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BEHAVIORAL NOTES ON SOME BREEDING BIRDS IN SOUTHERN UTAH

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Rare, or rarely observed, behaviors may represent important components of a species' life history and may provide valuable insight into the evolution and maintenance of behavioral traits. Rare behaviors, however, frequently go undocumented, limiting our ability to evaluate fully the distribution of behavioral traits within a species' repertoire or among related species. Understanding the frequency of events or traits that have consequences for a bird's fitness may elucidate its evolution. Here I describe three apparently rare behaviors, observed in high-elevation breeding passerines, that have been reported only once or never previously in the literature. In particular, I document reuse of a nest site by Western Wood-Pewees (*Contopus sordidulus*), nest building by a juvenile American Robin (*Turdus migratorius*), and helping behavior in Chipping Sparrows (*Spizella passerina*).

Observations were made in mixed conifer–aspen forest along Duck Creek, 0.1–1.0 km east of Duck Lake, Dixie National Forest, Kane Co., Utah, at an elevation of 2575 m. Habitat consisted primarily of regenerating trembling aspen (*Populus tremuloides*) woodland with scattered large aspen, Engelmann spruce (*Picea engelmannii*), and ponderosa pine (*Pinus ponderosa*) trees. Information presented here was obtained as I surveyed an area of about 34 ha one to two times per week from May to August 2000–2001, as part of a larger project on the breeding biology of the Dusky Flycatcher (*Empidonax oberholseri*).

Nest and substrate heights that were too high to be measured directly were calculated from measurements made with a clinometer.

Nest site reuse in the Western Wood-Pewee. I observed an active Western Wood-Pewee nest in the same nest site during the breeding seasons of both 2000 and 2001. The fates of these nests were not determined. The reused nest site consisted of a small shelf, which appeared to be the scarred base of a broken-off branch, 5.0 m above the ground. The nest was built against the main trunk of a live trembling aspen, 9.7 m tall. On the basis of six other nests, Western Wood-Pewees in the study area tend to use two types of nest sites: small shelves (e.g., broken-off branch scars) adjacent to the trunks of live aspen trees ($n = 3$), and small dead aspen branches, 5–50 cm from the main trunks of live aspen trees ($n = 3$). Considering all Western Wood-Pewee nest sites observed in the study area ($n = 7$), mean [\pm standard deviation (SD)] nest height was 3.6 ± 1.2 m (range 2.4–5.5 m) and mean nest tree height was 8.8 ± 2.5 m (range 4.4–12.7 m). Thus nest height, nest tree height, and vegetation characteristics of the reused nest site were not atypical of those observed for Western Wood-Pewees in the study area.

Despite being a common and widespread species in western North America, the breeding biology of the Western Wood-Pewee is rather poorly known (Chace et al. 1997). Reuse of nest sites, while apparently very rare among noncolonial passerines, occurs regularly in some tyrannid flycatchers and was recently documented in Western Wood-Pewees in New Mexico (Curson et al. 1996 and references therein). My observations from Utah suggest that this behavior may be widespread and relatively common in the Western Wood-Pewee.

Nest building by a juvenile American Robin. During the 2000 breeding season, American Robin fledglings were first seen in the study area on 31 May. On 16 June 2000, along the bank of Duck Creek, I observed an American Robin in juvenal plumage (characterized by heavy dark mottling on a buff-colored breast) collecting large, coarse, wet grasses. The juvenile robin carried that material, and similar

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material collected during subsequent forays, to a mostly complete nest 9.2 m above the ground, on a branch of an Engelmann spruce 21.0 m tall. The nest was located approximately 2.0 m from the trunk and 0.8 m from the end of the branch. Between two of the three observed trips to the nest, the juvenile interacted nonaggressively with two adult American Robins, which were foraging within 30 m of the nest tree. Any relationship among the three birds is speculative. The adults were not observed collecting or carrying nesting material and were never observed near the nest. It is not known whether the juvenile bird constructed the entire nest. The nest site was unusually high in comparison to other American Robin nests observed in the study area (mean \pm SD = 2.4 \pm 1.3 m; range 0.5–4.3 m; n = 10). I did not observe any activity at the nest during subsequent days and weeks.

This is the second documented observation of nest building by a juvenile American Robin (see also Rasmussen 1986), although nonfunctional reproductive behavior is not exceptionally rare in young birds of this species. Juvenile American Robins have been observed copulating (Young 1955), incubating (D'Agostino et al. 1982), and feeding nestlings (Favell in Nice 1943). Brackbill (1973) observed a juvenile American Robin collecting nest material in August, although the bird was not observed carrying the material more than "several steps." Rasmussen (1986) observed an American Robin in fresh juvenal plumage nest building at a previously constructed American Robin nest, which was inactive after being depredated six weeks previously. At that nest, the juvenile bird performed nest-cup-shaping movements and manipulated, with its bill, nest material that was already in the nest (Rasmussen 1986). My observation represents a documented case of a juvenile American Robin, and one of few cases of any juvenile passerine, actively nest building with material that it collected and carried to a nest site in the wild.

Helping behavior in Chipping Sparrows. On 9 July 2000 I observed three adult Chipping Sparrows feeding at least two nestlings 7–9 days old (nestling age based on development of young on 9 July, a 9–12-day nestling period [Middleton 1998], and a fledging date of 12–14 July) at a nest located 3–4 m above the ground in an Engelmann spruce 5–6 m tall. On 14 July, the three adults were observed carrying food to at least two fledglings at and in the vicinity of the nest. The fledglings were not together but were within 15 m of each other, with one perched on the same branch as, and within 20 cm of, the nest, and the other in a different tree within 15 m of the nest. It is possible that a third young bird was present on both 9 July (in the nest) and 14 July (near the nest). All three adults appeared to make multiple visits to the nest with food, but, because the birds were not banded, I could not discern if some visited the nest more or less frequently than others. On both days of observation, I saw all three adults, with food, in the same field of view as they visited the nest (9 July) and nest area (14 July).

This is apparently the first documented record of helping behavior in the western subspecies of the Chipping Sparrow (*Spizella passerina arizonae*). Although few records exist, helping behavior may be relatively widespread among *Spizella* sparrows, with one record each for the eastern subspecies of Chipping Sparrow (*S. p. passerina*) (Middleton and Prescott 1989, Middleton 1998) and for Brewer's Sparrow (*S. breweri*) (Gill and Krannitz 1997). The importance of helping behavior in the reproductive ecology of Chipping Sparrows will only be determined with detailed observational study of breeding populations.

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