

Observations of re-nesting in three resident species: Common Moorhen, Common Myna and Spotted Dove

Tarak Samanta, Lina Chattejee, Nandana Chaudhuri, Saswati Sinha, Arjan Basu Roy*

Nature Mates-Nature Club, Kolkata, West Bengal, India.

**For Correspondence:* naturemates@gmail.com

Abstract

During the breeding season, every animal is trying to improve their chance of successfully raising their offspring. In birds they try to utilize their entire breeding season in case of unsuccessful attempts or sometimes even in case of successful attempts. But there are always a lot of costs that they need to consider. We observed re-nesting in three resident species of Newtown, West Bengal. They are Common Moorhen, Spotted Dove and Common Myna. All three species lost their first clutch for different reasons: weather calamity and predation. The time interval between initiation of second clutch and losing the first clutch differed for all three observations.

Keywords: Renesting, Breeding, Double brooding, Avian reproduction.

In nature, each individual of every species is trying to maximize their fitness by improving their reproductive success rates. They adopt different mating strategies to increase their number of offspring. Double brooding is one such strategy commonly used by many avian species. The phenomenon of laying and raising two clutches in a single breeding season is known as double brooding. True double brooding refers to when a second brood is attempted soon after successful fledging of the first brood (Morrison, 1998). It has also been observed that some birds also re-nest after losing a clutch (Morrison, 1998; Newton, 1979; Wood and Collopy, 1993; Forsman et al., 1995; Allan and Davies, 2005).

Although double brooding increases the clutch size, it also comes with its own costs. In a study on productivity of Crested Caracaras *Caracara plancus* and effect of double brooding on it, Morrison (1998) found that second

nests failed more often and that fledglings from first brood were more likely to survive till sexual maturity than young from second brood.

In the literature a number of studies have been found that recorded true brooding in birds like Little Penguin *Eudyptula minor* (Gales, 1985), Crested caracaras *Caracara plancus* (Morrison, 1988), Indian House Crow *Corvus splendens* (Shimba, 2012), Tree Swallows *Tachycineta bicolor* (Monroe, 2008), Wrentit *Chamaea fasciata* (Geupel and DeSante, 1990), Orchard Oriole *Icterus spurius* (Ligi and Omland, 2007) and Nightjar *Caprimulgus europaeus* (Lack, 1927). From India, Sarus Crane *Antigone antigone* (Sundar, 2005) has been observed to re-nest.

We have observed re-nesting in some species in Ecopark, Newtown. The species are Common Moorhen *Gallinula chloropus*, Spotted Dove *Streptopelia chinensis* and Common Myna *Acridotheres tristis*. The Common Myna was observed re-using one of the nest boxes installed within the park whereas the other species were observed re-using their natural nests. The first clutch of the Common Moorhen was first observed on 25th June, 2021. Their nest was constructed in an opening in the reedbeds beside a small pond using dry grasses. Due to heavy rain and flooding in the first week of July this nest was abandoned. The pair was first observed trying to save the nest by adding more twigs and dry leaves but ultimately it was abandoned on 6th July 2021. After the rain subsided, they started building a new nest by 8th July 2021. The Spotted Dove had built its nest on top of a fan within a household. The nest with the fledglings was first observed on 24th November 2020. The nest should be more than 15 days as they incubate for 15-16 days (Khaing and May, 2019). Because of the inconvenient location, the fledglings were carefully relocated. But within a day the Spotted Dove was again noticed sitting on the same spot and by 12th December 2020 a second clutch was observed. The Common Myna used an artificial nest box installed within the park. The first clutch was raised till the young were able to fly, but then the nest got raided by an Indian Rat Snake (*Ptyas mucosa*). Immediately after that the pair initiated a second clutch in the same nest-box and this time they managed to raise the clutch successfully.

Species	Date of observation of nest with first clutch	Date of observation of empty nest	Date of observation of nest with second clutch	Success or failure of first clutch
Common Moorhen	25.06.2021	06.07.2021	08.07.2021	Failure

<i>Gallinula chloropus</i>				
Spotted Dove <i>Streptopelia chinensis</i>	24.11.2020	10.12.2020	12.12.2020	Success with support from us.
Common Myna <i>Acridotheres tristis</i>	18.06.2021	29.06.2021	10.07.2021	Failure

Table 1: The dates of observation of first clutch, empty nest and initiation of second clutch of Common Moorhen, Spotted Dove and Common Myna.

Among the three species observed to re-nest, the Spotted Dove was the fastest to start a second clutch. On their second try they did not require to repair or add onto the previous nest which may have given them an advantage. The Common Moorhen had to repair and rebuild its nest before laying a new clutch and could only begin after the natural calamity has subsided. The Common Myna, on the other hand, who lost its first clutch due to predation was careful and did not immediately initiate a second clutch. There was a gap of 11 days before the initiation of second clutch. In all three cases, second time nesting was done on the same location where they had previously lost their first clutch. The question arises whether they are not reusing the same nesting spots to reduce the efforts of building a completely new nest even with the risk of predation. Further research into the matter can help highlight the specific causes behind this phenomenon.

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Conflict of interest:

There is no so-called conflict of interest.