

A NEW SPECIES OF *HETERO CERUS* RECORDED
FROM FLORIDA AND CANADA
(COLEOPTERA:HETERO CERIDAE)

WILLIAM V. MILLER
1718 Ohio Ave., Modesto, Ca. 95351

ABSTRACT

A new heterocerid species, *Heterocerus tenuis*, is described from Florida and Ontario, Canada. Recorded heterocerids from Florida, *angustatus* Chev., *selanderi* (Pacheco), *tristis* Mann., *mollinus* Kies., and *Tropicus pusillus* (Say), are discussed.

RESUMEN

Se describe de la Florida y de Ontario, Canadá, una nueva especie heterocérica, *Heterocerus tenuis*. Se discuten heterocéridas de la Florida, *angustatus* Chev., *selanderi* (Pacheco), *tristis* Mann., *mollinus* Kies., y *Tropicus pusillus* (Say).

INTRODUCTION

Heteroceridae is not well represented in Florida. In his catalog, Pacheco (1978) lists only four species; *H. angustatus* Chev. *H. selanderi* (Pacheco), *H. tristis* Mann., and *Tropicus pusillus* (Say). Recently *H. mollinus* Kies., has been recorded from Florida, a New State Record. Both *angustatus* Chev., a West Indies species and *Tropicus pusillus* (Say), a tropical species, are very common in Florida being found from Dade Co. in the south to Baker Co. in the north to Escambia Co. in the west. In the Batchley collection at Purdue University, *H. angustatus* Chev., has been recorded from Dunedin, Pinellas Co., and collected during 1913. *H. selanderi* (Pacheco), described from Florida by F. Pacheco (1969) is less encountered but probably is a common species as well. It has been recorded from the following counties: Marion, Levy, Alachua, Wakulla, Highlands, Volusia, Duval and Charlotte. There is also a specimen in the Batchley collection from Pinellas Co., taken in 1913. Pacheco (1979) recorded a single specimen of *H. tristis* Mann., from Monroe Co. (Everglades) an unlikely area for a true Northern species. Although not previously recorded hypermandibulate males can be found when large numbers of *angustatus* Chev., and *tristis* Mann., are available for study. This is also true for certain other species not recorded from Florida. Hypermandibulate males are those certain males that have the mandibles greatly elongated and is usually accompanied by an elongated and produced labrum. In some species males are found with only the mandibles elongated. Males that have both the mandibles and labrum elongated and produced are indeed spectacular appearing creatures. Neither of these characters are common. King males, being less common, are found in populations of *mollinus* Kies., and *tristis* Mann. King males are those males that are not only hypermandibulate but also have a rather sizeable dental horn on the mandibles. The labrum is produced in *mollinus* Kies., but not in *tristis* Mann. The horn on the mandible of *mollinus* Kies., is a true horn projecting from the surface of the mandible. In *tristis* Mann., the dental horn is an enlargement of the dorsal subapical tooth and bends inward. Furthermore in *tristis* Mann., some males have pronounced clypeal horns, an uncommon character in New World heterocerids.

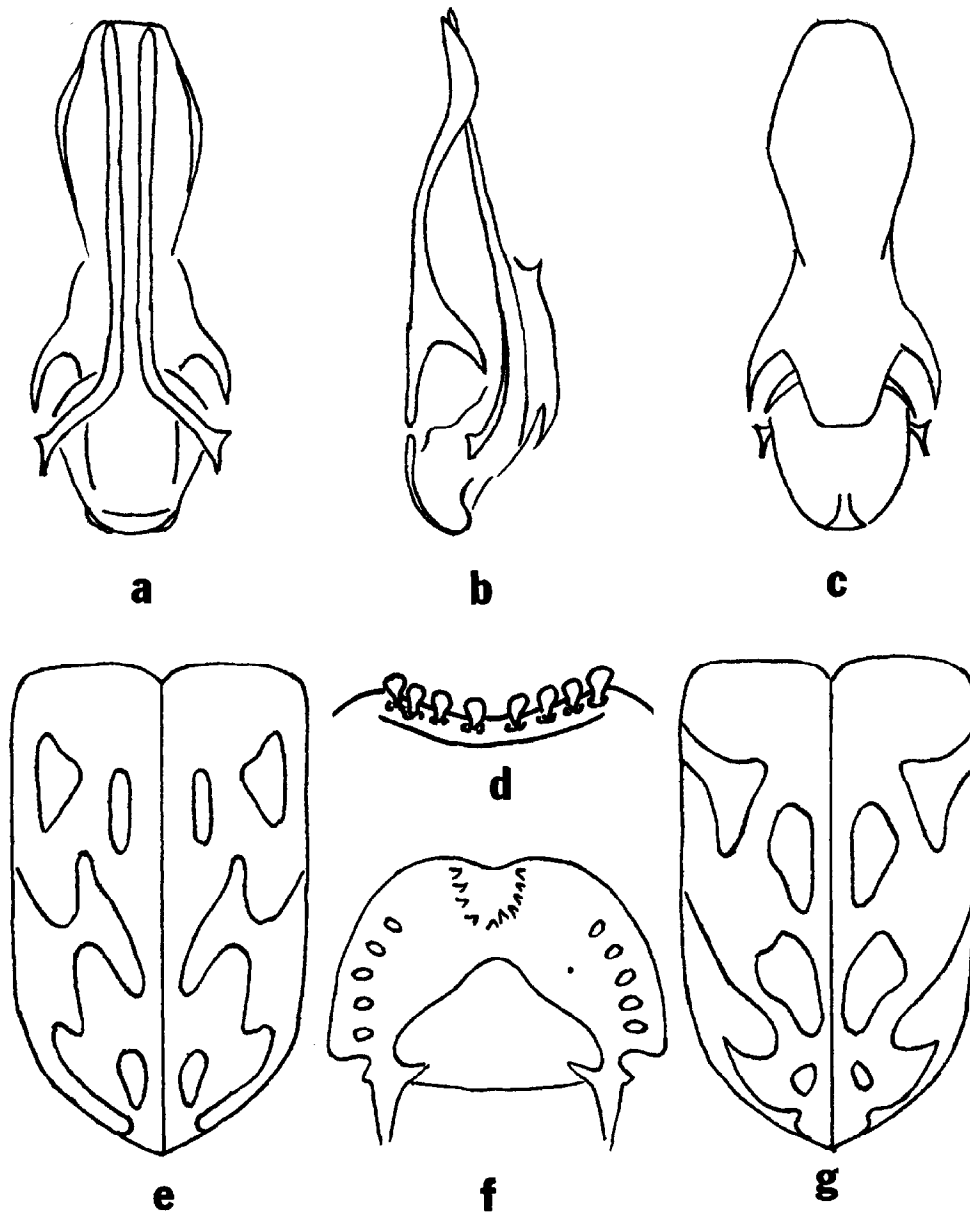


Fig. 1. *H. tenuis* n. sp. a-c. dorsal, lateral and ventral views of genitalia. d. sensory palpi at tip of labrum (440x). e & g. elytral markings. f. labrum of male (100x).

Although heterocerids are collected by the thousands in Florida at light traps only a few species are represented. An examination of a large series of heterocerids in two Canadian collections revealed a species that by size could be mistaken for a rather common species found virtually throughout Florida.

Heterocerus tenuis Miller, new species

Small, compact and shining. Basic color black or dark brown, elytral markings (Fig. 1 e,f), legs, apical corners of pronotum and lateral margins of abdominal sternites pale.

Head small, black with very fine, crowded punctures; setae sparse; antennae compact, setate; clypeus with very small crowded punctures, setae longer and denser than that of pronotum; apical margin broadly concave; labrum wider than long with small narrow apical margin thickened and devoid of setae, slightly concave. Pronotum wider than long, as wide as elytra at base; basal margin broadly convex, sides broadly rounded and converging apically; surface covered with very fine but distinct punctures, almost scabrous in appearance; setae short and sparse except near margins. Elytra shining, nearly devoid of setae; small depression at outer basal angles; surface densely punctate, nearly scabrous in appearance, punctures very small but distinct; striations noticeable but not prominent; epipleura line prominent, in some specimens faint but noticeable. Surface beneath shining, densely covered with very small scabrous like punctures; setae sparse; meso coxal line fine but easily noticed; stridulatory ridge heavy and prominent. Length 3.0-3.5 mm.

MALE. Other than characters given in the description the sexes are similar. The genitalia (Fig. 1 a-c), is of the modified type, unlike a typical heterocerid. The median lobe of the phallobase and the median strut are easily recognized with the latter slightly longer than the median plate. The lateral arms are hardly recognizable with no sclerotization but with a small but definable thorn like projection on lateral margin near apex. The paramere is broadly rounded apically and slightly protruding without a notch. The labrum (Fig. 1 f), has the typical sensory palpi on the ventral surface and the labral triangle, site of muscle attachment, has its own distinctive shape (100x). The apex of the labrum (Fig. 1 d), has on the area devoid of setae a series of projecting sensory palpi (440x) which are usually seen under normal low power magnification. All heterocerids studied have the sensory palpi with only slight differences in shape or size and all have four palpi each side of the median line.

TYPE MATERIAL. Male holotype, female allotype, three female and three male paratypes taken at Weeki Wackee, Hernando Co., Florida, on 19 v 1955, collector unknown. The types plus one female and one male paratype returned to Dr. R. E. Roughley of the University of Manitoba, Winnipeg, Canada. In addition a series of 23 specimens have been recently studied and determined to be identical with the new species from Florida. These specimens were collected from various areas within Rondeau Park, Ontario, Canada, during May, June and July 1985. The collectors were L. LeSage, A. Smetana, A. Woodliffe and D. M. Wood. Collection sites were; moss on logs in pond, in maple-beech forest, in white Pine stand, in open marsh forest, on sand beach edge in oak forest and a single specimen was attracted to ally isothiocyanate. Paratypes have been returned to Dr. L. LeSage of the Canadian National Collection.

DISCUSSION

Externally this new species resembles *H. schwarzi* Horn, that is usually found in the Eastern United States but has not been recorded from Canada or from Florida. It has been, however, recorded from Louisiana, New Jersey, Pennsylvania and Texas (Pacheco 1964). The elytra of *H. tenuis* n. sp., is densely punctate with an almost scabrous appearance. The striations are not prominent but are noticeable. When the 23 specimens from Canada were examined two male specimens were seen having the genitalia entirely exposed. No species related to *H. tenuis* n. sp., has the thorn like projection at the end of the lateral arms.

The elytral markings vary as with all heterocerids. There are 2 spots in the basal series and the outer spot usually reaches the margin (Fig. 1. e, g). The mid series is usually a single spot, again reaching the margin, but could be 2 separate spots (Fi. 1. e, g).

REFERENCES CITED

- PACHECO, F. 1964. Sistemática, filogenia y distribución de los Heteroceridos de América. Escuela Nat. de Agr. Colegio de Post Graduados, Chapingo, México.
- . 1969. A new species of Heterocerini (Coleoptera:Heteroceridae). Florida Ent. 52(1): 37-39.
- . 1978. A catalog of the coleoptera of America north of Mexico. Family: Heteroceridae. USDA Agr. Handbook 529-47.

MOSQUITO LARVAE IN AXILS OF THE
IMPORTED BROMELIAD *BILLBERGIA PYRAMIDALIS*
IN SOUTHERN FLORIDA

J. H. FRANK

Entomology and Nematology Department, 3103 McCarty Hall,
University of Florida, Gainesville, Florida 32611, USA

J. P. STEWART

East Volusia Mosquito Control District, 1600 Bellevue Avenue,
Daytona Beach, Florida 32014, USA

AND

D. A. WATSON

Mosquito Control Division, Metropolitan Dade Co. Public Works Department,
8901 NW 58th St., Miami, Florida 33178, USA

ABSTRACT

At monthly intervals for a year, in Daytona, Tampa, Vero Beach and Miami, a survey was conducted of the aquatic stages of mosquitoes existing in water impounded by the leaves of the imported bromeliad *Billbergia pyramidalis*. A few *Aedes aegypti*, *Culex quinquefasciatus*, *Toxorhynchites rutilus* and *Corethrella appendiculata* were found, but almost all of the mosquitoes belonged to the genus *Wyeomyia*. *Wyeomyia vanduzeei* was predominant at 3 of 5 sites in Miami, but at all the other sites *W. mitchellii* was predominant. Average annual production of *Wyeomyia* per bromeliad was estimated as 107 adults based upon the number of pupae collected. Pupae were found throughout the year. There was a linear relationship of numbers of pupae to numbers of eggs + larvae collected at lower densities of eggs + larvae.

RESUMEN

En las ciudades de Daytona, Tampa, Vero Beach y Miami se condujeron encuestas todos los meses durante un año de las etapas acuáticas de los mosquitos que existen en el agua embalsada por las hojas de la bromelia importada *Billbergia pyramidalis*. Unos cuantos *Aedes aegypti*, *Culex quinquefasciatus*, *Toxorhynchites rutilus* y *Corethrella appendiculata* fueron encontrados, pero casi todos los mosquitos pertenecían al género *Wyeomyia*. *Wyeomyia vanduzeei* fue el más abundante en 3 de los 5 sitios en Miami, pero en todos los demás sitios, la especie predominante fue *W. mitchellii*. La producción media anual de *Wyeomyia* fue estimada a ser 107 adultos, basado en el