

Longhorn beetles (Coleoptera, Cerambycidae) of the Golfo Dulce region, Costa Rica

Cerambícidos (Coleoptera, Cerambycidae) de la región de Golfo Dulce, Costa Rica

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Abstract: The following study compiles a checklist of the cerambycid fauna of the Golfo Dulce region, mainly Osa Peninsula, in southern Costa Rica. There are 117 species of Cerambycidae known from that region. In addition to listing the species, comments on their ecology such as flight period in the region and known host plants are given for some species, and figures of several species are added.

Key words: checklist, faunistics, flight period, host plants.

Resumen: Se elabora un listado de los Cerambícidos de la región de Golfo Dulce, especialmente de la Península de Osa, en el sur de Costa Rica. Hasta el momento se reconocen 117 especies de Cerambícidos en la región. Se incluyen comentarios sobre la ecología, período de vuelo y de las plantas hospederas conocidas, como también fotografías de algunas de las especies.

Palabras clave: listado, faunística, período de vuelo, plantas hospederas.

Introduction

Cerambycidae are one of the most species-rich beetle families. Some 30.000 species are known worldwide, but each year several hundred new taxa are described. The Golfo Dulce region is studied relatively poorly in reference to Cerambycidae, but there is an online database of the specimens of the InBIO collection. This database is not yet complete, so there are probably some more described species occurring in the region which are not mentioned here. The taxonomy of Cerambycidae follows the catalogue by MONNÉ (2005a, 2005b, 2006), and an online checklist (MONNÉ & BEZARK 2008). Additionally, some data from a recent review of the genus *Coleoxestia* and recent taxonomical changes and additions in Disteniini have been included (EYA & CHEMSAK 2005a, 2005b, SANTOS-SILVA & HOVORE 2007a, 2007b). A few personal observations of longhorn beetles have been made during a visit to La Gamba tropical research station in June 2005; these are also added to the checklist.

The ecology of longhorn beetles in the tropics is not well known. Generally, cerambycids develop in mostly dead wood, while adults feed on live plant tissues, sap or pollen and nectar. Because of the feeding habits of the larvae, many longhorn beetles, especially

in the temperate regions, are considered a pest of forestry cultivation. The host plants of most species are unknown. There are recent compilations of the species with known host plants (MONNÉ 2001a, 2001b, 2001c, 2002a, 2002b).

Time of activity

There are diurnal and nocturnal longhorn beetle species, the diurnal ones usually with brighter colour patterns. Cerambycidae are found all the year in the Golfo Dulce region, but in differing abundances during the year, possibly correlated to the amount of rainfall. In the InBio collection database, data are available for 887 specimens of Cerambycidae collected in the Golfo Dulce region. Almost 300 (36.5%) of these specimens have been collected in March and April, while there have been only 200 (22.5%) specimens collected in the five months from July to November (Fig. 1). This different from data from the whole of Costa Rica: ROGUET (2004-2007) analysed data from 236 citations of the subfamily Lamiinae and found a maximum of 20% in June (Golfo Dulce region only 9%), 26% in March and April and 28% in July to September. This difference can probably be explained by the varied climatic conditions in distinct regions of the country.

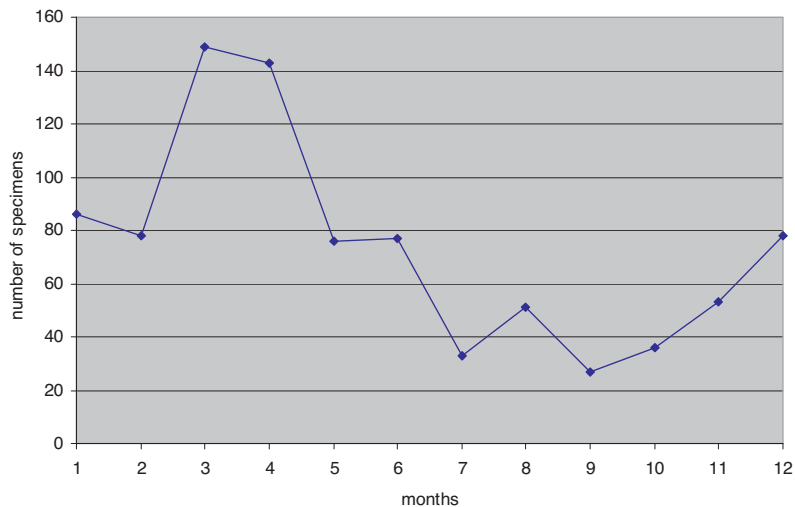


Fig. 1: Abundance of longhorn beetles in the Golfo Dulce region during the year.

Biology of sample species

To give an overview of the many different species, I present some species, each with a short description on its ecology and special features and a figure:

Hesperandra glabra (DEGEER 1774) Fig. 2

This species belongs to a group of longhorn beetles which look quite unusual. The antennae are relatively short and the fourth tarsal segment is not as small as in other cerambycids.

Hesperandra is a nocturnal genus. The flat body of this species enables it to hide in crevices of timber most time of the day.

Acrocinus longimanus (LINNAEUS 1758) Fig. 3

The harlequin beetle is another very strange-looking species. Its forelegs can reach a length of 14 cm in males, while the body is not longer than 7 cm. Fig. 3 shows a female, while the males have even longer forelegs, because they use them to compete for mates (TIPPMANN 1951-1952). Another function of these structures is to improve the climbing abilities of the animals in traversing tree branches (CHEMSAK 1983, KLAUSNITZER 2002). The coloration serves as camouflage against lichens, mosses and leaves. Beneath the elytra, pseudoscorpions and mites can often be found, using the beetle for phoresy (TIPPMANN 1951-1952, CHEMSAK 1983, AGUIAR & BÜHRNHEIM 1993). The usually diurnal beetles are also attracted by light in the dark. Females lay their eggs in plants of different families (Apocynaceae, Bombacaceae, Caryocaraceae, Lauraceae, Mimosaceae, Moraceae, Myrtaceae, Papilionaceae, Sterculiaceae) (CHEMSAK 1983, MONNÉ 2001c). The larvae need about 7 to 8 months for matu-

ration and another 4 months for pupation (CHEMSAK 1983). In the Golfo Dulce region, the harlequin beetle can be found all year round and has already been observed at La Gamba research station.

Scatopyrodes angustus (TASCHENBERG 1870) Fig. 4

Almost nothing is known about this blue-coloured prionine beetle. The colour indicates its diurnal habit, while most Prioninae are nocturnal. The specimens from the Golfo Dulce region in the InBio collection were collected from February to August, with a maximum in March and April.

Lagocheirus araneiformis ypsilon (VOET 1778) Fig. 5

This nocturnal species is widely distributed in different subspecies from Florida to Brazil and can be found in the Golfo Dulce region all the year. Its larvae feed beneath the bark of Anacardiaceae, Burseraceae, Euphorbiaceae, Moraceae, Poaceae (MONNÉ 2001c). Just before pupation, the larvae cut a wide, elliptical disc of 4-5 cm diameter into the bark and pupate 1-2 cm deep in the sapwood (VITALI & REZBANYAI-RESER 2003b).

Taeniotes scalatus (GMELIN 1790) Fig. 6

Taeniotes scalatus is very common and widely distributed in Central America. In the Golfo Dulce region, this nocturnal species can be found all year round with a maximum from March to June. The host plant families of the larvae are Moraceae and Rubiaceae (MONNÉ 2002a).

Oreodera glauca (LINNAEUS 1758) Fig. 7

Most specimens of this nocturnal species have been collected in the Golfo Dulce region from January to April, with only single specimens in other months. Known host plants include Euphorbiaceae, Moraceae, Papilionaceae and Sterculiaceae (MONNÉ 2001c). Just before pupation, the larvae cut a wide, elliptical disc into the bark and pupate 2-3 cm deep in the sapwood (VITALI & REZBANYAI-RESER 2003b). Adults show a phenomenon called "tergiversation" by SILBERGLIED & AIELLO (1976): resting during the day, they place their antennae in a way close to their body that they look like continuing behind the elytral apex. So predators are misled and assume the back of the beetle being its head. Even the legs are positioned in a way enforcing this impression. Fore and mid legs are held together, while the hind legs are extended backwards, suggesting to be the forelegs.

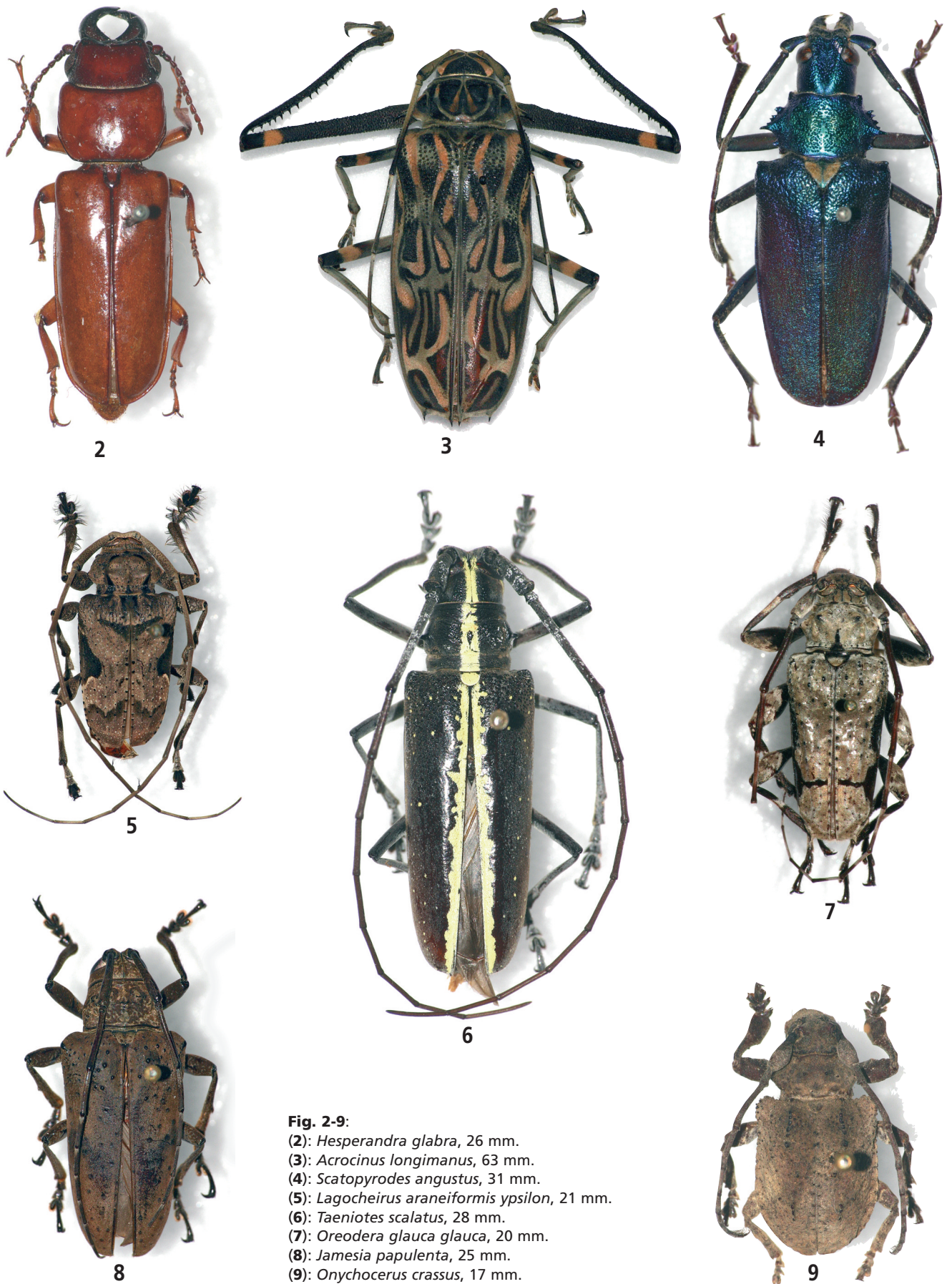


Fig. 2-9:

- (2): *Hesperandra glabra*, 26 mm.
(3): *Acrocinus longimanus*, 63 mm.
(4): *Scatopyrodes angustus*, 31 mm.
(5): *Lagocheirus araneiformis ypsilon*, 21 mm.
(6): *Taeniotes scalatus*, 28 mm.
(7): *Oreodera glauca glauca*, 20 mm.
(8): *Jamesia papulenta*, 25 mm.
(9): *Onychocerus crassus*, 17 mm.

***Jamesia papulenta* THOMSON 1868 Fig. 8**

This species has been collected in the Golfo Dulce region in different months throughout the year. The host plants are unknown.

***Onychocerus crassus* (VOET 1778) Fig. 9**

Larvae of this species feed on plants of the families Anacardiaceae, Euphorbiaceae and Mimosaceae (MONNÉ 2001c). In the Golfo Dulce region, only single specimens have been collected in different months, so possibly the species can be found all the year. This species is probably not as uncommon as the few observations would suggest, because it resembles the bark of trees and is therefore hard to find.

***Achryson surinamum* (LINNAEUS 1767) Fig. 10**

This species is widely distributed from the United States to Argentina. In the Golfo Dulce region, it is not very common, but can possibly be found all the year. The females of this species in particular are attracted by light (VITALI & REZBANYAI-RESER 2003a). The larvae feed on host plants from many different families (MONNÉ 2001a).

***Bothrocerambyx nevermanni* SCHWARZER 1929 Fig. 11**

This nocturnal species is attracted by light. In the Golfo Dulce region, specimens have been collected in April to June and October to November. The host plants are unknown.

***Callichroma batesi* GAHAN 1894 Fig. 12**

The Callichromatini are a tribe with conspicuous metallic shine, evidence of their diurnal habits. Beyond that, nothing is known about this species. So far, only two specimens from the InBio collection have been collected in the Golfo Dulce region, one in March and one in August. The species is distributed from Honduras to Panama.

***Chlorida cincta* GUÉRIN-MÉNEVILLE 1834 Fig. 13**

This species, especially females, is frequently attracted by light (VITALI & REZBANYAI-RESER 2003b). The host plants are unknown and specimens from the Golfo Dulce region have so far been collected in February and June.

***Malacopterus tenellus* (FABRICIUS 1801) Fig. 14**

The larvae of this nocturnal species feed on Euphorbiaceae, Fagaceae, Salicaceae, Sapotaceae and Ulmaceae (MONNÉ 2001b, VITALI & REZBANYAI-RESER 2003a). Adults can be found all the year in the Golfo Dulce region. The species is distributed from the United States to Brazil.

***Listroptera tenebricosa* (OLIVIER 1790) Fig. 15**

This species is known from Mexico to Bolivia and Argentina and has been collected in the Golfo Dulce region in May. Known host plants are from the families Mimosaceae and Rutaceae (MONNÉ 2001b).

***Megacyllene angulata* (FABRICIUS 1775) Fig. 16**

This widely distributed species feeds on Fabaceae and Rubiaceae (MONNÉ 2001a) and has been reported from the Golfo Dulce region from March. A closely-related species is the locust borer, *Megacyllene robiniae* (FORSTER 1771), a pest of the black locust, *Robinia pseudacacia*, of North America.

***Nyssicus topographicus* LINSLEY 1935 Fig. 17**

Nocturnal habits and its attraction to light characterise this species. In the Golfo Dulce region, it has been collected in different months of the year. Its host plants are unknown.

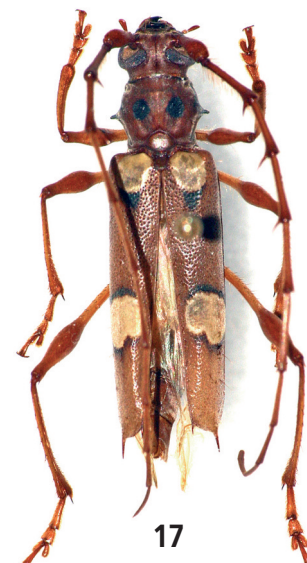
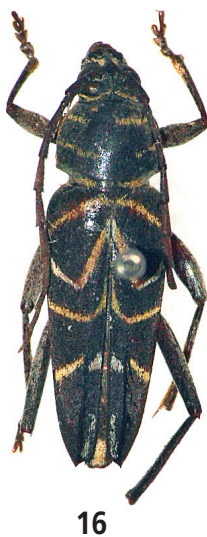


Fig. 10-17:

- (10): *Achryson surinamum*, 22 mm.
(11): *Bothrocerambyx nevermanni*, 34 mm.
(12): *Callichroma batesi*, 25 mm.
(13): *Chlorida cincta*, 26 mm.
(14): *Malacopterus tenellus*, 32 mm.
(15): *Listroptera tenebricosa*, 11 mm.
(16): *Megacyllene angulata*, 14 mm.
(17): *Nyssicus topographicus*, 22 mm.

Checklist of Cerambycidae of the Golfo Dulce region

PARANDRINAE

Parandrini

- Hesperandra (Tavandra) polita* (SAY 1835)
Hesperandra (Zikandra) glabra (DEGEER 1774)
 (Fig. 2)
Parandra (Parandra) angulicollis BATES 1879

PRIONINAE

Anacolini

- Udeterus magnificus* GALILEO 1987

Callipogonini

- Callipogon (Callipogon) barbatum* (FABRICIUS 1781)

Macrotomini

- Malldonopsis mexicanus* THOMSON 1860

Mallaspini

- Praemallaspis rhombodera* (BATES 1879)
Scatopyrodes angustus (TASCHENBERG 1870) (Fig. 4)
Scatopyrodes trichostethus (BATES 1879)

Prionini

- Callistoprionus fasciatus* TIPPMANN 1953

CERAMBYCINAE

Achrysonini

- Achryson surinamum* (LINNAEUS 1767) (Fig. 10)

Bothriospilini

- Chlorida cincta* GUÉRIN-MÉNEVILLE 1834 (Fig. 13)
Chlorida festiva (LINNAEUS 1758)

Callichromatini

- Callichroma batesi* GAHAN 1894 (Fig. 12)
Mionochroma vittatum vittatum (FABRICIUS 1775)
Xystochroma chloropus (BATES 1879). New record for
 Costa Rica.

Cerambycini

- Bothrocerambyx nevermanni* SCHWARZER 1929
 (Fig. 11)
Coleoxestia curoei EYA & CHEMSAK 2005
Coleoxestia nitida (BATES 1872)
Coleoxestia rachelae EYA & CHEMSAK 2005
Coleoxestia rubromaculata (GOUNELLE 1909)
Coleoxestia sanguinipes (BATES 1884)
Juiaparus mexicanus (THOMSON 1860)
Plocaederus plicatus (OLIVIER 1790). Probably false
 determination! Known range is Venezuela to
 Brazil.

Clytini

- Mecomtopus jansoni* BATES 1870
Megacyllene (Megacyllene) angulata (FABRICIUS 1775)
 (Fig. 16)
Neoclytus personatus CHEMSAK & LINSLEY 1974

Eburiini

- Eburia hovorei* NOGUERA 2002

- Eburodacrys triocellata* (STÅL 1857)

- Pronuba incognita* HOVORE & GIESBERT 1990

Ectenessini

- Ectenessa nitida* BATES 1885

Elaphidiini

- Aneflus minutivestis* CHEMSAK & LINSLEY 1963
Mephritis apicatus (LINSLEY 1935)
Miltesthus marginatus BATES 1872
Nyssicus topographicus LINSLEY 1935 (Fig. 17)
Parastizocera procera (ERICHSON 1848)

Hesperophanini

- Anatinomma bispinosum* AURIVILLIUS 1916
Phrynocris notabilis BATES 1867

Ibidionini

- Pygmodeon validicorne* (BATES 1885)

Necydalopsini

- Eucharassus dispar* BATES 1885
Ozodes multituberculatus BATES 1870

Oemini

- Malacopterus tenellus* (FABRICIUS 1801) (Fig. 14)

Oxycoleini

- Oxycoleus culicinus* (BATES 1870)

Rhinotragini

- Odontocera fasciata* (OLIVIER 1795)
Odontocera nevermanni FISHER 1930
Ommata (Chrysaethe) aurantipennis GIESBERT 1991

Rhopalophorini

- Listroptera tenebricosa* (OLIVIER 1790) (Fig. 15)

Torneutini

- Gigantotrichoderes conicicollis* TIPPMANN 1953
Praxitheia travassosi LANE 1939
Xenambyx lansbergei (THOMSON 1865)

Trachyderini

- Ceragenia insulana* FISHER 1943. New record for Cos-
 ta Rica.
Ceragenia leprieurii BUQUET 1844. Probably false de-
 termination! Known range is Brazil and French
 Guyana.

LEPTURINAE

Lepturini

- Strangalia picticornis* (BATES 1869)

LAMIINAE

Acanthocinini

- Anisopodus costaricensis* LARA & SHENEFELT 1964
Atrypanius conspersus (GERMAR 1824)
Atrypanius cretiger (WHITE 1855)
Atrypanius irrorellus BATES 1885
Cobelura claviger (BATES 1885)
Eutrypanus mucoreus (BATES 1872)
Hylettus coenobita (ERICHSON 1847)
Lagocheirus araneiformis ypsilon (VOET 1778) (Fig. 5)

Lagocheirus tuberculatus (FABRICIUS 1787)
Leptostylus hilaris BATES 1872
Leptostylus lividus HOVORE 1989
Leptostylus retrorsus BATES 1885
Leptostylus subfurcatus BATES 1880
Nyssodectes roseicollis (BATES 1872)
Nyssodrycina haldemani (LECONTE 1852)
Nyssodrysternum serpentinum (ERICHSON 1847)
Ozineus arietinus BATES 1872
Sympagus laetabilis BATES 1872
Trypanidius mexicanus THOMSON 1860
Urographis vexillaris (BATES 1872)
Acanthoderini
Exalphus cavifrons (BATES 1872)
Myoxinus pictus (ERICHSON 1847)
Oreodera fluctuosa BATES 1861
Oreodera glauca glauca (LINNAEUS 1758) (Fig. 7)
Psapharochrus bivittus (WHITE 1855)
Psapharochrus circumflexus (JACQUELIN DU VAL 1857)
Psapharochrus phasianus (BATES 1861). New record for Costa Rica.
Steirastoma histrionica WHITE 1855
Acrocinini
Acrocinus longimanus (LINNAEUS 1758) (Fig. 3)
Agapanthiini
Hippopsis meinerti AURIVILLIUS 1900
Anisocerini
Onychocerus crassus (VOET 1778) (Fig. 9)
Parachalastinus championi (BATES 1885)
Apomecynini
Rosalba obliqua (THOMSON 1868)
Colobothheini
Carterica optata PASCOE 1866
Colobothea bitincta BATES 1872
Colobothea chontalensis BATES 1872
Colobothea distincta PASCOE 1866
Priscilla hypsiomoides THOMSON 1864
Desmiphorini
Desmiphora (Desmiphora) fasciculata (OLIVIER 1792)
Paradesmiphora farinosa (BATES 1885)
Hemilophini
Cephalodina crassiceps BATES 1881
Lamiini
Deliathis quadritaeniator (WHITE 1846)
Neoptychodes candidus (BATES 1885)
Neoptychodes trilineatus (LINNAEUS 1771)
Taeniotes praeclarus BATES 1872
Taeniotes scalatus (GMELIN 1790) (Fig. 6)
Taeniotes xanthostictus BATES 1880
Mauesini
Taurolema albopunctata GOUNELLE 1906
Onciderini
Eudasmus rubefactus BATES 1865. Probably false de-

termination! Known range is Brazil and French Guyana.

Furona degenera (BATES 1880)
Jamesia papulenta THOMSON 1868 (Fig. 8)
Lochmaeocles batesi (AURIVILLIUS 1923)
Lochmaeocles tessellatus costaricae CHEMSAK 1986
Oncideres albomarginata albomarginata THOMSON 1868
Oncideres fulvostillata BATES 1872
Sternycha approximata DILLON & DILLON 1945
Trestonia assulina BATES 1874
Tybalma caeca BATES 1872
Xenofreini
Xenofrea zonata BATES 1885

DISTENIINAE

Disteniini

Cometes hilaris BATES 1885
Cometes pulcherrimus BATES 1872
Cometes solisi HOVORE & SANTOS-SILVA 2007
Distenia (Basisvallis) rugiscapis BATES 1885
Elytrimitatrix (Grossifemora) geniculata (BATES 1872)

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