

REVISION OF THE GENUS *SEMISSUS* MELICHAR, 1906 (HEMIPTERA: FULGOROMORPHA: ISSIDAE)

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Abstract.— The genus *Semissus* Melichar, 1906 is redescribed. *Theryana* Bergevin, 1922 is placed in synonymy with *Semissus*. *Semissus acuminatus* (Lethierry, 1876) and *S. semissoides* (Bergevin, 1922), **comb. nov.** are redescribed. *S. tlemsenicus* Dlabola, 1987 is placed in synonymy with *S. acuminatus*. Three new species of the genus are described from Morocco and Algeria – *S. pliadicus* sp. nov., *S. hyadicus* sp. nov., and *S. hesperidicus* sp. nov. A key for species identification is given.



Key words.— Issidae, *Semissus*, new species, synonymy, taxonomy, morphology.

INTRODUCTION

Melichar (1906) erected the genus *Semissus* for *Issus acuminatus* Lethierry, 1876 described from Oran in Algeria (Lethierry 1876). The genus *Theryana* was erected by Bergevin (1922) for *Theryana semissoides* described from the Middle Atlas Mountains in Morocco. Later Dlabola (1987) described from Algeria one more species of the genus – *S. tlemsenicus*. Examination of the material on *S. acuminatus* from the type locality, type specimens of *T. semissoides* and *S. tlemsenicus* showed that *Theryana* Bergevin, 1922 is a junior synonym of *Semissus* Melichar, 1906 and *S. tlemsenicus* Dlabola, 1987 is a junior synonym of *S. acuminatus* (Lethierry 1876). At the same time two new species of the genus from Morocco and one new species from Algeria are discovered.

According to external morphology (metope without transverse keel) and the structure of ovipositor (median field of gonapophyses IX weakly protruding, with two lobes apically, each anterior connective lamina of gonapophyse VIII with 5 teeth in lateral group) the genus *Semissus* belongs to the subtribe Hysteropterina Melichar of the tribe Issini Spinola (sensu Gnezdilov 2002).

The present paper adds to the knowledge of distribution of the genus (Fig. 1) and makes possible the identification of the species. *Semissus semissoides* (Bergevin) is known from Middle Atlas mountains in Northwestern Morocco, *S. pliadicus* sp. nov. and *S. hyadicus* sp. nov. are sympatric species distributed in Anti Atlas mountains and Atlantic coast in Southwestern Morocco, *S. acuminatus* (Lethierry)

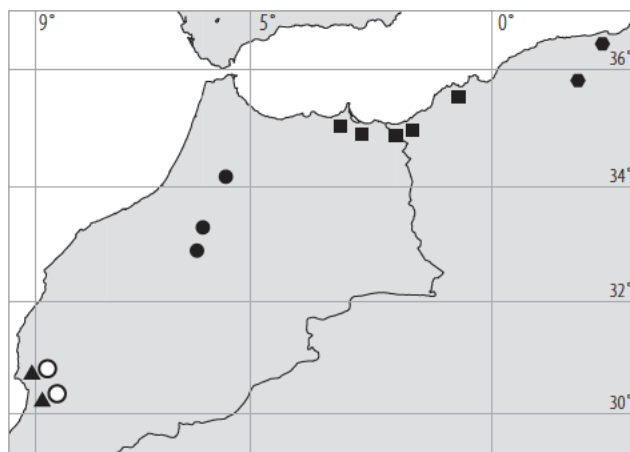


Figure 1. Distribution of the species of the genus *Semissus* Melichar. (■) *S. acuminatus*; (●) *S. semissoides*; (▲) *S. pliadicus* sp. nov.; (◐) *S. hyadicus* sp. nov.; (◑) *S. hesperidicus* sp. nov.

is recorded from extreme Northeastern Morocco and extreme Northwestern Algeria, and *S. hesperidicus* sp. nov. is known from middle of the extreme North of Algeria.

MATERIAL AND METHODS

The terminology of the head follows Anufriev and Emeljanov (1988) and Emeljanov (1995) and the terminology of the male genitalia Gnezdilov (2003) and the female genitalia Bourgoïn (1993) and Gnezdilov (2002).

The material examined is deposited in the following collections:

NMWC – National Museums of Wales (Cardiff, United Kingdom);

BMNH – The Natural History Museum (London, United Kingdom);

MNHN – Muséum National d'Histoire Naturelle (Paris, France);

IRSNB – Institut Royal des Sciences Naturelles de Belgique (Brussels, Belgium);

RMNH – Nationaal Natuurhistorisch Museum ("Naturalis") (Leiden, The Netherlands);

ZMAN – Universiteit van Amsterdam, Instituut voor Taxonomische Zoologie, Zoölogisch Museum (Amsterdam, The Netherlands);

ZIN – Zoological Institute, Russian Academy of Sciences (St. Petersburg, Russia).

TAXONOMY

Semissus Melichar, 1906

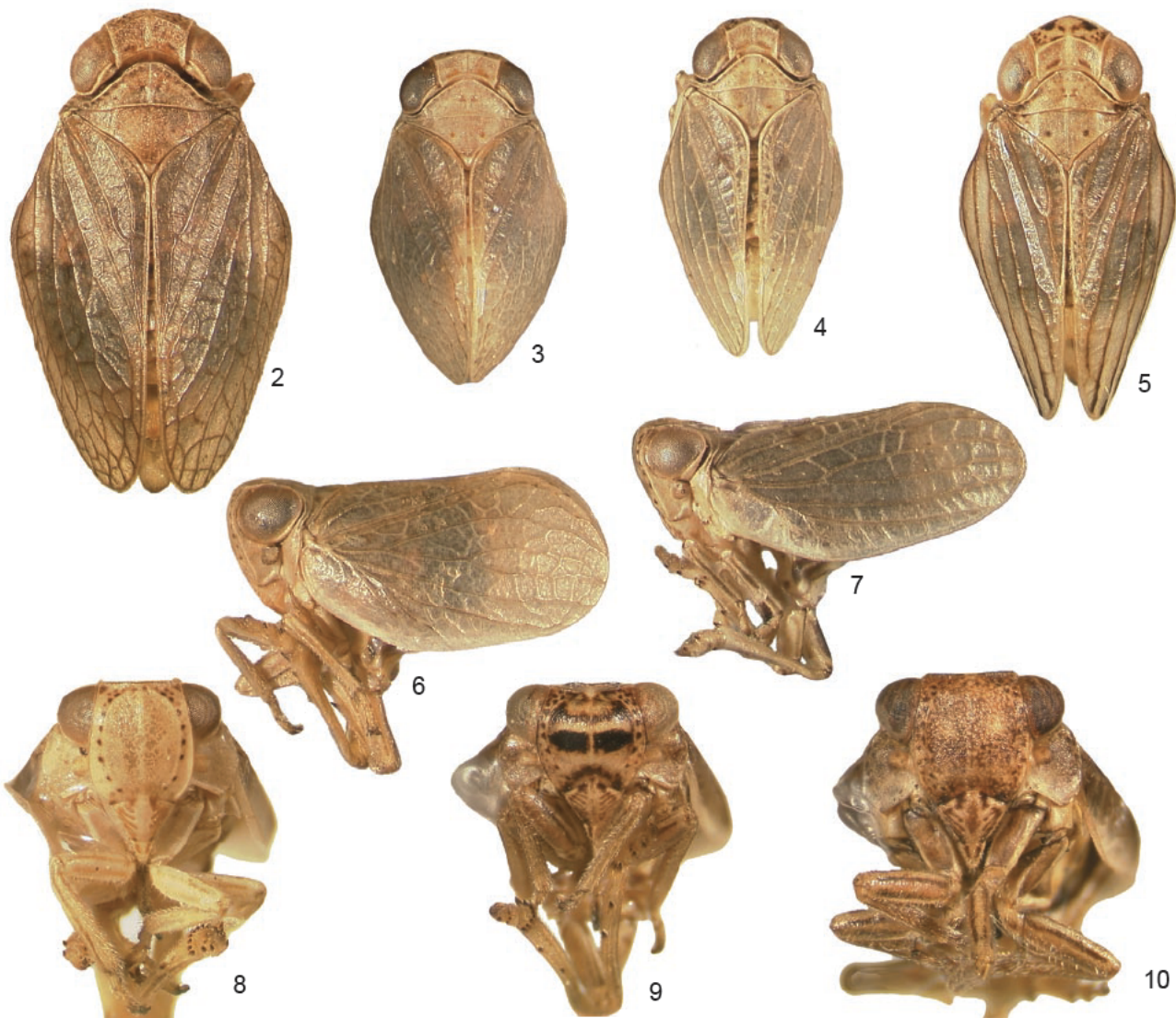
Semissus Melichar, 1906: 112.

Type species. *Issus acuminatus* Lethierry, 1876.

Theryana Bergevin, 1922: 129, *syn. nov.*

Type species. *Theryana semissoides* Bergevin, 1922.

Redescription. Metope convex with median and sublateral keels joining at its upper margin. Coryphe transversal – about 2–3 times as broad as long (measured at midian line), anterior margin convex or obtusely angulate, posterior margin concaved. Coryphe plain pressed-in. Fore wing weakly narrows apically, with narrow *S. acuminatus* or without hypocostal plate. R_3 , M_{2-4} , CuA_{1-2} , veins well marked. Hind wing rudimentary. Hind tibia bears 1–2 lateral teeth. Metatarsomere I with 1–3 intermediate socle setae.



Figures 2–10. *Semissus* spp., total view. (2, 10) *S. semissoides*; (3, 6) *S. pliadicus* sp. nov.; (4, 7, 8) *S. hyadicus* sp. nov.; (5, 9) *S. acuminatus*. Female: (2) dorsal view, (3) dorsal view, (8) view from front, (10) view from front. Male: (4) dorsal view, (5) dorsal view, (6) lateral view, (7) lateral view, (9) view from front.

Male genitalia. Pygofer narrow, lateral margins scarcely convex (in lateral view). Anal tube elongate, narrowed basally and apically (in dorsal view), lateral margins turned down (Figs 13, 14, 20, 21, 28, 29, 36, 37, 42, 43). Anal column 0.2–0.3 times as long as anal tube. Dorso-lateral phallobase lobes fused dorsally. Each dorso-lateral lobe phallobase of with 1–2 subapical processes (Figs 12, 19, 27, 34, 41). Apices of dorso-lateral lobes widely rounded (in lateral view). Ventral lobe of phallobase broad and relatively long, reaches anterior processes of dorso-lateral lobes, narrows apically (Fig. 11). Aedeagus with a pair of long tapered ventral hooks, which gradually narrow to apices. Apical processes of aedeagus bilobed (Fig. 19). Stylus with concaved hind margin; caudo-dorsal angle narrowly rounded (Figs 16, 23, 31, 39, 45). Capitulum of stylus long and narrow (in dorsal view); lateral tooth in shape of broad plate (Figs 15, 22, 30, 38, 44).

Female genitalia. Anal tube elongate, weakly narrows to apex (in dorsal view). Anal column 0.25–0.3 times as long as anal tube. Each gonoplac with an approximately triangular transversal keel. Furca well pigmented. The border between first and second gonoplac lobes indistinct. Gonapophyses IX elongate (general view). Distal parts of posterior connective laminae of gonapophyses IX obtusely angulate with or without processes towards the apex (Figs 17, 24, 46). Proximal part of posterior connective lamina convex with notch. Lateral fields flat. Median field with a pair of lobes apically. Gonocoxa VIII with lobe-shaped hind margin (Figs 25, 32). Endogonocoxal process gradually narrows to weakly bifurcated apex. Apical group of each anterior connective lamina of gonapophyse VIII includes 1–3 teeth, lateral group includes 5 teeth with keels; comb broad.

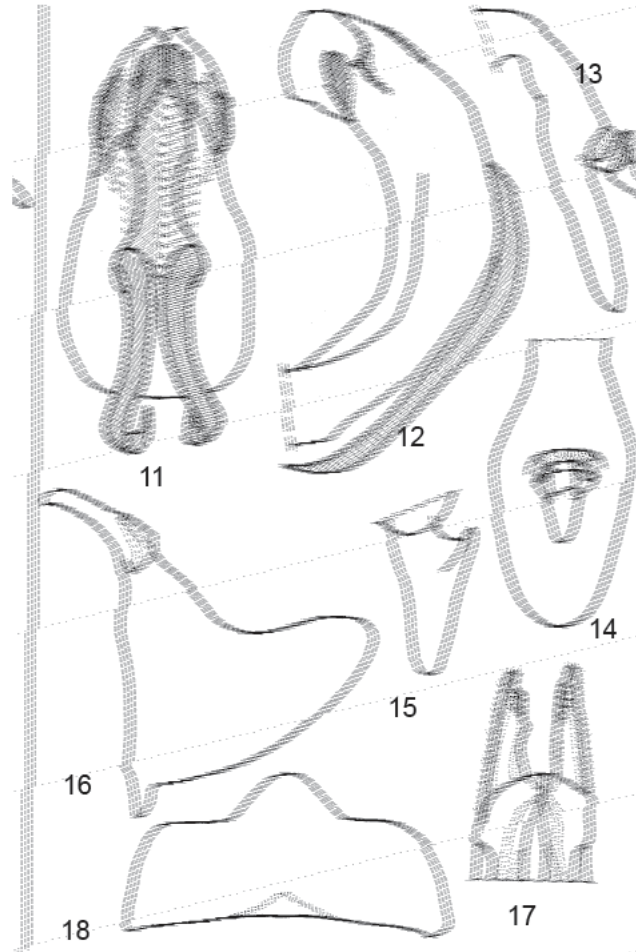
Semissus semissoides (Bergevin, 1922) **comb. nov.**
(Figs 2, 10, 11–18)

Theryana semissoides Bergevin, 1922: 129.

Material. Morocco, Moyen Atlas: 1 ♀ (holotype), 1 ♂, Aïn Leuh [MNHN]; 2 ♀, Azrou, 1900, Coll. E. de Bergevin [MNHN]; 1 ♂, Ras el ma [MNHN]; 1 ♂, 1 ♀, Timhadit, Bekrit [MNHN]; 2 ♂, 3 ♀, Ouiouane, Coll. Thery [MNHN]; 1 ♀, Ito, 4000 ft., 18.IV.1935, leg. D. Aubertin [BMNH].

Redescription. Body length. Males: 3.6–3.9 mm. Females: 4.2–4.9 mm.

Coryphe quite long (about 2 times as broad as long), with weak median keel, anterior margin obtusely angulate (Fig. 2). Fore wing quite long (about 2 times as long as broad). R₃, M₂₋₃, CuA₁. Hind wing narrow and oval, reaches the base of the abdomen. Pronotum with median keel. Scutellum with lateral keels. Hind tibia bears 2 lateral teeth. Metatarsomere I with 2 intermediate socle setae.



Figures 11–18. *Semissus semissoides* (Bergevin). (11–16) Male; (17–18) female. (11) penis, ventral view; (12) same, lateral view; (13) male anal tube, lateral view; (14) same, dorsal view; (15) capitulum of stylus, dorsal view; (16) stylus, lateral view; (17) distal parts of posterior connective laminae of gonapophyses IX, dorsal view; (18) female sternum VII, ventral view.

Male genitalia. Anal column 0.20–0.25 times as long as anal tube. Each dorso-lateral phallobase lobe with two distinct subapical processes without projections – one narrow triangular anterior process and one short and wide posterior process (Fig. 12). Ventral lobe of phallobase with weak incision apically (Fig. 11). Capitulum of stylus narrows to apex (in dorsal view) (Fig. 15), apical tooth small (Fig. 16).

Female genitalia. Hind margin of sternum VII with large process medially (Fig. 18). Anal column 0.25 times as long as anal tube. Distal parts of posterior connective laminae of gonapophyses IX without processes towards the apex (Fig. 17). Hind margin of gonocoxa VIII with well developed lobe. Apical group of each anterior connective lamina includes 2 rounded teeth, lateral group with large upper tooth and small other teeth. Spermateca elongate.

Coloration. General coloration light brown with brown dots. Metope sometimes with dark brown dots (Fig. 10). Traces of sensory pits of metope, teeth and

socle setae of hind legs, and claws of all legs dark brown. Veins of fore wing sometimes dark brown or reddish.

Semissus pliadicus sp. nov.
(Figs 3, 6, 19–26)

Material. Holotype [NMWC], ♂, Morocco, NE of Tafraoute, Ajuz (Ait Abla), 1500 m, 12.V.1999, leg. M.R. Wilson. Paratypes [NMWC, ZIN]. Morocco: 5♂, 3♀, as holotype; 1♂, “Cap Rhir”, N of Agadir, by coast, 5.V.1999, all leg. M.R. Wilson.

Description. Body length. Males: 3.2–3.5 mm. Females: 4.1 mm.

Coryphe broad (about 3 times as broad as long), with medial groove, anterior margin weakly convex (Fig. 3). Pronotum and scutellum without keels. Fore wing quite short and broad (1.6 times as long as broad) (Fig. 6). R₃, M₃₋₄, CuA₁. Hind tibia bears 2 lateral teeth. Metatarsomere I with 3 (2+1) intermediate socle setae.

Male genitalia. Anal column 0.20–0.25 times as long as anal tube. Each dorso-lateral phallobase lobe with two distinct subapical processes without projections – one narrow triangular anterior process and one short and wide posterior process (Fig. 19). Apex of ventral lobe of phallobase without incision. Capitulum of stylus does not narrow to apex (in dorsal view) (Fig. 22), apical tooth large (Fig. 23).

Female genitalia. Hind margin of sternum VII with-out process medially, almost straight (Fig. 26). Anal column 0.25 times as long as anal tube. Each distal part of posterior connective laminae of gonapophyse IX with a long process towards the apex (Fig. 24). Hind margin of gonocoxa VIII with well developed lobe (Fig. 25). Apical group of each anterior connective lamina of gonapophyse VIII includes 3 teeth, lateral group with 3 upper large teeth and 2 lower small teeth.

Coloration. General coloration yellowish light brown. Traces of sensory pits of metope, teeth and socle setae of hind legs, and claws of all legs dark brown.

Etymology. The species name is derived from the name of daughters of Greek Titan Atlant – Pleiades (Πλειάδες).

Semissus hyadicus sp. nov.
(Figs 4, 7, 8, 27–33)

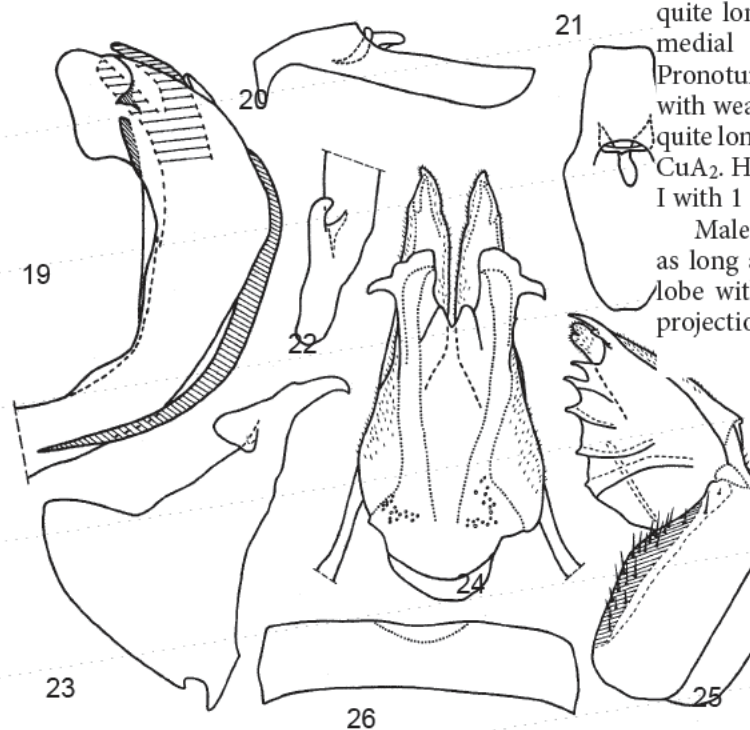
Material. Holotype [NMWC], ♂, Morocco, NE of Tafraoute, Ajuz (Ait Abla), 1500 m, 12.V.1999, leg. M.R. Wilson. Paratypes [NMWC, ZIN]. Morocco: 2♂, as holotype; 3♂, 1♀, same locality, 11.V.1999; 1♀, same locality, 1280 m, 17.V.1999; 1♂, 3♀, “Cap Rhir”, N of Agadir, by coast, 5.V.1999, all leg. M.R. Wilson.

Description. Body length. Males: 3.4–3.6 mm. Females: 4.2–4.8 mm.

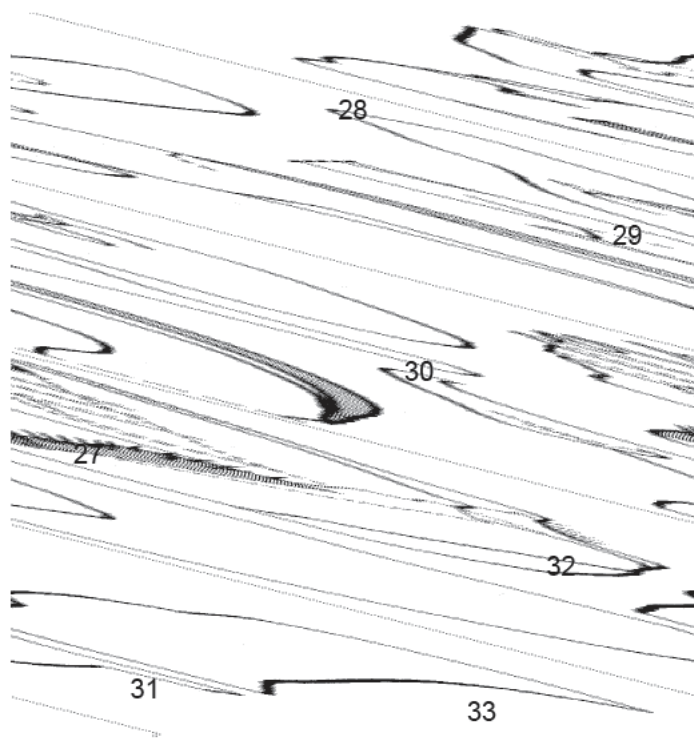
Median keel of metope sometimes weak. Coryphe quite long (about 2.3 times as broad as long), with medial groove, anterior margin convex (Fig. 4). Pronotum and scutellum without keels or scutellum with weak lateral keels and medial groove. Fore wing quite long (2 times as long as broad) (Fig. 7). R₃, M₂₋₃, CuA₂. Hind tibia with 1 lateral tooth. Metatarsomere I with 1 intermediate socle seta.

Male genitalia. Anal column 0.20–0.25 times as long as anal tube. Each dorso-lateral phallobase lobe with two distinct subapical processes without projections – one narrow triangular anterior process and one short and wide posterior process (Fig. 27). Apex of ventral lobe of phallobase without incision. Capitulum of stylus does not narrow to apex (dorsal view) (Fig. 30), apical tooth large (Fig. 31).

Female genitalia. Hind margin of sternum VII with short trapezoidal process medially (Fig. 33). Anal column 0.25 times as long as anal tube. Each distal part of posterior connective laminae of gonapophyse IX with a long process towards the apex (like *S. pliadicus* sp. nov.). Hind margin of gonocoxa VIII lobe-shaped only proximally (Fig. 32). Apical group of each anterior connective lamina of gonapophyse VIII includes 1 tooth, lateral group with 3 upper large teeth and 2 under small teeth.



Figures 19–26. *Semissus pliadicus* sp. nov. (19–23) male, holotype; (24–26) female, paratype. (19) penis, lateral view; (20) male anal tube, lateral view; (21) same, dorsal view; (22) capitulum of stylus, dorsal view; (23) stylus, lateral view; (24) posterior connective laminae of gonapophyses IX, dorsal view; (25) anterior connective lamina of gonapophyse VIII and gonocoxa VIII, lateral view; (26) female sternum VII, ventral view.



Melilla, leg. A. Pardo [NMWC, BMNH]; 3♂, 2♀, Melilla, M. Rechia, leg. A. Pardo [NMWC]; 1♂, 1♀, Melilla-Marruecos, Gurugu, IV.1961, leg. A. Pardo [NMWC]; 1♀, Melilla-Marruecos, Sidi Guariach, leg. A. Pardo [ZIN].

Redescription. Body length. Males: 4.2–4.8 mm. Females: 4.6–5.5 mm.

Metope strongly protruding with very weak median keel and distinct sublateral keels (Figs 5, 9). *Coryphe* quite long (2 times as wide as long), anterior margin obtusely angulate, posterior margin concave (Fig. 5). Pronotum with median keel. Scutellum with distinct median keel and weak lateral keels. Fore wing elongate (twice as long as wide), narrows to rounded apex. $R_3 M_2$ - $3 CuA_2$. Hind tibia with 2 lateral teeth. Metatarsomere I with 3 (2 + 1) intermediate socle setae.

Male genitalia. Anal tube distinctly narrows basally and weakly narrows to truncated apex (in dorsal view) (Fig. 36). Anal column 0.20–0.25 times as long as anal tube. Each dorso-lateral phallobase lobe with two large processes – triangular anterior process and horn-shaped posterior process (Figs 34, 35). Ventral phallobase lobe relatively short, lance-shaped (broad basally and strongly narrows to pointed apex, with a pair of swellings by sides medially). Capitulum of

Figures 27–33. *Semissus hyadicus* sp. nov. (27–31) Male holotype; (32–33) female paratype. (27) penis, lateral view; (28) male anal tube, lateral view; (29) same, dorsal view; (30) capitulum of stylus, dorsal view; (31) stylus, lateral view; (32) anterior connective lamina of gonapophyse VIII and gonocoxa VIII, lateral view; (33) female sternum VII, ventral view.

Coloration. General coloration yellowish light brown. Traces of sensory pits of metope (Fig. 8), teeth and socle setae of hind legs, and claws of all legs dark brown. Longitudinal veins of fore wing sometimes dark brown.

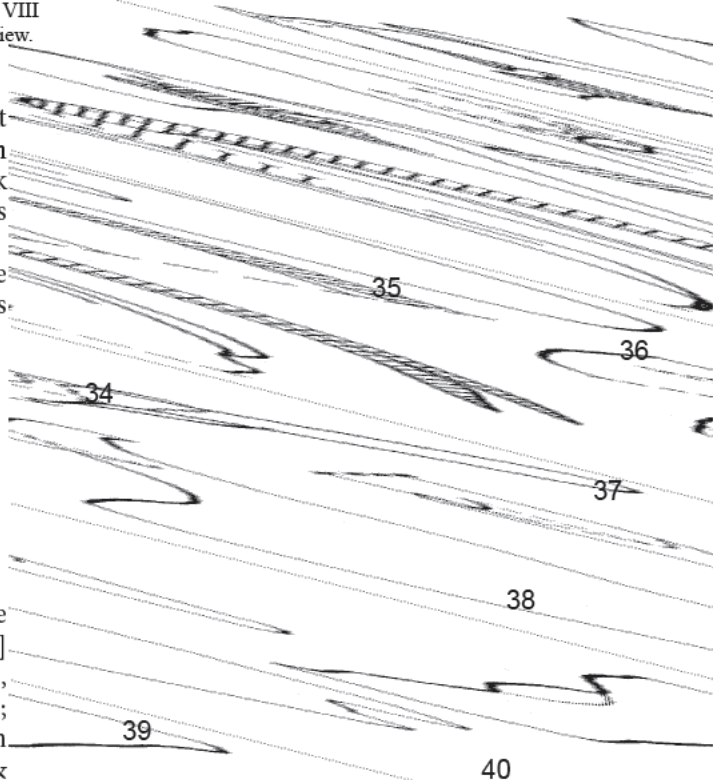
Etymology. The species name is derived from the name of daughters of Greek Titan Atlant – Hyades (Ύάδες).

Semissus acuminatus (Lethierry, 1876)
(Figs 5, 9, 34–40)

Issus acuminatus Lethierry, 1876: 76.

Semissus tlemsenicus Dlabola, 1987: 66, syn. nov.

Material. Algeria: 3♂, 2♀, Oran, Coll. E. de Bergevin [MNHN, BMNH]; 1♂, Marnia [Maghnia] [MNHN]; 1♂, Tlemsen, leg. Dr. Martin [MNHN]; 1♂, ?Tlemsen, ?24.V.[18]91, J. de Gaulle 1898 [MNHN]; 1♂ (holotype of *S. tlemsenicus*), Tlemcen, 20 km N of Maghnia, Bab Taza, 9.IV.1983, leg. R. Leys & P.v.d. Hurk [ZMAN]. Morocco: 2♂, 4♀, Guerbous, 16.V.[19]35, Coll. H. Ribaut [MNHN]; 6♂, 3♀, Mexere Homadi, 26.IV.1973, leg. A. Pardo [NMWC]; 2♂, Zaïo, IV.1960, leg. A. Pardo [NMWC]; 2♂, 3♀,



Figures 34–40. *Semissus acuminatus* (Lethierry). (34–39) Male; (40) female; (34–35) penis, lateral view; (36) male anal tube, dorsal view; (37) same, lateral view; (38) capitulum of stylus, dorsal view; (39) stylus, lateral view; (40) female sternum VII, ventral view.

stylus narrows apically (in dorsal view) (Fig. 38), lateral tooth in shape of wide lobe, apical tooth distinct (Fig. 39).

Female genitalia. Hind margin of sternum VII with broad and quite long process medially, turned outside (Fig. 40). Anal column 0.25 times as long as anal tube. Each distal part of posterior connective laminae of gonapophyse IX with a long process towards the apex (like *S. pliadicus* sp. nov.). Gonocoxa VIII with lobe-shaped hind margin mostly developed proximally. Each anterior connective lamina of gonapophyse VIII with 3 teeth in apical group and 4 teeth and 5 keels in lateral group.

Coloration. General coloration yellowish-light-brown. Costal margin of fore wing sometimes whitish. Metope with wide transversal dark brown stripe near the base of clypeus and with two pairs of dark brown or black spots in its upper part between median and sublateral keels; traces of the sensory pits also dark brown (Fig. 9). Preocular fields above antennae dark brown or black. Weakly pigmented specimens with apex of metope and upper pair of metopial spots sometimes light. Longitudinal veins of fore wing (Fig. 5), socle setae, teeth, apices of metatarsomeres III, and claws of all legs brown or dark brown. Abdominal tergites dark brown except anal segments. Male with apex of anal tube dark brown. Female anal tube with dorsal longitudinal dark brown stripe widening apically. Abdominal sternites sometimes with dark brown or black spots basally on middle line.

Semissus hesperidicus sp. nov.

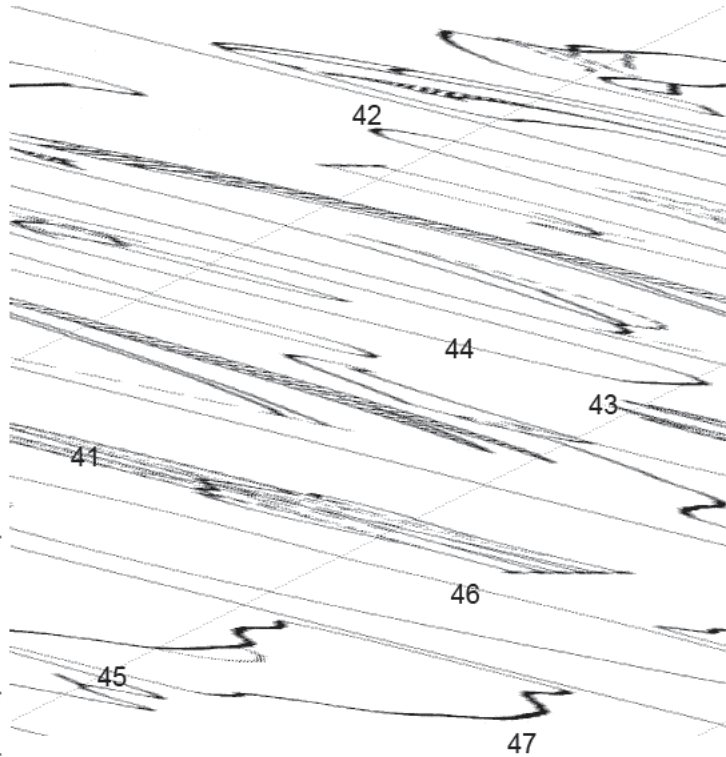
(Figs 41–47)

Material. Holotype. ♂, Algeria, Ouarsenis Teniet el Haad, 30.V.-5.VI.1954, leg. G. Fagel [IRSNB]. Paratypes. Algeria: 1♂, Blida, 1889, leg. ?Desbrochers [RMNH]; 3♀, ?Tenice, 10.V.[18]?95, J. de Gaulle 1898 [MNHN, ZIN].

Description. Body length. Males: 3.7–4.0 mm. Females: 4.3–4.5 mm.

Coryphe quite long (2 times as wide as long), with convex anterior margin. Pronotum with very weak median keel. Scutellum with weak median and lateral keels. Sometimes keels of pronotum and scutellum invisible. Fore wing elongate (twice as long as wide) weakly narrows apically. R₃ M₂₋₃ CuA₂. Hind tibia with 2 lateral teeth. Metatarsomere I with 1 intermediate socle seta.

Male genitalia. Anal tube distinctly narrows basally, with widely truncated apex (in dorsal view) (Fig. 43). Anal column long (0.3 times as long as anal tube) and narrow (Fig. 43). Each dorso-lateral phallobase lobe with concaved subapical process bearing two lobe-shaped projections (Fig. 41). Ventral margin of the lobe



Figures (41–47) *Semissus hesperidicus* sp. nov. (41, 44–45) Male, holotype; (42–43), male, paratype; (46–47) female, paratype; (41) penis, lateral view; (42) male anal tube, lateral view; (43) same, dorsal view; (44) capitulum of stylus, dorsal view; (45) stylus, lateral view; (46) distal parts of posterior connective laminae of gonapophyses IX, dorsal view; (47) female sternum VII, ventral view.

strongly protruding medially under aedeagal hook (in lateral view) (Fig. 41). Ventral phallobase lobe wide and relatively long, reaches a middle of the subapical process of phalbase (in lateral view), weakly enlarges to widely truncated apex. Capitulum of stylus narrow and narrows apically (in dorsal view) (Fig. 44), lateral tooth in shape of wide lobe, apical tooth distinct (Fig. 45).

Female genitalia. Hind margin of sternum VII weakly protruding medially (Fig. 47). Anal tube convex, with truncated apex. Anal column narrow, enlarged apically (0.3 times as long as anal tube). Each distal part of posterior connective laminae of gonapophyse IX with triangular process towards the apex (Fig. 46). Gonocoxa VIII with weakly protruding lobe-shaped hind margin weakening distally. Apical group of each anterior connective lamina of gonapophyse VIII includes 2 teeth (second tooth very weak), lateral group includes 4 teeth and 5 keels (3 upper teeth larger than lower tooth).

Coloration. General coloration light-brown. Apex of rostrum dark brown. Metope with wide transversal dark brown or black stripe near the base of clypeus and with two pairs of brown or dark brown spots in its upper part between median and sublateral keels (like *S. acuminatus*). Upper angles of metope dark. Traces of the sensory pits of metope dark brown. Fore wing with sometimes whitish

costal margin and dark brown longitudinal veins. Middle line of coryphe, pronotum, and scutellum sometimes with light yellow stripe, especially wide on coryphe. Legs with dark brown teeth, socle setae, and claws. Femorae and tibiae with dark brown longitudinal stripes. Female with dark brown middle part of abdominal sternites IV–VI, margins of gonoplasts and apex of anal tube.

Etymology. The species name is derived from the name of daughters of Greek Titan Atlant – Hesperides (Εσπερίδες).

Key for species

- 1(4). Metope with wide dark brown or black transversal stripe near the base of clypeus and two pairs of large dark brown spots upper (Fig. 9). Fore wing with dark brown longitudinal veins (Fig. 5)
- 2(3). Metope strongly convex, visible in dorsal view (Fig. 5). Each dorso-lateral phallobase lobe with two distinct subapical processes without projections (Figs 34, 35) *S. acuminatus* (Lethierry)
- 3(2). Metope scarcely convex, invisible in dorsal view. Each dorso-lateral phallobase lobe with single subapical process bearing two lobe-shaped projections (Fig. 41) *S. hesperidus* sp. nov.
- 4(1). Metope without dark brown or black stripe and large spots. Fore wing with yellowish brown or brown longitudinal veins (Figs 2–4, 6–8, 10)
- 5(6). Fore wing with bifurcated Cubitus Anterior (CuA₂). Hind tibia with 1 lateral tooth. Metatarsomere I with 1 intermediate socle seta. Hind margin of gonocoxa VIII lobe-shaped only proximally (Fig. 32) *S. hyadicus* sp. nov.
- 6(5). Fore wing with simple Cubitus Anterior (CuA₁). Hind tibia with 2 lateral teeth. Metatarsomere I with 2–3 intermediate socle setae. Hind margin of gonocoxa VIII with well developed through whole length lobe (Fig. 25)
- 7(8). Coryphe broad (about 3 times as broad as long), anterior margin weakly convex (Fig. 3). Fore wing quite short (1.6 times as long as broad) (Fig. 6). Capitulum of stylus does not narrow to apex (in dorsal view) (Fig. 22). Hind margin of female sternum VII without process medially, approximately straight (Fig. 26). Each distal part of posterior connective laminae of gonapophyse IX with long process towards the apex (Fig. 24). Relatively small (males: 3.2–3.5 mm, females: 4.1 mm.) *S. pliadicus* sp. nov.
- 8(7). Coryphe quite long (about 2 times as broad as long), anterior margin obtusely angulate (Fig. 2). Fore wing quite long (about 2 times as long as broad). Capitulum of stylus narrows to apex (in dorsal view) (Fig. 15). Hind margin of female sternum VII with large process medially (Fig. 18). Each distal part of posterior connective laminae

of gonapophyse IX without process towards the apex (Fig. 17). Relatively large (males: 3.6–3.9 mm, females: 4.2–4.9 mm.) *S. semissoides* (Bergevin)

REMARKS

According to the features of the male and female genitalia *Semissus* is a monophyletic genus, but contains two groups of species. One group with a single species – *S. hesperidicus* sp. nov. which has phallobase with only one pair of subapical processes (Fig. 41). This condition can be considered as a primitive one. This species is also characterized by weakly protruding distal parts of posterior connective laminae towards the apex (Fig. 46) and hind margin of female sternum VII (Fig. 47). Another group includes *S. acuminatus*, *S. hyadicus* sp. nov., *S. pliadicus* sp. nov., and *S. semissoides* and is characterized by the phallobase having two pairs of subapical processes (Figs 12, 19, 27, 34). This condition can be treated as derived. Also *S. acuminatus*, *S. hyadicus* sp. nov., and *S. pliadicus* sp. nov. have distal parts of posterior connective laminae with long laterally processes towards the apex (Fig. 24) and *S. semissoides*, *S. hyadicus* sp. nov., and *S. acuminatus* have hind margin of female sternum VII with a median process (Figs 18, 33, 40). It is likely that the common ancestor of these two species sister-groups had a structure of the penis and female genitalia similar to ones of *S. hesperidicus* sp. nov.

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