

NATURAL HISTORY NOTES

SALVADORA MEXICANA (Mexican patchnose snake): COMBAT BEHAVIOR. The difficulties in monitoring much of the natural history in secretive snake species warrants the documenting of snake behavior when it is observed (Gillingham *et al.*, 1977). Male combat has been documented in many species of snakes (Gillingham, 1987), however the full extent to which male combat occurs among most snake species likely remains unknown or undocumented (Shine, 1994).

Although seven species make up the genus *Salvadora* (*bairdi*, *deserticola*, *grahamiae*, *hexalepis*, *intermedia*, *lemniscata*, and *mexicana*) much of the basic natural history for the genus is lacking (Ernst & Ernst, 2003). Some reproductive data have been collected for species within *Salvadora* (Vitt, 1978; Stebbins, 1985; Goldberg, 1995; Werler & Dixon, 2000; Ernst & Ernst, 2003) but to our knowledge male combat behavior has not been reported for the genus.

On 9th June 2007 (15:19 h) we observed two male *Salvadora mexicana* during a combat session in a tropical deciduous forest just west of Ostuta in Michoacán, México (18.51394N, 103.46616W, WGS84; 171 m elev.). The combatants (Figure 1) had begun their bout on a hill near the side of the road before we first observed them. These individuals were intertwined with one another in stereotypical combat behavior (Lowe, 1948) without indication of biting or serious aggression between them. This combat bout took place over a period of ca. 3 min and five photographs were taken of the account (UTA digital images 1078–1082), during which time they were either oblivious to or undaunted by our movements. Both males appeared similar in length and mass. They quickly separated as we rushed towards them and one of the two individuals was collected (UTA R-55373). This adult male (SVL 85.7 cm, TBL 104.8 cm) was of reproductive age and possibly fighting for territorial dominance (see Lowe & Norris, 1950), however Gillingham (1987) states that there is little evidence for territoriality in snakes. This documents the first observation reported of male combat in *S. mexicana* and the genus *Salvadora*. These observations suggest that other species in the genus may conduct similar male combat as well.

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Figure 1. Two combatant male *Salvadora mexicana* in Michoacán, México (UTA digital image 1082). © U. García-Vázquez.