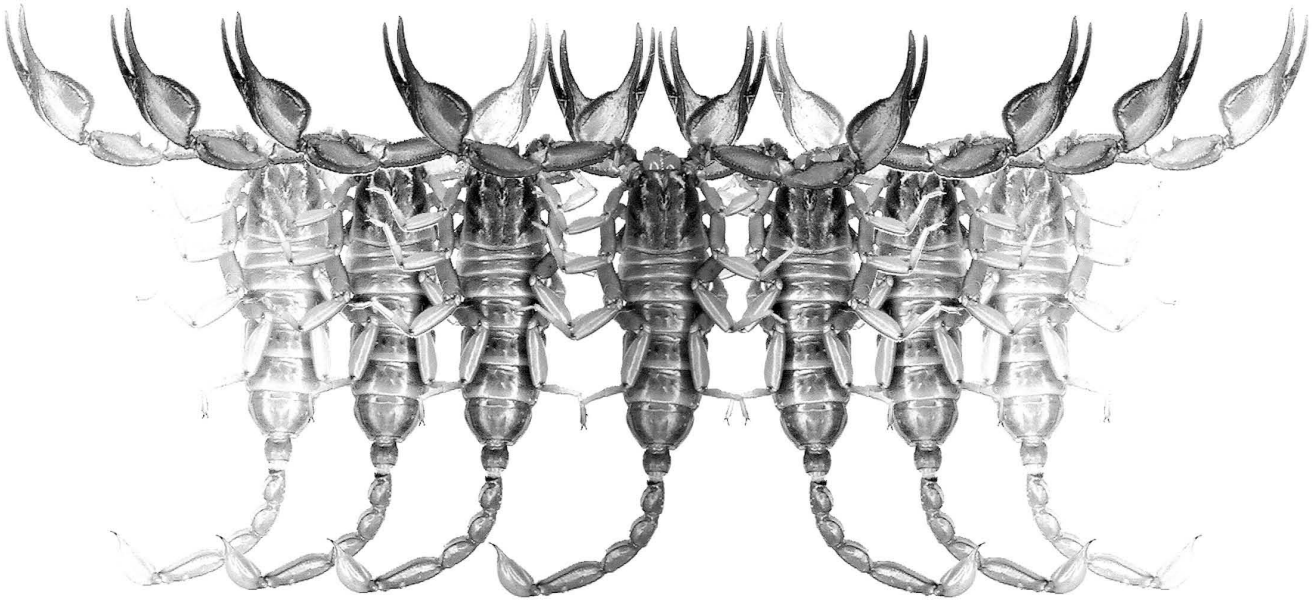
Euscorpius

Occasional Publications in Scorpiology



Alloscorpiops citadelle sp. n. from Thailand (Scorpiones: Euscorpiidae: Scorpiopinae)

František Kovařík

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

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Summary

Alloscorpiops citadelle **sp. n.** from Thailand is described and compared with *A. anthracinus* (Simon, 1887). *A. citadelle* **sp. n.** is characterized mainly by a higher number of trichobothria on the patella, which has 29–34 external (23–24 in *A. anthracinus*) and 19–21 ventral (15–19 in *A. anthracinus*) trichobothria.

Introduction

Alloscorpiops was described by Vachon (1980: 155) as a subgenus, and has become a genus with elevation of the Scorpiopinae to family status. Vachon distinguished *Alloscorpiops* from all other genera of Scorpiopinae according to the number of ventral trichobothria on the chela, 10–13 in *Alloscorpiops* (Figs. 11 and 15) and 4 (rarely 3, in *Scorpiops irenae* Kovařík, 1994 only) in *Dasyscorpiops*, *Euscorpiops*, *Neoscorpiops*, *Parascorpiops* and *Scorpiops*. Soleglad & Sissom (2001) revised the family Euscorpiidae, in which they placed the subfamily Scorpiopinae.

The genus *Alloscorpiops* comprises taxa originally described as *Scorpiops anthracinus* Simon, 1887, *Scorpiops lindstroemii* Thorell, 1889 and *Scorpiops lugubris* Thorell, 1889; two latter are, however, considered synonyms of *Alloscorpiops anthracinus* (Simon, 1887). The hereby described *Alloscorpiops citadelle* **sp. n.** thus is the second valid species of the genus, and its discovery reveals a considerable variation, particularly in the number of external trichobothria on the patella.

Systematics

Alloscorpiops Vachon, 1980
(Figs. 1–22)

Scorpiops (*Alloscorpiops*) Vachon, 1980: 151; Bastawade, 1997: 104.

Alloscorpiops: Stockwell, 1989: 120; Sissom, 1990: 114; Kovařík, 1998: 141; Lourenço, 1998: 246; Fet, 2000: 487; Kovařík, 2000: 155; Soleglad & Sissom, 2001: 49, 93, figs. 99, 103, 117; Kovařík, 2009: 32.

Type species: *Scorpiops anthracinus* Simon, 1887.

DIAGNOSIS. Total length 37–68 mm. First to fourth metasomal segments with paired parallel ventral median carinae. Pair median eyes and three pairs of lateral eyes present. Movable fingers of pedipalps with granules in two rows. Patella of pedipalp with 23–34 external and 15–21 ventral trichobothria. Chela of pedipalp bears 10–13 trichobothria. Trichobothrium Eb_3 on external surface of chela is located between trichobothria *Dt* and *Est*.

Alloscorpiops anthracinus (Simon, 1887)
(Figs. 1–2)

Scorpiops anthracinus Simon, 1887: 112; Pocock, 1893: 328; Kraepelin, 1899: 180; Pocock, 1900: 74.

Scorpiops (*Alloscorpiops*) *anthracinus*: Vachon, 1980: 151 and 153, figs. 18–25.

Alloscorpiops anthracinus: Kovařík, 1998: 141; Fet, 2000: 487; Kovařík, 2000: 155, figs. 8, 24, and 26; Soleglad & Sissom, 2001: 93.

= *Scorpiops lindstroemii* Thorell, 1889: 573; Pocock, 1893: 328; Pocock, 1900: 74 (syn. by Kraepelin, 1913: 161–162, see comments below).

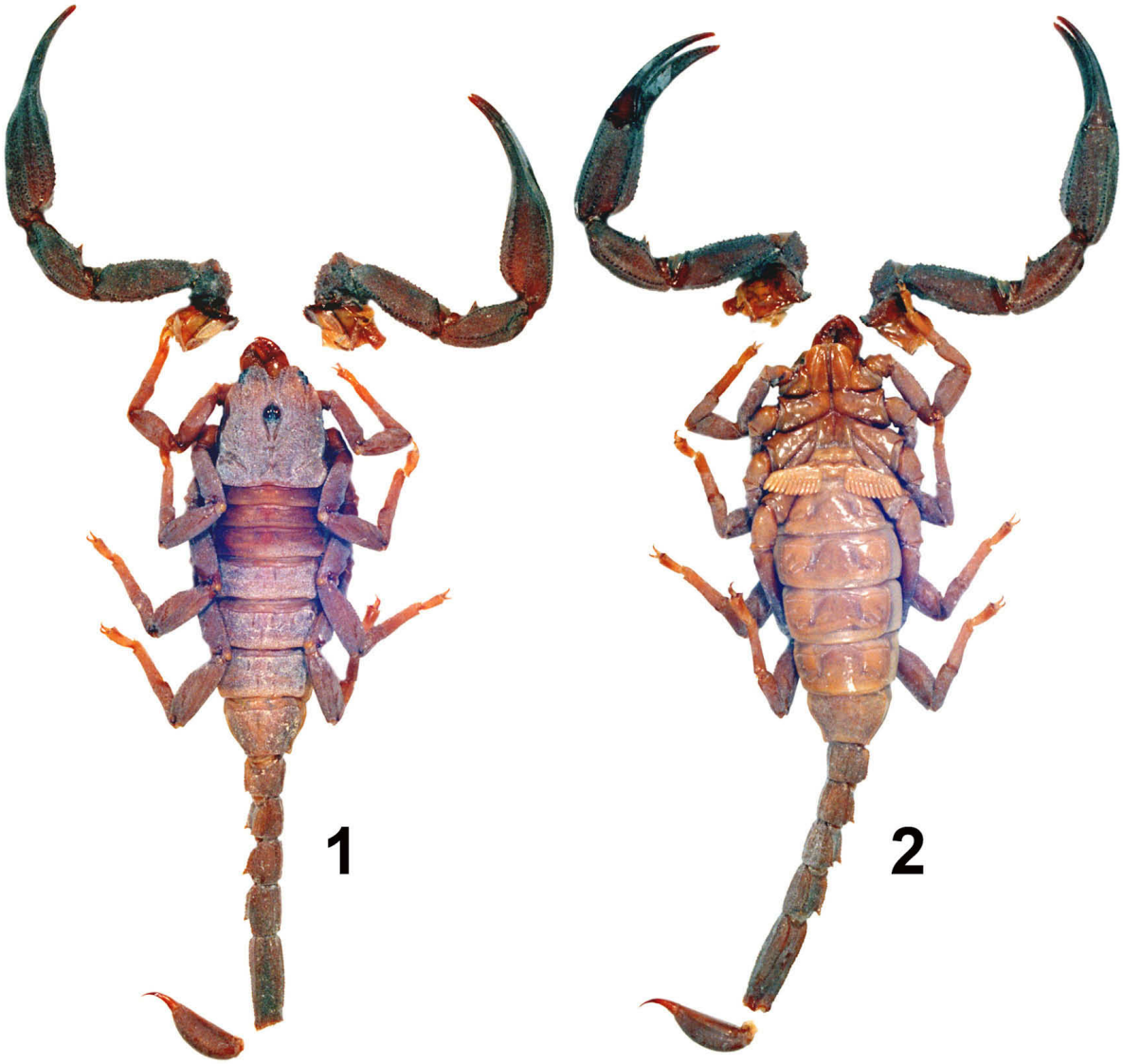
Scorpiops (*Alloscorpiops*) *lindstroemi*: Vachon, 1980: 151.

Alloscorpiops lindstroemi: Kovařík, 1998: 141.

Alloscorpiops lindstroemii: Fet, 2000: 487; Kovařík, 2000: 156; Soleglad & Sissom, 2001: 34, 57, 58, 60, 65, 66, 68, 69, 93, and 94, figs. 4, 136, 143, 156, 177, 188, 189, 201, and 221; Soleglad & Fet, 2003a: 6; Soleglad & Fet, 2003b: 7.

= *Scorpiops lugubris* Thorell, 1889: 579; Pocock, 1893: 328 (syn. by Pocock, 1900: 74).

TYPE LOCALITY AND TYPE REPOSITORY. Tavoy, Myanmar; MNHN (Muséum national d´Histoire naturelle, Paris, France).



Figures 1–2: *Alloscorpiops anthracinus* (Simon, 1887), dorsal and ventral views, male 60 mm long, Myanmar, Tavoy (Tenasserim), ZMUH (Zoologisches Institut und Zoologisches Museum, Universität Hamburg, Germany).

DIAGNOSIS. Total length 48–68 mm. Patella of pedipalp with 23–24 (5 *eb*, 2 *esb*, 2 *em*, 8–9 *est*, 6 *et*) external and 15–19 ventral trichobothria. Chela of pedipalp bears 10–12 ventral trichobothria. Pectinal teeth number 8–11.

COMMENTS. This species was based on a specimen for which Simon did not determine the sex. I have not been able to examine the type; however, I have studied a male from the Hamburg museum (Figs. 1–2). *Alloscorpiops lindstroemii* (Thorell, 1889) is based on one specimen collected by Leonardo Fea in Myanmar (Plapoo, Mt. Mooleyit). Its total length is 68 mm (Thorell, 1889: 578). The position and distribution of trichobothria on the chela and patella of pedipalps have not been published. Ventral trichobothria on the patella number 15 (Pocock, 1900: 66), and pectinal teeth number 8 (Thorell, 1889: 578). *Scorpiops lugubris*, based on a 24 mm long juvenile from the same locality (Thorell, 1889: 583), was regarded by Pocock (1900: 74) as a junior synonym of *A. lindstroemii*. Kraepelin (1913: 161–162) doubted the validity of *A. lindstroemii* and thought that it could be a synonym of *A. anthracinus*. He believed the type of *A. lindstroemii* to be a female of *A. anthracinus* and their different numbers of pectinal teeth to be only due to sexual dimorphism. I agree with this opinion.

Alloscorpiops citadelle Kovařík, **sp. n.**

(Figs. 3–22)

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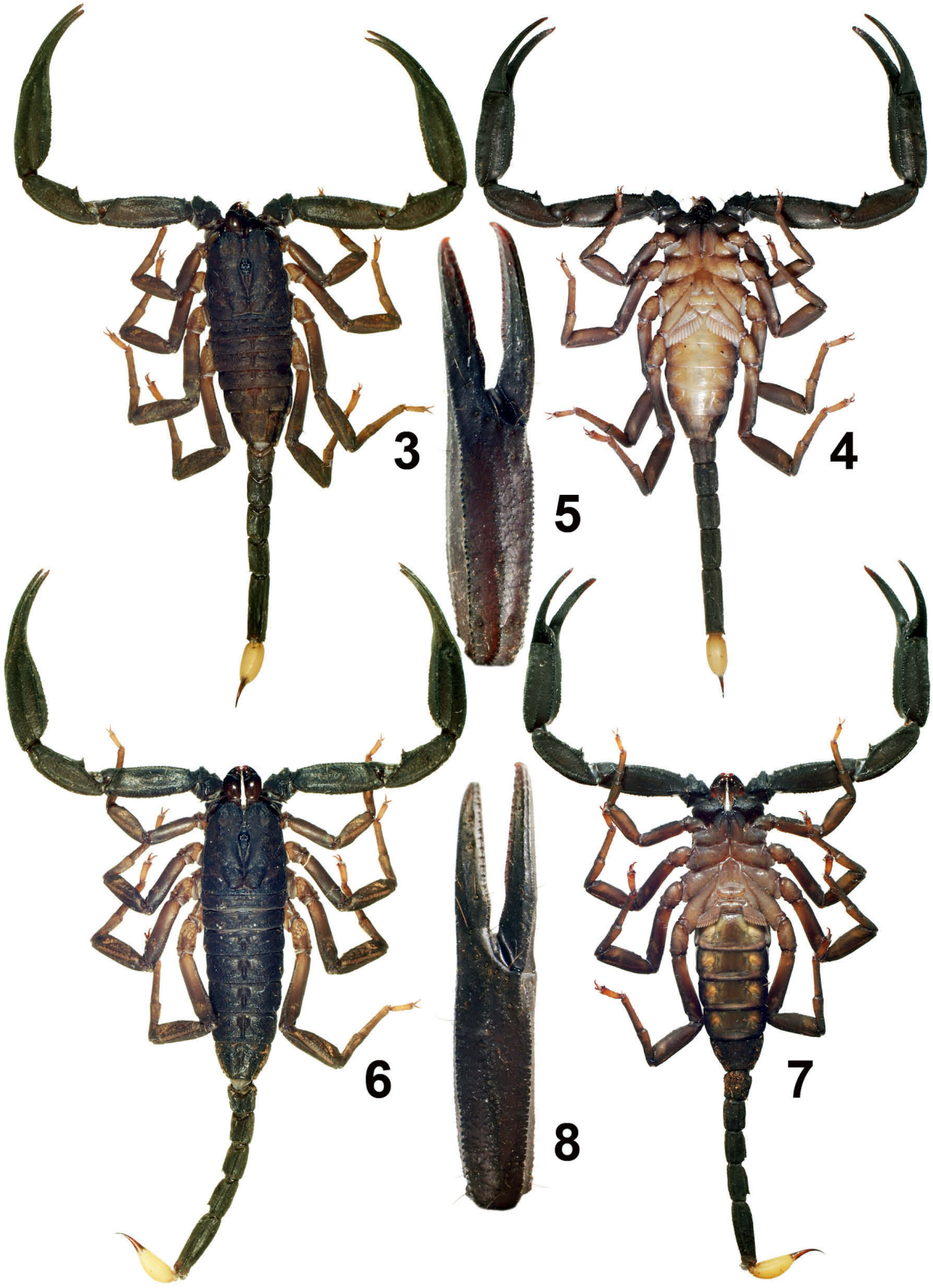
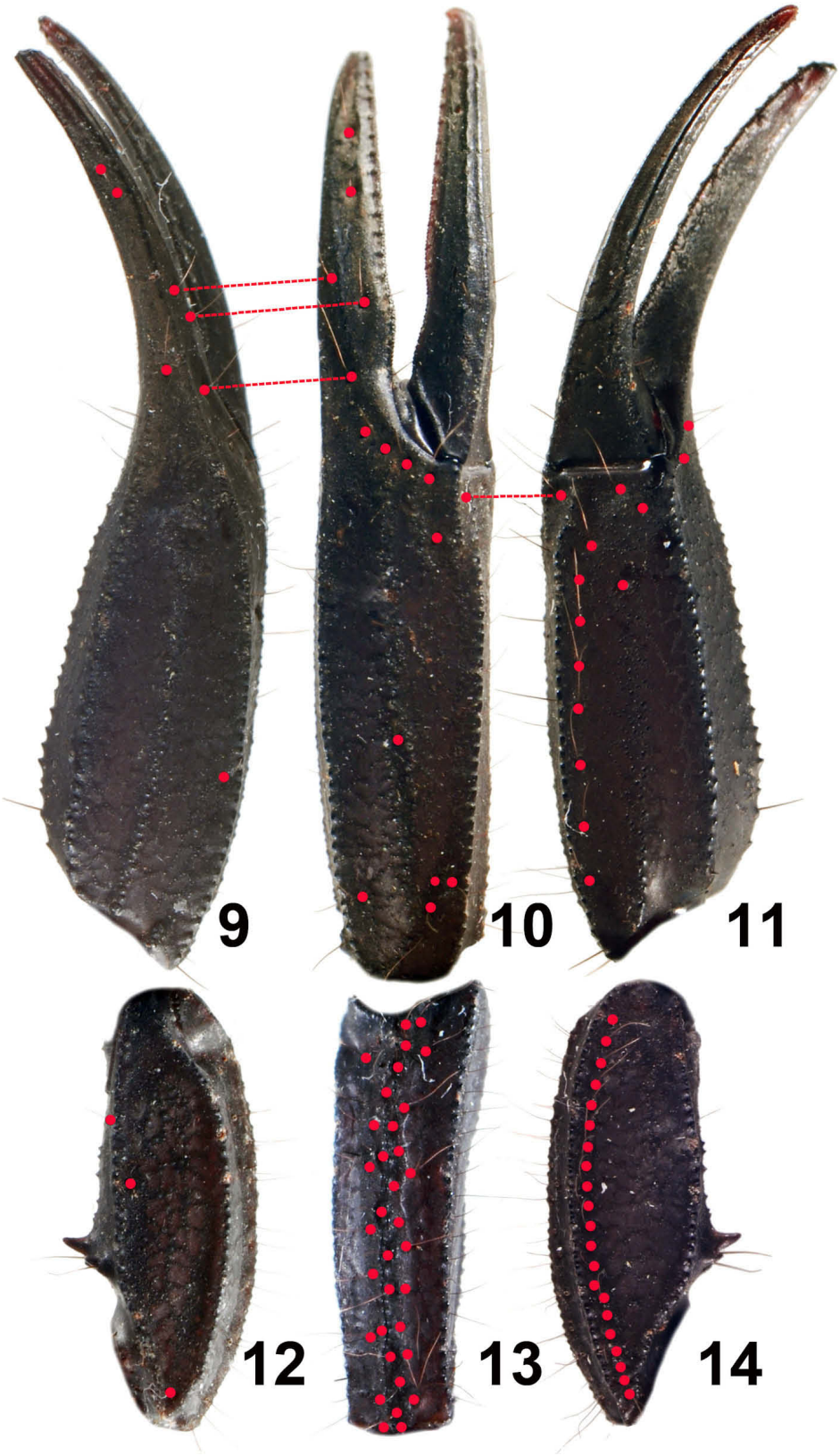
TYPE LOCALITY AND HOLOTYPE REPOSITORY. Thailand, Klong Phanom, 8.88039N 98.67387E; author's collection (FKCP).



Figures 3–8: *Alloscorpiops citadelle* **sp. n. 3–5.** Male holotype, dorsal and ventral views, and chela external. **6–8.** Female allotype, dorsal and ventral views, and chela external.



Figures 9–14: *Alloscorpiops citadelle* **sp. n.** Female allotype, trichobothrial pattern indicated. **9.** Chela dorsal. **10.** Chela external. **11.** Chela ventral. **12.** Patella dorsal. **13.** Patella external. **14.** Patella ventral.

Figures 15: *Alloscorpiops citadelle* **sp. n.** Male holotype, chela ventral view, trichobothria not indicated.

TYPE MATERIAL. Thailand, Klong Phanom, 8.88039N 98. 67387E (Loc. No. 7), II.2013, 1♂ 2 ♀ 1 juv. (holotype, allotypic paratype, paratypes), leg. L. Nerad; Khao Sok, 8.918312N 98.527608E (Loc. No. 6), II.2013, 1juv. (live paratype, Fig. 20), leg. L. Nerad; Sai Yok, near Kanchana Buri, XI.2005, 1juv. (paratype), leg. V. Šejna. All specimens are in the author's collection (FKCP).

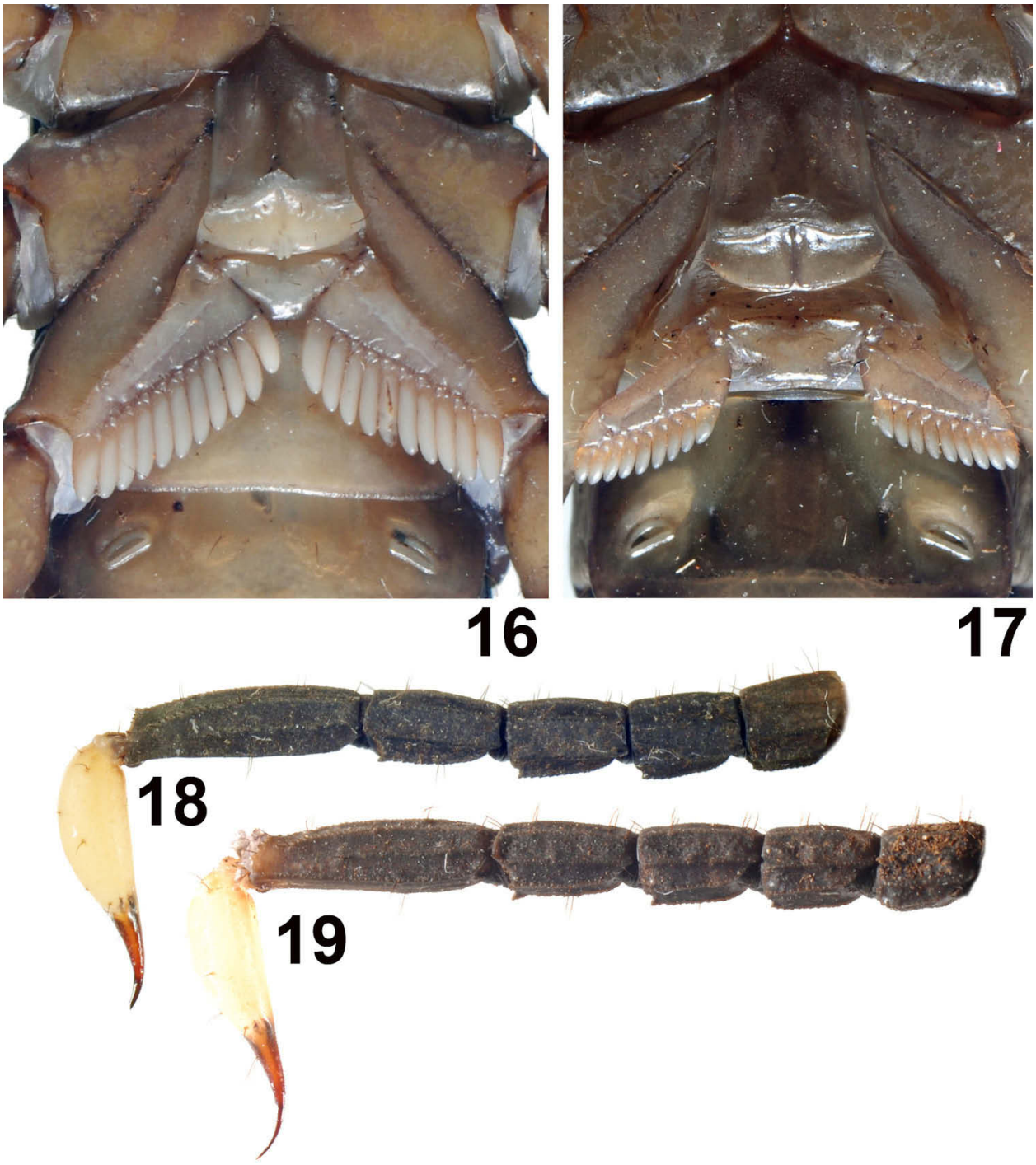
ETYMOLOGY. Named after a book, *Citadelle*, by Antoine de Saint-Exupéry (1948).

DIAGNOSIS. Total length 37–54 mm. Base color uniformly greenish black to black, legs can be pigmented and telson is yellow with a reddish sting. Pectinal teeth number 10–11 in males and 8–9 in females. Patella of pedipalp with 29–34 external (5 *eb*, 2–3 *esb*, 3 *em*, 12–17 *est*, 5–6 *et*) and 19–21 ventral trichobothria. Chela of pedipalp bears 11–13 ventral trichobothria. Sexual dimorphism minor, adult males have relatively larger pectines (Figs. 16 and 17); there is no difference in length and width of metasomal (Figs. 18 and 19) and pedipalp segments, and fingers of pedipalps are almost stright in both sexes (Figs. 5 and 8).

DESCRIPTION: Total length 37–54 mm. The base color is uniformly greenish black to black, legs can be pigmented, sternites are lighter, and the telson is yellow with a reddish sting. Chelicerae are reddish brown and reticulate. For habitus see Figs. 3–4 and 6–7. Sexual dimorphism minor.

MESOSOMA AND CARAPACE: The mesosoma is granulated, with one median carina, and the seventh sternite bears four carinae. The entire carapace is granulated, without carinae. The anterior margin of the carapace is markedly depressed in the middle. The carapace bears three lateral eyes of which two are normal and one is reduced. Pectinal teeth number 10–11 in males and 8–9 in females.

METASOMA AND TELSON (Figs. 18 and 19): The metasoma is finely granulated, with sparse, relatively



Figures 16–19: *Alloscorpiops citadelle* **sp. n. 16–17.** Pectinal areas. **18–19.** Metasoma and telson lateraly. **16 & 18.** Male holotype. **17 & 19.** Female allotype.

large granules. The first segment bears 10 carinae, the second to fourth segments bear eight carinae, and the fifth segment bears seven carinae. The dorsolateral carinae of the third and fourth segments posteriorly terminate in a pronounced tooth. The telson is elongate, without granules.

PEDIPALPS: For position and distribution of trichobothria on the patella of pedipalps see Figs. 9–15. External trichobothria on the patella number 29–34 (5 *eb*, 2–3 *esb*, 3 *em*, 12–17 *est*, 5–6 *et*) (Fig. 13), and ventral trichobothria on the patella number 19–21 (Fig. 14). The chela bears11–13 ventral trichobothria (Figs. 11

Figures 20–22: *Alloscorpiops citadelle* **sp. n.**, live specimens. **20.** Juvenile paratype. **21.** Male holotype. **22.** Female allotype.

and 15). The femur and patella are granulated. The femur has five granulose carinae, and the patella has five carinae with pronounced internal twin tubercles. The manus dorsally bears fine rounded granules, which in the central part form a longitudinal carina. The external surface of the chela is densely covered by minute granules. The movable fingers bear straight double rows of granules. The pedipalp fingers are almost straight in both sexes.

MEASUREMENTS (in mm): Total length of male holotype 52; carapace length 8.6, width 7.9; metasoma and telson length 27.1; first metasomal segment length 2.7, width 2.8; second metasomal segment length 3.1, width 2.5; third metasomal segment length 3.4, width 2.3; fourth metasomal segment length 3.8, width 2.2; fifth metasomal segment length 6.55, width 2; telson length 7.5; pedipalp femur length 9.3, width 3.1; pedipalp patella length 8.5, width 3; chela length 17.6; manus width 3.75; movable finger length 9.2.

Total length of female allotype 54.1; carapace length 8.2, width 7.7; metasoma and telson length 25.4; first metasomal segment length 2.6, width 2.6; second metasomal segment length 2.8, width 2.25; third metasomal segment length 3, width 2.1; fourth metasomal segment length 3.6, width 2.1; fifth metasomal segment length 6, width 1.9; telson length 7.4; pedipalp femur length 8.4, width 2.9; pedipalp patella length 7.9, width 2.8; chela length 16.4; manus width 3.65; movable finger length 8.9.

AFFINITIES: The described features distinguish *Alloscorpiops citadelle* **sp. n.** from *A. anthracinus*. The main difference is in the trichobothrial pattern. Higher number and different positions have also ventral trichobothria on the chela (Fig. 11) and patella (Fig. 14), but most important is the number of external trichobothria on the patella (Fig. 13) of which *A. citadelle* **sp. n.** has 29–34 (5 *eb*, 2–3 *esb*, 3 *em*, 12–17 *est*, 5–6 *et*), whereas *A. anthracinus* has only 23–24 (5 *eb*, 2 *esb*, 2 *em*, 8–9 *est*, 6 *et*).

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