

NEW RECORDS OF THRIPS (THYSANOPTERA) FROM CENTRAL AMERICA WITH COMMENTS ON SPECIFIC CHARACTERS

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The increase in Thysanoptera research has led to the description of new species, especially in the Neotropic region (Mound 2002). Similarly, new location records for species considered endemic are common in the current literature, as in the case of *Ameranathrips herediae* Mound & Marullo and *Neohydatothrips hadrosetae* Mound & Marullo both described for Costa Rica and found recently in Cuba (González & Suris 2005; González & Castillo 2009). *Neohydatothrips hadrosetae* was described in Costa Rica from a single specimen in poor condition. A similar case is that of *Ethirothrips firmus* Hood, which was known only from 5 specimens collected in Brazil and was recently collected in the State of Nayarit in Mexico (Valenzuela-Garcia et al. 2011).

With the development of new technologies to study the geographical distribution of species occurrence, the acquisition of new records is important in order to establish new distribution points of various species. These types of data become an essential tool for modern ecology because they lead to an accurate portrayal of species' distribution and behavior and thereby allow us to predict new locations as potential sites for colonization (Broennimann & Guisan 2008). New localities in Central America for 2 known species are reported in this paper, and comments on variations of their morphological characters are included.

TEREBRANTIA

Aeolothripidae

Erythrothrips Moulton

This genus was redefined by Mound & Marullo (1993). *Erythrothrips* is similar in morphology to *Aeolothrips* and it is generally diagnosed by the presence of the distal segment of maxillary palp subdivided and by several pairs of discal setae on abdominal sternites (Mound & Marullo 1996).

Erythrothrips diabolus Priesner

Distribution

Type locality: MEXICO, southwestern Mexico, Chapingo. Known distribution: the only known distribution is the type locality and that of the material recently sampled by Johansen in Hidalgo, northeast of Chapingo, Oaxaca. This specimen has the following collection data: MEXICO, Hidalgo, Zacualtipán de Ángeles, Vertiente SW de La Meseta de Zacualtipan, N 20.65° W -98.6°, 1640 m asl. 2-III-1980, 1 ♀, deposited at Colección Nacional de Insectos, Subcolección Thysanoptera, N° Thys-420.

New record: Costa Rica, 5 ♀ ♀, San José, 5 km Este de Villa Mills, Sendero Carbón, Trampa de Malaise, (3-20)/I/1996.

Remarks

Specimens of this species are scarce and the species is apparently rare. The new record in Costa Rica indicates that it is possible to find it distributed throughout Central America, but sampling of this species is difficult. This species was first described in the genus *Aeolothrips* and reclassified by zur Strassen (1978) as *Erythrothrips*. This species is very similar to *Erythrothrips durango*, and they differ in the color of antennal segment III, which is brown in the apical section in *E. diabolus* but yellow in *E. durango*. This difference is valid only for diagnosing females.

TUBULIFERA

Phlaeothripidae

Phlaeothripinae

Plectrothrips Hood

The genus *Plectrothrips* was described by Hood (1908). The type species is *Plectrothrips antenna-*

tus and it is distributed from the USA to Brazil and Paraguay (Mound & Marullo 1996). A dozen species are included in this genus, 7 species are in Brazil and out of these, 6 have been reported for Brazil exclusively (Okajima 1981; Monteiro 2002).

Plectrothrips bicuspis Hood

Distribution

Type locality: BRAZIL, Rondon, Parana (near Paraguayan border), Nov 1952, Fritz Plaumann, 10 ♀, 9 ♂ (including holotype) from dead branches. Know distribution: Brazil, Paraná.

New record: only one specimen (1 ♀) collected in Central America, HONDURAS, Patuca, Caño Cayamelito, N 15.82722° W 63.9385°, 07-V-1998, collected in samples of aquatic insects by Pia Paaby.

Remarks

This species was described by Hood (1957) who established this species as "Unique among the New World species in having two stout spurs, instead of one, on the middle tibiae" (Hood 1957, pp. 37). According to the key given by Mound & Marullo (1996) the identification matches the species *P. bicuspis*, the comparison with the characters proposed by Hood (1957) is consistent with those exhibited by the specimen collected in Honduras except that the width of the head is narrower than in the original description.

SUMMARY

New localities in Central America for *Erythrothrips diabolus* Priesner and *Plectrothrips bicuspis* Hood are reported in this paper with comments on variations of morphological characters. New locations records can lead to a better understanding of species dynamics and their capacity to spread.

RESUMEN

Los nuevos reportes de localidades de especies permiten obtener un mejor conocimiento de sus dinámicas y de su capacidad para dispersión. En este escrito se reportan nuevas localidades en Centro América para *Erythrothrips diabolus* Priesner y *Plectrothrips bicuspis* Hood, con comentarios sobre variaciones de caracteres morfológicos.

REFERENCES CITED

- BROENNIMANN, O., AND GUISAN, A. 2008. Predicting current and future biological invasions: both native and invaded ranges matter. *Biol. Lett.* 4: 585-589. Doi: 10.1098/rsbl.2008.0254
- GONZÁLEZ, C., AND SURIS, M. 2005. New genera and species of Thysanoptera in Cuba. *Rev. Protección Veg.* 20(1): 70
- GONZÁLEZ, C., AND CASTILLO, N. 2009. Dos nuevas especies del género *Neohydatothrips* John (Thysanoptera: Thripidae) para Cuba. *Rev. Protección Veg.* 24(3): 184-186
- HOOD, J. D. 1908. New genera and species of Illinois Thysanoptera. *Bull. Illinois State Lab. Nat. Hist.* 8: 361-379.
- HOOD, J. D. 1957. New Brazilian Thysanoptera. *Proc. Biol. Soc. Washington* 70: 129-180.
- MONTEIRO, R. C. 2002. The Thysanoptera fauna of Brazil, pp. 325-340 In R. Marullo and L. A. Mound [eds.], *Thrips and Tospoviruses: Proc. 7th Int. Symp. Thysanoptera*.
- MOUND, L. A. 2002. Thysanoptera biodiversity in the Neotropics. *Rev. Biol. Trop.* 50(2): 477-484
- MOUND, L. A., AND MARULLO, R. 1993. The *Erythrothrips* complex of tropical Aeolothripidae (Thysanoptera) with a new Australian genus and a new South African species. *Entomol. Scandinavica*. 24: 285-291
- MOUND, L. A., AND MARULLO, R. 1996. The Thrips of Central and South America: An Introduction (Insecta: Thysanoptera). *Mem. Entomol. Intl.* 6: 1-487.
- OKAJIMA, S. 1981. A revision of the Tribe Plectrothripini of fungus-feeding Thysanoptera (Phlaeothripidae: Phlaeothripinae). *Systematic Entomol.* 6: 291-336.
- VALENZUELA-GARCÍA, R. D., RETANA-SALAZAR, A. P., GARCÍA-MARTÍNEZ, O., AND CARVAJAL-CAZOLA, C. 2011. New records of thrips from Mesoamerica and comments regarding specific characters (Tubulifera: Phlaeothripidae). *Florida Entomol.* 94(2): 372-373.
- ZUR STRASSEN, R. 1978. Thysanopterologische Notizen (4) (Insecta: Thysanoptera). *Senckenbergiana biológica* 58: 185-202.