



## **New Record of *Hypogeococcus pungens* (Hemiptera: Pseudococcidae) in the Dominican Republic with Comments on Specific Characters**

Authors: German-Ramirez, E., Kairo, M. T .K., Stocks, I., Haseeb, M., and Serra, C. A.

Source: Florida Entomologist, 97(1) : 320-321

Published By: Florida Entomological Society

URL: <https://doi.org/10.1653/024.097.0151>

---

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at [www.bioone.org/terms-of-use](http://www.bioone.org/terms-of-use).

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

---

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

NEW RECORD OF *HYPOGEOCOCCUS PUNGENS* (HEMIPTERA: PSEUDOCOCCIDAE) IN THE DOMINICAN REPUBLIC WITH COMMENTS ON SPECIFIC CHARACTERS

E. GERMAN-RAMIREZ<sup>1,\*</sup>, M. T. K. KAIRO<sup>2</sup>, I. STOCKS<sup>3</sup>, M. HASEEB<sup>1</sup> AND C. A. SERRA<sup>4,\*</sup>

<sup>1</sup>Center for Biological Control, College of Agriculture and Food Sciences, Florida A&M University, Tallahassee, FL 32307, USA

<sup>2</sup>School of Agricultural and Natural Sciences, University of Maryland Eastern Shore, Princess Anne, MD 21853, USA

<sup>3</sup>Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Gainesville, FL 32614, USA

<sup>4</sup>Centro de Tecnologías Agrícolas (CENTA), Instituto Dominicano de Investigaciones Agropecuarias y Forestales (IDIAF), Santo Domingo 10205, Dominican Republic

\*Corresponding authors; E-mail: colmar.serra@gmx.net; engger.german@gmail.com

The mealybug *Hypogeococcus pungens* Granara de Willink (Hemiptera: Pseudococcidae) (Fig. 1) is thought to be native to South America (Zimmermann et al. 2010) and is closely related to *Hypogeococcus festerianus* (Lizer & Trelles), which was introduced into Australia and South Africa as a biological control agent against invasive cacti from the subfamily Cactoideae. However, these species are very similar, and the actual species identity might have been confused due to taxonomic uncertainty and differences in host plant specificity (Zimmermann et al. 2010).

*Hypogeococcus pungens* was reported in Florida in 1984 and Hawaii in 2005 (Hodges & Hodges 2009), and Puerto Rico in 2005 (Zimmermann et al. 2010). *H. pungens* occurs in Argentina, Brazil, Paraguay and Peru, where it is found on Cactaceae and several other ornamental plant families, including Portulacaceae (*Portulaca* spp.), Apocyanaceae (*Mandevilla* sp.) and Polygonaceae (*Alternanthera* spp.) (Williams & Granara de Willink 1992). ScaleNet also cited Guadeloupe, Martinique, France, Greece, Italy and Spain as countries where *H. pungens* can be found. This species previously reported as a species of little economic significance (Hodges & Hodges 2009), is now causing severe damage in Puerto Rico to several species of native columnar cacti in the subfamily Cactoideae (Zimmermann & Pérez Sandi Cuen 2010). Additional unpublished reports suggest that *H. pungens* is causing serious damage to native cactus plants in Puerto Rico (A. L. Roda, unpublished data). This species poses a potentially serious threat to the rich diversity of cacti in Mexico if were to become established there (Zimmermann & Pérez Sandi Cuen 2010).

There are no prior literature reports that *H. pungens* has been collected or intercepted from plants that originated in the Dominican Republic. This new record is based on a single sample from 21 May 2010 on the host *Gomphrena globosa*

L. (Amaranthaceae) from a garden in the city of Santo Domingo (N 18° 28' 03.6" W 69° 56' 32.1"; 62 m asl). Matile-Ferrero & Étienne (2006) reported this species on the same host in Guadeloupe and

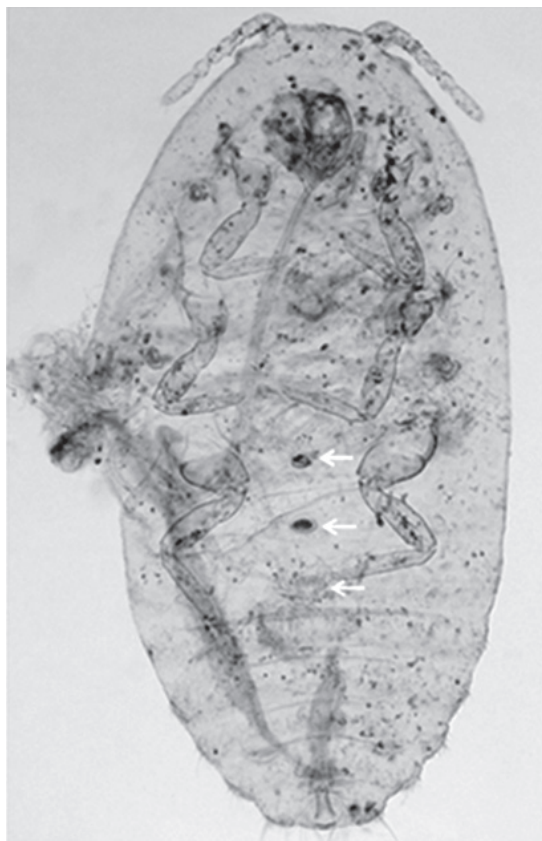


Fig. 1. Ventral views of a slide mounted *Hypogeococcus pungens* with arrows pointing to its 3 cerci.

Martinique. A subsequent record of this mealybug from 2 Apr 2011 was collected on *Opuntia moniliformis* (L.) Haw. ex Steud, a native cactus found in the subtropical dry forest area of the Dominican Republic in the city of Pedernales (N 18° 2' 4.68" W 71° 44' 42.55") (Serra 2013).

*Hypogeococcus pungens* differs from its congeners in having 3 circuli (Fig. 1), whereas other species possess a single circulus (Williams & Granara de Willink 1992).

#### SUMMARY

The mealybug *Hypogeococcus pungens* Granara de Willink (Hemiptera: Pseudococcidae) is a new record for the Dominican Republic, based on specimens collected on 21 May 2010 from the ornamental plant *Gomphrena globosa* L. (Caryophyllales: Amaranthaceae), in Santo Domingo.

Keywords: Mealybug, Cactaceae, *Opuntia*, Caribbean

#### RESUMEN

La especie *Hypogeococcus pungens* Granara de Willink (Hemiptera: Pseudococcidae) fue encontrada el 21 de mayo del 2010 como un nuevo record para la República Dominicana, especímenes fueron colectados en Santo Domingo sobre la planta ornamental *Gomphrena globosa* L. (Caryophyllales: Amaranthaceae).

Palabras Clave: Cochinilla o Piojo harinoso, Cactaceae, *Opuntia*, Caribe

We greatly appreciate the funding and logistical support from the Instituto Dominicano de Investigaciones Agropecuarias y Forestales, Centro de Tecnologías Agrícolas; Ministerio de Agricultura de la República Dominicana, Departamento de Sanidad Vegetal; Paula Morales, USDA – APHIS International Services, Dominican Republic; US Department of Agriculture, Animal and Plant Health Inspection Service and US

Department of Agriculture, National Institute of Food and Agriculture.

#### REFERENCES CITED

- HODGES, A., AND HODGES, G. 2009. *Hypogeococcus pungens* Granara de Willink (Insecta: Hemiptera: Pseudococcidae), a mealybug. EENY459. IFAS Extension, University of Florida. Available online: <http://edis.ifas.ufl.edu/pdffiles/IN/IN82700.pdf> (accessed: May 15, 2013)
- MATILE-FERRERO, D., AND ÉTIENNE, J. 2006. Cochenilles des Antilles françaises et de quelques autres îles des Caraïbes (Hemiptera, Coccoidea). Rev. Française d'Entomol. 28(4): 168-190.
- RODA, A. L. Unpublished data [amy.l.roda@aphis.usda.gov]. Trip reports and personal observations of *Hypogeococcus pungens* Granara de Willink in Puerto Rico.
- SCALENET. 2013. Catalogue Query Results: *Hypogeococcus pungens* Granara de Willink. Reviewed: 28 Nov 2013. Available online: <http://www.sel.barc.usda.gov/catalogs/pseudoco/Hypogeococcuspungens.htm> (accessed: 3 Dec. 2013).
- SERRA, C. A. 2013. Personal communication [colmar@idiaf.gov.do]: *Hypogeococcus pungens* in the Dominican Republic. Centro de Tecnologías Agrícolas (CENTA), Instituto Dominicano de Investigaciones Agropecuarias y Forestales (IDIAF), Santo Domingo, Dominican Republic.
- WILLIAMS, D. J., AND GRANARA DE WILLINK, M. C. 1992. Mealybugs of Central and South America. CAB International, London, UK. 635 pp.
- ZIMMERMANN, H. G., AND PÉREZ SANDI CUEN, M. 2010. La amenaza de los piojos harinosos *Hypogeococcus pungens* e *Hypogeococcus festerianus* (Hemiptera: Pseudococcidae) a las cactáceas mexicanas y del Caribe. Cactus and Succulent J.: 55(1):4-17. Available online: [http://aridamerica.org/descargables/Cact\\_Suc\\_Mex\\_2010\\_%281%29.pdf](http://aridamerica.org/descargables/Cact_Suc_Mex_2010_%281%29.pdf) (accessed: 15 May 2013).
- ZIMMERMANN, H. G., PÉREZ, S. CUEN, M., MANDUJANO, M. C., AND GOLUBOV, J. 2010. The South American mealybug that threatens North American cacti. Cactus and Succulent J. 82(3):105-107. Available online: [http://aridamerica.org/descargables/csj\\_usa.pdf](http://aridamerica.org/descargables/csj_usa.pdf) (accessed: 15 May 2013).