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Heterobostrychus hamatipennis Lesne (Coleoptera: Bostrichidae) new to Florida

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INSECTA MUNDI

A Journal of World Insect Systematics

0138

Heterobostrychus hamatipennis Lesne
(Coleoptera: Bostrichidae)
new to Florida

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Date of Issue: September 24, 2010

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Insecta Mundi 0138: 1-5

Published in 2010 by

Center for Systematic Entomology, Inc.

P. O. Box 141874

Gainesville, FL 32614-1874 U. S. A.

<http://www.centerforsystematicentomology.org/>

Insecta Mundi is a journal primarily devoted to insect systematics, but articles can be published on any non-marine arthropod taxon. Manuscripts considered for publication include, but are not limited to, systematic or taxonomic studies, revisions, nomenclatural changes, faunal studies, phylogenetic analyses, biological or behavioral studies, etc. **Insecta Mundi** is widely distributed, and referenced or abstracted by several sources including the Zoological Record, CAB Abstracts, etc.

As of 2007, **Insecta Mundi** is published irregularly throughout the year, not as quarterly issues. As manuscripts are completed they are published and given an individual number. Manuscripts must be peer reviewed prior to submission, after which they are again reviewed by the editorial board to insure quality. One author of each submitted manuscript must be a current member of the Center for Systematic Entomology.

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Printed Copy ISSN 0749-6737

On-Line ISSN 1942-1354

CD-ROM ISSN 1942-1362

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Heterobostrychus hamatipennis Lesne (Coleoptera: Bostrichidae) new to Florida

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Abstract. *Heterobostrychus hamatipennis* Lesne, an oriental wood borer, is reported to be established in southeast Florida for the first time. This is the second member of the genus *Heterobostrychus* Lesne that has become established in Florida.

Introduction

The genus *Heterobostrychus* Lesne is composed of six species that inhabit the warmer areas of the Old World (Fisher 1950). Adults of this genus range in size from 10 to 15 mm in length and are characterized by head deeply inserted into the pronotum and not visible from above; anterior margin of the pronotum strongly, transversely depressed; posterior coxal cavities completely margined, 3-segmented antennal club that is not flabellate nor strongly transverse and round sensory depressions. *Heterobostrychus* species are readily spread by commerce with five species either having been intercepted at various U.S. ports of entry or having later emerged from foreign wood products (Beiriger unpublished data). Two of these species have become established in the United States with *Heterobostrychus aequalis* (Waterhouse) (Fig. 1) established in Florida (Woodruff 1967) and *Heterobostrychus brunneus* (Murray) (Fig. 2) established in California (Ivie 2002).

It was not surprising then that in 2004, a new *Heterobostrychus* species was attracted to an alcohol baited trap set at Archbold Biological Station, Highlands Co., 15 May to 12 June 2004. Between spring 2004 and spring 2006, 3 additional females were collected, in same locality, on the following dates, 15 May to 16 June 2005, (1 female) and 30 April to 20 May 2006 (2 females) and all were tentatively identified as *Heterobostrychus hamatipennis* Lesne (Fig. 3). However, since none of the distinctly armed males was seen and since this species is listed as probably not established (Peck and Thomas 1998) questions remained as to this identification.

In July 2007, a light trap sample was sent to me from Monroe County, North Key Largo, 2 July, 2007 containing another female *H. hamatipennis*. After finding females of this species over a fairly broad area, I decided to place alcohol baited traps at the J. W. Corbett Wildlife Management Area to determine whether the species also occurred in Palm Beach County. During the first nine weeks of trapping, four specimens including the first male, were collected. Dates of capture were 14-VI-4-VII-2009 (1 female), 4-24-VII-2009 (1 male and 1 female), and 24-VII-15-VIII-2009 (1 female). In spring 2010, six specimens of *H. hamatipennis* were collected in Florida, Glades County, Curry Island with the follow collection data: 17-IV-7-V-2010 (4 males, 1 female) and 7-21-V-2010 (1 male). Also during this time another male was found in the Florida State Collection of Arthropods (FSCA) with the collection data: Florida, Broward County, Davie, 28 May 2008. The most recently collected specimen, also in the FSCA, has the data: Florida, Orange County, Orlando, Moss Park, 25-VI-2010. It was collected in an ethanol-baited Lindgren funnel trap. Based on these collections there seems to be little question that *H. hamatipennis* is established in southeastern Florida.

Heterobostrychus hamatipennis has a wide host range (Beeson and Bhatia 1936) including the following plant genera: *Acacia*, *Anogeissus*, *Bombax*, *Boswellia*, *Canarium*, *Dalbergia*, *Dendrocalamus*, *Eugenia*, *Garuga*, *Machilus*, *Mangifera*, *Mallotus*, *Quercus*, *Shorea*, *Terminalia*, and *Vatica*. Currently, no larval hosts have been found in Florida, but *Quercus* sp. was common in all areas where this beetle has been trapped. *Heterobostrychus hamatipennis* breeds mainly in logs and branch wood and unlike *H. aequalis* is not a serious pest of lumber and wood products in India (Beeson and Bhatia 1936). It probably is this trait that has allowed this species to be unknowingly spread throughout southeastern Florida.



Figure 1. Male *Heterobostrychus aequalis* (Waterhouse). **A)** Dorsal view. **B)** Lateral view.

The larvae of *H. hamatipennis* are undescribed and little is known about the life cycle other than there is one generation per year with 70% of the emergence in June in India (Beeson and Bhatia 1936). In southern Florida, all specimens have been collected mid April through early August with most specimens emerging May through June.

A key to the species of *Heterobostrychus* that could occur in Florida is presented below. It is not known whether a third species of *Heterobostrychus*, *H. brunneus* (Murray) is established in Florida. I have seen only one specimen that might have been wild caught in Florida with data: Monroe County, No Name Key, 10 June 1953. I have seen no more recently collected specimens from Florida. Based on this record and since females of *H. hamatipennis* look similar to male and female *H. brunneus*, this species is included in the following key. *Heterobostrychus brunneus* feeds mainly on bamboos and if it occurs in Florida, it should be found in the lower to middle Florida Keys.

Key to species of *Heterobostrychus* that could occur in Florida

1. Fronto-clypeal suture obsolete or little apparent (Fig. 4B) 2



Figure 2. Male *Heterobostrychus brunneus* (Murray). **A)** Dorsal view. **B)** Lateral view.

- Fronto-clypeal suture strongly apparent, especially well marked in middle (Fig. 4A) *H. hamatipennis* Lesne
- 2(1). Eyes weakly raised posteriorly. Posterior pronotal angles with one large prominent tubercle. Elytra glabrous. Granules of pronotum flattened and scale-like *H. aequalis* (Waterhouse)
- Eyes strongly raised posteriorly and slightly detached. Posterior angles with weak tubercle. Elytra lightly pubescent. Granules of pronotum rounded on top, not flattened *H. brunneus* (Murray)

Acknowledgments

I wish to thank Donny Moore, Regional Operations Manager, Florida Fish and Wildlife Conservation Commission, for help in obtaining permits for sampling Corbett Wildlife Management Area; Mark Deyrup, Archbold Biological Station, for permission to sample at ABS; and David Fine for providing trap samples from North Key Largo. A special thanks to Mike Thomas and Paul Skelley, Florida State Collection of Arthropods, for taking the photographs and critical review of this manuscript.

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Received June 18, 2010; Accepted August 10, 2010



Figure 3. Male *Heterobostrychus hamatipennis* Lesne. A) Dorsal view. B) Lateral view.



Figure 4. Frontal view of *Heterobostrychus* spp. **A)** *H. hamatipennis* Lesne with fronto-clypeal suture well marked and depressed in middle. **B)** *H. aequalis* (Waterhouse) with fronto-clypeal suture obsolete or little apparent.

