

Abstract of an oral presentation delivered on 16 January 2005 at the Biology of the Rattlesnakes symposium at Loma Linda University, Loma Linda, California.

**Habitat utilization and behavior of the Mohave rattlesnake (*Crotalus scutulatus scutulatus*) in the western Mohave Desert**

Radiotelemetry resulted in 3777 observations of 20 *Crotalus s. scutulatus* (10♂/10♀) over 39 months in creosote bush (*Larrea tridentata*) scrub at an elevation of ca. 975 m in California's Mohave Desert. Burrows utilized on 819 occasions when specimens were underground during the active season (ca. March – October) included those of *Dipodomys* sp. and/or *Ammospermophilus leucurus* (92%), *Vulpes macrotis* (5%), *Spermophilus beecheyi* (1%), and burrows of undetermined origin (2%). Thirty-seven winter refuge selections by 17 specimens (8♂/9♀) were documented, including 27 (73%) *Dipodomys* and/or *Ammospermophilus* burrows, 7 (19%) *Vulpes* burrows, 2 (5%) in unidentified burrows under a collapsed Joshua tree (*Yucca brevifolia*) and 1 (3%) *Spermophilus* burrow. No evidence of communal denning, either with conspecifics or other species, was detected. Of 10 specimens (5♂/5♀) monitored through multiple winters, one (Css61♂) occupied the same burrow during two winters and two (Css03♂ and Css24♀) spent winters in burrows used during previous winters by other specimens (Css16♀ and Css25♂ respectively). Several animals made late season visits to their own prior winter refugia before continuing on to become inactive in other burrows. Woodrat (*Neotoma lepida*) middens and nearby granite rock outcrops were ignored in all seasons. Utilizing only specimens with ≥ 365 d continuous data (mean 745 d; range 370-953), males were found to occupy much larger areas than females ( $P = .001$ ). Mean home ranges, computed by the 95% fixed kernel method, were 20.4 ha (SE = 2.59) for males (n = 6) and 2.2 ha (SE = 0.43) for females (n = 8). A bimodal mating pattern was observed, with 11 pairs involved in accompaniment, courtship and/or coitus observed in summer/fall (August, September, October) and 14 observed in spring (March, April, May). Observed prey species included *Dipodomys* sp., *Perognathus* sp., *Ammospermophilus leucurus*, and *Cnemidophorus tigris*.

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