APPARENT PREDATION BY ROCK WREN OF COMMON SAGEBRUSH LIZARD

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Analyses of the stomach contents of wrens (Troglodytidae) rarely report vertebrates (Beal et al. 1916, Bent 1948, Poulin et al. 2001, Lopes et al. 2005), and few published records exist of wrens capturing and consuming vertebrate prey. We report here on a Rock Wren (*Salpinctes obsoletus*) that was seen apparently preying upon a Common Sagebrush Lizard (*Sceloporus graciosus*). The observation occurred on 11 June 2015 during the Western Field Ornithologists convention held in Billings, Montana, on a field trip Casey led to Bear Canyon. Bear Canyon is located in Carbon County on the south side of the Pryor Mountains in south-central Montana at the northern edge of the Wyoming Basin Ecoregion near the Montana/Wyoming border (Marks et al. 2016). This arid canyon is bounded by outcropped limestone and supports a dominant vegetation of Utah Juniper (*Juniperus osteosperma*), Limber Pine (*Pinus flexilis*), and Big Sagebrush (*Artemisia tridentata*).

At about 10:00 MDT, while surveying a brushy and rubble-filled draw (45.0777° N, 108.5393° W; 1580 m elevation), we found a Rock Wren already grasping in its bill a small lizard by the neck (Figure 1). We watched and photographed the bird from a distance of approximately 10 m for at least 60 seconds. During that time the wren acted alert to our presence but nevertheless stayed in one location in full view of the group. The wren twice struck the lizard on a rock, as if to kill it, although we saw no movement by the lizard during our observation. After this brief period the wren moved out of our view and was not seen again. From the wren's behavior and the fresh body condition of the lizard, we assume that it captured the lizard alive and consumed it, rather than scavenged it. We did not witness the wren ingesting the lizard.

The lizard was dull gray-brown with two parallel rows of dark blotches on the dorsal surface, field marks consistent with the Common Sagebrush Lizard. This lizard is one of five species known from Montana (Werner et al. 2004), only two of which have been recorded in Bear Canyon (the other being the distinctive Greater Short-horned Lizard, *Phrynosoma hernandesi*). Judging from our photos, and from the average length of Rock Wren mandibles measured in Montana and Wyoming (19 mm; Lowther et al. 2000), we estimated the snout–vent length of the lizard to be at least 30 mm; the tail tip was missing, probably autotomized once in the grasp of the wren (the break in the tail appeared recent). The size and belly coloration of the lizard were consistent with a juvenile individual (Werner et al. 2004). Mueller and Moore (1969) reported a mean snout–vent length of 34 mm for juvenile Sagebrush Lizards, and tails averaging 53% of total body length. We therefore estimate this lizard's original total body length to have been 60–65 mm, with 20 mm of tail missing, for a carcass length of 40–45 mm.

Previous studies of the Rock Wren's diet have found arthropods to be its primary food (Knowlton and Harmston 1942, Tramontano 1964), but consumption of a 40- to 45-mm lizard seems well within the capability of this and other wren species. Ours appears to be the first report of predation on the Common Sagebrush Lizard by a Rock Wren, although there is a previous record of a juvenile Texas Spiny Lizard (*S. olivaceus*, a larger lizard species) in the stomach of a female Rock Wren in Nuevo Leon (Contreras and Treviño 1987). In California, Rock Wrens have been implicated in attacking clay models of lizards (Keehn and Feldman 2018).

Other records of North American wrens preying on lizards include a Common

FIGURE 1. Rock Wren with juvenile Common Sagebrush Lizard in bill, Bear Canyon, Carbon County, Montana, 11 June 2015.

Photo by Daniel Casey

Side-blotched Lizard (*Uta stansburiana*) 50 mm long found in the stomach of a Cactus Wren (*Campylorhynchus brunneicapillus*) in California (Storer 1920), the remains of unidentified lizards in 14 (0.5%) of 291 stomachs of Carolina Wrens (*Thryothorus ludovicianus*) from across the southeastern United States (Beal et al. 1916, Bent 1948, Haggerty and Morton 2014), a pair of Carolina Wrens in Mississippi capturing, subduing, and feeding juvenile Green Anoles (*Anolis carolinensis*) to their nestlings at least 5 times over 3 days (Birkhead and Benny 2014), 10 apparently autotomized tail fragments of the Ground Skink (*Scincella lateralis*) in 3 Carolina Wren nest cups in Texas that may have been dropped during the process of feeding the lizards to the nestlings (McNeese et al. 2021), a House Wren (*Troglodytes aedon*) in Costa Rica subduing and feeding a juvenile (snout–vent length 30 mm) House Lizard (*Hemidactylus frenatus*) to the wren's nestlings (Barquero and Hilje 2005), a House Wren in Dominica subduing and consuming a juvenile Puerto Rican Crested Anole (*A. cristatellus*) (van den Burg and Brisbane 2021), and Zapata Wrens (*Ferminia cerverai*) in Cuba preying on Brown Anoles (*A. sagrei*) up to 100 mm long (Powell and Henderson 2008, Kroodsma and Brewer 2020).

The few published reports of wrens feeding upon lizards indicate that most lizards are small species or juveniles, up to about 100 mm in total length and with snout–vent lengths approximating the size of large invertebrate prey that wrens routinely capture. The overall low frequency of lizards in wren diets (Beal et al. 1916, Bent 1948, Poulin et al. 2001, Lopes et al. 2005) further suggests that attacks on lizards by wrens are usually the result of opportunistic encounters. However, in some localities where small lizards are relatively abundant, wrens may hunt and capture them regularly, especially when the wrens are tending nestlings (Birkhead and Benny 2014, McNeese et al. 2021). Common Sagebrush Lizards are relatively abundant in Bear Canyon, where they sometimes fall prey to birds not considered to be predators of vertebrates, such as the Green-tailed Towhee (*Pipilo chlorurus*) (Hendricks and Hendricks 2002). Thus, it seems likely that foraging Rock Wrens in Bear Canyon encounter sagebrush lizards frequently, and may attack and capture them more often than currently appreciated.

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