Revista Ibérica de Aracnología, nº **35** (31/12/2019): 29–32.
Grupo Ibérico de Aracnología (S.E.A.). ISSN: 1576 - 9518.

A SHORT CONTRIBUTION TO THE KNOWLEDGE OF *EUSCORPIOPS SEJNAI* (KOVAŘÍK, 2000), DESCRIBED FROM VIETNAM (SCORPIONES: SCORPIOPIDAE)

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Abstract: *Euscorpiops sejnai* (Kovařík, 2000), a species belonging to the family Scorpiopidae Kraepelin, 1905, is redescribed based on two topotype specimens, one male and one female, collected in the type locality, the Bach Ma National Park in Vietnam. This contribution is part of a global inventory survey of the Vietnamese scorpion fauna conducted by the first author (T.-H.T), in connection with the preparation of a doctoral thesis.
Key words: Scorpiones, Scorpiopidae, *Euscorpiops sejnai,* redescription, Vietnam.

Breve contribución al conocimiento de *Euscorpiops sejnai* (Kovařík, 2000), descrita de Vietnam (Scorpiones: Scorpiopidae)
Resumen: Se redescribe *Euscorpiops sejnai* (Kovařík, 2000), especie perteneciente a la familia Scorpiopidae Kraepelin, 1905, en base a dos especímenes topotípicos, uno masculino y uno femenino, recolectados en la localidad tipo del Parque Nacional Bach Ma, en Vietnam. Esta contribución forma parte de un inventario global de la fauna de escorpiones vietnamitas realizada por el primer autor (T.-H.T), en relación con la preparación de una tesis doctoral.
Palabras clave: Scorpiones, Scorpiopidae, *Euscorpiops sejnai,* redescripción, Vietnam.

Introduction

In the last twenty years, several new species belonging to the genus *Euscorpiops* Vachon, 1980 have been described from Vietnam (Lourenço & Pham, 2014), however, the precise status of some of these species remain obscure. This is the case of *Euscorpiops kaftani* (Kovařík, 1993) and *Euscorpiops sejnai* (Kovařík, 2000). Originally described in the genus *Scorpiops*, these species were subsequently transferred to the genus *Euscorpiops*. Any clarification of their status or comparative study is however, totally hampered by their incomplete descriptions, without adequate illustrations of most characters. Furthermore, their type material is deposited in a private collection and is not available for study.

During the global inventory survey of the Vietnamese scorpion fauna performed by Mrs Tran T. Hang and Dr. Pham D. Sac, which main objective is the preparation of a doctoral thesis by Mrs Tran T. Hang, two specimens belonging to the genus *Euscorpiops* Vachon, 1980 were collected in the Bach Ma National Park in Vietnam, which is in fact the type locality of *Euscorpiops sejnai*. After a careful examination, we concluded that the new collected material could correspond to this last species. In order to bring a better clarification on the status of this species, we propose here a short redescription.

Methods

Illustrations and measurements were made with the aid of a Wild M5 stereo-microscope with a drawing tube (camera lucida) and an ocular micrometer. Measurements follow Stahnke (1970) and are given in mm. Trichobothrial notations follow Vachon (1974) and morphological terminology mostly follows Hjelle (1990).

Taxonomic treatment

Family **Scorpiopidae** Kraepelin, 1905

Genus ***Euscorpiops*** Vachon, 1980

***Euscorpiops sejnai* (Kovařík, 2000)** (Fig. 1-13)
Scorpiops sejnai Kovařík, 2000: 195.

MATERIAL: 1 male, Vietnam, Thua Thien Hue province, Bach Ma National Park (16°13'454" N – 107°51'284" E), 398 m, 16/VI/2018 (Tran T. Hang), specimen found under a rock; 1 female, Vietnam, Thua Thien Hue province, Bach Ma National Park (16°13'446" N – 107°51'265" E), 391 m, 16/VI/2018 (Tran T. Hang), specimen collected at small cave entrance (cave without a name).
1 male and 1 female. Male deposited in the collections of the Muséum national d'Histoire naturelle, Paris. Female deposited in the collections of the Vietnam National Museum of Nature of the Vietnam Academy of Science and Technology.

NEW DIAGNOSIS: *Euscorpiops sejnai* exhibits the general characteristics of the genus *Euscorpiops* (Vachon, 1980; Lourenço, 1998). Total body length is medium in relation to other species of the genus. Total length for the studied adult male is 32.4 mm. The general coloration ranges from yellow-brown to reddish-brown. Body and pedipalps moderately slender. Internal aspect of patella with two small spinoid tubercles of similar size; internal aspect of chela with conspicuous spinoid granules. Trichobothrial pattern with three trichobothria on femur: dorsal, internal and external. Patella with 2 dorsal, 1 internal, 9 ventral and 18 external trichobothria in both sexes. Chelal manus with 4 ventral, 2 dorsal (*Dt*, *Db*), 2 internal (*ib*, *it*), 1 *Est*, 5 *Et*, 1 *Esb* and 3 trichobothria in the *Eb* series. Trichobothrium Eb_3 is distal in relation to Eb_2 (Vachon, 1980) and at the same level as Dt.

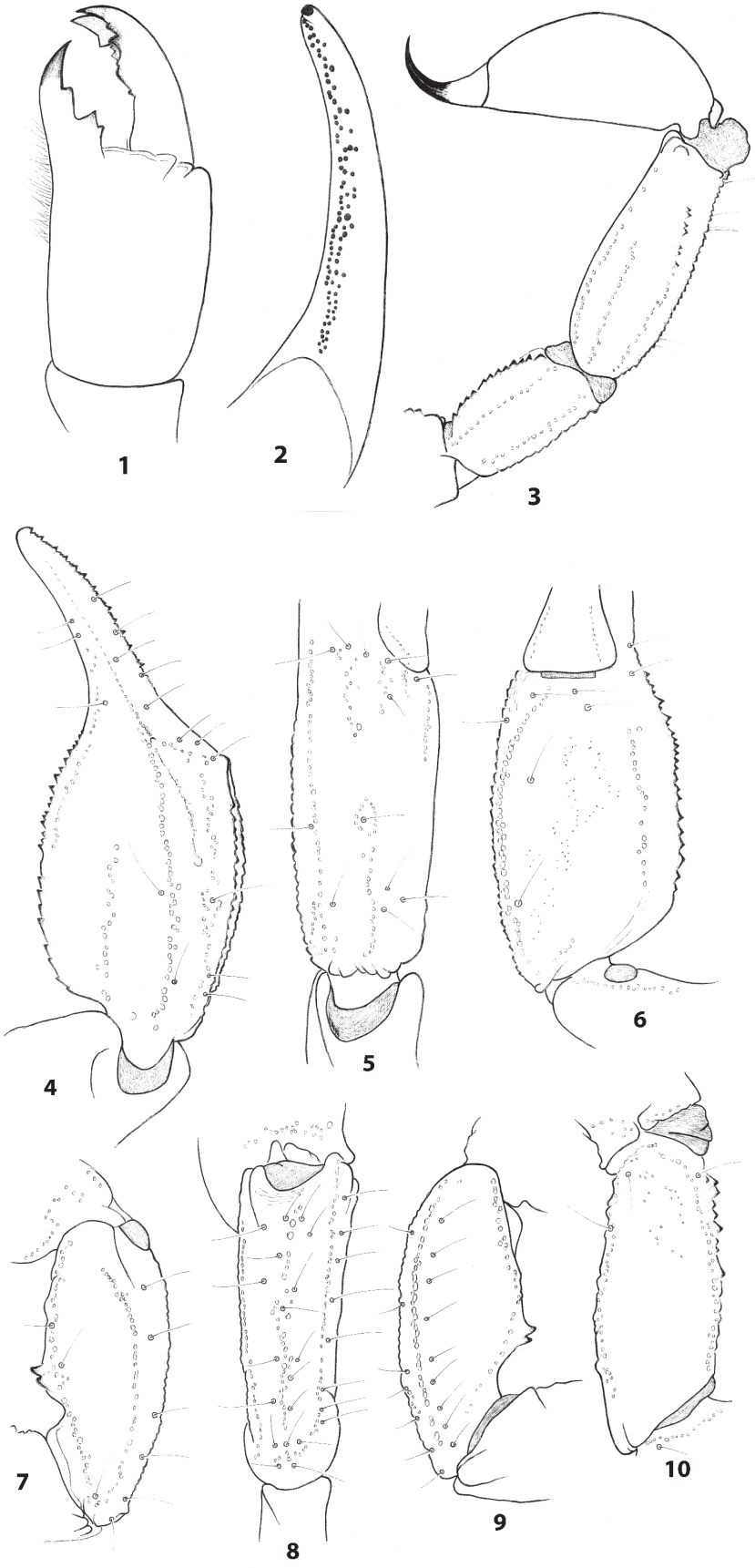


Fig. 1-10. *Euscorpiops sejnai*, male topotype. **1**. Chelicera, dorsal aspect. **2**. Cutting edge of movable chelal finger. **3**. Metasomal segments IV-V and telson, lateral aspect. **4-6**. Chela, dorso-external, external and ventral aspects. **7-9**. Patella, dorsal, external and ventral aspects. **10**. Femur, dorsal aspect.



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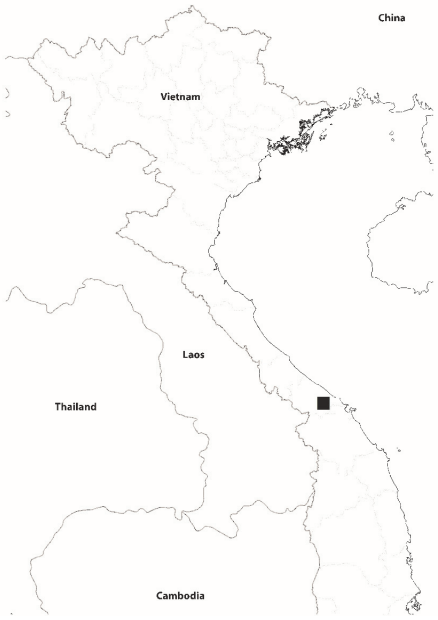
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Fig. 11-13. *Euscorpiops sejnai*, female topotype. **11**. Chelicerae and carapace, dorsal aspect. **12**. Ventral aspect showing coxapophysis, sternum, genital operculum, pectines and sternite III. **13**. Metasomal segments III-V and telson, lateral aspect. **Fig. 14.** The typical vegetation of the type locality of *E. sejnai*. **Fig. 15.** Map of Vietnam showing the type locality of *E. sejnai* (black square).

DESCRIPTION: **Coloration** yellow-brown to reddish-brown. Carapace reddish-brown with paler zones on anterior and posterior edges and on furrows. Tergites yellow-brown with paler confluent zones. Metasomal segments reddish-brown with carinae darker; telson yellow; base of aculeus yellow and tip reddish. Chelicerae yellow with conspicuous variegated spots; these are better marked at the base of the teeth. Pedipalps reddish-brown; carinae and granulations on fingers fingers darker than chela manus. Legs brown-yellow. Venter globally yellow to reddish-yellow with some infuscations on sternite VII.

Morphology. Carapace weakly granular, granulation better marked on the anterior edge; furrows moderately deep. Median eyes anterior to the middle of carapace; three pairs of lateral eyes, the third pair slightly smaller than the first two. Sternum pentagonal, slightly longer than wide. Tergites moderately granulated; granulation thin; VII with five carinae, moderately marked. Pectines large in male, reduced in female; pectinal tooth count 6-6 in male, 5-5 in female; fulcra absent in both sexes. Sternites almost smooth and punctate; sternite VII with vestigial carinae and little granulation. Metasomal segment I wider than long; segments II to V longer than wide; 10-8-8-8-7 carinae present on segments I-V; dorsal carinae on segments II-IV with a single moderately marked posterior spinoid granule; metasomal tegument weakly granulated; ventral carina on segment V with moderately marked spinoid granules. Telson vesicle with thin granulations on male and without granulations on female. Aculeus strongly curved on male, much less on female. Setation moderate to weak on metasomal segments and telson. Pedipalps: femur with dorsal internal, dorsal external, ventral internal and ventral external carinae strongly marked; tegument moderately granular. Patella with dorsal internal, dorsal external, ventral internal, ventral external and external carinae strongly marked; two moderately marked spinoid granules of similar size present on internal aspect; tegument moderately granular. Chela with dorsal marginal, external secondary, ventral internal and ventral carinae strongly marked; tegument granulated dorsally and ventrally; internal aspect with conspicuous spinoid granules, less marked on female. Chelal fingers with two longitudinal series of granules, almost fused, a few inner and several outer accessory granules. Cheliceral dentition as defined for the Scorpionoidea (Vachon, 1963); 4-5 teeth on ventro-internal face of movable finger. Trichobothriotaxy type **C**, as shown in figures 4-10 (Vachon, 1974): see diagnosis for additional details.

Morphometric values (in mm) of male topotype (values are not proposed for female because not a full adult). Total length (including telson) 32.4. Carapace: length 5.2; anterior width 3.3; posterior width 5.4. Mesosoma length 9.7. Metasomal segment I: length 1.6, width 1.9; II: length 1.9, width 1.7; III: length 2.0, width 1.5; IV: length 2.3, width 1.4; V: length 3.9, width 1.4, depth 1.5. Telson length 5.8. Vesicle: width 1.8, depth 1.7. Pedipalp: femur length 5.2, width 2.0; patella length 5.2, width 2.0; chela length 9.7, width 3.2, depth 2.3; movable finger length 4.4.

Acknowledgements

This research was financed by Vietnam National Foundation for Science and Technology Development (Nafosted) under grant number 106-NN.06-2015.38.

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