

Research Article

New distributional notes and key to the known species of *Leptoglossus* Guérin-Méneville from Guatemala (Heteroptera: Coreidae: Coreinae: Anisoscelini)

Nuevas notas distribucionales y clave de las especies conocidas de *Leptoglossus* Guérin-Méneville de Guatemala (Heteroptera: Coreidae: Coreinae: Anisoscelini)

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Abstract. The genus *Leptoglossus* in Guatemala is commented. *Leptoglossus brevirostris*, *Leptoglossus cretalis* and *Leptoglossus tetranotatus* are reported from Guatemala for the first time. New distributional data for *Leptoglossus concolor*, *Leptoglossus dilaticollis*, *Leptoglossus gonagra*, *Leptoglossus subauratus* and *Leptoglossus zonatus* are reported. A revised key to the known species of *Leptoglossus* from Guatemala is provided.

Key words: First records, new records, Hemiptera.

Resumen. Se comenta el género *Leptoglossus* en Guatemala. *Leptoglossus brevirostris*, *Leptoglossus cretalis* y *Leptoglossus tetranotatus* son registrados por primera vez de Guatemala. Se ofrecen nuevos datos distribucionales para *Leptoglossus concolor*, *Leptoglossus dilaticollis*, *Leptoglossus gonagra*, *Leptoglossus subauratus* y *Leptoglossus zonatus*. Se proporciona una clave revisada de las especies conocidas de *Leptoglossus* de Guatemala.

Palabras clave: Primeras citas, nuevos registros, Hemiptera.

Introduction

The genus *Leptoglossus* Guérin-Méneville, 1831 consists of 62 species and is one of the most diverse and complex taxa of the tribe Anisoscelini within the Coreidae in the western hemisphere. It is cosmopolitan, mainly widely distributed in the Nearctic and in the Neotropical region (Brailovsky and Barrera 2004; Brailovsky 2014; van der Heyden and Gamboa Hidalgo 2014; Faúndez and Carvajal 2016; CoreoideaSF Team 2019). The genus *Leptoglossus* in Guatemala is commented. First and new records of species within the genus *Leptoglossus* from Guatemala are reported. A revised key to the known species of the genus from Guatemala is provided.

Materials and Methods

The following abbreviations are used for the institutions cited here: California State Collection of Arthropods, Sacramento, California, USA (CDFA); Carnegie Museum of

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Natural History, Pittsburgh, Pennsylvania, USA (CMNH); Florida State Collection of Arthropods, Gainesville, Florida, USA (FSCA); Bohart Museum of Entomology, University of California, Davis, USA (UCDC); Universidad del Valle de Guatemala, Guatemala (UVG); University of Georgia, Athens, Georgia, USA (UGAG); Instituto de Biología, Universidad Nacional Autónoma de México (UNAM).

Systematic arrangement and general morphology follow Brailovsky (2014).

Results

Key to the known species of *Leptoglossus* from Guatemala*

1. Thoracic pleura with at least two, usually more strongly yellowish maculae, or yellowish stripes or venter widely yellow to shiny orange; thoracic and abdominal sterna without numerous black discoidal spots 2
- Thoracic pleura orange or pale yellowish or dark reddish brown, without strongly contrasting yellowish markings; thoracic and abdominal sterna with numerous small black dots 5
2. Clavus and corium dark brown with strongly contrasting pale yellow or ochraceous veins; pronotal disk with wide yellow or yellowish orange transverse fascia, sometimes covering the middle third of the disk *L. subauratus* Distant
- Clavus and corium dark brown to dark reddish brown with veins concolorous, or at most shiny red or black, but never pale yellow ochraceous 3
3. Pronotal disk with narrow, arcuate, pale yellowish transverse fascia; thoracic pleura with 10 to 12 pale yellowish to orange maculae on each side; hind tibiae with outer dilation extending for 85-90% of the maximal length of tibiae *L. gonagra* (Fabricius)
- Pronotal disk lack a narrow yellowish transverse fascia, usually unicolorous or with yellow or orange discoidal spots; thoracic pleura lack or never with more than six yellowish maculae on each side; hind tibiae with outer dilation shorter, extending for at most 70% of the maximal length of tibiae 4
4. Pronotal disk with four small yellowish spots, two on anterior disk and two on posterior marginal area; thoracic pleura with six yellowish maculae on each side
..... *L. tetranotatus* Brailovsky and Barrera
- Pronotum without yellowish spots; pronotal disk almost entirely pale yellow; thoracic pleura with a single yellow maculae occupying almost entire ventral third of each pleuron *L. cinctus* (Herrich-Schaeffer)
5. Dorsal abdominal segments with a median pale yellow longitudinal fascia; large species, length 26-39 mm; humeral angles of pronotum produced as large, broadly rounded anteriorly curving processes *L. dilaticollis* Guérin-Méneville
- Dorsal abdominal segments without median pale yellow longitudinal fascia; smaller species shorter than 22 mm; humeral angles of pronotum never expanded as a broadly curving processes 6
6. Yellowish transverse fascia on corium always present, rectangular, with anterior and posterior margins straight and parallel *L. phyllopus* (Linnaeus)
- Yellowish transverse fascia on corium irregular (zig-zag), or fascia absent 7
7. Yellowish transverse fascia on corium absent; antennal segment I entirely chestnut orange or shiny orange, thickest, robust with inner surface densely setosus
..... *L. crestalis* Brailovsky and Barrera
- Yellowish transverse fascia on corium irregular (zig-zag); antennal segment I bicolorous, slender 8
8. Pronotal disk with two strongly contrasting yellowish spots *L. zonatus* (Dallas)
- Pronotal disk without contrasting yellowish spots 9

9. Labium short, reaching posterior margin of metasternum; rostral segment IV black; rostral segment IV shorter than antennal segment I; pronotal calli smooth, sparsely pale pilose hairs on anterior pronotal disk *L. brevirostris* Barber
- Labium longer, usually extending well onto abdomen; rostral segment IV yellow with apex black; rostral segment IV longer than antennal segment I; anterior pronotal disk with a rough surface texture, with numerous dark thick hairs interspersed with pale hairs 10
10. Male genital capsule with slightly median concavity, without dorsal prongs
..... *L. concolor* (Walker)
- Male genital capsule with deep median concavity, with dorsal prongs
..... *L. stigma* (Herbst)

*Modified from Brailovsky (2014) key.

***Leptoglossus brevirostris* Barber, 1918**

Leptoglossus brevirostris Barber, 1918: 35-36.

Distribution. Known from Costa Rica, Honduras, Mexico and United States (Allen 1969; Brailovsky and Sánchez 1983; Brailovsky and Barrera 1998; Packauskas 2010; Linares and Orozco 2017).

Material examined. New country records. GUATEMALA: Lake Amatitlán, 19-VI-1983, J.E. Conn (UNAM), 1 female; Antigua, Sacatepéquez, 18-II-1989, K. and S. Bloem (UCDC), 1 female.

***Leptoglossus cinctus* (Herrich-Schaeffer, 1836)**

Anisoscelis cincta Herrich-Schaeffer, 1836: 91.

Distribution. This is a widely distributed species occurring in Argentina, Bolivia, Brazil, Colombia, Costa Rica, Cuba, French Guiana, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Paraguay and Venezuela (Distant 1881; Allen 1969; Brailovsky and Sánchez 1983; Brailovsky and Barrera 1998; Maes 1991; Packauskas 2010; Linares and Orozco 2017).

Guatemala: San Géronimo and Cubulco (Distant 1881).

***Leptoglossus concolor* (Walker, 1871)**

Anisoscelis concolor Walker, 1871: 128.

Distribution. Cited from Belize, Costa Rica, Cuba, Dominican Republic, Haiti, Guatemala, Honduras, Mexico, Panama, Puerto Rico, United States and Virgin Islands (Distant 1881; Allen 1969; Brailovsky and Barrera 1998; Packauskas 2010; Linares and Orozco 2017).

Guatemala: Yepocapa, Morales, Antigua, Vizcaya and Panzós (Allen 1969).

Material examined. New records. GUATEMALA: Guatemala City, 10-VI-1997, H. Ciase (FSCA), 1 female; Izabal, Cerro Zunil, Nacimiento San Gil, 200 m, 1-XI-1999, G. Goemans (UVG), 1 female; Izabal Dept., Parque Regional Montaña Chiclera, N of CA-9, NE of Valle Nuevo, 176 m, 15.50861°N-88.86202°W, 18-X-2012, R.S. Zack (CDFA), 1 female.

***Leptoglossus crestalis* Brailovsky and Barrera, 2004**

Leptoglossus crestalis Brailovsky and Barrera, 2004: 66-68.

Distribution. Only cited from Mexico.

Material examined. New country records. GUATEMALA: Guatemala City, Universidad del Valle, 20-XI-1991, D. Schalabach (UVG), 1 female, 18-IX-1993, R. Arevalo (UVG), 1 male, 5-III-1994, L. Valle (UVG), 1 female, 6-V-1998, H. Peña (UVG), 1 male; Zacapa, Rd. to San Lorenzo, 1000 m, 15-X-2006, R. Turnbow (UGAG), 1 male; Santo Domingo Xenacoj, Sacatepéquez, 27-XII-2018, S. Pérez fot. (Pérez 2018).

***Leptoglossus dilaticollis* Guérin-Méneville, 1831**

Leptoglossus dilaticollis Guérin-Méneville, 1831: 174.

Distribution. Known from Brazil, Guatemala, Mexico and Panama (Distant 1881; Allen 1969; Packauskas 2010).

Guatemala: Senahú (Distant 1881).

Material examined. New record. GUATEMALA: Izabal, Sierra de Caral, 900 m, VII-1992, J. Monzon (UVG), 1 female.

***Leptoglossus gonagra* (Fabricius, 1775)**

Cimex gonagra Fabricius, 1775: 708.

Distribution. Widely distributed through Argentina, Bolivia, Brazil, Belize, Cuba, El Salvador, Guatemala, Costa Rica, Jamaica, Mexico, Puerto Rico, Nicaragua, Paraguay, Uruguay, Venezuela and West Indies. Also cited from Africa, Australia, Canary Islands, Ceylon, Cook Islands, Fiji Islands, India, Indonesia, Madagascar, Malay Archipelago, Micronesia, New Hebrids, New Caledonia, New Guinea, Phillipine Islands, Samoa, Seychelle Islands, Solomon Islands, South East Asia, Tahiti and Taiwan (Distant 1881; Allen 1969; Brailovsky and Sánchez 1983; Maes 1991; Packauskas 2010; van der Heyden and Gamboa Hidalgo, 2014; Linares and Orozco 2017).

Guatemala: San Geronimo and San Isidro (Distant 1881).

Material examined. New records. GUATEMALA: Izabal, Sierra de Caral, 900 m, VII-1992, J. Monzon (UVG), 1 female; Guatemala City, Universidad del Valle, 20-X-1994, J. Schuster (UVG), 1 male.

***Leptoglossus phyllopus* (Linnaeus, 1767)**

Cimex phyllopus Linnaeus, 1767: 731.

Distribution. A wide ranging species occurring throughout Brazil, Costa Rica, Guatemala, Mexico, Panama and United States (Distant 1881; Allen 1969; Brailovsky and Sánchez 1983; Brailovsky and Barrera 1998; Packauskas 2010).

Guatemala: San Geronimo (Distant 1881).

***Leptoglossus stigma* (Herbst, 1784)**

Cimex stigma Herbst, 1784: 258.

Distribution. Cited from Brazil, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Guyana, Mexico, Nicaragua, Panama, Paraguay, Suriname and Uruguay (Distant 1881; Allen 1969; Brailovsky and Sánchez 1983; Packauskas 2010).

Guatemala: Capetillo and Telemán (Distant 1881).

***Leptoglossus subauratus* Distant, 1881**

Leptoglossus subauratus Distant, 1881: 126.

Distribution. Recorded from Costa Rica, El Salvador, Guatemala, Mexico and Nicaragua (Distant 1881; Allen 1969; Brailovsky and Sánchez 1983; Maes 1991; Brailovsky and Barrera 1998; Packauskas 2010).

Guatemala: Capetillo and Candez (Distant 1881; Blöte 1936).

Material examined. New record. GUATEMALA: Izabal, Cerro Zunil, 15-X-2001, J. Schuster (UVG), 1 male.

***Leptoglossus tetranotatus* Brailovsky and Barrera, 1994**

Leptoglossus tetranotata Brailovsky and Barrera, 1994: 60-62.

Distribution. Cited from Costa Rica and French Guiana (Brailovsky and Barrera 1994, 1998; Packauskas 2010).

Material examined. New country record. GUATEMALA: Izabal, Green Bay Resort, Romancita, Sierra del Mic, 3-5 m, 23-26-IX-2008, J.B. Heppner (FSCA), 1 female.

***Leptoglossus zonatus* (Dallas, 1852)**

Anisoscelis zonatus Dallas, 1852: 452.

Distribution. This is a widely distributed species occurring in Argentina, Bolivia, Brazil, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru, United States and Venezuela (Distant 1881-1892; Allen 1969; Brailovsky and Sánchez 1983; Maes 1991; Brailovsky and Barrera 1998; Packauskas 2010; Linares and Orozco 2017).

Guatemala: Antigua, Los Amates, San Isidro, El Reposo, Cerro Zunil, San Géronimo, Volcán de Atitlán and Mirindilla (Distant 1881-1892; Allen 1969).

Material examined. New records. GUATEMALA: Sanarate, El Progreso, 11-14-VIII-1960, C.L. Haatch (CMNH), 2 females; Guatemala City, 14-XI-1991, P.J. Landolt (FSCA), 1 female; El Progreso, Agua Caliente, 900 m, 18-IV-1998, A. Anzito (UVG), 1 male.

Conclusion

With the new country records reported in this paper, the number of known species of the genus *Leptoglossus* in Guatemala increases from eight to eleven.

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