

ARTÍCULO:

**A new troglobitic scorpion of the genus *Taurepania* González-Sponga, 1978 from Venezuela (Scorpiones; Chactidae)**

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**A NEW TROGLOBITIC SCORPION OF THE GENUS  
*TAUREPANIA* GONZÁLEZ-SPONGA, 1978 FROM  
 VENEZUELA (SCORPIONES, CHACTIDAE)**

Valerio Vignoli & František Kovařík

**Abstract**

*Taurepania trezzii* sp. n. from Venezuela is described and compared with other species of the family Chactidae. It is characterized by trichobothrial pattern of type C, absence of retrolateral and prolateral pedal spurs and of tibial spurs, presence of two pairs of lateral eyes, and reduction of median eyes.

**Key Words:** Scorpiones, new species, systematics, Venezuela.

**Taxonomy:** *Taurepania trezzii* sp. n.

**Un nuevo escorpión troglobio del género *Taurepania* González-Sponga, 1978 de Venezuela (Scorpiones, Chactidae)**

**Resumen:**

Se describe una nueva especie de escorpión de Venezuela, *Taurepania trezzii* sp. n., y se compara con otras especies de la familia Chactidae. La especie se caracteriza por el patrón tricobotrial de tipo C, la ausencia de espolones tibiales, la presencia de dos pares de ojos laterales y la reducción de los medios.

**Palabras clave:** Scorpiones, nueva especie, Sistemática, Venezuela.

**Taxonomía:** *Taurepania trezzii* sp. n.

***Taurepania trezzii* sp. n.**

Figs. 1-12, Map 1, Table I.

**TYPE LOCALITY AND TYPE REPOSITORY.** Venezuela, Estado Bolívar, Canaima National Park, Auyán-Tepui (4°55'48"N, 61°04'25"W); sistema Aonda Superior (1650 m). Holotype in second author's collection (FKCP).

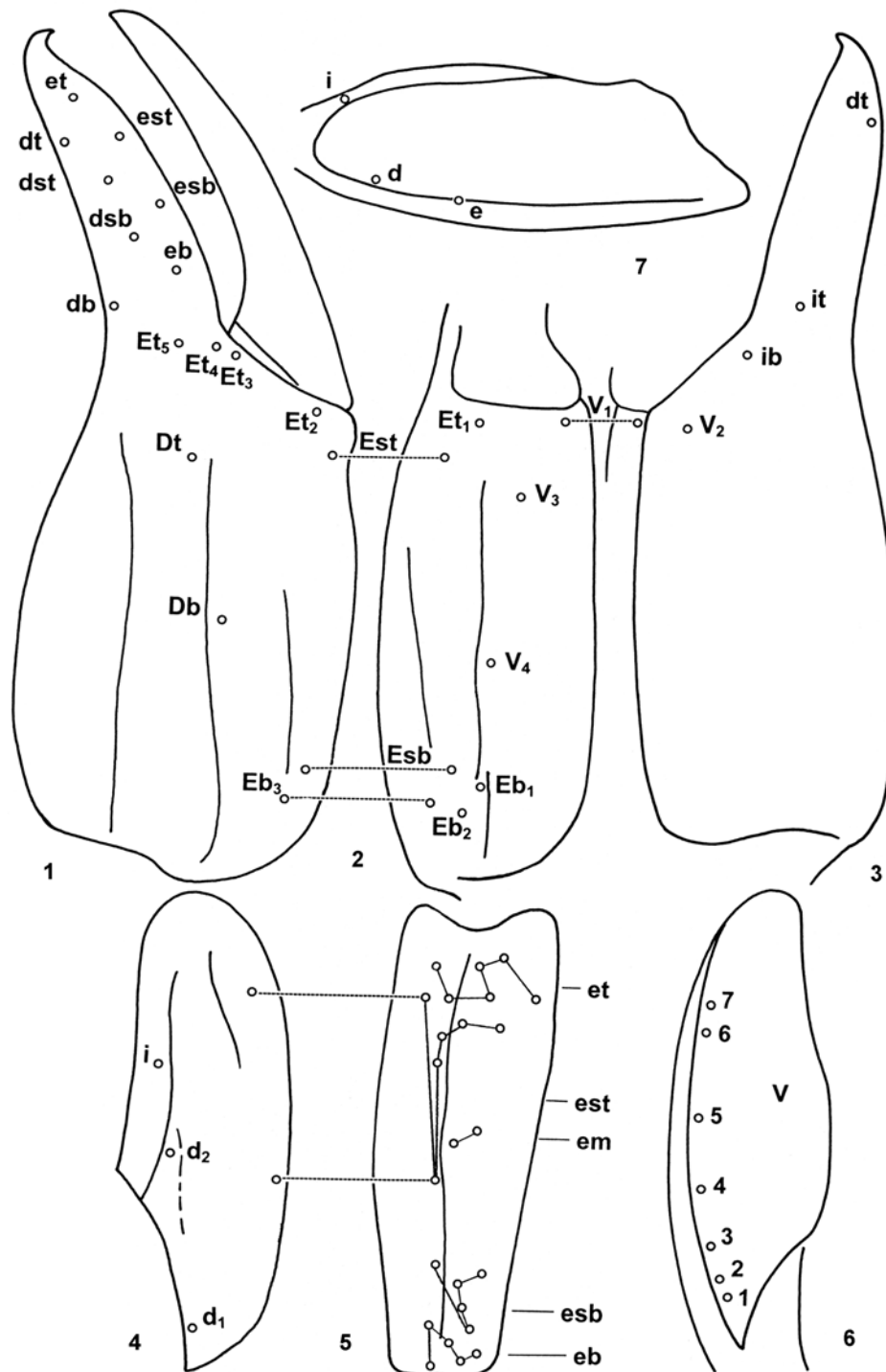
**Holotype.** A male collected on 21-VIII-1992 by Giuliano Trezzi. It is preserved in alcohol.

**Comments on the locality.** The scorpion was found during a scientific expedition which examined an impervious area called Aonda Superior (100 m higher than Sima Aonda), which contains several caves. The holotype was collected under a stone inside a 50 m deep gorge; the biotope was characterized to us as dark and extremely humid.

**ETYMOLOGY.** Named after Giuliano Trezzi, who collected the unique holotype.

**DIAGNOSIS.** Sternum subpentagonal. Trichobothrial pattern of type C. Pedipalp femur with three trichobothria, one of them internal. Ventral surface of pedipalp patella with seven trichobothria. Retrolateral and prolateral pedal spurs absent. Tibial spurs absent. Two pairs of lateral eyes well developed, median eyes reduced. Carapace smooth and without carinae, reduced median eyes situated in its anterior third. Mesosoma smooth, without carinae. All sternites smooth and without carinae. Stigmata minute and circular. Pectines without fulcra and with six teeth. Movable finger of pedipalp with seven rows of granules which include one internal granule, no external granules, are not slanted (appear as one row), and have one distal granule. Legs without spines. Femur and patella of legs with several bristles. Tarsomeres with numerous bristles, namely internally. Metasoma ventrally without carinae.

**DESCRIPTION:** The holotype is 27.1 mm long. The habitus is shown in Figs. 8 and 9. For number and distribution of trichobothria on tibia, patella, and femur of pedipalps see Figs. 1-7. Measurements of the carapace, telson, segments of the metasoma and segments of the pedipalps, and numbers of pectinal teeth are given in Table I. Chelicerae are smooth and without ventral denticles (Figs. 10-11).



**Fig. 1-7.** *Taurepania trezzii* sp. n. In Figs. 1-3 the first capital letters denote trichobothria situated on the manus, and the first lower-case letters denote those situated on the fixed finger of pedipalp. Figs. 4-6 show the distribution of trichobothria on the patella of pedipalp. Fig. 7 shows the distribution of trichobothria on the femur of pedipalp.

Explanation: First letters: **D**: dorsal, **E**: external, **I**: internal, **V**: ventral. Second or second plus third letters: **b**: basal, **sb**: supra-basal, **m**: medial, **st**: sub-terminal, **t**: terminal, **v**: ventral. Numerals distinguish individual trichobothria of the same classification. Designation and description of trichobothria according to Vachon (1974). Morphological terminology according to Stahnke (1970).

**Coloration:** The mesosoma, metasoma, and legs are yellow to yellowish brown, pedipalps and carapace are reddish brown, and the telson and chelicerae are yellow.

**Mesosoma and carapace:** The mesosoma is smooth and without carinae. There are only two long, symmetrical bristles on each tergite and several granules on the seventh segment. The carapace is smooth, without carinae, and bears several long bristles. Present are two pairs of normally developed lateral eyes and reduced median eyes. The median eyes are situated in anterior third of the carapace, 1.2 mm from the anterior margin

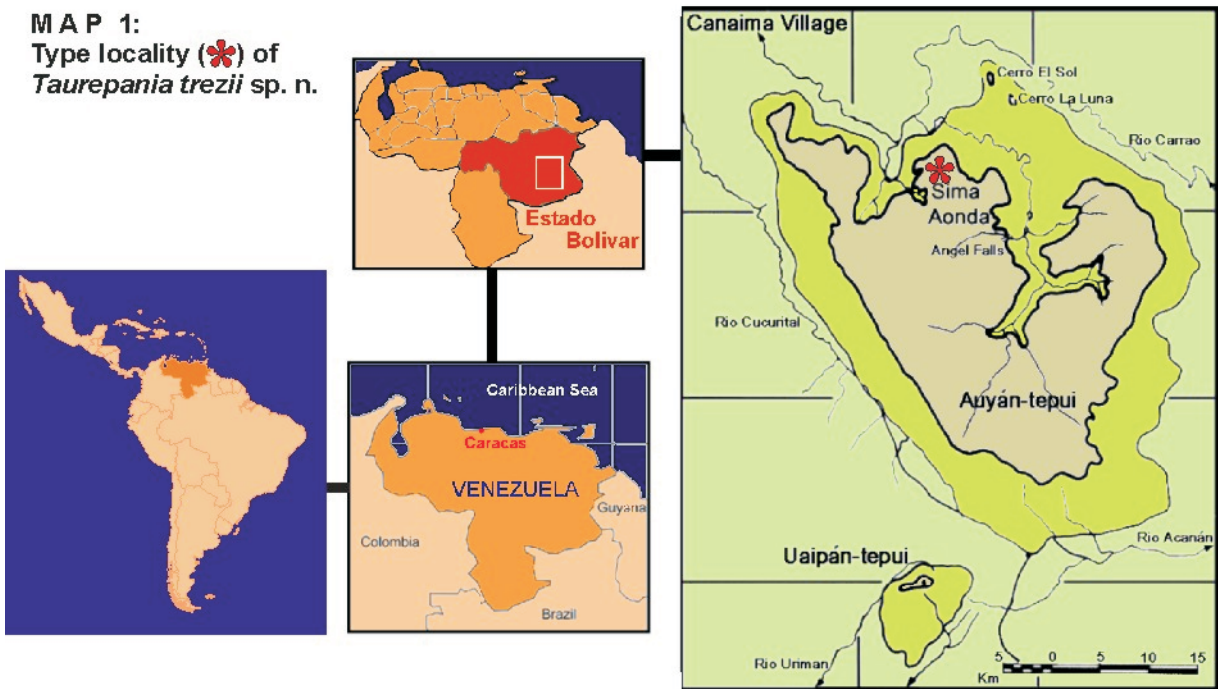
and 2.6 mm from the posterior margin. All sternites are smooth, without carinae, and with several hairs. Stigmata are minute and circular. The pectines including teeth are hirsute; they lack fulcra and have six teeth each.

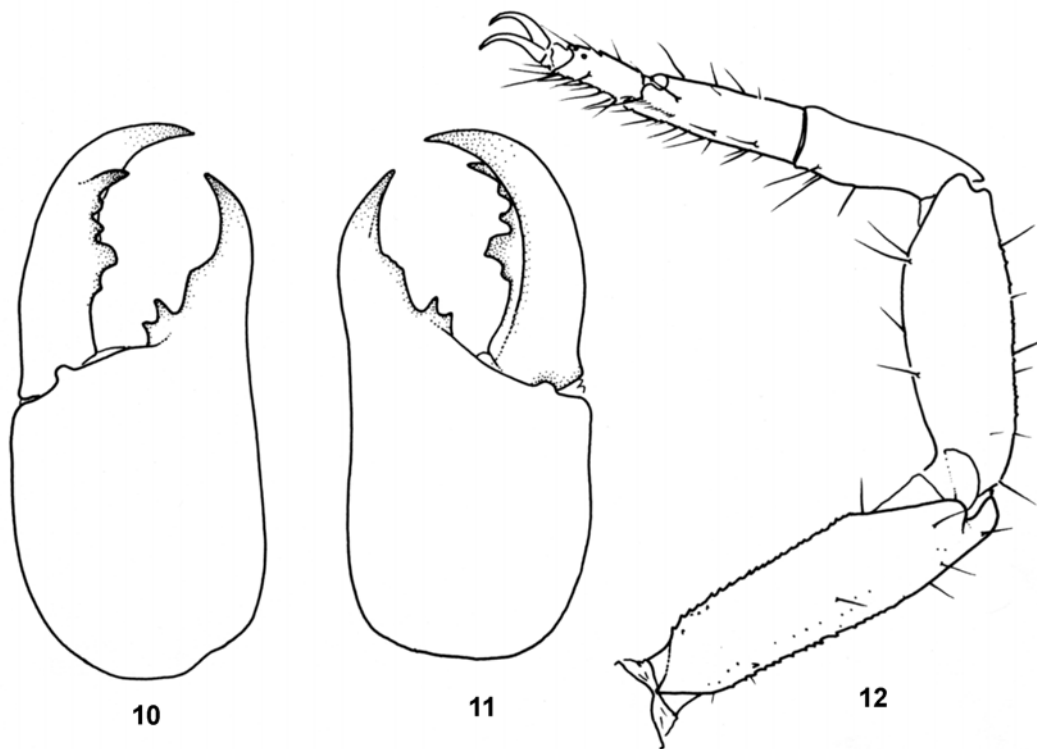
**Metasoma and telson:** The metasoma is smooth and ventrally without carinae, but ventrally on the fifth segment bears about 10 solitary pointed tubercles and a row of tubercles on the posterior margin. The first to fourth segments bear four conspicuous carinae composed of large, closely spaced granules. Lateral carinae run throughout length of segments, whereas dorsal



Fig. 8. *Taurepania trezii* sp. n., dorsal view.  
 Fig. 9. *Taurepania trezii* sp. n., ventral view.

MAP 1:  
 Type locality (\*) of  
*Taurepania trezii* sp. n.





Figs. 10-12. *Taurepania trezzii* sp. n. 10: Chelicerae, dorsal view. 11: Chelicerae, ventral view. 12: Second leg.

**Table I**  
Measurements (in millimeters)  
of holotype of *Taurepania trezzii* sp. n.

Total	length	27.1
Carapace	length	3.8
	width	4.0
Metasoma	length	14.3
segment I	length	1.1
	width	1.8
segment II	length	1.6
	width	1.4
segment III	length	1.7
	width	1.4
segment V	length	2.0
	width	1.2
telson	length	3.9
Pedipalp		
femur	length	3.5
	width	1.4
patella	length	4.2
	width	1.5
tibia	length	7.6
	width	2.4
finger mov.	length	4.0
Pectinal teeth		6:6

carinae consist of only two to six granules. The fifth segment is essentially without carinae, only dorsal carinae are indicated by about eight solitary granules. The telson is smooth, bulbous, with a very short aculeus and several bristles; there is no subaculear tubercle.

**Pedipalps:** The pedipalps are smooth, with conspicuous carinae. The femur and patella have four carinae and the femur is parallel-sided both dorso-ventrally and latero-medially. The chela has seven mostly smooth (granulated to a small extent) but well discernible carinae. The movable finger bears seven rows of granules which include one internal granule, no external granules, are not slanted (form a single row), and have one distal granule.

**Legs:** Retrolateral and pro-lateral pedal spurs as well as tibial spurs are absent. The legs are smooth except for a dorsal and a ventral row of granules on the femur. Spines are absent. The femur and patella bear several bristles. Tarsomeres bear numerous bristles, namely on the internal surfaces. The lateroapical margin of tarsi is straight (Fig. 12) and lateral claws are long.

**AFFINITIES.** The features given in the diagnosis and described below distinguish *Taurepania trezzii* sp. n. from all other species of scorpions.

The placement of *Taurepania trezzii* sp. n. in the family Chactidae is indicated by the trichobothrial pattern (see Fig. 1-7), namely the characteristic position of trichobothria on the femur of pedipalp (Fig. 7 and figs. 74 - 77 in Soleglad & Sissom, 2001: 46), by the straight denticle rows on the chela, and by two pairs of lateral eyes.

Some of the characters noted in the above description are so unique that they invite the possibility of

placement in a new genus. Most notable of them is the absence of both pedal spurs; however, this is an adaptation to life in caves found also in *Sotanochactas elliotti* (Mitchell, 1971), *Typhlochactas cavicola* Francke, 1986, *T. granulatus* Sissom & Cokendolpher, 1998, and *T. rhodesi* Mitchell, 1968 (see Sissom & Cokendolpher, 1998), which belong to another family (Superstitioniidae Stahnke, 1940) and therefore render this character ill-suited for evaluating relationships.

*Taurepania trezzii* sp. n. has stigmata minute and circular, like those in *Broteochactas* Pocock, 1893 and *Taurepania* González-Sponga, 1978; this character precludes placing the new species in the genus *Brotheas* C. L. Koch, 1837, which has long, slit-like stigmata. Pectines without fulcra place the new species in the genus *Taurepania*, which is very close to the genus *Broteochactas*.

Apart from the morphology, the generic placement of the new species is supported also by geographic considerations. The genus *Taurepania* González-Sponga, 1978 comprises species from Venezuela and Guyana (*T. manisapanensis* González-Sponga, 1992, *T. porosa* (Pocock, 1900), *T. verneti* González-Sponga, 1992, and *T. vestigialis* González-Sponga, 1978), none of which is troglobitic. No troglobitic species have been described in the genera *Broteochactas* Pocock, 1893 and *Brotheas* C. L. Koch, 1837 either.

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