathafai maadhooni	Uncommon	Non-breeding visitor	LC
71	Brown Booby	<i>Sula leucogaster</i>	(Boddaert, 1783)	Kalhu maadhooni	Uncommon	Straggler	LC

Appendix 1. Checklist of Birds of the Maldives

	English Name	Scientific Name	Authority	Dhivehi Name	Abundance	Status	IUCN
72	Masked Booby	<i>Sula dactylatra</i>	Lesson, 1831	Hudhu maadhooni	Uncommon	Straggler	LC
Suliformes: Phalacrocoracidae (Cormorants)							
73	Little Cormorant	<i>Microcarbo niger</i>	(Vieillot, 1817)	Kuda feena dhooni	Vagrant		LC
74	Indian Cormorant	<i>Phalacrocorax fuscicollis</i>	Stephens, 1826	Feena dhooni	Vagrant		LC
Suliformes: Anhingidae (Darters)							
75	Oriental Darter	<i>Anhinga melanogaster</i>	Pennant, 1769	Dhigu feen dhooni	Vagrant		NT
Charadriiformes: Haematopodidae (Oystercatchers)							
76	Eurasian Oystercatcher	<i>Haematopus ostralegus</i>	Linnaeus, 1758		Vagrant		NT
Charadriiformes: Recurvirostridae (Stilts)							
77	Black-winged Stilt	<i>Himantopus himantopus</i>	(Linnaeus, 1758)	Theyravaa ilolhi	Rare	N winter visitor	LC
Charadriiformes: Charadriidae (Plovers)							
78	Grey Plover	<i>Pluvialis squatarola</i>	(Linnaeus, 1758)	Alaka	Uncommon	N winter, some overstay	LC
79	Pacific Golden Plover	<i>Pluvialis fulva</i>	(Gmelin, 1789)	Bileymaa dhooni	Uncommon	N winter visitor	LC
80	Common Ringed Plover	<i>Charadrius hiaticula</i>	Linnaeus, 1758	Agothi bondana	Uncommon	N winter visitor	LC
81	Little Ringed Plover	<i>Charadrius dubius</i>	Scopoli, 1786	Bondana	Uncommon	N winter visitor	LC
82	Kentish Plover	<i>Charadrius alexandrinus</i>	Linnaeus, 1758	Kiru bondana	Uncommon	N winter visitor	LC
82	Lesser Sand Plover	<i>Charadrius mongolus</i>	Pallas, 1776	Bondana	Uncommon	N winter visitor	LC
84	Greater Sand Plover	<i>Charadrius leschenaultii</i>	Lesson, 1826	Valu bondana	Uncommon	N winter visitor	LC
85	Caspian Plover	<i>Charadrius asiaticus</i>	Pallas, 1773	Bondana	Vagrant		LC
86	Sociable Lapwing	<i>Vanellus gregarius</i>	(Pallas, 1771)	Andhun bondana	Vagrant		CR
Charadriiformes: Scopelacidae (Waders)							
87	Whimbrel	<i>Numenius phaeopus</i>	(Linnaeus, 1758)	Bulhithumbi	Common	N winter, some overstay	LC
88	Eurasian Curlew	<i>Numenius arquata</i>	(Linnaeus, 1758)	Bodu bulhithumbi	Uncommon	N winter visitor	NT
89	Bar-tailed Godwit	<i>Limosa lapponica</i>	(Linnaeus, 1758)	Ilohi	Uncommon	N winter visitor	NT
90	Black-tailed Godwit	<i>Limosa limosa</i>	(Linnaeus, 1758)	Eshunga ilolhi	Vagrant		NT
91	Ruddy Turnstone	<i>Arenaria interpres</i>	(Linnaeus, 1758)	Rathafai	Common	N winter, some overstay	LC
92	Ruff	<i>Calidris pugnax</i>	(Linnaeus, 1758)		Rare	N winter visitor	LC
93	Curlew Sandpiper	<i>Calidris ferruginea</i>	(Pontoppidan, 1763)	Bondana ilolhi	Common	N winter visitor	NT
94	Temminck's Stint	<i>Calidris temminckii</i>	(Leisler, 1812)		Rare	N winter visitor	LC
95	Long-toed Stint	<i>Calidris subminuta</i>	(von Middendorff, 1853)		Uncommon	N winter visitor	LC
96	Sanderling	<i>Calidris alba</i>	(Pallas, 1764)		Uncommon	N winter visitor	LC
97	Dunlin	<i>Calidris alpina</i>	(Linnaeus, 1758)		Rare	N winter visitor	LC
98	Little Stint	<i>Calidris minuta</i>	(Leisler, 1812)		Uncommon	N winter visitor	LC
99	Pintail Snipe	<i>Gallinago stenura</i>	(Bonaparte, 1831)		Uncommon	N winter visitor	LC
100	Swinhoe's Snipe	<i>Gallinago megala</i>	Swinhoe, 1861		Vagrant		LC
101	Common Snipe	<i>Gallinago gallinago</i>	(Linnaeus, 1758)	Onna ilolhi	Uncommon	N winter visitor	LC
102	Terek Sandpiper	<i>Xenus cinereus</i>	(Güldenstädt, 1775)		Rare	N winter visitor	LC
103	Common Sandpiper	<i>Actitis hypoleucos</i>	(Linnaeus, 1758)		Common	N winter visitor	LC
104	Green Sandpiper	<i>Tringa ochropus</i>	Linnaeus, 1758		Vagrant		LC
105	Spotted Redshank	<i>Tringa erythropus</i>	(Pallas, 1764)		Vagrant		LC
106	Common Greenshank	<i>Tringa nebularia</i>	(Gunnerus, 1767)	Chonchon ilolhi	Common	N winter visitor	LC
107	Common Redshank	<i>Tringa totanus</i>	(Linnaeus, 1758)		Uncommon	N winter visitor	LC
108	Wood Sandpiper	<i>Tringa glareola</i>	Linnaeus, 1758		Uncommon	N winter visitor	LC
109	Marsh Sandpiper	<i>Tringa stagnatilis</i>	(Bechstein, 1803)	Furedhi ilolhi	Uncommon	N winter visitor	LC
Charadriiformes: Dromadidae (Crab-plover)							
110	Crab-plover	<i>Dromas ardeola</i>	Paykull, 1805	Theyravaa	Uncommon	N winter visitor	LC

Appendix 1. Checklist of Birds of the Maldives

	English Name	Scientific Name	Authority	Dhivehi Name	Abundance	Status	IUCN
Charadriiformes: Glareolidae (Pratincoles)							
111	Collared Pratincole	<i>Glareola pratincola</i>	(Linnaeus, 1766)		Vagrant		LC
112	Oriental Pratincole	<i>Glareola maldivarum</i>	Forster, 1795		Uncommon	N winter visitor	LC
Charadriiformes: Stercorariidae (Skuas)							
113	Long-tailed Skua	<i>Stercorarius longicaudus</i>	Vieillot, 1819		Rare	N spring, offshore	LC
114	Arctic Skua	<i>Stercorarius parasiticus</i>	(Linnaeus, 1758)		Uncommon	N winter, offshore	LC
115	Pomarine Skua	<i>Stercorarius pomarinus</i>	(Temminck, 1815)		Uncommon	N winter, offshore	LC
116	South Polar Skua	<i>Stercorarius maccormicki</i>	H. Saunders, 1893	Kukulhu maadhooni	Rare	S winter, offshore	LC
117	Brown Skua	<i>Stercorarius antarcticus</i>	(Lesson, 1831)	Kukulhu maadhooni	Rare	S winter, offshore	LC
Charadriiformes: Laridae (Gulls and Terns)							
118	Brown Noddy	<i>Anous stolidus</i>	(Linnaeus, 1758)	Maaranga	Common	Widespread	LC
119	Lesser Noddy	<i>Anous tenuirostris</i>	(Temminck, 1823)	Kurangi	Common	Widespread	LC
120	White Tern	<i>Gygis alba</i>	(Sparman, 1786)	Dhondheeni / Kandhuvalu dhooni	Local	Breeding resident in S	LC
121	Brown-headed Gull	<i>Chroicocephalus brunnicephalus</i>	(Jerdon, 1840)	Gohorukey	Vagrant		LC
122	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	(Linnaeus, 1766)	Boakalhu gohorukey	Vagrant		LC
123	White-eyed Gull	<i>Ichthyaetus leucophthalmus</i>	(Temminck, 1825)	Loahudhu gohorukey	Vagrant		LC
124	Sooty Gull	<i>Ichthyaetus hemprichii</i>	(Bruch, 1853)	Gohorukey	Vagrant		LC
125	Pallas's Gull	<i>Ichthyaetus ichthyaetus</i>	(Pallas, 1773)	Gohorukey	Vagrant		LC
126a	Heuglin's Gull	<i>Larus fuscus heuglini</i>	Bree, 1876	Gohorukey	Rare	N winter visitor	LC
126b	Steppe Gull	<i>Larus fuscus barabensis</i>	Johansen, 1960	Gohorukey	Rare	N winter visitor	LC
127	Sooty Tern	<i>Onychoprion fuscatus</i>	(Linnaeus, 1766)	Beyndhu	Common	Offshore	LC
128	Bridled Tern	<i>Onychoprion anaethetus</i>	(Scopoli, 1786)	Vaali	Common	Offshore	LC
129	Little Tern	<i>Sternula albifrons</i>	(Pallas, 1764)		Uncommon	N winter visitor?	LC
130	Saunders's Tern	<i>Sternula saundersi</i>	(Hume, 1877)	Bondu dhooni	Common	Breeding resident?	LC
131	Gull-billed Tern	<i>Gelochelidon nilotica</i>	(Gmelin, 1789)	Kanifulhu dhooni	Rare	No recent records	LC
132	Caspian Tern	<i>Hydroprogne caspia</i>	(Pallas, 1770)	Miyaremu dhooni	Rare	No recent records	LC
133	Whiskered Tern	<i>Chlidonias hybrida</i>	(Pallas, 1811)		Vagrant		LC
134	White-winged Tern	<i>Chlidonias leucopterus</i>	(Temminck, 1815)		Rare	N winter visitor	LC
135	Roseate Tern	<i>Sterna dougallii</i>	Montagu, 1813	Vala	Uncommon	Breeding resident	LC
136	Black-naped Tern	<i>Sterna sumatrana</i>	Raffles, 1822	Kiru dhooni	Common	Breeding resident	LC
137	Common Tern	<i>Sterna hirundo</i>	Linnaeus, 1758	Vaali	Common	N winter, offshore	LC
138	White-cheeked Tern	<i>Sterna repressa</i>	Hartert, 1916	Valhoa dhooni	Vagrant		LC
139	Lesser Crested Tern	<i>Thalasseus bengalensis</i>	(Lesson, 1831)	Ainmathi gaadhooni	Common	N winter, some overstay	LC
140	Greater Crested Tern	<i>Thalasseus bergii</i>	(Lichtenstein, 1823)	Bodu gaadhooni	Common	Breeding resident	LC
141	Sandwich Tern	<i>Thalasseus sandvicensis</i>	(Latham, 1787)		Vagrant		LC
Accipiteriformes: Pandionidae (Ospreys)							
142	Osprey	<i>Pandion haliaetus</i>	(Linnaeus, 1758)	Keyolhu baazu	Rare	N winter visitor	LC
Accipiteriformes: Accipiteridae (Hawks and Eagles)							
143	Black-winged Kite	<i>Elanus caeruleus</i>	(Desfontaines, 1789)	Fiyakalhu ehanda	Rare	Breeding resident in S	LC
144	Western Marsh Harrier	<i>Circus aeruginosus</i>	(Linnaeus, 1758)	Ehanda	Uncommon	N winter visitor	LC
145	Pallid Harrier	<i>Circus macrourus</i>	(Gmelin, 1770)	Hudhu ehanda	Rare	N winter visitor	NT
146	Montagu's Harrier	<i>Circus pygargus</i>	(Linnaeus, 1758)	Valu ehanda	Rare	N winter visitor	LC
147	Brahminy Kite	<i>Haliastur indus</i>	(Boddaert, 1783)		Vagrant		LC
148	Black Kite	<i>Milvus migrans</i>	(Boddaert, 1783)		Vagrant		LC

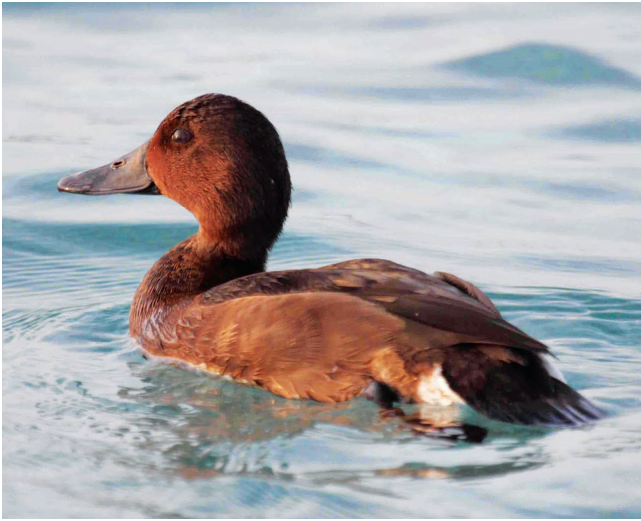
Appendix 1. Checklist of Birds of the Maldives

	English Name	Scientific Name	Authority	Dhivehi Name	Abundance	Status	IUCN
Strigiformes: Strigidae (Owls)							
149	Pallid Scops Owl	<i>Otus brucei</i>	(Hume, 1872)	Bakamoon	Vagrant		LC
150	Short-eared Owl	<i>Asio flammeus</i>	(Pontoppidan, 1763)	Bakamoon	Rare	Irruptive	LC
Bucerotiformes: Upupidae (Hoopoes)							
151	Common Hoopoe	<i>Upupa epops</i>	Linnaeus, 1758	Funagandu dhooni	Rare	N winter visitor	LC
Coraciiformes: Meropidae (Bee-eaters)							
152	Blue-tailed Bee-eater	<i>Merops philippinus</i>	Linnaeus, 1767		Rare	N winter visitor	LC
153	Blue-cheeked Bee-eater	<i>Merops persicus</i>	Pallas, 1773	Noolhosfani dhooni	Rare	Irruptive	LC
154	European Bee-eater	<i>Merops apiaster</i>	Linnaeus, 1758	Lhosfani dhooni	Vagrant		LC
Coraciiformes: Coraciidae (Rollers)							
155	Indian Roller	<i>Coracias benghalensis</i>	(Linnaeus, 1758)		Vagrant		LC
156	European Roller	<i>Coracias garrulus</i>	Linnaeus, 1758		Vagrant		LC
Coraciiformes: Alcedinidae (Kingfishers)							
157	Common Kingfisher	<i>Alcedo atthis</i>	(Linnaeus, 1758)	Kuli keyolhu	Rare	N winter visitor	LC
Falconiformes: Falconidae (Falcons)							
158	Lesser Kestrel	<i>Falco naumanni</i>	Fleischer, 1818	Rai surumuthi	Rare	N winter visitor	LC
159	Common Kestrel	<i>Falco tinnunculus</i>	Linnaeus, 1758	Surumuthi	Uncommon	N winter visitor	LC
160	Amur Falcon	<i>Falco amurensis</i>	Radde, 1863	Amur surumuthi	Uncommon	Autumn passage	LC
161	Eurasian Hobby	<i>Falco subbuteo</i>	Linnaeus, 1758	Surumuthi	Rare	N winter visitor	LC
162	Oriental Hobby	<i>Falco severus</i>	Horsfield, 1821	Surumuthi	Vagrant		LC
163	Peregrine Falcon	<i>Falco peregrinus</i>	Tunstall, 1771	Bodu surumuthi	Rare	N winter visitor	LC
Passeriformes: Campephagidae (Cuckooshrikes)							
164	Large Cuckooshrike	<i>Coracina macei</i>	(Lesson, 1831)		Vagrant		LC
Passeriformes: Oriolidae (Orioles)							
165	Indian Golden Oriole	<i>Oriolus kundoo</i>	Sykes, 1832		Rare	N winter visitor	LC
Passeriformes: Artamidae (Woodswallows)							
166	Ashy Woodswallow	<i>Artamus fuscus</i>	Vieillot, 1817		Vagrant		LC
Passeriformes: Laniidae (Shrikes)							
167a	Northern Brown Shrike	<i>Lanius cristatus cristatus</i>	Linnaeus, 1758		Rare	N winter visitor	LC
167b	Philippine Shrike	<i>Lanius cristatus lucionensis</i>	Linnaeus, 1766		Rare	N winter visitor	LC
168	Long-tailed Shrike	<i>Lanius schach</i>	Linnaeus, 1758		Vagrant		LC
Passeriformes: Corvidae (Crows)							
169	House Crow	<i>Corvus splendens</i>	Vieillot, 1817	Kaalhu	Common	Breeding resident	LC
Passeriformes: Monarchidae (Paradise-flycatchers)							
170	Indian Paradise-flycatcher	<i>Terpsiphone paradisi</i>	(Linnaeus, 1758)		Rare	N winter visitor	LC
Passeriformes: Motacillidae (Wagtails and Pipits)							
171	Forest Wagtail	<i>Dendronanthus indicus</i>	(Gmelin, 1789)		Vagrant		LC
172	Tree Pipit	<i>Anthus trivialis</i>	(Linnaeus, 1758)	Dhon fenfoa dhooni	Vagrant		LC
173	Red-throated Pipit	<i>Anthus cervinus</i>	(Pallas, 1811)	Mushi fenfoa dhooni	Rare	N winter visitor	LC
174	Western Yellow Wagtail	<i>Motacilla flava</i>	Linnaeus, 1758	Reendhoo fenfoa dhooni	Uncommon	N winter / passage	LC
175	Grey Wagtail	<i>Motacilla cinerea</i>	Tunstall, 1771	Alhi fenfoa dhooni	Rare	N winter visitor	LC
176	Citrine Wagtail	<i>Motacilla citreola</i>	Pallas, 1776	Reedhoo fenfoa dhooni	Vagrant		LC
177	White Wagtail	<i>Motacilla alba</i>	Linnaeus, 1758	Fenfoa dhooni	Vagrant		LC
Passeriformes: Fringillidae (Finches)							
178	Common Rosefinch	<i>Carpodacus erythrinus</i>	(Pallas, 1770)		Vagrant		LC

Appendix 1. Checklist of Birds of the Maldives

	English Name	Scientific Name	Authority	Dhivehi Name	Abundance	Status	IUCN
Passeriformes: Emberizidae (Buntings)							
179	Ortolan Bunting	<i>Emberiza hortulana</i>	Linnaeus, 1758		Vagrant		LC
Passeriformes: Alaudidae (Larks)							
180	Sykes's Short-toed Lark	<i>Calandrella dukhunensis</i>	(Sykes, 1832)		Rare	N winter visitor	LC
Passeriformes: Locustellidae (Grasshopper-warblers)							
181	Grasshopper Warbler	<i>Locustella naevia</i>	(Boddaert, 1783)		Vagrant		LC
Passeriformes: Hirundinidae (Swallows and Martins)							
182	Northern House Martin	<i>Delichon urbicum</i>	(Linnaeus, 1758)	Ramathi forikey	Uncommon	N winter visitor	LC
183	Streak-throated Swallow	<i>Petrochelidon fluvicola</i>	(Blyth, 1855)		Vagrant		LC
184	Red-rumped Swallow	<i>Cecropis daurica</i>	(Laxmann, 1769)		Rare	N winter visitor	LC
185	Barn Swallow	<i>Hirundo rustica</i>	Linnaeus, 1758	Gasmathi forikey	Uncommon	N winter visitor	LC
186	Sand Martin	<i>Riparia riparia</i>	(Linnaeus, 1758)	Forikey	Uncommon	Autumn passage	LC
Passeriformes: Sylviidae (Sylvia Warblers)							
187	Garden Warbler	<i>Sylvia borin</i>	(Boddaert, 1783)		Vagrant		LC
Passeriformes: Sturnidae (Starlings and Mynas)							
188	Common Starling	<i>Sturnus vulgaris</i>	Linnaeus, 1758		Vagrant		LC
189	Rosy Starling	<i>Pastor roseus</i>	(Linnaeus, 1758)		Rare	N winter visitor	LC
Passeriformes: Muscipidae (Chats and Flycatchers)							
190	Indian Robin	<i>Saxicoloides fulicatus</i>	(Linnaeus, 1766)		Vagrant		LC
191	Northern Wheatear	<i>Oenanthe oenanthe</i>	(Linnaeus, 1758)		Vagrant		LC
192	Isabelline Wheatear	<i>Oenanthe isabellina</i>	(Temminck, 1829)		Uncommon	N winter visitor	LC
193	Pied Wheatear	<i>Oenanthe pleschanka</i>	(Lepechin, 1770)		Rare	N winter visitor	LC
Passeriformes: Turdidae (Thrushes)							
194	Eyebrowed Thrush	<i>Turdus obscurus</i>	Gmelin, 1789		Vagrant		LC
2. SPECIES OCCURRING BUT IDENTIFICATION UNCONFIRMED							
Procellariiformes: Oceanitidae (Southern Storm-petrels)							
195	Black-bellied / White-bellied Storm-petrel	<i>Fregatta sp.</i>		Kandu kabaa	Rare	S winter, offshore	
Charadriiformes: Scolopacidae (Waders)							
196	Phalarope	<i>Phalaropus sp.</i>			Vagrant / rare	N winter, offshore in N	
Accipiteriformes: Accipiteridae (Hawks and Eagles)							
197	Honey Buzzard	<i>Pernis sp. / spp.</i>		Maamui baazu	Rare	N winter visitor	
198	Buzzard	<i>Buteo sp. / spp.</i>		Baazu	Uncommon	N winter visitor	
3. INTRODUCED / FERAL SPECIES							
Galliformes: Phasianidae (Partridges and Quails)							
199	Red Junglefowl	<i>Gallus gallus</i>	(Linnaeus, 1758)	Kukulhu	Common	Domestic/Feral	na
Columbiformes: Columbidae (Pigeons and Doves)							
200	Rock Pigeon	<i>Columba livia</i>	Gmelin, 1789	Kotharu	Common	Domestic/Feral	na
Psittaciformes: Psittaculidae (Parrots)							
201	Rose-ringed Parakeet	<i>Psittacula krameri</i>	(Scopoli, 1769)	Guraa	Uncommon	Introduced	LC
Passeriformes: Passeridae (Sparrows)							
202	House Sparrow	<i>Passer domesticus</i>	(Linnaeus, 1758)	Kuruli dhooni	Uncommon	Introduced, local	LC
Passeriformes: Sturnidae (Starlings and Mynas)							
203	Common Myna	<i>Acridotheres tristis</i>	(Linnaeus, 1766)	Maina	Common	Introduced	LC

Photo gallery



Tim Sykes

32 (2). Ferruginous Duck. Dhiggaru Island, Meemu Atoll, 13 Nov 2014. This appears to be the third record for the Maldives.



Sun Newspaper sun.nv/36756, 5 December 2013

33 (10). Greater Flamingo. Locally captured bird, Kanduhulhudhoo Island, Gaafu Alifu Atoll, December 2013.



Dieter Meissner, courtesy Reinhard Kikinger

34 (50). Eurasian Bittern. Kuramathi Island, North Ari Atoll, 5 Nov 2011



Syed Abbas

35 (51). Yellow Bittern. Kolhufushi Island, Meemu Atoll, 12 December 2016



Syed Abbas

36 (53). Black Bittern. Kolhufushi Island, Meemu Atoll, 5 January 2017



Riyaz Jaucharee

37 (64). Black-headed Ibis. Locally captured bird, Hithadhoo, Laamu Atoll, 5 September 2014



Riyaz Jauharee

38 (66). Glossy Ibis. Locally captured bird, Hithadhoo Island, Laamu Atoll, 5 September 2014.



Syed Abbas

39 (174). Western Yellow Wagtail. Kolhufushi Island, Meemu Atoll, 10 February 2017.



Syed Abbas

40 (178). Common Rosefinch. Kolhufushi Island, Meemu Atoll, 8 February 2017.



Syed Abbas

41 (189). Rosy Starling. Kolhufushi Island, Meemu Atoll, 10 February 2017.

Notes

About the authors



Dr Charles Anderson is a British marine biologist who has been working in the Maldives since 1983, much of that time with the Marine Research Centre (now Maldives Marine Research Institute) of the (then) Ministry of Fisheries and Agriculture. His research has included studies of the important pole-and-live tuna fishery, the shark fisheries, reef fishery and offshore fishery. More recently his research has concentrated on cetaceans. Throughout this time he has spent over 2000 days at sea, which provided numerous opportunities to observe both seabirds, and land birds on passage. He has published several reports on Maldivian birds including a number of first national records, and has a particular interest in migration (of birds, dragonflies and cetaceans). Charles has been Maldives representative of the Oriental Bird Club since 2006 and has recently been co-opted as eBird quality controller for Maldives.

R. Charles Anderson, Manta Marine, PO Box 2074, Malé, Maldives.
E-mail: anderson@dhivehinet.net.mv & charles.anderson11@btinternet.com [RCA]



Mohamed Shimal works at the Maldives Marine Research Institute (formerly Marine Research Centre) under the Ministry of Fisheries, Marine Resources and Agriculture as a Senior Research Officer, focusing on reef fisheries research. He has a Bachelor of Environmental Science, specializing in wildlife and conservation biology from Charles Darwin University, Australia, and recently completed a Master of Science in Marine Biology at Bangor University, UK. Shimal's interest in birds developed while studying in Australia, where he became fascinated by his diverse and close encounters with birdlife, and it was there that he took up birding and bird photography.

Mohamed Shimal, Maldives Marine Research Institute, H. Whitewaves, Malé, Maldives.
E-mail: mohamed.shimal@mmri.gov.mv & elevenshimal@gmail.com [MS]

