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DOUBLE MOUND OF THE HARVESTER ANT
POGONOMYRMEX OCCIDENTALIS (HYMENOPTERA:
FORMICIDAE, MYRMICINAE)

William H. Clark¹

Key words: harvester ant double mound, *Pogonomyrmex occidentalis*, ant nest, Utah.

Several species of *Pogonomyrmex*, especially members of the *occidentalis* complex, have nests surmounted by a large, conical mound of soil and gravel in a clearing created by the ants (Cole 1932, 1968). I report a rare double mound of the western harvester ant, *Pogonomyrmex occidentalis* (Cresson), having two distinct mounds not joined at the bases within a single clearing (Fig. 1).

MATERIALS AND METHODS

The rare double-mounded nest of *P. occidentalis* was located on 15 July 1987 in Grand

County, Utah, approximately 58 km NE Moab along Highway 128 and about 4 km from the Colorado River, at an elevation of 1445 m. Voucher specimens from both mounds (WHC #8184 and 8185) are deposited in the Orma J. Smith Museum of Natural History, Albertson College of Idaho, Caldwell (CIDA).

RESULTS AND DISCUSSION

The *P. occidentalis* nest was located in a disturbed area 5 m from the edge of Highway 128 in a clearing surrounded entirely by cheatgrass (*Bromus tectorum* [L.]). The clearing



Fig. 1. Nest of *Pogonomyrmex occidentalis* (Cresson), with two mounds, in Grand County, Utah. Field book is 11 × 19 cm.

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was 2.6×2.9 m, with one mound 50×50 cm in diameter and 8 cm tall, and the other 60×63 cm in diameter and 12 cm tall. Big sagebrush (*Artemisia tridentata* Nutt.) and greasewood (*Sarcobatus vermiculatus* [Hook.] Torr.) were the dominant shrubs in the adjacent area. The mounds were totally covered by fine gravel and scattered leaves of *S. vermiculatus*. Both mounds had east-facing entrances at their bases. Ant activity outside the nest had apparently ceased during the hot afternoon, so worker ants were collected from each mound by excavation. The shorter mound contained workers, callow workers, and brood at a depth of 5 cm; the other mound contained only workers (maximum excavation below each mound was 60 cm). The ants were placed in a field observation arena and showed no aggression toward each other, indicating that they are nestmates. Ants of the same colony can recognize each other (Sudd and Franks 1987).

Lavigne (1969) found only one queen per nest ($n = 27$) in this species. I was unable to locate a queen or queens to help resolve the question: Is this one or two nests? Queens in this species are often found deep, up to 185 cm (Lavigne 1969).

The cause of the double mound is unknown. Human disturbance is certainly a possible cause since the nest is located along a highway.

During 25 years of field observation I have not previously encountered the double-mound situation. Cole (1932) stated that for a closely related species, which is now known as *P. salinus* Olsen (Shattuck 1987), "there are

many double mounds and occasionally a triple one"; no further details were given. Allred (1982) stated that in examination of 219 mounds of *P. occidentalis* in Utah, 213 were typical single mounds, while only 5 had two and 1 had three main mounds joined above-ground and apparently inhabited by the same colony. However, the six ant mounds reported by Allred (1982) shared common bases with their double/triple, which differentiates them from the nest described here (Fig. 1).

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