

Stirogaster kmenti sp. nov., a new species from Iran
(Heteroptera, Reduviidae, Stenopodainae)¹

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Abstract. *Stirogaster kmenti* sp. nov. is described from Iran (Fars and Kerman provinces). The new species is close to *S. uvarovi* China, 1934 and *S. ahriman* Rédei, 2005. The identification key of *Stirogaster* species (MOULET 2005) is modified.

Résumé. Description de *Stirogaster kmenti* sp. nov. d'Iran (provinces de Fars et Kerman). La nouvelle espèce est proche de *S. uvarovi* China, 1934 et de *S. ahriman* Rédei, 2005. Le tableau d'identification des espèces (MOULET 2005) est modifié en conséquence.

Key words. Reduviidae, Stenopodainae, *Stirogaster*, new species, Iran

Introduction

The genus *Stirogaster* Jakovlev, 1874 has been studied recently by RÉDEI (2005) and MOULET (2005, 2009) who increased the number of known species up to ten. The species are mainly distributed in North Africa, the Arabian Peninsula and Central Asia; some species reach the tropical Africa and the Oriental Region (LINNAVUORI 1986, MALDONADO CAPRILES 1990). Examining the material of Stenopodainae from the National Museum in Prague (NMPC), I found several Iranian specimens of *Stirogaster* that represent a new species, which is described in this paper.

Taxonomy

Stirogaster kmenti sp. nov.

Type locality. Iran, Fars, Daryache-ye Maharlu (29°21'N 52°49'E), south bank of the lake Maharlu (for details see HOBERLANDT 1981).

Type material. HOLOTYPE: ♂ (NMPC), 'S Iran, Maharlu, 5-6.6.1973 [white label, printed] // Loc. no. 227, Exp. Nat. Mus., Praha [white label, printed] // Collectio, National Museum, Praha Czech Republic [white label, printed] // Holotypus, *Stirogaster kmenti* n. sp., P. Moulet det 2009 [red label, printed]' (length 12.6 mm).

¹) 8th contribution to the study of West-Palaeartic Stenopodainae.

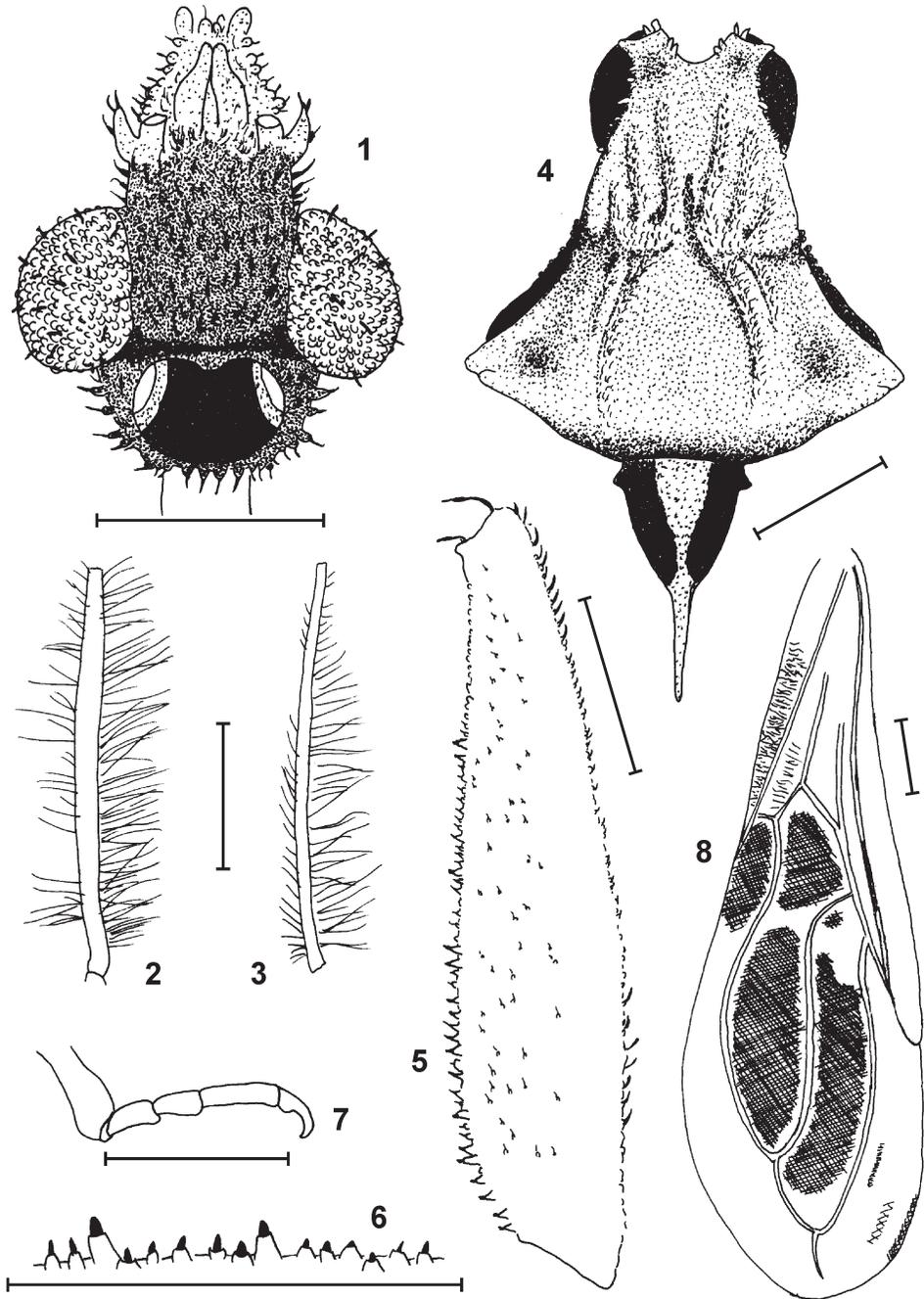
PARATYPES: **IRAN: FARIS:** 1 ♂ (NMPC), the same data as holotype (length 12.6 mm); 1 ♂ (NMPC), 'S Iran, Mian Jangal, 30.5-5.6. 1973 [white label, printed] // Loc. no. 223, Exp. Nat. Mus., Praha [white label, printed] // Collectio, National Museum, Praha Czech Republic [white label, printed]' (length 13.3 mm); 2 ♂♂ (NMPC and author's collection), 'S Iran, Estahbanat, 8-9.7.1970 [white label, printed] / Loc. no. 49, Exp. Nat. Mus., Praha [white label, printed] / Collectio, National Museum, Praha Czech Republic [white label, printed]' (lengths 12.74 and 12.60 mm). **KERMAN:** 2 ♂♂ (NMPC), 'C. Iran 1650 m, 30 km W Sabzevaran 17-19.5.1977 [white label, printed] / Loc. no. 337, Exp. Nat. Mus., Praha [white label, printed] / Collectio, National Museum, Praha Czech Republic [white label, printed]' (lengths 13.16 and 13.72 mm). All paratypes bear the following printed red label: 'Paratypus, *Stirogaster kmenti* n. sp., P. Moulet det 2009'.

Description. Macropterous males.

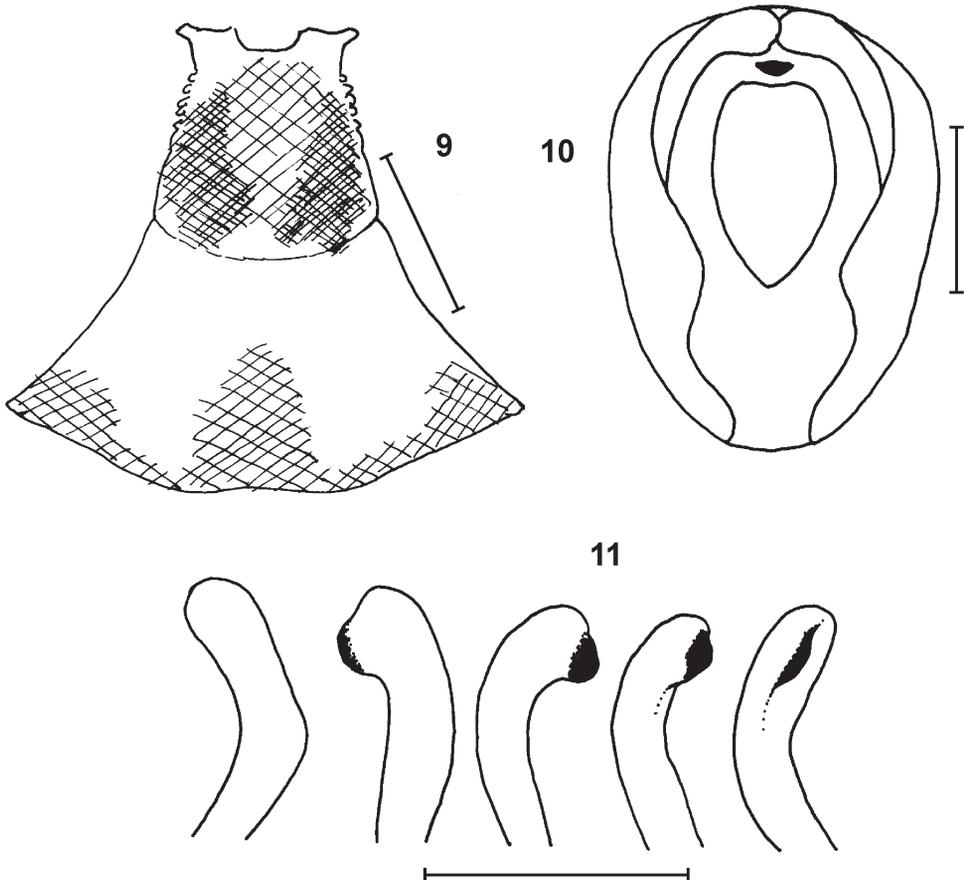
Measurements (in mm; mean, extremes are given in brackets): total length 12.96 (12.6–13.72); maximum width of abdomen 3.81 (3.62–3.92); length of head (without 'neck') 1.63 (1.48–1.70); length of anterior lobe of head 1.12 (0.99–1.18); length of posterior lobe of head 0.54 (0.51–0.55); length of anteoocular part of head 0.74 (0.64–0.84); length of postocular part of head (without eye) 0.30 (0.23–0.35); length of postocular part of head (with eye): 0.92 (0.84–1.01); width of head 1.61 (1.55–1.70); length of antennomeres: 1 – 2.41 (2.14–2.59), 2 – 2.42 (2.18–2.59), 3 – 0.91 (0.70–0.99); 4 – 0.65 (0.52–0.85); length of rostral segments: 1 – 0.89 (0.81–0.97), 2 – 0.78 (0.73–0.81), 3 – 0.46 (0.44–0.49); length of pronotum 2.63 (2.51–2.70); length of anterior lobe of pronotum 0.92 (0.9–0.96); length of posterior lobe of pronotum 1.07 (0.99–1.17); width of anterior lobe of pronotum (including angles) 1.10 (1.03–1.11); width of posterior lobe of pronotum 2.93 (2.77–3.03); length of scutellum 1.48 (1.45–1.53); width of scutellum 0.98 (0.87–1.04); length of hemelytron 10.3 (10.0–10.62); length of corium 6.95 (6.5–7.25); length of fore femur: 3.88 (3.76–4.04); maximal width of fore femur: 0.70 (0.58–0.81); length of fore tibia 3.42 (3.24–3.52); length of hind femur 5.75 (5.39–6.16); length of hind tibia 7.10 (6.54–7.7); length of setae of the antennomere 1 0.39 (0.25–0.46); length of setae of the antennomere 2 0.31 (0.21–0.35); ratio length of the head / head width 1.01 (0.87–1.17); length of pygophore (mean) 1.35.

Body elongated, rather slender, 3.4 times as long as broad; general colour pale yellow.

Head (Fig. 1) very short, 1.01 times as long as head wide and 0.55 times as long as pronotum wide posteriorly, brown to black posterior to the level of antenniferous tubercles, yellow or light brown (one specimen) anterior of them. Head with very short and adpressed golden setae. Interocular furrow well visible and deep. Anterior lobe armed laterally with 3–4 setiferous spines between eye and antenniferous tubercle, the latter laterally differentiated as a bent tooth directed forward. Posterior lobe very clearly higher than the anterior one; ocelli placed laterally on posterior lobe; some strong and setiferous spines present laterally. Anteoocular part short, 2.44 times as long as postocular part. Eyes voluminous, globose, protruding from outline of head, eyes contiguous medially, bearing some setae between ommatidia. Antennae of the general colour, pale yellow; antennomere 1 robust, very long, 1.47 times as long as the head; antennomeres 1 and 2 equally long (Figs. 2, 3); antennomere 3 clearly longer than the antennomere 4 (1.4 times). Antennomeres 1 and 2 (Figs. 2, 3) provided with long, fine, golden and erect setae; which are 2.72 times longer than the diameter of antennomere 1 and 3.95 times than of antennomere 2; these setae are more numerous and longer on internal face of appendices. Cephalic combs triangular, narrow, yellow and densely hairy at base. Throat brown. Rostrum yellow (in one specimen light brown), superior face of first rostral segment darkened or fully brown (one specimen); first rostral segment 1.14 times as long as second and clearly surpassing anterior level of eyes.



Figs. 1–8. *Strogaster kmenti* sp. nov. 1 – head from above; 2 – antennomere 1; 3 – antennomere 2; 4 – pronotum and scutellum; 5 – profemur; 6 – details of denticles on fore femora; 7 – fore tarsus; 8 – hemelytron. Scale bars: 1 mm.



Figs. 9–11. *Stirogaster kmenti* sp. nov. 9 – pronotum of a darker individual from Sabzevaran. 10 – pygophore from above; 11 – paramere in different positions. Scale bars: 1 mm (Fig. 9) and 0.5 mm (Figs. 10–11).

Pronotum (Fig. 4) trapezoid, rather long, at the level of humeral angles 1.11 times wider than long. Posterior pronotal lobe 1.15 times as long as anterior lobe, pale yellow, without spot (humeral angles sometimes slightly darkened); three specimens with posterior margin of pronotum more or less darkened with a triangular spot between median ribs, two of them moreover with anterior lobe darkened and one with fully dark lobe except the central zone (Fig. 9).

Pronotum bearing two feeble parallel ribs on anterior lobe, ribs stronger and divergent on posterior lobe and bearing very short and bent setae. Anterior lobe with a pair of sublateral ribs, sometimes indicated only by the bent setae they bear; these ribs joined in front of the transverse furrow; a third pair of lateral ribs, decorated like the two first ones, emerging in front of the transverse furrow and continuing on the posterior lobe without reaching the posterior margin. Margins of posterior lobe slightly sunk medially and bent forwards. Lateral margins

provided with small, shortly setiferous teeth. Posterior margin nearly straight, posterolateral margins weakly concave, hardly bent backwards. Anterior angles strong, acute and directed laterally. Humeral angles short, acute and directed upwards. Transverse furrow prominent and deep. Breast and thoracic pleura of the general colour, pale yellow.

Scutellum triangular (Fig. 4), its median length (except apical process) 1.51 times longer than its basal width; apex produced into a long, tapered and slightly raised process, fully yellow, basal half of lateral margins brown to blackish.

Legs pale yellow, covered with short, bent and adpressed white setae; femora with apical pale brown ring. Fore femora (Fig. 5) robust (5.51 times as long as their maximal diameter) and long (1.13 times as long as the fore tibia). Inferior face of the fore femora (Figs. 5, 6) provided with about 50 spiniferous tubercles, ca. 10 of them stronger, the remaining ones at most 0.5 times as long as the great ones, each bearing a short and acute apical spine (except the most apical) (Fig. 6). Tibiae provided with fine and semierect golden setae; the longest setae on hind tibiae three times as long as the diameter of tibia. Tarsi three-segmented (Fig. 7).

Hemelytra longer than abdomen, general colour pale yellow (Fig. 8). Clavus darkened except at the extreme apex. Internal apical cell fully brown except a very narrow stripe along vein Cu; internal apical zone of membrane close to internal apical cell slightly darkened; external apical cell dark except base and apex; sometimes the extreme apex of membrane slightly darkened (two specimens). Veins white to golden yellow, vein Sc darkened at apex and sometimes with two little brown spots at base, provided with minute teeth, each bearing a very short and bent apical seta.

Abdomen. Dorsum of abdomen, including connexivum, pale yellow without any spot. Venter yellow, unicolourous except in one male decorated with a dark median spot on sternite 8.

Male genitalia. Pygophore (Fig. 10) short, ovoid; lateral margins of opening strongly sinuated, apical spine broad basally with rounded apex. Parameres (Fig. 11) regular, isodiametric, regularly bent at apex; apical lobe short and rounded.

Female unknown.

Differential diagnosis. *Stirogaster kmenti* sp. nov. is close to *S. uvarovi* China, 1934 and *S. ahriman* Rédei, 2005. It can be easily distinguished from *S. ahriman* by several morphometric characters (Table 1). Moreover, there are differences in the colouration of the scutellum (dark brown in *S. ahriman*), the colour of the pronotum (four black spots at the base of anterior lobe and posterior margin slightly darkened in *S. ahriman* (it should be noted that some specimens of *S. ahriman* (D. Rédei det.) do not possess the pronotal ornamentation and the entire pronotum is pale yellow), the colour of the legs (completely pale in *S. ahriman*), black spots on the connexivum and the shape of genitalia.

Stirogaster kmenti sp. nov. differs from *S. uvarovi* by completely yellow antennae (antennomeres 2–4 darkened in *S. uvarovi*), antennomere 1 1.49 times longer than the head (only 1.29 times in *S. uvarovi*), shorter head (0.62 times as long as the pronotum, but 0.73 times in *S. uvarovi*), longer anteocular part of the head 0.8 times as long as the posterior part including eyes (0.52 times in *S. uvarovi*), the posterior lobe of pronotum 1.15 times as long as the anterior part (1.5 times in *S. uvarovi*), pale scutellum (blackish except the middle of the base in *S. uvarovi*), paler membrane (more darkened in *S. uvarovi*) and the unicolourous connexivum

Table 1. Comparison of selected morphometric characters in *Stirogaster kmenti* sp. nov., *S. ahriman* Rédei, 2005, and *S. uvarovi* China, 1934.

	<i>S. kmenti</i>	<i>S. ahriman</i>	<i>S. uvarovi</i>
Length of front femur / diameter	5.51	4.29	5.31
Length of antennomere 1 / length of head	1.47	1.26	1.29
Length of head / length of pronotum	0.62	0.71	0.73
Length of posterior lobe of pronotum / length of anterior lobe	1.15	1.15	1.5
Length of hind tibia / total length	0.54	0.46	unknown
Length of 2 nd antennal joint / length of 1 st	1.0	0.94	1.0
Length of fore femur / length of fore tibia	1.13	1.21	1.13
Length of hind femur / length of hind tibia	0.81	0.83	unknown

(spotted in *S. uvarovi*). Moreover, *S. kmenti* sp. nov. is on average smaller, hardly 13 mm long, but some specimens are almost of the same length than *S. uvarovi* (14 mm long).

Stirogaster kmenti sp. nov. can be also distinguished by the more extensive denticulation of the fore femora, there are ca. fifty teeth of which ten or twelve are stronger, while in both two other species there are about thirty teeth, eight of which are stronger.

The identification key proposed by MOULET (2005) must be modified as follows:

- 7 (8) Pale yellow pronotum more or less light brown or beige coloured or fully unicolourous. A
 A (B) Length about 10 mm, femora without dark ring apically.
 *S. ahriman* Rédei, 2005 [Iran: Fars]
 B (A) Larger, femora apically with dark ring. C
 C (D) Head short, 0.62 times as long as pronotum and 0.68 times as long as antennomere 1; body length 12.6–13.7 mm. *S. kmenti* sp. nov. [Iran: Fars, Kerman]
 D (C) Head long, 0.73 times as long as pronotum and 0.77 times as long as antennomere 1; body length 14 mm. *S. uvarovi* China, 1934 [Iraq¹⁾]
 8 (7) To the key.

Habitat. In Mian Jangal the habitat includes steppe and plantations of almond trees merging shrubs. The type locality at Maharlu were rocky slopes close to the lake, covered with similar vegetation to the preceding locality (HOBERLANDT 1981). Locality Estahbanat represent a mountain valley with semidesert characteristics and with beginning cultivation of *Ficus carica*; the material was collected by a light trap (HOBERLANDT 1974). At Saghdar (Loc. No. 337) the material was collected in a mountain semidesert with *Amygdalus scoparia*, *A. eburnea* and *Ebenus stellata*; it was collected from the vegetation and by light trap (HOBERLANDT 1983).

Distribution. *Stirogaster kmenti* sp. nov. is known only from central and southern Iran (Fars and Kerman provinces).

¹⁾MALDONADO CAPRILES (1990) mentioned *S. uvarovi* as doubtful from Iran.

Etymology. I dedicate this species to Petr Kment, the Hemiptera curator of the National Museum in Prague, in recognition of his help during this study.

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