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On the genus *Rhopalocerina* REITTER (Coleoptera: Staphylinidae: Aleocharinae)

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A b s t r a c t : *Rhopalocerina sinica* nov.sp. (China: S-Shaanxi), the second species of the genus, is described, illustrated, and distinguished from the West Palaearctic *R. clavigera* (SCRIBA 1859). The sexual characters of *R. clavigera* are illustrated. Diagnoses and data on the distribution and natural history of the two species of *Rhopalocerina* REITTER 1909 are presented. Two new country records of *R. clavigera* are reported.

K e y w o r d s : Coleoptera, Staphylinidae, Aleocharinae, Homalotini, *Rhopalocerina*, Palaearctic, new species, distribution, natural history.

Introduction

GANGBAUER (1895) described *Rhopalocera* as a subgenus of *Atheta* THOMSON 1858 to include only the type species by monotypy, *Homalota clavigera* SCRIBA 1859. Having discovered that *Rhopalocera* represented a junior homonym, REITTER (1909) replaced the name with *Rhopalocerina*. The taxon continued to be regarded as a subgenus of *Atheta* for decades to come, but was moved to the Gyrophaenini as a genus by HORION (1967), based on a manuscript by LOHSE (unpublished). Subsequently, LOHSE (1974) assigned *Rhopalocerina* to the Bolitocharini (now Homalotini), based on the four-jointed mesotarsi, the morphology of the mouthparts, the broadly separated mesocoxae, and the shape of the mesocoxae. Up to today, *R. clavigera* has remained the sole representative of the genus. The only other name that had originally been attributed to *Rhopalocerina*, *Atheta kaiseri* BERNHAUER 1936, is now a junior synonym of *Atheta* (*Microdota*) *foveicollis* (KRAATZ 1856) (SMETANA 2004).

During a joint field trip to China conducted by Michael Schülke, David Wrase (both Berlin), and the author in summer 2012, several specimens of *Rhopalocerina* were collected. An examination of this material revealed that it represented an undescribed species, the second species of the genus.

Material and methods

The material treated in this paper is deposited in the following collections:
cAss..... author's private collection

cFel private collection Benedikt Feldmann, Münster
 cWun private collection Paul Wunderle, Mönchengladbach
 cSch private collection Michael Schülke, Berlin

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss Germany) and a Jenalab compound microscope (Carl Zeiss Jena). A digital camera (Nikon Coolpix 995) was used for the photographs.

Head length was measured from the anterior margin of the clypeus to the posterior margin of the head, elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra, and the length of the aedeagus from the apex of the ventral process to the base of the median lobe. The parameral side (i.e., the side where the sperm duct enters) of the median lobe of the aedeagus is termed the ventral, the opposite side the dorsal aspect.

The species of *Rhopalocerina*

Rhopalocerina clavigera (SCRIBA 1859) (Figs 8, 13-16)

Homalota clavigera SCRIBA 1859: 414.

Gyrophæna clavicornis EPPELSHEIM 1878: 40.

M a t e r i a l e x a m i n e d : Germany: 1 ex., Niedersachsen, Hannover, Eilenriede, mixed forest, car-net, 3.VII.1991, leg. Assing (cAss); 1 ex., same data, but 8.VII.1991 (cAss); 1 ex., same data, but 15.V.1992 (cAss); 1 ex., Niedersachsen, Osnabrück, Sedanstraße, pitfall trap, IX.1993, leg. Kache (cFel); 1 ex., Nordrhein-Westfalen, Porta Westfalica, Wittekindsberg, car-net, 10.VI.1993, leg. Assing (cAss); 1 ex., Nordrhein-Westfalen, Menden, Hönnetal, Klusenstein, sifted, 29.IV.1995, leg. Feldmann (cFel); 1 ex., Nordrhein-Westfalen, Düsseldorf, Benrath, Schlosspark, mixed forest, pitfall trap, 17.VII.2004, leg. Wenzel (cFel); 1 ex., Nordrhein-Westfalen, Wahner Heider, Troisdorf, car-net, IV.1987, leg. Wunderle (cWun); 1 ex., Nordrhein-Westfalen, Düren, road Gürzenich to Schevenhütte, car-net, 26.V.1989, leg. Wunderle (cWun). Italy: 1 ex., Lombardia, Bergamo, Val Brembana, Mezzoldo, 46°00'N, 9°40'E, 800 m, 11.VII.2002, leg. Lompe (cAss); 2 exs., Liguria, Montoggio, Sanguinetto, chestnut litter sifted, 30.IX.1989, leg. Wunderle (cWun); 2 exs., Liguria, NW Finale Ligure, Colle de Melogno, 1010 m, beech litter sifted, 12.IX.2001, leg. Wunderle (cWun); 1 ex., Veneto, Monte Baldo, Monte Altissimo, 1950 m, shrub litter sifted, 4.X.1996, leg. Assing (cAss); 1 ex., Veneto, Monti Lessini (VR), E Mga, Campogrosso, 27.V.1996, leg. Schuh & Lang (cAss); 12 exs., Campania, Lago Matese (CE), 1100 m, beech forest, 17.V.2001, leg. Angelini (cAss); 3 exs., Toscana, Vallombrosa, 43°43'N, 11°33'E, 1150 m, 17.IX.2002, leg. Meybohm (cAss); 1 ex., Umbria, SE Terni, 10 km S Leonetta, Monti Reatini, 1400 m, beech litter sifted, 3.VI.2000, leg. Wunderle (cWun); 4 exs., Calabria, Monti Orsomarso, Grisolia, Pantanelli (CS), 670 m, beech forest, 4.VIII.1989, leg. Angelini (cAss). Serbia: 1 ex., Gramada planina, S Sastav Reka, 29.IV.2007, leg. Stévanović (cAss). Macedonia: 1 ex., Šar planina, Popova shapka, 5.-11.VI.1955, leg. Schubert (cAss). Greece: 1 ex., Ioánnina, Oros Mitsikéli, road Dikórifto to Manassis, 970 m, subterranean trap, leg. Giachino & Vailati (cAss); 1 ex., Fthiotis, Parnassos Oros, ski resort, 38°33'N, 22°35'E, 1760 m, *Abies* forest, litter sifted, 15.IV.2000, leg. Assing (cAss); 2 exs., Parnassos, road to ski resort, 38°34'N, 22°34'E, 1700 m, fir litter near snow sifted, 15.IV.2000, leg. Wunderle (cWun); 1 ex., Fthiotis, 40 km W Lamía, bank of Sperchios river, 38°56'N, 21°59'E, floodplain forest, 16.IV.2000, leg. Assing (cAss); 2 exs., Pelopónnisos, Erimanthos, above Kalentzi, 37°57'N, 21°47'E, 1200 m, *Abies* forest, sifted, 1.IV.1997, leg. Assing (cAss); 1 ex., Pelopónnisos, Paronon Oros, 1100-1450 m, pine and fir litter sifted, 13.VI.1996, leg. Wunderle (cWun). Turkey: see ASSING (2007).

C o m m e n t : The original description of *Homalota clavigera* is based on two syntypes from Germany (SCRIBA 1859). An exact locality is not specified, but it can be assumed that they were collected in Hessen, where the author lived. *Gyrophæna*

clavicornis was described from "Siebenbürgen" (today in Romania), based on "2 oder 3 Ex." (EPPELSHEIM 1878), and subsequently synonymized with *R. clavigera*.

Diagnosis: The species is readily distinguished from other West Palaearctic Homalotini by the following character combination: body small (body length: 1.7-2.5 mm; length of forebody: 0.9-1.2 mm); head approximately as long as broad, widest anteriorly (across eyes); antennae conspicuously incrassate apically, clavate (antennomeres IV-X strongly transverse, at least twice as wide as long); forebody with pronounced microreticulation; punctation of forebody extremely fine, barely noticeable in the microsculpture; elytra much broader than pronotum and posteriorly widened; abdomen broad, widest at segments V or VI, almost as broad as elytra; punctation of abdomen conspicuously sparse and fine, barely noticeable in the microreticulation; median lobe of aedeagus small and with deeply bifid ventral process (Figs 13-15); spermatheca (Fig. 8) with long and fully developed proximal portion, resembling that of many Athetini. The four-jointed mesotarsus is illustrated in Fig. 16.

Distribution and natural history: According to SMETANA (2004), *R. clavigera* is distributed from the Balkans and Russia across Central Europe and Italy to France and Great Britain. Recently, the species was also recorded from northeastern Turkey (ASSING 2007). The above specimens from Macedonia and Serbia represent new country records.

Rather little is known about the ecology of the species. According to HORION (1967), it has mainly been found in litter and debris of beech forests. The examined material was primarily collected by sifting leaf litter of various forest (beech, fir, boxwood, chestnut, and alder forests, floodplain forest) and subalpine shrub habitats at a wide range of altitudes, from near sea-level to 1950 m. However, the overall rarity of records suggests that the reproduction habitat is essentially unknown and cryptic, a conclusion supported also by the fact that one specimen was collected in a subterranean pitfall trap. On several occasions *R. clavigera* was caught on the wing with car-nets during the period from April through July.

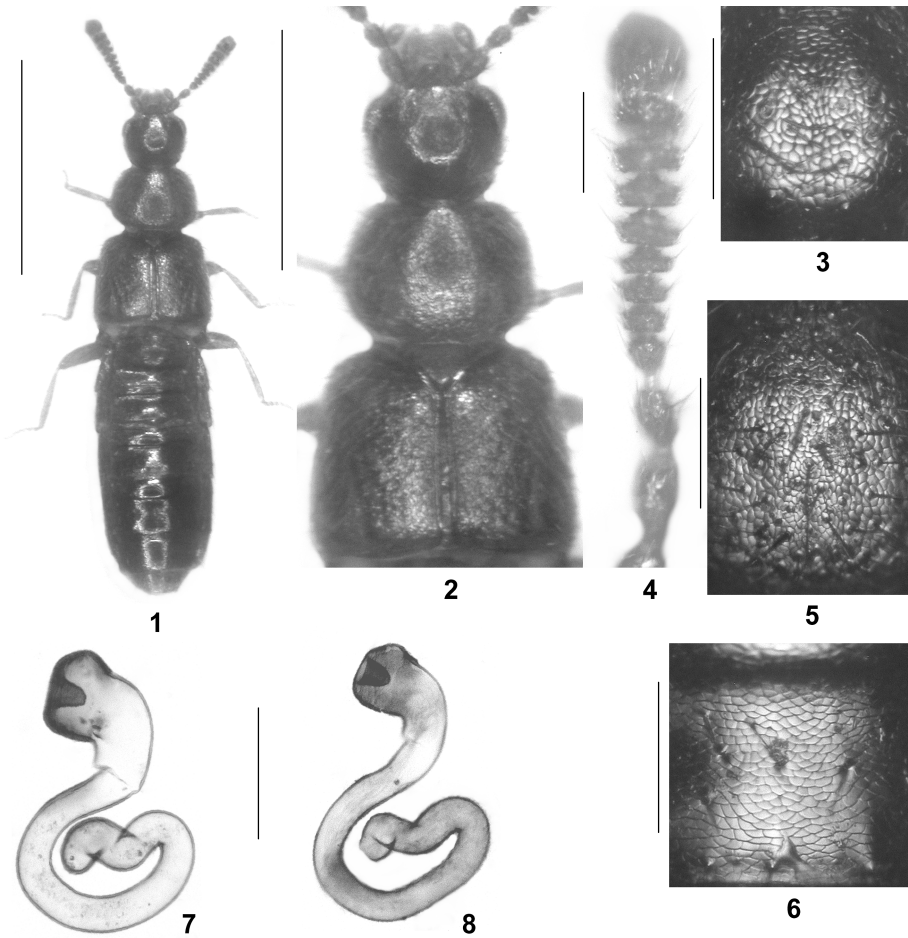
***Rhopalocerina sinica* nov.sp.** (Figs 1-7, 9-12)

Type material: Holotype ♂: "China [2] - S-Shaanxi, SW Meixian, Qinling Shan, 34°01'31"N, 107°24'13"E, 1870 m, 26.VII.2012, V. Assing / Holotypus ♂ *Rhopalocerina sinica* sp.n. det. V. Assing 2012" (cAss). Paratypes: 2♂♂, 2♀♀: same data as holotype (cAss); 2♀♀: same data, but leg. Schülke (cSch).

Etymology: The specific epithet is a latinised adjective meaning "Chinese".

Description: Body length 2.2-2.9 mm; length of forebody 1.1-1.3 mm. Habitus as in Fig. 1. Coloration: head brown; pronotum and elytra pale-brown; abdomen reddish-brown, with segments VI-VII darker; legs reddish-yellow; antennae dark-brown, with the basal two antennomeres sometimes slightly paler.

Head (Figs 2-3) approximately as long as broad, widest anteriorly (across eyes), narrowed behind eyes; integument with distinct microreticulation; punctation extremely fine, barely noticeable. Eyes large and distinctly convex, longer than postocular region in dorsal view. Antenna (Fig. 4) strongly incrassate apicad.

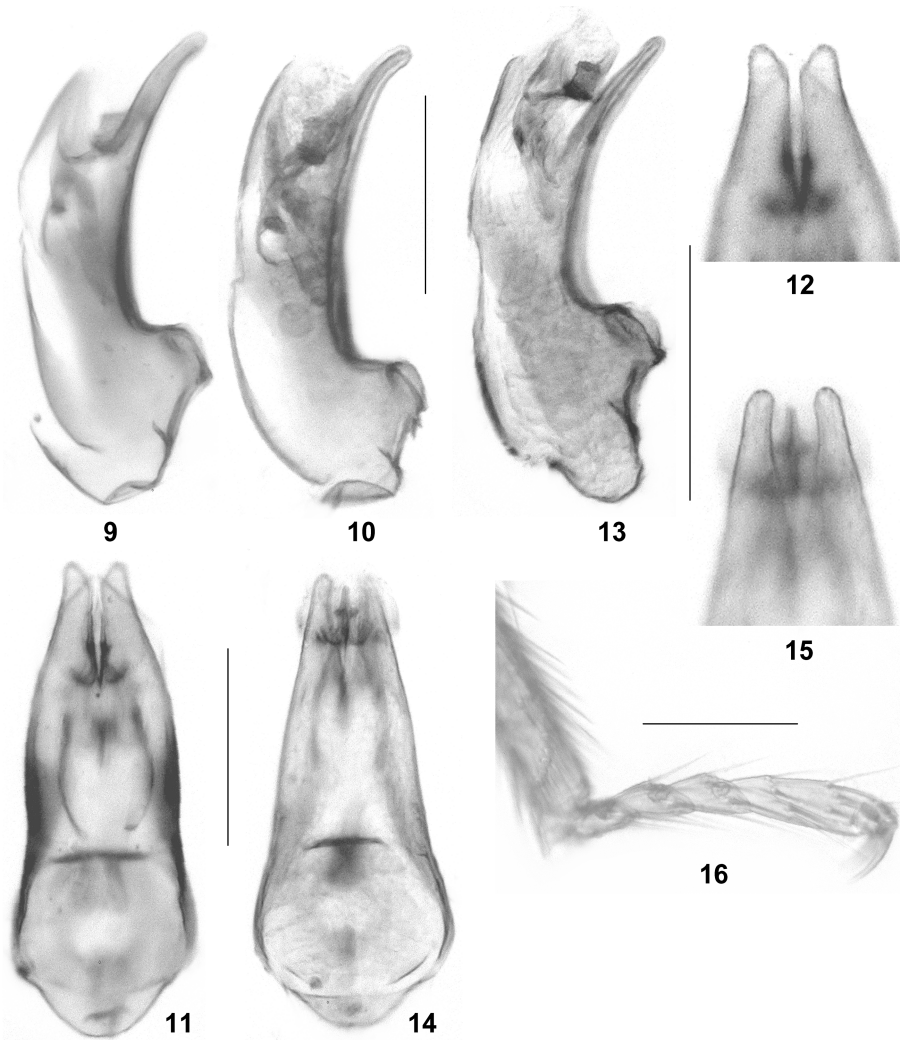


Figs 1-8: *Rhopalocerinina sinica* nov.sp. (1-7) and *R. clavigera* from Greece (8): (1) habitus; (2) forebody; (3) median portion of head; (4) antenna; (5) median portion of male pronotum; (6) median portion of tergite VI; (7-8) spermatheca. Scale bars: 1: 1.0 mm; 2: 0.5 mm; 3-8: 0.1 mm.

Pronotum (Figs 2, 5) 1.25-1.30 times as broad as long and 1.30-1.35 times as broad as head, widest approximately in the middle; posterior angles weakly marked, almost obsolete; punctation slightly less fine than that of head; microsculpture similar to that of head.

Elytra (Fig. 2) approximately as long as, and at posterior margin approximately 1.4 times as broad as pronotum, distinctly widened posteriad; punctation very fine, barely noticeable in the pronounced microreticulation. Hind wings fully developed. Metatarsomere I approximately as long as II.

Abdomen (Figs 1, 6) approximately as broad as elytra at posterior margin, widest at segment V; punctation very sparse and fine, barely noticeable in the microreticulation; posterior margin of tergite VII with palisade fringe.



Figs 9-16: *Rhopalocercina sinica* nov.sp. (9-12) and *R. clavigera* from Greece (13-16): (9-10, 13) median lobe of aedeagus in lateral view; (11, 14) median lobe of aedeagus in ventral view; (12, 15) apical portion of median lobe of aedeagus in ventral view; (16) mesotarsus. Scale bars: 0.1 mm.

♂: median lobe of aedeagus approximately 0.24 mm long and shaped as in Figs 9-12; ventral process deeply bifid.

♀: spermatheca as in Fig. 7.

Comparative notes: The new species is distinguished from *R. clavigera* by the paler coloration (*R. clavigera*: pronotum and elytra usually blackish-brown to blackish), slightly larger average body size, somewhat more massive antennae, larger and more convex eyes, on average less pronounced microsculpture of the forebody, by the shape of the ventral process of the median lobe of the aedeagus and by the shape of the spermatheca.

Distribution and natural history: The type locality is situated in the Qinling Shan in southern Shaanxi province, China. The specimens were sifted from leaf litter and grass roots in a secondary deciduous forest near a stream at an altitude of 1870 m.

Acknowledgements

My thanks are due to Benedikt Feldmann for proof-reading the manuscript.

Zusammenfassung

Rhopalocerina sinica nov.sp. (China: S-Shaanxi), die zweite Art der Gattung, wird beschrieben, abgebildet und von der in der Westpaläarktis verbreiteten Typusart *R. clavigera* (SCRIBA 1859) unterschieden. Die Genitalien von *R. clavigera* werden abgebildet. Daten zur Verbreitung und Bionomie der beiden *Rhopalocerina*-Arten werden zusammengestellt. Für *R. clavigera* werden zwei Erstnachweise gemeldet.

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