

Two new *Stenus* species from Costa Rica (Coleoptera: Staphylinidae) (299th Contribution to the knowledge of Steninae)

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ABSTRACT

Two new species of the genus *Stenus* Latreille, 1797 are described from Costa Rica: *Stenus (Hypostenus) ashei* sp. nov. and *S. (H.) asheianus* sp. nov.

KEY WORDS: Coleoptera, Staphylinidae, Steninae, Steninae, Central America.

RESUMEN

Se describen dos especies del género *Stenus* Latreille, 1879 de Costa Rica: *Stenus (Hypostenus) ashei* sp. nov. and *S. (H.) asheianus* sp. nov.

PALABRAS CLAVE: Coleoptera, Staphylinidae, Steninae, Steninae, Centroamérica.

INTRODUCTION

In this paper I describe and name two new *Stenus* species from Costa Rica in honour of the late James S. Ashe. I was deeply impressed when I first made his acquaintance at the XVII International Congress of Entomology in Hamburg 1984. Since then we have stayed in close contact and I met him several times at staphylinidologist's meetings in the last few years. He was a great encourager of young staphylinidologists and brought together a large collection of Latin American Staphylinidae, which he always generously made available for my studies. The two new species described in this paper are also part of this valuable material.

The *Stenus* fauna of Costa Rica is rich and far from completely known. Including the new species 55 taxa are now known from Costa Rica.

Abbreviations: aE = average distance between eyes; HT = holotypus; IEI: greatest length of elytra; IP = length of pronotum; IS = length of suture; PM = proportional measurements (1 unit = 0,025 mm); PT = paratypus; wEI = greatest width of elytra; wH = width of head; wP = width of pronotum.

TAXONOMIC PART

Stenus (Hypostenus) ashei sp. nov.

Description: Black, very shiny, forebody coarsely and moderately densely punctate, abdomen moderately finely to finely and sparsely punctate; pubescence short, inconspicuous. Base of antennae light brown, apical half brown. Maxillary palpi yellowish. Basal two thirds of femora yellowish brown, apical third dark brown, tibiae and tarsi brown. Clypeus and labrum black, moderately densely pubescent.

Length: 4.1-4.5 mm (forebody 2.3 mm).

PM of HT: wH: 34; aE: 17.5; wP: 27; IP: 30; wEI: 40; IEI: 41; IS: 37.

Head much narrower than elytra, frons moderately broad with deep lateral furrows, impunctate median portion as broad as each of the lateral portions, distinctly elevated, extending to the level of inner eye margins. Punctuation coarse, dense only in longitudinal furrows, diameter of punctures as large as antennal segment 3 in cross-section, five distinct shining areas present: antennal tubercles, lateral areas near posterior eye margin and the median portion. Antennae slender, when reflexed approximately extending to the posterior margin of pronotum, penultimate segments one third longer than broad. Pronotum somewhat longer than broad, broadest slightly behind middle, sides slightly convex in anterior half, strongly constricted posteriorly. With distinct lateral callus medio-laterally, transverse impression near anterior margin, and with less distinct lateral callus in posterior half. Punctuation coarser than on head, diameter of punctures about as large as antennal segment 3 in cross-section, interstices mostly smaller than diameter of punctures, much larger (3-4 x) in the middle and – less distinct – beside the middle. Elytra quadrate, nearly as broad as long, shoulders rectangular, straight sides constricted in posterior quarter, posterior margin broadly emarginate. With distinct sutural impression in anterior third, humeral impressions also distinct, and with transverse median callus in about the

middle. Punctuation very coarse, diameter of punctures about as large as antennal segment 2 in cross-section, relatively dense in about lateral half (interstices about half as wide as diameter of punctures), sparse in sutural half, on medial callus and in posterior quarter (where punctures are smaller), interstices here up to three times as wide as diameter of punctures. Hind wings fully developed. Abdomen broad, basal constrictions of anterior segments very deep, tergite 7 with a broad membranous fringe apically. Punctuation moderately fine (anteriorly) to very fine (posteriorly) and sparse, tergite 10 nearly impunctate. Legs slender, metatarsi slightly longer than two thirds of metatibiae, first segment longer than the two following segments combined, slightly longer than the fifth segment; segment 4 deeply bilobed. Entire surface of the insect glossy.

Male: Legs simple. Metasternum shallowly impressed, densely punctate and pubescent medially, interstices smooth. Sternites 4 and 5 more sparsely punctate postero-medially. Sternite 6 with an impunctate impression in posterior half. Sternite 7 with a broad median impression, which is finely and densely punctate and pubescent, posterior margin medially feebly sinuous and slightly projecting. Sternite 8 with a deep and narrow notch in posterior half (length of sternite: depth of notch = 24.5: 11.5). Sternite 9 (Fig. 2) acute apico-laterally and with a very long apico-lateral brush. Tergite 10 broadly rounded. Median lobe of aedeagus broad with a narrow lancet-like apical portion and with some fine setae at concave subapical lobe, internal structures mainly membranous; parameres much longer than the median lobe, sinuous with about 27 setae (Fig. 1).

Female: Sternite 6 with an impunctate impression in posterior quarter. Sternite 7 finely and densely punctate in posterior middle. Sternite 8 broadly rounded. Valvifer with a sharp tooth and a long brush apico-laterally. Tergite 10 broadly rounded.

Type material: Holotype (♂) and 1 ♂, 1 ♀ paratypes: COSTA RICA: Puntarenas: Las Alturas Biological Station, 1660 m, 8°56.17 N, 82°50.01 W, leaf packs in stream, 3.VI.2004, J. S. Ashe, Z. Falin & L. Hinojosa. HT and 1 PT in the Natural History Museum, Kansas, Lawrence, Kansas, 1 PT in the author's collection.

Discussion: *Stenus ashei* sp. nov. belongs to the group of *Stenus denticollis* Fauvel. It may be distinguished from the other similarly sized species of this group as follows: from *S. atrocyaneus* Puthz (Colombia, Ecuador), *S. calceatus* Puthz (Brazil), *S. calvus* L. Benick (Brazil), *S. cyaneosplendens* Bernhauer (Brazil, Paraguay), *S. suaveolus* Sharp (Guatemala) and *S. violaceus* Bernhauer (Brazil) by the absence of metallic lustre, from *S. atrolucens* Puthz (Ecuador, Colombia), *S. atromicans* Puthz (Bolivia, Peru, Colombia), *S. nodicollis* Puthz (Peru) and *S. tuberosicollis* L. Benick (Colombia, Bolivia) by the apico-laterally acute sternum 9, from *S. simplicicollis* Puthz (Colombia) by the pronotal calli, from *S. denticollis* Fauvel (Colombia, Ecuador) and *S. nigrosplendens* Puthz (Brazil) by the light coloured base of femora. From *S. salvini* Sharp (Costa Rica) (which comparing their aedeagi should be its sister species) and from *S. asheianus* sp. nov. (Costa Rica) – both very similar- by the slightly coarser punctuation of the forebody, from all by the male sexual characters (see Puthz, 1969, 1972, 1974, 1984, 2000, 2006).

Stenus (Hypostenus) asheianus sp. nov.

Description: In nearly all respects as *S. ashei* sp. nov.

Length: 4.0-4.5 mm (forebody 2.3 mm)

PM of HT: wH: 35; aE: 18; wP: 29.5; lP: 33; wEl: 41; lEl: 42; lS: 36.

Male: Ventral side of abdomen as in *S. ashei*, but sternite 7 with a broad impression antero-medially and a moderately deep, broad apical emargination. Sternite 8 with a moderately narrow triangular notch in posterior half (length of sternite: depth of notch = 23.5: 9.5). Sternite 9 as in Fig. 2.- Tergite 10 very broadly rounded. Aedeagus (Fig. 3) with median lobe broad, anterior margin broadly concave, some fine setae apico-laterally, internal structures with some strongly sclerotized elements; parameres straight, much longer than the median lobe, with about 37+ setae in apical third.

Female: As in *S. ashei*.

Type material: Holotype (♂) and 1 ♂, 2 ♀♀ paratypes: COSTA RICA: Puntarenas: Corcovado National Park, Sirena Station, Espavales Trail, 5 m, 8°29.07 N, 83°35.17 W, beating shore detritus, 28.VI.2000, Z. H. Falin. HT and 2 PTT in the Natural History Museum Kansas, Lawrence, Kansas, 1 PT in the author's collection.

Discussion: This new species is very similar to *S. ashei* sp. nov. and *S. salvini* Sharp from which it is best distinguished by the aedeagus (Fig. 3, compare Fig. 1). The exoskeleton is slightly less coarsely punctate than in *S. ashei* (diameter of elytral punctures slightly shorter than antennal segment 2 in cross-section). For more characters separating it from other members of the *S. denticollis* group see the discussion in the section on *S. ashei* above.

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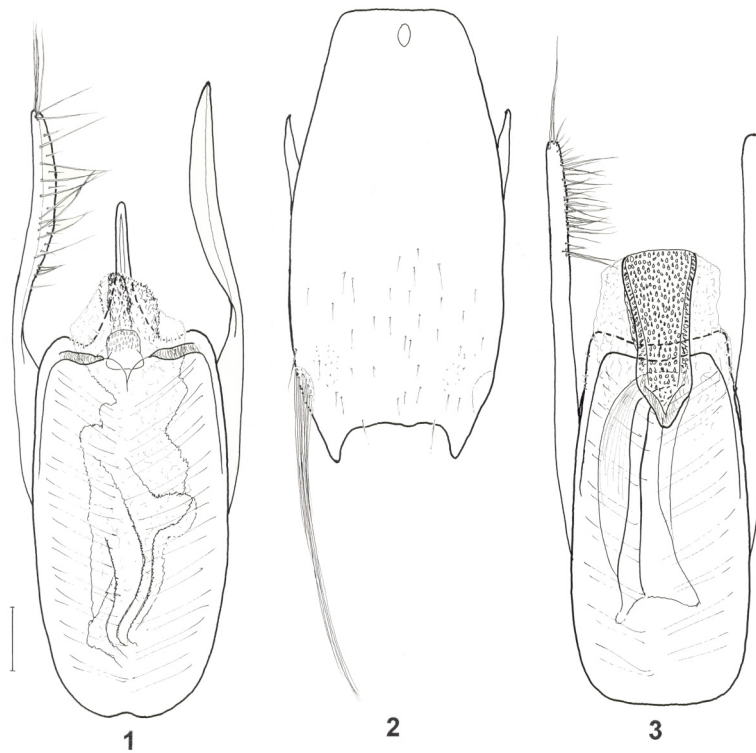
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Figures 1-3: Ventral aspect of aedeagus (1, 3), sternite 9 of male (2): (1) *Stenus* (*Hypostenus*) *ashei* sp. nov. (PT) and (2, 3) *S. (H.) asheianus* sp. nov. (HT).- Scale bar = 0.1 mm.