



11-5-2012

Marginal record of the southern grasshopper mouse *Onychomys torridus* in Baja California, México

Aldo A. Guevara-Carrizales

Universidad Autónoma de Baja California, México, aaguev@yahoo.com

Jonathan Escobar-Flores

Universidad Autónoma de Baja California, México, jescobar@uabc.edu.mx

Roberto Martínez-Gallardo

Universidad Autónoma de Baja California, México, robtron@uabc.edu.mx

Follow this and additional works at: <https://scholarsarchive.byu.edu/wnan>



Part of the [Anatomy Commons](#), [Botany Commons](#), [Physiology Commons](#), and the [Zoology Commons](#)

Recommended Citation

Guevara-Carrizales, Aldo A.; Escobar-Flores, Jonathan; and Martínez-Gallardo, Roberto (2012) "Marginal record of the southern grasshopper mouse *Onychomys torridus* in Baja California, México," *Western North American Naturalist*: Vol. 72 : No. 3 , Article 16.

Available at: <https://scholarsarchive.byu.edu/wnan/vol72/iss3/16>

This Note is brought to you for free and open access by the Western North American Naturalist Publications at BYU ScholarsArchive. It has been accepted for inclusion in Western North American Naturalist by an authorized editor of BYU ScholarsArchive. For more information, please contact scholarsarchive@byu.edu, ellen_amatangelo@byu.edu.

MARGINAL RECORD OF THE SOUTHERN GRASSHOPPER MOUSE *ONYCHOMYS TORRIDUS* IN BAJA CALIFORNIA, MÉXICO

Aldo A. Guevara-Carrizales^{1,2}, Jonathan Escobar-Flores¹, and Roberto Martínez-Gallardo¹

ABSTRACT.—A specimen of an adult male of the southern grasshopper mouse *Onychomys torridus* was collected in Punta Choros, 25 km SE of Bahía de los Ángeles, Baja California, México. This record extends the species' distribution 330 km SE of the prior southernmost locality on the peninsula.

RESUMEN.—Se colectó un espécimen de un macho adulto del ratón chapulinero *Onychomys torridus* en Punta Choros a 25 km al SE de Bahía de los Ángeles, Baja California, México. Este registro extiende la distribución de esta especie 330 km al SE de la localidad mas sureña de la península.

The southern grasshopper mouse is characterized by small size and a tail shorter than the head and body length (McCarty 1975). *Onychomys torridus* is distributed from southern Canada to northern Mexico (Sonora, Coahuila, Nuevo León & Tamaulipas; Hall 1981). Physiological adaptations allow this species to survive in extreme aridity (Schmidt-Nielsen and Haines 1964). *Onychomys torridus* is carnivorous, and its diet is constituted mainly of arthropods and small vertebrates (Bailey and Sperry 1929, Hornet et al. 1964).

In Baja California, *Onychomys torridus* has been reported in the following areas: 51 km S Pilot Knob, Colorado River (32°34'41.429"N, 114°48'57.881"W) [MVZ] (39329–39345, 49981–49983); South of the Valle de las Palmas (32°23'27.307"N, 116°44'12.704"W) [SDHM] (8041, 8042); Valle de la Trinidad, La Zapopita 40 km N (31°22'0"N, 115°43'58.99"W), Valle de la Trinidad (31°24'5.389"N, 115°43'22.90"W) [LACM] (13689–13691); Valle de la Trinidad [MVZ] (6172, 6173, 6178, 6179, 6193, 6197, 6210, 6242, 6259, 6285, 6286, 6328, 6451, 6465, 6469, 6480, 6495, 6497, 11644, 22647–22651); Rancho Sangre de Cristo (31°51'0.001"N, 116°7'0.007"W) [SDHM] (6060, 6093, 6121, 6392, 6393, 22641); Misión Santo Domingo (30°43'0.002"N, 115°56'0.004"W) [SDHM] (4681, 4700); Arroyo Nuevo York (30°33'16.923"N, 115°56'9.589"W) [SDHM] (36253, 36254); San Quintín (30°34'30"N, 115°56'0.004"W) [MSB] (4989–4991, 5001, 5015, 15951, 22644, 22645) and 13 km N from San

Quintín (30°41'51.845"N, 115°57'26.768"W) [MBS] (44065).

We provide a new record from an adult male collected in late May 2008 in Punta Choros, Baja California, Mexico (28°49'57.38"N, 113°14'49.49"W), 47 m elevation, 25 km SE Bahía de los Ángeles (Fig. 1), close to a dry stream located 360 m from the coast of the Gulf of California. This report constitutes the southernmost record of *O. torridus* in the peninsula of Baja California, extending the species' distribution 330 km southeast of the prior southernmost locality.

The predominant vegetation in the surrounding area was scrub desert (Delgadillo 1998), characterized by *Encelia farinosa*, *Fouquieria splendens*, and *Bursera microphylla* and associated with rodents such as *Chaetodipus spinatus* and *Ammospermophilus leucurus*.

The specimen was formalin-fixed, preserved in 70% ethanol, and deposited in the Vertebrate Collection of the University of Baja California (CVUABC-911). External and cranial measurements (mm) are total length 143, tail length 41, hind foot length 15.21, ear length 18.53, mandibular length 12.49, zygomatic breadth 13.30, length of upper molar row 3.69, and weight 15 g. These measurements correspond with typical values for the species given by McCarty (1975).

Although *O. torridus* does not present conservation challenges because of its wide distribution and tolerance to anthropogenic disturbance (Ceballos 2005), it typically has occurred

¹Universidad Autónoma de Baja California, Km 103 Carretera Tijuana-Ensenada, CP. 22800, Ensenada, Baja California, México.

²E. mail: aaguev@yahoo.com

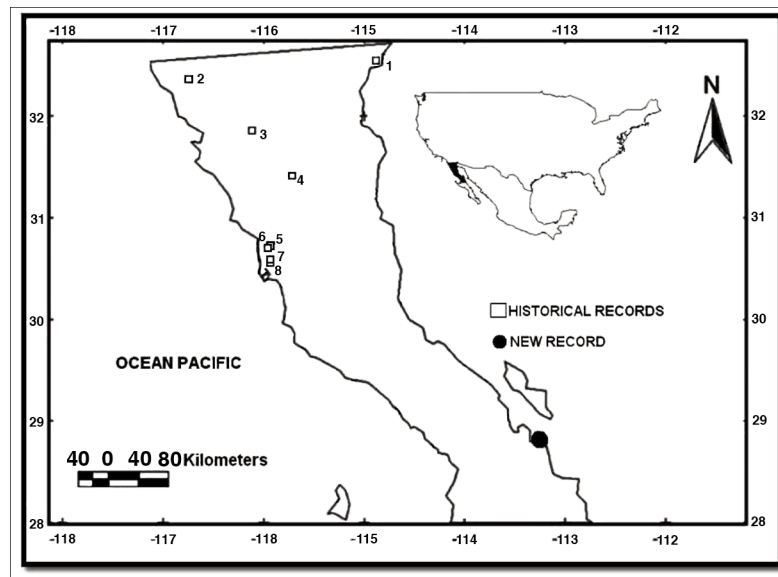


Fig 1. Historical records of *Onychomys torridus* in Baja California, México: 1, Colorado river; 2, Sur del Valle de las Palmas; 3, Valle de la Trinidad La Zapopita 40 km N; 4, Valle de la Trinidad; 5, Rancho Sangre de Cristo; 6, Misión de Santo Domingo; 7, Arroyo Nuevo York; 8, 13 km N from San Quintín; and new record, Punta Choros 25 km al SE de Bahía de los Ángeles.

at low densities (Bailey and Sperry 1929, McCarty 1975), even since the first collections in the state (Elliot 1903). In the recent rodent inventory taken during 2009–2010 in Baja California, the specimen described herein was the only one collected. This leads us to consider *O. torridus* as a rare species in Baja California that will require population studies to establish its conservation status.

We thank the Comisión Nacional para el Conocimiento y Uso de la Biodiversidad for financing the project “Inventory of small and medium mammals of arid and semiarid areas of Baja California.” We also thank Dirección General de Vida Silvestre for issuing collecting license FAUT-0156, as well as Rodolfo Espejo (†), Darío Martínez, and Adriana Mateos for their help and assistance in field work. Gabriela González and anonymous reviewers provided helpful comments on the manuscript.

LITERATURE CITED

- BAILEY, V., AND C.C. SPERRY. 1929. Life history and habits of the grasshopper mice, genus *Onychomys*, U.S. Department of Agriculture, Technical Bulletin 145:1–19.
- CEBALLOS, G. 2005. *Onychomys torridus* (Coues, 1874). Pages 706–707 in G. Ceballos and G. Oliva, editors, Los mamíferos silvestres de México. México: FCE-CONABIO.
- DELGADILLO, J. 1998. Florística y ecología del norte de Baja California. Universidad Autónoma de Baja California. 407 pp.
- ELLIOT, D.G. 1903. A list of mammals collected by Edmun Heller in the San Pedro Martir and Hanson Laguna Mountains and the accompanying coast region of lower California with description of apparently new species. Field Columbian Museum 79. Vol III. 12:199–232.
- HALL, E.R. 1981. The mammals of North America. Volume 2. John Wiley & Sons, New York, NY. 1175 pp.
- HORNET, B.E., J.M. TAYLOR, AND H.A. PADYKULA. 1964. Food habits and gastric morphology of the grasshopper mouse. *Journal of Mammalogy* 45:513–535.
- MCCARTY, R. 1975. *Onychomys torridus*. *Mammalian Species* 87:1–6.
- SCHMIDT-NIELSEN, K., AND H.B. HAINES. 1964. Water balance in a carnivorous desert rodent, the grasshopper mouse. *Physiological Zoology* 37:259–265.

Received 14 October 2011
Accepted 17 February 2012