Intybia (Protolaius), a new subgenus of soft winged flower beetles (Coleoptera: Malachiidae) from Indonesia

Intybia (Protolaius) — новый подрод жуков малашек (Coleoptera: Malachiidae) из Индонезии

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ABSTRACT. A new subgenus, Intybia (Protolaius) subgen.n., is described in the tribe Apalochrini (Coleoptera: Malachiidae, Malachiinae) on the basis of the male special structures of Intybia schilhammeri (Wittmer, 1996), which is known from Sumatra, Indonesia. The slender body with modified 1st and 3rd antennal segments in the male allow one to attribute this species to the genus Intybia Pascoe, but the emarginations on the outer sides of the anterior femora in the male and dark-blue metallic colouration of the upperside which are similar to the genus Laius Guérin-Méneville, 1831 have previously not been known in Intybia representatives. Thus, the male of Intybia schilhammeri demonstrates the evolutionary similarity between these two genera and presumably could be considered as a transitive form between them. A detail description and illustrations of male special characters of a type species and a diagnosis of the new subgenus are provided. The species that have been previously described from Sumatra in the genus Intybia are also discussed.

REЗИОМЕ. На основании исследования специфических структур самца Laius schilhammeri Wittmer, 1996 с острова Суматра в Индонезии, передние голени и бёдра которого не вздуты и не модифицированы в виде сложно скульптурированного органа, а переднеспинка не простая узкая поперечная, как у представителей рода Laius Guérin-Méneville, 1831, вид ранее был перенесен в род Intybia Pascoe 1866 — I. schilhammeri (Wittmer, 1996) [Plonski, 2013]. Несмотря на то, что ряд таких признаков, как: стройное узкое тело, простые передние ноги, модифицированные 1 и 3 членики усиков позволяют отнести вид к роду Intybia Pascoe, тем не менее, вырезанные передние бёдра самца с пучком волосков, а также тёмно-синяя металлическая окраска покровов сближают данный вид с родом Laius Guérin-Méneville, 1831. Таким образом, самец I. schilhammeri демонстрирует эволюционную близость между двумя упомянутыми выше родами и, вероятно, может рассматриваться как переходная форма между ними. В связи с этим, описан новый подрод жуков малашек Intybia (Protolaius) subgen.n. в трибе Apalochrini (Coleoptera: Malachiidae, Malachiinae). Представлены детальное описание и фотографии внешнего вида и специфических структур самца типового вида с диагнозом нового подрода. Обсуждаются виды, ранее описанные с Суматры в роде Intybia, и их современное таксономическое положение.

Introduction

The genus Intybia Pascoe, 1865 belongs to the tribe Apalochrini and includes representatives with a characteristic small second segment of the antennae almost completely hidden by a scapus. The taxonomic structure of the tribe has been recently discussed with special reference to South-Asian genera [Plonski, 2013, 2014, 2016]. How to cite this article: Tshernyshev S.E. 2020. Intybia (Protolaius), a new subgenus of soft winged flower beetles (Coleoptera: Malachiidae) from Indonesia // Russian Entomol. J. Vol.29. No.2. P.173–177. doi: 10.15298/rusentj.29.2.08
Amongst those genera currently known in the tribe, four generic groups should be considered, namely: Apalochrus-group (Apalochrus Erickson, 1840, Paratrichoides L. Medvedev, 1964, Protopalochrus Evers, 1987, Pectapalochrus Tshernyshev, Oculapalochrus Tshernyshev etc.), Collops-group (Collops Erickson, 1840, Protocols Evers, 1991, Troglocollops Wittmer, 1965, Si- moderus Abellé de Perrin, 1891), Laius-group (Laius Guérin-Menéville, 1838, Intybia, Troglointybia Tshernyshev, Dicranolaius Champion, 1921, Eulaius Wittmer, 1996 etc.), and Dromanthomorphus-group (Dro- manthomorphus Pic, 1921, Hidrocnemon Kraatz, 1895, Mimapalochrus Tshernyshev etc.). The Laius-group is one of the most common in SE Asia and Indonesia occurring in coastal zone, sometimes on stones washed with seawaters. That is why three specimens of Intybia Pasco laying on cotton wool together with other beetles collected in Sumatra by Alexei Moseyko, Saint-Petersburg attracted attention. One specimen is a female with black elytra spotted with yellow-white making maculae, and another two are completely blue-metallic male and female with a poorly visible sexual dimorphism. The first species is provisionally identified as Laius luteono- tatus Pic, 1921, on the basis of the typical colouration of the upperside, but for species attribution male special charters (mainly antennae and genitalia) should be also studied. The second species is L. shilhammeri Wittmer, 1996, endemic to the Sumatran fauna. The external appearance of this beetles is typical of Intybia, due to the slightly elongate and slender body, and the male antennal segment 3 is enlarged and modified. The com- pletely dark blue colouration would make one to believe it to be a representative of Stenolaius Wittmer, 1995 or perhaps a narrow bodied Laius. The simple head and lack of a tarsal comb in the anterior leg of the male questions its attribution to Stenolaius, and the simple fore-tibae in the male and the narrow, coarsely punctured body would not place this species to Laius. The only genus appropriate for L. shilhammeri is Intybia, but one male character, namely the excave femora, differs this species from all known representatives of the genus proposed.

The genus Intybia was recently revised [Tshernyshev, 2016a], the type species being re-treated, re- described and illustrated. The nominative species, I. guttata Pascoe. 1866, was described from a small Island of Indonesia on the basis of the female only. Naturally, the lack of special male characters in type species complicates a proper definition of the genus Intybia, but a comparative analysis of these structures in the conge-
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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. Specimens have been deposited at the collection of Zoological Institute of the Russian Academy of Sciences, Saint-Petersburg (ZISP).

**Intybia (Protolaius)** Tshernyshhev, *subgen.n.*

Type species: *Laisus schillhammeri* Wittmer, 1996, designated herewith.

**DESCRIPTION.** Moderately small-size (c. 3.5 mm) malachid beetles with slightly elongate sub-oval body, slightly expanded posteriorly (Figs 1–3). Upperside with monochromous colouration of dark-blue metallic lustre, roughly and sparsely puncturation and sparsely long dark and erect pubescence of head, pronotum and elytra are typical for the subgenus. Antennae (Fig. 4) filiform, not serrate, thin, almost completely reaching middle of elytra; in male 1st and 3rd segments enlarged, scapus clavate, sub-triangularly widened distally, the 3rd segment oval, slightly flattened, complicatedly impressed, lacking a tuft of hairs. Palpae short, apical segment sub-oval and truncate. Head conjugate with convex anterior part of the pronotum, slightly wider than pronotum, eyes small, round, protruding, disc of the head between eyes slightly depressed. Pronotum transverse, weakly protruding and convex anteriorly, strongly depressed and sinuate to the base just behind the middle, with posterior margin elevate and swollen; sides with thin margins, anterior angle rounded, posterior distinct and almost at a complete right angle.

Elytra sub-oval and elongate (Figs 1–3), slightly expanded posteriorly, coarsely punctured, with short and slightly protruding shoulders; apices evenly rounded, simple. Surface evenly covered with strong, erect black setae and sparse short light-coloured adpressed pubescence on periphery. Anterior femora in male excavate in the middle and provided with a tuft of light-coloured long straight hairs (Figs 6–7), anterior tarsi simple, lacking comb (Fig. 5). Metathorax slightly swollen, transverse, simple, lacking appendages or tufts of hairs. Apical tergite in male undivided, simple, transversal, narrow, apical sternite bilaciniate, narrow, transverse, aedeagus slightly curved, extremely elongate at apical third, with evenly narrowed and short lamella, two strong long horns in inner sac are noticeable at base of the aedeagus (Figs 8–11).

**DIAGNOSIS.** Monochromous dark blue metallic coloured beetles of c. 4 mm in length, roughly punctured and densely covered with strong erect black setae. Pronotum strongly sinuate at base and narrower than elytra. Sexual dimorphism is not contrasting, noticeable in 1st and 3rd antennomeres and excavate femora in males. From representatives of the nominative subgenus it can be easily separated by the male characters, namely excavate femora and aedeagus with extremely elongate apical part.

**ETYMOLOGY.** The name of the subgenus reflects similarity with the genus *Laisus* according to the special male character of the anterior femora that can be considered to be an ancestral character of the genus.

**NOTES.** Two species are included in the subgenus due to typical male femora in anterior legs, *I. (P.) schillhammeri* and *I. (P.) lombokana* (Pic, 1910) (= *I. jaechi* (Wittmer, 1996)). The decision is based on study of types of these species, kindly carried out by Isidor S. Plonski. He informed that the photos was compared with the holotype of *I. schillhammeri*, and are found conspecific. The only difference is in colouration, the third antennomere in holotype is brownish enlightened on the inner side. Furthermore, the excavated femora in *I. schillhammeri* and *I. lombokana* are confirmed. Presumably, *Intybia cibrosa* (Pic, 1937) could also be included in this subgenus, but the male special characters should be examined first in view of the poor original description of the species.

List of species in the subgenus *Intybia (Protolaius)*:

*I. (P.) schillhammeri* (Wittmer, 1996) — Indonesia: Sumatra Island;

*I. (P.) lombokana* (Pic, 1910) (= *I. jaechi* (Wittmer, 1996)) — Indonesia: Lombok Island.

*Intybia (Protolaius) schillhammeri* (Wittmer, 1996), *comb.n.* Figs 1–12.

*Laisus schillhammeri* Wittmer, 1996: 319, 320, figs. 240, 241; *Intybia schillhammeri* (Wittmer, 1996): Plonski, 2013: 65; 2016: 31.

**MATERIAL.** *INDONESIA*, W Sumatra, Prov. Sungai Pinang, 18 km S Padang, 01°08´36´ ´ 100°24´48´ ´E, 0–300 m a.s.l., 22.2.2017, A. Moseyko leg. — 1♂, 1♀.

**DESCRIPTION.** Male (Figs 1, 2). Body elongate, sub-oval, slightly expanded just behind the middle.

Body black excepting impressed areas in 3° antennomere, apices of coxae and commisure sides of sternites light brown. Elytra, pronotum and head completely black with dark blue metallic lustre. Surface evenly covered with sparse long erect black hairs, head and pronotum additionally with a light-coloured fine adpressed pubescence. Vesicles brown-yellow, thoracic mesepimeron black.

Head somewhat wider than pronotum, eyes round, small, protruding over the sides of the head, disc of the head between eyes slightly impressed, simple, genae short and strongly impressed; clypeus transverse, narrow, straight and slightly elevate; labrum transverse; palpae short, apical segment sub-oval and truncate; surface of head dull, sparsely punctured and covered with light-coloured short adpressed and black semi-erect hairs.

Antennae filiform (Fig. 4), 2.0 mm long, almost completely reaching the middle of the elytra; 1° segment enlarged, clavate-triangular, 2° segment small, round, the 3rd segment oval, slightly flattened, complicatedly impressed, lacking bunch of hairs; 4th and 5th antennomeres equilateral, each of them double the length of the 2nd, remaining segments each slightly longer that the 5th, sub-cylindrical; 11th segment somewhat longer than previous, evenly narrowed and pointed at apex; surface evenly covered with short black semi-erect pubescence.

Pronotum longitudinal, strongly narrowed from middle to base, anterior half convex and strongly impressed behind, posterior margin elevate and swollen; anterior part slightly convex, posterior straight, lateral and basal sides distinctly marginate; surface shiny, sparsely and finely punctured at the swollen part, and coarsely at the periphery, sparsely covered with fine light semi-erect pubescence and long erect black hairs.

Scutellum small, rectangular and transversal, narrow but distinct, sparsely punctured and covered with sparse dark fine pubescence.

Elytra sub-oval and sub-parallel, widened posteriorly just behind the middle, at base strongly wider than pronotum; humeri small, distinct, weakly protruding; apices evenly rounded, simple; surface shiny, coarsely punctured, with
indistinct microsculpture, sparsely covered with long black erect hairs.

Hind wings normally developed.

Legs short and thin; posterior femora almost completely reaching apex of the elytra; all tibiae thin and straight, femora narrow, slightly compressed, not curved, anterior femora in male excavate in a middle and provided with a bunch of light-coloured long straight hairs (Figs 6–7); all tarsi 5-segmented, narrow, 2nd segment in anterior tarsi simple, lacking comb (Fig. 5), claw-segment longest and somewhat wider in all

Figs 1–11. Intybia (Protolaius) schillhammeri (Wittmer, 1996), male (1–2, 4–11) and female (3). 1, 3 — external appearance, dorsal view; 2 — external appearance, lateral view; 4 — left antenna; 5 — right anterior tarsus; 6 — femur of left anterior leg; 7 — femur of right anterior leg; 8 — apical tergite; 9 — apical sternite; 10 — aedeagus, lateral view; 11 — tegumen. Scale bars: 0.5 mm.

Рис. 1–12. Intybia (Protolaius) schillhammeri (Wittmer, 1996), сэмц (1–2, 4–11) и самка (3). 1–2 — внешний вид дорзально; 2 — внешний вид, сбоку; 4 — левый усик; 5 — правая передняя лапка; 6 — бедро левой передней ноги; 7 — бедро правой передней ноги; 8 — апикальный тергит; 9 — апикальный стернит; 10 — эдеагус, латерально; 11 — тегумен. Масштаб: 0,5 мм.
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