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A NEW SPECIES OF PILL BEETLES OF THE GENUS *CURIMOPSIS* GANGLBAUER, 1902 (COLEOPTERA : BYRRHIDAE) FROM SOUTH SIBERIA

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Summary. *Curimopsis notiosibiricus* Tshernyshev, **sp. n.** (Byrrhidae: Syncalypinae) is described and illustrated from Altaiskii krai and Kemerovskaya oblast. It differs from all known congeners of the *monticola* species-group by small size (2,2 mm in length), inversely egg-shaped body distinctly narrowed posteriorly, short and round antennal club and needle-shaped aedeagus with apex slightly curved downwards.

Key words: Byrrhidae, Syncalypinae, taxonomy, new species, Russia.

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Резюме. Из Алтайского края и Кемеровской области описан *Curimopsis notiosibiricus* Tshernyshev, **sp. n.** (Byrrhidae: Syncalypinae). От всех известных

представителей рода из группы видов *monticola* новый вид отличается небольшими размерами (длина тела 2,2 мм), заметно суженной кзади обратнойцевидной формой тела, отчетливой коротко-округлой булавой усиков и игловидно суженным эдеагусом, слегка загнутым на вершине.

INTRODUCTION

Curimopsis Ganglbauer, 1902 is the most species rich genus in the subfamily Syncalypitinae distributed in the Palaearctic and Nearctic regions (Franz, 1967; Paulus, 1970, 1973; Johnson, 1986; Lafer, 1989; Korotyaev, 1990; Jaeger & Pütz, 2006; Tshernyshev, 2002, 2006, 2009, 2012, 2013). The morphology and species composition of *Curimopsis* in the Asian part of Eurasia are discussed in detail revisions by Tshernyshev (2002–2013). Representatives of the genus are small (2–3 mm in length), with round-oval body, and clavate antennae with short distinct club formed with two or three apical segments. One of the most typical characters of the genus is body pubescence; instead of hairs, the beetles are covered with scales and clavate or acicular setae, both of which are exploited for species differentiation. Two species groups, *moosilauke*-group and *monticola*-group, were separated on the basis of specific shape of scales and setae (Tshernyshev, 2013). The most “northern” species, *C. cyclolepidia* Münster, 1902, *C. moosilauke* (Johnson, 1986), *C. nordensis* Tshernyshev, 2013, *C. olgae* Tshernyshev, 2013, and *C. sibirica* (Paulus, 1970), belong to the *moosilauke* species-group. The most temperate or “arid” species, *C. monticola* Franz, 1967, *C. obenbergeri* (Paulus, 1970), *C. paleata* (Erichson, 1846), *C. ussuriensis* Lafer, 1989, *C. kolovi* Tshernyshev, 2009, *C. medvedevi* Tshernyshev, 2002, and *C. afghanicus* Pütz, 1990 belong to the *monticola* species-group.

Nine species of *Curimopsis* were previously known from North Asia, namely *C. cyclolepidia* (northern Eurasia from Scandinavia to the Chukotskyi Peninsula, the highlands of Europe and Siberia), *C. moosilauke* (Eurasia from the Urals to the Chukotskyi Peninsula, the highlands of the Urals and Altai-Sayan mountains, the Polar Urals, Kamchatka and North America), *C. nordensis* (Taimyr Peninsula), *C. olgae* (Yakutia), *C. sibirica* (Eastern Sayan mountains), *C. monticola* (mountains of Eurasia from Europe to Southern Siberia and Mongolia), *C. obenbergeri* (West Yakutia, Amurskaya oblast, Primorskii krai, Mongolia), *C. paleata* (Eurasia from West Europe to East Siberia), and *C. ussuriensis* (southern part of Primorskii krai) (Tshernyshev, 2013). One new species is described below.

The beetles were studied using an Amscope trinocular stereomicroscope (Ultimate Trinocular Zoom Microscope 6.7X-90X Model ZM-2TY) and digital photographs were taken using a Carl Zeiss Stemi 2000 trinocular microscope and the AxioVision programme. Male genitalia, embedded in DMHF (Dimethyl hydantoin formaldehyde), were mounted onto a transparent card and pinned under the specimen. Type specimens are kept in the Institute of Animal Systematics and Ecology, Siberian Branch of the Russian Academy of Sciences, Novosibirsk (ISEA) and the Zoological Institute of the Russian Academy of Sciences, St Petersburg (ZISP).

DESCRIPTION OF NEW SPECIES

Curimopsis notiosibiricus Tshernyshev, sp. n.

<http://zoobank.org/NomenclaturalActs/250A4FD1-307D-440F-ADDF-4110FE7AF518>

Figs 1–11

MATERIAL. Holotype: ♂, **Russia:** Altaiskii krai, Talmenskii raion, near Gonoshikha village, Chumysh River, bank near water's edge, 53°46'23" N, 84°46'28" E, h~165 m, 11–14.VIII 2014, leg. R. & E. Dudko (ISEA). Allotypus – ♀, the same data as holotype (ISEA). Paratypes: the same data as holotype, 4♂ (ISEA, ZISP); Kemerovskaya oblast, Krapivinskii raion, 8 km SSW Saltymakovo village, near Azhendarovo Biological Station of Kemerovo State University, 54°45' N, 87°01' E, h~ 165 m, 28.V–3.VI 2014, 1♂, leg. A.V. Korshunov (ISEA).

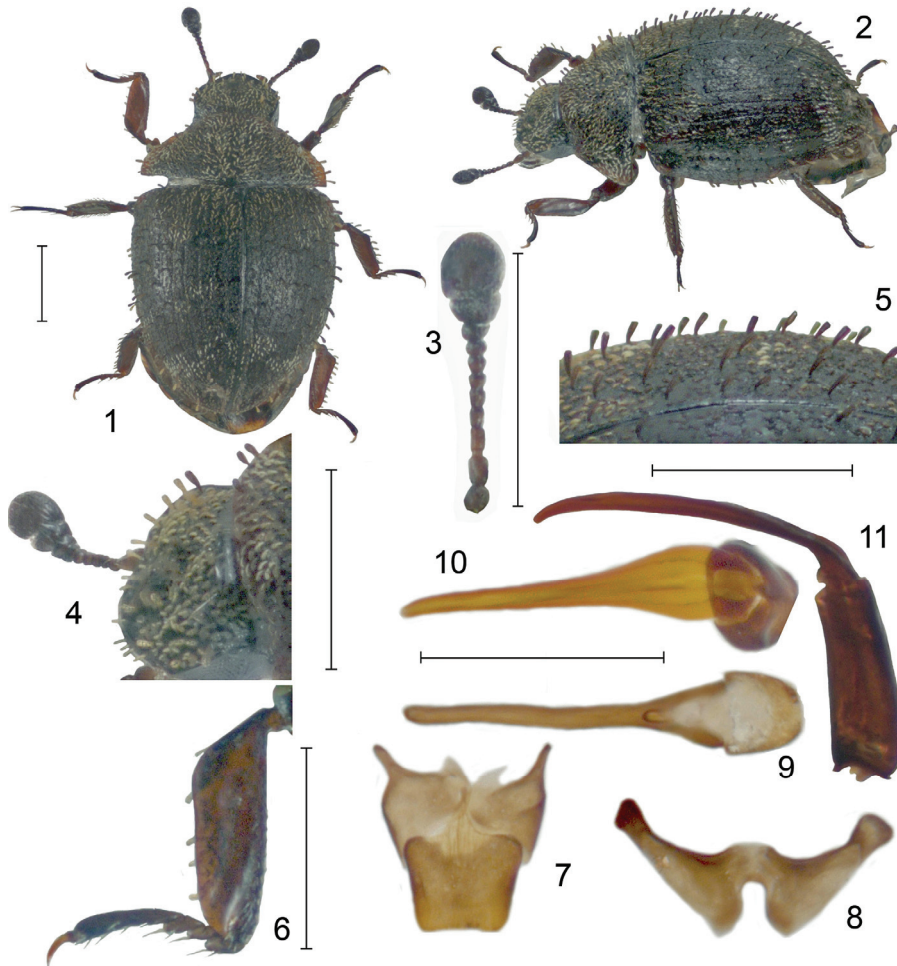
DESCRIPTION. Holotype, male (Figs 1, 2). Body inversely egg-shaped, slightly elongate and distinctly narrowed posteriorly, black with legs, basal and intermediate antennomeres pale brown.

Head small, trapezoid-shape with carinate edging along dorsal side, with small distinct median transversal carina in posterior part of occiput. Clypeus almost straight, slightly projecting, entire, not excised, with small but distinct depression posteriorly; distally provided with erect whitish-yellow acicular setae forming a row. Labrum transverse, narrow, regularly rounded laterally, slightly emarginate in middle with a straight anterior margin, finely punctured, bearing sparse elongate whitish-yellow sub-recumbent hairs directed anteriorly. Eyes finely faceted, longitudinal, not convex, not visible in dorsal view being concealed by lateral edging of disc of head; supraorbital lateral declivities very narrow, impunctate, with very sparse microsculpture, shining. Mandibles small, wide, not projecting beyond labrum.

Antennae fine, reaching basal 1/4 of pronotum (Fig. 3); 1st and 2nd segments large, slightly compressed, 1st antennomere round, 2nd elongate and oval, 3rd antennomere half the width but the same length as 1st, 4–10th antennomeres of the same width as 4th, each posterior antennomere somewhat shorter than previous, 4–6th oblong, 7–9th moniliform; 3rd segment 1.5 times as long as 4th; 5th segment slightly shorter than 4th, 7–9th segments rounded, equilateral, sub-equal in size, each 0.4–0.5 times as long as 5th segment, 8–9th antennomeres 1.1–1.2 times as long as 7th; 10–11th segments forming distinct rounded club; 9th segment 1.1 times as wide as 8th, but 0.66 times as long and wide as 10th; latter wider than long, 0.4 times as long as, and slightly narrower than apical segment; 11th segment round, wide, regularly flattened toward apex; club appearing 2-segmented, compact; surface of antennae finely and sparsely punctate, pubescence invisible. Surface of head with densely punctured with distinct microsculpture, densely covered with white small triangular-shaped scales and sparsely with erect yellow-transparent clavate setae (Fig. 4) thicker in distal part of head.

Pronotum transverse, with roundly swollen disc pronounced and narrowed anteriorly; anterior margin arcuate, posterior one slightly projecting, finely marginate.

Anterior angles of pronotum small and rounded; posterior angles slightly attenuate posteriad. Surface irregularly but densely punctate, microsculpture visible, evenly covered with yellow small triangular-shaped scales and sparsely with erect light-brownish clavate setae. Small areas of white scales located on posterior angles. Scutellum small, black, narrow, triangular, with acute apex, lacking setae or scales, finely marginate, shining.



Figs 1–12. *Curimopsis notiosibiricus* sp. n., holotype male. 1 – external appearance, dorsal view; 2 – external appearance, dorso-lateral view; 3 – left antenna; 4 – surface of head; 5 – surface of elytra; 6 – left anterior leg; 7 – pygidium; 8 – ultimate abdominal ventrite; 9 – spicula gastrale; 10 – aedeagus, dorsal view; 11 – aedeagus, lateral view. Scale bar 0.5 mm.

Elytra oval, not widened behind middle and evenly narrowed and slightly elongate. Humeri small, slightly convex but not noticeably projecting. Bases of elytra very finely marginate; suture fine, not good visible; rows of sparse punctures forming distinct striae, puncturation indistinguishable on areas between rows that are densely covered with scales; intervals between rows flat; puncturation very fine, dense, with distinct microsculpture, shining. Surface evenly and densely covered with elongate triangular tightly appressed yellow-brown and white scales, similar to those on pronotum, white scales forming pattern of three transverse w-shape maculae; erect setae clavate, sparse, pale-brown, equal in width at periphery and in middle of elytral disc. Setae evenly widened and cut apically, skittle shape, erect, sparse (Fig. 5). Epipleura narrow, shining, without microsculpture. Legs moderately long, not narrow; flattened tibiae narrower than femora, bearing row of strong sparse transparent setae along outer margin, and whitish fine hairs at periphery along inner margin; angles on their outer side distinct and projecting, especially in intermediate and posterior legs (Fig. 6). Tarsi narrow, elongate, not longer than tibiae; their claw-segment longest, much longer than preceding segments combined; other segments subequal in length; entire surface without adhesive brushes, only with row of pale long hairs situated at apex of ventral side of tarsomeres; claws very fine, sharp, elongate, without basal appendage, pale brown.

Body ventrally with very delicate and indistinct punctation, covered with white scales and white clavate setae on thorax and commissure sides of abdominal sternites. Ventral side black, legs, base of gula, prothorax and mouthparts brown.

Hind wing normally developed.

Aedeagus (Figs 10, 11) curved dorsoventrally, its apical lobe (in lateral view) straight with apex slightly curved downwards, its apical horizontal lobe almost the same length as its large vertical basal lobe; apical lobe in dorsal view wide at base and extremely narrowed at the apical third, lamella of aedeagus evenly narrowed and rounded at apex (Fig. 10). Pygidium (Fig. 7), ultimate abdominal ventrite (Fig. 8) and spicula gastrale (Fig. 9) as in photos.

Female. Similar to male but differs in narrower antenna and slightly wider body.

MEASUREMENTS. Length (from apical margin of pronotum to elytral apices): ♂ – 2,0 mm, ♀ – 2,1 mm ; width (across widest part of elytra): ♂ – 1,2 mm, ♀ – 1,3 mm.

DIAGNOSIS. New species belongs to the *monticola*-species group (*sensu* Tshernyshev, 2013) by shape of scales and setae on the beetle body. It is most similar to *C. ussuriensis* from Primorskii krai in the shape of the aedeagus, the basal character that allows one to differentiate species. Apical lobe of aedeagus in both these species widened at base and extremely narrowed distally, but in the new species the apical lobe is distinctly longer than basal one and slightly curved dorsally. Differences are also noticeable in the external appearance: clypeus not strongly impressed behind, its external margin not widened; clavate setae not thickened and short, skittles-shaped, i.e. narrow at base; scales narrow, forming white w-shaped pattern on elytra and visible on pronotum; body inversely egg-shaped (i.e. distinctly narrowed posteriorly), and 1,25 times narrower (with the same length in both species).

DISTRIBUTION. Russia: South Siberia (Altaiskii krai and Kemerovskaya oblast).

HABITAT. All specimens were collected by hand in the litter layer of soil on river banks, the species probably preferring sandy soils with a moist microclimate.

ETYMOLOGY. The species name, *notiosibiricus*, refers to its distribution (originates from the Greek νότια – south, and *sibiricus* – Siberia).

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