

RESULTS OF AN ELF OWL (*MICROTHENE WHITNEYI*) SURVEY IN DARK CANYON, GUADALUPE MOUNTAINS, EDDY COUNTY, NEW MEXICO

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On the night of 14 May 2007, Robert W. Dickerman and I conducted a survey for Elf Owls in Dark Canyon as part of our investigations of this owl's taxonomic status in the southeastern part of New Mexico and adjacent Texas (see Dickerman and Johnson 2013; Dickerman et al. 2010). It has been my experience that these owls do not respond consistently every night to playback. Although this survey is from only one night, they responded vigorously to playback, and I think that it is likely that most males along this stretch of canyon responded. Therefore, I feel that these results are a useful measure of the population in that stretch of canyon. This record is already reported in the NMOS Field Notes Database, but the details of habitat, survey method, and distance surveyed have never been published.

We conducted the survey along 2.8 km of Forest Road 69 in Dark Canyon. This canyon sits roughly in the center of the Guadalupe Mountains 9.2 km south of Queen, New Mexico. The center of this survey route is at 32.111244° N, 104.738789° W, elevation 1840 m. Habitat in the canyon varies from very dry south-facing canyon walls of yucca (*Yucca*), sotol (*Dasylirion*), beargrass (*Nolina*), agave (*Agave*), and grasses (Poaceae) to juniper (*Juniperus*) forest. The canyon bottom along the road tends to be wetter and supports an open forest of piñon (*Pinus edulis*)–juniper, gray oak (*Quercus grisea*), chinquapin oak (*Quercus muehlenbergii*), ponderosa pine (*Pinus ponderosa*), scattered Texas madrone (*Arbutus xalapensis*), and grass in the herbaceous layer. The terrain is very rocky and cliffs are abundant.

The survey route covered a linear distance of 2 km (GPS points in Table 1). The survey consisted of driving along the road and stopping approximately every 0.32 km to play a tape recording of Elf Owl song for approximately 2 minutes and then listening for a vocal response from any owls nearby. I noted the side of the road from which each owl responded and made an effort to not double-count individuals. GPS coordinates were recorded at each point along the road from where Elf Owls responded (Table 1). We made no effort to quantify the distance of owls from the road, but I estimate 300 m was the maximum distance that I was able to detect them. The survey lasted from 2120–2310 hrs. It began to rain at 2300 hrs., but I did not record any other weather conditions.

We recorded 8 Elf Owls along this 2 km stretch of Dark Canyon (Table 1). Based on my estimate of maximum distance detection, the density of Elf Owls in Dark Canyon in 2007 was roughly 6.6 owl pairs per km². This assumes each owl that responded was a male and that each male was paired. This is within the range of published densities for similar evergreen woodland and riparian forest habitats (summarized in Henry and

Gehlbach 1999). The width of the canyon and habitat therein is quite variable, but the estimate assumes its average width is twice the detection radius, 0.6 km.

Elf Owls were first reported from the Guadalupe Mountains in McKittrick Canyon in Texas in 1968 (La Val 1969) and were discovered in the New Mexico side of the Guadalupe Mountains in Dark Canyon in 1997 by Steve West (NMOS Field Notes Database). They are known from other localities in the Guadalupe Mountains, including up to eight in Last Chance Canyon (NMOS Field Notes Database) and from other localities in the desert west of Carlsbad at lower elevations (eBird.org). Surveys of other canyons in the region will likely expand the known range of this species in southeastern New Mexico.

Table 1. GPS coordinates in Dark Canyon from where Elf Owls were detected 14 May 2007.

Latitude N	Longitude W	Elevation (m)	Notes
32°06.4372'	104°44.8970'	1855	2 elf owls calling (1 each side of road)
32°06.5399'	104°44.8021'	1857	1 elf owl calling north side of road
32°06.5482'	104°44.7544'	1856	1 elf owl calling south side of road
32°06.5696'	104°44.4984'	1848	1 elf owl calling north side of road
32°06.6411'	104°44.3745'	1851	1 elf owl calling north side of road
32°06.7042'	104°44.2513'	1842	1 elf owl calling south side of road
32°06.7567'	104°43.6736'	1808	1 elf owl calling north side of road

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These data would not be available but for the dedication and generosity of Robert W. Dickerman (deceased 2015). He could have rightfully been included as a coauthor, but all of the speculation in this note is mine, and I would not want him to bear any of that responsibility. Matthew Baumann and an anonymous reviewer provided helpful comments on a previous version of this manuscript.

LITERATURE CITED

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REVIEWERS FOR VOLUME 39

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