

twigs, and in acorns (Headley, 1943), as well as under stones (Wheeler, 1905; Cole, 1940) and between clefts in rocks, in stone walls or under bark (Wheeler, 1903a), including dead, standing trees (Dennis, 1938), or within rotting logs (Cole, 1940). Nests may be small, one nest was 1.2cm deep under a pebble with a diameter of 0.6cms (Cole, 1940). It is found in conifer forests (Letendre and Pilon, 1972) or mixed species forests, where shade of trees is dense (Dennis, 1938; Headley, 1943; Carter, 1962), or prefers open areas with good drainage (Herbers, 1985). It is found occasionally at lower elevations in the southern Blue Ridge of Virginia (Van Pelt, 1963). Nest populations are relatively larger than in other species (Wheeler, 1903a), and average 46 workers, to a total (including sexuals and brood) average of 136 and a maximum of 419 (Headley, 1943). Egg laying begins in mid May, but brood are present in the nest through the year (Headley, 1943). Pupae are present in the nest by the second week of June (Headley, 1943). Worker populations peak late in the season (Headley, 1943). Winged females and males are found in nests in August (Wheeler, 1903a). Workers reproduce in queenright colonies (Frumhoff and Ward, 1992). They are polygynous (Alloway et al., 1982; Herbers, 1984; 1986a) and polydomous (Alloway et al., 1982; Herbers and Tucker, 1986) with many nests found without queens (Headley, 1943). Scarcity of available nest sites may influence the pattern of polygyny (Herbers, 1986b). This species spreads by nest fission and migration (Herbers and Tucker, 1986a). Mating flights occur from mid July until early September (Leprince and Francoeur, 1986), with mating occurring on hilltops. Females are inseminated once, or use sperm from a single male for a given clutch (Herbers, 1986c). Nests are considerably more spread out in the summer than they are in the winter (Herbers, 1985). Apparently nests fractionate in the summer to occupy several nest sites (Herbers, 1986a). Many summer nests are queenless, whereas such nests are rarely found in the winter (Herbers 1986a), and survivorship of nests during the winter may be a function of the resident queen number (Herbers 1986b). Nest density can be as high as 1.7 (Headley, 1943) to 4 (Herbers, 1985) nests per square meter. This species forages on the low vegetation in the shade of trees (Wheeler, 1903a, 1905). Foraging activity peaks in summer and fall (Herbers, 1989). Herbers (1990) and Backus (1993) reported on the investment of this ant in workers and reproductives. Social organization was discussed by Herbers (1983).

It is enslaved by *Leptothorax* (*Leptothorax*) *duloticus* and *Protomognathus americanus* (Headley, 1943; Alloway et al., 1982; Alloway and del Rio Pesado, 1983; Alloway and Keough, 1990), and can recognize *Protomognathus americanus* as an enemy (Alloway, 1990).