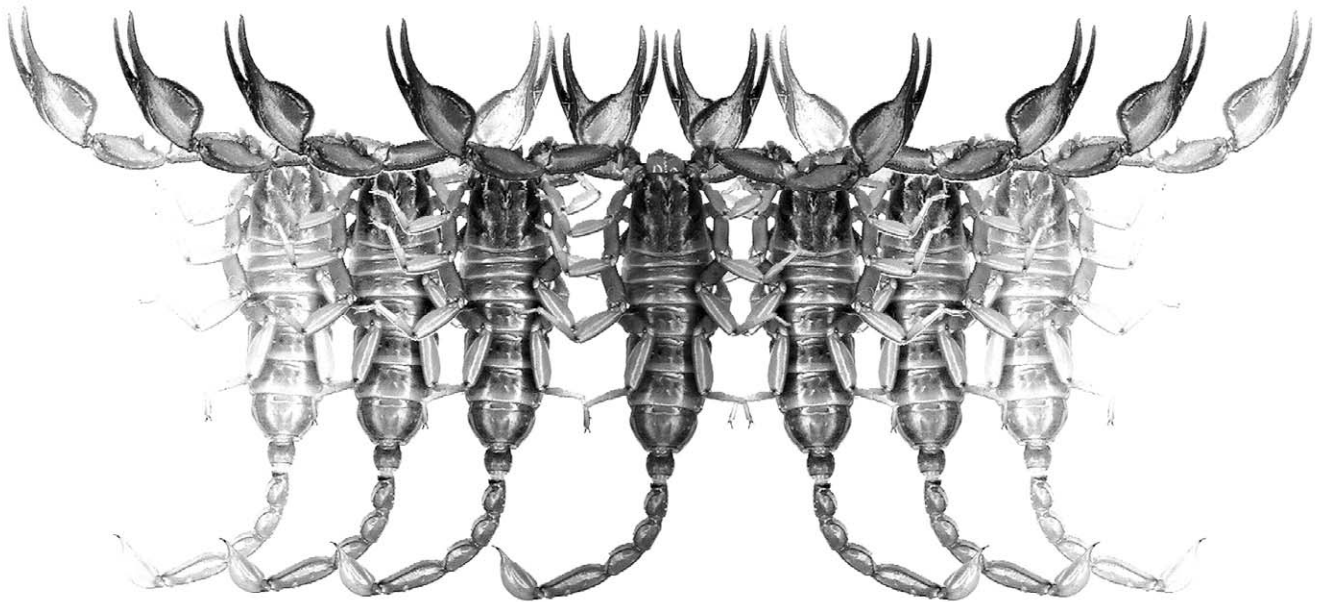


Euscorpius

Occasional Publications in Scorpiology



***Centruroides thorellii* (Scorpiones: Buthidae): Traveling
from Guatemala to England Without a Passport**

Rony E. Trujillo, Luis F. de Armas & Darren Mansfield

February 2017 — No. 239

Euscorpius

Occasional Publications in Scorpiology

EDITOR: Victor Fet, Marshall University, 'fet@marshall.edu'
ASSOCIATE EDITOR: Michael E. Soleglad, 'soleglad@znet.com'

Euscorpius is the first research publication completely devoted to scorpions (Arachnida: Scorpiones). *Euscorpius* takes advantage of the rapidly evolving medium of quick online publication, at the same time maintaining high research standards for the burgeoning field of scorpion science (scorpiology). *Euscorpius* is an expedient and viable medium for the publication of serious papers in scorpiology, including (but not limited to): systematics, evolution, ecology, biogeography, and general biology of scorpions. Review papers, descriptions of new taxa, faunistic surveys, lists of museum collections, and book reviews are welcome.

Derivatio Nominis

The name *Euscorpius* Thorell, 1876 refers to the most common genus of scorpions in the Mediterranean region and southern Europe (family Euscorpiidae).

Euscorpius is located at: <http://www.science.marshall.edu/fet/Euscorpius>

(Marshall University, Huntington, West Virginia 25755-2510, USA)

ICZN COMPLIANCE OF ELECTRONIC PUBLICATIONS:

Electronic ("e-only") publications are fully compliant with ICZN (*International Code of Zoological Nomenclature*) (i.e. for the purposes of new names and new nomenclatural acts) when properly archived and registered. All

Euscorpius issues starting from No. 156 (2013) are archived in two electronic archives:

- **Biotaxa**, <http://biotaxa.org/Euscorpius> (ICZN-approved and ZooBank-enabled)
- **Marshall Digital Scholar**, <http://mds.marshall.edu/euscorpius/>. (This website also archives all *Euscorpius* issues previously published on CD-ROMs.)

Between 2000 and 2013, ICZN did not accept online texts as "published work" (Article 9.8). At this time, *Euscorpius* was produced in two identical versions: online (*ISSN 1536-9307*) and CD-ROM (*ISSN 1536-9293*) (laser disk) in archive-quality, read-only format. Both versions had the identical date of publication, as well as identical page and figure numbers. Only copies distributed on a CD-ROM from *Euscorpius* in 2001-2012 represent published work in compliance with the ICZN, i.e. for the purposes of new names and new nomenclatural acts.

In September 2012, ICZN Article 8. *What constitutes published work*, has been amended and allowed for electronic publications, disallowing publication on optical discs. From January 2013, *Euscorpius* discontinued CD-ROM production; only online electronic version (*ISSN 1536-9307*) is published. For further details on the new ICZN amendment, see <http://www.pensoft.net/journals/zookeys/article/3944/>.

Publication date: 8 February 2017

Centruroides thorellii (Scorpiones: Buthidae): traveling from Guatemala to England without a passport

Rony E. Trujillo¹, Luis F. de Armas² & Darren Mansfield³

¹ Museo de Historia Natural, Escuela de Biología, Universidad de San Carlos de Guatemala, Calle Mariscal Cruz 1-56 zona 10, Ciudad de Guatemala, Guatemala. ronytrujillo83@gmail.com

² P. O. Box 4327, San Antonio de los Baños, Artemisa 32500, Cuba. luisdearmas1945@gmail.com

³ Exotic Pet Refuge, Deeping St James, Peterborough, England. chipith@hotmail.co.uk

Summary

We recorded a pregnant female of the Central American bark stripped scorpion *Centruroides thorellii* (Kraepelin, 1891), which arrived to England as a stowaway in the bag of a woman that previously visited the Departments of Sacatepéquez, Sololá and San Marcos, Guatemala. On January 2, this *C. thorellii* female had a litter of three offspring and three infertile eggs, but she has eaten them, probably as consequence of the stress caused by the hard travel and the environmental changes. We provide a map with the geographical distribution of this species and photos of the female detected in a British train.

Resumen

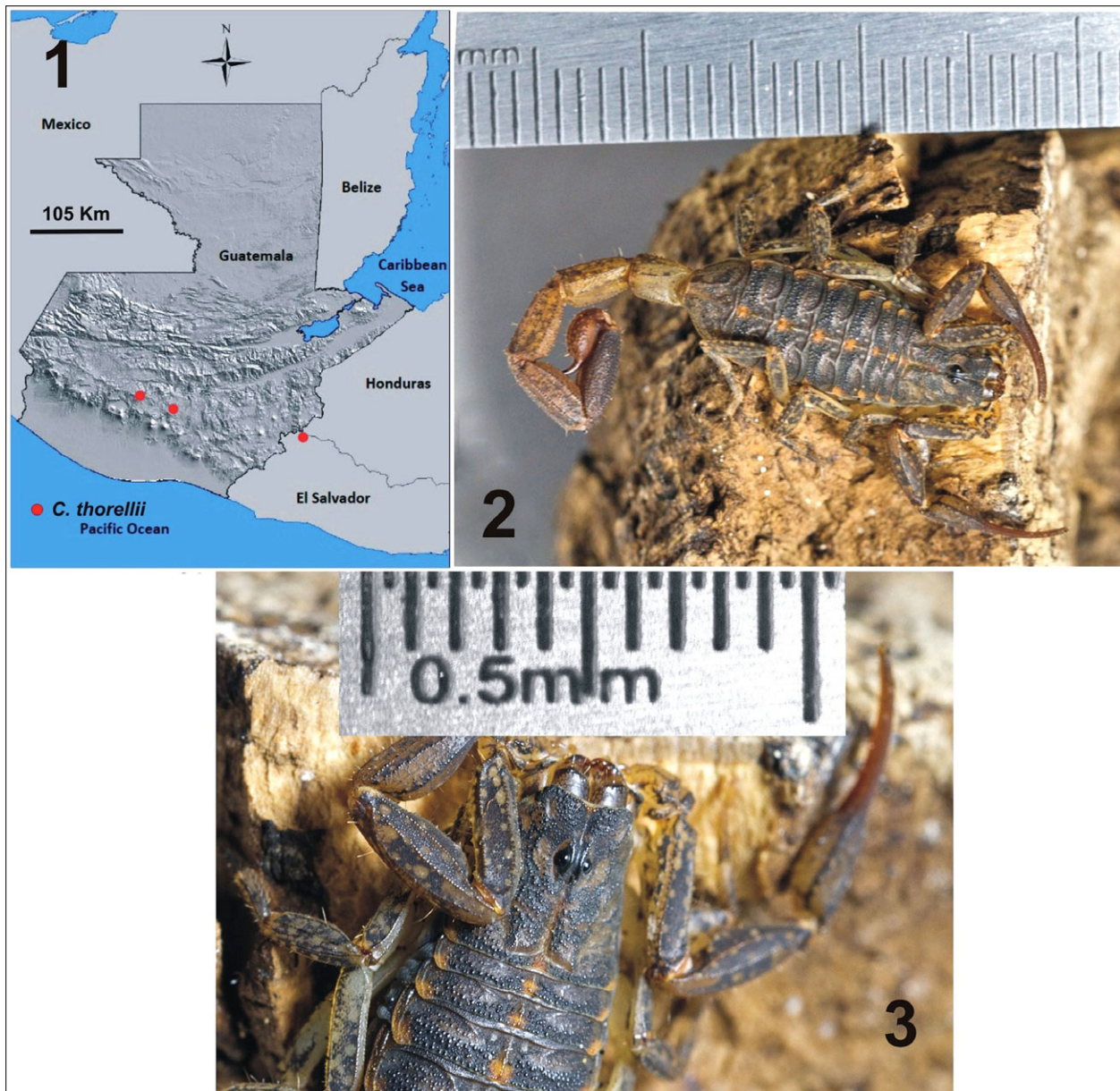
Se registra el caso de una hembra grávida del escorpión *Centruroides thorellii* (Kraepelin, 1891), introducida accidentalmente en Inglaterra, en el equipaje de una mujer proveniente de los departamentos de Sacatepéquez, Sololá y San Marcos, Guatemala, Centroamérica. El espécimen parió tres larvas y tres huevos infértiles el 2 de enero, pero se los comió, probablemente debido al estrés ocasionado por la larga travesía y los cambios ambientales. Se incluyen el mapa de distribución de esta especie y fotos de la hembra detectada en un tren inglés.

Some scorpion species have been accidentally introduced into territories so much apart from its natural area of distribution. When the species is ecologically adaptable and the new territory appropriate, then a new population may be established. The most relevant cases are those of the buthid *Isometrus maculatus* (De Geer, 1778), at this moment widespread around the world, and the New World species *Centruroides gracilis* (Latreille, 1805) and *Centruroides margaritatus* (Gervais, 1841), which have introduced populations in Canarias Islands and the West Indies, respectively (Vachon, 1972; Fet & Lowe, 2000; Armas et al., 2011).

As consequence of the modern facilities in transportation, the involuntary introduction of exotic species has been incremented. Relatively recent cases involving scorpions have been recorded from Argentina (Camargo & Ricciardi, 2000), Venezuela (De Sousa et al., 2008), Norway (Teruel & Rein, 2009), Brazil (Lobo et al., 2011), and Spain (Teruel & de Biurrun Baquedano, 2015).

Centruroides thorellii (Kraepelin, 1891) is a medium-sized scorpion distributed in central south Guatemala and northwestern El Salvador (Fig. 1; Armas, 1999; Armas & Maes, 2001). In Guatemala it has been recorded from Finca San Rafael, Sacatepéquez department, at 2103 m a.s.l., and from “Chichivac”, Tecpán municipality, Chimaltenango department (Sissom, 1995), although its natural history remains poorly known.

We believe that Finca San Rafael, where R.D. Mitchell collected this species in 1948, corresponds to Finca San Rafael Las Hortensias (14°38'30.4''N, 90°38'44.9''W), located in Santiago Sacatepéquez municipality, Sacatepéquez Department, within the limits of the Cordillera Alux Water Springs Protection Reserve. There are several specimens of *Centruroides thorellii* collected at Cordillera Alux Water Springs Protection Reserve in the Arachnid Collection of the Natural History Museum at Universidad de San Carlos de Guatemala, although this information has never been



Figures 1–3: *Centruroides thorellii*. 1, Geographical distribution (solid red circles). 2–3, Adult female from western Guatemala, introduced as a stowaway to England: 2, dorsal habitus; 3, prosoma and first abdominal segments, dorsal aspect. Photos courtesy of Neil Malton.

published. According to Sissom (1995), specimens of *C. thorellii* were collected in 1934 by P. J. W. Schmidt, during Leon Mandel Guatemalan Expedition, in “Chichivac”, near Tecpán, although the correct name of this location is “Chichavac” (2500 m a.s.l.).

Recently, on New Year’s Day 2017, Virginia Scott and her young son were returning from a holiday in Guatemala on board a Virgin train from London to Glasgow, U.K. While spending most of their time in aldea Zorzoya, San Lucas Sacatepéquez municipality, Sacatepéquez department, they did travel around to El Paraíso, El Quetzal municipality, San Marcos depart-

ment and to Panajachel municipality, Sololá department, before returning to Sacatepéquez. Once back in England and on the train, she opened her bag and reached inside for her glasses, when she looked at the case she saw a little scorpion clinging to the side of it, in surprise she dropped the case and it fell to the floor of the train. Once the scorpion was captured and kept alive into a secure box (of course, after a hard and difficult searching), the train stopped at Peterborough station and the British Transport Police took the scorpion from the train and then contacted the Exotic Pet Refuge (E.P.R.) and asked for their assistance.



Figures 4–5: *Centruroides thorellii*. The same female as in Fig. 2: 4, pedipalp chela, dorsolateral aspect; 5, metasoma, lateral aspect. Photos courtesy of Neil Malton.

When the E.P.R. received the scorpion, it was quickly transferred to a suitable, heated and ventilated enclosure with plenty of places to hide and by the next morning she had given birth to three offspring, and three infertile eggs. Within a few hours they were not visible and the mother was hiding under a piece of bark. It became apparent the next day that she was not carrying them on her back and it seems she had eaten them, most likely due to the stress during her long journey and new home. As described by Armas (1980: 10–11; 1986: 8–9), several minutes after the parturition is concluded, the mother cleans the place by eating the infertile eggs, slimy remnants, dead embryos and those offspring that failed in climbing to her back. Thus, we think that was the case in this abnormal parturition.

This adult female (Fig. 2–5) has been identified by us as belonging to the Central American bark stripped scorpion *Centruroides thorellii*. The Guatemalan area visited by Virginia Scott and her son, mainly the small village of Zorzoya, Sacatepéquez Department, is in the geographical area of distribution of this species.

Certainly, it is not uncommon for small invertebrates to catch a ride to the U.K. The E.P.R. has been called for scorpions in wood shipments and huntsman spiders in fruit containers in the past (Darren Mansfield, pers. obs.). This refuge has stated that when the herein recorded scorpion dies, it will be donated to the Natural History Museum in London, U.K.

Acknowledgments

The first author (R.E.T.) will like to thank Guatemalan journalist Gabriel Arana, who shared the news about a Guatemalan scorpion in a London train, and Amapola Tercero, for her kind support during the preparation of this note. The third author (D.M.) would like to thank Virginia Scott for the safe capture of the scorpion and provided data, to the British Transport Police for contacting the Exotic Pet Refuge for assistance, and Neil Malton for the professional photography of the scorpion.

References

- ARMAS, L. F. DE. 1980. Aspecto de la biología de algunos escorpiones cubanos. *Poeyana*, 211: 1–28.
- ARMAS, L. F. DE. 1986. Biología y morfometría de *Rhopalurus garridoi* Armas (Scorpiones: Buthidae). *Poeyana*, 333: 1–27.
- ARMAS, L. F. DE. 1999. Ampliación del área de distribución de algunos *Phrynus* (Amblypygi: Phrynidae) y *Centruroides* (Scorpiones: Buthidae) de América Central y las Antillas. *Cocuyo* (La Habana), 8: 29–30.
- ARMAS, L. F. DE & J.-M. MAES. 2001. Enmiendas a la “Lista anotada de los alacranes de América Central (Arachnida: Scorpiones)”. *Cocuyo*, 10: 16–17.
- ARMAS, L. F. DE, R. TERUEL & F. KOVAŘÍK. 2011. On *Centruroides margaritatus* (Gervais, 1841) and closely related species (Scorpiones: Buthidae). *Euscorpius*, 132:1–16.
- CAMARGO, F. J. & A. I. A. RICCIARDI. 2000. *Sobre la presencia de un escorpión Tityus serrulatus Lutz e Mello (Scorpiones, Buthidae) en la ciudad de Corrientes*. Universidad Nacional del Nordeste, Comunicaciones Científicas y Tecnológicas. 3 pp.
- DE SOUSA, L., A. BORGES, J. MANZANILLA, I. BIONDI, E. AVELLANEDA. 2008. Second record of *Tityus bahiensis* (Scorpiones, Buthidae) from Venezuela: Epidemiological implications. *Journal of Venomous Animal Toxins including Tropical Diseases*, 14(1): 170–177.
- FET, V. & G. LOWE. 2000. Family Buthidae C. L. Koch, 1837. Pp. 54–286 in: Fet, V., W. D. Sissom, G. Lowe & M. E. Braunwalder. *Catalog of the Scorpions of the World (1758–1998)* (The New York Entomological Society: New York.
- LOBO, R. A., P. A. M. GOLDONI, C. A. R. DE SOUZA & C. R. DE MEDEIROS. 2011. Accident caused by *Centruroides testaceus* (DeGeer, 1778) (Scorpiones, Buthidae), native to the Caribbean, in Brazilian airport. *Revista da Sociedade Brasileira de Medicina Tropical*, 44(6): 789–791.
- SISSOM, W. D. 1995. Redescription of the scorpion *Centruroides thorelli* Kraepelin (Buthidae) and description of two new species. *Journal of Arachnology*, 23: 91–99.
- TERUEL, R. & G. DE BIURRUN BAQUEDANO. 2015. Primer registro del escorpión norteamericano *Vaejovis mexicanus* C. L. Koch, 1836 (Scorpiones: Vaejovidae) en España. *Revista Ibérica de Aracnología*, 27: 124–126.
- VACHON, M. 1972. Remarques sur les Scorpions appartenant au genre *Isometrus* H. et E. (Buthidae) à propos de l'espèce *Isometrus maculatus* (Geer) habitant l'île de Paques. *Cahiers du Pacifique*, 16: 169–180.