

**Two new species of *Benediktellus* PELLETIER, 2004 (Coleoptera:
Curculionidae: Entiminae) from Turkey**

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ABSTRACT. Two new species of *Benediktellus* PELLETIER, 2004 from eastern Turkey are described and illustrated; key for identification of all known species is provided.

KEY WORDS: Coleoptera, Curculionidae, Entiminae, new species, Turkey.

INTRODUCTION

PELLETIER (2004) described two new genera closely related to *Strophomorphus* SEIDLITZ, 1867: *Syriacodes* and *Benediktellus*. The most important diagnostic feature that allows separation of both new genera from *Strophomorphus* is the structure of antennae: these are considerably more slender in *Strophomorphus* and the second funicular joint is longer than the first one, whereas newly described genera have the first joint clearly longer than the second one. Moreover, there are small, but essential, differences in the structure of rostrum: both *Syriacodes* and *Benediktellus* have no or weakly expressed ventral edge of antennal scrobes, and rostrum is very short, (sub)conical with narrow dorsal part (in result scrobes are almost fully visible in dorsal view). In contrast, *Strophomorphus* species have scrobes with sharply expressed ventral margins, dorsal part of rostrum is broad (so the scrobes are less visible in dorsal view). Eyes moderately or weakly vaulted, whereas for *Strophomorphus* extremely vaulted eyes (Strophosoma-like) are typical (PELLETIER 1999).

Benediktellus differs from *Syriacodes* in a little thicker protruding hairs, slightly less robust antennae and legs and somewhat bigger, round eyes (PELLETIER 2004). However, all

these differences are weakly expressed, so the status of both groups should be thoroughly revised. We had an opportunity to study only *B. flavisetosus* (two, ptc) and *Syriacodes weilli* PELL (ht).

TAXONOMY

Key for identification of species of *Benediktellus*

1. Elytrae not regularly rounded in dorsal view but expanded backwardly, robust (Fig. 2) with recumbent vestiture; aedeagus (Fig. 6), spermatheca (Fig. 7).....*B. nemrutensis* sp.n.
- Elytrae regularly rounded in dorsal view, slender (Fig. 11), with clearly protruding vestiture; males unknown.....2
2. Pronotum without area devoid of punctures on disc, uniformly punctured; dorsal part of rostrum broad, so the scrobes only partly visible in upper view, uniformly punctured, without trace of median row; epistome with hind margin regularly rounded; elytral declivity almost perpendicular in lateral view; spermatheca (Fig. 15).....*B. armeniacus* sp.n.
- Pronotum in the centre of disc with longitudinal area devoid of punctures; dorsal part of rostrum narrow, so the scrobes largely visible in upper view, apical portion less punctured than basal part, more mat, with very weak but detectable trace of middle row; epistome triangular, hind margins at an acute angle; elytral declivity much less vaulted, obliquely pointed in lateral view; spermatheca (Fig. Sw7, PELLETIER 2004).....*B. flavisetosus* PELL.

Benediktellus nemrutensis sp.n.

Material examined

Holotype male, dissected (Fig. 1)(right fore and hind tarsi except for first joint are missing): 18.05.2001 S Turkey; Nemrut Dagi; SE [of] Malatya; leg. P. Bialooki/*Benediktellus nemrutensis* sp.n., P. Bialooki & J. Szygula design. 2005. Deposited in Natural History Museum of Wroclaw University, Poland.

Paratypes: same label, 23 exx. (11 exx.in P. Bialooki coll.; 4 exx. in J. Pelletier coll.; 2 exx. in S. Benedikt coll.; 2 exx. in Hungarian Natural History Museum, Budapest); 03.06.2002, otherwise the same label, 19 exx., in P. Bialooki coll.

17-19.05.2001, leg. J. Szygula, otherwise the same label, 12 exx. in J. Szygula coll.

Diagnosis

Very peculiar, easily distinguishable species with strongly expressed sexual dimorphism (Figs 1, 2). Differs from the only, so far, described species of the genus *B. flavisetosus* PELLETIER, 2004 as well as from *B. armeniacus* sp.n. in elytral hairs protruding, but strongly bent backwardly, so the tips are close to elytral surface; in much robust body with elytrae not regularly rounded but expanded backwardly and in spermatheca (Figs 7, 15) (Fig. Sw 7, PELLETIER 2004).

Description

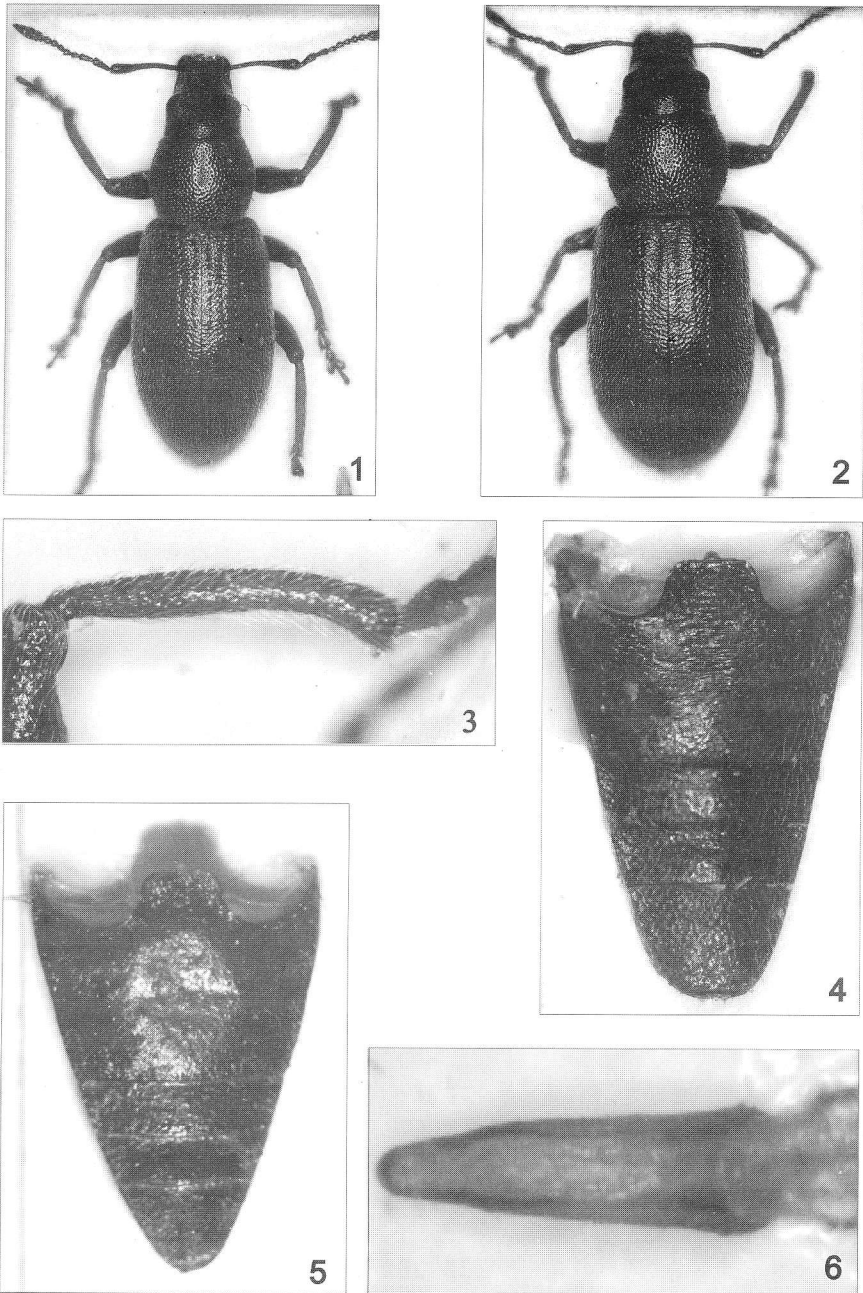
Body length (rostrum excluding) 5.3 - 5.8 mm (holotype 5.7 mm); rather dark brown except for tibiae, antennal scape and funicle light brown. Head (Fig. 9) moderately coarsely punctured; punctures in part coalesced longitudinally, especially close to inner margins of eyes; with long semierect hairs directed backwardly; eyes rather large, moderately vaulted, clearly but shortly oval; frons with small elongate median fovea, practically at the same level as dorsal part of rostrum, (weak, indistinct depression close to eyes only, hardly visible), slightly wider, or as wide as rostrum with pterygia; temples shorter than eyes diameter.

Rostrum very short, 1.6x as broad as long; dorsal part relatively narrow, flat with partially unclear longitudinal, impressed, very thin, median line from frons fovea up to the epistome i.e. to the midlength of pterygia (here rostrum surface with weak impression); epistome clearly bent downwards, smooth, shining, proximal margin slightly elevated as very thin carina; antennal insertion and scrobes almost fully visible in dorsal view, in apical half subparallel, in basal part margins of dorsal surface of rostrum unclear, punctured as head, hairs clearly shorter and more recumbent than those on head.

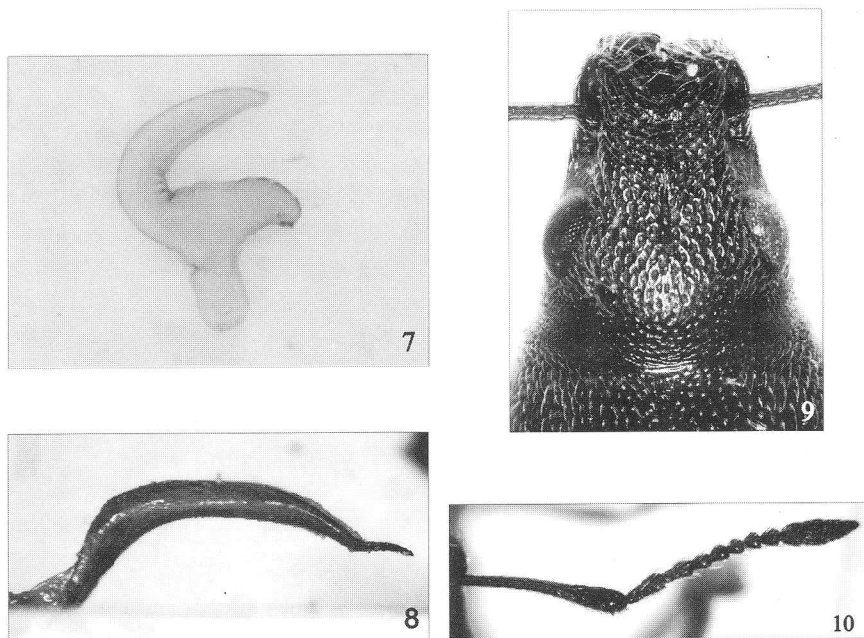
Antennae (Fig. 10) long and slender, scape and funicle equally long; scape weakly but clearly bent in midlength, apical half moderately expanded; first funicular joint 2.7x as long as wide, 1.4x as long as second one; second joint twice as long as broad; joints 3-4 slightly elongate; 5-7 subisodiametric; club very elongate, 2.8x as long as wide, clearly longer than four last funicular joints combined; first two joints of club subequal, about six-tenth of total length of club, apical two joints combined little shorter than third joint.

Pronotum moderately transverse, 1.2x as broad as long, sides evenly, moderately rounded, widest at midlength, longitudinally almost flat; rather coarsely, densely punctured, interstice shorter than punctures diameter; puncture little bigger than that of head and rostrum; covered with almost recumbent hairs, much shorter than those on head and rostrum; in the middle of disc small, longitudinal area devoid of punctures.

Elytrae in males 1.65x and in females 1.55x as long as broad, in both sexes at base clearly wider than base of pronotum, behind weakly but clearly expressed shoulders (sub)linearly expanded backwardly, apex acutely rounded; in males in lateral view weakly vaulted, in females elytral declivity much more vaulted; interstices flat, much wider than rows, covered with dense, microscopic tubercles (points of hairs attachment) and dense,



Figs 1 –6. *Benediktellus nemrutensis* sp.n.1 – ht, male, dorsal view; 2 – female, dorsal view; 3 – ht, male, foretibia; 4 – ht, male, ventrites; 5 – female, ventrites; 6 – ht, male, aedeagus, dorsal view.



Figs 7 – 10. *Benediktellus nemrutensis* sp.n. 7 – female, spermatheca; 8. – ht, male, aedeagus, lateral view; 9 – h, male, head, dorsal view; 10 – ht, male, antenna.

weakly protruding hairs, resembling pronotal hairs, more erect on declivity; rows not impressed, consist of separated punctures, at elytral base much bigger than those on pronotum, then backwardly gradually and strongly declining. Scutellum well visible, moderately large, clearly transversal, triangular with rounded apex.

Legs. Femora inermis, with recumbent hairs; tibiae slender, almost straight at base, weakly expanded apically, with semierect hairs; fore tibiae (Fig. 3) strongly bent inwards apically; tarsi slender, first joint elongate, especially in hind tarsus (as long as second and third joints combined), third joint strongly bilobed, claws strongly connate; all tibiae in both sexes with tibial spur, single in fore and middle tibiae, and double in hind tibiae.

Ventral side of body with thin hairs, fore coxae contiguous, in midlength of prothorax; just behind anterior margin of prothorax thin, impressed line, much closer to anterior margin of prothorax than to anterior margins of front coxae; middle coxae separated by narrow process, equal to the basal width of scape; hind tibiae widely separated; gular suture well developed, impressed; suture of mesepisternum fully developed. Ventrites strikingly different in both sexes (Figs 4, 5) – In males much less narrowed apically than in females: ratio max. width of first ventrite/ max. width of last ventrite 1.7 in males and 2.1 in females. Last ventrite in males cut apically, with no impression or peculiar pubescence; more regularly rounded in females.

Aedeagus, ht (Figs 6, 8).

Spermatheca (Fig. 7).

Biology

Biology unknown; all specimens collected under stones, at elevation about 1.900 m asl

Distribution

So far, known only from locus typicus in South Eastern Turkey.

***Benediktellus armeniacus* sp.n.**

Material examined

Holotype female, dissected (missing left hind leg): 17.06.2002 NE Turkey; W [of] Horasan; E [of] Erzurum; leg. J. Szypula / *Benediktellus armeniacus* sp.n.; P. Bialooki & J. Szypula design.2004; deposited in Natural History Museum of Wroclaw University, Poland.

Paratypes: same label, leg. et coll. P. Bialooki, 2exx.; same label, leg. et coll. J. Szypula, 1ex.

Diagnosis

Easily recognizable species; differs from *B. nemrutensis* sp.n. in weakly vaulted eyes, hardly protruding from head outline in dorsal view, in much more slender body, in fore tibiae much less bent apically inwards, in much more protruding vestiture and different spermatheca and spiculum ventrale. From *B. flavisetosus* PELLETIER differs in pronotum uniformly punctured, without area devoid of punctures in the middle of disc, in considerably less vaulted eyes, in broader dorsal part of rostrum so the scrobes less visible in dorsal view, in much more vaulted elytral declivity (almost perpendicular in lateral view).

Description

Body length: 5.0 – 5.2 mm (ht 5.0), entirely light brown with clearly lighter tibiae but all specimens newly hatched and apparently not fully sclerotized.

Head (Fig. 12) short, transverse, uniformly conical with basal half of rostrum moderately coarsely punctured; frons convex transversally, as broad as max. width of rostrum with pterygia, with clear but small, longitudinal median fovea; with long, semierect hairs, directed backwardly; eyes slightly oval, weakly vaulted, hardly protruding from head outline in dorsal view; temples shorter than eyes diameter; ventral half of head with recumbent hairs directed distally.

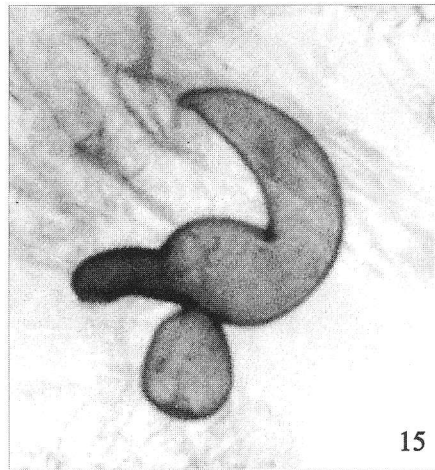
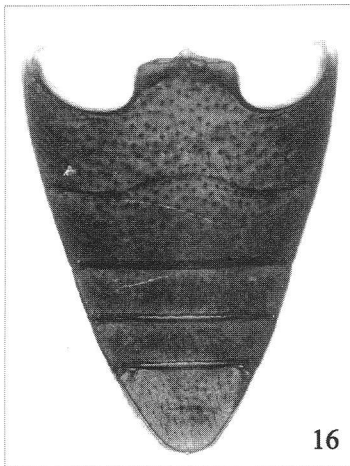
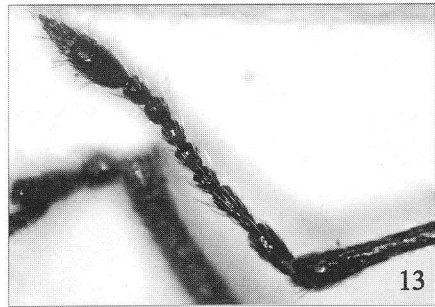
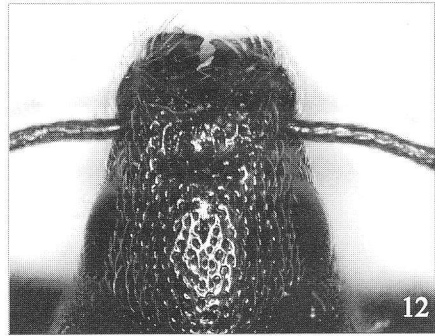
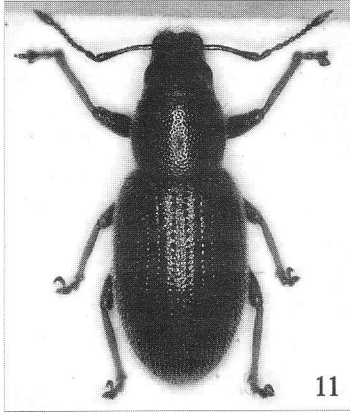
Rostrum short, strongly transverse, 1.5x as broad as long, basal portion conical together with head, apical part subparallelsided or slightly expanded, at the same level as head, with no median furrow or carina, weakly impressed between antennal insertions, punctured as head; vestiture also the same; dorsal part of rostrum broad, somewhat expanding from antennal insertions to the inner margins of eyes; scrobes only partly visible in dorsal view, pit-like, placed laterally; no trace of ventral margin of scrobe behind pterygia; epistome large, directed somewhat downwards, reaching midlength of pterygia, shining, indistinctly punctured with minute, sparse punctures, transversally half as broad as dorsal part of rostrum between anterior margins of pterygia, separated posteriorly by very thin, slightly elevated regularly rounded carina.

Antennae (Fig. 13) rather slender, scape and funicle of equal length, scape clearly flattened dorso-ventrally, in dorsal view thicker, in midlength slightly bent, apical one-third weakly expanded; covered with thin, minute, weakly semierect hairs; first joint of funicle little longer and much thicker than second one; second one more than twice as long as broad, joints 3-7 clearly longer than wide; club as long as four last funicular joints combined, strikingly elongate - 2.8x as long as wide, with joints resembling *B. nemrutensis* sp.n.

Pronotum rather weakly transverse, 1.2x as broad as long, with weakly, evenly rounded sides, broadest at its midlength, almost flat longitudinally, rather strongly vaulted transversally; moderately, evenly punctured, interspaces about as long as punctures diameter, smooth, shining; covered with clearly protruding hairs, backwardly bent, directed to the scutellum.

Elytrae (Fig. 11) 1.55x as long as broad, with rounded shoulders; sides very weakly, regularly rounded, subparallel, apex somewhat acutely rounded; elytral declivity in lateral view moderately vaulted; interstices much broader than rows, flat, with irregular rugosity caused by hairs attachments; hairs little shorter than interstice width, clearly semierect, arcuated, bent backwardly, thin, clearly broadest at base and then gradually narrowed apically, at apex strictly acute, very thin. Rows weakly impressed, at base of elytrae consist of punctures twice as large as those on pronotal disc, separated from one another by distance smaller than puncture diameter, with hairs clearly shorter than on interstices, otherwise similar. Four outer interstices with vestiture much less protruding, in part recumbent, rows with much smaller punctures. All elytral vestiture though dense, not obscuring integument.

Legs slender, covered with bright semierect hairs; all femora inermis; fore tibiae almost straight, indistinctly bent basally, apically weakly arcuated inwards; tarsi slender, especially hind ones; first joint clearly elongate, much longer than second; third joint clearly bilobed, rather small; last joint slender, exceeding third joint at the distance longer than third joint length; claws small, strongly connate.



Figs 11-15. *Benediktellus armeniacus* sp.n. 11 – female, dorsal view; 12 – female, head, dorsal view; 13 – female, antenna; 14 – female, ventrites; 15 – female, spermatheca.

Ventral part of body (Fig. 14) with semierect light hairs. Suture of metepisternum fully developed, well visible.

Spermatheca (Fig. 15).

Biology

Biology unknown, all specimens swept in the evening in dry steppe at elevation about 800 m asl.

Distribution

So far, known from locus typicus only in eastern Turkey (Armenian Upland).

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