

Mexican Reduviidae, III: The genus *Atrachelus* (Harpactorinae)¹

Jenaro Maldonado Capriles and Harry Brailovsky²

ABSTRACT

According to the authors' data, the distribution of two subspecies of *Atrachelus cinereus* (Fabricius) fall in the accepted subdivision of Mexico into a Nearctic, mostly northern area, and a Neotropical, mostly southern portion. *A. c. crassicornis* is recorded from the Neotropical area and *A. c. wygodzinskyi* from the Nearctic. These findings corroborate Elkins' observation when he described the three subspecies of *A. cinereus* and studied their geographic distribution.

INTRODUCTION

Elkins³ wrote a synopsis of the genus *Atrachelus*. He subdivided the genus into two subgenera, namely *Atrachelus* Amyot and Serville, 1843 and *Phorobura* Stal, 1859. Stal assigned generic rank to *Phorobura* and separated it from *Atrachelus* because the males of the latter have strongly thickened third antennal segment and in both sexes the postocular margin of the head is only slightly longer than the antecular. Elkins noticed that the thickness of the third antennal segment in the males of one geographic race of *A. cinereus* varied from lacking to slightly evident, thus it can not be used as a generic character. He also noticed that *Phorobura* and *Atrachelus* share the uncommon character of absence of gonoforceps, have similar aedeagal and basal plates in the males, and similar tergites in the females. For reasons of priority *Phorobura* was declared a subgenus of *Atrachelus*.

The subgenus *Phorobura* includes 9 species, none so far reported from México. Subgenus *Atrachelus* has only one species, *A. cinereus*, that ranges from Argentina to the United States. It has three morphologically well defined subspecies. Elkins key to the subspecies is copied below.

Key to the subspecies of *Atrachelus cinereus*

1. Spines on head and thorax rather long; dorsal thoracic spines half or more the length of basal rostral segment 2
- Spines on head and thorax short; dorsal thoracic spines less than half the length of basal rostral segment *cinereus wygodzinskyi*
Elkins

¹ Manuscript submitted to Editorial Board March 1, 1984.

² J. Maldonado Capriles, Ponce School of Medicine, Ponce, Puerto Rico, and Department of Plant Protection, University of Puerto Rico, Mayagüez, P. R.; and Harry Brailovsky, Instituto de Biología, Universidad Autónoma, Ciudad de México, México 20, D. F.

³ Elkins, J. C., 1954. A synopsis of *Atrachelus* (Hemiptera, Reduviidae). Proc. Entomol. Soc. Wash., 56(3):97-120.

2. Legs usually concolorous, sometimes with indistinct speckled longitudinal markings or rarely with very faint annuli on femora
cinereus cinereus (Fabr.)

Femora and tibiae with well defined annuli, often with additional longitudinal markings *cinereus crassicornis* (Burm.)

Elkins observed that *A. cinereus wygodzinskyi* is associated with an average rainfall of less than 35 in. (88.9 mm) and that the typical form comes from areas in Arizona and New Mexico with an average annual precipitation of 38 mm or less. The distribution of this subspecies is therefore more to the west of southern United States. Elkins studied but one Mexican specimen and it seemed to be a cline between *wygodzinskyi* and *crassicornis*. The specimen came from Cuernavaca. *A. c. cinereus* ranges from Texas to Florida. The average precipitation in this area is over 92 mm. *A. c. crassicornis* is a neotropical form whose range extends from Argentina to southern Mexico. Elkins found it impossible to associate this form with rainfall as annual precipitation varies from (18–254 mm) in its range.

OBSERVATIONS

Specimens from the collection of the "Instituto de Biología" in the "Universidad Nacional Autónoma" at Mexico City were identified by the junior author to subspecies. The morphology of the specimens agrees quite well with Elkins' descriptions and no clines were noted among them. The results of these identifications and the geographical distribution of the two forms are detailed below. All the collections represent new records for Mexico. A summary of climatological conditions is given under each subspecies group.

A. *Atrachelus cinereus crassicornis*; 32 males and 13 females: NAYARIT (A): Rincón de Guayabitos. JALISCO ((B): Chanela, Guadalajara. GUERRERO (C): Los Arenales. OAXACA (D): Bethania, Tuxtepec, Temazcal, and Presa Miguel Alemán. CHIAPAS (E): Huixtla, Bonampak, and Río Lacanja (rd. Palenque Ocosingo). TABASCO (F): Teapa. VERACRUZ (G): Metlac, Puente Nacional, Tlilapán, Zongolica, San Andrés Veracruz, Los Tuxtlas, Tecolapa, Sierra de Santa Marta, Atzacán, Salto de Eyippantla, Cordillera Alemán, Plan del Río, and Orizaba. PUEBLA (H): La Esperanza. SAN LUIS POTOSI (I): Xilitla.

These states are characterized by a high annual precipitation and are considered to be in the Neotropical Realm by Halffter⁴.

B. *Atrachelus cinereus wygodzinskyi*: 24 males and 3 females: SONORA (1): Valle del Yaqui. COAHUILA (2): Matamoros. AGUAS-

⁴ Halffter, G., 1964. La Entomofauna Americana, Ideas Acerca de su Origen y Distribución. Folia Entomol. Méx. 6:35–6.

CALIENTES (3): Aguascalientes. HIDALGO (4): Tasquillo. ESTADO DE MEXICO (5): Texcoco. MORELOS (6): Yautepec, Cuautla, and Oaxtepec. PUEBLA (7): Puebla, Santa Lucía (Atlixco).

With the exception of Morelos, these states are characterized by a very low precipitation rate and cold weather. This part of the country is considered Neartic by Halffter.

In figure 1 the numbers identify the states where *wygodzinski* was collected. The numbers are placed close to collection localities and the dots represent the localities listed above. The letters correspond to states where *crassicornis* was collected and the dots the localities mentioned above. The states corresponding to the numbers and letters are listed below under their corresponding Realm. The black line approximately separates the Neotropical from the Neartic Realm.

List I

Collections of *A. c. crassicornis* and *A. c. wygodzinskyi* by Realm and State, Mexico (fig. 1).

NEARTIC	NEOTROPICAL
<i>A. c. wygodzinskyi</i>	<i>A. c. crassicornis</i>
1. Sonora	A. Nayarit
2. Coahuila	B. Jalisco
3. Aguascalientes	C. Guerrero
	D. Oaxaca
5. México	E. Chiapas
6. Morelos	F. Tabasco
7. Puebla	G. Veracruz
	H. Puebla
	I. San Luis Potosí

RESULTS

The above records show that *A. c. crassicornis* occurs in areas with over 92 mm of annual rainfall, whereas *A. c. wygodzinskyi* occurs in areas with 89 mm or less. These data corroborate Elkins' observations. The specimens from Morelos represent the only discrepancy. Morelos has a wet and hot climate, thus more neotropical conditions.

RESUMEN

Al estudiar la distribución geográfica de dos de las tres subespecies de *Atrachelus cinereus*, a saber *A. c. crassicornis* y *A. c. wygodzinskyi*, se observa que respectivamente ocurren en las regiones Neotropical y Neár-

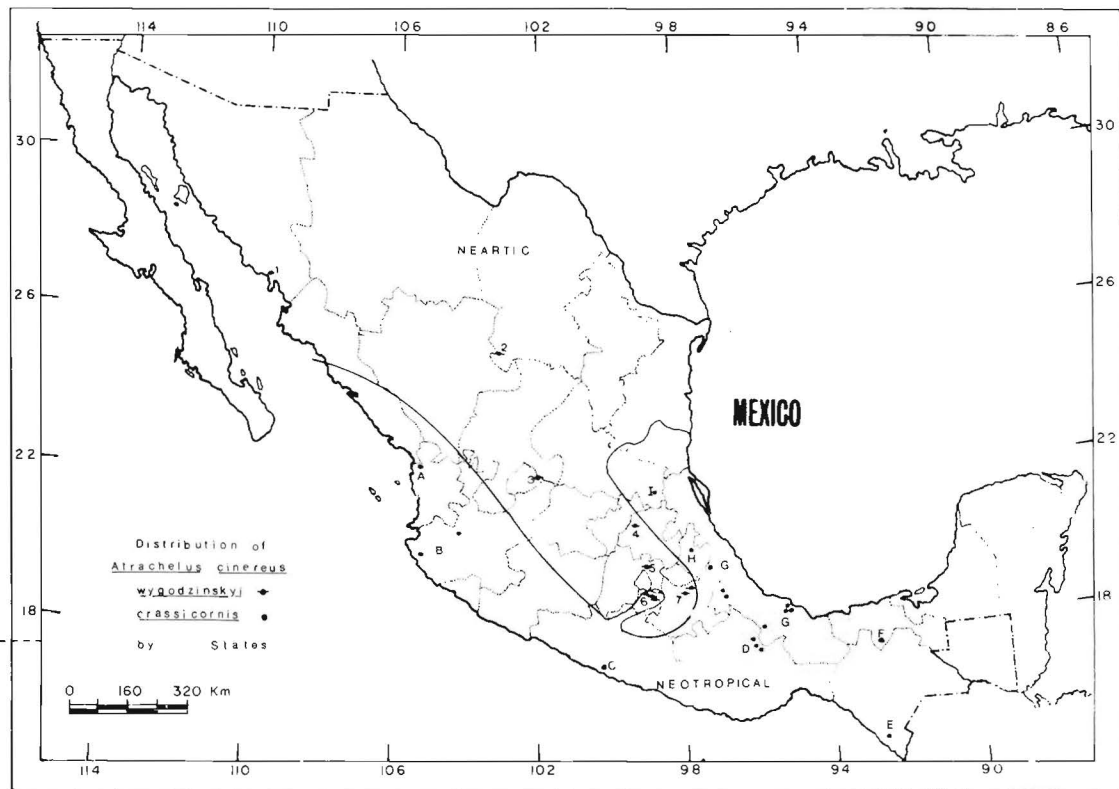


FIG. 1.—States and localities where *wygodzinskyi* and *crassicornis* were collected.

tica en las que se subdivide México. Esto corrobora las observaciones de Elkins sobre la distribución geográfica de éstas y la tercera subespecie *A. c. cinereus*. Esta última se registró de México. Los ejemplares de Morelos presentan la única discrepancia y los autores por el momento no tratan explicarla.