

**First discovery of Trachyphloeini in Libya - *Trachyphloeus tarunahensis* sp. nov.
(Coleoptera: Curculionidae: Entiminae: Trachyphloeini)**

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Abstract. *Trachyphloeus (Trachyphloeus) tarunahensis* sp. nov. from Libya is described, illustrated and distinguished from similar species.

INTRODUCTION

The area of the origin of the genus *Trachyphloeus* Germar, 1817 is undoubtedly the western part of the Mediterranean region. The number of species only known from Iberian peninsula and France in Europe, and Morocco and Algeria in Africa, is higher (41 species) than the number of species known from countries situated east of France and Algeria (34 species). At the present time, 33 species of *Trachyphloeus* from North Africa are known (Borovec 2003, 2009), 15 species from Morocco, 13 species from Algeria and 9 from Tunisia. The genus is relatively numerous in Tunisia, but it has not yet been reported from Libya. The discovery of the *Trachyphloeus* in Libya discussed here is thus the first information on the occurrence of the genus in this country. Neither the general catalogue of Libyan fauna published before the Second World War (Zavattari, 1934) nor the updated list for Libya, which could be consulted at <http://jcringenbach.free.fr/>, mention any weevil belonging to this genus.

MATERIAL AND METHODS

The specimens were measured in lateral view from the anterior eye margin to the apex of elytra. Dissected female genitalia were embedded in Solakryl, male genitalia were mounted dry on the same card as the respective specimen. The terminology of rostrum follows Oberprieler (1988), the terminology of female genitalia follows Borovec (2006).

The following acronyms are used to indicate the depository of specimens:

PWE Patrick Weill, private collection, Pau, France;

RBO Roman Borovec, private collection, Sloupno, Czech Republic.

RESULTS

Trachyphloeus (Trachyphloeus) tarunahensis sp. nov.

(Figs 1-8)

Type locality. Libya, North of Tarunah, Tripolitania near Sidi Al Gharib archeological site (N 32°27'13", E 13°37'39"), elevation 370 m.

Type material. Holotype (♂): Libya, Nd. Tarunah, 06-II-2009, P. Weill [lgt.] (PWE). Paratypes: (2 ♂♂, 1 ♀): the same data as holotype (1 ♂, 1 ♀ PWE, 1 ♂ RBO).

Description. Length of body (rostrum excluded): holotype 2.75 mm; males 2.63-2.81 mm; female 3.03 mm.

Body black, antennae and tarsi yellowish red, spines at apex of all tibiae yellow, epistome brownish black. The whole body except antennal funicle with club and tarsi densely covered by adherent scales and scarcely by raised setae. Adherent scales irregularly angular, partly overlapping, with 2-3 fine longitudinal striae. Almost perpendicularly raised setae on elytra create one regular, somewhat dense row on each interval, longer than half the width of one interval, lanceolate to subspatulate, conspicuous. Raised setae on pronotum, head and rostrum shorter than elytral setae, irregularly scattered, on pronotal sides very wide, spatulate, on pronotal disc and head subspatulate, on rostrum slender. Raised setae on femora, tibiae, antennal scape and funicle piliform, suberect, long, conspicuous. Adherent scales greyish yellow, with irregular small spots of brown and white scales; elytra sometimes with darker disc and lighter margins, pronotum with longitudinal, white median stripe. White scales with pearlescent sheen. Raised setae grey (Fig. 1).

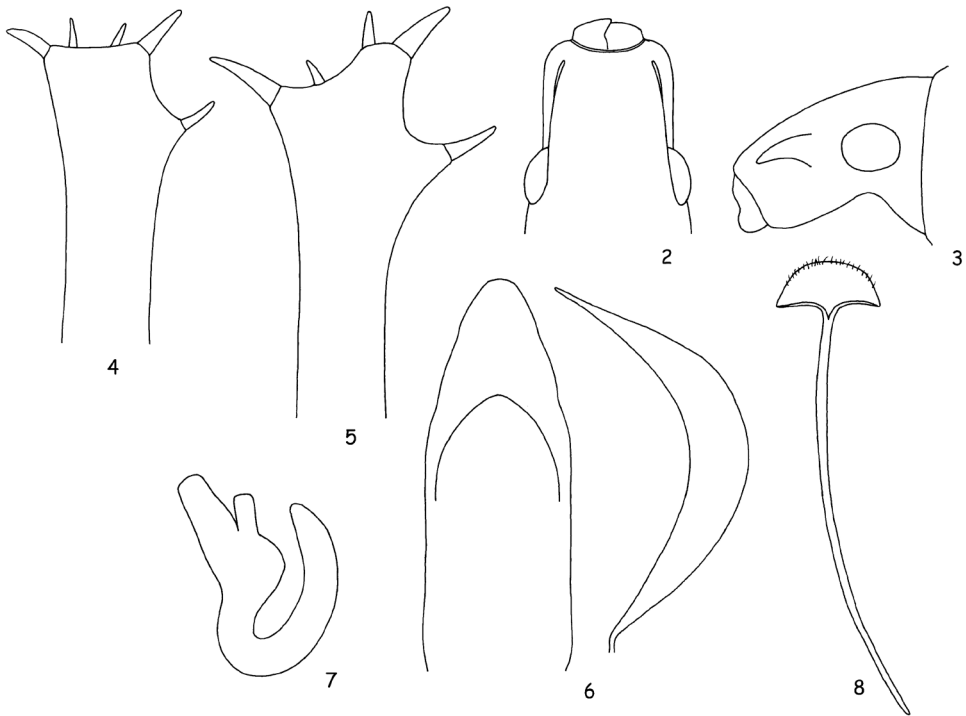
Rostrum slender and long, only 1.08-1.17 times as wide as long, parallel-sided. Epifrons short, terminated at longer distance from apex of rostrum, regularly tapered anteriorly with straight margins, almost flat, with indistinct, shallow longitudinal depression in the middle. Epistome prominent, V-shaped, with distinct slender carina separating it from frons, anteriorly not exceeding margin of rostrum. Frons in narrow stripe along the epistome bald. Antennal scrobes dorsally visible only in short anterior part, in lateral view feebly curved and enlarged distad, short, separated from eye by wide squamose stripe. Dorsal border of scrobe subparallel, with dorsal border of rostrum, ventral border directed to middle of eye. Eyes large, distinctly protruding from outline of head, in lateral view placed shortly below middle of head height. Head with laterally projected flat bumps above eyes, behind eyes enlarged distad (Figs. 2, 3).

Antennae slender. Scape slender, about 1.2 times longer than funicle, in apical third feebly regularly enlarged apicad, at apex more slender than antennal club. Funicle gradually enlarged to club. Antennomere 1 conical, 1.5-1.6 times as long as wide, equally long and 1.3 times as wide as antennomere 2; antennomere 2 very slender, 2.0-2.1 times as long as wide; antennomeres 3 and 4 isodiametric; antennomere 5 1.1 times as wide as long; antennomere 6 1.3-1.4 times as wide as long; antennomere 7 1.5 times as wide as long; antennal club wide, pointed, 1.5-1.6 times as long as wide, slightly longer than last four antennomeres.

Pronotum 1.27-1.38 times as wide as long, with strongly rounded sides, widest behind midlength, behind anterior margin strongly constricted (Fig. 1). Disc vaulted, without any structure. In lateral view pronotum strongly vaulted, only in anterior quarter flat.



Figs 1-9: *Trachyphloeus tarunahensis* sp. nov.: 1- Habitus of male holotype; 2- Head with rostrum in dorsal view; 3- Head with rostrum in lateral view; 4- Apex of male protibia; 5- Apex of female protibia; 6- Aedeagus in dorsal and lateral view; 7- Spermatheca; 8- Ventricle VIII in female; 9- Landscape at the collect location.



Scutellum invisible.

Elytra long-oval, 1.22-1.29 times as long as wide, with feebly rounded sides (Fig. 1). Striae very narrow, intervals feebly vaulted. Elytra in lateral view regularly vaulted.

Femora edentate. Tibiae slender, protibia about as wide as antennal club at midlength, at apex strikingly enlarged laterally and mesally. In females apex of protibia conspicuously three-lobed. Outer lobe armed with one long, laterally directed straight spine. Inner lobe with one long, indistinctly curved spine pointed inside and with one small spine placed above it. Middle lobe armed with two different spines, outer big, long and pointing laterally, inner small and fine, about half as long and wide as outer one, pointed anteriorly. One additional, small and fine spine placed in inner indentation. Outer and inner indentations equally deep and wide (Fig. 5). Protibia in males more feebly three-lobed than in females, with smaller and finer spines (Fig. 4). Inner indentation in males shallow, sometimes almost straight, inner spine on middle lobe sometimes missing. Tarsi slender and long; protarsomere 2 1.1 times as wide as long, metatarsomere 2 isodiametric; tarsomere 3 in all tarsi small, deeply bilobed, 1.2-1.3 times as wide as long and only 1.2 times as long as tarsomere 2; protarsomere 3 1.3 times as wide as protarsomere 2, metatarsomere 3 1.5 times as wide as metatarsomere 2; ungular tarsomere long, strikingly enlarged apically, about 2.5 times as long as at apex wide, slightly longer than tarsomere 2 and 3 combined. Claws free, long.

Abdominal ventrites 1.08-1.16 times as long as wide, densely covered by adherent scales, with semierect piliform setae. Metasternal process narrow, obtuse. Ventrite I somewhat longer than ventrite II and equally long as ventrites III and IV combined.

Aedeagus in basal two thirds about parallel-sided, with indistinctly concave sides. Aedeagus in apical third feebly constricted and then regularly pointed. In lateral view aedeagus regularly curved, regularly pointed, apex long and slender (Fig. 6).

Female genitalia. Spermatheca with slender and long cornu, with developed corpus. Ramus twice as long and wide as nodulus, feebly tapered apically, nodulus slender, parallel-sided, tube-shaped, divergent to ramus (Fig. 7). Sternum 8 in female with very long apodeme and small plate. Plate very feebly sclerotised, about semicircular, with developed margo basalis and almost indistinct margo apicalis with scarce setae (Fig. 8).

Sexual dimorphism. The only known female is longer than the three male specimens studied, with strikingly developed lobes, indentations and spines at apex of protibia (Figs 4-5).

Collection circumstances. The four specimens were collected under a stone lying on the grass between the small river flowing alongside the road coming from Tarunah eastward and the rocky escarpment where animal carvings could be seen westward. An almond tree plantation bounds the pasture northward (Fig. 9).

Differential diagnosis. The new species described here belongs to the subgenus *Trachyphloeus* s. str. by its 7-segmented antennal funicle and antennal scrobes not reaching the eye. Within this nominotypical subgenus it belongs to the *Trachyphloeus cinereus* A. et F. Solari, 1905 group, as defined by Borovec (1993) and supplemented by *T. italicus* Hoffmann, 1956 and *T. euphorbiae* Borovec, 2003 examined later (Borovec 2003). All the species of the group are known from Morocco and Tunisia, and distinguished from all other *Trachyphloeus* species by their very slender tarsi with slender tarsomere 3 and ungular tarsomere longer than

tarsomeres 2 and 3 combined, elytra without bumps on all or at least odd intervals and raised setae on all elytral intervals. *T. tarunahensis* sp. nov. differs from all the species of *T. cinereus* group mainly by large, distinctly prominent eyes in dorsal view and rostrum strikingly slender at base compared to head including eyes. All the species of *T. cinereus* group have eyes in dorsal view small, moderately vaulted, with head including eyes only slightly wider than rostrum at base. In lateral view, *T. tarunahensis* sp. nov. has eyes large, height of head above eyes is equal to its diameter. All the species of the *T. cinereus* group have height of head above eyes larger than diameter of small eyes in lateral view. *T. tarunahensis* sp. nov. distinguishes from all other species of the *T. cinereus* group also by very slender antennomere 2, which is 2.0-2.1 times as long as wide, while all other species of the *T. cinereus* group have antennomere 2 at most 1.8 times as long as wide, with exception of *T. stajfi* Borovec, 1993 and *T. euphorbiae* having antennomere 2 twice as long as wide. However, the two species have pronotum strikingly wider than long (*T. stajfi* 1.34-1.55, *T. euphorbiae* 1.39-1.48 times as wide as long), while *T. tarunahensis* sp. nov. has pronotum more slender, only 1.27-1.38 times as wide as long. *T. tarunahensis* sp. nov. has rostral frons bald, creating narrow glabrous stripe along the epistome. All the species of *T. cinereus* group have frons squamose almost to the narrow carina separating epistome from the remaining part of rostrum. *T. tarunahensis* sp. nov. has aedeagus different from all the species of *T. cinereus* group, with constriction in apical third.

By head with large distinct eyes, strikingly wider than basal part of rostrum and with equal diameter of eye as height of head above it and by glabrous rostral frons *T. tarunahensis* sp. nov. is similar also to *T. pollicatus* Formánek, 1907, known from Morocco and Algeria (Borovec 2003). *T. tarunahensis* sp. nov. is easily distinguishable from this species by slender tarsi, with tarsomere 3 1.2 times as wide as tarsomere 2 and ultimate tarsomere longer than tarsomeres 2 and 3 combined (*T. pollicatus* has tarsomere 3 1.4-1.5 times as wide as tarsomere 2 and ultimate tarsomere shorter than tarsomeres 2 and 3 combined); elytral raised setae conspicuous, dense, longer than half the width of one interval and subspatulate (*T. pollicatus* has elytral raised setae inconspicuous, scarce, shorter than half the width of one interval, parallel-sided) and by aedeagus at apex tapered, pointed (*T. pollicatus* has aedeagus enlarged at apex, dull).

Etymology. The new species name is derived from the name of the nearest locality as a reminder of the place where this *Trachyphloeus* was collected for the first time.

REFERENCES

- BOROVEC R. 1993: Revision of *Trachyphloeus cinereus* group (Coleoptera: Curculionidae: Polydrusinae: Otiorhynchini). *Entomological Problems* 24 (2): 19-28.
- BOROVEC R. 2003: Review of *Trachyphloeus* from northwestern Africa, with the description of two new species from Morocco. *Snudebiller* 4: 176-185.
- BOROVEC R. 2006: Taxonomic notes on the tribe Omiini, with description of one new genus and species, and with revision of genera *Anemophilus* and *Euplatinus* (Coleoptera: Curculionidae: Entiminae). *Klapalekiana* 42: 1-44.
- BOROVEC R. 2009: Revision of the Palaearctic supraspecific taxa of the tribe Trachyphloeini (Coleoptera: Curculionidae: Entiminae). *Klapalekiana* 45: 1-97.

OBERPRIELER R. G. 1988: Revision of the Tanyrhynchini of continental Africa (Coleoptera: Curculionidae). 1. Introduction and review of the genera, revision of the genus *Brachytrachelus* Schönherr and description of *Afroleptops* gen. nov. *Entomology Memoir of Department of Agriculture and Water Supply* 71: 1-50.
ZAVATTARI E. 1934: *Prodromo della Fauna della Libia*. Pavia: Tip. già Cooperativa, viii + 1234 pp.

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