A revision of the species of the subfamily Habrocerinae (Coleoptera: Staphylinidae) of the world.

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A revision of the species of the subfamily Habrocerinae (Coleoptera: Staphylinidae) of the world. At present the subfamily Habrocerinae comprises two genera, Habrocerus Erichson and Nomimocerus Coiffait & Saiz. A worldwide revision of the genus Habrocerus Erichson yielded altogether 13 valid species. 7 new species are described: H. ibericus sp. n. from Southwest Europe, H. simulans sp. n. from the Eastern Mediterranean region, H. cyprensis sp. n. from Cyprus, H. canariensis sp. n. from the Canary Islands, H. indicus sp. n. from India, H. costaricensis sp. n. from Costa Rica and H. schillhammeri sp. n. from Sumatra. H. capillaricornis ssp. pilidicus Korge is raised to species rank. Lectotypes are designated for Habrocerus capillaricornis (Gravenhorst) and H. schwarzii Hom. Nomimocerus tichomirovae Filatova is transferred to Habroceris. H. magnus Leconte from North America is excluded from the genus. 3 new species of Nomimocerus Coiffait & Saiz, formerly known to contain only the type species, N. marginicollis (Solier), are described: N. longispinosus sp. n., N. peckorum sp. n., both from Chile, and N. parvispinosus sp. n. from Argentina and Chile. The systematic position and the morphological characteristics, particularly the structure of the male abdomen, of Habrocerus and Nomimocerus are outlined. For each species details and illustrations of differential characters as well as data on distribution and, if available, bionomics are presented. Diagnostic keys allowing separation of Habrocerus and Nomimocerus adults are provided.

Key-words: Coleoptera - Staphylinidae - Habrocerinae - Habrocerus - Nomimocerus - World - Taxonomy - new species

THE SUBFAMILY HABROCERINAE: INTRODUCTION AND SYSTEMATICS

The genus Habrocerus was fixed by ERICHSON (1839) by monotypy. Its type species, H. capillaricornis, had been described as Tachyporus capillaricornis by GRAVENHORST in 1806. In the 19th century, Habrocerus was largely considered to belong to the subfamily Tachyporinae, apparently because of its general similarity in

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Habrocerus pisidicus Korge: morphology of the ♂ urites VIII and IX in ventral view (app = appendices of pleurite VIII; es = emargination of central hind margin of sternite VIII; is = internal sac; pVIII = pleurite VIII; sVIII = stertite VIII; sIX = sclerites of urites IX; tVIII = tergite VIII. Scale: 0.5 mm.)
**Fig. 4**

*Hubrocerus* sp. **a** pleurites and tergite of *♂* urino VIII; **b** sternite VIII; **c** tergite VIII; **d** sternite VII; **e** tergite VII; **f** sternite VIII; **g** tergite VIII; **h** sternite VIII; **i** urino VIII. Scale: 0.5 mm.

The species of *Hubrocerus*

The revision of several thousands of specimens of *Hubrocerus* from our own material as well as from various private and museum collections yielded altogether 7 species new to science; 1 subspecies is raised to species rank. On the other hand it revealed that one of the four species known before our study must be excluded from the genus, so that *Hubrocerus* currently comprises 13 valid species, 7 of them Paleearctic, 3 Oriental, 1 Nearctic and 2 Neotropical. It may be assumed that a more intensive search especially in the Neotropical region and in Southeast Asia, perhaps also in other areas of the southern hemisphere (Australia, Africa) will lead to an increase in species number.

**Fig. 5**

*Hubrocerus simus*, sp. nov. **a** pleurites and tergite of *♂* urino VIII; **b** sternite VIII; **c** tergite VIII; **d** sternite VII; **e** tergite VII; **f** sternite VIII; **g** tergite VIII; **h** sternite VIII; **i** urino VIII; **j** stipes and punctures omitted in h. Scale: 0.5 mm.
**Description:**

3.0-4.0 mm. Colour variable; head, pronotum and elytra light to pitchy brown, abdomen usually slightly darker except for the hind margins of the tergites; legs, antennae and mouthparts yellowish brown to light brown, maxillary palpi darkened.

Head with large eyes, in normal position reaching anterior margin of pronotum; surface shining, shallow transverse microsculpture only visible at higher magnifications (80x). Antennal segments 3-11 filiform, distinctly narrower than first two segments; segments 4-11 with short pubescence. A bottle-like dilatation and a circle of long setae in the middle (cf. Fig. 1a).

Pronotum ca. 1.5x wider than long, with arcuate sides converging more strongly anteriorly than posteriorly and with rounded angles; front and hind margin with 4, lateral margins with 2 long setae; epipleurae not visible in lateral view; disc of pronotum usually smooth and shining, superficial transverse microsculpture, if any, restricted to marginal areas of pronotal surface.

Elytra transverse, ca. 1.5x wider than long, at base about as wide as and at suture as long as pronotum; lateral margins slightly diverging posteriorly, hind angles truncate; elytra with 1 subhumeral seta, 2 setae near lateral margin and 1 seta at sutural angle; surface with often very weak micropunctuation and fine transverse microsculpture, its intervals clearly wider than those on the pronotum; epipleurae meeting with dorsal surface at acute angle.

Legs moderately long; spicules of middle and hind femora with a long seta; tarsi 5-segmented; basi segment of middle and hind tarsi elongate, as long as the two following segments together, segments 2-4 decreasing in length. Segment 5 as long as the two preceding ones together.

Abdomen with distinct lateral margins converging posteriorly, tergites with barely visible microsculpture and dense yellowish pubescence, their hind margins with long setae increasing in number caudally.

♀: Appendices of pleurites VIII with 2 long setae (Fig. 3a), emargination of stemite VIII U-shaped and with relatively long posterior processes (Fig. 3b), hind coxae of tergite and stemite VII straight with rounded angles (Figs 3c-d); internal sac with 6 large, wide-based spines and additional small sclerotized structures of roughly triangular shape (Fig. 11a).

♂: Hind margin of tergite VII rounded. That of the corresponding stemite with shallow central emargination; tergite VII acutely pointed (Fig. 5g), stemite VIII V-shaped (Fig. 3h) posteriorly.

**Distribution:**

_H. capillaricornis_ is widely distributed in the Western Palaearctic region. It is a common species in Central Europe and has also been recorded from the southern parts of the Scandinavian countries, from the British Isles (except Scotland), from southern Europe and the Mediterranean (including North Africa), eastern Europe and the Caucasus (Fig. 12). We have not seen any specimens from Cyprus, Rhodos and Crete.

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**Fig. 7**

_Habrocerus ibericus_ spec. nov.: ♀ pleurites and tergite of ♀: stemite VIII ♀: tergite VII (c); ♀ stemite VIII ♀: ♀ stemite VII (d); ♀ tergite VII (e); ♀ stemite VII (f); ♀ tergite VIII ♀: ♀ stemite VIII ♀: setae and punctures omitted in h. Scale: 0.5 mm.
**Further Material Studied:**
Bosnia: (1) (CEC, CWm).
Bulgaria: Rhodope (4) (CEC, NHMW).
Greece: Ierapetra (74) (NHNG), Crete (46) (MHNG), Rhodos (72) (MHNG), Corfu (36) (MHNG, CEC, CWm), Cephalonia (13) (MHNG), Levkas (135) (MHNG, CEC), Peloponnes (1) (NHMW).
Cyprus: (58) (MHNG).
Turkey: Thrace (19) (Ckor), Central (3) (MHNG, NHMW), Cypnis: (58) (MHNG).
Greece: Levkas (135) (MHNG, Ckat, CWm), Crete (46) (MHNG, Ccat), Corfou (36) (MHNG), Peloponnes (72) (MHNG).

**Description:**
3.0-4.0 mm. Size and body proportions as in *H. capillaricornis*. Colour, especially of head, pronotum and elytra, usually slightly darker than in *H. capillaricornis*, dark brown to pitchy brown.

Pronotum with the whole surface generally covered with fine transverse microsculpture. Setae, punctation and shape of pronotum and elytra as in *H. capillaricornis*. Elytral microsculpture frequently more distinct.

Appendages and first abdominal segments similar to *H. capillaricornis*.

- d: hind margin of tergite VII almost straight with rounded angles (Fig. 4c), that of sternite VIII with rounded (Fig. 4d); appendices of pleurites VIII with 1 long seta (Fig. 4a), central emargination of sternite VIII broad with short posterior processes (Fig. 4b); internal sac with a row of ca. 11 large spines of elongate triangular shape (Fig. 11c).

- q: tergite VII with weakly rounded, sternite VII with almost straight hind margin (Figs 4g-h); tergite and sternite VIII shortly pointed posteriorly (Figs 4g-h).

**Distribution:**
*H. pisidicus* has been recorded from Turkey (Thrace; northern, western and central parts of Anatolia), from Greece (including Crete and islands), Cyprus, Bulgaria and Bosnia. The records from Transcaucasia (only ♀♀) remain doubtful. The species was observed to occur together with *H. capillaricornis* in Bosnia, Greece (Levkas, Corfu, Crete) and the European part of Turkey and together with *H. cyprius* on Cyprus (Fig. 12).

**Bionomics:**
Little is known about the bionomics of *H. pisidicus*. It has been collected over a wide range of altitudes (50 - ca. 1800 m) in various kinds of litter, frequently together with *H. capillaricornis*, in December, January and April through September. Teneral specimens were observed in April, May, July and August.

**Addendum:**
After the manuscript had gone to press, *H. pisidicus* was also recorded from Southern Italy: 22 δ♂, 20 ♀♀, Mte. Gargano (various localities), in stands of *Quercus* spp., 400-900m, 30.XII.1994, leg. & coll. Assing; 3 δ♂, 19 ♀♀, Puglia, Martina (TA), 17.XII.89, leg. & coll. Montemurro.

**Fig. 9**
*Habrocerus rougemonti* Pace: ♀ pleurites and tergite VIII (a); ♀ sternite VIII (b); ♀ tergite VII (c); ♀ sternite VII (d); ♀ tergite VI (e); ♀ sternite VI (f); ♀ tergite VIII (g); ♀ sternite VIII (h); ♀ urotergite IX in lateral view (i). Scale: 0.5 mm.
Mamonia, 14.VII.77. C. Besuchet: 2 d e, 1 g: Chypre, Stroumbi, 400 m, 22.VII.77. C. Besuchet: 1 d: Chypre. Caledonian Falls, 1400 m. 1.VI.17. C. Besuchet; 1 d: Chypre. V. de Cédres, 1200 m. 12.VII.77 C. Besuchet (MHNG. Cass. Cwun).

DESCRIPTION:

Size, body proportions, setae, punctuation, microsculpture and colour as in H. capillaricornis.

♂: tergite VII with nearly straight, stemite VII with shallowly concave hind margin (Figs 6c-d); appendices of pleurites VII with 2 setae (Fig. 6a); central emargination of stemite VIII similar to H. capillaricornis, but broader and with longer, slightly converging posterior process (Fig. 6b); internal sac without dark spines (Fig. 11f).

♀: tergite VII rounded, the corresponding stemite shallowly concave posteriorly (Figs 6e-f); acutely pointed process of hind margin of tergite VIII longer than in H. capillaricornis (Fig. 6g); stemite VIII shortly pointed posteriorly (similar to H. pisidicus) (Fig. 6h).

DISTRIBUTION:

H. cyprensis appears to be endemic to Cyprus (Fig. 12).

BIONOMICS:

The species apparently inhabits a wide range of altitudes. At several localities it was collected together with H. pisidicus.

Habrocerus ibericus spec. nov.

Figs 7, 11, 12

HOLOTYPES: ♂, Portugal, Algarve, 8 km S. Brás de Alportel, 400 m. 1.VI.92, Wunderle (Cwun).


The Habrocerus capillaricornis- and the H. rougemonti-group: Internal sacs of H. capillaricornis (a), H. canariensis (b), H. pisidicus (c), H. simulans (d), H. ibericus (e), H. cyprensis (f), H. rougemonti (g) and H. indicus (h). Scale: 0.25 mm.
**FIG. 13**

*Habrocerus schwarzi* Horn: pleurites and tergite of ♂ urite VIII (a); ♂ sternite VIII (b); ♂ sternite VII (c); ♂ tergite VII (d); ♀ sternite VIII (e); ♀ tergite VIII (f); ♂ urite IX in lateral view (g). Scale: 0.5 mm.

**FIG. 14**

*Habrocerus tropicus* Wondeler: pleurites and tergite of ♂ urite VIII (a); ♂ sternite VIII (b); ♂ sternite VII (c); ♂ tergite VII (d); ♀ sternite VIII (e); ♀ tergite VIII (f); setae and punctures omitted in c-d. Scale: 0.5 mm.
**Description:**

Size, body proportions, setae, punctuation, microsculpture and colour as in *H. rougemonti*.

♂: tergite VII with weakly rounded, sternite VII with shallowly concave hind margins (as in *H. rougemonti*) (Figs 10c–d); appendices of pleurites VIII with 1 seta, shape of pleurites slightly different from that in *H. rougemonti*; without seta near the spiracle of Urtic VIII (Fig. 10a); sternite VIII with deep V-shaped emargination, central part of sternite narrower than in *H. rougemonti* (Fig. 10b); posterior apex of sclerites IX pointed in lateral view (Fig. 10i); internal sac without large dark spines, internal row with ca. 80 semitransparent triangles (Fig. 11h).

♀: tergite and sternite VII transverse, the former with weakly rounded and the latter with nearly straight hind margins (Figs 10c–f); tergite and sternite VIII bluntly pointed posteriorly (Figs 10g–h).

**Distribution:**

*H. indicus* is only known from the Himalayan regions in the north of India.

**Bionomics:**

Unknown.

**III. The Habrocerus schwarzi species group**

Habrocerus schwarzi Horn

Figs 13, 18


**Lectotype:** ♀, designated here; labels: Mic, Paratype, 3146, G. H. Horn collection. Lectotypus Habrocerus schwarzi Horn 1877, design. Assing & Wunderle 1992 (MCZ).

**Paralype:** ♀, labels: Mic, Paratype, 3146, G. H. Horn Collection (MCZ).

5 old specimens from the MCZ (G. H. Horn collection and LeConte collection) were examined. Although one of them was labeled 'type' and two further specimens were labeled 'paratype' there remained considerable doubt as to the exact identity of the holotype. Therefore, we chose to designate a lectotype from the Horn collection.

**Further Material Studied:**

165 specimens from the BRI (157) and FMNH ♀.

**Description:**

2.5–3.0 mm. Colour variable, usually with head, pronotum, antennae and anterior parts of tergites light to dark brown, elytra and hind margins of tergites yellowish to yellowish brown and the legs yellow.

Head somewhat shining with fine transverse microsculpture; antennal segments shorter than in *H. capillaricornis*, segment 3 distinctly shorter 4, segments 4–10 subequal in length. Pronotum 1.4–1.5x wider than long and with transverse microsculpture on whole surface. Anterior and lateral setae closer to margin, anterio-lateral seta distinctly closer to anterior angle than in *H. capillaricornis*.

Elytra 1.7–1.8x wider than long (at suture), about as long as pronotum, with transverse microsculpture and sparse micropunctuation.

Tarsi of middle and hind legs shorter than in *H. capillaricornis*.

Abdomen with subdued shine due to short yellowish pubescence and fine dense microsculpture; number of setae on hind margins of tergites increasing caudally.
Bionomics:
The specimens examined were collected at elevations of 300-600 m from March through May and from July through December.

Habrocerus costaricensis spec. nov.

Type: Holotype ♂, Costa Rica, Sa. Isidorek Cor. (?), 3.VIII.39, A. Bierig Collection (FMNH).

Description:
Size, body proportions, setae and microsculpture as in *H. schwurzi*; colour darker, body brown to pitchy brown (often similar to *H. tropicus*) with the elytra, the posterior margins of the tergites and especially the tip of the abdomen usually somewhat lighter; legs and antennae light brown to brown.

♂: tergite VII with straight, sternite VII with rounded hind margin (Figs 15a-d); sclerites of Undes VII and IX arranged asymmetrical (Figs 15a-b); appendices of pleurites VIII with 4 setae, the subapical seta strongly bent (Fig. 15a); posterior lateral processes of sternite VIII long an asymmetrical (Fig. 15b).

♀: tergite VIII strongly converging posteriorly with very small emargination (Fig. 15f); hind margin of sternite VIII rounded (Fig. 15e).

Distribution:
So far only known from Costa Rica.

Bionomics:
Apart from the data indicated above, the bionomics of *H. costaricensis* remain unknown.

Habrocerus tichomirovae (Filatova, 1981), comb. nov.

_Nominocerus tichomirovae_ Filatova, 1981. Rev. Ent. URSS 60: 120f. figs.
Further material studied: 1 ♀, Russia, Khabarovsk Terr., Bükib Dist., 9 km SSE Boitsovo (FMNH).

Description:
Size, body proportions, microsculpture, punctaion, arrangement of setae as in *H. schwurzi*. Head, pronotum, antennae, maxillary palpi and abdomen, except for the hind margins of the tergites, brown to blackish brown; elytra light brown; legs yellowish brown.

♂: tergite VII almost straight posteriorly, sternite VII with sinuate sides and slightly rounded hind margin (Figs 16a-d); sclerites of urite VIII as in Figs 16a-b (appendices missing in holotype); internal sac with two rows of weakly sclerotized structures, most of which are of roughly triangular shape, whereas the apical ones are distinctly elongate (Fig. 18b).

♀: tergite VIII with angular, sternite VIII with variable, very weak to angular emargination posteriorly (Figs 16e-f).

Remarks: Since part of the genital armature of the only available ♂ (holotype) was missing, a description of the appendices and the number and shape of the setae, an important diagnostic character in the *H. schwurzi* species group, is not possible at present. However, as differences in the contents of internal sac as well as in the shapes of the ♂ tergite and sternite VIII can be observed, we think it best to treat _H. tichomirovae_ as a valid species distinct from _H. schwurzi_, until further material of the former is available.

Distribution:
_H. tichomirovae_ is only known from Primorskiy kraj, and Khabarobskij kray, Russian Far East.

Bionomics:
The holotype and the paratypes were found under hay and straw, respectively. The ♀ from Khabarovsk Terr. was collected from "dead wood and litter in basal tree hole of small tree on hilltop".

The Habrocerus schwurzi-group: Internal sac of _H. schwurzi_ (a), _H. tichomirovae_ (b) and _H. tropicus_ (c). Scale: 0.25 mm.
The genus Nomimocerus

COIFFAT & SAIZ (1965) based their description of *Nomimocerus* on the type species *N. marginicollis* (Soler) from Chile, originally described as *Tachyporus marginicollis*. Since then only one further *Nomimocerus* has been described, *N. tichomirovae* Filatova, which, however, is here transferred to *Habrocerus* (see above).

**Morphology**

*Nomimocerus* is identified as a habrocerine genus on the basis of the following characters: the absence of an aedeagus, the modifications of the last abdominal segments in the males (see below) and the flat triangular shape of the hind coxae. In addition, it very much resembles *Habrocerus* in general appearance, body size, sculpture and colour. Unlike *Habrocerus*, however, *Nomimocerus* possesses non-filiform antennae (Fig. 19a) and 4-segmented labial palps (Fig. 19b). Furthermore, the shape of the modified male urites, particularly the appendices of pleurites VIII, a character also visible in dried specimens, is clearly different (Fig. 20).

In *Nomimocerus* males tergite VII carries a membranous appendage posteriorly. The hind margin of sternite VII is concave or emarginate. The species differ with regard to this character, which is, however, subject to some intraspecific variability and thus not very reliable. The male genital armature is characterized by two somewhat massive pleurites VIII, which together are of scoop-like appearance, dorsally connected and ventrally linked to sternite VIII. The latter is U-shaped anteriorly and forms a wide X posteriorly (Fig. 20a). Segment IX, too, is highly modified and principally of similar construction as in *Habrocerus*. It consists of two anteriorly connected lateral lobes and a rode-like structure in the centre, the latter apically bent like a hook (Fig. 20b). The internal sac, which contains rows of spines of specific shapes and sizes, represents the most important and reliable differential character for the identification of the species of *Nomimocerus*.

In the females the hind margins of tergite and sternite VIII are rounded (Fig. 21b, c). As in *Habrocerus*, urite IX carries two stylus-shaped processes, the tips of which are visible in normal position (Fig. 21a).

Further morphological details are presented by COIFFAT & SAIZ (1965). It should be noted, however, that their illustrations contain several errors: Figs 2a-c depict the male urite VIII (not the aedeagus, as indicated in the legend), Fig. 2e shows the tergite VIII of a female *Habrocerus* [!] (not the fifth sternite of a male *Nonitnocerus*) and Fig. 2f represents the female urite IX of *Habrocerus* [!] (not the male genital segment of *Nomimocerus*).

The species of Nomimocerus

An examination of the *Nomimocerus* material of several museum collections including the lectotype of *N. marginicollis* showed that at present 4 species can be...
Regarding their external morphology the species of *Nomimocerus* are highly similar. Apart from the somewhat variable shape of the hind margin of the male sternite VIII, no consistent differences were found, although a variety of characters and measurements were considered. Surprisingly, the same even applies to the complex structure of the male genitalia. The arrangement, size, and shape of spines and further sclerotized structures in the internal sac were found to be the only safe and reliable differential characters, a situation similar to that in other staphylinid taxa (e.g., Xantholininae, Aleocharinae, etc.). In order to evaluate the internal sac properly, it is necessary to squeeze it lightly and to examine it under the microscope at magnifications of 200-400x.

Since the four species treated below are highly similar regarding their external morphology, we consider it sufficient to describe only *N. marginicollis* in full detail. The descriptions of the following species will then focus on differential characters.

*Nomimocerus marginicollis* (Solier, 1849)

**Tachyporus marginicollis** Solier, 1849, in: Gay, Hist. Chile 4: 343.


**LECTOTYPE:** 9; label: Paecto Montt. Chili, marginicollis Sol., Habrocerus coll. et det. A. Fauvel (IRSNB; Nr. 17479).

**FURTHER MATERIAL STUDIED:** 16. same data as lectotype and labeled 'Ex-Typis' (IRSNB).

**DESCRIPTION:**

3.5-4.0 mm. Measurements of pronotum and elytra of lectotype: length (PL) and width (PW) of pronotum 0.71 mm and 1.07 mm, respectively; length of elytral suture (EL) 0.83 mm. Head, pronotum, elytra and legs light to dark brown; abdomen dark brown to blackish brown with the hind margins of the tergites somewhat lighter; antennae yellow to yellowish brown, basal segments a little lighter in colour than apical half of anten

Head with large eyes reaching hind margin, surface somewhat shining despite clear transverse microsculpture. Antenna with first segment longer and wider than segment 2; segments 3-10 gradually decreasing in length and increasing in width, the distinctly elongate segments 3-6 ca. 3x and the suboval segments 9-10 ca. 1.5 x longer than wide; segments 5-11 with inconspicuous but very dense pubescence (cf. Fig. 19a).

Pronotum ca. 1.5x wider than long (see measurements) with arcuate sides and rounded anteriors and posterior angles; its surface somewhat shining, but with distinct transverse microsculpture; altogether with 12 long setae: 4 equally spaced setae near
Hind wings reduced, only slightly longer than elytra, in all the specimens examined.

♀: tergite VII smaller than in N. marginicollis, its hind margin with weak concave emargination in the middle (Fig. 23c); emargination of posterior margin of sternite VII wide and usually deeper than in N. marginicollis, but not as deep as in the following species (Fig. 23b); internal sac with a rather small sclerotized piece visible in transparent light, a characteristic row of partly long spines (name!) and a short row of minute spines (Fig. 23a).

♀: last abdominal segments as in Figs 21a-c.

**DISTRIBUTION:**

All the specimens studied were collected near Puerto Ayen (Aisen) in the south of Chile (ca. 45° southern latitude).

**BIONOMICS:**

The type material was extracted or sifted from leaf and stick litter and bamboo litter in mixed forests at lower elevations (70-150 m). A considerable proportion of the beetles collected in January was immature. All 66 specimens were brachypterous and thus incapable of flight.

Nomimocerus parvispinosus spec. nov.

**Holotype:** ♂; labels: Chile, Osorno Prov., Puyehue N.P., Pucpeon Rd., 500 m, 6.I.1985; forest litter, S. J. Peck, herbarize (FMNH).


**DESCRIPTION:**

3.5-4.0 mm. Measurements of pronotum and elytra: PL: 0.63-0.70 mm; PW: 0.9-1.1 mm; EL: 0.65-0.85 mm.

Colour of head, pronotum and elytra brown to dark brown with the head often darker and the sides of the pronotum usually yellowish brown; abdomen blackish brown with the hind margins of the tergites lighter in colour; colour of appendages as in N. marginicollis.

External morphology (proportions, microsculpture, punctures) highly similar to N. marginicollis; abdomen slightly less shining due to superficial microsculpture between punctures. Hind wing development dimorphic, elytra somewhat longer in macropoterous specimens (distinctly longer than pronotum) than in those with reduced alae (about equal in length to pronotum).

♀: shape of tergite VII as in N. marginicollis, but smaller (Fig. 24c); emargination of hind margin of sternite VII usually relatively deep and roughly triangular (Fig. 24b), rarely shallow and almost concave; internal sac smaller than in N. marginicollis, with one row of 30-40 small spines (name!) and without distinct sclerotized piece (Fig. 24a).

♀: last segments of abdomen as in N. longispinosus.

**DISTRIBUTION:**

N. parvispinosus is only known from the type locality in Argentina and the surroundings of Santiago de Chile.

**BIONOMICS:** Unknown.

Noniiinocerus peckorum spec. nov.

**Fig. 25**

Holotype: ♀; labels: Chile, Osorno Prov., Puyehue N.P. Anticura. Repucura Tr., 500 m, 6.11.1985; forest litter, S. & J. Peck, herbarize (FMNH).


**DESCRIPTION:**

3.5-4.0 mm. Measurements of pronotum and elytra: PL: 0.63-0.70 mm; PW: 0.9-1.1 mm; EL: 0.65-0.85 mm.

Colour variable; head, pronotum and elytra reddish brown to dark brown with the head often darker and the sides of the pronotum lighter; abdomen blackish brown with the hind margins of the tergites lighter in colour; colour of appendages as in N. marginicollis.

In external morphology (proportions, microsculpture, punctures) highly similar to the other species; shine and microsculpture of abdomen as in N. longispinosus and N. parvispinosus.

Hind wings reduced, only slightly longer than elytra, in all the specimens included in the type series.

♀: tergite VII smaller than in N. marginicollis, its shape as in N. longispinosus (Fig. 25c); emargination of posterior margin of sternite VII triangular, deeper than in the other species (Fig. 25b); internal sac with a large sclerotized piece and a series of spines; part of which are characteristically shaped with a bulbous base and a slender apical process (Fig. 25a).

♀: last abdominal segments as in N. longispinosus.

**DISTRIBUTION:**

Presently the species is only known from the type locality and its surroundings south of Valdivia, Chile.
\[\text{Note:} \text{H. capitillaris has become indigenous in North America only in this century and is here considered a West Palaearctic species.}\]
REFERENCES


