

## **HETEROTERMES TENUIS (ISOPTERA: RHINOTERMITIDAE): NEW RECORD FROM VENEZUELA**

Authors: Perozo, José, and Issa, Solange

Source: Florida Entomologist, 89(3) : 410-411

Published By: Florida Entomological Society

URL: [https://doi.org/10.1653/0015-4040\(2006\)89\[410:HTIRNR\]2.0.CO;2](https://doi.org/10.1653/0015-4040(2006)89[410:HTIRNR]2.0.CO;2)

---

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.

*HETEROTERMES TENUIS* (ISOPTERA: RHINOTERMITIDAE):  
NEW RECORD FROM VENEZUELA.

JOSÉ PEROZO<sup>1</sup> AND SOLANGE ISSA<sup>2</sup>

<sup>1</sup>Postgrado de Entomología, Instituto de Zoología Agrícola. Facultad de Agronomía  
Universidad Central de Venezuela, Maracay, estado Aragua, Venezuela

<sup>2</sup>Departamento de Biología de Organismos. Universidad Simón Bolívar. Apdo. 89000. Caracas 1080-A, Venezuela

*Heterotermes* Froggat (Isoptera: Rhinotermitidae) is a genus of subterranean termites comprising several major pest species. *Heterotermes* tunnel and feed on wood in contact with soil (Nickle & Collins 1992) and forage for wood above ground. This genus has been reported in the West Indies, Panama, Venezuela, Brazil, Ecuador, and several islands of the Caribbean (Emerson 1971; Nickle & Collins 1992; Constantino 2002; Szalanski et al. 2004). The last checklist of the termites from Venezuela (Issa 2000), the list by Snyder (1959), and Constantino (2000) reported only *H. convexinotatus* (Snyder) and *H. crinitus* (Emerson). In this note we report *H. tenuis* (Hagen) for the first time in Venezuela.

Samples of *H. tenuis* were collected from diverse localities in Venezuela. Specimens from Chaguaramas (Monagas state) were collected from wood lying on the soil and under dry bark of pine (*Pinus caribaea*), and had tunnels consisting of wood, sand, and clay. All samples were stored in 80% alcohol. Measurements of soldiers were performed with a stereomicroscope fitted with an ocular micrometer. The measurements included head length, head width, and pronotum width. Voucher specimens are maintained at the Laboratorio de Comportamiento of the Simón Bolívar University. The specific identifications were made with the key from Contanstino (2000).

We found that *H. tenuis* is distributed around the northeastern and southern Venezuela in several habitats (Fig. 1), and is present at different altitudes from 10 to 1100 m (Table 1). The specimens found were soldiers and workers. We found minor soldiers only in the sample from Los Cerritos (Fig. 2, Constantino 2000). The measurements for *H. tenuis* (*n* = 14 major soldiers) were 3.0 ±



Fig. 1. Distribution of *Heterotermes tenuis* in Venezuela.

0.24 mm (mean ± SD) for head length, 1.1 ± 0.03 mm for head width, and 0.8 ± 0.0001 for pronotum width. For the minor soldiers (*n* = 1) the measurements were 2.68, 1.08, and 0.79 mm of head length, head width, and pronotum width, respectively. This has not been collected from structures in Venezuela. Constantino (2002) reports that *H. tenuis* is a minor pest of structures and a major pest of agriculture in some locations in South America.

The authors thank Rudolf Scheffrahn, Fort Lauderdale Research and Educational Center, University of Florida, and Ernesto Medina, Instituto Venezolano de Investigaciones Científicas for review of a previous draft of the manuscript.

TABLE 1. LOCALITIES AND DISTRIBUTION OF *HETEROTERMES TENUIS*.

| Map number | Place        | State    | Altitude (m) | Longitude/Latitude | Habitat                                |
|------------|--------------|----------|--------------|--------------------|--|
| 1          | Los Cerritos | Aragua   | 200          | 10°27'N/67°35'W    | Secondary forest                       |
| 2          | Canoabo      | Carabobo | 950          | 10°17'N/67°14'W    | Plantation                             |
| 3          | Maturín      | Monagas  | 110          | 8°41'N/62°45'W     | Urban                                  |
| 4          | Chaguaramas  | Monagas  | 110          | 8°20'N/62°30'W     | Pines forest ( <i>Pinus caribaea</i> ) |
| 5          | El Peñón     | Sucre    | 10           | 10°26'N/62°30'W    | Secondary forest                       |
| 6          | Parupa       | Bolívar  | 1,500        | 4°30'N/60°50'W     | Plains                                 |
| 7          | El Paují     | Bolívar  | 800          | 4°28'N/61°35'W     | Plains                                 |

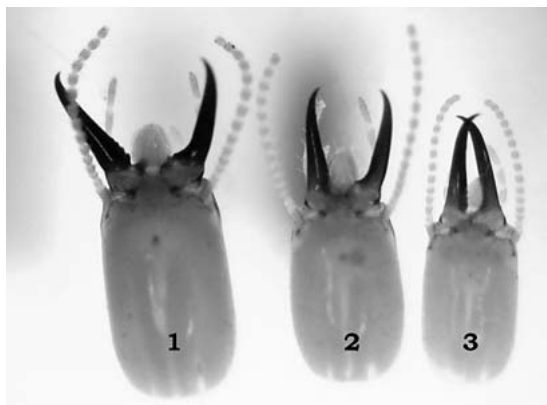


Fig. 2. Ventral view of head of soldier from *Heterotermes tenuis* (major soldier)<sup>1</sup>, *H. tenuis* (minor soldier)<sup>2</sup>, and *H. convexinotatus*<sup>3</sup> from Venezuela.

#### SUMMARY

The termite *Heterotermes tenuis* (Hagen) is reported from Venezuela for the first time. Specimens were found at several localities in the country including near the coast at the north of the country, and places near Gran Sabana at the south near the Brazilian frontier. The species was collected at different altitudes and habitat.

#### REFERENCES CITED

- CONTANSTINO, R. 1998. Catalog of Living Termites of the New World (Insecta: Isoptera). *Arquivos de Zoologia* 35: 135-231.
- COSTANTINO, R. 2000. Key to the soldiers of South America *Heterotermes* with a new species from Brazil (Isoptera: Rhinotermitidae). *Insect Systematics and Evolution* 31: 463-471.
- CONSTANTINO, R. 2002. The pest termites of South America: taxonomy, distribution, and status. *J. Applied Entomol.* 126: 355-365.
- EMERSON, A. 1971. Tertiary fossil species of the Rhinotermitidae (Isoptera), phylogeny of genera, and reciprocal phylogeny of associated Flagellata (Protozoa) and Staphylinidae (Coleoptera). *Bull. American Mus. Natural Hist.* 146: 243-304.
- ISSA, S. 2000. A checklist of termites from Venezuela (Isoptera: Kalotermitidae, Rhinotermitidae, Termitidae). *Florida Entomol.* 83: 379-382.
- NICKLE, D., AND M. COLLINS. 1992. Termites of Panama (Isoptera), pp. 208-248 *In* D. Quintero and A. Aiello [eds.], *Insects of Panama and Mesoamerica*. Oxford University Press. 150 pp.
- SNYDER, T. 1959. New termites from Venezuela, with keys and list of described Venezuelan species. *American Midland Naturalist* 61: 313-321.
- SZALANSKI, A., R. SCHEFFRAHN, J. AUSTIN, J. KRECEK, AND N.-Y. SU. 2004. Molecular phylogeny and biogeography of *Heterotermes* (Isoptera:Rhinotermitidae) in the West Indies. *Ann. Entomol. Soc. America* 97: 556-566.