

A review of the North African species group *Trachyphloeus godarti* with descriptions of two new species from Morocco, Algeria and Tunisia (Coleoptera: Curculionidae: Entiminae)

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Abstract. *Trachyphloeus godarti* Seidlitz, 1868 group of species is defined and revised. All its species are redescribed, illustrated and keyed. *Trachyphloeus oranensis* sp. nov. from Morocco and Algeria and *Trachyphloeus svatavae* sp. nov. from Algeria and Tunisia are described. *Trachyphloeus difformis* Formánek, 1907 is proposed as a junior synonym of *Trachyphloeus godarti* Seidlitz, 1868. Lectotypes of *Trachyphloeus difformis* Formánek 1907, *T. fairmairei* Reitter, 1874, *T. godarti* Seidlitz, 1868, *T. nodipennis* Chevrolat, 1860, *T. impressicollis* Stierlin, 1884 and *T. solariorum* Formánek 1907 are designated. Male and female genitalia of all the species included are studied and illustrated for the first time.

INTRODUCTION

In numerous collections, a relatively large number of representatives of several North-African *Trachyphloeus* Germar, 1817 were found. These species, often long series of specimens known from only single localities and scattered in different collections, have often never been collected again and thus, we know those species only from old material. On the contrary, recent material collected thanks to better mobility of collectors and also better collecting methods complete our knowledge of these terricolous weevils, using hidden way of life. One from these cases is the *Trachyphloeus godarti* group defined here. Four species belonging to the group were described between 1868 and 1907 and except the only one recently collected specimen I have not seen any other material, collected after 1907. Moreover, one new species, different from described ones, was collected in two localities recently.

Species of *T. godarti* group are currently placed in *Trachyphloeus*, sg. *Trachyphloeus* s. str. (Borovec 2009). Seidlitz (1868), Marseul (1873), Stierlin (1884) and Formánek (1907) listed them in their "1. Gruppe" of the *Trachyphloeus*. *Trachyphloeus* s. str. is the largest subgenus of *Trachyphloeus* containing almost 70 species. Species of the *T. godarti* group can be very easily distinguished from all the other species by the following set of characters:

- elytra with bumps and ridge-shaped prominences on all or at least odd intervals
- all elytral intervals bear raised elytral setae (in distinction from *T. nodipennis* Chevrolat, 1860 and *T. solariorum* Formánek, 1907, having also conspicuous elytral bumps, with raised setae only on odd intervals).

All the species of the group are known only from three countries, Morocco, Algeria and Tunisia, and there are no known data about their bionomy.

MATERIAL AND METHODS

The material is housed in the following collections (identified by codens):

- CCG collection of Christoph Germann, Thun, Switzerland;
ECO collection of Enzo Colonnelli, Rome, Italy;
GOS collection of Giuseppe Osella, Verona, Italy;
HMNH Hungarian Museum of Natural History, Budapest, Hungary;
IRB Institut Royal des Sciences Naturelles de Belgique, Brusells, Belgium;
JPE collection of Jean Pelletier, Monnaie, France;
MCM Museo Civico di Storia Naturale di Milano, Italy;
MNB Museum für Naturkunde der Humboldt Universität, Berlin, Germany;
MNCN Museo Nacional de Ciencias Naturales, Madrid, Spain;
NHRS Naturhistoriska Riksmuseet, Stockholm, Sweden;
NMP National Museum, Praha, Czech Republic;
NMW Naturhistorisches Museum Wien, Austria;
PST collection of Peter Stüben, Mönchengladbach, Germany;
RBO collection of Roman Borovec, Sloupno, Czech Republic;
SDEI Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany;
SMTD Staatliches Museum für Tierkunde, Dresden, Germany;
ZSM Zoologische Staatssammlung, München, Germany.

TAXONOMIC PART

Trachyphloeus fairmairei Reitter, 1874

(Figs 1, 5-9)

Trachyphloeus fairmairei Reitter, 1874: 12.

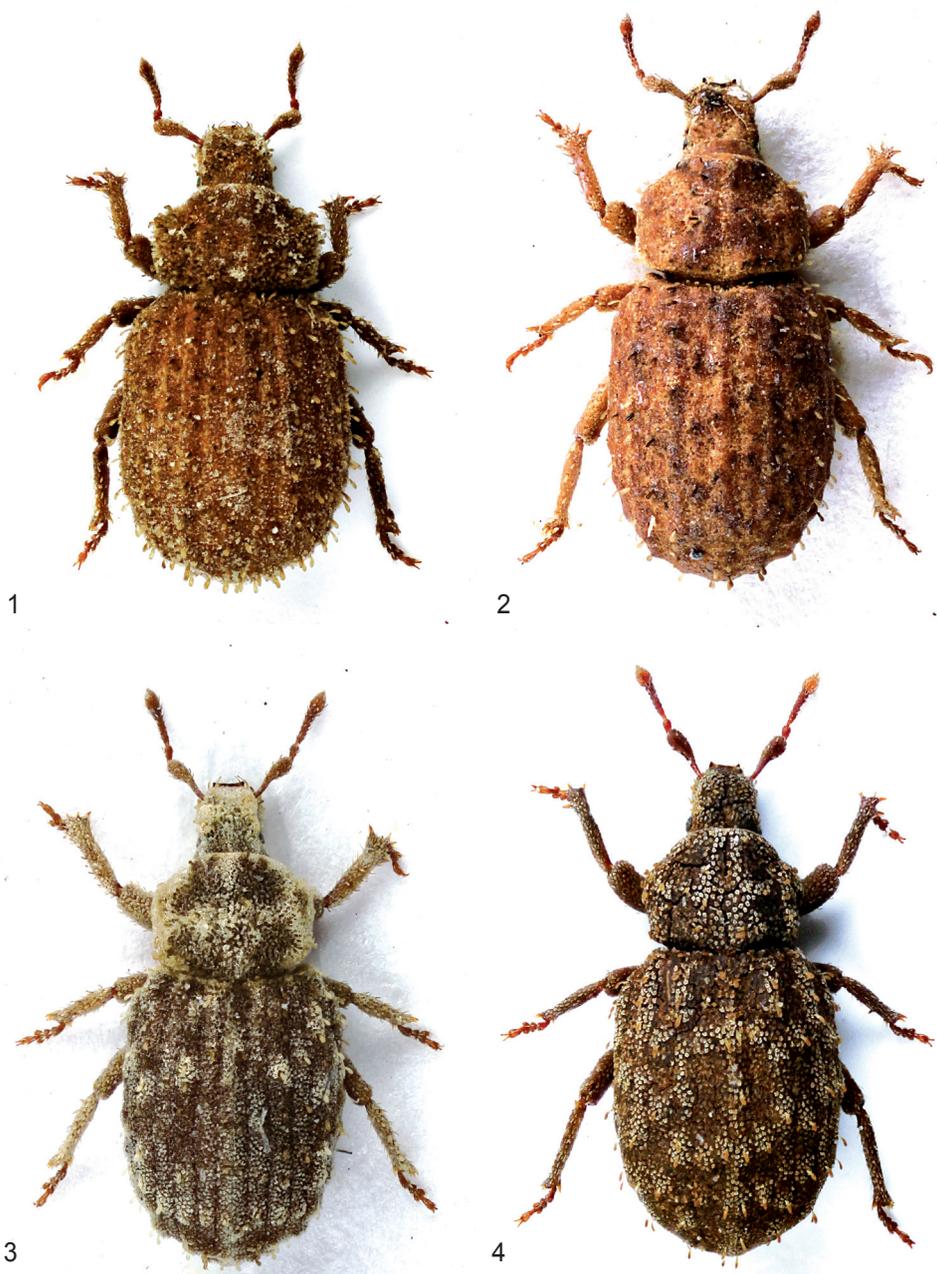
T. fairmairei: Formánek 1907: 150; Winkler 1932: 1437; Lona 1937: 322; Borovec 2009: 80.

Type material examined. Reitter (1874) did not state the number of type specimens in his original description and as a type locality he stated "Oran". I found one 3.03 mm long female in the Heyden's collection (SDEI), labelled as follows: Fairmairei Reitter Oran Reitter [handwritten] / Fairmairei det. Formánek [partly printed, partly handwritten] / Syntypus [red, printed] / coll. Heyden [handwritten] / DEI Eberswalde [printed] / LECTOTYPUS *Trachyphloeus fairmairei* Reitter, R. Borovec desig. 2013 [printed, red]. Lectotypus lacks right antenna. Lectotype is designated in order to stabilize the nomenclature in this genus according to Article 74.7.3 of the Code (ICZN 1999).

There are five more specimens (one male and four females) in SMTD collection, labelled as follows: Oran Kirsch [blue, handwritten] / Fairmairei det. Formánek [partly printed, partly handwritten] / Syntypus [red, handwritten] / Staatl. Museum für Tierkunde Dresden [printed]. Because Reitter (1874) did not state Kirsch as a collector or source of material and there is no any indication on the labels, Reitter examined these five specimens. For these reasons I do not assume these five specimens to belong to the type series.

Additional material examined. (1 ♂): Algeria, Oran (SDEI); (2 spec.): Algeria, Oran (NMP); (2 spec.): Algeria, Oran (MNCN); (1 ♂): Algeria, Oran (NMW).

Redescription. Length (rostrum excluded) 2.88-3.09 mm. Body covered by adherent scales, irregularly angular to irregularly star-shaped. Intervals between two scales on elytra shorter

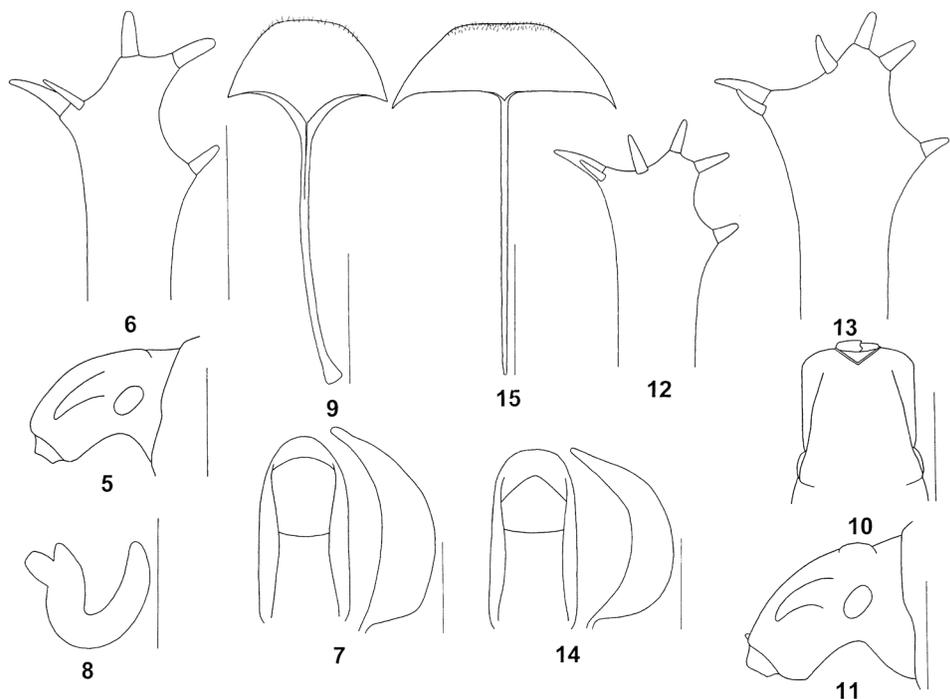


Figs 1-4. Habitus: 1- *Trachyphloeus fairmairei* Reitter; 2- *T. godarti* Seidlitz; 3- *T. oranensis* sp. nov.; 4- *T. svatavae* sp. nov. Scale = 0.25 mm.

than diameter of one scale. Raised setae on elytral disc semierect, in elytral declivity almost perpendicularly erect, slightly longer than half width of one interval, slender, but enlarged apicad. Raised setae on pronotum and head with rostrum similar as elytral ones, only shorter, irregularly scattered.

Rostrum short and wide, 1.27-1.31 times as wide as long, parallel-sided. Epifrons wide, only in very short basal part parallel-sided, then regularly tapered apicad, with straight sides. Epifrons with slender longitudinal median stria, covered by scales and longitudinally shallowly depressed. Frons short, squamose, lowered. Epistome small, separated from frons by slender V-shaped carina. Antennal scrobes in dorsal view invisible (Fig. as in 10), in lateral view curved, enlarged posteriad, directed above eyes, ventral border of scrobe directed just towards dorsal border of eye (Fig. 5). Rostrum in lateral view regularly curved, frons feebly declined. Eyes small, flat, in dorsal view not prominent from outline of the head, in lateral view below the middle of head height.

Antenna moderately robust, scape 1.1 times as long as funicle, at midlength feebly curved, in apical half regularly enlarged to apex, at apex as wide as club. Antennomere 1 1.7-1.8 times as long as wide and 1.6 times as long as antennomere 2, which is 1.4-1.5 times as long



Figs 5-9. *Trachyphloeus fairmairei* Reitter: 5- head with rostrum in lateral view; 6- apex of female protibia; 7- penis in dorsal and lateral views; 8- spermatheca; 9- sternite VIII in female. Scale = 0.25 mm.

Figs 10-15. *Trachyphloeus godarti* Seidlitz: 10- head with rostrum in dorsal view; 11- head with rostrum in lateral view; 12- apex of male protibia; 13- apex of female protibia; 14- penis in dorsal and lateral views; 15- sternite VIII in female. Scale = 0.25 mm.

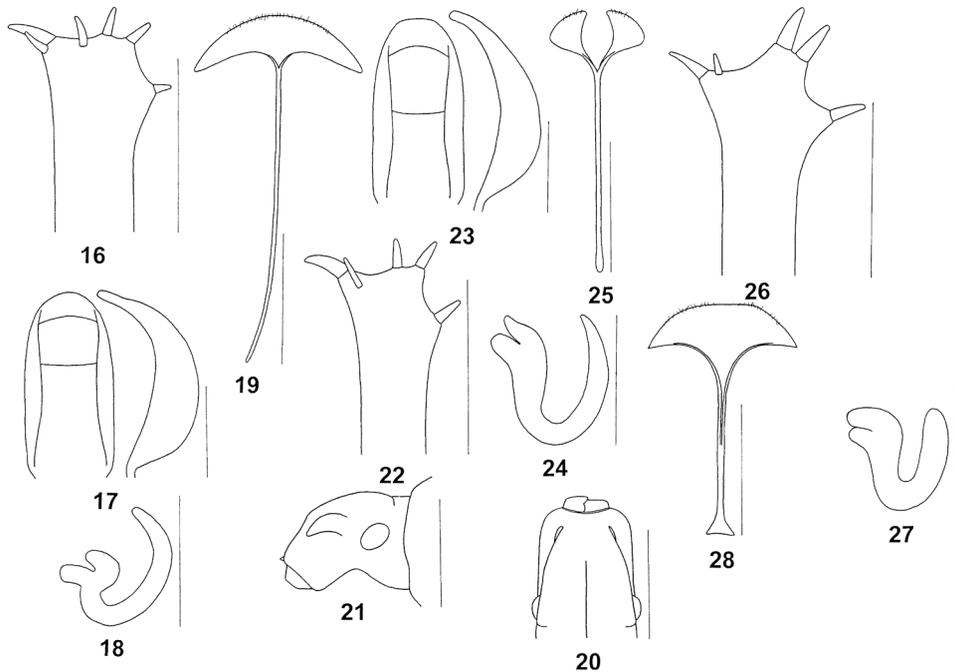
as wide. Antennomeres 3-5 1.6 times as wide as long; antennomere 6 1.7 times as wide as long; antennomere 7 1.8 times as wide as long. Club 1.4 times as long as wide.

Pronotum 1.40-1.49 times as wide as long, widest at anterior third, strongly tapered anteriorly and only moderately tapered posteriorly, with almost straight sides. Base feebly arched. Pronotum strongly and widely constricted behind anterior border, with ill-defined, shallow longitudinal depression in middle part of basal half (Fig. 1). Pronotum in lateral view almost flat, lowered in anterior third.

Scutellum invisible.

Elytra 1.25-1.32 times as long as wide, with feebly arcuated sides. Elytra on the disc with hardly visible, very low bumps, only in elytral declivity bumps are somewhat distinct. Odd intervals somewhat more elevated than even ones. Base almost straight. Striae narrow (Fig. 1). Elytra in lateral view slightly vaulted.

Apex of protibia distinctly three-lobed with 5 spines. In females apex strongly enlarged laterally and mesally, with long lobes and long and deep indentation, similar as in *T. spinimanus* Germar, 1824. Outer indentation somewhat longer than inner one. Lateral lobe



Figs 16-19. *Trachyphloeus oranensis* sp. nov.: 16- apex of male protibia; 17- penis in dorsal and lateral views; 18- spermatheca; 19- sternite VIII in female. Scale = 0.25 mm.

Figs 20-25. *Trachyphloeus svatavae* sp. nov.: 20- head with rostrum in dorsal view; 21- head with rostrum in lateral view; 22- apex of male protibia; 23- penis in dorsal and lateral views; 24- spermatheca; 25- sternite VIII in female. Scale = 0.25 mm.

Figs 26-28. *Trachyphloeus pelletieri*: 26- apex of female protibia; 27- spermatheca; 28- sternite VIII in female. Scale = 0.25 mm.

bears one spine, middle and inner lobes bear two spines. Lateral spine in middle lobe slightly moved more anteriorly. Bottom spine in inner lobe long, hook-shaped, curved inside (Fig. 6). Apex of protibia in males with lobes, indentations and spines fine, quite different from those in females (Fig. as in 22). Tarsomere 2 1.2-1.3 times as wide as long; tarsomere 3 1.3-1.4 times as wide as long and 1.3 times as wide as previous one. Ungular tarsomere 1.6-1.7 times as long as penultimate one. Claws free.

Penis almost parallel-sided, at apex irregularly rounded with hardly visible concavity before apex. In lateral view curved, tapered in about apical half, apex lengthened (Fig. 7).

Sternite VIII in females with plate large, semicircular, about twice as wide as long, with long basal arms, almost reaching hind corners of plate and with very slender apical margin bearing short setae (Fig. 9). Spermatheca with slender, regularly curved cornu, large corpus, subrectangular ramus, significantly longer and wider than small, triangular nodulus (Fig. 8).

Differential diagnosis. *T. fairmairei* Reitter, 1874 is easily distinguishable from all the other species of the group by less developed bumps on elytra and depressions on pronotum, and by long and deep lateral indentation of apex of protibia reaching a quarter of protibia length (Fig. 6), antennal scrobes directed above the eye in lateral view (Fig. 5) and long basal arms of sternite VIII in females (Fig. 9).

Distribution. Algeria.

Trachyphloeus godarti Seidlitz, 1868

(Figs 2, 10-15)

Trachyphloeus godarti Seidlitz, 1868: 102.

T. godarti: Marseul 1873: 610; Stierlin 1884: 136; Formánek 1907: 147; Winkler 1932: 1437; Lona 1937: 323; Borovec 2009: 80.

Trachyphloeus impressicollis Stierlin, 1884: 136.

Trachyphloeus difformis Formánek 1907: 149.

T. difformis: Winkler 1932: 1437; Lona 1937: 322; Borovec 2009: 79.

Type material examined. Seidlitz (1868) described species according to "Zwei Stücke aus Algier von Herrn Godart mitgeteilt". In author's collection (ZSM) there are 5 specimens under the name *godarti*, one of them belongs distinctly to type series. It is well preserved male, 3.51 mm long, glued on very small triangular label, bearing following labels: Algeria Godart [handwritten] / *Trachyphloeus Godarti* Sdlz Type [handwritten by pencil] / *Godarti* n. sp. [handwritten] / Type von *Trachyphl Godarti* Seidlitz [partly printed and handwritten, orange red label] / LECTOTYPUS *Trachyphloeus godarti* Seidlitz, R. Borovec desig. 2012 [printed, red]. The other four specimens belong to three other species: 2 males from Oran belong to *T. godarti*; 1 female from Oran belongs to new species, described as *T. oranensis* sp. nov. below and 1 female from Edough belongs to *T. pelletieri* Borovec, 1999. Lectotype is designated in order to stabilize the nomenclature in this genus according to Article 74.7.3 of the Code (ICZN 1999).

Trachyphloeus difformis Formánek, 1907: Formánek (1907) described this species after 5 specimens from locality "Sfax, Tunesien". I examined nine specimens from Solari's collection (MCM), five of them from type locality Sfax and labelled them as lectotype and four paralectotypes. Lectotype is 3.31 mm long specimen, labelled as follows: Sfax, Tunisia, 1986, Vauloger [printed] / *Difformis*, Type [Formánek's handwriting] / Lectotypus [red, handwritten] / *T. difformis* R. Borovec desig. 1986 [handwritten]. Two paralectotypes on the same pin (one of them glued upside down) has the same labels as lectotype, but copied by my handwriting; two other paralectotypes have all labels identical with lectotype, only the second label is written by Solari's handwriting as follows: *difformis* m.i.litt. There is also one specimen in Formánek's collection (NMP), labelled as "Type", but originated from "Prov. d'Alger,

Chellala 1895 de Vauloger". I do not consider it to be a syntype. Lectotype and paralectotypes are designated in order to stabilize the nomenclature in this genus according to Article 74.7.3 of the Code (ICZN 1999).

Trachyphloeus impressicollis Stierlin, 1884: This species was described from an unspecified number of specimens coming from "Oran". I have found a female in the Stierlin's collection (SDEI), 3.19 mm long, labelled as follows: 51 Db [printed] / Oran [handwritten] / T. impressicollis Desbr. [Stierlin's handwriting, label with blue margins] / impressicollis Stierl. Type [handwriting] / Godarti det. Formánek [partly printed, partly handwritten] / Holotypus [red, printed] / DEI Eberswalde [printed] / LECTOTYPUS *Trachyphloeus impressicollis* Stierlin, R. Borovec desig. 2013 [printed, red] / *Trachyphloeus godarti* Seidlitz, R. Borovec det. 2013 [printed]. The female is remounted by me and lacks left antenna and tarsi or part of tarsi of four legs.

Additional material examined. (1 spec.): Algeria, Chellala 1895, de Vauloger (NMP); (2 spec.): Algeria, Chellala 1895, de Vauloger (MCM); (3 ♂♂ 4 ♀♀): Algeria, Chellala, iv.1895, Vauloger (JPE); (2 spec.): Algeria, Jekel (MCM); (3 spec.): Algeria, Oran (NMP); (2 ♂♂): Algeria, Oran (JPE); (2 ♂♂): Algeria, Oran (MNB); (2 ♀♀): Algeria, Oran, Vauloger (NMW); (3 ♂♂ 2 ♀♀): Algeria, Oran (HMNH); (1 ♀): Algeria, Oran, 29.v.1987, Lemozo [lgt.] (JPE); (32 spec.): Algeria centr., Oran, Sidi bel Abbès, Winkler [lgt.] (GOS, RBO); (1 spec.): Algeria, Constantine, Allard (SMTD).

Redescription. Length (rostrum excluded) 2.81-3.63 mm. The whole body covered by irregularly star-shaped adherent scales, with three to five tips. Interval between two scales slightly smaller than diameter of one scale. Semierect raised setae on elytra slightly longer than half width of one interval, slender, somewhat enlarged to apex. Semierect setae on pronotum and head with rostrum identical with those on elytra, somewhat shorter, irregularly scattered.

Rostrum 1.14-1.21 times as wide as long, parallel-sided. Epifrons in basal quarter parallel-sided, then regularly, moderately tapered anteriorly with straight sides, longitudinally and shallowly depressed. Frons short, lowered, scarcely squamose. Epistome small but well visible, separated from frons by V-shaped, narrow carina. In males epistome lengthened to two narrow and pointed dents, curved up. Antennal scrobes in dorsal view invisible, in lateral view curved, enlarged distad, directed towards eye but separated from it by wide squamose stripe. Rostrum in lateral view strongly and regularly vaulted, with frons feebly declined (Fig. 11). Eyes small, in dorsal view flat, not prominent from outline of the head (Fig. 10), in lateral view placed slightly below middle of head height.

Antenna moderately robust. Scape 1.1-1.2 times as long as funicle, at midlength curved, in apical half regularly enlarged, at apex as wide as club. Antennomere 1 1.6 times as long as wide, 1.3-1.4 times as long as antennomere 2, which is 1.5 times as long as wide. Antennomeres 3-5 1.5 times as wide as long; antennomeres 6 1.6 times and antennomere 7 1.7 times as wide as long. Club 1.6 times as long as wide. One specimen from locality Chellala, deposited in NMP, has funicle with only 6 antennomeres.

Pronotum 1.32-1.41 times as wide as long, widest at anterior third of length, strongly tapered anteriorly and only very slightly tapered posteriorly, with straight sides, in several specimens almost parallel-sided. Pronotum behind anterior border strikingly and widely, bow-shaped constricted, with five ill-defined, shallow and wide depressions, one in the middle before the base, four in all pronotal corners. Base arched (Fig. 2). Pronotum in lateral view feebly vaulted, in anterior third lowered.

Scutellum invisible.

Elytra slender and long, 1.26-1.31 times as long as wide, with parallel sides. All intervals with small bumps, lower on elytral disc than on elytral declivity. Odd intervals somewhat

more elevated than even ones. Base arched. Striae narrow (Fig. 2). Elytra in lateral view moderately vaulted.

Apex of protibia three-lobed with six spines. In females distinctly enlarged laterally and mesally, lateral lobe bears one spine, middle lobe two spines and inner lobe two spines of unequal size - the bottom spine is the longest, hook-shaped, curved inside. The last sixth spine is placed in inner indentation. Inner indentation slightly longer than outer one (Fig. 13). Apex of protibia in males with only feebly less developed lobes, spines and indentations, reminds of female protibia of other species of the group (Fig. 12). Tarsi slender and long. Tarsomere 2 1.2-1.3 times as wide as long; tarsomere 3 1.2 times as wide as long and 1.2 times as wide as tarsomere 2. Ultimate tarsomere 1.9-2.2 times as long as penultimate one. Claws free.

Penis short, in ventral view widest at base, only slightly tapered apicad with almost straight sides, apex obtuse, almost regularly rounded. Penis in lateral view regularly curved, tapered only in short apical part (Fig. 14).

Sternite VIII in females with very large plate, about three times as wide as long, with anterior border flattened with fringe of short setae, hind corners lengthened (Fig. 15). Spermatheca not examined.

Differential diagnosis. *T. godarti* Seidlitz, 1868 is distinguishable from all other species of the group by slender, parallel-sided elytra (Fig. 2), long unguar tarsomere and apex of protibia in males with long and deep indentations (Fig. 12).

Distribution. Algeria, Tunisia.

Trachyphloeus oranensis sp. nov.

(Figs 3, 16-19)

Type material. Holotype (♂): Algeria, Oran, Madon lgt. (IRB). Paratypes: (3 ♂♂): the same data as holotype (IRB); (1 ♂, 1 ♀): Oran (RBO); (1 ♀): Oran (SDEI); (1 ♀): Oran (ZSM); (1 ♂, 1 ♀): Oran (NHRS); (1 ♂): Morocco, M.de Kebdana, Küste, 3 km SW Ras-el-Ma, Launaea spinosa, 50 m, 31.xii.2001, C. Germann lgt. (CCG); (1 ♀): Mk [Morocco], M.de Kebdana, Küste, 3 km SW Ras-el-Ma, Launaea spinosa, 50 m, 31.xii. [20]01, leg. [P.] Stüben 22 (PST).

Description. Length (rostrum excluded) 2.56-3.31 mm, holotype 2.78 mm. Body densely covered by adherent scales. Elytral scales irregularly angular to star-shaped, irregularly dense, not covering integument completely. Scales on pronotum and head with rostrum irregularly star-shaped, on pronotum sometimes with hole in the middle, on rostrum very dense, on head and pronotum with intervals almost as large as diameter of one scale. Raised semierect elytral setae create one scarce row on each interval, growing just from tip of each bump, spatulate, short, shorter than half width of one elytral interval. Raised setae on pronotum and head with rostrum almost identical as those on elytra, irregularly scattered.

Rostrum 1.15-1.23 times as wide as long, parallel-sided, with straight sides. Epifrons in basal third to half parallel-sided, then distinctly tapered anteriorly, longitudinally depressed in entire surface. Frons long, densely squamose, lowered. Epistome small but conspicuous, glabrous, V-shaped, separated from frons by narrow carina. Antennal scrobes in dorsal view invisible, in lateral view regularly curved, enlarged distad, directed towards eye, separated

from it by squamose stripe. Rostrum in lateral view strongly but regularly curved, lowered in frons part. Eyes small, almost flat, not protruding from outline of the head. In lateral view eyes placed just below the middle of the head height (Figs as in 10, 11).

Antennal scape about as long as funicle, at apical half abruptly enlarged, as wide as club. Antennomere 1 conical, 1.6-1.7 times as long as wide and 1.6 times as long as antennomere 2, which is 1.2-1.3 times as long as wide. Antennomeres 3-7 gradually wider towards the club; antennomere 3 and 4 1.5 times as wide as long; antennomere 5 1.6 times as wide as long; antennomere 6 1.8 times as wide as long and antennomere 7 twice as wide as long.

Pronotum 1.36-1.44 times as wide as long, widest at anterior third, anteriorly strongly tapered, posteriorly feebly, in several specimens indistinctly tapered with indistinctly rounded sides. Base arched. Pronotum with wide and conspicuous constriction behind anterior border and with wide, shallow and ill-defined depression in the middle before base and in all corners (Fig. 3). Pronotum in lateral view feebly vaulted, lowered in anterior third.

Scutellum invisible.

Elytra short, oval, 1.19-1.24 times as long as wide, with rounded sides. All intervals with small but distinct bumps along the whole length, visible mainly in dorso-lateral view or in elytral declivity. Base arched. Striae narrow (Fig. 3). Elytra in lateral view moderately vaulted.

Apex of protibia strongly enlarged laterally and mesally, three-lobed, armed with six spines. Lateral lobe bears one, middle and inner lobes two spines. Last, sixth spine is placed in inner indentation. Inner spine larger than the others, hook-shaped, curved inside. Inner indentation slightly longer than lateral one (Fig. as in 13). Lobes, indentations and spines in males shorter and finer than in females (Fig. 16). Tarsomere 2 1.1 times as wide as long; tarsomere 3 1.2 times as wide as long and 1.2 times as wide as tarsomere 2, unguar tarsomere 1.6 times as long as penultimate one. Claws free.

Penis short, in ventral view with slightly rounded sides and with apex almost regularly rounded. In lateral view curved, at apex tapered (Fig. 17).

Sternite VIII in females with plate distinctly wider than long, crescent-shaped, translucent, with very slender apical margin and very short arms of basal margin (Fig. 19). Spermatheca with slender and long cornu, exceeding corpus and with ramus and nodulus parallel, ramus somewhat longer and wider than nodulus (Fig 18).

Differential diagnosis. *T. oranensis* sp. nov. is possible to distinguish from other species of the group by raised elytral setae spatulate, shorter than half of width of one interval (Fig. 3). By short elytra with rounded sides (Fig. 3) this species is similar to *T. svatavae* sp. nov. (Fig. 4), distinguishing characters between these two species are stated in the key.

Etymology. Patronymic, derived from locality from where majority of type material come.

Distribution. Morocco and Algeria.

Trachyphloeus svatavae sp. nov.

(Figs 4, 20-25)

Type material. Holotype (♂): Tunisia, Bizerte Raf-Raf, 11.X.[19]91, 200 m, sotto *Quercus cocciferae*, [C.] Bellò lgt. (GOS). Paratypes: (1 ♀): Tunisia, Raf Raf (Bizerte), 11-X-1991, [G.] Osella [lgt.] (RBO); (1 ♀): ALGERIE - will. Ain Berda, Oum El Bouaghi, Dj. Sidi -Rgh., 1400 m, 31.v.1984, M. Bologna [lgt.] (ECO).

Description. Length (rostrum excluded) 2.50-2.69 mm, holotype 2.50 mm. Adherent scales on the whole body irregularly angular, with a hole in the middle, scarce. Interval between two scales on pronotum and head with rostrum as large as diameter of one scale, on elytra slightly shorter than diameter of one scale. Raised semierect elytral setae slender and long, slightly enlarged distad, longer than half width of one interval. Raised setae on pronotum and head with rostrum distinctly shorter than elytral ones, irregularly scattered.

Rostrum 1.13-1.17 times as wide as long, parallel-sided. Epifrons in basal third parallel, almost as wide as rostrum, then abruptly tapered anteriorly. Frons squamose, lowered. Epistome inconspicuous, short and wide, separated from frons by arched narrow carina. Antennal scrobes in dorsal view inconspicuous, in lateral view curved, short, enlarged posteriorly, directed towards the eye. Rostrum in lateral view curved, before antennal insertion distinctly lowered (Fig. 21). Eyes small, vaulted, somewhat prominent from outline of the head (Fig. 20), in lateral view placed in bottom part.

Antennal scape slightly longer than funicle, at apex as wide as club, in apical half abruptly enlarged. Antennomere 1 and 2 slender and long; antennomere 1 1.7-1.8 times as long as wide and 1.2-1.3 times as long as antennomere 2, which is 1.8 times as long as wide. Antennomeres 3-5 1.4 times as wide as long; antennomere 6 1.5 times as wide as long and antennomere 7 1.6 times as wide as long.

Pronotum narrow, 1.33-1.38 times as wide as long, widest at anterior third with laterally prominent bumps. Pronotum anteriorly distinctly tapered, posteriorly only slightly tapered, with sides almost straight. Pronotum behind anterior border strongly and broadly constricted, on the disc with wide, shallow and ill-defined longitudinal middle depression and four depressions in each corner. Base arched (Fig. 4). Pronotum in lateral view somewhat vaulted, in anterior third lowered.

Scutellum invisible.

Elytra short, oval, 1.19-1.23 times as long as wide, with rounded sides. Each interval with scarce row of bumps along the whole length, well visible in dorso-lateral view or in elytral declivity. Base arched (Fig. 4). Elytra in lateral view somewhat vaulted.

Apex of protibia feebly enlarged laterally and mesally, with three lobes armed with five spines. Lateral lobe bears one, middle and mesal lobes two spines. Inner spine long, hook-shaped, curved inside, the others long, slender, about equally sized. Lateral and mesal indentations short, about equally long and deep. Lobes, indentations and spines in males shorter and finer than in females (Fig. 22). Tarsomere 2 1.3 times as wide as long; tarsomere 3 1.2-1.3 times as wide as long and 1.2-1.3 times as wide as previous one. Ultimate tarsomere 1.7 times as long as penultimate tarsomere. Claws free.

Penis short, with slightly concave sides and with almost regularly arcuated apex. In lateral view regularly curved and regularly tapered apicad (Fig. 23).

Sternite VIII in females with plate split into two, oval arms leaving wide fenestra in the middle (Fig. 25). Spermatheca with long and slender cornu, not exceeding corpus. Corpus large, long, ramus and nodulus parallel, ramus somewhat wider than nodulus (Fig. 24).

Differential diagnosis. *T. svatavae* sp. nov. is easily separated from other species of the group by apex of protibia with five spines (Fig. 22), eyes protruding from outline of the head (Fig. 20), long and slender antennomere 2, slender pronotum and ventrite 8 in females with two arms and fenestra between them (Fig. 25). By short elytra with rounded sides (Fig. 4) this species is similar to *T. oranensis* sp. nov. (Fig. 3), distinguishing characters between these two species are stated in the key.

Etymology. It is my honour to dedicate the new species to my late sister Svatava Vacková, who helped me in youth very much, when I started with entomology and who was a paragon of a human behaviour during her life.

Distribution. Algeria, Tunisia.

KEY TO THE SPECIES OF *TRACHYPHLOEUS GODARTI* GROUP

1. Outer indentation of apex of protibia in females longer than inner, reaching quarter of protibia length (Fig. 6). Antennal scrobe in lateral view directed above the eye (Fig. 5). Bumps on elytra visible mainly in elytral declivity. Pronotum without depressions in corners (Fig. 1). Apex of protibia with 5 spines (Fig. 6). Sternite VIII in females with basal arms almost as long as width of plate (Fig. 9). 2.9-3.1 mm. *T. fairmairei* Reitter
- Outer indentation of apex of protibia in females shorter or as long as inner one, reaching fifth of protibia length (Fig. 13). Antennal scrobe in lateral view directed towards the eye (Figs 11, 21). Bumps on elytra developed also in elytral disc. Pronotum with ill-defined, but well visible depressions in each corner (Figs 2-4). Apex of protibia with 5 or 6 spines (Figs 12, 13, 16, 22). Sternite VIII in females with basal arms distinctly shorter than half of width of plate (Figs 15, 19, 25) 2
2. Elytra longer, 1.26-1.31 times as long as wide, parallel-sided (Fig. 2). Ultimate tarsomere long, 1.9-2.2 times as long as penultimate tarsomere. Apex of protibia in males with deep indentations, outer indentation reaching to fifth of protibia length (Fig. 12). 2.8-3.6 mm. *T. godarti* Seidlitz
- Elytra shorter, 1.19-1.24 times as long as wide, with rounded sides (Figs 3, 4). Ultimate tarsomere short, 1.6-1.7 times as long as penultimate tarsomere. Apex of protibia in males with shallow indentations, outer indentation reaching to seventh of protibia length (Figs 16, 22). 3
3. Apex of protibia with 6 spines (Fig. 16). Antennomere 2 short, 1.2-1.3 times as long as wide. Eyes flat, not protruding from outline of the head (Fig. as in 10). Rostrum in lateral view regularly vaulted in anterior part (Fig. as in 11). Raised elytral setae shorter than half width of one interval. Penis in lateral view wider (Fig. 17). Sternite VIII in females with uniformly translucent plate (Fig. 19). Spermatheca with cornu exceeding corpus (Fig. 18). 2.6-3.3 mm. *T. oranensis* sp. nov.
- Apex of protibia with 5 spines (Fig. 22). Antennomere 2 long, 1.8 times as long as wide. Eyes vaulted, prominent from outline of the head (Fig. 20). Rostrum in lateral view distinctly lowered in apical part of rostrum (Fig. 21). Raised elytral setae longer than half width of one interval. Penis in lateral view more slender (Fig. 23). Sternite VIII in females with visible arms leaving fenestra in the middle (Fig. 25). Spermatheca with cornu reaching corpus (Fig. 24). 2.5-2.7 mm. *T. svatavae* sp. nov.

Remark. *T. pelletieri*, one specimen discovered in Seidlitz's series of *T. godarti*, is the first female of that species, described only according to two males. This female is easily distinguished from male by apex of protibia strikingly enlarged laterally and mesally, with well developed lobes and with long spines (Fig. 26). In distinction from males, female has protibia armed only with 5 spines. Female genitalia: sternite VIII with short apodeme with conspicuous, transversal caput. Plate 3.5 times as wide as long, umbrella-shaped, translucent, with slender basal and apical margin (Fig. 28). Spermatheca with moderately long cornu, ramus and nodulus parallel, nodulus slightly longer and wider than ramus (Fig. 27).

ADDITIONAL TYPE MATERIAL EXAMINED

I also studied type material of two species being very similar to *T. godarti* group, see introduction.

***Trachyphloeus nodipennis* Chevrolat, 1860**

Trachyphloeus nodipennis Chevrolat, 1860: 450.

T. nodipennis: Marseul 1873: 610; Stierlin 1884: 136; Formánek 1907: 146; Winkler 1932: 1437; Lona 1937: 326; Borovec 2009: 80.

I have studied three specimens from the collection of Chevrolat (NHRS), one without the locality, two other labelled by red type labels. One well preserved and complete specimen is designated here as lectotype, it is 2.75 long, glued on the label with green stripe, labelled as follows: 432 [printed] / Typus [red, printed] / NHRS-JLKB 000020783 [printed] / LECTOTYPUS *Trachyphloeus nodipennis* Chevr. R. Borovec desig. 2013 [red, printed]. The second specimen, pinned, bears following labels: Oran plus illegible word [blue, handwritten] / Paratypus [red, printed] / NHRS-JLKB 000020784 [printed] and I designated it as a paralectotype. Lectotype and paralectotype are designated in order to stabilize the nomenclature in this genus according to Article 74.7.3 of the Code (ICZN 1999). All the three specimens belong to a species known from Morocco, Algeria, Tunisia and Sicily and they are in collection identified as *T. nodipennis*.

***Trachyphloeus solariorum* Formánek, 1907**

Trachyphloeus solariorum Formánek 1907: 147.

T. solariorum: Winkler 1932: 1437; Lona 1937: 331; Borovec 2009: 81.

Formánek (1907) stated in his original description that the new species is in different collections under name *impresicollis*, and species is described from "Tunesien". I have studied two specimens from the Formánek's collection (NMP). One of them, 2.96 mm long male, dissected by me, bears the following labels: Mahedia, Tunisia, 1895 Vauloger [handwritten] / *impresicollis* det. Formánek [partly handwritten, partly printed] / Solariorum Type [Formánek's handwriting] / LECTOTYPUS *Trachyphloeus solariorum* Form. R. Borovec desig. 2013 [red, printed]. The second specimen, female, bears handwritten label with illegible

locality and Formánek's determination label and I do not consider it to belong to type series. Lectotype is designated in order to stabilize the nomenclature in this genus according to Article 74.7.3 of the Code (ICZN 1999). *T. solariorum* is an independent species, similar to *T. nodipennis*, but very rare. I do not know any other material except of the two specimens from Formánek's collection.

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