

Status Survey and Conservation Action Plan

North American Rodents

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IUCN/SSC Rodent Specialist Group

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***Microdipodops pallidus* Merriam 1901**
Pale kangaroo mouse

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5 subspecies, 1 of conservation concern:

M. p. restrictus Soda Spring Valley kangaroo mouse

IUCN Red List Category

Microdipodops pallidus – Lower Risk, least concern (LR,lc)

M. p. restrictus – Vulnerable (VU): D2

Assignment of the subspecies of conservation concern is based on its occurrence at a single known locality.

Taxonomy and distribution

Hafner *et al.* (1979) evaluated genetic interactions of the two species of *Microdipodops* in sympatry, and demonstrated that they behaved as distinct species at a purported zone of hybridization. Hafner (1981) revised the taxonomy of the species and evaluated evolutionary relationships and biogeography of the genus. Hafner (1985) named a new subspecies, *M. p. restrictus*, from Soda Spring Valley at the southern end of Rhodes Salt Marsh in Mineral County, Nevada.

Kangaroo mice (*Microdipodops*) are confined to the Great Basin of Nevada and parts of surrounding California, Oregon, Idaho, and Utah. Within the Great Basin, they are restricted to xeric, sandy habitats, often bordering alkaline dry lakes and sinks. Of the two species, the pale kangaroo mouse (*M. pallidus*) has a more restricted distribution at lower elevations of Nevada and California in the immediate rain-shadow of the Sierra Nevada. Hafner *et al.* (1996) studied ecological interactions of *M. pallidus* and *M. megacephalus* in sympatry. *Microdipodops p. restrictus* is known only from the type locality, 8.9mi [14.3km] S, 1.2mi [1.9km] E Mina, 4,400ft [1,341m], Mineral County, Nevada.

Remarks

Although no current threats to *Microdipodops p. restrictus* are known, its restricted and isolated distribution leaves it particularly vulnerable to habitat alteration. Throughout the remainder of the range of the genus, other populations have suffered from introduction of weedy grasses and cultivation of dry sinks by irrigation from limited pockets

of water that collect under the pans (J.C. Hafner pers. obs.). Although the supply of water may be limited, habitat alteration at these cultivated sites is extreme, resulting in wholesale displacement of *Microdipodops*. In addition to these human-related habitat changes, apparently natural shifts in vegetative zones have resulted in the replacement of rodent communities including *Microdipodops* by those including *Dipodomys deserti*, and vice versa (J. C. Hafner pers. obs.). Natural and human-related habitat modifications may have amplified effects on the already fragmented, patchy distribution of *Microdipodops*. O'Farrell and Blaustein (1974b) reviewed the general biology of this species.

Conservation status and occurrence in captivity and protected areas

This subspecies currently has no protected status. Breeding populations of *Microdipodops pallidus* have been maintained with limited success for several generations (D.J. Hafner pers. obs., J.C. Hafner pers. obs., W.L. McNeil pers. comm.). No populations are known to occur in protected areas.

Recommended action

- Initiate survey and monitoring program to detect major human-induced and natural habitat alterations that affect the distribution of *M. p. restrictus*.
- Survey appropriate habitat in the vicinity of the type locality of *M. p. restrictus* to determine its population status and distributional limits, and consider potential protected area(s) for conservation of this isolated subspecies.