

tooththrow, and glans penis than other species in the *boylei* species group (Carleton, 1977, 1979). Its entire range encompasses a narrow rectangular strip along the lowland tropical forest, coastal palm groves, and mangrove swamps on the coastal plains of Sinaloa and Nayarit at elevations ranging from sea level to generally less than 200 m (Carleton, 1989; Carleton et al., 1982).

*Peromyscus simulus* originally was described by Osgood (1904) as a subspecies of *P. spicilegus* because of the similarity in pelage color between the two taxa. Later, in his revision of *Peromyscus*, Osgood (1909) arranged both *spicilegus* and *simulus* as subspecies of *P. boylei*, referring to *simulus* as a coastal representative of the more montane form *spicilegus*. Carleton (1977) raised both *simulus* and *spicilegus* to species status for several reasons: their sympatric occurrence in Nayarit (Carleton, 1977, 1989; Carleton et al., 1982) with no indication of intergradation in contact areas (Baker and Greer, 1962; Carleton, 1989); their ready identification using characters of the skull (Hooper, 1955, 1958), phallus (Bradley and Schmidly, 1987; Carleton, 1977; Carleton et al., 1982), and karyotype (Schmidly and Schroeter, 1974; Smith et al., 1989); and their occupation of different elevational zones (*simulus* in the lowland tropical forest and thorn scrub of the coastal plains and *spicilegus* in both the coastal lowlands and the higher elevations of the Sierra Madre Occidental; Carleton, 1977, 1989).

The studies of Carleton (1977, 1979) and Carleton et al., (1982) sustained the differences between *P. simulus* and *P. spicilegus* and suggested that the former belonged to an assemblage within the *P. boylei* species group comprised of the taxa *attwateri*, *boylei*, *pectoralis*, and *stephani*, whereas the latter formed an assemblage with *aztecus* and *winkelmani*. A phylogenetic study of the phallus (Bradley and Schmidly, 1987) showed *P. simulus* and *P. spicilegus* to be distantly related, in support of Carleton's (1977) interpretation.

Carleton (1989), in his review of systematics and evolution in the genus *Peromyscus*, described *simulus* as a monotypic species with morphological and karyological affinities to *P. madrensis* on the Tres Marias Islands and *P. boylei rowleyi* in the higher elevations of the Sierra Madre Occidental and adjacent Mexican Plateau. Earlier, Carleton et al., (1982) had argued for a close phylogenetic relationship between *simulus* and *madrensis* on zoogeographic grounds as well as on the basis of cranial, phallic and karyotypic similarities.

There have been no comprehensive studies of population variation (non-geographic or geographic) in *P. simulus*, nor is much known about its biology. As part of a research project to assess the systematics of the *P. boylei* species group in Mexico, we had the opportunity to collect *P. simulus* in many parts of its range and to examine most specimens already in collections. This material constitutes the basis for a statistical assessment of morphological variation within and among populations of the Sinaloan mouse as well as providing first-hand knowledge about the conservation status of this species.