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INSTANCE OF A MOURNING DOVE (*Zenaida macroura*) REUSING A FLORIDA SCRUB-JAY (*Aphelocoma coerulescens*) NEST

Charlotte Hood*, Tori Bakley, and Sahas Barve
Archbold Biological Station, Venus, Florida 33960

**E-mail: charlottehood1@comcast.net*

While most birds construct a new nest for each clutch (Ellison 2008), the reuse of an individual's own nest or the nest of another species represents an alternative reproductive strategy. Because nest construction often requires significant energy and time investment (Hansell 2000), forgoing construction altogether offers some advantages to nesting individuals. One cost associated with nest construction is a delayed start of laying, so reusing nests may facilitate an earlier lay date (Barclay 1988, Hauber 2002, Antonov and Atanasova, 2003). Additionally, time and energy saved from nest construction may allow resource allocation to other activities such as remating (Ueda 1989) or secondary broods (Ellison 2008, but see Wysocki 2004). Despite the potential benefits of nest reuse, the relative scarcity of this behavior highlights the likely significance of the associated costs. Studies have shown that reusing nests may expose nestlings and adults to increased ectoparasite loads (Hansell 2000, Rendell and Verbeek 1996), which in turn can lead to reduced clutch size (Møller 1991, Moss and Camin 1970) and nestling survival (Barclay 1988, Merino and Potti, 1995), as well as negative impacts on the health of the incubating female (Tomás et al. 2007). Moreover, reused nests may experience greater nest predation as predators remember the location of a previously depredated nest (Sonerud 1985).

Intraspecific reuse of nests, either within or between breeding seasons, has been well-documented in raptors (Jiménez-Franco et al. 2014, Saga and Selås 2012, Beardsell et al. 2016) due to the size and durability of the nests as well as the presence of fewer natural predators (Otterbeck et al. 2019). Nest reuse is likewise observed more often in colonially nesting species (Barclay 1998) and some woodpecker species (Aitken et al. 2002, Koenig et al. 2021). While nest reuse is generally considered rare in open-cup nesting passerines, it has been observed in several taxonomic families, including Lanidae, Turdidae, Mimidae, Bombycillidae, and Icteridae (Ellison 2008). When the nests of open-cup passerines are reused, it is usually by the original nesting pair within the same season or by conspecifics in following seasons, and

rarely by another bird species (Wuczyński and Hałupka 2024, see also Boves 2013, Richmond et al. 2007).

While uncommon, the interspecific reuse of open-cup passerine nests has been documented for several species. Eastern Kingbirds have been noted to use the nests of Western Kingbirds (*Tyrannus verticalis*), American Robins (*Turdus migratorius*), and Scissor-tailed Flycatchers (*Tyrannus forficatus*) (Redmond et al. 2007). One study conducted at Malheur National Wildlife Refuge in Oregon reported that, out of 341 nesting attempts by Eastern Kingbirds over the course of four years, 24 involved the reuse of another species' nest, primarily those of American Robins (Redmond et al. 2007). Other studies have noted rare, seemingly isolated instances of interspecific passerine nest reuse, e.g., the reuse of a Fieldfare (*Turdus pilaris*) nest by a Eurasian Blackbird (*Turdus merula*) (Wysocki 2004) in one report and a Song Thrush (*Turdus philomelos*) in another (Chmielewski 2019). While there is no formal review, the reuse of open-cup passerine nests by Columbids (pigeons and doves) has been widely observed. For example, White-winged Doves (*Zenaida asiatica*) are known to build nests over those of various other species, though more so later in the nesting season or within nesting colonies (Schwertner et al. 2020). European Turtle-Doves (*Streptopelia turtur*) have been documented using the abandoned nests of Song Thrush and Red-backed Shrike (*Lanius collurio*) (Baptista et al. 2020). Opportunistic reuse of other passerine species' nests has similarly been documented for several other dove species (Bowman 2020, Baptista et al. 2022, Mueller 2020), including the Mourning Dove (McClure 1943). Mourning Doves have been reported using the abandoned nests of American Robins, Gray Catbirds (*Dumetella carolinensis*), Brown Thrashers (*Toxostoma rufum*), Common Grackles (*Quiscalus quiscula*), Yellow- and Black-billed Cuckoos (*Coccyzus americanus*, *Coccyzus erythropthalmus*), and Rose-Breasted Grosbeaks (*Pheucticus ludovicianus*), though most frequently for the first two species (McClure 1943). They are also known to use the nests of other dove species, and once were even observed using the nest of a Crested Caracara (*Caracara plancus*) in Texas (Schutze 1903). While Mourning Doves have been noted using the abandoned nests of Blue Jays (*Cyanocitta cristata*) (McClure 1943), to our knowledge, there is no published report of their reuse of a Florida Scrub-Jay nest.

On 26 March 2024, a Scrub-Jay nest measured at 1.27 m high in a 2 m tall *Quercus myrtifolia* bush was found at Archbold Biological Station in Highlands County, FL, containing four eggs. It was then monitored until three Florida Scrub-Jay nestlings successfully fledged on 28 April. The nest was visited again on 10 June and was unoccupied at that time. On the morning of 1 August 2024, CH unexpectedly flushed a dove from the inactive Florida Scrub-Jay nest. Initial observations

that morning revealed that sparse supplemental nesting material had been added to the internal cup and two dove nestlings were present within the nest. After activity was noted at the nest on 1 August, CH returned to the nest on 2 August to identify the dove species and age the nestlings. During the final visit on 7 August, the nest was empty.

Based on photos of the nest taken on 2 August, we identified the occupants as Mourning Doves (Fig. 1), and estimated the age of the nestlings to be 2-3 days old due to their closed eyes, blue color of the wings and body, and the presence of primary feather sheaths (Hanson and Kossack 1962) (Fig. 2). Incubation time is 14 days for Mourning Doves (Otis et al. 2020), indicating that the last (second) egg was likely laid on 16 July and the nest occupied a few days prior. Mourning Doves typically remain in the nest for 13-15 days prior to fledgling (although they may fledge as early as 9-10 days if startled) (Otis et al. 2020), suggesting that the nestlings, which would have been 7-8 days old on 7 August 2024 did not survive to fledge.

We hypothesize that the reuse of the Florida Scrub-Jay nest by the Mourning Dove was facilitated by the similar size of the two species. Additionally, the durability of Florida Scrub-Jay nests makes them a good candidate for reuse as they seem to remain structurally intact following use, often for multiple years (CH, personal observation). Lack of suitable nesting habitat does not seem to account for this instance

Figure 1. Mourning Dove in inactive Florida Scrub-Jay nest on 2 August 2024 at Archbold Biological Station in Highlands County, FL.

Figure 2. Two Mourning Dove nestlings in inactive Florida Scrub-Jay nest at Archbold Biological Station in Highlands County, FL.

of nest reuse as Mourning Doves vary greatly in their selection of nest sites in regard to host plant species, habitat type, and nest height, and have been known to nest even on/in man-made structures (Davis 2014). As documented in White-winged Doves (Schwertner et al. 2020), this pair of Mourning Doves may have chosen to reuse this nest as it was near the end of their typical breeding season (McClure 1943).

Based on observations at Archbold Biological Station, which has monitored its population of Florida Scrub-Jays for over 50 years, as well as correspondence with other Scrub-Jay researchers around the state, to our knowledge this is the first recorded instance of a Florida Scrub-Jay nest reuse by another species. This phenomenon may be more widespread but under-studied as Florida Scrub-Jay nests accumulate over multiple breeding seasons, and researchers may not monitor them after their use by Scrub-Jays.

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