

# Two new species of the genus *Nalassus* Mulsant, subgenus *Helopondrus* Reitter (Coleoptera: Tenebrionidae) from Turkey

MAXIM V. NABOZHENKO

## Abstract

Two new tenebrionid species, *Nalassus (Helopondrus) szalokii* n. sp. and *N. (H.) schmalfussi* n. sp. are described from eastern Turkey. Within the subgenus *Helopondrus*, the new species form a separate species-group which can be distinguished by the different structure of the elytral intervals: the 8<sup>th</sup> elytral interval is apically as convex as the other intervals and not keel-shaped; it is apically connected with the elytral margin and the 2<sup>nd</sup> interval.

**Key words:** Tenebrionidae, *Nalassus*, *Helopondrus*, Turkey, new species.

## Zusammenfassung

Zwei neue Tenebrioniden-Arten, *Nalassus (Helopondrus) szalokii* n. sp. and *N. (H.) schmalfussi* n. sp. aus der Osttürkei werden beschrieben. Die neuen Arten bilden innerhalb der Untergattung *Helopondrus* eine Arten-Gruppe, die sich durch die unterschiedliche Struktur der Elytren-Zwischenräume auszeichnet: der achte Zwischenraum ist apikal ebenso konvex wie die anderen Zwischenräume und nicht kielförmig; er ist außer mit dem Elytrenrand auch mit dem zweiten Zwischenraum verbunden.

## Contents

1	Introduction .....	263
2	Material and methods .....	263
3	Taxonomy .....	264
3.1	<i>Nalassus (Helopondrus) szalokii</i> n. sp. ....	264
3.2	<i>Nalassus (Helopondrus) schmalfussi</i> n. sp. ....	266
4	Key to the Turkish species of <i>Nalassus</i> subgenus <i>Helopondrus</i> .....	267
5	References .....	267

## 1 Introduction

The subgenus *Helopondrus* Reitter, 1922 of the genus *Nalassus* Mulsant, 1854 is widespread in the Caucasus, in Iran, eastern Turkey, and southern Turkmenistan. One species, *N. assimilis* (Mulsant, 1854), has a disjunct distribution area in the Tyrrhenian region in France and Italy. *Nalassus sareptanus* (Allard, 1876) populates the steppe zone from Moldavia to northwestern Kazakhstan (NABOZHENKO 2001, 2004). Recently a review of Anatolian *Helopondrus* was published (NABOZHENKO 2008), which added one species to this subgenus (KESKIN & NABOZHENKO 2010). Two new species of *Helopondrus* are described in this paper. Thus, the fauna of Turkey includes six species of the subgenus (see key chapter 4).

*Nalassus szalokii* n. sp. and *N. schmalfussi* n. sp., both from Southeast Turkey, form a separate group within the subgenus. These two species differ by absence of hair maculae on the 1<sup>st</sup> abdominal sternite of the males, and also by the structure of the 8<sup>th</sup> elytral interval which is as convex apically as the other intervals and connected not only with the edge of the elytra, but also with the 2<sup>nd</sup> interval. Genitalia and gastral spicula are typical for the subgenus *Helopondrus*.

Other species of *Helopondrus* are known from Northeast Turkey.

## Acknowledgements

The author is much obliged to OTTÓ MERKL (HNHM) and WOLFGANG SCHAWALLER (SMNS) for providing material, to DEZLO SZALÓKI (Eötvös Lorant University, Budapest) and IGOR SHOKHIN (Institute of arid zones, Russian Academy of Sciences, Rostov-on-Don) for collecting some of the specimens, to ALEXANDER KONSTANTINOV (Smithsonian Institute, National Museum of Natural History, Washington) for linguistic review, to KONSTANTIN DVADNENKO (Southern Scientific Centre, Russian Academy of Sciences, Rostov-on-Don) for scanning electron microscopy, and to WOLFGANG SCHAWALLER and ROLAND GRIMM (Tübingen) for the review of the manuscript.

## 2 Material and methods

The study is based on the examination of material from the following institutes and museums: Collection of DEZLO SZALÓKI, Eötvös Lorant University, Budapest; Staatliches Museum für Naturkunde, Stuttgart (SMNS), Hungarian Natural History

Museum, Budapest (HNHM), Zoological Institute, Russian Academy of Sciences, St.-Petersburg (ZIN), Zoological Museum of Ege University, Bornova-Izmir (ZDEU).

Scanning electron microscopy was made in the analytic laboratory of Southern Scientific Centre RAS with the SEM EVO-40 XVP (LEO 1430VP).

### 3 Taxonomy

#### 3.1 *Nalassus (Helopondrus) szalokii* n. sp.

(Figs. 1, 2, 6–10)

**Holotype**, ♂: “Turkey, road Van–Bitlis, near pass Kuskunkiran (h=2240 m) between Van and Bitlis provinces, N 38°23' E 42°46', under stones with lichens, 25.05.2010, leg. M. V. & S. V. NABOZHENKO, B. KESKIN” (ZIN).

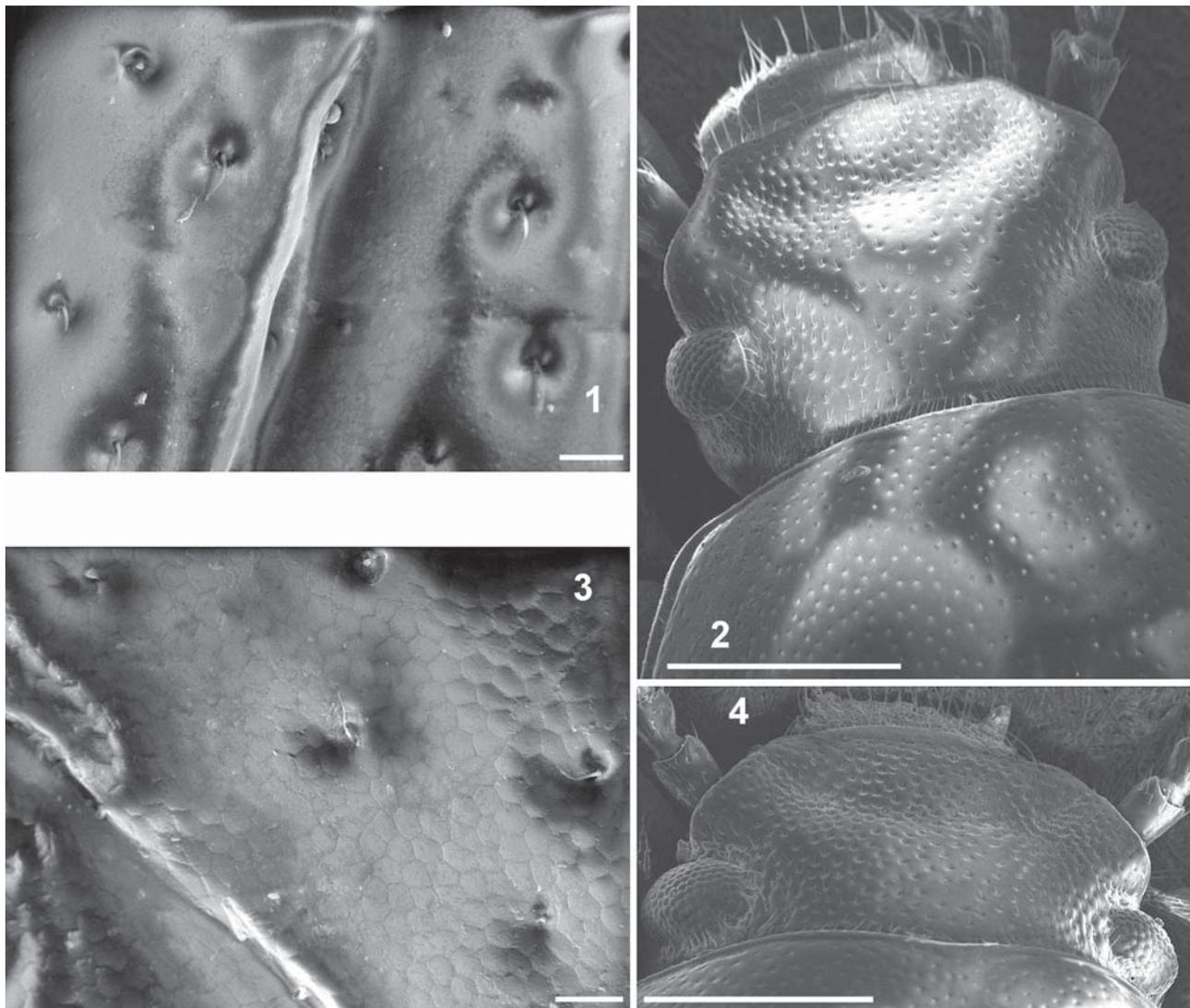
**Paratypes**: 1 ♂, 1 ♀, same data as holotype (ZDEU). – 1 ♂: “Turkey, Bitlis vil., Küçüksu, 1990.04.10, under stones, leg. SZALÓKI D.” (HNHM). – 1 ♀: “Turkey, vil. Muş, Buglan gec., 7 km E Solhan, N 38°56' E 41°07' h=1725–1930 m, 19.–22.05.2009, leg. I. V. SHOKHIN, D. G. KASATKIN” (ZIN).

#### Etymology

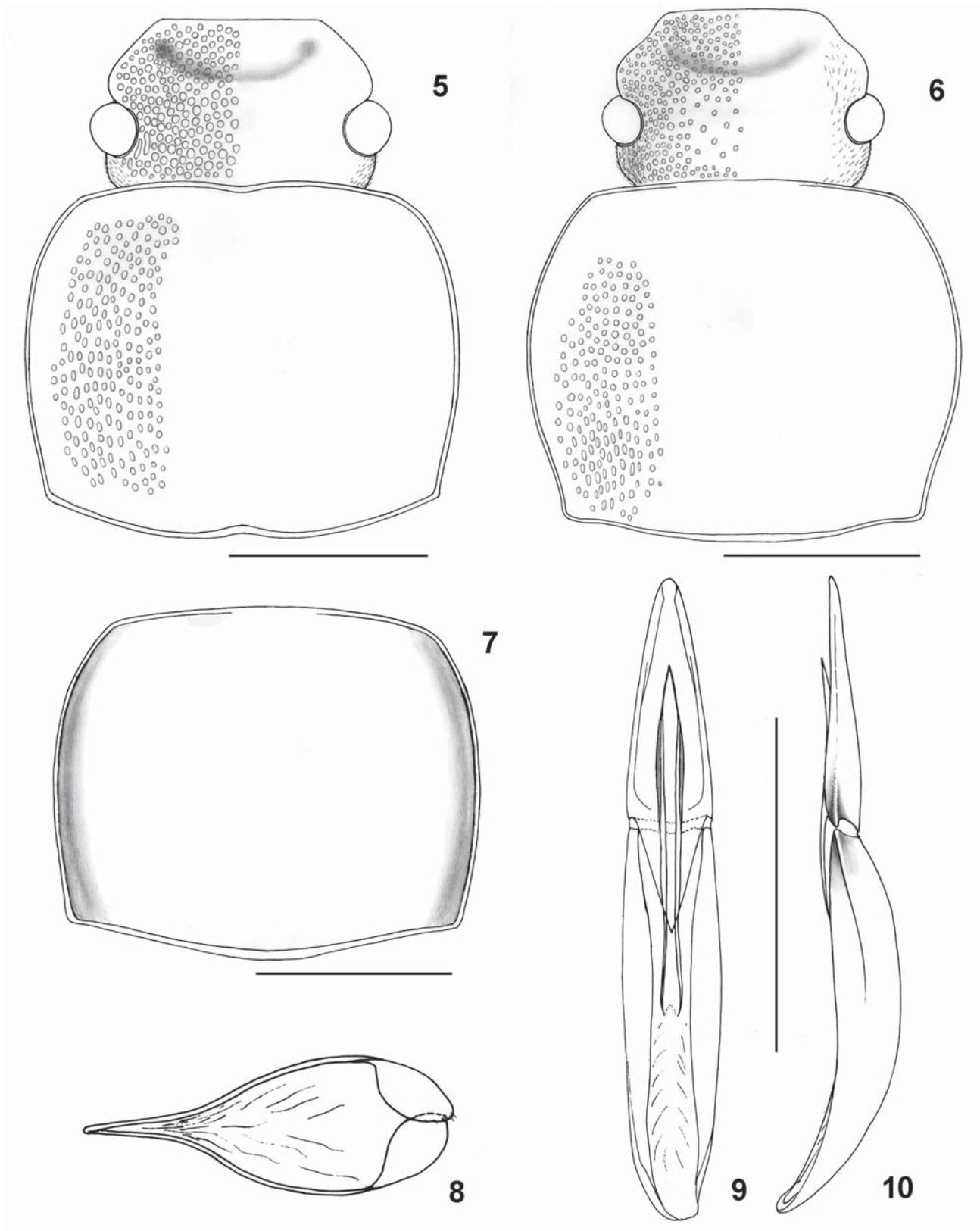
The new species is named in honour of the Hungarian entomologist and first collector of the species, DEZLO SZALÓKI (Budapest).

#### Description

Body brown, shining, convex. Head widest at level of eyes. Eyes small, convex. Ratio of head width at eyes to distance between eyes 1.4. Genae angle-shaped, rounded, straight at base. Outer margin of head between gena



**Figs. 1–4.** *Nalassus szalokii* n. sp. (1, 2) and *N. schmalfussi* n. sp. (3, 4). – 1, 3. Microsculpture of elytra. 2, 4. Head and anterior part of pronotum. – Scales: 20 µm (1, 3), 0.5 mm (2, 4).



**Figs. 5–10.** *Nalassus schmalfussi* n. sp., ♀ (5) and *N. szalokii* n. sp., ♂ (6–10). –5, 6. Head and pronotum. 7. Pronotum. 8. Gastral spicula. 9. Aedeagus, ventral view. 10. Aedeagus, lateral view. – Scales: 1 mm.

and clypeus slightly and broadly emarginated. Transverse depression of head between frons and clypeus not deep. Base of frons and head surface near eyes (including temples) covered with short recumbent hairs. Punctuation of head moderately dense and coarse: distance between punctures 1.5–2 times as wide as puncture diameter in middle of frons; diameter of punctures 1.5 times as wide as distance between punctures on clypeus. Temple grooves below eyes well developed. Antennae moderately long, three apical antennomeres extending beyond base of pronotum; four apical antennomeres flattened and weakly widened. Length/width ratio of 2<sup>nd</sup>–11<sup>th</sup> antennomeres: 0.6/0.5; 1.6/0.6; 1.1/0.5; 1.0/0.5; 1.1/0.5; 1.2/0.6; 1.4/0.8; 1.4/0.9; 1.3/0.9; 1.5/1.3. 3<sup>rd</sup> antennomere 2.6 times as long as 2<sup>nd</sup> and 1.45 times as long as 4<sup>th</sup> antennomere.

Pronotum weakly transverse (1.17 times as wide as long), widest at middle, 1.5 times as wide as head. Outer sides of pronotum moderately rounded, weakly emarginated near base. Anterior and posterior angles weakly obtuse, well visible on apex. Anterior margin of pronotum straight, base weakly rounded. Base and outer margins with deep border, anterior margin not edged in the middle. Disc of pronotum evenly strongly convex. Punctuation of pronotum same as of head, but punctures longitudinally elongate on each side from middle near base. Propleura with longitudinal smoothed, fine rugae and very short and sparse recumbent setae. Prosternal process pubescent on base, weakly extending at apex (in lateral view).

Elytra convex, elongate, 2.25 times as long and 1.2 times as wide as pronotum. Intervals of elytra convex, the 8<sup>th</sup> interval apically as convex as the other intervals and not only connected with the edge of elytra, but also with the 2<sup>nd</sup> interval. Punctures arranged in striae connected in narrow and deep grooves. Punctuation of intervals fine and sparse. Epipleura smooth, not depressed.

Abdominal sternites glabrous, with fine and sparse punctuation and longitudinal wrinkles on sides. Anal sternite without border on apex.

Tibiae straight, fore tarsi very weakly widened. Tibiae and tarsi covered with dense goldish hairs. Sole of tarsi with dense hair brushes.

Aedeagus typical for the subgenus *Helopondrus*. Parameres flattened dorso-ventrally, elongate (length of phallobase from anterior part to base 1.5 times as long as parameres). Sclerites of penis short and narrow, not merged.

Gastral spicula typical for the genus *Nalassus*: branches narrow, widely placed, becoming closer towards apex, but remaining separate. Blades of spicula moderately elongate, weakly sclerotized.

♀: Lateral sides of pronotum weakly and narrowly flattened; outer margins of propleura narrowly flattened. Elytra slightly wider than at male, 1.3 times as wide as pronotum.

Body length 7 mm, width 2.5–2.7 mm.

#### Differential diagnosis

The new species is close to *Nalassus schmalfussi* n. sp. For differences to *N. schmalfussi* and to other species of the subgenus *Helopondrus* see the key below (chapter 4).

#### 3.2 *Nalassus (Helopondrus) schmalfussi* n. sp. (Figs. 3–5)

H o l o t y p e, ♀: “Ost-Türkei, Umgeb. Van-See, 1800–2000 m, 1.–8.6.1986, leg. H. SCHMALFUSS” (SNMS).

#### Etymology

The species is named in honour of the known specialist on Isopoda HELMUT SCHMALFUSS (Stuttgart), collector of the holotype.

#### Description

Body black, matt, covered with fine reticular microsculpture, antennae and legs dark brown. Head widest at level of eyes. Eyes small, convex. Ratio of head width at eyes to distance between eyes 1.4. Genae rounded only at base, remaining margin straight. Outer margin of head between gena and clypeus straight, without emargination. Head dorsally covered with short recumbent setae near eyes, with transverse depression between frons and clypeus. Punctuation of head coarse and dense, diameter of punctures 2–3 times as wide as distance between punctures. Temple grooves below eyes well developed. Antennae short, only the apical antennomere extending beyond base of pronotum; four apical antennomeres flattened, wider and longer than the other ones.

Pronotum transverse (1.24 times as wide as long), widest little before middle, 1.4 times as wide as head. Outer sides of pronotum weakly and regularly rounded, with small emargination in middle. Anterior angles obtuse, weakly rounded on apex, posterior angles weakly obtusangular, narrowly rounded on apex. All margins with narrow border. Disc of pronotum evenly convex. Punctuation of pronotum moderately coarse, not dense, finer and sparser than on head, diameter of punctures subequal to distance between punctures; punctures longitudinally elongated on sides of disc. Propleura with fine longitudinal rugae and very short, sparse setae. Prosternum pubescent, prosternal process weakly convex.

Elytra moderately convex, elongated (1.5 times as long as wide), 1.3 times as wide and 2.5 times as long as pronotum, 1.85 times as wide as head. Intervals of elytra flat, the 8<sup>th</sup> elytral interval apically as convex as the other intervals and not only connected with the edge of elytra, but also with the 2<sup>nd</sup> interval. Punctures arranged in striae connected in grooves which are sometimes interrupted at base. 4<sup>th</sup> and 6<sup>th</sup> intervals connected on apex, forming hillock. Epipleura smooth, not depressed.

Abdominal sternites with fine and sparse punctuation, not pubescent. Abdominal sternite without border on apex.

Tibiae straight, sole of tarsomeres with dense hair brush.

Body length 7 mm, width 2.5 mm.

#### Differential diagnosis

The new species is close to *Nalassus szalokii* n. sp. For differences to *N. szalokii* and to other species of the subgenus *Helopondrus* see the key below (chapter 4).

#### 4 Key to the Turkish species of *Nalassus* subgenus *Helopondrus*

- 1 8<sup>th</sup> elytral interval apically as convex as the other intervals, not keel-shaped, connected with the elytral margin and the 2<sup>nd</sup> interval. .... 2
- 8<sup>th</sup> elytral interval more convex than the other intervals, sometimes keel-shaped, connected only with the elytral margin, not with the 2<sup>nd</sup> interval. .... 3
- 2 Body shining, brown. Outer margins of pronotum not emarginated at base, anterior margin and base not emarginated in the middle (Figs. 2, 6, 7). Anterior margin of pronotum without border in the middle. Longitudinal punctation expressed only at base of disc lateral to the middle. Elytral intervals convex. .... *N. szalokii* n. sp.
- Body dull, black. Outer margins of pronotum emarginated at base, anterior margin and base with well visible emargination in the middle (Figs. 4, 5). Anterior margin of pronotum with border in the middle. Punctation of pronotum on sides longitudinal. Elytral intervals flattened. .... *N. schmalfussi* n. sp.
- 3 Body large, often more than 10 mm long, strongly shining, with bronze-green metallic luster. Punctation of pronotum without longitudinally elongated punctures. 8<sup>th</sup> elytral interval keel-shaped on apex. Parameres of males elongated and sclerotized. .... *N. gloriosus* (Faldermann, 1837)

- Body small, at most 10 mm long, moderately shining, without metallic luster. Punctation of pronotum on sides longitudinally elongated. 8<sup>th</sup> elytral interval more convex than the other intervals, but not keel-shaped. Parameres of males short, weakly sclerotized. .... 4
- 4 Anterior angles of pronotum strongly projecting, acute, pointed at the apex. .... *N. adzharcicus* Nabozhenko & Dzhabazishvili, 2001
- Anterior angles of pronotum not projecting or moderately projecting, straight or obtuse, rounded at the apex. .... 5
- 5 Anterior angles of pronotum moderately projecting, straight, narrowly rounded. Head at frons with longitudinally elongated punctation. Genae smoothly rounded, not parallel. .... *N. planivittis* (Allard, 1876)
- Anterior angles of pronotum not projecting, obtuse, broadly rounded on apex. Head at frons with usual punctation of round punctures. Genae angled, parallel basally. .... *N. clavicornis* Allard, 1876

#### 5 References

- KESKIN, B. & NABOZHENKO, M. V. (2010): A new species and new records of the genus *Nalassus* Mulsant, 1854 (Coleoptera: Tenebrionidae: Helopini) from Turkey. – *Annales Zoologici* **60**: 23–28.
- NABOZHENKO, M. V. (2001): On the classification of the tenebrionid tribe Helopini, with a review of the genera *Nalassus* Mulsant and *Odocnemis* Allard (Coleoptera, Tenebrionidae) of the European Part of CIS and the Caucasus. – *Entomologicheskoe Obozrenie* **80**: 627–668 [in Russian; English translation in *Entomological Review* **81** (8): 909–942].
- NABOZHENKO, M. V. (2004): New synonyms in the tribe Helopini. – *Eurasian entomological Journal* **3**: 185–186.
- NABOZHENKO, M. V. (2008): Review of the subgenus *Helopondrus* Reitter, 1922 of the genus *Nalassus* Mulsant, 1854 (Coleoptera: Tenebrionidae) of Turkey. – *Russian entomological Journal* **16** (2007): 453–456.

Author's address:

Dr. MAXIM V. NABOZHENKO, Azov branch of Murmansk Marine Biological Institute, Kola Scientific Centre RAS, Southern Scientific Centre RAS, Chekhov street 41, Rostov-on-Don 344006, Russia; e-mail: nalassus@mail.ru

Manuscript received: 8.III.2010, accepted: 1.VI.2010.