

SCIENTIFIC NOTE

**NOTEWORTHY RECORDS OF *BRACHYPELMA*
(ARANEAE: THERAPHOSIDAE) FROM PENINSULA OF
YUCATAN, MEXICO¹**

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ABSTRACT: We report new distribution records of two tarantula species from the genus *Brachypelma* (Simon 1891) within the Peninsula of Yucatan: *B. vagans* (Ausserer 1875) and *B. epicureanum* (Chamberlin 1925). *B. vagans* distribution is confirmed for the Mexican state of Yucatan. We also provide zoogeographical information from specimens deposited in the Colección Entomológica Regional at the Campus de Ciencias Biológicas y Agropecuarias of the Universidad Autónoma de Yucatán.

KEY WORDS: Tarantula, *Brachypelma*, Peninsula of Yucatan

The genus *Brachypelma* (Simon 1891) is distributed from México to Costa Rica (Valerio, 1980; Smith, 1994). It includes 20 species, 13 inhabiting the Mexican territory (West, 2005; Platnick, 2008; Rudloff, 2008). The species of tarantulas from the genus *Brachypelma* (Simon 1891), are well appreciated as pets and are listed on the appendix II of CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) to prevent illegal traffic which could eventually threaten their wild populations (Locht et al., 1999). Two *Brachypelma* (Simon, 1891) species have been reported from the Peninsula of Yucatan (PY) (18° 50' N, 89° 7' W): *B. vagans* (Ausserer, 1875) the Mexican redrump tarantula, distributed in the low deciduous and medium evergreen forests from south of PY at the Mexican states of Quintana-Roo and Campeche (West, 2005) and *B. epicureanum* (Chamberlin, 1925) the Yucatan rustrump tarantula, a species restricted to the north of the PY. This species was apparently the only one associated with the low deciduous and low deciduous thorny forests in the Mexican state of Yucatan (Smith, 1994; Loch et al., 1999; West, 2005).

This paper provides new records of *Brachypelma* species from the PY based on examination of specimens from donations and nonsystematic collections within different localities in the PY from 2005-2007, and currently, these spiders are deposited in the Colección Entomológica Regional from Campus de Ciencias Biológicas y Agropecuarias of the Universidad Autónoma de Yucatán (CER-

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UADY). Information provided about the distribution and relative abundance of the *Brachypelma* species from PY were obtained directly from the specimen's collection data.

We examined 94 specimens from the genus *Brachypelma* (Simon, 1891) at different life stages. The two species identified were *B. vagans* and *B. epicureanum* (20♂ and 65♀ of *B. vagans*; 5♂ and 4♀ of *B. epicureanum*). Species identification was based on the original descriptions and *Brachypelma* species keys, based on the comparison of genitalia characters (Ausserer, 1875; Chamberlin, 1925; Reichling, 2003). Collection specimens suggest that, in general, tarantulas are more conspicuous in the PY from May to October, very possibly associated with the rainy season. From collected *Brachypelma* species and field observations by the authors, the emergence of spiderlings and juveniles from ground burrows happens from May to June, preceding the reproductive period occurring from June to October, when adults from both species are more abundant especially the males, which after the last molt "wander" searching for females at night (although adults were reported almost throughout the year with lower relative abundances). Finally from February to April the gravid females stay in their burrows and build an egg-sac where they carefully put their eggs, from which spiderlings emerge after approximately 8 weeks. These observations agree with the natural history from genus and phenology of species like *B. vagans* in Belize and other as *B. klaasi* in Mexico (Locht et al., 1999; Yañez, 1999; Reichling, 2003). *B. vagans* was the species most well represented in the collections. This species was collected throughout all months of the years 2005-2007, except for February and December. Most *B. vagans* male adults were collected from July and August. In opposition, the scarcity of records for *B. epicureanum* suggests it is a demographically rare species, with low populations and well represented in the collections during the rainy season from May to October. Most *B. epicureanum* male adults were collected in October.

From specimens deposited at CER-UADY, *B. vagans* was the species most widely distributed in the PY. However, from the material examined, the distribution of *B. vagans* in the PY is extended to localities north of Quintana-Roo not previously reported (Locht et al., 1999; Yañez, 1999; Reichling, 2003; Machkour M'rabet et al., 2007). In addition, *B. vagans* is confirmed for the Mexican state of Yucatan. Apparently this species is well adapted to perturbed areas or urbanized localities (Nicholas, 2002; Reichling, 2003; West, 2005; Machkour M'rabet et al., 2005; Machkour M'rabet et al., 2007); i.e. it was collected in Merida the capital and largest city of Yucatan, and its surrounding suburbs. However, it was also collected in more natural habitats like Calakmul, Campeche and a fragmented forest in Solidaridad, Quintana-Roo (Fig. 1). *B. epicureanum* was collected only in Yucatan and apparently still is an endemic species from the state; but in contrast, *B. epicureanum* collections were more restricted to areas with natural vegetation or low urbanized localities from Yucatan (Fig. 1). Distribution records from material examined suggest that *B. vagans* and *B. epicureanum* are

sympatric, occurring concurrently in localities with low deciduous and low deciduous thorny forests from north (i.e. Chablekal and Merida) to south Yucatan (i.e. Tzucacab) (Fig. 1).

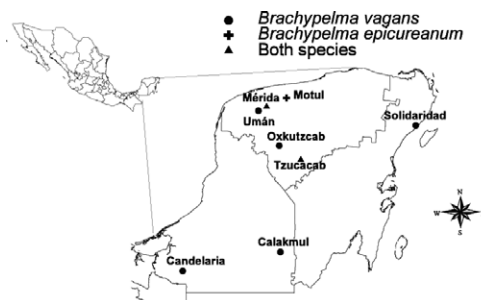


Figure 1. *Brachypelma* species distribution in southern Mexico.

Material Examined

Abbreviations.- Institutions: CER-UADY= Colección Entomológica Regional de la Universidad Autónoma de Yucatán, México; **Localities:** PY= Península of Yucatan; **Collectors:** CA = Carlos Arisqueta, PS = Patricia Samano.

Brachypelma epicureanum (Chamberlin 1925): MEXICO: YUCATAN: Mérida: Chablekal: Country Club (21° 05'N, 89° 37'W), 22 October 2007, P. Manrique, 2♂; Xmatkuil, Reserva Ecológica Cuxtal: (20° 51'N, 89° 37'W), 23 July 2007, G. Guillermo, 1♀, 6 September 2007, J. Herrera, 1♂, 28 May 2005, M. Ruiz, 2♀, Reserva Ecológica Cuxtal, Rancho Los Juanes: (20° 51'N, 89° 38'W), 6 October 2007, CA, 1♂; Motul: San Pedro Chacabal (21°07'N, 89°12'W), 8 June 2007, J. Carballo, 1♀; Peto: Tzucacab, Rancho Hobonil (20° 00'N, 89° 02'W), 3 October 2006, CA, 1♂.

Brachypelma vagans (Ausserer 1875): MEXICO: CAMPECHE: Calakmul (18° 07'N, 89° 46'W), Campamento Yaax'che, 15 November 2007, CA, 1♂; Candelaria (18° 18'N, 91° 20'W), 25 April 2006, PS, 2♀, 27 & 28 May 2006, PS, 6♀; QUINTANA-ROO: Solidaridad: (20° 38'N, 87° 04'W), *Pueblo sacbé*: 11 June 2006, PS, 3♀, 10 June 2006, L. Camacho, 1♀, 10 June 2006, A. Sanchez, 1♀, 9 June 2006, W. Cruz, 1♀; YUCATAN: Mérida: (20° 58'N, 89° 36'W) 17 April 2005, A. Mayral, 1♀, 3 June 2006, N. Ugalde, 1♀, 31 January 2005, P. Moo, 1♀, 26 March 2005, L. Magaña, 1♀, Emiliano zapata sur (20° 55'N, 89° 38'W), 12 March 2006, 1♀, Villas del Sol (21° 00'N, 89° 37'W), 28 June 2006, P. Monforte, 1♀, Brisas (20° 58'N, 89° 35'W), 18 June 2006, G. Rivera, 1♀, Juan Pablo II (20° 57'N, 89° 40'W), 5 October 2007, S. Baeza, 2♀ & 1♂, Miraflores (20° 57'N, 89° 35'W), 30 October 2007, J. Ayora, 1♀; Chablekal: Country Club (21° 05'N, 89° 37'W), 23 October 2007, P. Manrique, 1♂; Xmatkuil, Reserva Ecológica Cuxtal: (20° 51'N, 89° 37'W), 20 May 2005, D. Garcia 2♀, 21 June 2007, R. Sansores, 1♀, 28 July 2007, CA, 1♂; Oxkutzcab: Hacienda Tabi: (20°

20°N, 89° 25'W), June 2005, E. Santos, 1♀, 11 June 2005, R. Cortes, 2♀; Peto: Tzucacab, Rancho Hobonil (20° 04'N, 89° 03'W), 3 October 2006, CA, 1♀, 5 October 2006, 1♀; Uman: Fracc. Sn Lorenzo : (20° 53'N, 89° 43'W), 6 June 2006, R. Sansores, 2♀, 2 June 2006, CA, 6♀, 4 June 2006, CA, 3♀, 6 June 2006, CA, 3♀, 27 May 2006, CA, 1♀, 29 May 2006, CA, 3♀, 5 June 2007, CA, 2♀ & 1♂, 20 May 2007, CA, 3♀, 9 August 2007, CA, 1♂, 14 July 2007, CA, 1♂, 14 June 2007, CA, 1♂, 13 August 2007, CA, 1♀, 19 August 2007, CA, 1♂, 30 July 2007, CA, 1♀, 30 August 2007, CA, 1♂, 31 August 2007, CA, 1♂, 5 September 2007, CA, 1♂, 15 September 2007, CA, 1♂, 20 July 2007, CA, 1♂, 20 May 2007, CA, 1♀, Fracc. Siglo XXI : (20° 52'N, 89° 44'W), 16 July 2007, CA, 1♂, 19 August 2007, CA, 1♀, 31 August 2007, CA, 1♂, 2 August 2007, CA, 1♀, 3 September 2007, CA, 2♂, 17 September 2007, CA, 1♀, 27 June 2007, CA, 1♀, 19 August 2007, CA, 1♀, 3 July 2007, CA, 1♀, 13 August 2007, CA, 1♂; Tebec : (20° 52'N, 89° 43'W), 5 July 2007, CA, 1♂.

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