

The influence of trap type on evaluating population structure of the semifossorial and social rodent *Octodon degus*

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Abstract

Trap type may influence captures of individuals in different age-sex categories in small mammal studies, resulting in biased population and demographic information. We deployed 4 live trap types at burrow systems of the rodent, *Octodon degus* Molina, 1782, in central Chile to determine trap efficacy in capturing individuals of 6 demographic categories. We captured 2672 individuals in 17 709 trap days (15.1% trapping success). Tomahawks were the most efficient trap capturing half of individuals during both years, followed by mesh Sherman traps, large Sherman traps, and medium Sherman traps in 2005. All trap types equally sampled sexes. Large and medium Sherman traps provided similar demographic structure, where half of the individuals captured were pups; Tomahawk traps sampled more adults than pups. Relative captures of pups were similar across different trap types, suggesting that pups are equally sampled by each of the deployed trap types. Relative captures of adults were lower in Sherman traps, suggesting that this age class avoided solid-walled traps. For *Octodon degus*, the sole use of Tomahawk traps may produce sufficient, unbiased demographic data. Only 4 trap mortalities occurred (0.15%). Researchers may minimize trap mortality without compromising sufficient demographic sampling by trapping during peak animal activity.