

**A study of the *Pelletierellus championi* species group  
with descriptions of four new species  
from Greece and Turkey (Coleoptera: Curculionidae: Entiminae: Trachyphloeini)**

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**Taxonomy, new species, key, Coleoptera, Curculionidae, Entiminae, Trachyphloeini, Greece, Romania, Turkey, Palearctic Region**

**Abstract.** The *Pelletierellus championi* (Formánek, 1907) species group is defined and revised. All the species are redescribed, illustrated and keyed. Four new species of *Pelletierellus* are described as follows: *P. bialooki* sp. nov. from Turkey, and *P. brevithorax* sp. nov., *P. danbartai* sp. nov. and *P. formaneki* sp. nov. from Greece.

## INTRODUCTION

A group of 16 large “*Trachyphloeus*” species with globose elytra, with apex of protibiae without lobes and spines, with antennal scrobes invisible in dorsal view, with abdominal ventrites with all sutures straight and ventrite 2 shorter than ventrites 3 and 4 combined and with ventrite VIII in females with umbrella-shaped plate, known from the Balkans and Turkey, was recently separated by Borovec (2009) as an independent genus *Pelletierellus*. On the species level, the whole group was revised by Borovec (1992). The genus including 8 species known historically, described more than hundred years ago, was supplemented by eight species described over the last 30 years. The present paper extends our knowledge of the genus by adding four new species recently collected in Greece and Turkey and dividing the whole genus into three species groups.

## MATERIAL AND METHODS

The total length of examined specimens was measured in profile from the anterior border of the eyes to the apex of the elytra, excluding the rostrum. The ratios between width and length of the rostrum, pronotum, elytra, antennal and tarsal segments are based on maximum widths and lengths of the respective parts in dorsal view. Dissected female genitalia were embedded in Solakryl BMX (Medika, Prague); male genitalia were mounted dry. Genitalia are mounted on the same card as the respective specimen. The terminology of the rostrum and genitalia follows Oberprieler et al. (2014).

Acronyms for depositories of the material are as follows:

ALAA Andreas Link, Ansfelden, Austria;  
GOVI Giuseppe Osella collection, Verona, Italy;  
NMPC National Museum, Praha, Czech Republic;  
PBSP Piotr Białooki private collection, Sopot, Poland;

RBSC Roman Borovec private collection, Sloupno, Czech Republic;  
SBPC Stanislav Benedikt private collection, Plzeň, Czech Republic.

#### TAXONOMIC PART

The *Pelletierellus championi* (Formánek, 1907) group of species defined here is easy to distinguish from all other *Pelletierellus* species by two characters: 1. short spines of protibiae blackish, at most brown blackish and 2. raised elytral setae on all elytral intervals, although sparser on intervals 2 and 4 in some species. All other *Pelletierellus* species, defined here as members of the *P. ventricosus* (Germar, 1824) species group, have spines at apex of protibiae yellowish and two species have blackish spines, *P. anatolicus* (Fremuth, 1992) known from Turkey and *P. hellenicus* (Borovec, 1988) known from Greece have raised elytral setae exclusively on odd intervals and I define them here as members of the *P. hellenicus* species group. The following characters, common for the species of *P. championi* group are as follows: Antennal scrobes in dorsal view invisible (Figs. 1, 7); frons creating narrow glabrous stripe along the epistomal ridge, with 3-4 pairs of stout apical setae; epistome V-shaped, small but distinct, glabrous, posteriorly sharply carinate (Figs. 1, 7); mandibles small, glabrous; rostrum strongly vaulted, separated from rest of head by a wide transverse depression; head with swollen supra-ocular ridges; scutellum invisible; apex of anterior tibiae laterally straight, mesally weakly enlarged inside, mucronate; metatibial corbels bald, only with narrow stripe of adherent scales on upper border, fringed by short, stout, blackish setae; claws fused, then weakly or distinctly divorced; penis short and wide or long and slender (Figs. 3, 14), well sclerotised, temones 1.5 times as long as body of penis and faintly longer than tegminal manubrium; tegmen in species with short penis with robust manubrium enlarged to distinct caput (Fig. 25), in species with slender penis with slender manubrium without caput, parameres translucent, inconspicuous, fused at base (Fig. 4); sternite IX in males with spiculum gastrale long and slender, anteriorly curved, creating slender plate, posteriorly with fused basal arms; sternite VIII in females with subtriangular pointed plate, long and narrow, with well visible apical margin and ill-defined basal margin (Figs. 6, 11); gonocoxites flat, long-oval or subtrapezoid with long apical styli bearing setae.

The group included the only two rare species, known only in several specimens, *P. championi* (Formánek, 1907) known from Greece and *P. fleischeri* (Formánek, 1911) known from Romania. Species of that group seems to occur quite seldom; they are only rarely collected and except of *P. formaneki* sp. nov. no species was repeatedly collected. Six present species of the group are known from Greece, Romania and Turkey. Recent material was collected mainly by sifting of roots of different plants, but according to other *Pelletierellus* species it could be assumed that adults are not so strictly nocturnal and they could be probably also found during the day on different plants, living polyphagous in warm and steppe habitats. All the species are amphigonic with standard ratio of both sexes, only *P. brevithorax* sp. nov. is known only in three females.

*Pelletierellus bialookii* sp. nov.

(Figs. 1-6)

**Type material.** Holotype (♂): Turkey NW, Mt. NE Edremit, 08.v.2007, 1294 m, P. Białooki lgt., (PBSP). Paratypes: (1 ♂, 4 ♀♀): the same data as holotype (3 ♀♀ PBSP, 1 ♂, 1 ♀ RBSC).

**Description.** Length 2.72-3.06 mm, holotype 2.88 mm. Adherent scales irregularly angular on circumference, each scale with a small hole in the middle, covered integument, space between two scales distinctly shorter than diameter of one scale. Setae on elytra erect, long and slender, about parallel-sided, longer than half width of one interval, light brownish. Type material is scraped, but its raised setae seem to be missing or at least sparser on intervals 2 and 4. Pronotum with raised setae, head and rostrum with sparsely irregularly scattered subspatulate setae, somewhat shorter than elytral ones.

Rostrum (Fig. 1) isodiametric to 1.03 times as long as wide, at base enlarged anteriorly in short distance, then indistinctly regularly tapered anteriorly, with straight sides. Epifrons widest at anterior third, in basal two thirds regularly enlarged anteriorly, in apical third distinctly tapered anteriorly. Epifrons with swollen margins and narrow U-shaped stria, parallel with margins of epifrons, at base more deepened, creating shallow wide ill-defined depression at base of rostrum. Frons glabrous, creating narrow stripe along border of epistome. Epistome well distinct, V-shaped, short and narrow. Antennal scrobes in lateral view narrow, weakly curved, directed to ventral border of eyes, separated from them by squamose stripe about as wide as diameter of eyes. Head with somewhat swollen borders above eyes. Eyes large, symmetrical, prominent from outline of head.

Antennae robust. Scapes straight, longer than funicles, regularly enlarged apically, at apex as wide as clubs or protibiae at midlength. Funicle segments 1 and 2 conical, robust; segment 1 1.1 times as long as wide and 1.2-1.3 times as long as segment 2, which is isodiametric to 1.1 times as long as wide; segments 3-6 1.8-1.9 times as wide as long; segment 7 1.9-2.0 times as wide as long; clubs short, 1.6-1.7 times as long as wide.

Pronotum (Fig. 2) 1.46-1.63 times as wide as long, widest behind midlength, with strongly rounded sides, anteriorly more tapered than posteriorly, behind anterior margin weakly constricted, with anterior border narrower than posterior, base weakly arched. Disc with moderately slender longitudinal furrow with ill-defined borders along the whole length and with numerous, ill-defined, irregular rounded depressions. Pronotum in lateral view weakly vaulted in basal half, flat in anterior half.

Elytra (Fig. 2) 1.17-1.22 times as long as wide, widest at midlength or behind midlength, at apex somewhat obtuse, with weakly rounded sides; humeri obliquely subtruncated, indistinct. Striae finely punctate; intervals almost flat. Elytra in lateral view almost flat.

Apex of anterior tibiae rounded, with straight lateral edge and weakly enlarged inside, with sparse, short, 7-8 black spines. Tarsal segment 2 1.4 times as wide as long; segment 3 1.4 times as wide as long and 1.5-1.6 times as wide as segment 2; onychium 1.1 times as long as segment 3. Claws fused at basal half.

Penis (Fig. 3) long and slender, widest at base, anteriorly almost regularly tapered with nearly straight sides, apex with narrow, but shortly obtuse point; in lateral view narrow, regularly faintly curved, with regularly pointed and elongated apex. Tegmen (Fig. 4) with

long and slender manubrium not enlarged to caput, almost as long as temones of penis, with slender ring of small diameter and long, translucent parameres solidly fused in basal half.

Female genitalia. Spermatheca (Fig. 5) swan-shaped, with regularly curved, moderately wide and long cornu and semicircular corpus; nodulus very small, almost indistinct, tubercle-shaped, ramus big, longer than wide, parallel with body of corpus. Sternite VIII (Fig. 6) in dorsal view with slender and long, subtriangular plate with elongated, slender and sharp point and with V-shaped sclerotisation. Gonocoxites subtrapezoid, short, with long apical styli.

**Differential diagnosis.** Easily distinguished from all other species by epifrons with U-shaped stria, depression at base of rostrum (Fig. 1), slender pronotum with numerous, ill-defined, irregular rounded depressions, long and slender penis (Fig. 3), spermatheca swan-shaped with semicircular corpus and ramus parallel with corpus (Fig. 5) and sternite VIII in females with elongated point in dorsal view (Fig. 6). Its long and slender penis resembles penis of *P. fleischeri* (Fig. 21), but penis of *P. bialooki* sp. nov. is widest at base and has wider obtuse apex, moreover *P. bialooki* sp. nov. is distinguishable from *P. fleischeri* except of characters stated above also by rostrum abruptly enlarged at short basal part, enlarged epifrons in basal two thirds, shorter elytral setae and wider funicle segments.

**Etymology.** The species is dedicated to its collector, Piotr Białooki (Sopot, Poland), a specialist in Entiminae.

**Distribution.** Turkey.

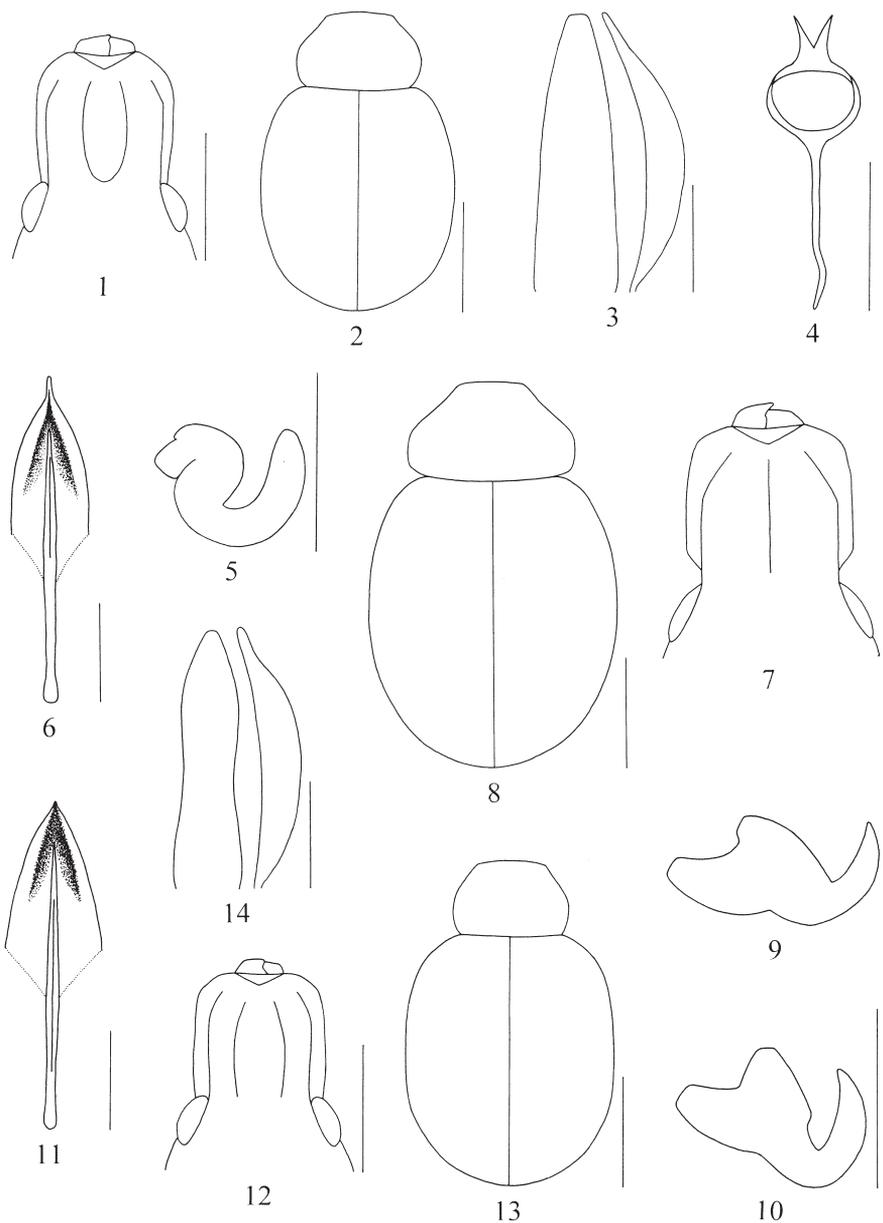
***Pelletierellus brevithorax* sp. nov.**

(Figs. 7-11)

**Type material.** Holotype (♀): Grecia [Greece], Peloponneso, M.te Paronias, Meligou, 5.vi.2003, 600 m, G. Osella lgt. (GOVI). Paratypes: (2 ♀♀): the same data as holotype (GOVI, RBSC).

**Description.** Length 3.51-3.69 mm, holotype 3.59 mm. Adherent scales on elytra irregularly shaped and angular, subtriangular to subtrapezoid, part of them with hole in the middle, somewhat sparse, with spaces between two scales shorter than diameter of one scale. Adherent scales on pronotum, head and rostrum in the shape of slender, three-pointed crosses. Raised setae on elytra conspicuous, long, perpendicularly erect, almost as long as width of one interval, slender, about parallel-sided, sparse, distance of two setae about the same as triple of one seta length, dark brownish, only setae on intervals 3, 5 and 7 light brownish. Pronotum with four sparse longitudinal rows of the same setae as on elytra, only shorter, and with group of shorter, semierect spatulate setae in lateral parts of pronotum. Head and rostrum with short, spatulate setae creating rows on epifrons margins and above eyes.

Rostrum (Fig. 7) short and wide, 1.08-1.14 times as wide as long, before eyes abruptly enlarged and then slightly tapered anteriorly with straight sides. Epifrons in basal two thirds subparallel-sided, with straight sides, at apical third widest and then strikingly tapered anteriorly, flat, slightly longitudinally depressed along ill-defined median longitudinal stria. Frons glabrous, short. Epistome conspicuous, but short and narrow. Scrobes in lateral view well edged, weakly curved and enlarged posteriorly, directed to ventral half of eyes but



Figs. 1-14. *Pelletierellus bialooki* sp. nov.: 1- head with rostrum in dorsal view. Scale = 0.50 mm; 2- pronotum and elytra in dorsal view. Scale = 1.00 mm; 3- penis in ventral and lateral view. Scale = 0.25 mm; 4- tegmen. Scale = 0.50 mm; 5- spermatheca. Scale = 0.25 mm; 6- sternite VIII in female. Scale = 0.50 mm. *Pelletierellus brevithorax* sp. nov.: 7- head with rostrum in dorsal view. Scale = 0.50 mm; 8- pronotum and elytra in dorsal view. Scale = 1.00 mm; 9, 10- spermatheca. Scale = 0.25 mm; 11- sternite VIII in female. Scale = 0.50 mm. *Pelletierellus championi* (Formánek): 12- head with rostrum in dorsal view. Scale = 0.50 mm; 13- pronotum and elytra in dorsal view. Scale = 1.00 mm; 14- penis in ventral and lateral view. Scale = 0.25 mm.

separated from them by squamose stripe almost as wide as diameter of it. Head wide with shallow longitudinal stria along the whole head length. Eyes somewhat vaulted, symmetrical, moderately protruding from outline of head.

Antennae robust. Scapes short and robust, as long as maximum width of rostrum, longer than funicle, at base weakly curved, in basal half weakly, in apical half distinctly enlarged, at apex very wide, distinctly wider than clubs or protibiae at midlength. Funicle segments 1 and 2 robust and conical; segment 1 1.1 times as long as wide, 1.2-1.3 times as long as segment 2, which is 1.2-1.3 times as long as wide; segments 3-6 1.4-1.5 times as wide as long; segment 7 1.5-1.6 times as wide as long; clubs 1.6-1.7 times as long as wide.

Pronotum (Fig. 8) very wide and short, 1.81-1.94 times as wide as long, widest at basal half with short and almost parallel sides, at apical half significantly tapered anteriorly, anterior border distinctly more slender than posterior one. Pronotum behind anterior border distinctly constricted, with longitudinal, wide and shallow, ill-defined furrow along the whole length, base distinctly arched. Pronotum in lateral view flat in basal half, in apical half lowered.

Elytra (Fig. 8) oval, 1.17-1.19 times as long as wide, with rounded but not prominent humeri, widest at midlength, with distinctly rounded sides, at apex broadly rounded; in lateral view distinctly vaulted. Striae narrow; intervals wide, slightly vaulted.

Apex of anterior tibia rounded, laterally straight, mesally weakly enlarged, with row of 6-8 black short spines. Tarsal segment 2 1.6-1.7 times as wide as long; segment 3 1.3-1.4 times as wide as long and 1.5-1.6 times as wide as segment 2; onychium 1.3 times as long as segment 3. Claws fused in basal half.

Penis unknown.

Female genitalia. Spermatheca (Figs. 9, 10) with short and slender, regularly pointed cornu, small in ratio to big corpus; ramus big, longer than wide, slightly curved, distinctly bigger than small, subtriangular nodule of different size. Sternite VIII (Fig. 11) with long and slender plate, subtriangular, apically regularly pointed, with V-shaped sclerotisation.

**Differential diagnosis.** This biggest species of the group is easily distinguishable from all the other *Pelletierellus* species of this group by its very wide pronotum (Fig. 8) with very wide shallow longitudinal furrow, very slender raised setae as long as width of elytral interval, and scapes short and wide. Identical long elytral setae are present in *P. fleischeri* only; *P. brevithorax* sp. nov. is also distinguishable from *P. fleischeri*, in addition to characters stated above, by rostrum abruptly enlarged at short basal part, enlarged epifrons in basal two thirds (Fig. 7), onychium longer than segment 3 and wider funicle segments.

**Etymology.** The very wide pronotum suggested the Latin name of this new species.

**Distribution.** Greece (Peloponnes).

***Pelletierellus championi* (Formánek, 1907)**

(Figs. 12-14)

*Trachyphloeus championi* Formánek, 1907: 171.

*T. championi*: Winkler 1932: 1437; Lona 1937: 321; Borovec 1992: 121.

*Pelletierellus championi*: Borovec 2009: 75; Borovec 2013: 417.

**Redescription.** Length 3.06 mm. Adherent scales on elytra, pronotum, head and rostrum irregularly shaped, three-, four- or five-pointed irregular crosses, distance between two scales shorter than diameter of one scale. Adherent scales light brownish, with small irregularly scattered spots of dark brownish scales. Erect elytral setae subspatulate, creating one regular row on each interval, about as long as half width of interval, distance between two setae about twice seta length, on even intervals on the disc sparser than on odd intervals. Pronotum, head and rostrum with similar setae as on elytra, only somewhat shorter, irregularly scattered. Raised setae light brownish.

Rostrum (Fig. 12) 1.05 times as wide as long, at short basal part gradually enlarged apicad, then slightly tapered apicad with straight sides. Epifrons in basal two thirds enlarged apicad, in apical third tapered apicad, with swollen borders and two narrow, slightly arched longitudinal striae. Frons glabrous, creating very narrow stripe around epistome, which is well visible, but small. Antennal scrobes in lateral view enlarged posteriorly, weakly curved, directed to ventral half of eyes, separated from them by narrow squamose stripe, about as long as half eye diameter. Head with swollen borders above eyes. Eyes symmetrical, vaulted, moderately prominent from outline of head.

Antennae moderately robust. Scapes longer than funicle, at base weakly S-shaped curved, in basal half weakly enlarged, in apical half distinctly gradually enlarged apicad, at apex slightly wider than clubs and about as wide as protibiae at midlength. Funicle segment 1 and 2 conical, robust; segment 1 1.3 times as long as wide and 1.4 times as long as segment 2, which is 1.3 times as long as wide; segments 3-5 1.3 times as wide as long, segment 6 and 7 1.4 times as wide as long; clubs 1.7 times as long as wide.

Pronotum (Fig. 13) 1.62 times as wide as long, small compared to elytra, 0.58 times as wide as elytral width, widest behind the midlength, with strongly rounded sides, anteriorly more tapered than posteriorly, behind anterior margin constricted, anterior margin distinctly narrower than posterior margin, base weakly arched. Disc with moderately slender longitudinal furrow in basal two thirds. Pronotum in lateral view vaulted, in apical half lowered.

Elytra (Fig. 13) oval, 1.22 times as long as wide, with rounded sides, and rounded, partly laterally prominent humeri, at apex broadly rounded. Striae narrow, punctate, intervals almost flat, wide. Elytra in lateral view vaulted.

Apex of protibiae laterally straight, mesally weakly enlarged, rounded, with 6 short, sparse, brown blackish spines. Tarsi moderately slender, segment 2 1.2 times as wide as long; segment 3 1.3 times as wide as long and 1.2 times wider than segment 2; onychium 1.8 times as long as segment 3. Claws fused at short basal half, divorced.

Penis (Fig. 14) long and slender, widest at base and at apical fifth, with distinctly concave sides, apex subtriangular; in lateral view faintly curved with lengthened apex.

Female genitalia unknown.

**Differential diagnosis.** Distinguished from all other species of this group by slender tarsi and long slender penis with distinctly concave sides along the whole length (Fig. 14), but also by pronotum small compared to elytra and elytra with rounded, partly laterally prominent humeri (Fig. 13).

**Distribution.** Greece (Thessaloniki).

**Remarks.** The species was described by Formánek according to the only one specimen from “Salonica” [Thessaloniki]. Holotype, dissected by me is deposited in Formánek’s collection (NMPC) and it is labelled as follows: Salonica [printed] / Championi m. i. l. [handwritten] / Holotypus [pink, printed] / Championi [handwritten] / Holotypus, Trachyphloeus championi Formánek, R. Borovec vid. 2014 [red, printed] / Pelletierellus championi (Formánek), R. Borovec det. 2014 [printed]. Holotype is the only known specimen of the species.

***Pelletierellus danbartai* sp. nov.**

(Figs. 15-18)

**Type material.** Holotype (♂): [Greece], Salonica [Thessaloniki] (RBSC). Paratype: (1 ♀): the same data as holotype (RBSC). The both type specimens are partly damaged, male lacks right pro- and metalegs and tarsus of left pro- and metalegs, female lacks tibia and tarsus of right proleg and tarsus of right metaleg.

**Description.** Length 3.16 mm holotype, paratype 3.38 mm. Adherent scales on elytra differently shaped, mostly irregularly angular with hole in the middle, but also in shape of irregularly three- or four-pointed crosses, sparsely covered integument, with the distance between two scales shorter than diameter of one scale. Adherent scales on pronotum, head and rostrum sparse, shaped as irregularly three-pointed crosses. Raised elytral setae erect, subspatulate, slightly longer than half width of one interval, creating one regular row on each interval, on intervals 2 and 4 on the disc almost missing, distance between two setae as triple length of one seta. Semierect setae on pronotum and head with rostrum identical as elytral ones, somewhat shorter, irregularly scattered.

Rostrum (Fig. 15) isodiametric, about parallel-sided. Epifrons in basal three quarters almost parallel-sided, in apical quarter distinctly tapered anteriorly, shallowly longitudinally deepened, with indistinct, narrow longitudinal median stria. Antennal scrobes in lateral view weakly curved and enlarged distad, directed towards ventral half of eyes, separated from them by squamose stripe somewhat shorter than diameter of eyes. Head with narrow median longitudinal stria. Eyes somewhat asymmetrical, widest behind midlength, slightly protruding from outline of head.

Antennae robust. Scapes in basal half weakly S-shaped, somewhat enlarged, in apical half distinctly and gradually enlarged apically, at apex slightly wider than clubs and as wide as protibiae at midlength. Funicles with segment 1 and 2 conical, robust; segment 1 1.2 times as long as wide and 1.4 times as long as segment 2, which is 1.2 times as long as wide; segments 3-5 1.3 times as wide as long; segment 6 1.4 times as wide as long; segment 7 1.5 times as wide as long; clubs 1.7 times as long as wide.

Pronotum (Fig. 16) 1.52 times as wide as long, widest behind midlength, with rounded sides, anteriorly more tapered than posteriorly, anterior margin more tapered than posterior one, behind anterior margin constricted, base weakly arched. Disc with moderately large,

shallow and ill defined depression before posterior border. In lateral view pronotum faintly vaulted, in apical half lowered.

Elytra (Fig. 16) 1.26 times as long as wide, oval, widest at midlength, with oblique humeri and with slightly rounded sides, at apex broadly rounded. Striae narrow, intervals wide, odd intervals slightly more elevated than even ones. Elytra in lateral view vaulted.

Apex of anterior protibiae with 6 blackish spines. Tarsal segment 2 1.4 times as wide as long; tarsal segment 3 1.4 times as wide as long and 1.4 times as wide as segment 2; onychium 1.4 times as long as segment 3. Claws fused at short basal half, divorced.

Penis (Fig. 17) short, subparallel-sided, broadly rounded apically, with long, slender and sharp tip. In lateral view irregularly curved with lengthened but somewhat wide apex. Female genitalia. Spermatheca not examined. Sternite VIII (Fig. 18) with slender, subtriangular plate, regularly pointed, without lengthened apex and sclerotisation. Gonocoxites flat, subtrapezoid, with moderately long apical styli.

**Differential diagnosis.** By slender, parallel-sided rostrum (Fig. 15) similar to *P. fleischeri* (Fig. 19), characters separating these two species are listed in the key below. By short subspatulate setae on elytra, sparser on even intervals and claws fused at short basal part *P. danbartai* sp. nov. is similar to *P. championi*, it is distinguishable from the latter by having rostrum and epifrons parallel-sided in basal half (Fig. 15), bigger pronotum in ratio to elytra, elytra with not prominent humeri (Fig. 16), shorter and wider tarsal segments and short and wide penis with parallel sides and with sharp long and slender apex (Fig. 17). By asymmetrical eyes similar to *P. formaneki* sp. nov., from the latter it is easily distinguishable by characters stated in the key below.

**Etymology.** The newly described species is dedicated to Dan Bárta, an amazing Czech singer and also enthusiastic photographer of Odonata in wild nature, mainly in South America.

**Distribution.** Greece (Thessaloniki).

***Pelletierellus fleischeri* (Formánek, 1911)**  
(Figs. 19-21)

*Trachyphloeus fleischeri* Formánek, 1911: 204.

*T. fleischeri*: Winkler 1932: 1437; Lona 1937: 322; Borovec 1992: 121.

*Pelletierellus fleischeri*: Borovec 2009: 75; Borovec 2013: 417.

**Redescription.** Length 3.19 mm. Adherent scales on elytra irregularly angular to cross-shaped, mostly with hole in the middle, with distance between two scales distinctly shorter than diameter of one scale. Elytral setae perpendicularly erect, long, slender, conspicuous, about as long as width of one interval, parallel-sided, creating one row on each interval, distance between two setae about twice length of one seta. Setae light brownish, only setae on intervals 3, 5 and 7 lighter. Semierect setae on pronotum, head and rostrum slender, similar to elytral ones, irregularly scattered, but about third of length of elytral seta.

Rostrum (Fig. 19) isodiametric, subparallel-sided, with straight sides and without abrupt widening in short basal part. Epifrons in basal three quarters about parallel-sided, in apical quarter tapered anteriorly, flat, shallowly longitudinally deepened, with weakly swollen

borders. Frons very short, glabrous. Epistome small but distinct. Antennal scrobes in lateral view very narrow, with almost parallel borders, weakly curved, directed to ventral part of eyes, separated from them by wide squamose stripe, about as wide as diameter of eyes. Head with narrow longitudinal median stria along the whole length and with weakly swollen borders above eyes. Eyes moderately large, symmetrical, prominent from outline of head.

Antennae moderately slender. Scapes longer than funicle, at basal half weakly enlarged, weakly S-shaped, in apical half distinctly gradually enlarged apicad, at apex slightly wider than clubs and about as wide as protibiae at midlength. Funicles slender; segments 1 and 2 slender, conical; segment 1 1.4 times as long as wide and 1.4 times as long as segment 2, which is 1.4 times as long as wide; segments 3-5 1.3 times as wide as long; segment 6 1.5 times as wide as long; segment 7 1.6 times as wide as long; clubs 1.6 times as long as wide.

Pronotum (Fig. 20) 1.57 times as wide as long, widest at basal half with slightly rounded sides, at apical half distinctly tapered anteriorad, behind anterior border constricted, anterior border distinctly more slender than basal one, base weakly arched. Disc with indistinct, shallow, ill-defined, moderately wide, longitudinal median furrow. Pronotum in lateral view vaulted, in apical half lowered.

Elytra (Fig. 20) oval, 1.27 times as long as wide, with distinctly rounded sides and with rounded humeri, at apex broadly rounded. Striae narrow, punctured, intervals almost flat. Elytra in lateral view vaulted.

Apex of protibiae laterally straight, mesally weakly enlarged, rounded, with 6 sparse, short, blackish spines. Tarsi robust; tarsal segment 2 1.3 times as wide as long; segment 3 1.3 times as wide as long and 1.5 times as wide as segment 2; onychium equally long as segment 3. Claws fused in basal half.

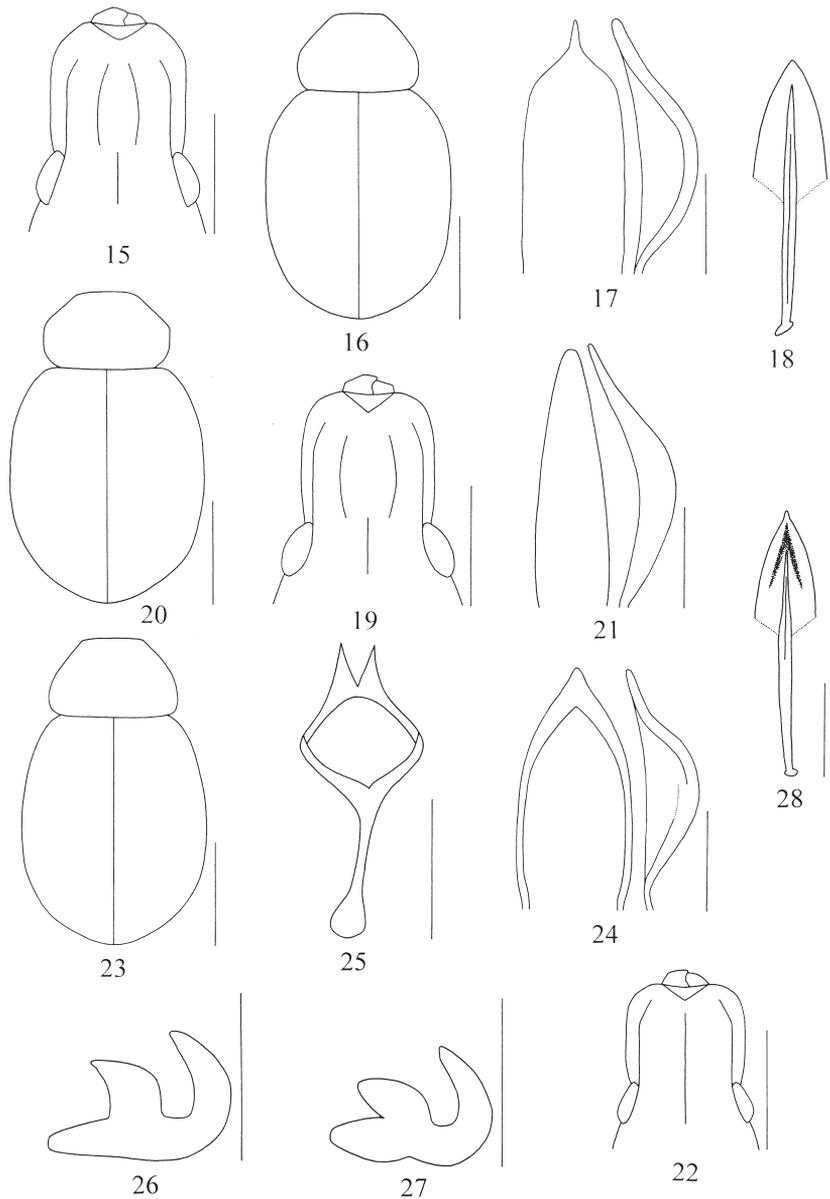
Penis (Fig. 21) slender and long, widest at basal quarter, basally weakly, apically distinctly regularly tapered with faintly rounded sides, apex lengthily pointed; in lateral view slender, almost regularly curved.

Female genitalia unknown.

**Differential diagnosis.** Rostrum isodiametric, before eyes regularly enlarged to anterior part, without abrupt widening in short basal part, epifrons in basal two thirds about parallel-sided (Fig. 19), funicles slender, elytral raised setae parallel-sided, as long as width of one interval and slender and long penis widest at basal third (Fig. 21) easily distinguish this species from all other species of this species group. Similarly long and slender elytral setae are also present in *P. brevithorax* sp. nov., and a similar penis can be found in *P. bialooki* sp. nov.; more details concerning their differentiation from each other are given in the discussion of these two species.

**Distribution.** Romania (?), Turkey.

**Remarks.** The species was described by Formánek, based on two specimens from "Alexandria, Rumänien". There are two males dissected by me and deposited in Formánek's collection (NMPC), designated as lectotype and paralectotype by Borovec (1992). Except of these two type specimens one more specimen was stated from Turkey (Borovec 1992, Fremuth 1992): 1 spec., Turkey, NW Anatolia, Uludag, vil. Bursa, 16.vii.1972, 2200 m, G. Osella lgt. (GOVI). In the view of the fact all six specimens are very similar, species identity



Figs. 15-28. *Pelletierellus danbartai* sp. nov.: 15- head with rostrum in dorsal view. Scale = 0.50 mm; 16- pronotum and elytra in dorsal view. Scale = 1.00 mm; 17- penis in ventral and lateral view. Scale = 0.25 mm; 18- sternite VIII in female. Scale = 0.50 mm. *Pelletierellus fleischeri* (Formánek): 19- head with rostrum in dorsal view. Scale = 0.50 mm; 20- pronotum and elytra in dorsal view. Scale = 1.00 mm; 21- penis in ventral and lateral view. Scale = 0.25 mm. *Pelletierellus formaneki* sp. nov.: 22- head with rostrum in dorsal view. Scale = 0.50 mm; 23- pronotum and elytra in dorsal view. Scale = 1.00 mm; 24- penis in ventral and lateral view. Scale = 0.25 mm; 25- tegmen. Scale = 0.50 mm; 26, 27- spermatheca (26- Profitis Illias, 27- Taigeto Poliana). Scale = 0.25 mm. 28- sternite VIII in female. Scale = 0.50 mm.

of this Turkish finding must be verified. Only these three specimens of the species are known to the time being.

***Pelletierellus formaneki* sp. nov.**

(Figs. 22-28)

**Type material.** Holotype (♂): [Greece], Peloponneso, Taigeto Poliana, 14.viii.1981, 1000/1600 m, M. & G. Osella lgt., (GOVI). Paratypes: (2 ♂♂, 2 ♀♀): the same data as holotype (1 ♂ 1 ♀ GOVI, 1 ♂ 1 ♀ RBSC); (1 ♂, 1 ♀): Grecia [Greece], Taigeto Poliane, Palo Panagia, 16.vii.1981, C. Bellò lgt. (GOVI); (1 ♀): Hellas [Greece], Taigetos, Prof. Illias, 4.iv.1988, 1000 m, A. K. Link lgt. (ALAA); (1 ♀): Graecia [Greece], Peloponnesos S, Taygetos Mts., Krioneri p. Paleopanagia, 29.iv.2008, 1300-1500 m, forest-pastures, S. Benedikt lgt. (SBPC).

**Description.** Length of males 2.75-2.84 mm, females 3.00-3.27 mm, holotype 2.84 mm. Adherent scales on elytra irregularly angular, differently shaped, each scale with a hole in the middle, space between two scales distinctly smaller than diameter of one scale. Adherent scales on pronotum, head and rostrum in the shape of slender, three-pointed crosses. Raised elytral setae long and slender, subspatulate, longer than half width of one interval, erect, creating one regular row on each interval, distance between two setae about as long as twice to triple length of one seta. Setae light brownish, in several specimens, setae on even intervals somewhat darker. Setae of one female about as long as half width of one interval. Semierect setae on pronotum, head and rostrum subspatulate, distinctly shorter than elytral ones, irregularly sparsely scattered.

Rostrum (Fig. 22) 1.09-1.14 times as wide as long, at short distance before eyes gradually enlarged, then slightly tapered anteriorly with straight sides. Epifrons widest at anterior third, in basal part subparallel-sided, in apical third distinctly tapered anteriorly, with slender longitudinal median stria, epifrons longitudinally depressed along the median stria. Antennal scrobes in lateral view weakly curved and weakly enlarged posteriorly, directed to ventral half of eyes, separated from them by slender squamose stripe, about as wide as half of eyes diameter. Eyes moderately small, vaulted, weakly prominent from outline of head, asymmetrical, widest at posterior quarter. Head with swollen longitudinal borders above eyes.

Antennae short and robust. Scapes longer than funicle, at base weakly S-shaped curved, weakly enlarged, at apical half distinctly gradually enlarged apically, at apex slightly wider than clubs and equally wide as protibiae at midlength. Funicle segments 1 and 2 robust and conical, segment 1 1.2 times as long as wide and 1.3 times as long as segment 2, which is 1.2-1.3 times as long as wide; segments 3-5 1.3 times as wide as long; segment 6 1.3-1.4 times as wide as long; segment 7 1.5-1.6 times as wide as long; clubs 1.5-1.6 times as long as wide.

Pronotum (Fig. 23) 1.55-1.74 times as wide as long, widest at basal half with subparallel sides, from midlength strongly tapered anteriorly, behind anterior margin constricted, anterior margin distinctly more slender than posterior margin, base weakly arched. Disc with shallow, moderately wide, longitudinal furrow with ill-defined borders along the whole length. Pronotum in lateral view vaulted, in apical half lowered.

Elytra (Fig. 23) oval, 1.25-1.28 times as long as wide, behind midlength, with indistinct humeri and with rounded sided and broadly rounded at apex. Striae narrow, punctate, intervals wide, almost flat. Elytra in lateral view vaulted.

Apex of anterior tibia rounded, laterally straight, mesally weakly enlarged, with sparse row of short, black 6-7 spines. Tarsal segment 2 1.4-1.5 times as wide as long; segment 3 1.3-1.4 times as wide as long and 1.4 times as wide as segment 2; onychium 1.1 times as long as segment 3. Claws fused in basal half.

Penis (Fig. 24) short and wide, in basal two thirds subparallel with moderately rounded sides, in apical third tapered and pointed, with slender sharp apex, sides before apex weakly concave; in lateral view irregularly curved with slender lengthened apex. Tegmen (Fig. 25) with short and robust manubrium, distinctly shorter than temones of penis, conspicuously enlarged to distinct oval caput and at its base; ring with big diameter, enlarged at base of manubrium and base of parameres; parameres inconspicuous, translucent, fused in short basal part.

Female genitalia. Spermatheca (Figs. 26, 27) with moderately long, slender, regularly curved and pointed cornu; ramus and nodulus longer than wide, subtriangular, ramus longer than nodulus, nodulus differently shaped. Sternite VIII (Fig. 28) with slender, subtriangular plate, pointed, with only shortly lengthened apex and with V-shaped sclerotisation. Gonocoxites flat, long-oval, with moderately long apical styli.

**Differential diagnosis.** Asymmetrical eyes, widest clearly behind the middle of their length in dorsal view (Fig. 22) and short and wide penis (Fig. 24) easily distinguish this species from all other species of this group. Short and wide penis, but with more slender and longer apex and weakly asymmetrical eyes are also present in *P. danbartai* sp. nov. (Fig. 17), but it has rostrum isodiametric, before eyes regularly enlarged along the whole length, without abrupt widening, and epifrons in basal two thirds about parallel-sided (Fig. 15).

**Etymology.** Species named after an eminent specialist in Entiminae, Czech entomologist Romuald Formánek (1857-1927), who described two species of the group, which have been known till the present time.

**Distribution.** Greece (Peloponnes).

#### KEY TO THE SPECIES OF *PELLETIERELLUS CHAMPIONI* GROUP

1. Pronotum very wide, 1.8-1.9 times as wide as long (Fig. 8). Raised setae on elytra almost as long as width of one interval. Scapes short and wide, as long as maximum width of rostrum, distinctly wider than clubs. Bigger, 3.5-3.7 mm. .... *P. brevithorax* sp. nov.
- Pronotum more slender, at most 1.7 times as wide as long (Figs. 2, 13). Raised setae on elytra distinctly shorter than width of one interval, except of *P. flesicheri* with long elytral setae. Scapes longer and more slender, longer than maximum width of rostrum, slightly wider than clubs. Smaller, 2.7-3.3 mm. .... 2
2. Pronotum with numerous, ill-defined, irregular rounded depressions. Epifrons with U-shaped stria, distinctly depressed at base (Fig. 1). Spermatheca with semicircular corpus and ramus parallel with corpus (Fig. 5). .... *P. bialooki* sp. nov.
- Pronotum regularly vaulted, without numerous small depressions. Epifrons with one straight or two arched longitudinal striae, not depressed at base (Figs. 12, 22). Spermatheca with ramus perpendicular to cornu (Figs. 26, 27). .... 3
3. Tarsi longer and more slender; segment 3 1.2 times wider than segment 2; onychium 1.8 times as long as segment 3. Pronotum 0.58 times as wide as maximum elytral width (Fig. 13). Penis with distinctly concave sides at midlength in ventral view (Fig. 14). .... *P. championi* (Formánek)
- Tarsi shorter and wider; segment 3 1.4-1.5 times wider than segment 2; onychium at most 1.4 times as long as

- segment 3. Pronotum 0.65-0.72 times as wide as maximum elytral width (Figs. 16, 20). Penis with straight or rounded sides at midlength in ventral view (Figs. 17, 21). ..... 4
4. Rostrum 1.1 times as wide as long, before eyes abruptly enlarged in short distance (Fig. 22). Epifrons in basal two thirds enlarged anteriorly (Fig. 22). Penis before apex with weakly concave sides (Fig. 24). .....  
*P. formaneki* sp. nov.
- Rostrum isodiametric, before eyes regularly enlarged along the whole length, without abrupt widening in short basal part (Figs. 15, 19). Epifrons in basal two thirds about parallel-sided (Figs. 15, 19). Penis before apex with distinctly concave sides or rounded (Figs. 17, 21). ..... 5
5. Elytral raised setae long, slender, parallel-sided, almost as long as width of one interval, creating one row on each interval. Eyes symmetrical, widest at middle (Fig. 19). Onychium as long as segment 3. Penis long and slender, with regularly rounded sides (Fig. 21). ..... *P. fleischeri* (Formánek)
- Elytral raised setae subspatulate, slightly longer than half width of one interval, creating one regular row on each interval, on intervals 2 and 4 on the disc almost missing. Eyes asymmetrical, widest at posterior quarter (Fig. 15). Onychium 1.4 times as long as segment 3. Penis short and wide, with distinct concavity before apex (Fig. 17). ..... *P. danbartai* sp. nov.

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