

**REVIEW OF GENUS *TURANIUM* BAECKMANN, 1923
(Coleoptera, Cerambycidae)**

Mikhail L. DANILEVSKY *

* Russian Academy of Sciences, A.N. Severtzov Institute of Ecology and Evolution, Leninsky prospect, 33, Moscow, 117071, Russia, E-mail: sevin@online.ru

Summary: *Turanium* (s.str.) *tekeorum* sp. n. from Turkmenia (Ashkhabad) and *T. (Chalcoturanium) badenkoi* sp. n. from Kazakhstan (Almaty) are described. A new synonym is established: *T. johannis* = *T. juglandis*. The descriptions and distributional areas of all taxa within the genus are given, as well as distinguishing characters. All taxa are figured.

Résumé: *Turanium* (s.str.) *tekeorum* sp. n. de Turkmenia (Ashkhabad) et *T. (Chalcoturanium) badenkoi* sp. n. de Kazakhstan (Almaty) sont décrites. Une synonymie nouvelle est établie: *T. johannis* = *T. juglandis*. Les descriptions et répartitions de tous les taxons sont données, ainsi que les caractères de détermination. Tous les taxa sont figurés.

Key words: Coleoptera, Cerambycidae, *Turanium*, new species, Kazakhstan, Kirgizia, Tadzhikistan, Turkmenia.

Up to now the genus (divided in two subgenera) was regarded as composed of 6 species: *T. (s.str.) scabrum* (Kraatz, 1882), *T. (s.str.) hladili* Kratochvil, 1985, *T. (s.str.) pilosum* (Reitter, 1891), *T. (s.str.) rauschorum* Holzschuh, 1998, *T. (Chalcoturanium) johannis* Baeckmann, 1923 and *T. (Ch.) juglandis* Jankowski, 1934. The investigation of individual variability of certain taxa as well as discovery of new forms compel to improve this system.

Genus *Turanium* Baeckmann, 1923.

Baeckmann, 1923: 32-35; Plavilstshikov 1934: 174-177, 1940: 265-271, 686-687; Jankowski, 1934: 99-101, 1935: 59-61; Gressitt, 1951: 220-221; Kostin, 1973: 169-171; Mamaev, Danilevsky, 1975: 195-196; Lobanov et al., 1982: 257; Danilevsky, 1988: 216-218.

Type species: *Callidium scabrum* Kraatz, 1882 (original designation).

Diagnosis. Body and elytra usually dark, unicoloured, only legs and antennae often lighter, with appressed and erect pubescence; 3d antennal segment longer than 4th; prothorax evenly rounded laterally; pronotum relatively flat with more or less rough dense punctuation, usually without smooth areas; prosternal intercoxal process very narrow, but relatively long, usually surpassing coxal middle; elytra also flattened; epipleurae distinct only in anterior half; femora slightly thickened; first two hind tarsi joints with wide central glabrous longitudinal line and with two narrow lateral hairy pads.

Distribution. Kazakhstan: nearly all territory excluding north and north-east regions; in the north-west from Mugodzhary Mountains southwards to Syr Darya Valley and to the east as far as Ily Valley and Dzhungarsky Alatau; Central Kazakhstan from Karaganda environs to about Aiaguz in Semipalatinsk region; up to now not found in East Kazakhstan region where its occurrence is very possible. Turkmenia: Kopet-Dag Ridge, Amu Darya Valley. Uzbekistan: from middle level of Amu Darya Valley, Bukhara and Samarkand regions southwards to Termez and eastwards to the state borders, including Tashkent environs and Fergana Valley. Tadzhikistan: nearly all territory, excluding very high mountains. Kirgizia: west part of the country; mountains surrounding Fergana Valley (Chatkal, Fergana and Alai Ridges); Talas and Kirgiz Ridges; low hills in Bishkek environs; not known from Issyk-Kul depression. The genus area figured by N.N. Plavilstshikov (1940: 266, Fig. 130) includes north regions of Afghanistan and Chinese Dzhungarie. Most probably it concerns *T. scabrum* and possibly *T. pilosum* (see below).

Subgenus *Turanium* Baeckmann, 1923.

Jankowski, 1934: 99-101; Plavilstshikov, 1934: 174-176, 686; Gressitt, 1951: 220; Lobanov et al., 1982: 257.

Diagnosis. The nominative subgenus is characterized by the absence of metallic lustre of elytra.

Five species: *T. scabrum*, *T. hladili*, *T. pilosum*, *T. tekeorum* sp.n. *T. rauschorum*.

***Turanium* (s.str.) *scabrum* (Kraatz, 1882) (Fig. 1)**

Callidium scabrum Kraatz, 1882 (in Heyden und Kraatz, 1882: 226) (Margelan).

Callidium simplarium Heyden, 1885: 296-297 (Namangan)

Turanium scabrum: Baeckmann, 1923: 33; Plavilstshikov, 1934: 175-176, 1940: 268-269, 686; Jankowski, 1934: 101; Gressitt, 1951: 220; Kostin, 1973: 170; Mamaev, Danilevsky, 1975: 196; Lobanov et al., 1982: 257; Danilevsky, 1988: 217.

Diagnosis: The species is rather variable in body proportions, colour and relative antennal length (Figs. 1: a-i).

Body dark-brown, brown or orange-yellow (Fig. 1: i). Antennae thin, in males usually much longer than body (surpassing elytral apices by three apical joints) or sometimes slightly (Fig. 1: g) longer than body (surpassing elytral apices by one apical joint), in females antennae usually short, reaching posterior elytral third or sometimes much longer, reaching posterior elytral fifth (nearly as long as body, Fig. 1: e); 3d joint with more or less dense more or less long erect setae, but never with very dense and long setae forming hairy brush; 3d-5th joints slightly angulated internally. Pronotum dull, with regular, small, dense punctuation (often less dense along middle); punctures often conjugated, but not forming transverse wrinkles, with or without short erect setae. Elytra in males usually strongly narrowed posteriorly or nearly parallelsided (Fig. 1: g), in females - parallelsided or slightly narrowed posteriorly; with dense, small regular punctuation usually obliterated posteriorly, covered with fine pale appressed pubescence, with several long black erect setae near base, which sometimes can be distributed to about elytral middle.

Pygidium usually rounded or with small emargination. Aedeagus with relatively obtuse, narrowly rounded apex; parameres short and wide with several long setae. Male genital structures are more or less similar in the populations from different parts of the area (specimens from Mugodzhary Mountains, Chimkent environs, Ily River Valley and Fergana Valley were analysed).

Body length in males: 7.5-11.6mm; in females: 6.5-12mm; body width in males: 2.2-3.4mm, in females: 1.9-3.7mm

Distribution: Kazakhstan: nearly all territory excluding north and north-east regions; in the north from Mugodzhary Mts. to Karaganda and Aiaguz River Valley, in the south from Syr Darya Valley to Ily Valley and Dzhungarsky Alatau; up to now not found in East Kazakhstan region where its occurrence is very possible. Turkmenia: Kopet-Dag Ridge, Amu Darya Valley. Uzbekistan: from middle level of Amu Darya Valley, Bukhara and Samarkand regions southwards to Termez and eastwards to the state borders, including Tashkent environs and Fergana Valley. Tadzhikistan: nearly all territory, excluding very high mountains. Kirgizia: west part of the country; mountains surrounding Fergana Valley (Chatkal, Fergana and Alai Ridges); Talas and Kirgiz Ridges. The occurrence of the species in Dzharkent environs (Baeckmann, 1923) makes possible its presence in Chinese Dzhungarie. The abundance of *T. scabrum* in Tadzhikistan along its border with Afghanistan (observed by me) makes sure the presence of the species in North Afghanistan.

Bionomy. Polyphagous on deciduous trees: *Elaeagnus*, *Malus*, *Prunus*, *Rosa*, *Halimodendron*, *Tamarix*, *Populus*, *Salix*, *Ulmus* and others. Larvae feed subcortically on dead, dry twigs and stems, pupation in wood in spring. Adults from April to July.

Materials. 2 males, NW Kazakhstan, Mugodzhary Mts. near Emba, 7.6.1985, M. Nesterov leg.; 1 female, Syr Darya Valley, Turkestan distr., Kzylsharv, 20.4.1966, Iablokov leg.; 4 males and 2 females, Chimkent, larvae collected 25.8.1971 from *Prunus* and *Malus*, adults emerged 1.1972, M. Danilevsky leg.; 1 male and 2 females, Almaty reg., Chilik env., from *Elaeagnus*, 20-25.4.1976, B. Mamaev leg.; 1 male and 1 female, Bakanas, 16.5.1997, M. Danilevsky leg.; 1 male and 3 females, Turkmenia, Deineu, from *Elaeagnus* twigs, 9.4.1973, B. Mamaev and N. Krivosheina leg.; 3 males and 1 female, Tadzhikistan, "Tigrovaia Balka" State Natural Reserve, 7-11.4.1978, M. Danilevsky leg., 7.4.1986, A. Kompantzev leg.; 1 male, Uzbekistan, Fergana, on *Populus*, 2.5.1936, S.M. Melnikov leg. (author's collection).

***Turanium* (s.str.) *hladili* Kratochvil, 1985** (Fig. 2)

Turanium hlادili Kratochvil, 1985: 65-66 (Aktash in Uzbekistan to the North-East from Tashkent).

Diagnosis: Body long and narrow, orange. Antennae thin, in males surpassing elytral apices by two apical joints (or, according to the original description, as long as body), in females antennae as long as or slightly longer than elytra; 3d joint with dense, short erect setae, without hairy brush; 3d-5th joints slightly angulated internally. Pronotum without erect setae, dull, with regular, very small, very dense punctuation (never less dense along middle); punctures nearly touch each other, but not forming transverse wrinkles. Elytra in males gradually narrowed posteriorly with small constriction near middle; with dense, small regular punctuation which becomes smaller but still distinct posteriorly, covered with fine yellowish appressed pubescence, with several long pale erect setae near base.

Pygidium with small emargination. Aedeagus with acute apex; parameres long and narrow with several long setae.

Body length according to the original description 7-11mm; body length of available males: 9.3-10.0mm; width: 2.2-2.3mm.

Distribution: According to the original description all type series (9 males and 9 females) was collected in Uzbekistan in Aktash near Tashkent. I've examined a male (marked as paratype and very similar to holotype) with label "Uzbekistan, Bukhara, 26.4.1980 (Kyzyl-kum des.) J. Hladil lgt." - wrong label?

Bionomy. "Developing in dead branches of Poplar (*Populus*)" (Kratochvil, 1985).

Materials. 1 male, holotype, Uzbekistan, Aktash (ex pupa, *Populus* sp.), 22.4.1980, J. Hladil leg.; 1 male, paratype, "Uzbekistan, Bukhara, 26.4.1980 (Kyzyl-kum des.) J. Hladil lgt." (the locality was not mentioned in the original description - wrong label?) (collection of S. Kadlec, Litvinov, Czechia)

Remark. The species is close to *T. scabrum*. Nearly all distinguishing characters mentioned in the original description are valuable (long and narrow body, aedeagus structure). Form and length of parameres are also different, in *T. hlادili* parameres much longer and narrow, but setae equipment of parameres is about same in both species (parameres pictures in the original description are wrong).

***Turanium* (s.str.) *pilosum* (Reitter, 1891)** (Fig. 3)

Pronocera pilosa Reitter, 1891: 33 (Tashkent).

Turanium pilosum: Baeckmann, 1923: 33-34; Plavilstshikov, 1934: 175; 1940: 267-268, 686; Jankowski, 1934: 101; Gressitt, 1951: 220; Kostin, 1973: 169; Mamaev, Danilevsky, 1975: 196; Lobanov et al., 1982: 257; Danilevsky, 1988: 217-218.

Diagnosis: Body black or dark-brown. Antennae thick, in males (Fig. 3: a) much longer than body (surpassing elytral apices by two or three apical joints), in females (Fig. 3: b) antennae about as long as body, slightly longer or slightly shorter; 3d joint with dense and moderately long or short erect setae, sometimes forming hairy brush; 3d-5th joints slightly angulated internally. Pronotum shining, with irregular, moderately rough, dense punctuation, usually with several small smooth areas (near base, along central line, near middle on the both sides of central line); punctures often conjugated forming transverse wrinkles; with numerous long erect setae. Elytra in males gradually narrowed posteriorly

in females - usually less narrowed or parallelsided; with dense, more or less rough irregular punctuation with conjugated punctures often forming transverse wrinkles, usually obliterated posteriorly, covered with short appressed pubescence, with numerous long black erect setae distributed to about elytral middle, becoming short and strong backwards.

Pygidium widely truncate. Aedeagus moderately acute; parameres moderately long and narrow with several long setae.

Body length in males: 9.6-13.2mm; in females: 10.9-14.5mm; body width in males: 2.8-3.8mm, in females: 3.2-4.6mm. According to N. N. Plavilstshikov (1940) body length of the species is up to 16mm.

Distribution: Kazakhstan: south part of Karatau Ridge and Talas Ridge; the occurrence in Zailiisky Alatau (Plavilstshikov, 1940) needs to be confirmed; the occurrence all along Syr Darya Valley northwards to Aral Sea (Plavilstshikov, 1940) is rather doubtful. Mountain forest areas of Kirgizia (Kirgizsky Ridge, Talas Ridge, mountains surrounding Fergana Valley: Chatkal, Fergana, Alai Ridges), Uzbekistan (Turkestan, Zeravshan, Gissar, Chatkal, Ugam, Pskem, Kuramin Ridges) and Tadzhikistan (Kuramin, Turkestan, Zeravshan, Gissar Ridges, Kuliab environs). The occurrence of the species in Tadzhikistan near Kuliab makes possible its presence in North Afghanistan. J. L. Gressitt's (1951) record for China ("Sinkiang") was based on N.N. Plavilstshikov's (1940) record for "Tian-Shan".

Bionomy. Polyphagous on both coniferous and deciduous trees: *Picea*, *Juglans*, *Amygdalus*, *Cydonia*, *Malus*, *Armeniaca*, *Cerasus*, *Acer*, *Populus*, *Salix*, *Ulmus*, *Morus*, *Sorbus* and others. Larvae feed subcortically on dead, dry twigs and stems, pupation in wood in spring. Adults from April to August.

Materials: 5 males and 1 female, Kirgizia, Sary-Chelek Natural Reserve, from *Juglans*, 12.5.1965, 25.5-2.6.1978, B. Mamaev and A. Kompatzev leg.; 1 female, Sary-Chelek Natural Reserve, 2000m, larvae collected 7.1991 from *Picea* twigs, adult emerged 25.1.1992, M. Danilevsky leg.; 1 male, Uzbekistan, Chingan, 1700m, 7.7.1991, M. Danilevsky leg.; 1 female, Uzbekistan, Chatkal Natural Reserve, Nevich, 20.6.1974, A. Kompantzev leg.; 6 males and 1 female, Tadzhikistan, Gissar Ridge, Takob, from *Amygdalus* twigs, 7.4.1978, M. Danilevsky leg. (author's collection).

***Turanium* (s.str.) *rauschorum* Holzschuh, 1998 (Fig. 4)**

Turanium rauschorum Holzschuh, 1998: 44 (Sosnovka near Kara-Balta in Kirgizia)

Diagnosis: Body black. Antennae very thick and short; in males (Fig. 4: a) about as long as body, slightly longer or slightly shorter, in females (Fig. 4: b) about reaching posterior elytral fourth; 3d joint with moderately long and very dense erect setae, forming hairy brush; 3d-5th joints with distinctly protruding internal apical angles. Pronotum dull with regular, small, dense punctuation, always without smooth areas; punctures usually not conjugated, never forme wrinkles; with numerous long erect setae and distinct appressed pubescence. Elytra in males slightly narrowed posteriorly, in females - parallelsided; with dense, regular punctuation, without conjugated punctures, not forming transverse wrinkles, becoming small but still distinct posteriorly; covered with short appressed pubescence, with more or less numerous long black erect setae distributed in anterior elytral third in males or only near scutellum in females, becoming short and strong backwards.

Pygidium widely truncate. Aedeagus less acute than in *T. pilosum*, but more than in *T. scabrum*; parameres also look intermediate between two species mentioned above.

Body length in available males: 7.9-12.4mm; in available females: 11.0-12.0mm; body width in males: 2.2-3.7mm, in females: 3.3-3.6mm. According to the original description the minimal length of the species is 7.6 mm.

Distribution: Two populations are known: Kirgizia, Sosnovka environs to the south from Kara-Balta (about 60 km SWS Bishkek); Kazakhstan, Chu-Ily Mountains, Rgaity environs (about 20 km S Kurdai, or 30km NEN Bishkek).

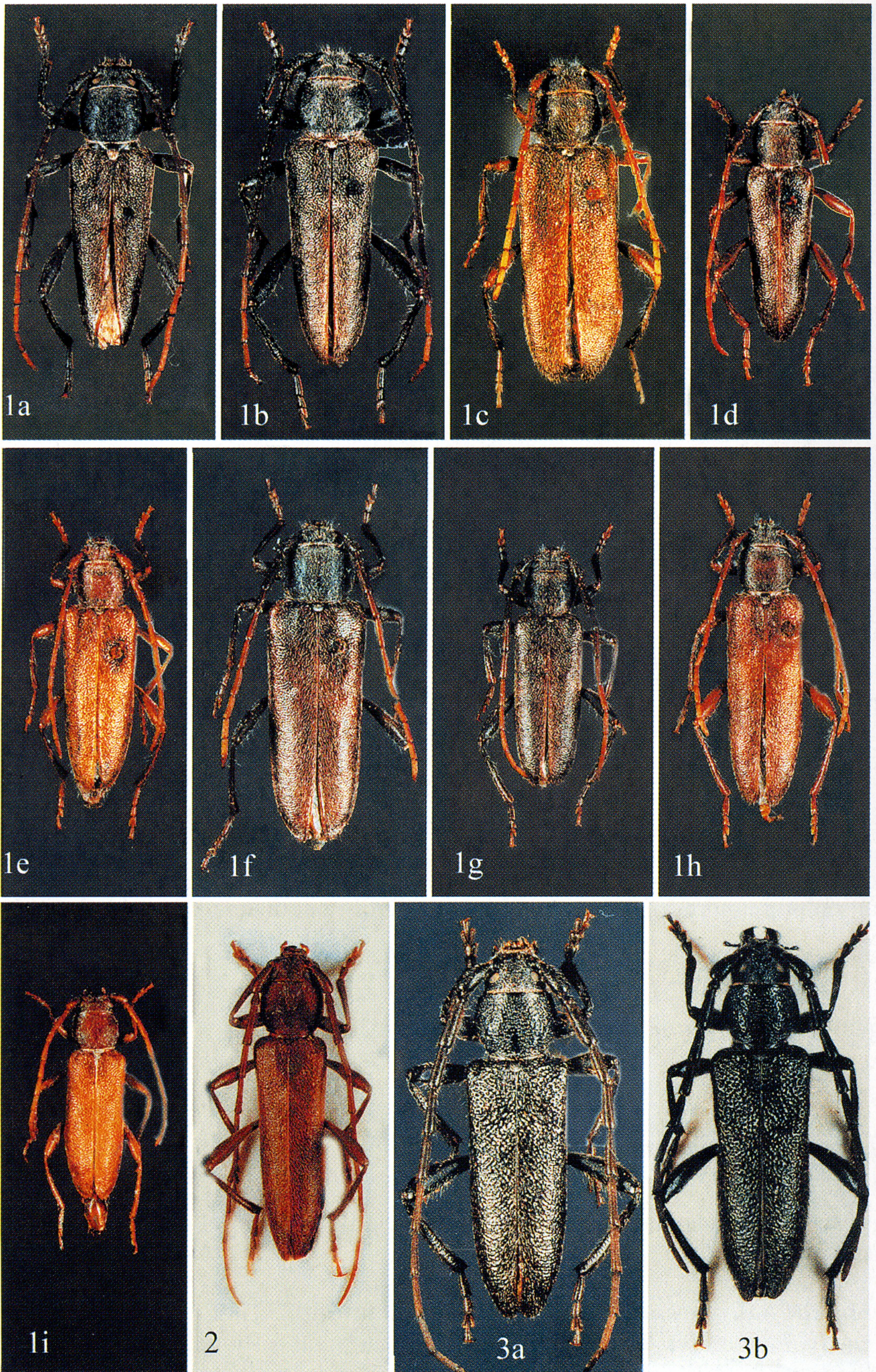


Fig. 1. *Turanium scabrum*: a - male from type locality, Uzbekistan, Fergana, 2.5.1936, S.M. Melnikov leg.; b - male, Kazakhstan, Chimkent, 25.8.1971 (ex l. 10.1.72), M. Danilevsky leg.; c - female with same label; d - male, Turkmenia, Deineu, 9.4.1973, B. Mamaev leg.; e - female with same label; f - female, same locality and date, N.Krivosheina leg.; g - male, Tadzhikistan, "Tigrovaia Balka", 7.4.1986, A. Kompantzev leg.; h - female, same locality, 11.4.1978, M. Danilevsky leg.; i - female, Kazakhstan, Turkestan distr., Kzylsharv, 20.4.1966, Iablokov leg.
 Fig. 2. *Turanium hladili*: male, holotype, Uzbekistan, Aktash, 22.4.1980, J. Hladil leg.
 Fig. 3. *Turanium pilosum*: a - male, Kirgizia, Sary-Chelek, Arkit, 2.6.1978, A. Kompantzev leg.; b - female, Sary-Chelek, 2000m, larvae collected 7.1991 from *Picea* twigs, adult emerged 25.1.1992, M.Danilevsky leg.

Bionomy. Both populations occupy low dry stony hills. *T. rauschorum* seems to be monophagous on *Atraphaxis* (Polygonaceae). Larvae in living roots near earth level, pupation in wood. Adults from May to June; beetles were observed by me on thin twigs.

Materials. 2 males, paratypes, Kirgizia, 60km WSW Bishkek, Sosnovka, 1000-1500m, 18.6.1989, J. Kalab leg.; 48 males and 25 females, Kazakhstan, Rgaity environs, 800m, on twigs of *Atraphaxis* sp. (possibly *A. pyrifolia* - identified by R. Kadyrbekov, Almaty), 8.5.1998, M. Danilevsky leg. (author's collection).

***Turanium* (s.str.) tekeorum sp. n.** (Fig. 5)

Diagnosis: Female. Body black. Antennae thick, thicker than in *T. pilosum*, but thinner than in *T. rauschorum*, slightly shorter than body; 3d joint with moderately long and very dense erect setae, forming hairy brush, as in *T. rauschorum*; 3d-5th joints with rounded internal apical angles. Pronotum dull, with regular, small, dense punctuation, with poorly developed smooth elongate area near base; punctures a little denser than in *T. rauschorum*, often conjugated, but do not form wrinkles; with very few long erect setae and indistinct appressed pubescence. Elytra parallelsided, slightly narrowed before middle and dilated posteriorly; with dense, less regular punctuation, with often conjugated punctures, forming poorly expressed transverse wrinkles, becoming small but distinct posteriorly, covered with short appressed pubescence, with a few erect setae near scutellum replaced backwards by short strong semierect setae; elytral pubescence less pronounced than in *T. rauschorum*.

Body length: 12.5mm, width: 3.6mm.

Distribution. Only one population known from Turkmenia: Kopet-Dag Ridge, south slope of Dushak Mountain near Ashkhabad, 1800m.

Materials. Holotype, female, Turkmenia, Kope-Dag, Dushak Mt., 29.6.1992, M. Danilevsky leg. (author's collection).

Remark. The new species is close to *T. rauschorum*; differs by longer antennae with rounded internal angles of 3d-5th joints; body pubescence less developed, pronotal and elytral sculpture more rough; pronotum with narrow, but distinct smooth area near base.

Etymology. Teke is one of the biggest Turkmenian tribes.

Subgenus *Chalcoturanium* Jankowski, 1934.

Jankowski, 1934: 100 ("Sectio"), 1935: 60-61; Plavilstshikov, 1934: 176-177; 686-687; Gressitt, 1951: 220; Lobanov et al., 1982: 257.

Type species: *Turanium johannis* Baeckmann, 1923 (Plavilstshikov's designation, 1940).

Diagnosis. The subgenus is characterised by metallic lustre of elytra.

Two species: *T. johannis*, *T. badenkoi*, sp. n.

***Turanium* (*Chalcoturanium*) *johannis* Baeckmann, 1923** (Fig. 6)

Turanium johannis Baeckmann, 1923: 34 (Karagaily, Talas Ridge); Plavilstshikov, 1934: 176-177 (part.); 1940: 270-271, 686 (part.); Jankowski, 1934: 100-101 (part.); 1935: 60-61 (part.); Gressitt, 1951: 220 (part.); Kostin, 1973: 170-171 (*jogannis*, (part.)); Mamaev, Danilevsky, 1975: 196 (*johannis*); Lobanov et al., 1982: 257 (part.).

Turanium juglandis Jankowski, 1934: 99-101 (South-East Chatkal and West Uzun Akhmat Ridges), syn. n.; 1935: 59-60; Plavilstshikov, 1934: 177; 1940: 271, 686-687; Gressitt, 1951: 220; Kostin, 1973: 170-171; Lobanov et al., 1982: 257; Danilevsky, 1988: 218. *Turanium juglandis* ab. *metallescens* Jankowski, 1934 (Padsha-Ata River); 1935: 60-61; Plavilstshikov, 1934: 177; 1940: 271, 686-687;

Description. The species is rather variable in body proportions, colour and relative antennal length.

Body dark brown, legs and antennae often totally or partly red, elytra with delicate metallic-blue or metallic-bronze lustre. Antennae usually brown with dark brown 1st joint (most of specimens from Chatkal and Uzun-Akhmat Ridges; Figs. 6: e-f), or red-brown with slightly darkened 1st joint (male from Kara-Alma and female from Sary-Chelek; Figs. 6: c-d, g), or totally red (all specimens from Talas Ridge and most specimens from Fergana Ridge; Figs. 6: a-b); thin and long; in males much longer than body surpassing elytral apices by about two or three apical joints, in females as long as body, slightly longer or slightly shorter; 3d joint with moderately long and dense erect setae, not forming hairy brush; 3d-5th joints slightly angulated internally near apices. Prothorax more or less transverse, usually much wider anteriorly than posteriorly, often widened before middle or evenly rounded laterally, or nearly parallelsided near middle. Pronotum dull, with regular, small, more or less dense punctuation, usually with small smooth area near base, or with two more smooth paramedial areas, or without any; punctures sometimes conjugated, forming small transverse wrinkles near middle; with more or less numerous long erect silvery or brownish setae and distinct appressed silvery pubescence. Elytra in males and females similarly narrowed posteriorly; with small, very dense punctuation, without conjugated punctures, never forming transverse wrinkles, obliterated posteriorly, covered with short appressed silvery pubescence, with dense long also silvery or brownish erect setae distributed to elytral apices though becoming sparser and shorter posteriorly. Legs dark brown with often lightened femora bases and tibiae apices (most of specimens from Chatkal and Uzun-Akhmat Ridges; Figs. 6: d-f), or red with slightly darkened femora apices and tibiae bases (male from Kara-Alma and female from Sary-Chelek; Figs. 6: c,g), or totally red (all specimens from Talas and most specimens from Fergana Ridges; Figs. 6: a-b).

Pygidium widely truncate. Aedeagus moderately acute; parameres relatively short with long and strong apical setae, tegmen wide with distinct angles near bases of parameres.

Body length of available males: 7.6-11.5mm, of available females: 9.2-12.2mm; body width of males: 2.1-3.2mm, of females: 2.7-3.5mm; according to N.N. Plavilstshikov (1940), the smallest length of the species is 7.0mm;

Distribution: The species is endemic of Kirgizian Republic: North slope of Talas Ridge (Karagaily), south slopes of Chatkal and Uzun-Akhmat Ridges (Itakar River, Khodzha-Ata River, Padsha-Ata River, Kashka-Su River, Sary-Chelek Natural Reserve), west slope of Fergana Ridge (Arslan-Bob, Kara-Alma); in the original description north slope of Kirgizsky Ridge (Alamedin River) was mentioned, and I. A. Kostin (1973) mentioned south slope of Kirgizsky Ridge.

All records from Kazakhstan (Zailiisky Alatau) belong to the next species. The record for "Gebirge der Sowjet. Dzungarei" (Plavilstshikov, 1940: 686) evidently means Zailiisky Alatau (and not Dzhungarsky Alatau!), because Dzhungarei was not mentioned in the main Russian part of the monograph (Plavilstshikov, 1940: 270). This record was wrongly interpreted by J. L. Gressitt (1951, followed by Lobanov et al., 1982), who mentioned *T. johannis* for China basing on Plavilstshikov's data. No specimens are known from Dzhungarsky Alatau or from China.

Bionomy. All populations occupy mountain forest localities. The species is extremely polyphagous on both coniferous and deciduous trees: *Picea*, *Abies*, *Juglans*, *Cotoneaster*, *Prunus*, *Sorbus*, *Malus*, *Frangula*. Larvae in dead twigs subcortically, pupation in wood. Adults from May to August flying or on food plants.

Materials. The original description was based on 7 females from one locality: "Nord-Abhänge des Talas-Alatau-Gebirges in der Karagajli-Schlucht, am 26.6.(9.7).1907, J. Baeckmann leg."; three of these syntypes with printed labels "cotypus" are still available (two in Zoological Institute, S.-Petersburg and one in Zoological Museum, Moscow); another specimen (male) mentioned in the original description ("am Flusse Alamedyn, im Alexander-Gebirge, 3/16.7.1910, A. Kiritshenko leg") is not available; 1 male, Karagajli, 6.1907, G. Fischer leg.; 1 male and

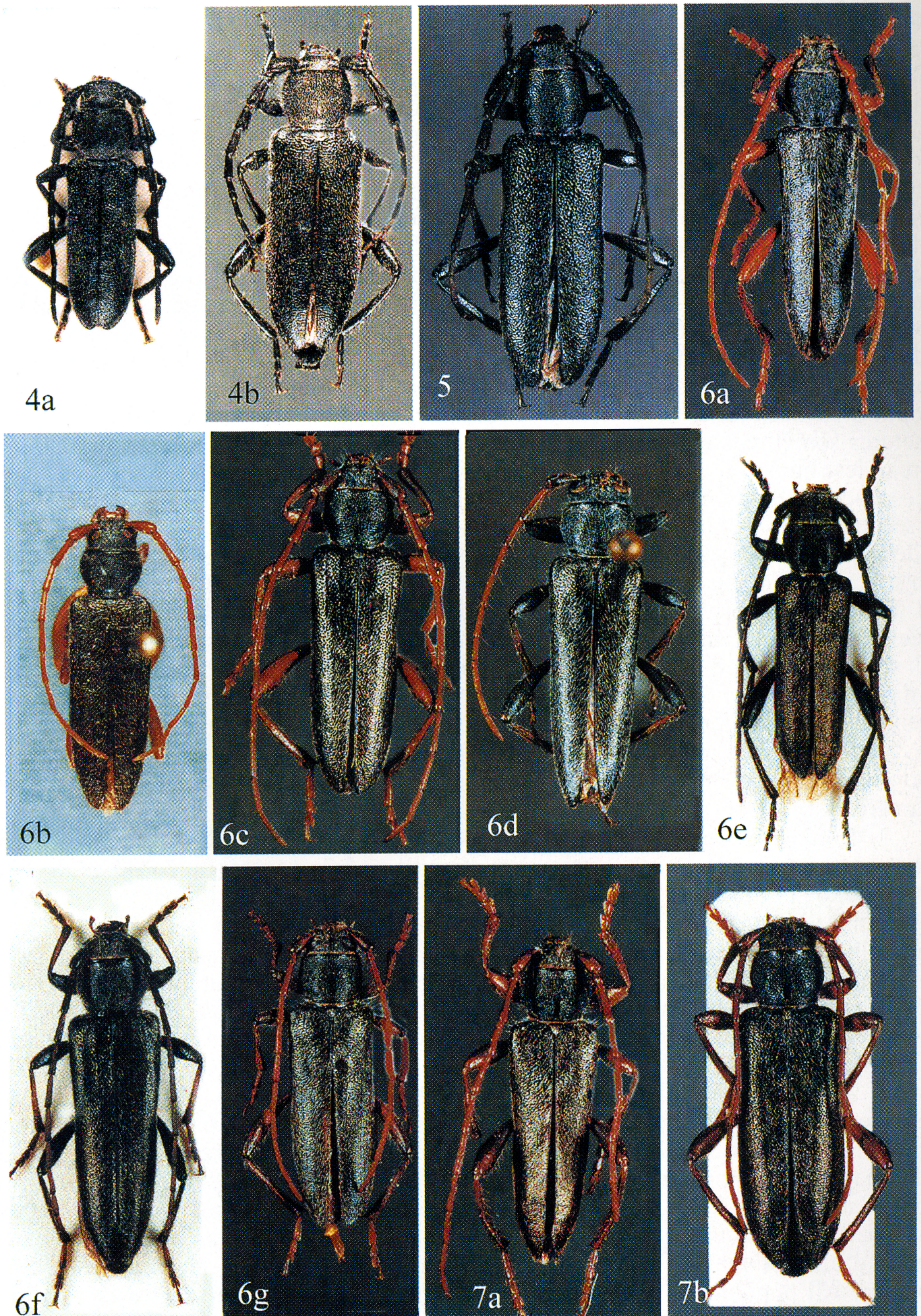


Fig. 4. *Turanium rauschorum*: a - male, paratype, Kirgizia, 60km WSW Bishkek, Sosnovka, 1000-1500m, 18.6.1989, J. Kalab leg.; b - female, Kazakhstan, Rgaity environs, 800m, 8.5.1998, M. Danilevsky leg. Fig. 5. *Turanium tekeorum*, sp.n.: female, holotype, Turkmenia, Kopet-Dag, Dushak Mt., 29.6.1992, M. Danilevsky leg. Fig. 6. *Turanium johannis*: a - male, north slope of Talas Ridge, Karagajli, 6.1907, G. Fischer leg.; b - female, syntype, same locality, 26.6.(9.7).1907, J. Baeckmann leg.; c - male, Kirgizia, Fergana Ridge, Kara-Alma, 21.6.1945, K. Arnoldi leg.; d - female, syntype of *T. juglandis* (ab. *metallescens*), Kirgizia, south slope of Chatkal Ridge, Padsha-Ata, 15.8.1933, I. Jankovsky leg.; e - male, Kirgizia, south slope of Chatkal Ridge, Sary-Chelek, 2000m, 7.1991 (*Prunus*, ex l. 25.1.1992), M. Danilevsky leg.; f - female, same locality and date (*Picea*, ex l. 20.2.1992), M. Danilevsky leg.; g - female, same locality, 25.9.1950 (*Frangula*, ex l. 7.12.1950), L. Arnoldi leg.; Fig. 7. *Turanium badenkoi*, sp.n.: a - holotype, male, Kazakhstan, Zaiiliyskiy Alatau, Chebuksai, ex l. 27.6.1966, A. Badenko leg; b - female, paratype, Almaty, 7.1989. J. Lorenz leg.

1 female, Fergana, Arslan-Bob, Ak-Terek, 4-18.6.1937, D. Prutenski leg.; 2 females, Fergana, Arslan-Bob, Uzbek-Gava, on leaves of *Prunus*, 7.6.1938, D. Prutenski leg. (Zoological Museum, Moscow); 1 female, syntype of *T. juglandis* (ab. *metallescens*), "Fergana bor., Padsha-Ata River, 15.8.1933, I. Jankovsky" (Zoological Institute, S.-Petersburg); 7 males and 3 females, Kirgizia, Sary-Chelek, 2000m, larvae collected 7.1991 from dead *Prunus* twigs, adults emerged 25.1.1992, M. Danilevsky leg.; 5 males and 4 females, same locality, larvae collected 7.1991 from *Picea* twigs, adult emerged 2.1992, M. Danilevsky leg.; 2 males, same locality, 26.5.1978 (from *Abies*) and 7.6.1978, A. Kompatzev leg.; 1 female, same locality, from *Picea*, 14.5.1965, B. Mamaev leg.; 1 female, same locality ("Arkit"), larvae collected 25.9.1950 from *Frangula*, adult emerged 7.12.1950, L. Arnoldi leg.; 1 female, Chatkal Ridge, Kashka-Su River, 1700m, larvae collected 9.7.1991 from *Malus* twigs, adult emerged 2.1992, M. Danilevsky leg.; 1 male, Fergana Ridge, Kara-Alma, 21.6.1945, K. Arnoldi leg. (author's collection).

Remark. After study a representative series from Sary-Chelek I found out all colour and morphology transitions from typical *T. juglandis* (with dark legs and antennae) to typical *T. johannis* (with red legs and antennae) both from Talas (type locality) and from Fergana Ridge. Male genital structures are also very similar. So, I regard *T. johannis* = *T. juglandis*, syn. n. Still, I do not know dark specimens from Talas Ridge; and in Fergana Ridge specimens with red legs and antennae are dominant, as well as in Chatkal Ridge dark specimens are dominant. This colour differences between three populations could testify the existence of three different subspecies. More materials from Talas and from Fergana are appreciated.

Specimens from Zailiisky Alatau in Kazakhstan are contrary rather stable in colour and morphology with distinctly different male genitalia, so this population represents a separate species.

***Turanium (Chalcoturanium) badenkoi* sp. n.** (Fig. 7)

Turanium johannis: Plavilstshikov, 1934: 176-177 (part.), 1940: 270- 271, 686 (part.); Jankowski, 1934: 100-101 (part.); Gressitt, 1951: 220 (part.); Kostin, 1973: 170-171 (*johannis*, part.); Lobanov et al., 1982: 257 (part.).

Description. Body dark brown, legs and antennae totally red, elytra with delicate metallic-bronze lustre or sometimes metallic-blue lustre. Antennae thin and long; in males (Fig. 7: a) longer than body surpassing elytral apices by about one or three apical joints, in females (Fig. 7: b) as long as body, sometimes slightly longer, but usually slightly shorter; 3d joint with moderately long and dense erect setae, not forming hairy brush; 3d-5th joints slightly angulated internally near apices. Prothorax more or less transverse, usually much wider anteriorly than posteriorly, often widened before middle or evenly rounded laterally, or nearly parallelsided near middle. Pronotum dull, with regular, small, more or less dense punctuation, always with more or less long smooth area near base, often in males with two paramedial concavities; punctures sometimes conjugated, forming small transverse wrinkles near middle; with more or less numerous long erect red-brown setae and distinct appressed brownish pubescence. Elytra in males narrowed posteriorly, in females parallelsided or sometimes also narrowed; with small, very dense punctuation, without conjugated punctures, never forming transverse wrinkles, obliterated posteriorly, covered with short appressed red pubescence, with dense long red-brown erect setae distributed to elytral apices though becoming sparser and shorter posteriorly.

Pygidium widely truncate. Aedeagus relatively acute; parameres relatively short with long and strong apical setae tegmen narrow without angles near bases of parameres.

Body length in males: 10.2-13.6mm, in females: 9.1-13.6mm; body width in males: 2.8-3.8mm, in females: 2.6-3.8mm.

Distribution: Only one population known: Kazakhstan, Zailiisky Alatau Ridge, to the south from Almaty.

All records of *T. johannis* from Kazakhstan (Zailiisky Alatau) belong to the new species. The record for "Gebirge der Sowjet. Dzungarei" (Plavilstshikov, 1940: 686) evidently means Zailiisky Alatau (and not Dzhungarsky Alatau!), because Dzhungarie was not mentioned in the main Russian part of the monograph (Plavilstshikov, 1940:

270). This record was wrongly interpreted by J. L. Gressitt (1951, followed by Lobanov et al., 1982), who mentioned *T. johannis* for China basing on Plavilstshikov's data. No specimens are known from Dzhungarsky Alatau or from China.

Bionomy. The population occupies mountain forest region situated about 1300-1600m above the level of the sea. The species seems to be less polyphagous on deciduous trees: up to now known from *Cotoneaster*, *Crataegus*, *Lonicera*. Larvae in dead twigs subcortically, pupation in wood. Adults from spring to summer flying on food plants. Materials. Holotype, male, Kazakhstan, Zailiisky Alatau, Butakovka, Chebukasai, larvae collected 28.3.1966 from dead *Cotoneaster* twigs, adults emerged 27.6.1966, A. Badenko leg.; 46 paratypes: 18 males and 26 females with same labels; 1 male and 1 female, Almaty, 7.1989. J. Lorenz leg. (author's collection).

Remark. The species is close to *T. johannis*. It is characterized by less degree of individual variability. Forms with dark legs and antennae are unknown. The different structure of male genitalia (narrow tegmen without internal angles and acute aedeagus) seems to be constant. The new species can be easily distinguished from all colour forms of *T. johannis* by red colour of appressed elytral pubescence, while in *T. johannis* it is always pale-silvery.

Etymology. The new species is dedicated to A. S. BADENKO (Almaty) - a well known collector of regional insect fauna.

Acknowledgements.

I am very grateful to all my friends and colleagues, who presented or loaned me their materials for study, and specially to: S. KADLEC (Litvinov, Czechia), J. KALAB (Brno, Czechia), A. KOMPANTZEV (Moscow), I. KOSTIN (Almaty), J. LORENZ (Chomutov, Czechia), B. MAMAEV (Moscow), D. OBYDOV (Moscow). I wish to express my heartfelt gratitude to Dr. N. NIKITSKY (Zoological Museum, Moscow) and Dr. A. LOBANOV (Zoological Institute, S.-Petersburg) for providing me with the opportunity to study museums' materials.

References

- BAECKMANN J., 1923. Revision der Gattung *Pronocera* auctorum (Coleoptera, Cerambycidae).- *Revue Russes d'Entom.*, 18 (1922): 28-35.
- DANILEVSKY M.L., 1988. Subfamily Cerambycinae. In: Svacha P., Danilevsky M.L. 1988. Cerambycoid larvae of Europe and Soviet Union (Col., Cerambycoidea). Part II.- *Acta Univ. Carolinae*, 31, 3-4: 129-280.
- GRESSITT J.L., 1951. Longicorn Beetles of China. *Longicornia*, vol. 2: 1-667.
- HEYDEN L.v. und G. KRAATZ, 1882. Käfer um Margelan, gesammelt von Haberhauer.- *Deutsche Ent. Zeitschr.*, 26, 1: 99-118.
- HEYDEN L. und G. KRAATZ, 1885. Beiträge zur turkestanischen Coleopteren-Fauna.- *Deutsche Ent. Zeitschr.*, 29, 2: 273-298.
- HOLZSCHUH C., 1998. Beschreibung von 68 neuen Bockkäfern aus Asien, überwiegend aus China und zur Synonymie einiger Arten (Coleoptera, Cerambycidae).- *FBVA Berichte*, 107. Forstliche Bundesversuchsanstalt Wien: 1-65.
- JANKOWSKI I.V., 1934. Material zur Kenntniss der Bockkäfer Mittelasiens.- [Bulletin des Mittelasiens Staatlichen Universität], 19, 16: 95-115. [im russisch.]
- JANKOWSKI I.V., 1935. Eine neue Art der Gattung *Turanium* Baeckm. 1922 (Coleoptera, Cerambycidae) vom südlichen Tschatkal-Alatau-Gebirge im westlichen Thian-Shan.- *Ent. Blätt.*, 31, 2: 59-61.
- KOSTIN I.A., 1973. The Dendrophagus Beetles of Kazakhstan (Buprestidae, Cerambycidae, Ipidae). Alma-Ata. 288pp.
- KRATOCHVIL J., 1985. Three new species of the Family Cerambycidae (Coleoptera) from Soviet Central Asia.- *Folia Entomologica Hungarica*, 46,1:65-71.
- LOBANOV A.L., M.L. DANILEVSKY, S.V. MURZIN, 1982. Systematic list of Longicorn beetles (Coleoptera, Cerambycidae) of the USSR. II.- *Rev. d'Ent. de l'URSS*, 61, 2: 252-277.
- MAMAEV B.M., M. L. DANILEVSKY, 1975. [Larvae of Timber-Beetles.]. Nauka. Moscow. 282pp. [in Russian]
- PLAVILSTSHIKOV N.N., 1934. Cerambycidae. 3. Teil. Cerambycinae: Cerambycini 3. (Callichromina, Rosaliina, Callidiina). Bestimmungs-Tabellen der europ. Coleopteren. 112. Heft. Troppau: 1-230.
- PLAVILSTSHIKOV N.N., 1940. Cerambycidae (P.2).- *Faune de l'URSS, Insectes Coléoptères*, v. 22. Moscou - Leningrad: 784pp.
- REITTER E., 1891. Neue Coleopteren aus Europa, den angrenzenden Ländern und Sibirien, mit Bemerkungen über bekannte Arten.- *Deutsche Ent. Zeitschr.*, 35, 1: 17-36.