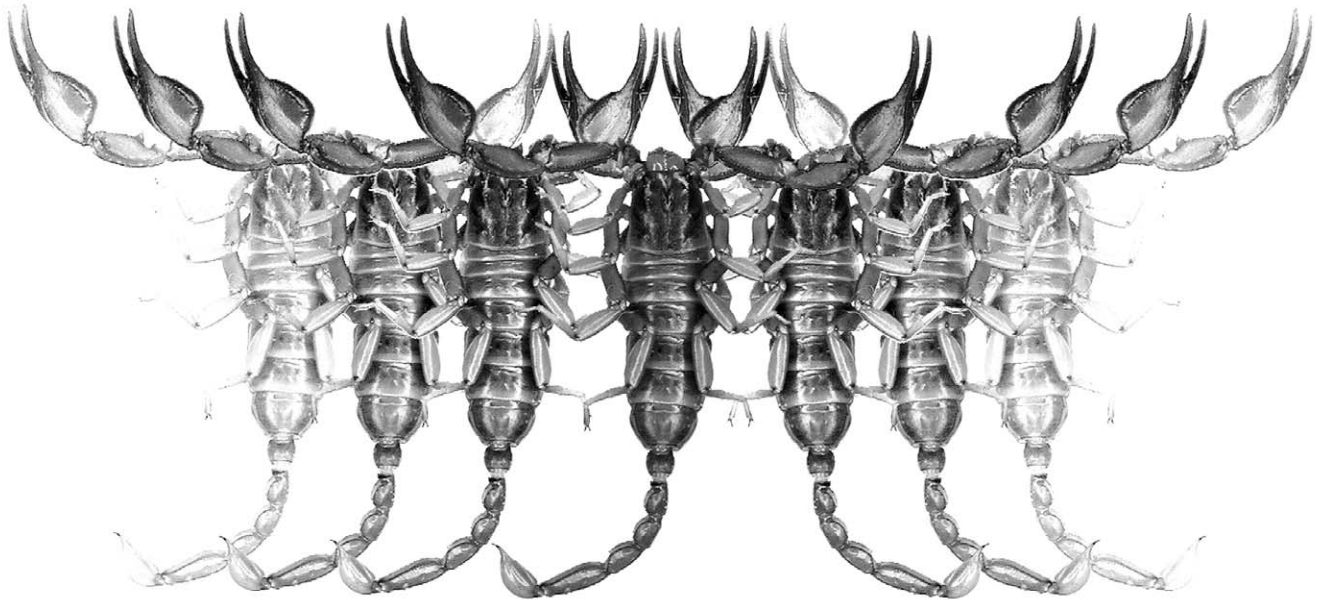


# *Euscorpius*

Occasional Publications in Scorpiology



**Two New *Hottentotta* Species from Iran, with a Review of  
*Hottentotta saulcyi* (Scorpiones: Buthidae)**

**František Kovařík, Ersen Aydın Yağmur & Mohammed Moradi**

**July 2018 – No. 265**

# *Euscorpius*

## Occasional Publications in Scorpiology

EDITOR: Victor Fet, Marshall University, 'fet@marshall.edu'  
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**Publication date: 10 July 2018**

<http://zoobank.org/urn:lsid:zoobank.org:pub:EC419E00-B4BB-4178-8A95-C637514C8653>

## Two new *Hottentotta* species from Iran, with a review of *Hottentotta saulcyi* (Scorpiones: Buthidae)

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<http://zoobank.org/urn:lsid:zoobank.org:pub:EC419E00-B4BB-4178-8A95-C637514C8653>

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### Summary

Two new buthid species from Iran, *Hottentotta navidpouri* sp. n. (Hormozgan Province) and *H. sistanensis* sp. n. (Sistan and Baluchestan Province) are described, compared with *H. saulcyi* (Simon, 1880), and fully illustrated with color photos. The two new species differ from *H. saulcyi* mainly in shape of chela, which is strongly elongated in both new species.

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### Introduction

Since 1996, several teams have been studying Iranian scorpions systematically. The Charles University in Prague organized the first Czech Biological Expedition in 1996 (Kovařík, 1997), and Czech scientists still continue studying the Iranian fauna. The main comparative scorpion collections are the result of the field study by the team under Shahrokh Navidpour (see e. g. Navidpour et al., 2008, 2012, 2013). Other very important scorpion collections were made by the team directed by one of the authors, Mohammed Moradi. In this paper, we analysed the collected specimens from the “*Hottentotta saulcyi*” complex (Buthidae), which is split into three closely related, allopatric species.

### Methods, Material & Abbreviations

Nomenclature and measurements follow Stahnke (1971), Kovařík (2009), and Kovařík & Ojanguren Affilastro (2013), except for trichobothriotaxy (Vachon, 1974), and sternum (Soleglad & Fet, 2003). Specimens studied herein are preserved in 80% ethanol. *Specimen depositories*: AZMM, Zoology Museum of Alaşehir Vocational School, Celal Bayar University, Manisa, Turkey; FKCP, František Kovařík, private collection, Prague, Czech Republic; MNHN, Muséum National d’Histoire Naturelle, Paris, France; ZMUH, Centrum für Naturkunde (CeNak), Center of Natural History Universität Hamburg, Zoological Museum, Hamburg, Germany.

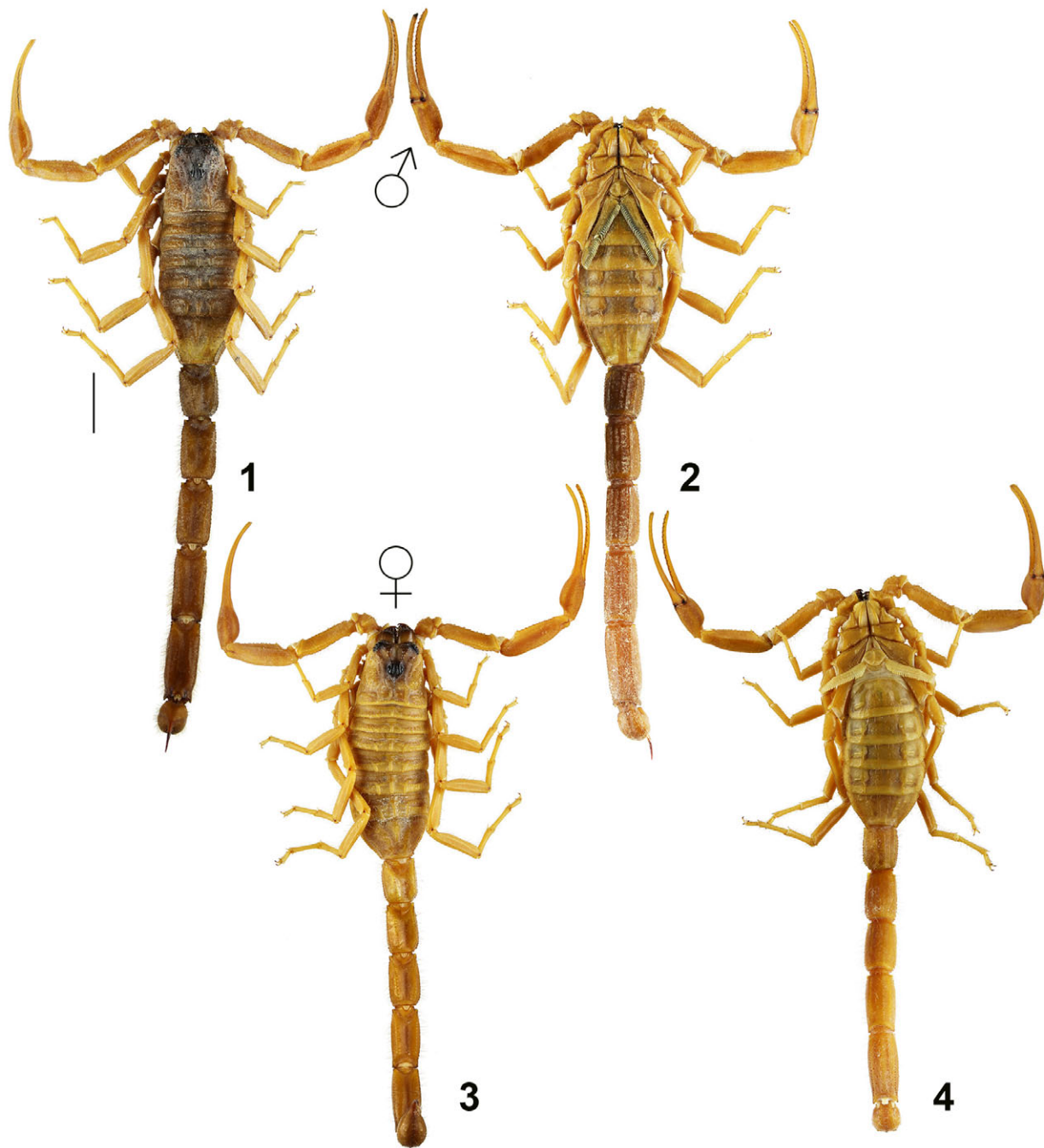
### Systematics

#### Family Buthidae C. L. Koch, 1837

Genus *Hottentotta* Birula, 1908  
(Figs. 1–76, Table 1)

*Hottentotta*: Fet & Lowe, 2000: 133–144 (complete reference and synonymy list until 1998); Kovařík & Ojanguren Affilastro, 2013: 159–180, figs. 942–1250 (complete reference and synonymy list until 2013).

**DIAGNOSIS.** Medium to large buthids, adults 30–130 mm. Sternum type 1 (Soleglad & Fet, 2003), triangular in shape. Pedipalps orthobothriotaxic, type Aβ (Vachon, 1974, 1975), femur trichobothrium  $d_2$  dorsal, patella  $d_3$  dorsal of dorsomedian carina. Chelal trichobothrium *db* usually located between *est* and *et*, or may be on level with trichobothrium *est*, rarely between *est* and *esb*. Trichobothrium *eb* clearly on fixed finger of pedipalp. Pectines with fulcra. Dentate margin of pedipalp-chela movable finger with distinct granules divided into 11–16 linear rows and (4) 5–7 terminal granules. Chelicerae with typical buthid dentition (Vachon, 1963), fixed finger armed with two denticles on ventral surface. Tergites I–VI granular, with three carinae, tergite VII with 5 carinae. Carapace with distinct carinae, entire dorsal surface nearly planate. First sternite with two granulated lateral stridulatory areas, which however may be reduced in some species (e. g. in *H. pachyurus* and *H.*



**Figures 1–4:** *Hottentotta navidpouri* sp. n. **Figures 1–2.** Holotype male, dorsal (1) and ventral (2) views. **Figures 3–4.** Paratype female, dorsal (3) and ventral (4) views. Scale bar = 10 mm.

*trilineatus*). Metasoma elongate, segment I with 10 carinae, segments II–IV with 8–10 carinae. Ventrolateral carinae of fifth metasomal segment with all granules more or less equal in size and never lobate. Telson bulbous, lumpy and granulated, without subaculear tooth.

Legs III and IV with well developed tibial spurs, first and second tarsomeres with paired ventral setae.

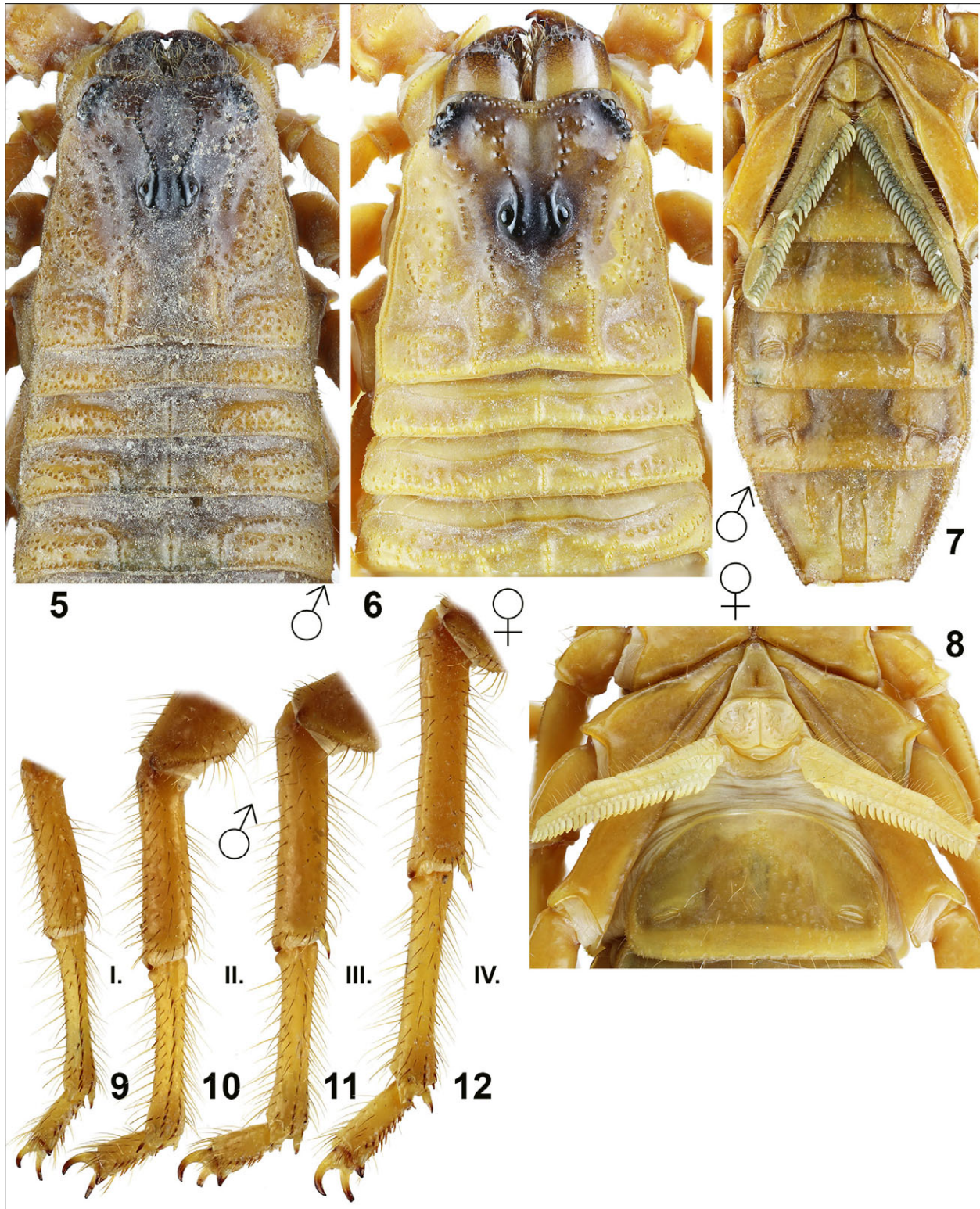
***Hottentotta navidpouri* sp. n.**

(Figs. 1–32, 52–54, Table 1)

<http://zoobank.org/urn:lsid:zoobank.org:act:CD51FEDF-6F9B-413C-A013-67140ECD8667>

*Hottentotta saulcyi*: Navidpour et al., 2013: 7, fig. 2.

TYPE LOCALITY AND TYPE REPOSITORY. **Iran, Hormozgan Province**, Lengeh, 27°08'N 55°49'E, FKCP.



**Figures 5–12:** *Hottentotta navidpouri* sp. n. **Figures 5, 7, 9–12.** Holotype male, chelicerae, carapace and tergites I–IV (5), sternopectinal region and sternites III–VII (7), and distal segments of legs I–IV (9–12), retrolateral view. **Figures 6 and 8.** Paratype female, chelicerae, carapace and tergites I–III (6), sternopectinal region and sternite III (8).



**Figures 13–20:** *Hottentotta navidpouri* sp. n. **Figures 13, 15–17.** Paratype female, telson lateral (13), metasoma and telson, lateral (15), ventral (16), and dorsal (17) views. **Figure 14.** Holotype male, telson lateral. **Figures 18–20.** Paratype male, metasoma and telson, lateral (18), ventral (19), and dorsal (20) views. Scale bar = 10 mm (15–20).

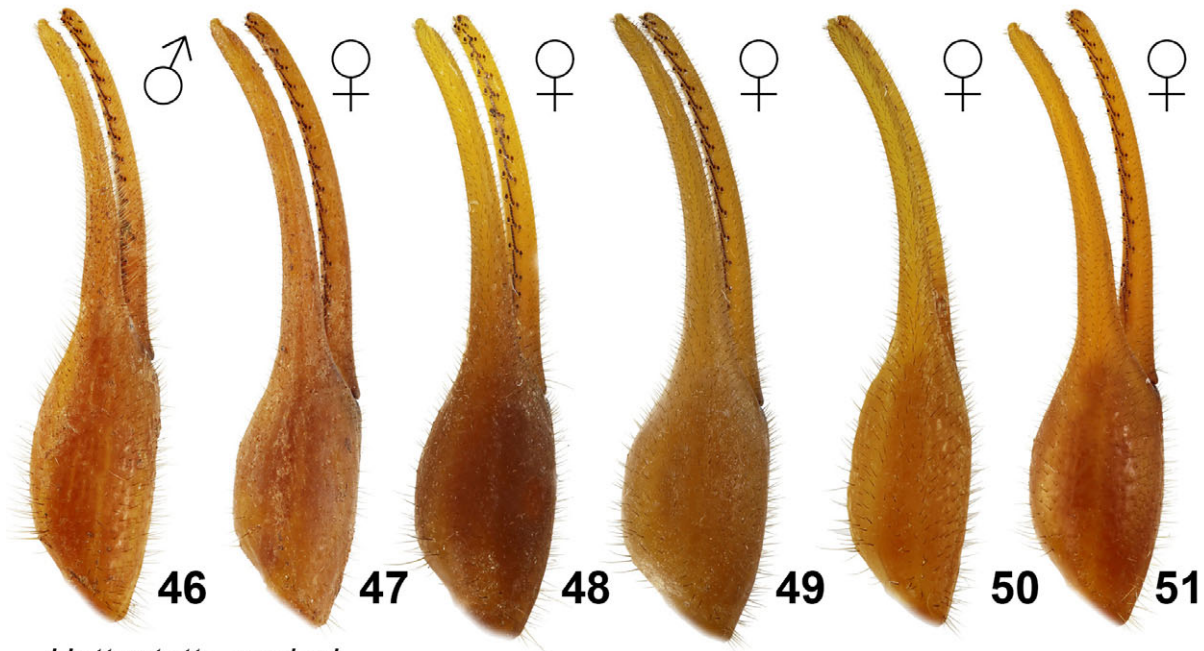
**TYPE MATERIAL.** Iran, *Hormozgan Province*, Lengeh, 27°08'N 55°49'E, 1♂ (holotype, Figs. 1–2, 5, 7, 9–12, 14, 23–32, 53) 1♀ (paratype, Figs. 3–4, 6, 8, 13, 15–17, 21–22, 54), leg. Akbari (Figs. 41–42, No. 1164), FKCP; Bandar Abbas to Lengeh Port road, 26°40'N 55°04'E, 1♂ (paratype, Figs. 18–20, 52), leg. Akbari (Fig. 40, No. 696), FKCP.

**ETYMOLOGY.** A patronym in honor of Shahrokh Navidpour, Iran, for his friendship and lifelong dedication to arachnids.

**DIAGNOSIS.** Total length of adults 92–105 mm. Trichobothrium *db* on fixed finger of pedipalp situated between trichobothria *et* and *est* or or may be on level



**Figures 21–45:** Pedipalp segments. **Figures 21–32:** *Hottentotta navidpouri* sp. n. **Figures 21–22.** Paratype female, pedipalp chela, dorsal (21) and external (22) views. **Figures 23–32.** Holotype male. Pedipalp chela, dorsal (23), external (24), and ventral (25) views. Pedipalp patella, dorsal (26), external (27), and ventral (28) views. Pedipalp femur and trochanter, internal (29), dorsal (30), and ventral (31) views. Pedipalp movable fingers (32). **Figures 33–45:** *Hottentotta sistansensis* sp. n. **Figures 33–34.** Paratype female, pedipalp chela, dorsal (33) and external (34) views. **Figures 35–45.** Holotype male. Pedipalp chela, dorsal (35), external (36), and ventral (37) views. Pedipalp patella, dorsal (38), external (39), and ventral (40) views. Pedipalp femur and trochanter, internal (41), dorsal (42), and ventral (43) views. Pedipalp movable (44) and fixed (45) fingers. The trichobothrial pattern is indicated in Figures 24–27, 29–30, 36–39, and 41–42.

*Hottentotta saulcyi**Hottentotta navidpouri* sp. n.*Hottentotta sistanensis* sp. n.

**Figures 46–56:** *Hottentotta saulcyi* (46–51), *H. navidpouri* sp. n. (52–54), and *H. sistanensis* sp. n. (55–56), pedipalp chela dorsal. **Figure 46–47.** *H. saulcyi*, male (46) and female (47) from Turkey, Şırnak Province, Kagrik Village, 37°25'39"N 42°14'13.4"E. **Figure 48.** *H. saulcyi*, female from Iraq, Dohuk Province, 17 km E of Zakho City, 37°11'12"N 42°54'55"E. **Figure 49.** *H. saulcyi*, female from Iran, Ilam Province, 30 km NW Ilam, 33°43'N 46°41'E. **Figure 50.** *H. saulcyi*, female from Iran, Lorestan Province, Aligudarz, Shoohabad Village, 33°11'44"N 49°11'31"E. **Figure 51.** *H. saulcyi*, female from Iran, Bachtaran Province, Bisotul, 34°23'31"N 47°26'05"E. **Figure 52.** *H. navidpouri* sp. n. male paratype from Iran, Hormozgan Province, Bandar Abbas to Lengeh Port road, 26°40'N 55°04'E. **Figure 53–54.** *H. navidpouri* sp. n. male holotype (53) and female paratype (54) from Iran, Hormozgan Province, Lengeh, 27°08'N 55°49'E. **Figure 55–56.** *H. sistanensis* sp. n. male holotype (55) and female paratype from type locality (56).



with trichobothrium *est*. Male with slightly narrower metasomal segments, width of pedipalp chela same in both sexes. Pectinal teeth number 29–35 in males, 23–26 in female. Nearly entire body hirsute, pedipalps, dorsal surface of mesosoma, legs, lateral and ventral surfaces of metasomal segments, and vesicle densely hirsute. Hairs on patella of pedipalps are long. Chelicerae yellow to brown, reticulate. Color yellow to yellowish green or brown, except black triangle of carapace. Telson and fifth metasomal segment can be black or not. Femur of pedipalp with 4 carinae. Patella with 8 carinae. Chela lacks carinae. Movable fingers of pedipalps with 15–16 rows of granules and 5 or 6 terminal granules. Seventh sternite with 4 well marked carinae. First metasomal segment with 10 carinae; second to fourth with 8 carinae; fifth with 5 carinae, 3 ventral (one median, two lateral) and two dorsal. All metasomal segments generally smooth, without granules between carinae. All metasomal segments of both sexes longer than wide. Metasomal segment II length/width ratio more than 1.5.

**DESCRIPTION.** The total length is 92–105 mm. Chelal trichobothrium *db* usually located between *est* and *et*, or may be on level with trichobothrium *est*. Male has the fingers proximally almost straight and female absolutely straight, there is not sexual dimorphism in shape of chela of pedipalp. Chelicerae are yellow to brown, with reticulation, the tips of teeth on cheliceral fingers are black. For the position and distribution of trichobothria see Figs. 24–27 and 29–30.

**COLORATION** (Figs. 1–8, 13–15). The basic color is yellow to yellowish green or brown, except black triangle of carapace. The telson and fifth metasomal segment can be black or not, similar variability is in color of tergites which can be entirely yellow or yellow with median narrow dark band (Figs. 5 versus 6). Legs and pedipalp segments are uniformly yellow to yellowish green or brown including chela. The tarsomeres of legs are yellow.

**MESOSOMA AND CARAPACE** (Figs. 5–8). The carapace is carinate and unevenly covered by granules of varying size; much of the granulation is fine, but some granules are larger and distinctly rounded. Tergites I–VI bear three carinae and are granulated, with some intercarinal granules small and others larger and rounded. Tergite VII is pentacarinata. The pectinal tooth count is 29–35 (32 /4/) in males and 23–26 (24.5 /2/) in female. The pectinal marginal tips extend to end of the third sternite in female and end of the fourth sternite in male. The pectines have three marginal lamellae and eight to nine middle lamellae. The lamellae bear numerous dark long setae, each fulcrum with two to three setae. All sternites are smooth and sparsely hirsute. The seventh sternite bears four usually granulate carinae. The other sternites bear two furrows.

**PEDIPALPS** (Figs. 21–45). The pedipalps are densely hirsute and almost smooth. The femur bears four granulated carinae. The patella bears eight carinae, ventral and external are smooth, without granules and obsolete; dorsal and internal are granulate. The chela is without carinae. The movable fingers of pedipalps bear 15–16 rows of granules and five or six terminal granules.

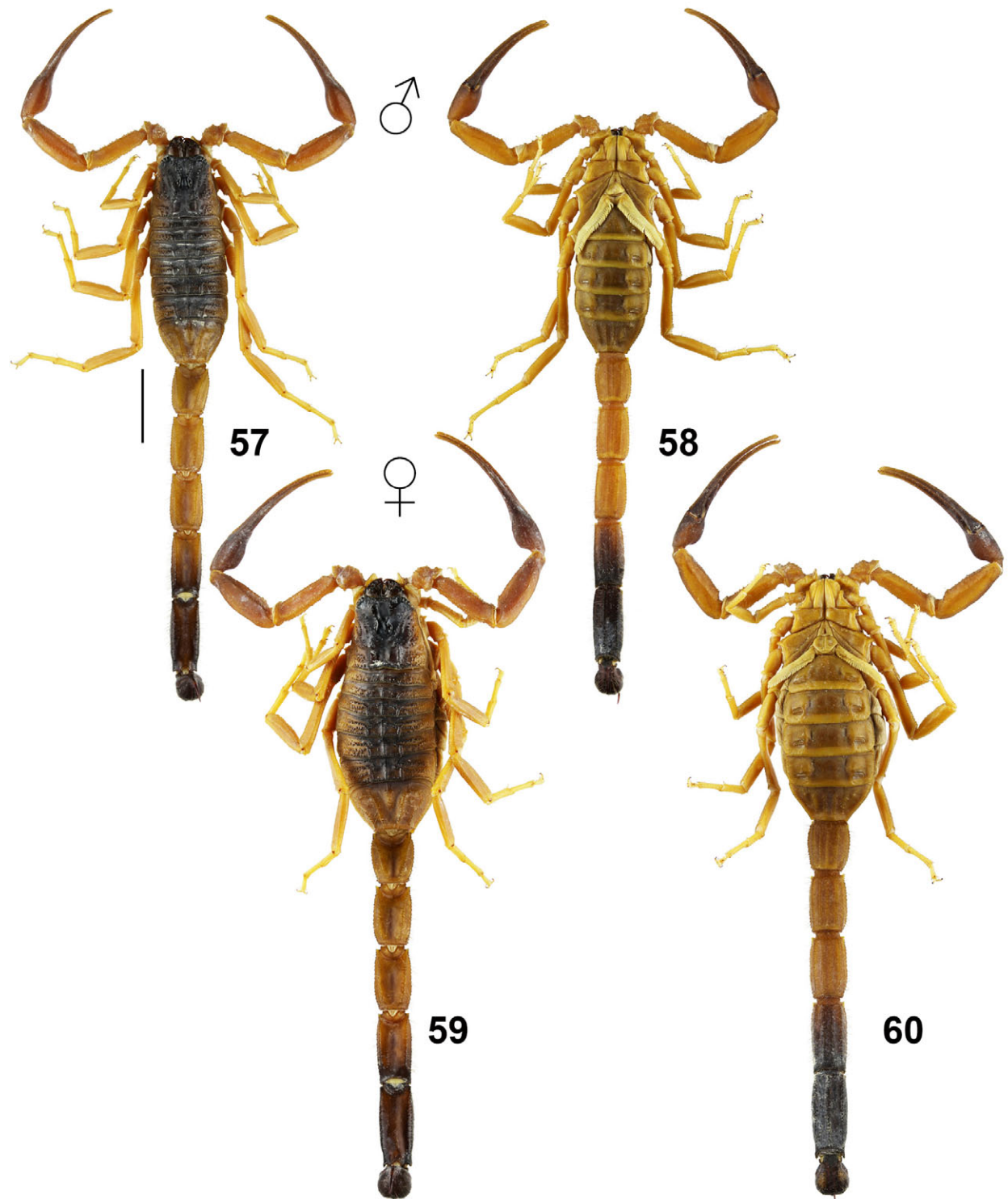
**LEGS** (Figs. 9–12). The tarsomeres bear two rows of short and strong spiniform setae on the ventral surface and numerous macrosetae on the other surfaces. Pedal spur of legs without setae. Femur and patella with carinae indicated. Tibial spurs present and long on third and fourth legs and absent in the other legs.

**METASOMA AND TELSON** (Figs. 13–20). All metasomal segments are densely hirsute. All metasomal segments of both sexes longer than wide. The segment I bears 10 carinae; segments II–IV bear 8 carinae; and segment V bears five carinae, three ventral and two dorsal. All carinae are with consistent denticles. The telson is hirsute, bulbous, bumpy and finely granulated, more in female.

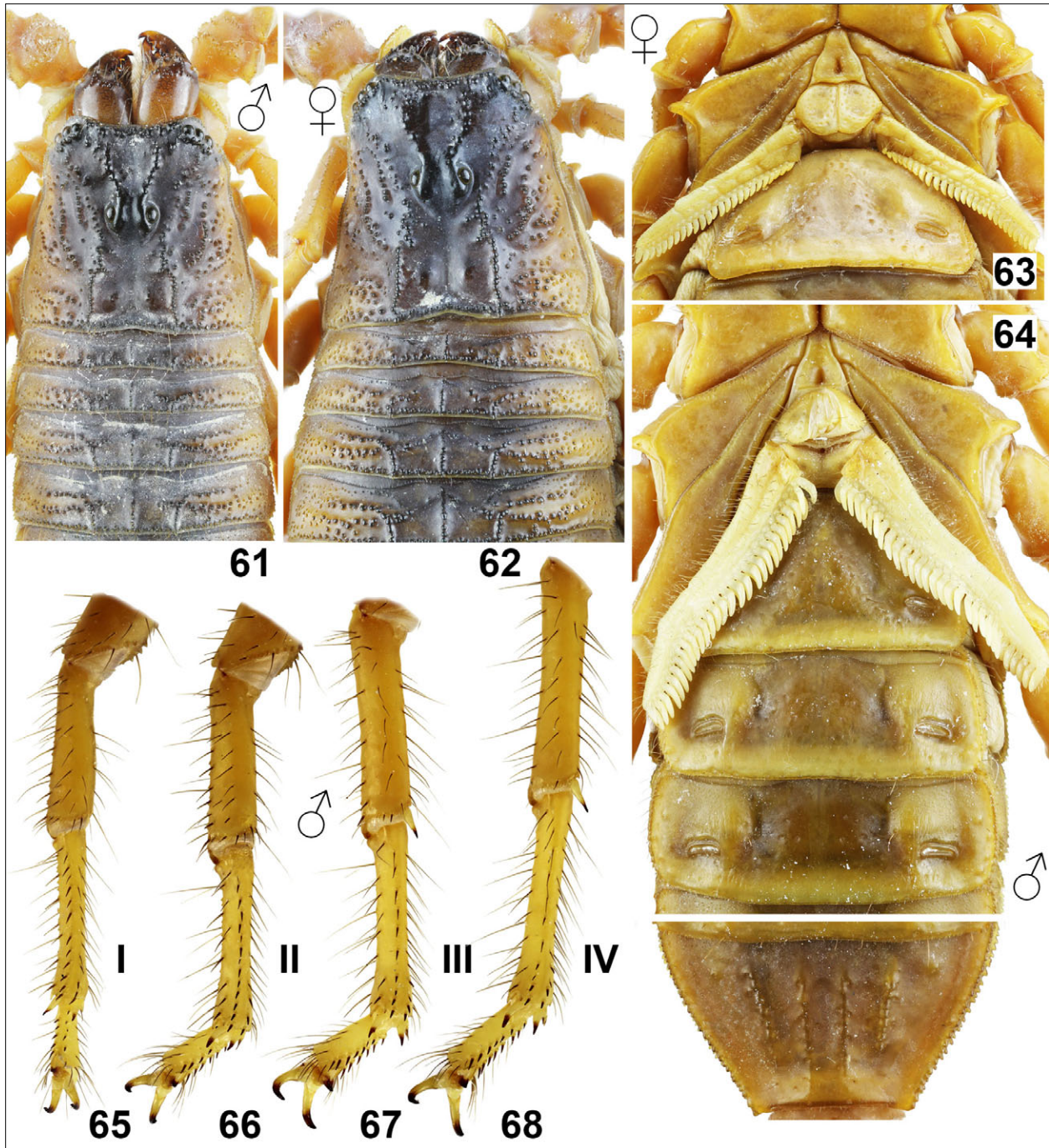
**AFFINITIES.** The described features distinguish *H. navidpouri* **sp. n.** from all other species of the genus. The occurrence and morphology make the new species very close to *H. saulcyi*, which was misinterpreted by Navidpour et al. (2013). Both *H. navidpouri* **sp. n.** and *H. sistanensis* **sp. n.** differ from *H. saulcyi* mainly in shape of chela which is strongly elongated in *H. navidpouri* **sp. n.** and *H. sistanensis* **sp. n.** and short in *H. saulcyi* (see Figs. 52–56 versus 46–51).

The Fars Province of Iran creates the southern boundary of *H. saulcyi* range in Iran (fig. 8 in Navidpour et al., 2012), while *H. navidpouri* **sp. n.** was found only in Hormozgan Province (fig. 2 in Navidpour et al., 2013), and *H. sistanensis* **sp. n.** in Sistan and Baluchestan Province near to the Pakistan border. The fact that the range of *H. navidpouri* **sp. n.** lies between the ranges of *H. saulcyi* and *H. sistanensis* **sp. n.** also confirms morphology which show that *H. navidpouri* **sp. n.** is more similar to *H. saulcyi* than *H. sistanensis* **sp. n.** is. These two species are more densely hirsute than *H. sistanensis* **sp. n.** and have uniformly colored all pedipalp segments while *H. sistanensis* **sp. n.** has darker chela than other pedipalp segments (Figs. 33–43).

It is possible to differentiate *H. navidpouri* **sp. n.** and *H. sistanensis* **sp. n.** except of these above mentioned differences and separate distribution ranges also by morphometry because *H. navidpouri* **sp. n.** has narrower and longer segments of pedipalps. Pedipalp patella length/width ratio is 3.7 in male and 3.4 in female of *H. navidpouri* **sp. n.** versus 3.4 in male and 3.1 in female of *H. sistanensis* **sp. n.** Movable fingers of pedipalps are longer in *H. sistanensis* **sp. n.** (chela length/MF length ratio is 1.31–1.36) than in *H. navid-*



**Figures 57–60:** *Hottentotta sistansensis* sp. n. **Figures 57–58.** Holotype male, dorsal (57) and ventral (58) views. **Figures 59–60.** Paratype female, dorsal (59) and ventral (60) views. Scale bar = 10 mm.



**Figures 61–68:** *Hottentotta sistanensis* sp. n. **Figures 61, 64–68.** Holotype male, chelicerae, carapace and tergites I–IV (61), sternopectoral region and sternites III–V and VII (64), and distal segments of legs I–IV (65–68), retrolateral view. **Figures 62–63.** Paratype female, chelicerae, carapace and tergites I–IV (62), sternopectoral region and sternite III (63).

*pouri* sp. n. (chela length/MF length ratio is 1.42–1.44).

***Hottentotta sistanensis* sp. n.**

(Figs. 33–45, 55–76, Table 1)

<http://zoobank.org/urn:lsid:zoobank.org:act:76C5B9ED-107C-495F-B6CB-342A2EA02840>

TYPE LOCALITY AND TYPE REPOSITORY. **Iran, Sistan and Baluchestan Province**, Sirkan, 26°49'47"N 62°38'23"E, 1268 m a.s.l.; AZMM.

TYPE MATERIAL. **Iran, Sistan and Baluchestan Province**, Sirkan, 26°49'47"N 62°38'23"E, 1268 m a.s.l., 10.VIII.2016, 1♂ (holotype, Figs. 35–45, 55, 57–58, 61,

64–69, 71–73) 4♂3♀ (paratypes), AZMM, 2♂ (paratypes), FKCP, 1.IV.2016, 2♂4♀ (paratypes), AZMM; Seravan, 27°22'58"N 62°21'22"E, 1207 m a.s.l., 1.IV.2016, 1♂ (paratype), FKCP, 4♀ (paratypes), AZMM; Koshtegan, 26°38'46"N 63°01'19"E, 876 m a.s.l., 15.IV.2016, 1♀ (paratype, Figs. 33–34, 56, 59–60, 62–63, 70, 74–76), FKCP.

ETYMOLOGY. Named after the Sistan region of the Iranian province of occurrence.

DIAGNOSIS. Total length of adults 75–95 mm. Trichobothrium *db* on fixed finger of pedipalp situated between trichobothria *et* and *est* or *est* and *esb*. Male with slightly narrower metasomal segments, width of pedipalp chela same in both sexes. Pectinal teeth number 26–30 in males, 23–28 in females. Nearly entire body hirsute, pedipalps, dorsal surface of mesosoma, legs, lateral and ventral surfaces of metasomal segments, and vesicle hirsute rather densely. Hairs on patella of pedipalps are long. Chelicerae brown to black, reticulate. Color yellow to yellowish green or brown, except black central part of carapace and tergites I–VI, telson, posterior part of fourth and whole fifth metasomal segment. Femur of pedipalp with 4 carinae. Patella with 8 carinae. Chela lacks carinae. Movable fingers of pedipalps with 15–16 rows of granules and 5 or 6 terminal granules. Seventh sternite with 4 well marked carinae. First metasomal segment with 10 carinae; second with 8 or 10 carinae; third and fourth with 8 carinae; fifth with 5 carinae, 3 ventral (one median, two lateral) and two dorsal. All metasomal segments generally smooth, without granules between carinae. All metasomal segments of both sexes longer than wide. Metasomal segment II length/width ratio more than 1.6.

DESCRIPTION. The total length is 75–95 mm, males usually smaller than females. Chelal trichobothrium *db* usually located between *est* and *et*, or may be on level with trichobothrium *est*, rarely between *est* and *esb*. Male has the fingers proximally almost straight and female absolutely straight, there is not sexual dimorphism in shape of chela of pedipalp. Chelicerae are brown to black, with reticulation, the tips of teeth on chelical fingers are black. For the position and distribution of trichobothria see Figs. 36–39 and 41–42.

COLORATION (Figs. 57–64, 69–76). The central parts of carapace and tergites I–VI, telson, posterior part of fourth and whole fifth metasomal segment, and pedipalp chela are reddish black to black; the metasoma I–III, femur and patella of pedipalps, margins of tergites I–VI, tergite VII, sternites, and legs are yellow to yellowish green or brown. The tarsomeres of legs are yellow.

MESOSOMA AND CARAPACE (Figs. 61–64). The carapace is carinate and unevenly covered by granules of varying size; much of the granulation is fine, but some

granules are larger and distinctly rounded. Tergites I–VI bear three carinae and are granulated, with some intercarinal granules small and others larger and rounded. Tergite VII is pentacarinata. The pectinal tooth count is 26–30 (28.928 /18/) in males and 23–28 (24.55 /24/) in females. The pectinal marginal tips extend to third of the fourth sternite in female and half of the fourth sternite in male. The pectines have three marginal lamellae and seven to nine middle lamellae. The lamellae bear numerous dark long setae, each fulcrum with two to three setae. All sternites are smooth and sparsely hirsute. The seventh sternite bears four granulate carinae. The other sternites bear two furrows.

PEDIPALPS (Figs. 33–45). The pedipalps are hirsute and almost smooth. The femur bears four granulated carinae. The patella bears eight carinae, ventral and external are smooth, without granules and obsolete; dorsal and internal are granulate. The chela is without carinae. The movable fingers of pedipalps bear 15–16 rows of granules and five or six terminal granules.

LEGS (Figs. 65–68). The tarsomeres bear two rows of short and strong spiniform setae on the ventral surface and numerous macrosetae on the other surfaces. Pedal spur of legs without setae. Femur and patella with carinae indicated. Tibial spurs present and long on third and fourth legs and absent in the other legs.

METASOMA AND TELSON (Figs. 69–76). All metasomal segments are hirsute rather densely. All metasomal segments of both sexes longer than wide. The segment I bears 10 carinae; segment II bears 10 or 8 carinae; segments III and IV bear 8 carinae; and segment V bear five carinae, three ventral and two dorsal. All carinae are with consistent denticles. The telson is only sparsely hirsute, bulbous, bumpy and finely granulated, more in females.

AFFINITIES. See affinities under *H. navidpourii* sp. n.

### *Hottentotta saulcyi* (Simon, 1880)

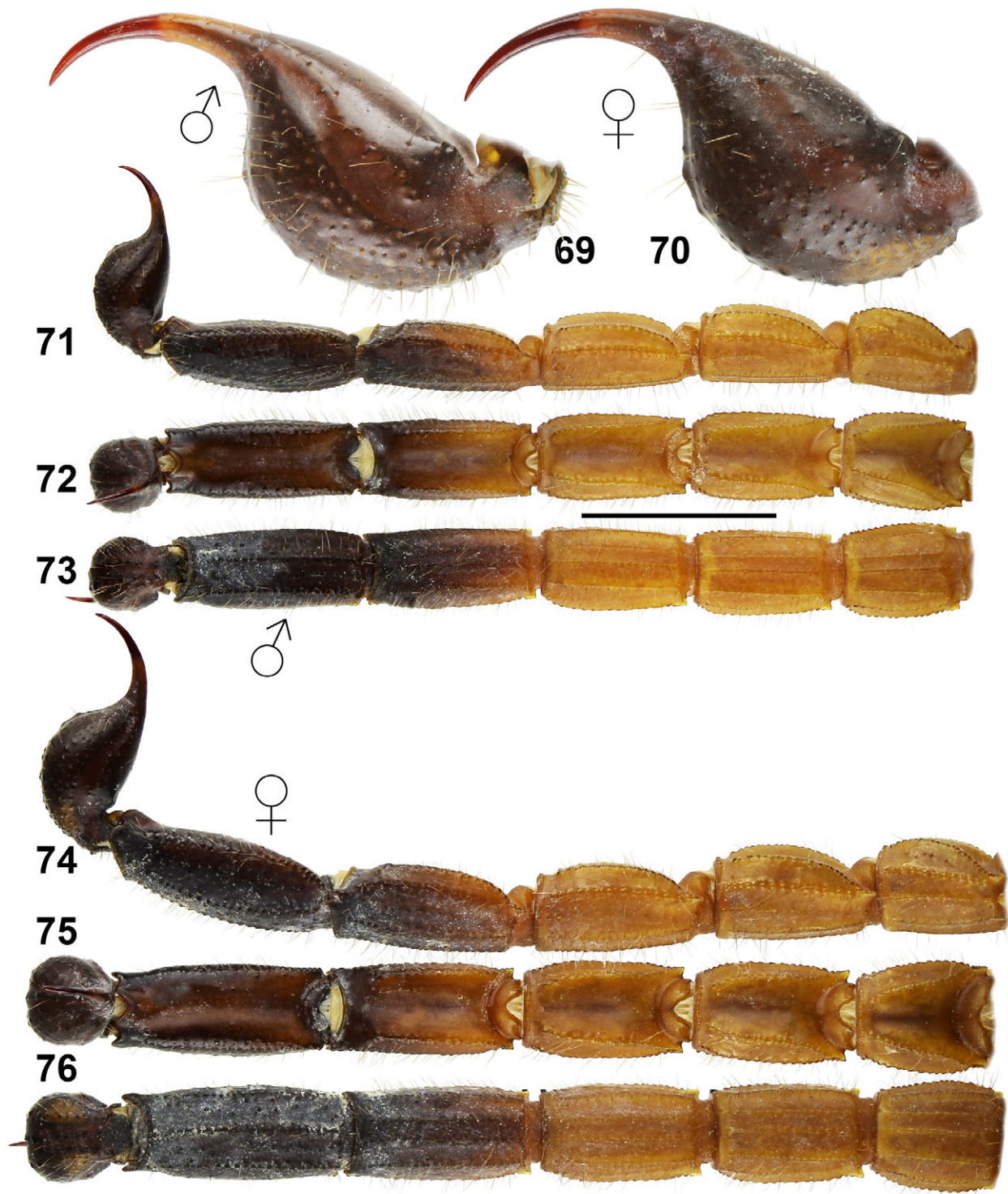
(Figs. 46–51)

*Buthus saulcyi* Simon, 1880: 378.

*Buthus saulcyi*: Vachon, 1949: 147 (1952: 233); Akbari et al., 1997: 112; Akbari, 2007: 76.

*Hottentotta saulcyi*: Kovařík, 1997: 40; Fet & Lowe, 2000: 143 (complete reference list until 2000); Crucitti & Vignoli, 2002: 446; Kovařík, 2007: 61; Navidpour et al., 2008: 5; Yağmur et al., 2008: 1; Piralı-Kheirabadi et al., 2009: 6; Navidpour et al., 2012: 7–9, fig. 10; Kovařík & Ojanguren, 2013, figs. 978–982, 1131, 133–1135 (complete reference list until 2013).

TYPE LOCALITY AND TYPE REPOSITORY. Iraq, Mosul; MNHN, ZMUH.



**Figures 69–76:** *Hottentotta sistanensis* sp. n. **Figures 69, 71–73.** Holotype male, telson lateral (69), metasoma and telson, lateral (71), dorsal (72), and ventral (73) views. **Figures 70, 74–76.** Paratype female, telson lateral (70), metasoma and telson, lateral (74), dorsal (75), and ventral (76) views. Scale bar = 10 mm (71–76).

**MATERIAL EXAMINED .** **Afghanistan,** Djebel us Saraj, 1♂, 1990, FKCP. **Iraq, Dohuk Province,** S foothill of Chiaje-Dairi Mountain Range, 5 km E of Bersivi Village, 17 km E of Zakho City, 37°11'12"N 42°54'

55"E, stony dry sparse maquis shrubland, 760-820 m a.s.l., 26.IV.2017, 1♀ (Fig. 48), leg. A. A. Fomichev, FKCP. **Iran, Bushehr Province,** Tangestan, Ahram, 28°51'45"N 51°20'50"E, 123 m a.s.l. (Locality No. Bu-

DIMENSIONS (MM)		<i>H. navidpouri</i> sp. n.		<i>H. sistanensis</i> sp. n.	
		♂ holotype	♀ paratype	♂ holotype	♀ paratype
Carapace	L / W	11.8 / 11.5	11.1 / 11.7	8.60 / 9.32	10.0 / 11.0
Mesosoma	L	24.5	25.6	20.0	23.7
Tergite VII	L / W	8.50 / 11.8	7.30 / 11.6	6.15 / 8.95	6.20 / 8.08
Metasoma et telson	L	68.05	58.10	51.20	56.90
Segment I	L / W / D	8.35 / 6.53 / 6.20	7.25 / 5.90 / 5.05	6.70 / 5.05 / 4.20	7.20 / 5.83 / 4.85
Segment II	L / W / D	10.4 / 6.05 / 5.90	8.45 / 5.42 / 5.10	7.60 / 4.53 / 4.05	8.30 / 5.10 / 4.52
Segment III	L / W / D	10.7 / 5.83 / 5.69	9.00 / 5.20 / 4.93	8.10 / 4.50 / 3.80	8.62 / 5.05 / 4.50
Segment IV	L / W / D	12.4 / 5.40 / 5.35	10.2 / 4.90 / 4.80	9.20 / 4.13 / 3.60	10.1 / 4.75 / 4.40
Segment V	L / W / D	13.9 / 5.48 / 5.18	11.5 / 4.83 / 4.63	10.1 / 4.10 / 3.60	11.2 / 4.60 / 4.25
Telson	L / W / D	12.3 / 4.78 / 5.05	11.7 / 4.75 / 4.98	9.50 / 3.80 / 3.60	11.5 / 4.65 / 4.40
Pedipalp	L	46.80	45.30	38.43	42.60
Femur	L / W	11.8 / 2.71	11.1 / 2.78	9.13 / 2.40	10.1 / 2.90
Patella	L / W	13.1 / 3.54	12.4 / 3.60	10.6 / 3.10	11.4 / 3.65
Chela	L	21.9	21.8	18.7	21.1
Manus	L / W / D	6.50 / 4.02 / 3.93	6.70 / 3.96 / 3.85	4.95 / 3.40 / 3.40	5.00 / 3.75 / 3.60
Movable finger	L	15.4	15.10	13.75	16.1
<b>Total</b>	<b>L</b>	<b>104.35</b>	<b>94.80</b>	<b>79.80</b>	<b>90.60</b>

**Table 1:** Comparative measurements of adults of *Hottentotta navidpouri* sp. n. and *H. sistanensis* sp. n. Abbreviations: length (L), width (W, in carapace it corresponds to posterior width), depth (D).

36), XI.2007, lim., leg. Masihipour, Bahrani & Habibzadeh, FKCP; **Fars Province**, 80 km SE Darab, 28°25' 23"N 55°09'09"E, 1512 m a.s.l., 24.V.2014, 1♀2juvs., leg. W. Grosser, FKCP; **Hamadan Province**, ca 2000 m a.s.l., 35 km SE of Hamadan, Gonbad Village env., 1♀2juvs., 7.-8.V.1996, leg. M. Kaftan, FKCP; Alandzhe, 1700 m a.s.l., 34°44'54"N 47°57'52"E, 2♀, 5.-6.X.1998, leg. P. Kabátek, FKCP; **Ilam Province**, 1786 m a.s.l., 30 km NW Ilám, 33°43'N 46°41'E, 7.VII.2004, 1♀ (Fig. 49), leg. P. Kabátek, FKCP; **Kermanshah** (formerly Bachtaran) **Province**, Bisotul, 1300-1600 m a.s.l., 34°23'31"N 47°26'05"E, 1♂3♀1juv., 6.-8.X.1998, leg. P. Kabátek, 1♀ (Fig. 51), leg. M. Kaftan, FKCP; Hasrouabad, 1300 m a.s.l., 34°10'09"N 46°21'56"E, 2♂1♀1im., 17.-18.X.1998, leg. P. Kabátek; **Khozestan Province**, Andimeshk District, Bidrooyeh, Jahangiri Village, 32°46'15"N 48°15'26"E, 504 m a.s.l. (Locality No. Bi 813-1 and 2), X.2007, 1♀im.1juv., leg. Masihipour & Hayader, FKCP; **Kohgiluyeh & Boyer Ahmad Province**, Yasuj to Mourgah road, Jahanno Village, 30°29' 20"N 51°31'38"E, 2153 m a.s.l. (Locality No. Y-4), III.2008, 3juvs., leg. Navidpour, Ghafarnia & Bahrani, FKCP; **Lorestan Province**, Dorud, 80 km E Horramabad, 33°27'N 49°01'E, 10.VI.1999, 1♂, leg. P. Kabátek, FKCP; Aligudarz, Shoolabad Village, 33°11'44"N 49°11'31"E, 1755 m a.s.l. (Locality No. LO-1363), X.2009, 1♀ (Fig. 50), leg. A. Pahlavani, A. Bahreei, M. Bahreei & R. Amraee, FKCP. **Turkey**, **Batman Province**, Central District, 15 km south of Batman town, 17.VIII.2007, 37°48'04"N 41°13'43"E,

700 m a. s. l., 1♂3♀, leg. E. A. Yağmur & A. Kürşat, AZMM; **Hakkâri Province**, Çukurca District, Çukurca Town, 18.V.2011, 37°15'08"N 43°36'51"E, 1397 m a.s.l., 1 juv., leg. E. A. Yağmur & M. Özkörük, AZMM; Çukurca District, Geçimli Village, 24.VI.2007, 37°21' 55"N 43°30'40"E, 930 m a.s.l., 1♀, leg. F. Kayraklı, AZMM; Çukurca District, Köprülü Village, 26.VI.2007, 37°18'26"N 43°30'32"E, 940 m a.s.l., 1♂, leg. İ. Dinler, AZMM; **Mardin Province**, Yeşilli District, 1 km North of Nahrza Quarter, 9.VIII.2006, 1♂1♀, leg. E. A. Yağmur & A. Kürşat, AZMM; Central District, Eskikale Village, 4.VIII.2006, 6♂5♀, leg. E. A. Yağmur & M. Yalçın, AZMM; Central District, Yolbaşı Village, 27.VI.2007, 37°16'00"N 40°48'00"E, 658 m a.s.l., 2♂ 2♀, leg. H. Koç & A. V. Gromov, AZMM; **Şırnak Province**, Central District, Kasrik Village, 37°25'39"N 42°14'13.4"E, 494 m a.s.l., 28.X.2011, 1♂1♀ (Figs. 46–47), FKCP, 1♂2♀, AZMM, leg. S. Demirci; Silopi District, Çardaklı Village, 12.X.2003, 37°14'00"N 42°35'14"E, 665 m a.s.l., 1 juv., leg. M. Mürsel, AZMM; Silopi District, Görümlü Village, 37°20'20"N 42°34' 30"E, 1009 m a.s.l., 20.V.2010, 1♀, leg. E. A. Yağmur & M. Özkörük, AZMM; Silopi District, Esenli Village, 37°17'20"N 42°26'54"E, 607 m a.s.l., 24.IV.2010, 1♀, S. Demirci, AZMM; Silopi District, Köseli Village, lower slopes of Cudi Mountain (Kurtik Hill), 26.IX.2004, 37°21'24"N 42°25'30"E, 1155 m a.s.l., 1♀, leg. M. Mürsel, AZMM; Beytüşşebab District, Başaran Village, 25.VI.2007, 37°28'50"N 43°07'23"E, 1150 m a.s.l., 1♀, leg. H. Koç & A. V. Gromov, AZMM; İdil District,

Yörük Village, 26.VI.2007, 36°16'58,1"N 42°01'10"E, 658 m a.s.l., 1♂1♀, leg. H. Koç & A. V. Gromov, AZMM.

**DIAGNOSIS.** Total length 75–120 mm, males usually smaller than females. Trichobothrium *db* on fixed finger of pedipalp situated between trichobothria *et* and *est*. Male with slightly longer and narrower metasomal segments, width of pedipalp chela same in both sexes. Pectinal teeth number 28–36 in males, 24–29 in females. Nearly entire body hirsute, pedipalps, dorsal surface of mesosoma, legs, lateral and ventral surfaces of metasomal segments, and vesicle densely hirsute. Hairs on patella of pedipalps are long. Chelicerae black, reticulate. Color yellow to yellowish green or brown, except black anterior part of carapace, telson and fifth metasomal segment. Ventral carinae on third and fourth metasomal segments may be also black. Femur of pedipalp with 5 carinae. Patella with 4–8 carinae. Chela lacks carinae. Movable fingers of pedipalps with 14–16 rows of granules and 5 or 6 terminal granules. Seventh sternite with 4 well marked carinae. First metasomal segment with 10 carinae; second and third with 8 or 10 carinae; fourth with 6–10 carinae; fifth with 5 carinae, 3 ventral (one median, two lateral) and two dorsal. Carinae of metasomal segments often smooth. All metasomal segments smooth, without granules between carinae. First and second metasomal segments of both sexes longer than wide.

**DISTRIBUTION:** Afghanistan (Kovařík, 1997: 40); Iran, verified from Kermanshah (formerly Bachtaran), Fars, Hamadan, Ilam, Lorestan (Kovařík, 2007: 65), Bushehr, Khozestan (Akbari, 2007: 76; Akbari et al., 1997: 112), Kohgiluyeh & Boyer Ahmad (Navidpour et al., 2008: 5), Chahar Machal & Bakhtiyari (Pirali-Kheirabadi et al., 2009: 6), Qazvin (Karataş et al., 2012), Zanjan (Moradi et al., 2015), and West Azerbaijan (Moradi et al., 2017) Provinces; Iraq (Simon, 1880: 379); Turkey (Crucitti & Vignoli, 2002: 446).

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