Abstract of an oral presentation delivered on 17 July 2006 at the Joint Meeting of Ichthyologists and Herpetologists in New Orleans, Louisiana.

THE EFFECT OF RADIOTELEMETRY ON THE GROWTH OF FREE-RANGING MOHAVE RATTLESNAKES (CROTALUS SCUTULATUS SCUTULATUS)

This study compares the growth rates of 13 free-ranging Mohave rattlesnakes (*Crotalus s. scutulatus*) with intracoelomically-implanted radio transmitters, monitored for 10,003 snake/days (mean duration = 769 d, range 365-1074, ± 70.3 SE) to growth rates of 16 non-telemetered animals captured and recaptured by chance at the same study site during the same time period, resulting in growth data for 6449 snake/days (mean duration = 403 d, range 194-977, ± 60.3 SE). Precise snout-vent lengths (SVL) were obtained from all specimens under general anesthesia. The telemetered group was restricted to animals with body mass ≥ 180 g, yielding a mean SVL of 762 mm (range 702-838, ± 12.4 SE), while the unrestricted non-telemetered group produced a mean SVL of 664 mm (range 467-838, ± 22.4 SE). Although the mean annual increase in SVL was greater for non-telemetered than for telemetered rattlesnakes (23.3 mm ± 7.2 SE, and 7.3 mm ± 2.1 SE, respectively; independent *t*-test $P = 0.047$), evaluation of growth data with ANCOVA using radiotelemetry (Y/N) as the fixed factor and SVL as a covariate indicates a strong relationship between snake size (SVL) and growth rate ($F_{1,26} = 21.317$; $P < 0.001$), while the relationship between being telemetered and growth rate was insignificant ($F_{1,26} = 0.247$; $P = 0.623$).

Keywords: *Crotalus scutulatus,* radiotelemetry, growth, natural history