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An Observation of Copulation and Allopreening of a Pair of Whiskered Owls.—

Herein we describe copulation and record the first observation of allopreening by a pair of Whiskered Owls (*Otus trichopsis*). Martin (1974) described vocalization of Whiskered Owls during copulation. Forsman and Wight (1979) reviewed published records of allopreening in 11 owl species and explored functions of this behavior.

We observed a Whiskered Owl pair on 6 June 1979 at the Bogsprings Campground, Madera Canyon, in the Santa Rita Mountains of Arizona. Surrounding habitat was oak-juniper (*Quercus-Juniperus*) woodland.

On 6 June 1979 we heard the faintly audible 8-note territorial call of a Whiskered Screech Owl at 0300. One of us (AD) imitated the call and received an immediate response. Thereafter AD imitated the territorial song at short intervals for a period of 2-3 min. Two owls responded by giving the territorial call, and moved closer. One of the owls stooped within 1-1.5 m of us, then switched to the 4-note syncopated call described by Martin (1974) as paramount in copulatory behavior. The second owl responded with the syncopated song slightly higher in pitch and frequency. Both owls began a duet, repeating

the syncopated song at short intervals. This duet continued for 2 min and stopped when only one owl was heard, directly overhead. When illuminated with a spotlight, both owls were seen facing us on a juniper branch about 2.5 m high. Neither bird appeared to be disturbed by the spotlight. The female leaned forward at a 25–30° angle from the horizontal with her wings partially extended laterally and her tail deflected laterally. The male straddled her back with his tarsi in back of and slightly beneath the level of her wings and remained in this position for 2.5 sec. No vocalizations were heard during coition.

The male dismounted by flying to the same branch about 0.2 m from the female. He then slowly approached her as she remained motionless and briefly sat in contact with her. The male initiated an allopreening sequence of bill rubbing, to which the female responded. Mutual billing continued for 7–10 sec, during which the eyes of both owls were partially closed. Still with partially closed eyes, the male leaned forward and preened the female's breast feathers. The female reciprocated by nibbling the male's head, neck, and shoulder region. The major component of both male and female allopreening behavior was the social nibble described by Ellis (1979).

Allopreening lasted for approximately 35 sec and was terminated by the male. The pair looked at each other for 3 sec, then repeated the billing behavior for 10 sec followed by mutual nibbling of the shoulders and breast for 10 sec. Again, the male terminated allopreening and abruptly flew to another tree, followed by the female. After the owls departed, AD again imitated the territorial call, but received only faint responses.

The reports by Martin (1974) and Jacot (1931) provide the only observations of Whiskered Owl mating behavior for comparison. Martin observed 3 instances of copulation by a pair of Whiskered Owls. Both Martin and Jacot noted the association of the syncopated call with copulation. Martin reported that during copulation the female gave a "chang" call resembling a cat's "meeow," and the male once gave a high-pitched scream call while mounted on the female. Although neither author reported copulation postures of the mating pair, Martin did note male wing-flapping to maintain balance while mounted on the female.

McQueen's (1972) description of copulating behavior of a pair of Screech Owls (*Otus asio*) is similar in several respects to our observation. Precopulation activity of both species included the "pair-song" duet terminated by the male mounting his mate. Coition consumed 1.5–2.0 sec. McQueen observed precopulation allopreening consisting of "nibbling one another around the area of their bills." Allopreening associated with mating has been reported in two other species of small owl by Haverschmidt (1946), who observed Little Owls (*Athene noctua*) which "nibbled each other in the feathers of the head" before and after copulation on two separate occasions, and by Martin (1973), who observed similar behavior of Burrowing Owls (*Athene cunicularia*).

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