

# Introduced birds of the Andaman & Nicobar Islands, India

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Introduced alien (or exotic) species can have serious negative effects on native ecosystems and populations. Biological invasions are a widespread and significant component of human-induced global environmental change through breakdown of regional distinctiveness of the Earth's flora and fauna. There is substantial evidence that biological invasions contribute substantially to extinction (Vitousek 1994; Vitousek *et al.* 1997; Simberloff 2003). In 1992 the Convention on Biological Diversity (CBD) recognised that biological invasion is the second most serious threat to biodiversity after habitat destruction (Jenkins 1999). Most of the introduced species have the potential to establish in an alien environment, and they can act as agents of change in species equilibrium and extinction of native species of the area where they are introduced (Fritts & Rodda 1998; Donlan *et al.* 2003; Ali 2004).

The Andaman and Nicobar Islands are exposed to high levels of human-mediated introduction of non-native plant and animal species. In all, 566 plant, three snail, four insect, 12 mammal, 13 marine fish species, and one virus are known to have been introduced to these islands (Mohanraj *et al.* 1999). There may be many more introduced species not yet documented in these islands. The primary objective of this paper is to prepare a complete list of wild avifauna that was intentionally introduced by humans into the Andaman and Nicobar Islands.

A total of 19 species of birds (Table 1) were introduced to the Islands from mainland India during the first half of the 19<sup>th</sup> Century (Lever 1987; Sankaran & Vijayan 1993; Mohanraj *et al.* 1999; Kazmierczak 2000). Bird surveys by Rajan on most inhabited islands, during the last four years, reveal that of these introduced species, only six—Common Myna *Acridotheres tristis*, House Sparrow *Passer domesticus*, Blue Rock Pigeon *Columba livia*, Grey Francolin *Francolinus pondicerianus*, House Crow *Corvus splendens*, and Indian Peafowl *Pavo cristatus* now survive in these islands. Grey Francolin and Indian Peafowl populations are small and restricted to one particular site (Rajan & Pramod 2011).

The Grey Francolin was introduced through Port Blair in c. 1890 but did not successfully establish a population; however, it continues to survive in very small numbers in defrosted areas of Dolly Gunj, Port Blair (Abdulali 1965; Lever 1987; Rajan & Pramod 2011). Bump & Bump (1964) reported that the Chinese Francolin *F. pintadeanus* was introduced to Andaman in the 19<sup>th</sup> century but has not been included in the list of introduced bird species of these islands by many subsequent authors (Lever 1987). There have been no further reports of these birds from the Andamans. According to Kloss (1903), the Blue Rock Pigeon was introduced in Car Nicobar. Abdulali (1965) reported that it had established populations in the Nicobar Islands as well as in Port Blair. The Blue Rock Pigeon is now very common in most of the main inhabited islands of the Andaman group, especially in

the urban areas (Rajan & Pramod 2011).

Around the 1860s, Col. R. C. Tytler introduced three species of birds—Common Myna, House Crow, and Jungle Myna *A. fuscus*—in Port Blair (Pittie 1988; Lever 1987; Mohanraj *et al.* 1999). Except for the Common Myna, the other two could not establish populations. However, a small population of the House Crow was reported by Pittie (1988), and has been recorded more recently in 2002 with seven individuals, their numbers are now increasing rapidly in Port Blair and nearby areas (Ali 2003; Rajan & Pramod 2011). According to Abdulali (1965), House Sparrow and Indian Peafowl were introduced to Ross Island in South Andaman. Indian Peafowl was introduced in 1868 and were apparently killed off during the Japanese colonisation of these Islands during the Second World War. After India's independence in 1947, birds were re-introduced to these Islands and there is now a viable population of Indian Peafowl on Ross Island (Lever 1987; Rajan & Pramod 2011). O. H. Brookes introduced the House Sparrow in two attempts; six birds were brought first in 1882, followed by 20 more in 1895 (Lever 1987). Sankaran & Vijayan (1993) reported that the Red-whiskered Bulbul *Pycnonotus jocosus whistleri* and the White-headed Myna *Sturnus erythropygius* were both introduced to the Nicobar Islands from Port Blair.

The Common Myna and House Sparrow are the most successful among the introduced bird species in the Andaman and Nicobar Islands. Not only have they maintained their populations near urbanised and rural areas, but also have extended their range of distribution to many other locations. These are two of the introduced species that may be considered as Alien Invasive Species (AIS) with respect to these islands. During the last four years, we have recorded several instances of direct competition of the Common Myna with native species for nesting holes and roosting places. The two native avian families that are directly affected by the competitive nature of this alien invasive species are starlings (Sturnidae) and parakeets (Psittacidae). Common Myna is one of the hundred worst global invasive alien species according to the IUCN's Global Invasive species database. In the Andaman Islands too, they have lived up to their negative reputation but ecological effects on the native species need to be more critically evaluated.

Introduced species are a major threat to island biodiversity. The impact of such alien species, particularly on islands, is well documented (Savidge 1987), and the situation in the Andaman & Nicobars is not different from other islands (Mohanraj *et al.* 1999; Ali 2004). The need for prevention and control of species being introduced, and severe threats posed by invasions have been documented by various experts at international and regional levels. The IUCN constituted the Species Survival Commission to look at invasive species as primary focus for its global action. Invasive Species Specialist Group (ISSG) of IUCN has provided 'Guidelines for the Prevention of Biodiversity Loss caused by

Alien Invasive Species' (IUCN 2000). Many eradication attempts have been made by different agencies worldwide on major AIS like the Common Myna (Feare 2010). According to Simberloff (2002), control of invasive species is possible in three stages, (1) keeping them out; (2) if they get in, finding and trying to eradicate them quickly; and (3) if they cannot be eradicated, managing them at low levels. With respect to the Common Myna in the Andaman Islands, the first two options are not considered practical now. The question is of adopting management strategies that can maintain the population at low levels. For this we need to have focused studies on the ecological impact of these introduced species so that wildlife managers in the islands can make informed decisions.

There is neither a complete list nor detailed studies on the introduced species of Andaman & Nicobar Islands, but experts have mentioned the introduced birds of these islands in different books and articles as anecdotal references. The list presented here (Table 1) is an up to date synthesis of all available information on the introduced birds of Andaman & Nicobar Islands with comments on their present status. Red-whiskered Bulbul and White-headed Myna are excluded from this list because their introduction was inter-island.

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Table 1. List of introduced bird species of Andaman and Nicobar Islands

No	Species	Year Introduced	Notes
1	Jungle Myna <i>Acridotheres tristis</i>	1860s	Introduced from Burma in Port Blair by Col. R. C. Tytler. Possibly died out.
2	House Crow* <i>Corvus splendens</i>	1862 & 1864	Introduced for sanitary purposes, but failed to establish. Accidentally reached recently and established well in Port Blair.
3	Rose-ringed parakeet <i>Psittacula krameri</i>	< 1863	Possibly died out
4	Eurasian Tree Sparrow <i>Passer montanus</i>	<1866	Possibly died out
5	Common Myna* <i>Acridotheres tristis</i>	1867	Introduced in Ross Island. Established well in different habitats of main inhabited Islands except evergreen forests.
6	Peafowl* <i>Pavo cristatus</i>	1868	Introduced in the Ross Island. About 16 individuals still surviving.
7	Red Avadavat <i>Amandava formosa</i>	< 1873	Possibly died out
8	House Sparrow* <i>Passer domesticus</i>	1882 & 1895	Introduced in the Ross Island. Established well in main inhabited islands.
9	Little Brown Dove <i>Streptopelia senegalensis</i>	1899	Possibly died out
10	Black headed Munia <i>Lonchura malacca</i>	< 1906	Possibly died out
11	Grey Partridge* <i>Francolinus pondicerianus</i>	1890	Now established around in Port Blair with very less number.
12	Spot-billed Duck <i>Anas poecilorhyncha</i>	1960	Escaped from iron-mesh enclosure on Ross Islands during a storm, no sightings after that. Possibly died out
13	Common Quail <i>Coturnix coturnix</i>	1961	Brought from Madras and released into Ross Island. No recent records. Possibly died out.
14	Jungle Bush Quail <i>Percidula asiatica</i>	1961	No recent records. Possibly died out
15	Painted Bush Quail <i>Percidula erythrorhyncha</i>	1961	No recent records. Possibly died out
16	Comb Duck <i>Sarkidiornis melanotos</i>	1961	Brought from Calcutta and released into Neil Island. No recent records. Possibly died out
17	Open-billed Stork <i>Anastomus oscitans</i>	1964	Introduced from Calcutta and released into South Andaman for the control of African giant snail. But failed to establish in these Islands. Died out.
18	Blue Rock Pigeon* <i>Columba livia</i>	--	Distributed in town center in Port Blair, Rangat, Hut Bay and Diglipur and also in villages as small groups.
19	Chinese Francolin <i>Francolinus pintadeanus</i>	<1964	Has been taken to Andaman (Bump & Bump, 1964), Possibly died out.

\*Surviving introduced species