

## **New species of the genus *Tetrops* Kirby, 1826 in Kirby & Spence 1826 (Coleoptera, Cerambycidae) from Central Europe**

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**Key words:** taxonomy, new species, Coleoptera, Cerambycidae, Lamiinae, *Tetrops*, Central Europe, Czech Republic.

**Abstract:** *Tetrops peterkai* sp. n. from Central Europe is described. The new species is close to *T. praeustus* (Linnaeus, 1758). The habitus and male genitalia are illustrated.

### **Introduction**

The genus *Tetrops* was established by Kirby (in Kirby & Spence 1826). The genus currently contains approximately 14 species and subspecies (Danilevsky, 2019) with the greatest species richness in the west Palaearctic region. *Tetrops peterkai* sp. n. (with type locality in Czech Republic) is also known from Slovakia, Austria and Germany. The new species is compared with closely related taxa: *T. praeustus* (Linnaeus, 1758), *T. gilvipes* (Faldermann, 1837), *Tetrops starkii* Chevrolat, 1859. The genus *Tetrops* is represented by these three species in Europe. *T. praeustus* is considered to be monotypic and specimens of *T. peterkai* has been confused with this species until now. The specimens of *T. peterkai* were compared to the type material of *T. praeustus* deposited in the Linnean Society of London and they are clearly two different taxa. *T. gilvipes* was described by Lazarev (2012), and the taxonomic classification of this species was also discussed by Sama (2002) and Berger (2012). *T. starkii* was described in detail by Holzschuh (1981) and Starzyk & Lessaer (1978).

### **Material and methods**

The habitus of all specimens were taken by the Canon EOS 350D digital camera with the Sigma 105 mm macro lens. Composite images were created using the software Image Stacking Software Combine ZP. Microstructures of dissected parts were observed under the DNT DigiMicroProfi USB microscope.

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The genitalia photographs were taken with a Canon MP-E 65mm/2.8 1-5× Macro lens on bellows attached to a Canon EOS 550D camera. Each photograph was taken as several partially focused images and afterwards composed in the Helicon Focus 3.20.2 Pro software. The photographs were modified using Adobe Photoshop CC.

The specimens examined including the type materials are deposited in the following collection:

LS - collection of Lukáš Skořepa (Peč, Czech Republic)

TP - collection of Tomáš Peterka (Veselí nad Lužnicí, Czech Republic)

MH - collection of Michal Holomčík (Lužice, Czech Republic)

NMP - collection of National Museum (Prague, Czech Republic)

SMNK - collection of Staatliches Museum für Naturkunde Karlsruhe (Landesmuseum, Germany)

The new species is compared with closely related taxa, which were represented by the following material.

### *Tetrops praeustus* Linnaeus, 1758

**Type locality.** Europa.

**Material.** 1 male, Czech Republic, Moravia SW, Horní Slatina env., on *Pyrus*, 1.iv.2020, L.Skořepa lgt. - LS (Fig. 1c, 2c, 3c); 3 males, Czech Republic, Moravia S, Rohatec (Soboňky), ex. lar., 2009, M.Holomčík lgt. - MH; 2 males, Czech Republic, Moravia S, Znojmo, Vevčice, ex. *Rosa*, lar., T.Peterka lgt. - TP; 4 males, Czech Republic, Moravia SW, Peč, ex. *Malus*, iii. 2014, L.Skořepa lgt. - LS; 2 males, Czech Republic, Bohemia centr., Červený Újezd, on *Prunus*, 28.v.2016, T.Peterka lgt. - TP; 2 males, Georgia, centr., Norio env., 22.vi.2017, T.Peterka lgt. - TP.

### *Tetrops starkii* Chevorlat, 1859

**Type locality.** Europa.

**Material.** 1 male, Czech Republic, Moravia SW, Český Rudolec env., on *Fraxinus*, 26.v.2017, L.Skořepa lgt. - LS (Fig. 1d); 4 males, Czech Republic, Moravia SW, Dačice, on *Fraxinus*, 26.v.2017,

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L.Skořepa lgt. - LS; 2 males, North Macedonia, Navačani, 23.v.2010, V.Křivan lgt. - LS.

*Tetrops gilvipes* Faldermann, 1837

**Type locality.** Transcaucasia.

**Material.** 1 male, Georgia SW, 13 km E Achalciche, 1 km S Benara, 24.vi.2019, L.Skořepa lgt. - LS (Fig. 1a, 2a, 3a); 3 females, Georgia SW, 13 km E Achalciche, 1 km S Benara, 24.vi.2019, L.Skořepa lgt. - LS; 2 males, 2 females, Georgia, Borjomi - Rveli, 17.v.2017, T.Peterka lgt. - LS.

## **Results**

### *Tetrops peterkai* sp. n.

Figs 1b, 2b, 3b

**Type locality.** Czech Republic, Moravia, Horní Pole environs.

**Description.** Body black, elongated, slightly depressed, with distinct punctation and pubescence; 5.5 times longer than wide; head black, widest across the eyes, about as wide as pronotum, with dense punctuation (diameter of the punctures is smaller than spaces in between), covered by dense long pubescence, frons and gena in males with very dense pubescence longer than width of the lower eye lobe; pubescence yellowish to golden; vertex slightly concave. Body length in males (from head to elytral apex) 3.1-5.0 mm, body width in males (near humeri as well as at the 4/5 of elytral length): 1.0-1.3 mm; in females body length (from head to elytral apex) 2.9-5.5 mm; width: body width (near humeri as well as at the 4/5 of elytral length): 0.9-1.3 mm.

Antennae long, in males almost reaching elytral apex, in females reaching 4/5 of elytral length; black, first two antennomeres punctated; all antenomeres covered with very short dense procumbent pubescence together with sparse long erect black pubescence; each antennomere wider than tibiae (particularly antenomeres 1 and 4-11).

Pronotum black, with sparse punctation, with two shallow transverse impressions; impression at basal third of pronotum is more distinctive and forms continuous line; sides of pronotum at

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position of the aforementioned impressions with very long erect setae (mainly in males); the rest of pronotum also with long erect sparser pubescence. Scutellum black, triangle with obtuse apex. There is a stripe of dense long erect pubescence from middle part of pronotum, continuing over scutellum and along elytral suture back to the first elytral third.

Elytra elongated, 3.5 times longer than wide, widest at base and at 4/5 of its length, narrowest at first third; with distinct shoulders; with obtuse apex; golden yellow, black at apex; shoulders and outer margin often darker, brown to blackish, in some specimens whole elytra brown to almost blackish (but never completely black); with erect setae, even denser and more erect in males.

Legs with yellow tibiae and tarsi, as well as anterior femurs; middle and hind femurs blackish or brown; with setae similar to elytral pubescence.

Parameres are pale, narrow and long, with 3-5 erect setae at apex (Fig. 2b); aedeagus narrowing apically (Fig. 3b).

**Differential diagnosis.** The new taxon is close to *T. gilvipes* (Faldermann, 1837), *T. praeustus* (Linnaeus, 1758) and *T. starkii* Chevorlat, 1859.

*T. peterkai* **sp. n.** distinctly differs from *T. gilvipes* (Fig. 1a) by elytral colour (never completely black) and by legs colour (never completely pale), antennae thicker, elytra longer. Body pubescence is markedly more erect, denser, longer and more distinctive. Aedeagus of *T. gilvipes* is characterised by narrow apex, which is not similar to *T. peterkai* (compare Figs 2a and 2b); parameres of *T. gilvipes* shorter, more obtuse at apex and differently shaped (see Figs. 3a and 3b).

*Tetrops peterkai* **sp. n.** distinctly differs from *T. praeustus* (Fig. 1c) by elytral and legs colour, by body shape, by length and thickness of antennae, by shape of head and pronotum, by length and structure of pubescence and by shape of male genitalia. Elytra in *T. praeustus* without any contraction at middle and without noticeable shoulders; antennae of males are shorter and thinner, head without depressed frons, pronotum without transverse impressed line, pubescence up to twice shorter and more procumbent. Male genitalia of *T. praeustus* are very similar to those of *T. gilvipes*, therefore, very different from *T. peterkai* (see Figs. 2c, 2b, 3c and 3b).

*Tetrops peterkai* **sp. n.** is clearly distinguished from

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*T. starkii* (Fig. 1d) by elytral and legs colour, by body shape and by differences in male genitalia. *T. starkii* is described in details by Holzschuh (1981). This species is characterised by different shape of black markings on elytra and by yellow colour of all legs, which is never found in *T. peterkai*. Elytra in *T. starkii* are more convex than in *T. peterkai*. Aedeagus of *T. starkii* is more obtuse and shorter, parameres thicker and shorter. Male genitalia of *T. starkii* were described by Holzschuh (1981).

**Type material.** Holotype, male, Czech Republic, Moravia SW, Horní Pole env., on *Frangula alnus*, 2.vi.2020, L.Skořepa lgt. - NMP; 56 Paratypes; 3 males, 13 females, same data as holotype; 4 males, Czech Republic, Moravia SW, 1 km NE Dolní Němčice, on *Frangula alnus*, 6.vi.2020, L.Skořepa lgt. - LS; 1 male, 2 females, Czech Republic, Moravia SW, 1 km E Matějovec, on *Frangula alnus*, 29.v.2020, L.Skořepa lgt. - LS; 1 female, Czech Republic, Moravia SW, 1 km E Matějovec, 16.v.2020, L.Skořepa lgt. - LS; 1 female, Czech Republic, Moravia SW, Hříšice, on *Salix*, 2.vi.2017, L.Skořepa lgt. - LS; 1 female, Czech Republic, Moravia SW, 2 km E Dobrohošť, Zavadilka, 9.vi.2020, L.Skořepa lgt. - LS; 1 female, Czech Republic, Moravia SW, 0,5 km W Dolní Radíkov, 21.v.2017, L.Skořepa lgt. - LS; 3 males, Czech Republic, Moravia SW, 1 km E Sumrakov, ex. *Frangula alnus*, lar, 10.iii.2017, L.Skořepa lgt. - LS; 1 male, Czech Republic, Bohemia S, 3 km S Veselí nad Lužnicí, vi.2013, T.Peterka lgt. - LS; 1 male, 1 female, Czech Republic, Bohemia S, 3 km S Veselí nad Lužnicí, vi.2013, T.Peterka lgt. - TP; 3 males, Czech Republic, Bohemia S, 3 km S Veselí nad Lužnicí, 25.v.2014, T.Peterka lgt. - LS; 1 male, 1 female, Czech Republic, Bohemia S, 3 km S Veselí nad Lužnicí, 25.v.2014, T.Peterka lgt. - TP; 2 males, 3 females, Czech Republic, Moravia SW, 2 km W Volfířov, on *Frangula alnus*, 7.vi.2018, L.Skořepa lgt. - LS; 2 females, Czech Republic, Moravia SW, 0,5 km NE Skrýchov, on *Frangula alnus*, 29.v.2020, L.Skořepa lgt. - LS; 1 male, 4 females, Czech Republic, Moravia SW, Radlice env., 30.v.2018, L.Skořepa lgt. - LS; 1 female, Austria, Burgenland, Leitagebirge, Donnerskirche, 26.iii.1994, H.Ziegler lgt. - SMNK; 1 female, Czech Republic, Bohemia centr., Čelákovice, Obenberger lgt. - NMP; 1 male, Slovakia mer., Chlaba, 4.vi.1972, S.Bílý lgt. - NMP; 1 male, Slovakia, Banská Bystrica, Čejka lgt. - NMP; 1 male, 1 female,

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Germany, Würth. Bad Buchau, NSG Wildes Ried, 10.6.1990, H.Ziegler lgt. - SMNK.

**Distribucion.** Czech Republic, Slovakia, Austria, Germany.

**Etymology.** The newly described species was named after my lifelong friend Tomáš Peterka (Veselí nad Lužnicí, Czech Republic), who has accompanied me since my first entomological experiences and who has been teaching me to collect longhorn beetles and who has already collected the described species too.

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**Fig. 1.** males, dorsal view: 1a - *T. gilvipes* (Faldermann, 1837), Georgia; 1b - *T. peterkai* **sp. n.**, holotypus; 1c - *T. praeustus* (Linnaeus, 1758), Czech Republic; 1d - *T. starkii* Chevrolat, 1859, Czech Republic.



**Fig. 2.** Aedagus: 2a - *T. gilvipes* (Faldermann, 1837), Georgia; 2b - *T. peterkai* **sp. n.**, holotypus; 2c - *T. praeustus* (Linnaeus, 1758), Czech Republic.



**Fig. 3.** Parameres: 3a - *T. gilvipes* (Faldermann, 1837), Georgia; 3b - *T. peterkai* **sp. n.**, holotypus; 3c - *T. praeustus* (Linnaeus, 1758), Czech Republic.

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