

South American Coccinellidae (Coleoptera). Part X: A systematic revision of *Thalassa* Mulsant (Hyperaspidinae)¹

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RESUMO. Coccinellidae (Coleoptera) da América do Sul. Parte X: Revisão sistemática de *Thalassa* Mulsant (Hyperaspidinae). O gênero *Thalassa* Mulsant, 1850 é revisado. Suas cinco espécies são redescritas: *T. pentaspilota* (Chevrolat, 1853), *T. flaviceps* Mulsant, 1850, *T. similaris* Mulsant, 1850, *T. montezumae* Mulsant, 1850 e *T. glauca* (Mulsant, 1850). Uma nova espécie é proposta, *Thalassa korschefskyi* sp. nov., da Colômbia. São fornecidas ilustrações e chave para as espécies. O lectótipo de *Thalassa reyi* Mulsant, 1850 é aqui designado.

PALAVRAS-CHAVE. Coccinellidae; Hyperaspidini; Taxonomia; *Thalassa*.

ABSTRACT. The genus *Thalassa* Mulsant, 1850 is revised. Its five species are redescribed: *T. pentaspilota* (Chevrolat, 1853), *T. flaviceps* Mulsant, 1850, *T. similaris* Mulsant, 1850, *T. montezumae* Mulsant, 1850, and *T. glauca* (Mulsant, 1850). A new species is proposed, *Thalassa korschefskyi* sp. nov., from Colombia. The species are illustrated and a key to species is also provided. Lectotype of *Thalassa reyi* Mulsant, 1850 is here designated.

KEYWORDS. Coccinellidae; Hyperaspidini; Taxonomy; *Thalassa*.

Thalassa Mulsant is a small genus of lady beetles thus far known from southern Arizona (USA) to Brazil. The genus is redefined and all species redescribed and illustrated herein.

MULSANT (1850) described *Thalassa*, placing it in a group he called “Thalassaires” along with *Corystes* Mulsant, 1850 and *Menoscelis* Mulsant, 1850. *Thalassa* was characterized by the emarginate eyes, shape of the anterior frontal margin, and the form of the anterior legs. MULSANT (1850) described six species in the new genus: *T. montezumae*, *T. pentaspilota* (Chevrolat) as *T. pentastigma*, *T. flaviceps*, *T. similaris*, *T. reyi*, and *T. prasina*.

CROTCH (1874) briefly redescribed five of these species and designated *T. pentaspilota* (Chevrolat) as the type species. He also synonymized *T. reyi* with *Menoscelis glauca* Mulsant (1850) and *T. prasina* with *T. flaviceps*.

CHAPUIS (1876) considered *Thalassa* as a subgenus of *Menoscelis*: *M. (Menoscelis)* and *M. (Thalassa)*.

GORHAM (1894) considered *Menoscelis* to be a synonym of *Thalassa*, followed by KORSCHESKY (1931) and BLACKWELDER (1945). Otherwise, DUVERGER (1989) and FÜRSCH (1990) placed *Menoscelis* as a subgenus of *Thalassa*.

CHAPIN (1966) presented a key to some genera of “Hyperaspini” in which he included *Thalassa*, but did not mention *Menoscelis*, apparently considering the latter to be a synonym of *Thalassa*.

GORDON (1985) redescribed the genus and the species *T. montezumae*. In 1987 he included five species in *Thalassa* and designated lectotypes for *T. similaris* and *T. pentaspilota*.

The specimens examined were provided by the following institutions: National Museum of Natural History, Washington,

D.C. (USNM); University Museum of Zoology, Cambridge (UMZC); The Natural History Museum, London (BMNH); Coleção Entomológica Pe. J. S. Moure, Departamento de Zoologia, Universidade Federal do Paraná, Curitiba, (DZUP); Museu Nacional, Universidade Federal do Rio de Janeiro, Rio de Janeiro (MNRJ).

Thalassa Mulsant, 1850

Thalassa Mulsant, 1850:506; Crotch, 1873:364; 1874:209; Gorham, 1894:183; Korschefsky, 1931:208; Blackwelder, 1945:449; Chapin, 1966:280; Gordon, 1985:400; 1987:26.

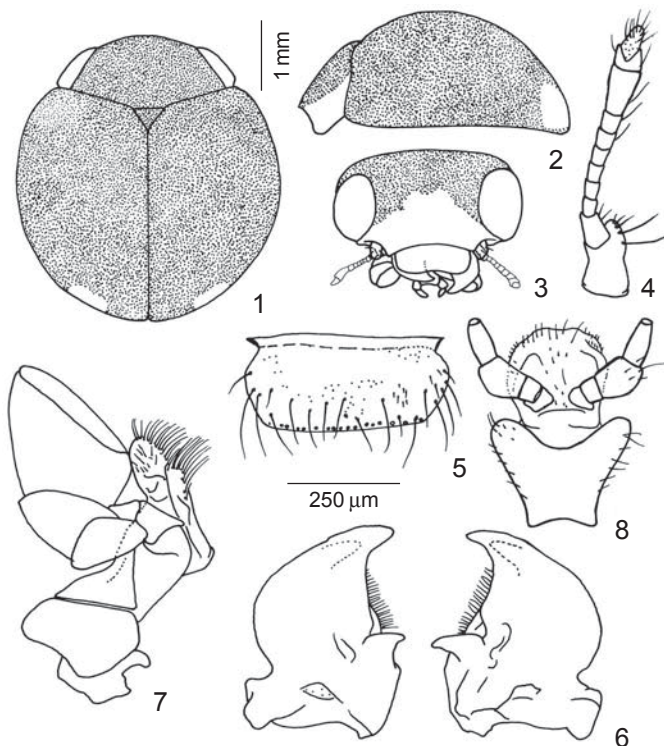
Menoscelis (Thalassa); Chapuis, 1876:233.

Thalassa (Menoscelis); Duverger, 1989:146; Försch, 1990: 63.

Type species: *Chilocorus pentaspilotus* Chevrolat, 1835 by subsequent designation of Crotch, 1874.

Body rounded in dorsal view (Fig. 1) convex (Fig. 2). Dorsal surface glabrous. Some species sexually dimorphic.

Eyes finely faceted and glabrous, not emarginate near antennal insertion (Fig. 3). Antennal insertion visible. Antennae short, composed of 11 antennomeres; scape subrectangular, with slight lateral lobe; pedicel rectangular; antennomere 9 three times longer than wide; 10 rectangular, 11 subtriangular (Fig. 4). Clypeus with apical margin slightly arcuate, with straight lateral margins projected (Fig. 3). Labrum subrectangular in shape (Fig. 5). Mandibles symmetrical, large, robust, strongly sclerotized; with apical and subapical incisor teeth and pointed median mola; prostheca with short bristles (Fig. 6). Maxillae sclerotized; palpomere 4 securiform, sides strongly diverging



Figs. 1–8. *Thalassa pentaspilota*: 1, dorsal view; 2, lateral view; 3, head, frontal view; 4, antenna; 5, labrum; 6, mandibles; 7, maxilla; 8, labium.

(Fig. 7). Labium with anterior ligula densely covered with small spines, ventral portion of ligula with several long setae; each labial palpus with basal articles and last narrower in the distal region. Mentum cordiform, prementum truncate; with median area strongly truncate (Fig. 8).

Prosternal process nearly parallel sided; prosternal carinae short, parallel (Fig. 9). Metendosternite trapezoidal, lateral margins almost parallel, with deep V-shaped anterior border (Fig. 10).

Wings with anal venation reduced; 1st and 2nd Anal veins and Ea, Eb and P evident (Fig. 12).

Elytra rounded with raised humeral callosity, lateral margin not flattened (Figs. 1, 2). Epipleura with excavations to receive apices of middle and hind femur (Fig. 11). Anterior tibia slender, with evident projection near apex, strongly excavated to receive tarsus; external basal angle rounded near base (Fig. 13). Tarsomere 2 subtriangular in ventral view; tarsal claw appendiculate (Fig. 14).

Male abdomen with 7 visible segments; female abdomen with 6 visible segments (Fig. 15).

Male genitalia. Median lobe asymmetrical, paramere longer than median lobe. Sipro strongly sclerotized, curved, with elongated apex (Fig. 19).

Female genitalia. Spermatheca globular; wide, transverse coxites with slender setae, without stylus and infundibulum (Fig. 16).

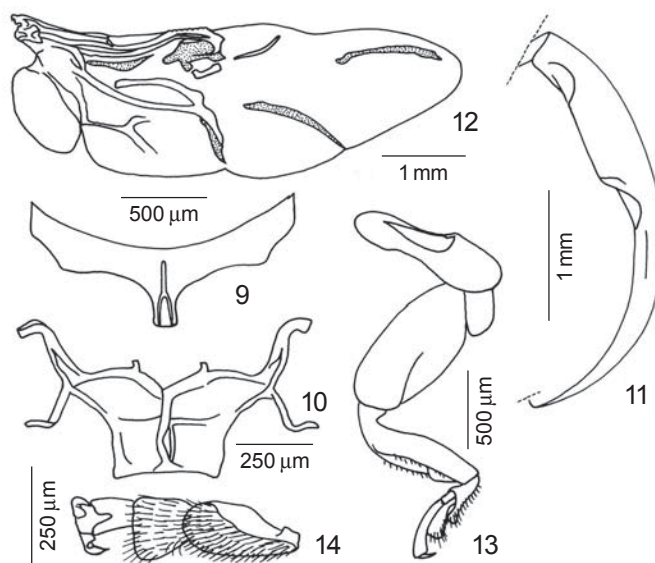
Remarks. *Thalassa* and *Menoscelis* have long been

considered synonymous (GORHAM 1894; KORSCHESKY 1931; BLACKWELDER 1945), or treated as subgenera (CHAPUIS 1876; DUVERGER 1989; FÜRSH 1990). We consider these two genera valid, based primarily on the quite different form of the anterior legs. *Thalassa* has slender, unmodified tibiae lacking flanges or projections of any type. *Menoscelis* has wide, highly modified legs of the type usually associated with the genus *Hinda* Mulsant, 1850 in the tribe Brachiacanthadini. In addition, *Thalassa* species are relatively small and characteristically dark in color with a metallic tint and yellow or orange spots. Species of *Menoscelis* are large and basically yellow with reddish brown maculation.

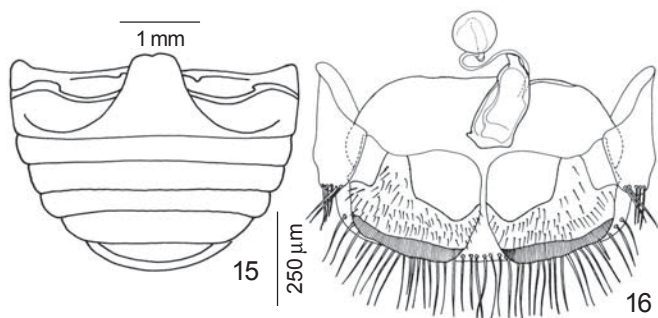
Thalassa is a typical Hyperaspidini genus because the eyes are not emarginated and the female genitalia have globular spermatheca and lack infundibulae. It is most similar to *Tiphysa* Mulsant, 1850 of the tribe Brachiacanthini because of size and color. *Tiphysa* differs from *Thalassa* by having eyes emarginated, and female genitalia with globular spermatheca and lacking an infundibulum (MILLÉO & ALMEIDA 2003).

Key to species of *Thalassa*

- 1. Elytron with spots 2
Elytron without spots 4
- 2(1). Elytron with one small spot 3
Elytron with two rounded yellow spots on disc (Figs. 33, 40) *Thalassa korschefskyi* **sp. nov.**
- 3(2). Elytron with one rounded yellow spot near the apex (Fig. 1, 35) *Thalassa pentaspilota* (Chevrolat)
Elytron with one quadrangular yellow spot at middle of disc (Figs. 25, 38) *Thalassa montezumae* Mulsant



Figs. 9–14. *Thalassa pentaspilota*: 9, prosternal process; 10, metendosternite; 11, epipleuron, ventral view; 12, wing; 13, anterior leg; 14, tarsus.



Figs. 15-16. *Thalassa pentaspilota*: **15**, female abdomen; **16**, female genitalia.

- 4(1). Pronotum with lateral margins yellow 5
- Pronotum with anterior and lateral margins narrowly dark yellow (Figs. 21, 37) *Thalassa similaris* Mulsant
- 5(4). Pronotum broadly yellow on lateral margin. Length 5.17 - 5.83 mm. Width 5 - 5.33 mm (Figs. 17, 36) *Thalassa flaviceps* Mulsant
- Pronotum with lateral margin narrowly yellow. Length 6.67 mm. Width 6 mm (Figs. 29, 39) *Thalassa glauca* (Mulsant)

***Thalassa pentaspilota* (Chevrolat, 1835)**
(Figs. 1-16, 35)

Chilocorus pentaspilotus Chevrolat, 1835:124; Mulsant, 1850: 103; Gorham, 1894:183; Gordon, 1985:400; Fürsch, 1989:20; 1990:17. *Thalassa pentastigma* [sic]; Mulsant, 1850:512-513; Crotch, 1874:209. *Hyperaspis pentastigma* [sic]; Mulsant, 1850:513. *Thalassa pentaspilota*; Crotch, 1874:209; Gorham, 1894:183; Blackwelder, 1945:449; Gordon, 1987:26; Duverger, 1989:146. *Coccinella pentaspilota*; Crotch, 1874:209. *Thalassa pentaspilotus* [sic]; Korschevsky, 1931:209.

Diagnosis. Female. Pronotum, scutellum and elytron bright metallic bluish-green. Dorsum of head and mouthparts black, front of head yellow. Pronotum with lateral margins narrowly yellow. Elytra with one small rounded spot near the apex (Fig. 1, 35). Thoracic sterna, abdomen and legs black. Length 4.83 - 5.67 mm. Width 4.33 - 4.83 mm.

Male. Not examined.

Female genitalia. Coxites subquadrates, sparsely setose, bursa copulatrix elongate, spermatheca rounded (Fig. 16).

Type material. The lectotype of *Chilocorus pentaspilotus*, from Mexico, designated by GORDON (1987), was studied and is located at the University Museum of Zoology, Cambridge, England (UMZC). The specimen has the following labels: [TYPE] in blue, [TYPE *Pentastigma* Mex] in the reverse [Chevrol.], [Lectotype *Thalassa pentastigma* Muls. By R.Gordon'70], [Lectotype *Thalassa pentaspilota* Chev. 1835 Gordon 1987].

Specimens examined. MEXICO. 1 specimen, B.C.A. Col. VII (BMNH) . VENEZUELA. 2 specimens, *Aragua*: Boca Del Rio (USNM); 1 specimen, *Carabobo*: Marciara, (USNM); 1 specimen, Yuma (USNM).

***Thalassa flaviceps* Mulsant, 1850**
(Figs. 17-20, 36)

Hyperaspis flaviceps Dejean, 1836: 435 (*nom. nud.*). *Thalassa flaviceps* Mulsant, 1850:513; Crotch, 1874:209; Korschevsky, 1931:208; Blackwelder, 1945:449; Gordon, 1987:26. *Thalassa prasina* Mulsant, 1850:516; Korschevsky, 1931:208 (*syn.*). *Thalassina* [sic] *prasina*; Crotch, 1874:209.

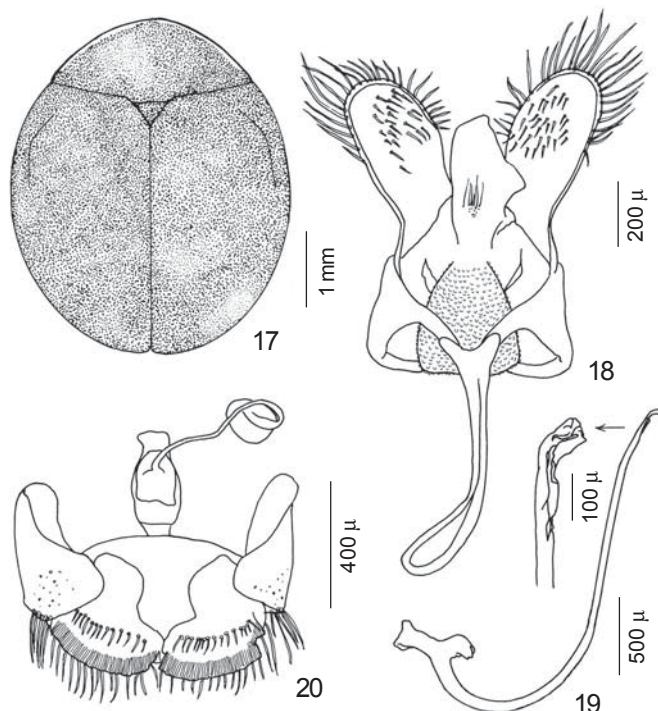
Diagnosis. Pronotum, scutellum and elytra bright metallic greenish-blue. Male head yellow, labrum black. Male pronotum with lateral margins narrowly dark yellow. Female pronotum entirely greenish blue. Elytra without maculation (Fig. 17, 36). Thoracic sterna black, abdomen castaneous. Legs black, except outer margin of femur yellow. Length 5.17 - 5.83 mm. Width 5 - 5.33 mm.

Male genitalia. Median lobe with lateral margin angular. Paramere wide with slight constriction at base. Basal piece wide, with short setae (Fig. 18). Siphon strongly sclerotized, sinuate, with membranous apex (Fig. 19).

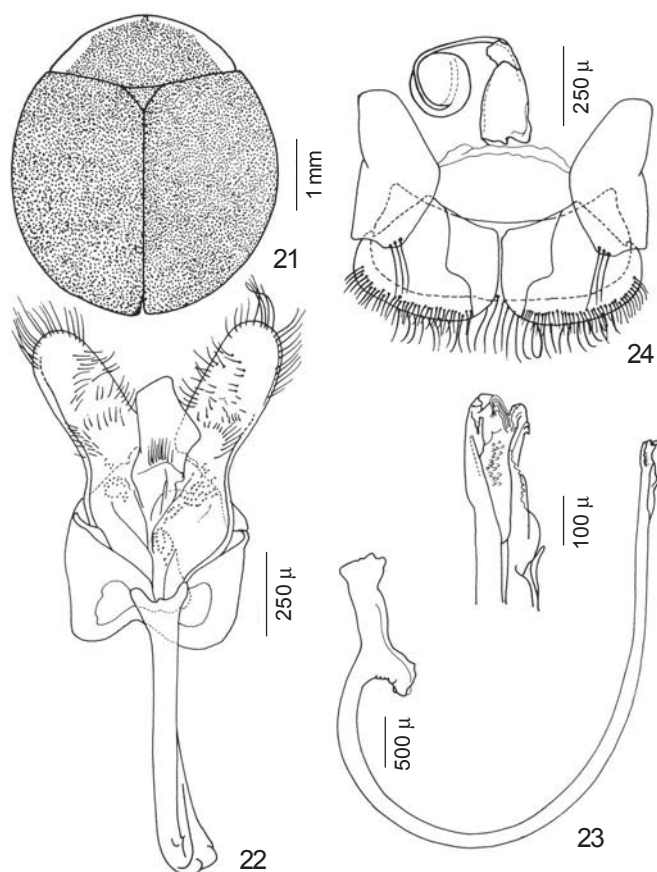
Female genitalia. Coxites subtriangular, sparse setae near apex, bursa copulatrix slightly rounded; spermatheca rounded (Fig. 20).

Type material. The syntype of *Thalassa flaviceps* from Cuba was not examined and GORDON (1987) indicated, with doubt, that the material should be located at the Muséum d'Histoire Naturelle, Lyon, France.

Specimens examined. CUBA. San Antonio de Las Banos, 28.VI.1928, Bierig leg., 1 specimen (DZUP); Santiago de las Vegas, 1.IV.1938, J.F. leg., 4 specimens (MNRJ); 1 specimen (UMZC). Without locality, 2



Figs. 17-20. *Thalassa flaviceps*: **17**, dorsal view; male genitalia: **18**, tegmen; **19**, siphon; **20**, female genitalia.



Figs. 21–24. *Thalassa similis*: 21, dorsal view; male genitalia: 22, tegmen; 23, siphus; 24, female genitalia.

specimens, Col. Guérin (UMZC); 2 specimens, Col. Chevrolat (UMZC); 1 specimen, Col. Deyrollei (UMZC).

***Thalassa similis* Mulsant, 1850**
(Figs. 21–24, 37)

Thalassa similis Mulsant, 1850:514; Crotch, 1874:209; Korschefsky, 1931:209; Blackwelder, 1945:449; Gordon, 1987:26.

Diagnosis. Dorsum greenish-blue with bright metallic green tint. Male head yellow. Female head with dorsum black, front dark yellow, labrum brown. Male pronotum with anterior and lateral margins narrowly dark yellow. Female pronotum with lateral margins narrowly dark yellow. Elytra without maculation (Fig. 21, 37). Thoracic sternum black, legs yellow, except coxae black. Abdomen yellow with basal portion of basal sternum black. Length 6 a 6.33 mm. Width 5.5 a 6.67 mm.

Male genitalia. Median lobe with lateral margin angular. Paramere and basal piece wide (Fig. 22). Siphus strongly sclerotized and anteriorly curved, membranous apex with small setae (Fig. 23).

Female genitalia. Coxites subquadrangular, with sparse setae near apex, bursa copulatrix slightly elongated; spermatheca rounded (Fig. 24).

Type material. The lectotype of *Thalassa similis*, from Colombia (Nova Granada), was designated by GORDON (1987). It was studied and is located at the University Museum of Zoology, Cambridge, England (UMZC). The specimen has the following label: [TYPE] in blue, [TYPE *similis* N.Gr. Guer.], [Lectotype *Thalassa similis* Muls. By R.Gordon'70], [Lectotype *Thalassa similis* Muls. 1850 Gordon 1987].

Specimens examined. Without locality, 1 specimen, Col. Deyrolle (UMZC).

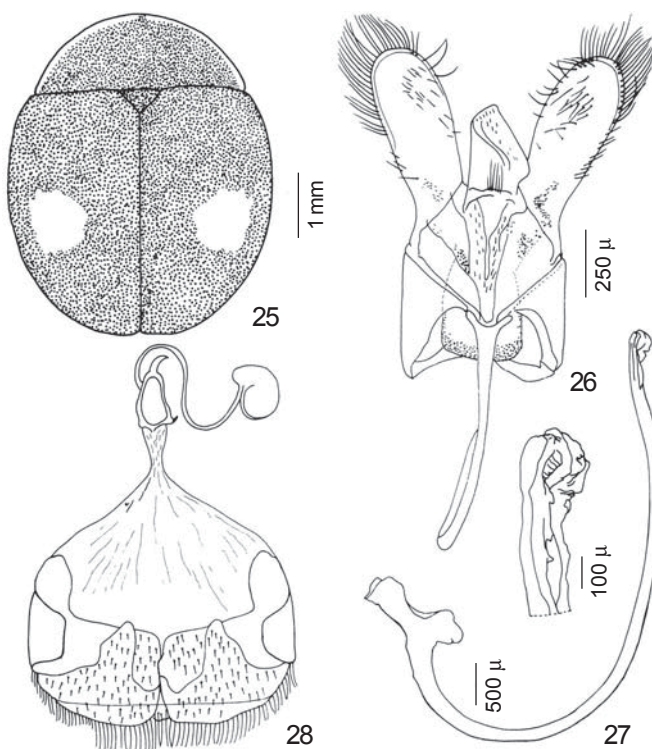
***Thalassa montezumae* Mulsant, 1850**
(Figs. 25–28, 38)

Thalassa montezumae Mulsant, 1850:512; Crotch, 1873:364; 1874:209; Gorham, 1894:183; Leng, 1903:211; Korschefsky, 1931:209; Blackwelder, 1945:449; Gordon, 1985:400–401; 1987:26.

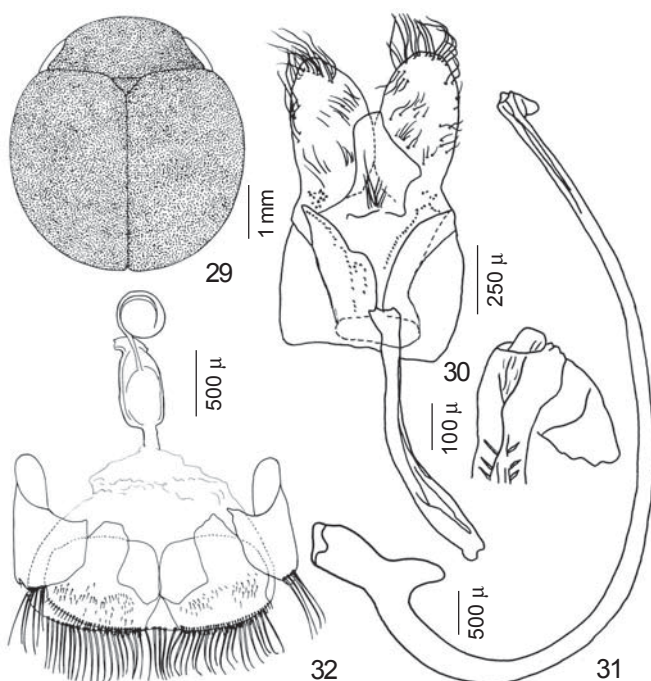
Diagnosis. Dorsum bright metallic bluish-green. Male head yellow with brown labrum. Pronotum with anterior and lateral margins narrowly yellow. Elytra with two quadrangular yellow spots on middle of disc (Fig. 25, 38). Thoracic sternum and legs dark brown. Abdomen yellow. Length 6.83 mm. Width 5.67 mm.

Male genitalia. Median lobe with lateral projection. Paramere and basal piece wide, with small setae (Fig. 26). Siphus strongly sclerotized, curved toward apex, apex membranous (Fig. 27).

Female genitalia. Coxites subquadrangular, with sparse bristles near apex, bursa copulatrix slightly elongated; spermatheca rounded (Fig. 28).



Figs. 25–28. *Thalassa montezumae*: 25, dorsal view; male genitalia: 26, tegmen; 27, siphus. 28, female genitalia (according to GORDON 1985).



Figs. 29–32. *Thalassa glauca*: 29, dorsal view; male genitalia: 30, tegmen; 31, siphus; 32, female genitalia.

Type material. The lectotype and the paralectotype of *Thalassa montezumae*, from Mexico, were designated by GORDON (1985). They were studied and are located in the University Museum of Zoology, Cambridge, England (UMZC). The lectotype with the following labels: [TYPE] in blue, [TYPE *montezumae* Mex.] versus [Chevrol], [Lectotype *Thalassa montezumae* Muls. By R.Gordon'70], [Lectotype *Thalassa montezumae* Muls. 1850 Gordon 1985]. The paralectotype with the labels: [male] versus [Chevr], [Paralectotype *Thalassa montezumae* Muls. 1850 Gordon 1987].

Specimens examined. UNITED STATES OF AMERICA. *Arizona*: 1 specimen (BMNH); Phoenix, J.H.O'Dell leg., 1 specimen (DZUP). MÉXICO. Veracruz, Sallé leg., 1 specimen, B.C.A. col. VII (BMNH); (Playa Vicente), Sallé leg., 1 specimen, B.C.A. col. VII (BMNH); Jalapa, Hoege leg., 1 specimen (BMNH); Puebla, Matamoros Izucar, Hoege leg. 1 specimen (BMNH). GUATEMALA. El Repozo, Champion leg., 1 specimen (BMNH).

***Thalassa glauca* (Mulsant, 1850)**
(Figs. 29–32, 39)

Menoscelis glauca Mulsant, 1850:510-511.

Thalassa glauca; Crotch, 1874:209; Chapuis, 1876:234; Gorham, 1894:184; Korschefsky, 1931:208; Blackwelder, 1945:449; Gordon, 1987:26.

Thalassa reyi Mulsant, 1850:515; Crotch, 1874:209 (*syn.*).

Diagnosis. Dorsum greenish-blue with bright metallic greenish tint. Male head yellow, in the female with vertex black, front dark yellow, labrum brown. Pronotum with lateral margins narrowly dark yellow. Elytra immaculate (Fig. 29, 39). Thoracic sterna black, legs yellow except coxae and anterior femur black. Abdomen yellow with basal region black. Length 6.67 mm. Width 6 mm.

Male genitalia. Median lobe with lateral projection. Paramere and basal piece wide, with small setae (Fig. 30). Siphus strongly sclerotized, curved toward apex, apex with membranous lateral projection (Fig. 31).

Female genitalia. Coxites subquadrangular, with sparse setae near apex and external surface; bursa copulatrix elongated; spermatheca rounded (Fig. 32).

Remarks. *T. glauca* and *T. similis* are quite similar and possibly synonymous.

Type Material. *Menoscelis glauca* Mulsant was described from the Dupont collection, but type has not been examined. GORDON (1987) indicated, with doubt, that the material should be located in the Muséum d'Histoire Naturelle, Paris, France.

The syntype of *Thalassa reyi* Mulsant, from Brazil was studied and is located in the Natural History Museum, London, England (BMNH) with the followings labels: [TYPE] in orange, [57 71] in blue, [119], [*Reyi* Muls. Brésil.], [named by Mulsant]. To preserve stability of nomenclature, this specimen is here designated LECTOTYPE, and a characteristic label will be added.

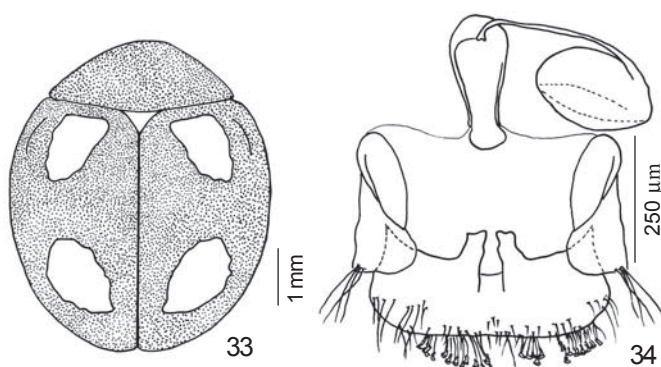
Specimens examined. GUATEMALA. Guatemala, Champion leg., 1 specimen, B.C.A. col. VII (BMNH); Tepan, Conradt leg., 1 specimen, B.C.A. col. VII (BMNH); Sallé leg., 1 specimen, B.C.A. col. VII (BMNH). COSTA RICA. Van Patten leg., 1 specimen, B.C.A. col. VII (BMNH). COLÓMBIA. Hoege leg., 46-20, 1 specimen (BMNH). BRASIL. Without locality, 1 specimen, P.Co., Col. Buquet (UMZC). *São Paulo*: São Paulo (Cantareira), 25.II.1962, J. Halik leg., Halik Collection, 1 specimen, 2029056 (USNM); Jaú, X.1903, 1 specimen, 2029056 (USNM).

***Thalassa korschefskyi* sp. nov.**
(Figs. 33, 34, 40)

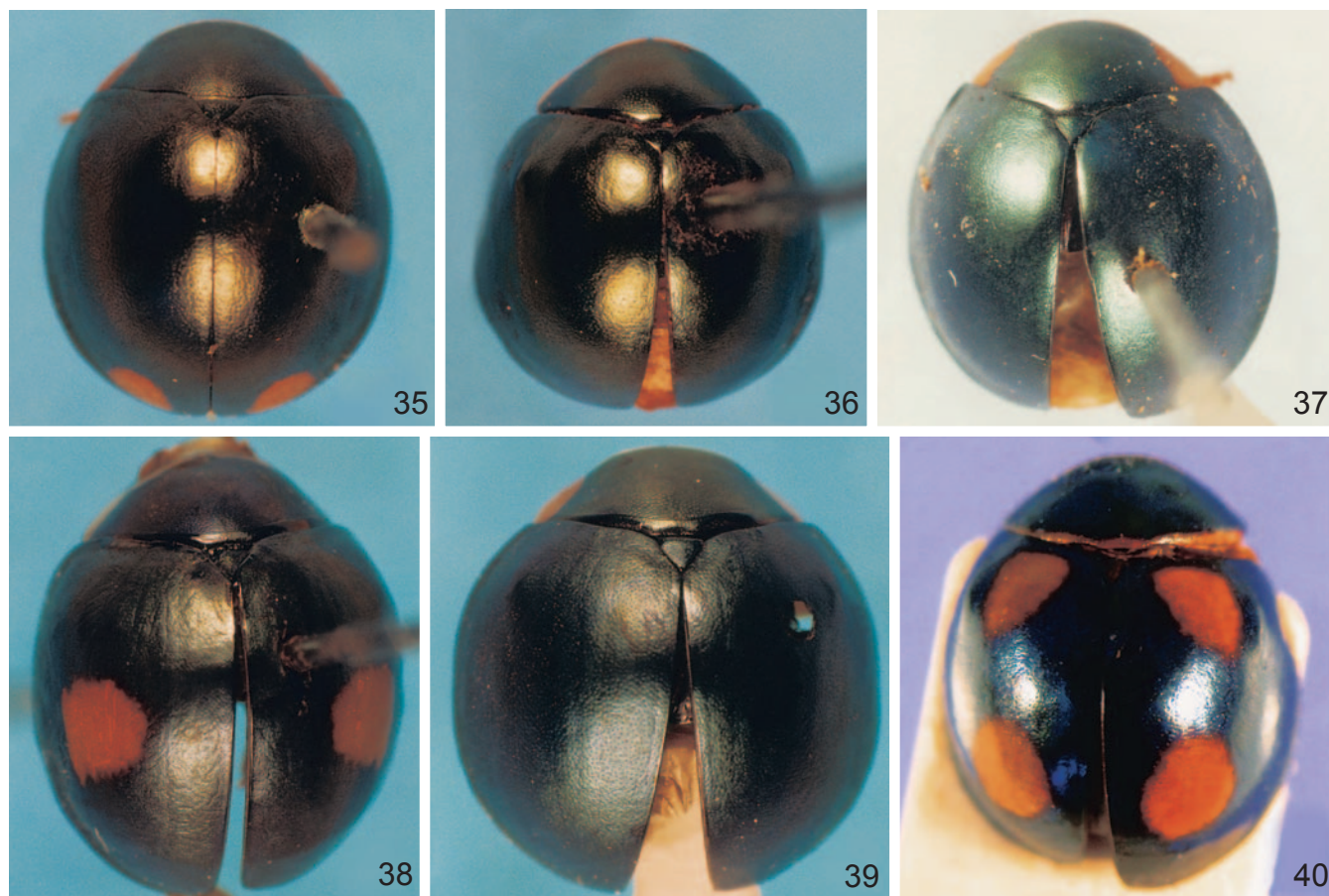
Diagnosis. Dorsum bright metallic bluish-green with four rounded yellow spots. Male head black with two rounded yellow spots. Pronotum with lateral margin narrowly yellow. Elytra with two rounded yellow spots on the disc (Fig. 33, 40). Thoracic sterna, legs and abdomen yellow, except prosternal carinae, brown. Length 4.67 mm. Width 3.75 mm.

Male genitalia. Not examined.

Female genitalia. Coxites subquadrangular, with sparse bristles spoon-like near apex, bursa copulatrix slightly elongated; spermatheca rounded (Fig. 34).



Figs. 33–34. *Thalassa korschefskyi* sp. nov. holotype female; 33, dorsal view; 34, female genitalia.



Figs. 35–40. 35, *Thalassa pentaspilota*; 36, *Thalassa flaviceps*; 37, *Thalassa similaris*; 38, *Thalassa montezumae*; 39, *Thalassa glauca*; 40, *Thalassa korschefskyi* sp. nov.

Type material. Holotype female, Colombia, IV-VI. 1908, Hac. Pehlke & E. Pehlke S., Korschefsky collection, USNM 2029056, deposited in the National Museum of Natural History, Washington, D.C. (USNM).

Remarks. *Thalassa korschefskyi* is similar to *T. pentaspilota* but differs in the number and position of the spots on disc of the elytra.

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