Ramona grasshopper mouse, *Onychomys torridus Ramona*

Paul W. Collins

Description: Southern grasshopper mice (*Onychomys torridus*) are short-tailed (39-52 mm), stocky (20-26 g) mice with sharply bicolored pelage (pale-brown to grayish or pinkish cinnamon dorsally and white ventrally); short, thick, distinctly bicolored (dark dorsally and white distally) tail with a white tip; and large hind feet (18-23 mm) with four tubercles and densely-furred soles (Hollister 1914, McCarty 1975, Jameson and Peeters 1988). Grasshopper mice can be distinguished from coexisting species of white-footed mice (*Peromyscus* spp.) by their relatively short (generally less than 50% of head and body length), club-like tail, and larger hind feet with hairy soles (McCarty 1975). The Ramona grasshopper mouse (*O. t. ramona*) is distinguished by its dark brown to grayish dorsal coloration (Rhoades 1893, Hollister 1914). This distinctive subspecies is the darkest colored race of *O. torridus* found in the United States (Hollister 1914). In size and skull characters this subspecies is similar to adjacent subspecies of *O. torridus* (Mearns 1907, Hollister 1914).

Taxonomic Remarks: This taxon was originally described as *O. ramona* (Rhoades 1893) and was later relegated to a subspecies of *O. torridus* by Merriam (1904a). Intergradation with the desert-inhabiting *O. t. pulcher* was reported in the west end of San Gorgonio Pass (Hollister 1914) and along the western side of Anza Borrego Desert State Park (Banks 1964). In areas where these two subspecies intergrade, it is difficult to assign specimens to a particular subspecies (Banks 1964). It is unknown to what extent these two forms intergrade elsewhere where their populations meet. Data on genetic and morphologic variability within *O. t. ramona* are lacking.

Distribution: In California, the Ramona grasshopper mouse ranges southward from Los Angeles County to the Mexican border, generally west of the desert. Historically, it inhabited mesas and valleys along the Pacific slope of the Peninsular and Transverse Ranges in southwestern California and extreme northwestern Baja California, Mexico (Hollister 1914, Grinnell 1933). It ranged from about Mint Canyon and San Fernando (Los Angeles County), east to Valle Vista in San Jacinto Valley (Riverside County), and south to La Puerta Valley and Jacumba (San Diego County) and Tecarte Valley (Baja California, Mexico) (Hollister 1914, Grinnell 1933, von Bloeker 1932). The known elevational range is from near sea level at the mouth of Tia Juana River (San Diego County: USNM 126061) to ca. 4,160 ft, north of Boulevard (San Diego County: LACM 81297). Specimen records indicate that it generally occurs below 3,000 ft elevation. Although *O. t. ramona* typically occurs west of the deserts on the Pacific slope side of the San Gabriel and San Bernardino mountains south through the Peninsular Ranges to the Mexican border, it also occurs at a number of scattered sites along the extreme western desert slope of the San Gabriel Mountains and the Peninsular Ranges. Specimens from these sites should be examined to determine their subspecific affinities, and whether intergradation is occurring between *O. t. ramona* and *O. t. pulcher* at sites situated along the desert slope of the Transverse and Peninsular ranges.

Life History: The life history of the Ramona grasshopper mouse is apparently similar to that of the related Tulare grasshopper mouse (see *O. t. tularensis* account). In general, they are primarily carnivorous, have large home ranges, occur in low densities, are highly territorial, and generally reproduce during the spring and early summer. Mearns (1907) reported collecting two gray-pelaged juveniles on 21 and 25 May at the foot of the Santee Mountains in San Diego County. Ramona grasshopper mice produce litters which average four young from March through June (Stephens 1906). According to Stephens (1921), *O. t. ramona* was "not common" in San Diego County. There is little additional data available on the life history of the Ramona grasshopper mouse.

Habitat: Little is known about the habitat requirements of the Ramona grasshopper mouse. This

taxon is believed to inhabit flat, sandy, valley floor habitats (Stephens 1906, Grinnell 1933). At Valle Vista in San Jacinto Valley, Riverside County, Grinnell and Swarth (1913) collected *O. t. ramona* among scattered brush on a gravelly valley floor. In San Diego County, it inhabited mesas and valleys in the coastal region (Stephens 1921). Like *O. torridus* elsewhere in California, this taxon probably inhabits a variety of low, open and semi-open scrub habitats including coastal sage scrub, mixed chaparral, low sagebrush, riparian scrub, and annual grassland with scattered shrubs.

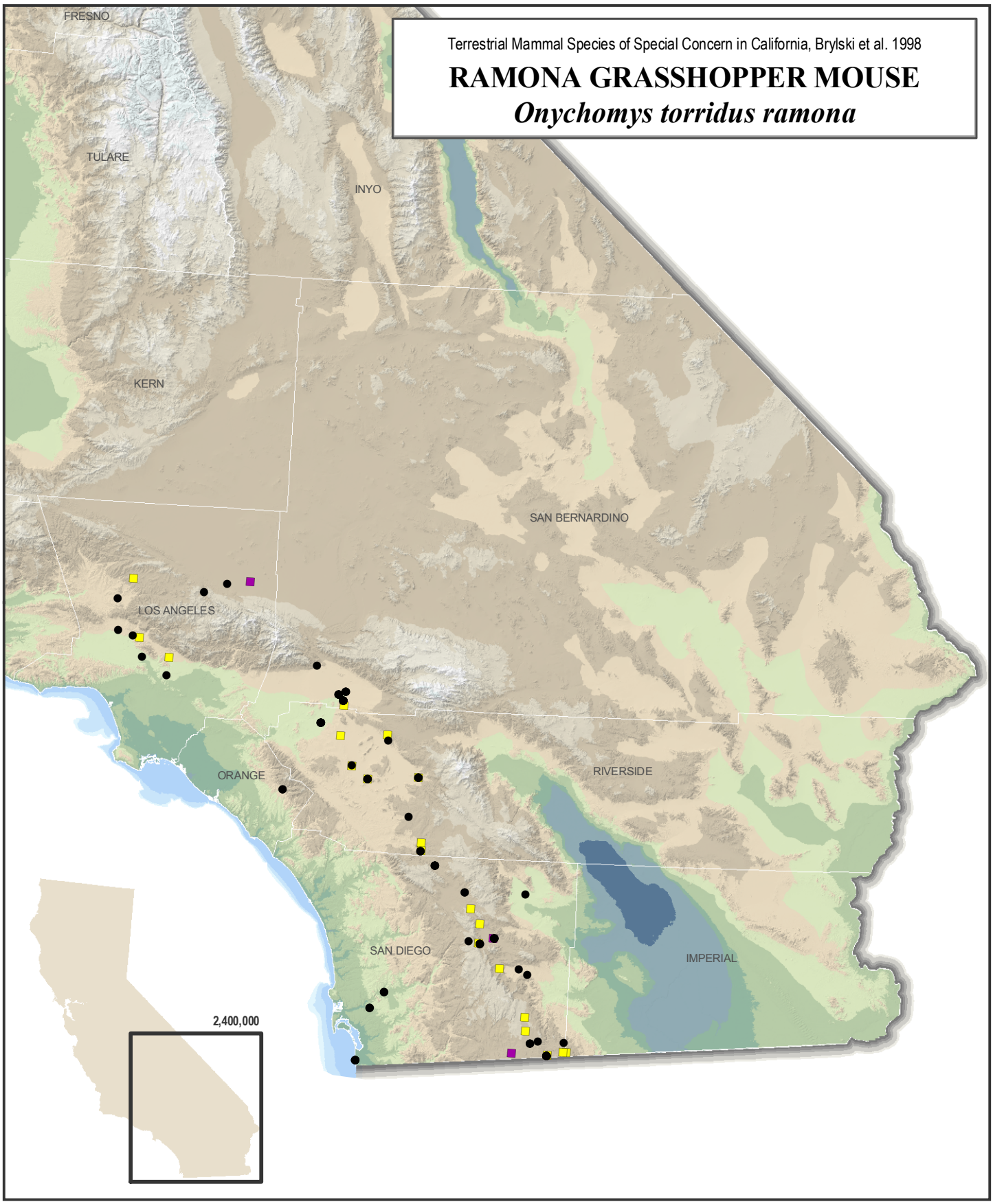
Status: Class II. The Ramona grasshopper mouse occurs in relatively low densities, and was considered uncommon by Stephens (1906, 1921). There are also few museum records for the species over the past 20 years (per our museum specimen records inventory). Recent records document the occurrence of this taxon on the desert slopes of the San Gabriel Mountains and the Peninsular Ranges, near Sage and Aguanga in Riverside County, and from the vicinity of Banner, Jacumba, Boulevard and Oak Grove in San Diego County. However, there are no recent records from the Los Angeles Basin, from the vicinity of Riverside and San Bernardino, from most of Orange County, or from western San Diego County. The Ramona grasshopper mouse is more susceptible to small- and large-scale habitat loss and fragmentation than other rodents, due to its low fecundity, low population density, and large home range size. The species has been extirpated from large areas of its historic range, including most flat valley bottom land, mesas, and low foothills, as a result of conversion of its habitat to urban and agricultural uses. Large-scale loss of habitat has occurred throughout the Los Angeles Basin, in coastal areas of Orange and San Diego counties, and in interior valleys of San Bernardino, southwestern Riverside and northern San Diego counties.

Management Recommendations: Studies on the current distribution, population status, and life history of this species are needed.

Terrestrial Mammal Species of Special Concern in California, Brylski et al. 1998

RAMONA GRASSHOPPER MOUSE

Onychomys torridus ramona



RESOURCES AGENCY CALIFORNIA DEPARTMENT FISH & GAME

- Locations verified by authors (captures, observations, museum records)

- CNDDB 1979 -1998
- CNDDB 1978 and before

Wildlife Branch:KFien12109