Fundación Miguel Lillo
Tucumán
Argentina

NOTA

After more than a century, second record of *Lethocerus collosicus* (Heteroptera: Belostomatidae) in Honduras

Después de más de un siglo, segundo registro de *Lethocerus collosicus* (Heteroptera: Belostomatidae) en Honduras

Alex M. Cubas-Rodriguez[1,2*], Fabio G. Cupul-Magaña[3], Tom W. Brown[4]

[1] Escuela de Biología, Facultad de Ciencias, Universidad Nacional Autónoma de Honduras, Departamento Francisco Morazán, Tegucigalpa, Honduras.
[2] Centro de Investigaciones Biológicas de Honduras (CIBIOH), 5to piso edificio palmira, Departamento Francisco Morazán, Tegucigalpa, Honduras
[3] Centro Universitario de la Costa, Universidad de Guadalajara, Puerto Vallarta, Jalisco, México.
[4] Kanahau Utila Research and Conservation Facility, Utila Island, Honduras.
* Correspondence: <alexmcubas@gmail.com>

Abstract

The second record of *Lethocerus collosicus* after more than 100 years is presented, based on a female collected on the island of Útila. In addition, comments are provided on the distribution and a previous GBIF record of this species in Honduras.

Keywords: Bay Islands, Útila, water bug, distribution, first record.

Resumen

Se presenta el segundo registro de *Lethocerus collosicus* después de más de 100 años, con base en una hembra recolectada en la isla de Útila. Además, se brindan comentarios sobre la distribución y un registro previo en GBIF de esta especie en Honduras.

Palabras clave: Islas de la Bahía, Útila, chinche de agua, distribución, primer registro.

➤ Ref. bibliográfica: Cubas-Rodríguez, A. M.; Cupul-Magaña, F. G.; Brow, T. W. 2025. "After more than a century, second record of *Lethocerus collosicus* (Heteroptera: Belostomatidae) in Honduras". *Acta Zoológica Lilloana 69* (1): 35-41. DOI: https://doi.org/10.30550/j.azl/2052
➤ Recibido: 8 de noviembre 2024 – Aceptado: 4 de diciembre 2024.
➤ URL de la revista: http://actazoologica.lillo.org.ar

INTRODUCTION

Members of the family Belostomatidae are insects commonly known as giant water bugs (Menke 1963), they are distributed almost worldwide, with greater abundance in the Neotropical region (Perez-Goodwyn, 2006; Moreira, Barbosa, Ribeiro, Alecrim, 2011; Ribeiro et al., 2018), however, they are usually absent in most of Europe (Schuh and Weirauch, 2020).

Currently, there are about 11 genera and more than 160 species in the family (Ribeiro et al., 2018; Franco, Stefanello, Azevêdo, Moreira, 2024). In Honduras, the study of Belostomatidae remains underexplored as evidenced by the limited documentation of only six species across four genera (Perez-Goodwyn, 2006).

The species reported from Honduras include: *Abedus signoreti* (Mayr, 1871), documented by Menke (1977); *Benacus griseus* (Say, 1832), mentioned by Perez-Goodwyn (2006); *Belostoma micantulum* (Stål, 1860), recorded by Champion (1897-1901); *B. minusculum* (Uhler, 1884), reported by Estevez and Polhemus (2007); Perez-Goodwyn (2006) suggested the possible presence of *Lethocerus delpontei* (De Carlo, 1930); and finally, *L. colossicus* (Stal, 1854) was confirmed with paratype specimens from Honduras (Menke, 1963).

The objective of this contribution is to confirm the presence of *L. collossicus* in Honduras with the first registry of this species in the island of Útila.

MATERIALS AND METHOD

The specimen reported here was collected in an urban area on the island of Útila, department of Islas de la Bahía, on April 2024. The work of Perez-Goodwyn (2006), was used to identify the specimen. An Olympus SZ stereoscopic magnifying glass was required for identification. A Canon 7D Smark ii camera coupled with a 100 mm Canon macro lens was used to photograph the specimens. The material was deposited in the first author's personal collection of arachnids and myriapods (AMC-R).

RESULTS AND DISCUSSION

Family Belostomatidae Leach, 1815
Genus *Lethocerus* Mayr, 1853
Lethocerus collosicus (Stål, 1854)
(Figs. 1-3)

Material examined.— 1 female. HONDURAS, Útila island, Bay Islands (16°05'48.8"N 86°53'44.0"W; 8 m asl, 03-04-2024), hand collection, col. Mario R. Delarca [BL-AMC-R 101].

Diagnosis.— According to Perez Goodwyn (2006), *L. collosicus* is large and robust, dark brown in colour, mottled in some areas, and lighter in

the dorsal region (Fig. 1A), with a wide pronotum; anterior femora robust, mottled, with short, thin pale lines, clear foveae (Fig. 1A-B). Interoculum keeled, clypeal suture well marked; eyes divergent, posterior edge oblique (Fig. 1C). Hind leg claw posterior longer than tarsomeres (Fig. 2A); anterior femur wider than posterior femur (Fig. 2A-B); external margin of posterior tibia straight (Fig. 2A).

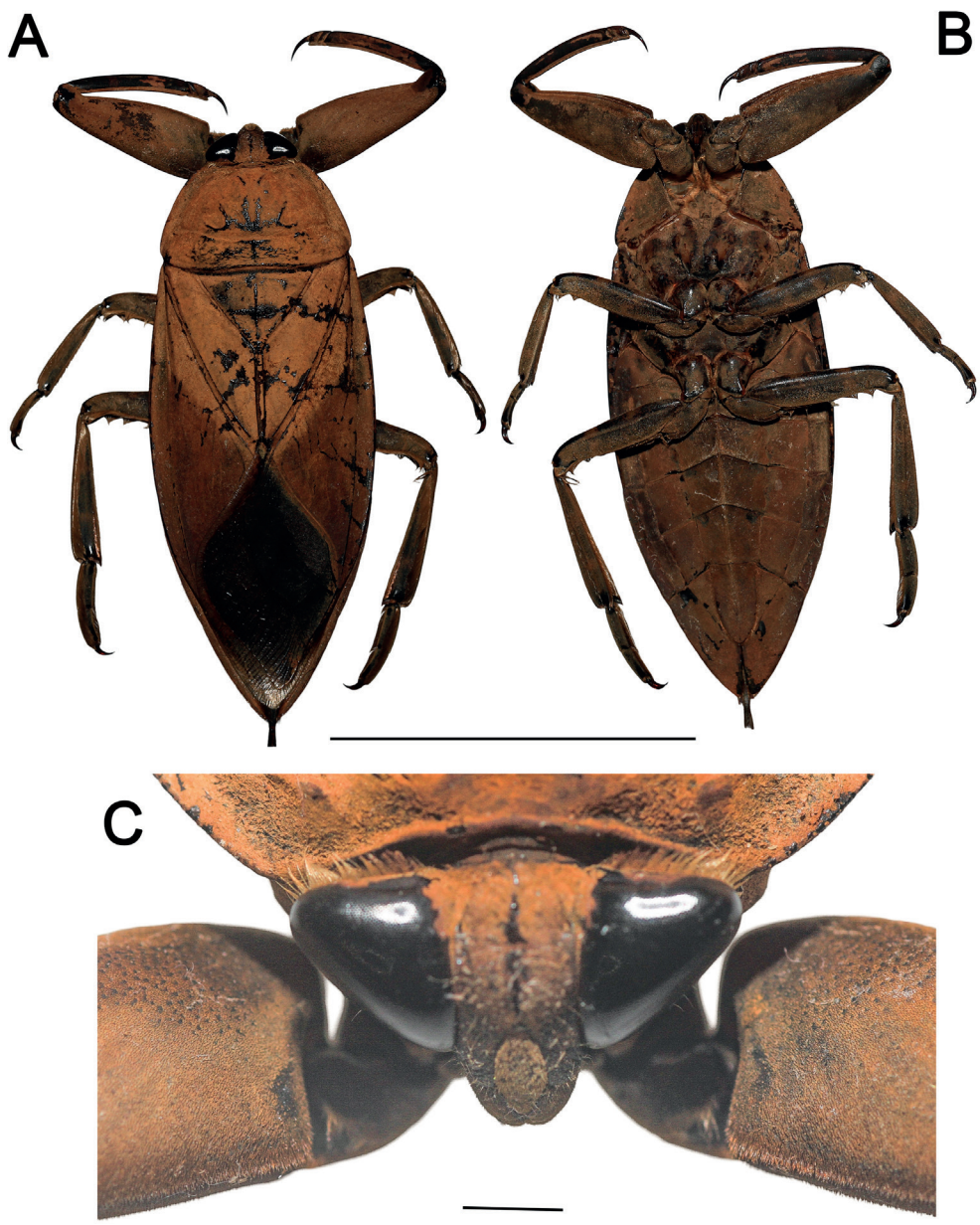

Figure. 1. *Lethocerus collosicus*. A. Dorsal view. B. Ventral view. C. Dorsal view of head. Scale bars: A-B = 9.5 cm; C= 1.5 cm.

Figura 1. *Lethocerus collosicus*. A. Vista dorsal. B. Vista ventral. C. Vista dorsal de la cabeza. Barras de escala: A-B = 9.5 cm; C = 1.5 cm.

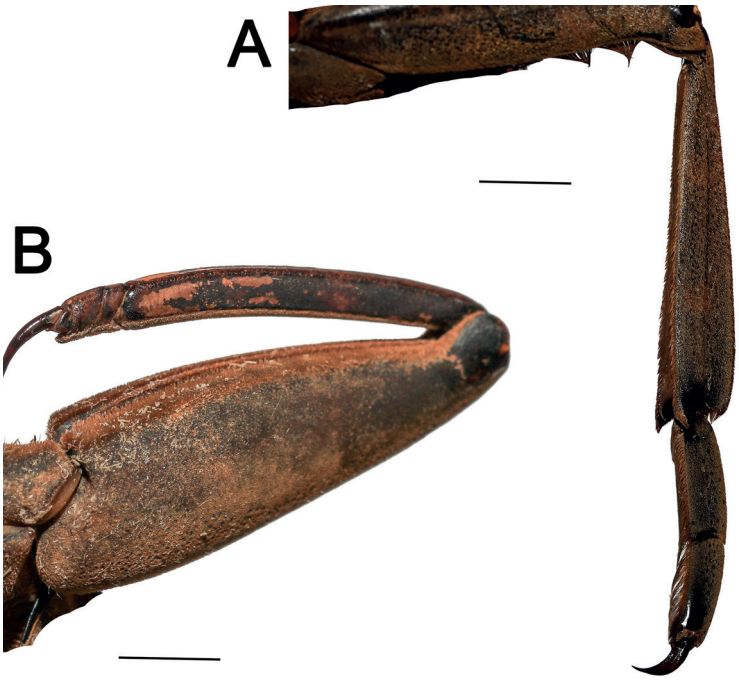

Figure. 2. *Lethocerus collosicus*. A. Leg view hind femur. B. Leg view fore femur. Scale bars: A= 4.6 cm; B= 2.3 cm.

Figura 2. *Lethocerus collosicus*. A. Vista de la pata, fémur posterior. B. Vista de la pata, fémur anterior. Barras de escala: A = 4.6 cm; B = 2.3 cm.

Distribution.— México, Cuba, Nicaragua, Honduras.

Distribution in Honduras.— Yoro or Atlántida, Islas de la Bahía (**new record**) and Olancho (Fig. 3).

Natural history.— The specimen was found among oceanic tidal debris along the coastline of Útila town, near a restaurant and human settlements, where brackish wetland habitats are present in the vicinity. It is likely that more than one species inhabits the island of Utila, some belostomatids have been observed at the Pumpkin Hill locality (personal observations of T. W. Brown)

Discussion.— Much of the knowledge regarding Belostomatidae in Honduras remains limited and uncertain. There is a clear need for more sampling and comprehensive studies to understand better which species inhabit the country. This is exemplified by *L. collosicus*, a species not recorded since its original description. It was briefly mentioned in Menke's (1963) work, though without a precise location. This author included the species on a distribution map, but it is unclear whether the indicated range corresponds to the departments of Atlántida or Yoro.

There is also a record of this species in the department of Olancho (Fig. 3), available on the GBIF platform (https://www.gbif.org/es/occur-

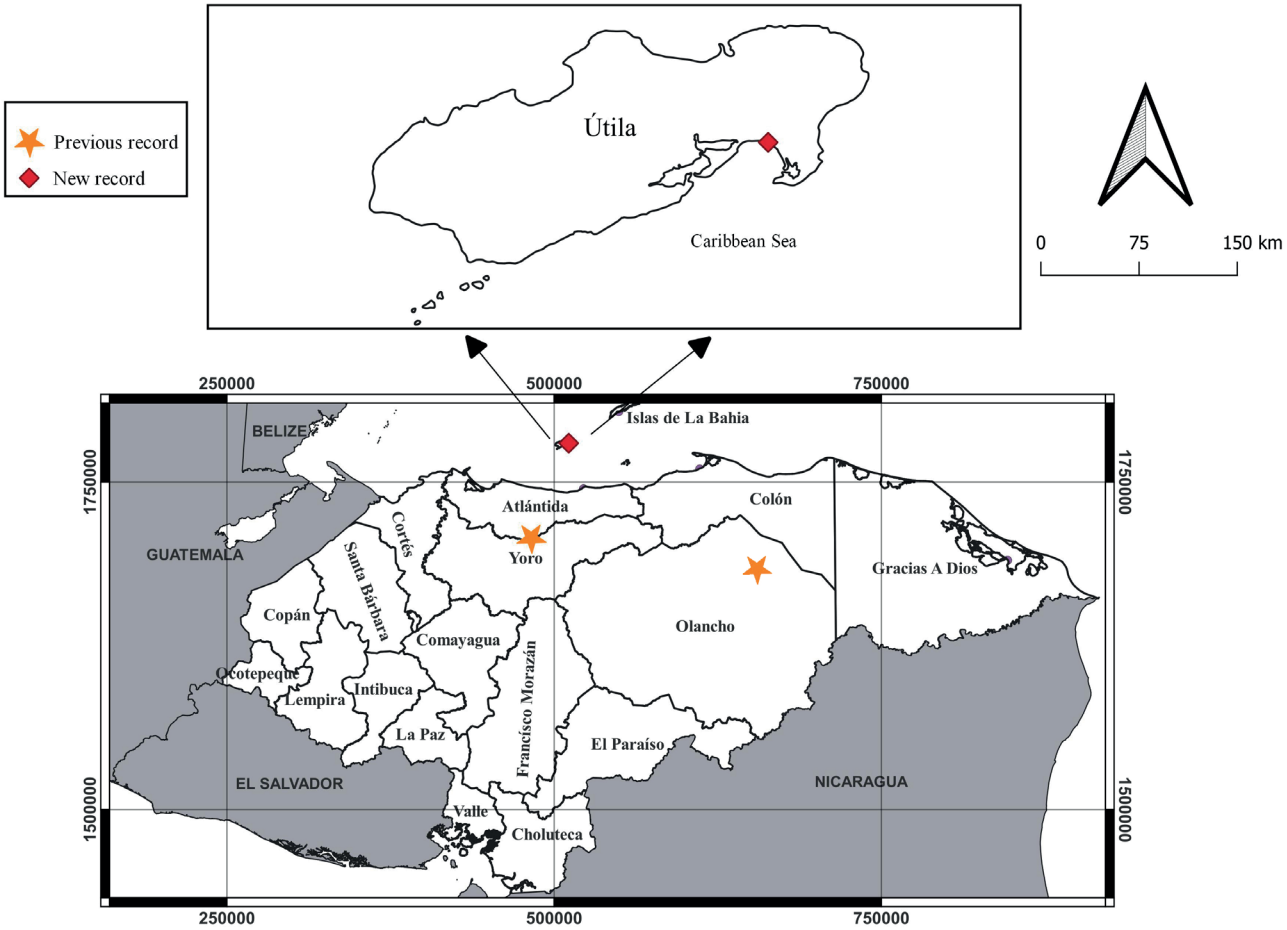

Figure 3. Known distribution of *Lethocerus collosicus* in Honduras.
Figura 3. Distribución conocida de *Lethocerus collosicus* en Honduras.

rence/3986316422). Although this record has not been published in a scientific article, we consider it a very important observation that provides more data to the knowledge of the group in Honduras. Our review considers it crucial to resolve and effectively verify the presence of all previously listed species in Honduras and thus have a broader overview of the distribution of the species.

ACKNOWLEDGMENTS

The authors sincerely thank Don Mario R. Delarca, of the restaurant Mario's Place, Útila, for collecting and donating the water bug specimen for our research.

FINANCIAL SUPPORT

This work did not have designated funding. It was supported in-kind by the authors and their institutions

CONTRIBUTIONS

AMC-R contributed with the identification, took photographs, prepared the map and figures, described and diagnosed the specimen, and wrote the manuscript. FGC-M identified the specimen, contributed with the description, diagnosis, contributed with the elaboration of the figures, wrote the manuscript, and provided literature. TWB helped with the initial collection of the specimen and later writing of the manuscript in English.

CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest with other authors or third parties.

CITED LITERATURE

Champion, G. C. (1897-1901). Biologia Centrali-Americana. Insecta. Rhynchota. Hemiptera-Heteroptera. London: Quaritch.

Estévez, A. L., Polhemus, J. T. (2007). The small species of *Belostoma* (Heteroptera, Belostomatidae): revision of the plebejum group. Revista de Biología Tropical, 55, 147– 155. https://doi.org/10.15517/RBT.V55I1.6065

Franco, C. L., Stefanello, F., Azevêdo, C. A. S., Moreira, F. F. F. (2024). Belostomatidae Leach, 1815 (Insecta: Hemiptera: Heteroptera: Nepomorpha) of northeastern Brazil. European Journal of Taxonomy, 271-304. https://doi.org/10.5852/ejt.2024.932.2537

Menke, A. S. (1963). A review of the Genus *Lethocerus* in North and Central America, including the West Indies (Hemiptera: Belostomatidae). Annals of the Entomological Society of America, 56, 261–267.

Menke, A. S. (1977). Synonimical notes and new distribution records in *Abedus* (Hemiptera, Belostomatidae). Southwestern Naturalist, 22, 115-123.

Moreira, F. F. F., Barbosa, J. F., Ribeiro, J. R. I., Alecrim, V. P. (2011). Checklist and distribution of semiaquatic and aquatic Heteroptera (Gerromorpha and Nepomorpha) occurring in Brazil. Zootaxa, 2958, 1-74. https://doi.org/10.11646/zootaxa.2958.1.1

Perez-Goodwyn, P. J. (2006). Taxonomic revision of the subfamily Lethocerinae Lauck & Menke (Heteroptera: Belostomatidae). Stuttgarter Beiträge zur Naturkunde Serie A, 695, 1-71.

Ribeiro, J. R. I., Ohba, S. Y., Pluot-Sigwalt, D., Stefanello F., Bu W., Meyin-A-Ebong S. E., Guilbert, E. (2018). Phylogenetic analysis and revision of subfamily classification of Belostomatidae genera (Insecta: Heteroptera: Nepomorpha). Zoological Journal of the Linnean Society, 182, 319-359. https://doi.org/10.1093/zoolinnean/zlx041

Schuh, R. T., Weirauch, C. (2020). True Bugs of the World (Hemiptera: Heteroptera): Classification and Natural History. 2nd Edition. Siri Scientific Press: Manchester.