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## **A new genus of Oxypodini from China (Coleoptera: Staphylinidae: Aleocharinae)**

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**A b s t r a c t :** *Notocousya* nov.gen. *quadriceps* nov.sp. (China: Yunnan) of the Oxypodini, subtribe Oxypodina, is described and illustrated. The new genus currently includes only the type species *N. quadriceps* and is characterized by a distinctive morphology of the head, including the mouthparts, and of the pronotum. The absence of previous records suggests a cryptic reproduction habitat.

**K e y w o r d s :** Coleoptera, Staphylinidae, Aleocharinae, Oxypodini, *Notocousya*, China, taxonomy, new genus new species.

### **Introduction**

According to SCHÜLKE & SMETANA (2015), the megadiverse tribe Oxypodini of the Aleocharinae is represented in the Palaearctic region by five subtribes. The Oxypodina is, by far, the most speciose of them and previously included 41 genera in the Palaearctic region, eleven of which are confined to the East Palaearctic. While some of these genera include a large number of species, with *Oxypoda* MANNERHEIM, 1830 alone accounting for nearly 500 species in the Palaearctic region (ASSING 2018b), there are others with only one or few species. Among the 41 genera represented in the Palaearctic region, as many as nine genera are monotypical and additional eight genera only include two species each. In general, there is a trend for less speciose genera to have more restricted distributions than larger taxa. China being a well-known biodiversity hotspot hosts several of the smaller genera, some of them exclusively so.

Material examined for a recently conducted study of *Drepasiagonusa* PACE, 2012, a genus previously including only a single species from the Chinese province Yunnan, included a single female that in some respects resembled *Drepasiagonusa* or *Cousya* MULSANT & REY, 1875, but which could not be assigned to either of these genera. A more thorough study eventually revealed that, based on the morphology of the head, including the mouthparts, and of the pronotum, this specimen represented an undescribed species of an undescribed genus.

### **Material and methods**

The material treated in this study is deposited in the Museum für Naturkunde, Berlin (coll. Schülke).

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss), a Discovery V12 microscope (Zeiss), and a Jenalab compound microscope (Carl Zeiss Jena). The images were created using a digital camera (Nikon Coolpix 995), Axiocam ERc 5s, and Picolay software.

Body length was measured from the anterior margin of the labrum to the abdominal apex, the length of the forebody from the anterior margin of the labrum to the posterior margin of the elytra, head length from the anterior margin of the clypeus (without anteclypeus) to the posterior constriction of the head, elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra, and the length of the aedeagus from the apex of the ventral process to the base of the aedeagal capsule. The "parameral" side (i.e., the side where the sperm duct enters) is referred to as the ventral, the opposite side as the dorsal aspect.

## Description

### Genus *Notocousya* nov.gen. (Figs 1-14)

*Type species*: *Notocousya quadriceps* nov.sp.

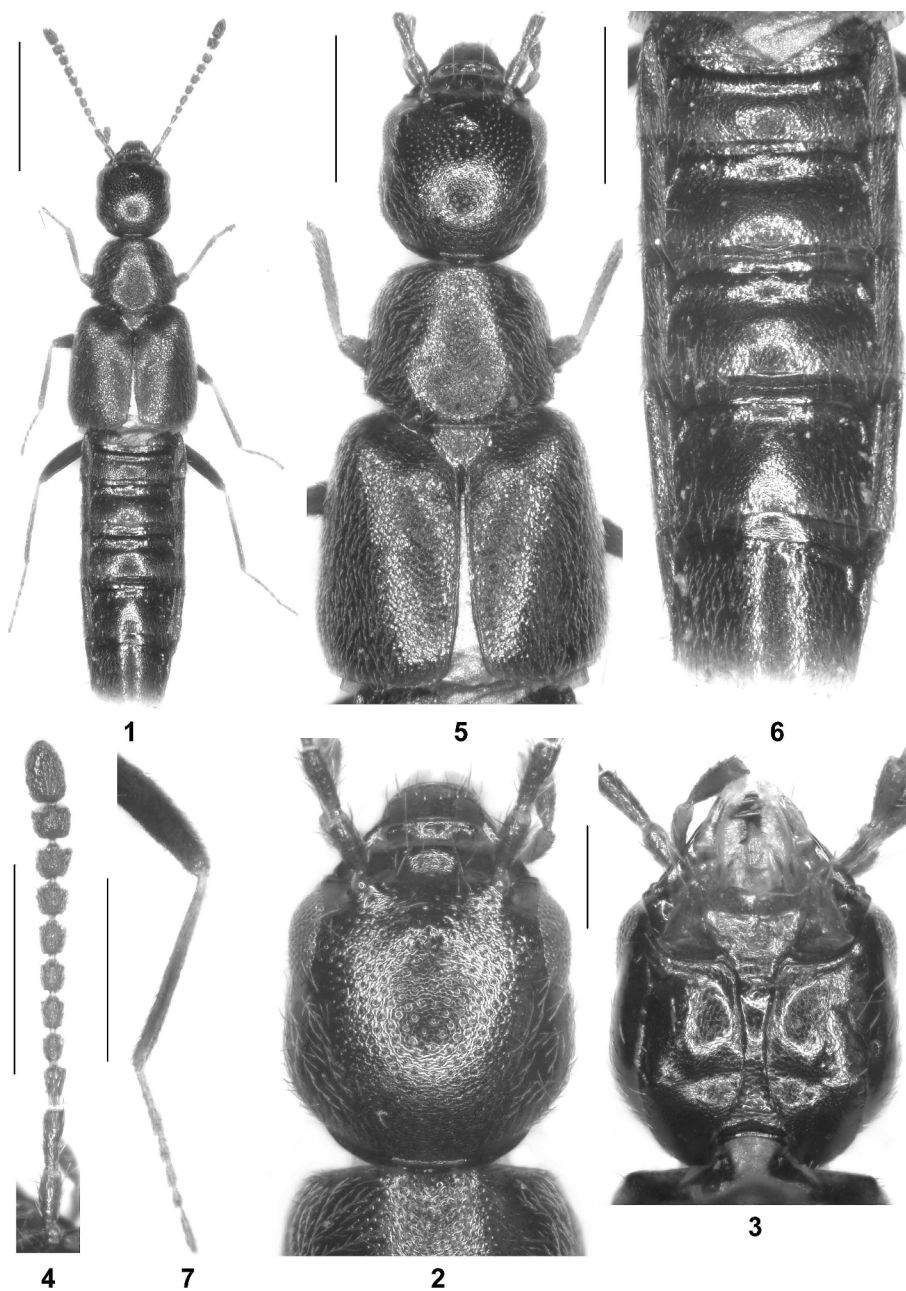
*Etyymology*: The new name (gender: feminine) alludes to the conspicuous shape of the pronotum and the general resemblance with species of the oxypodine genus *Cousya*.

*Description*: Habitus (Fig. 1) distinctive; whole body with dense and fine punctation and with microsculpture.

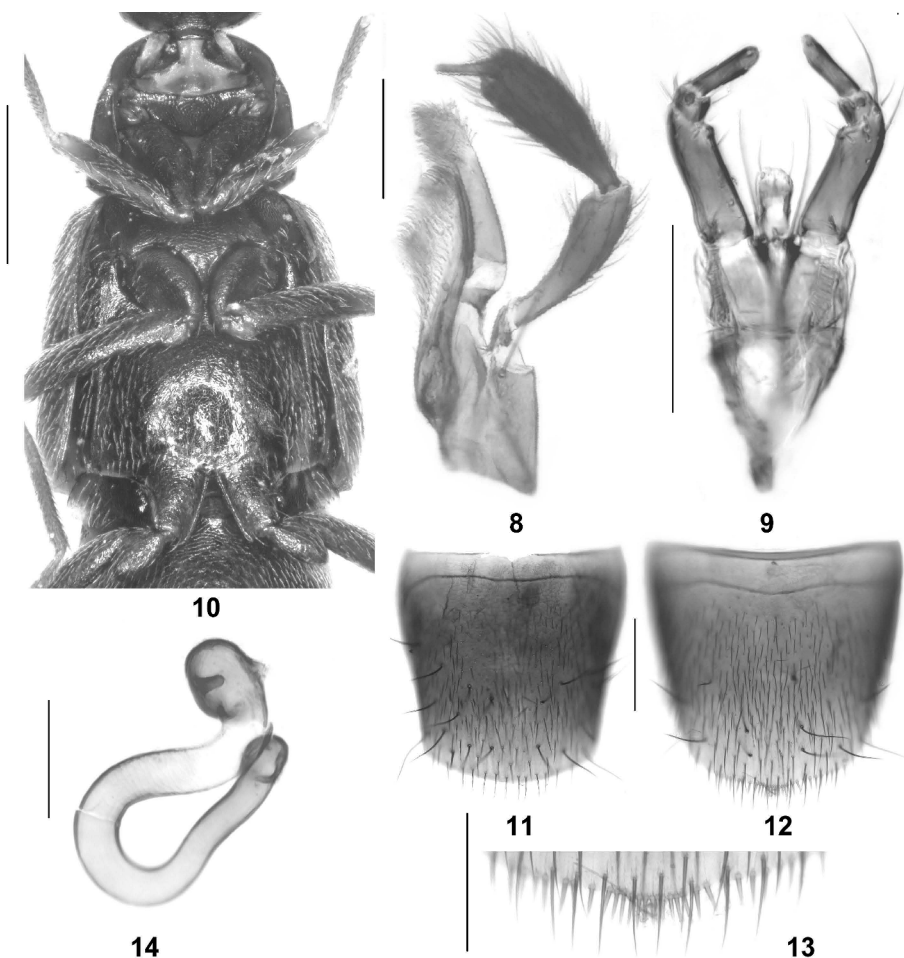
Head (Figs 2-3, 5) large in relation to pronotum, of oblong subquadrangular shape, with long postocular portion, lateral margins behind eyes parallel; postgenal carinae long and pronounced, anteriorly extending beyond posterior margin of eyes in ventral view; gular sutures distinctly separated (Fig. 3). Labrum (Fig. 2) moderately transverse; anterior margin smoothly convex and margined, with a long lateral seta on either side. Antenna (Fig. 4) moderately long, fine, and weakly incrassate apically; preapical antennomeres moderately transverse. Mandibles strongly curved, basally stout, apically acute, and of moderate length, not visible in dorsal view when in resting position. Maxilla (Fig. 8) with long and slender galea protruding from under the anterior margin of the labrum (apices visible in dorsal view); maxillary palpi 4-jointed and slender. Labium (Fig. 9) with slender 3-jointed palpi; ligula undivided, apically convex and with two long setae.

Pronotum (Fig. 5) of distinctive shape, small in relation to head, somewhat bell-shaped, weakly transverse, broadest at anterior angles, and with sharply marked posterior angles. Prosternum (Fig. 10) strongly transverse and sharply elevated along middle; epipleura well visible in lateral view.

Elytra (Fig. 5) long, large in relation to pronotum; postero-median process of mesoven-trite acute and reaching half-way between mesocoxya; metaventrte large and long (Fig. 10). Legs without distinctive modification; tarsal formula 5, 5, 5; metatarsomere I elongate, approximately as long as the combined length of metatarsomeres II-IV (Fig. 7).



**Figs 1-7:** *Notocousya quadriceps*: habitus (1); head in dorsal view (2); head in ventral view (3); antenna (4); forebody (5); abdomen (6); hind leg (7). Scale bars: 1: 1.0 mm; 4-7: 0.5 mm; 2-3: 0.2 mm.



**Figs 6-14:** *Notocousya quadriceps*: maxilla (8); labium (9); thorax in ventral view (10); female tergite VIII (11); female sternite VIII (12); posterior margin of female sternite VIII (13); spermatheca (14). Scale bars: 10: 0.5 mm; 11-12: 0.2 mm; 8-9, 13-14: 0.1 mm.

Abdomen (Fig. 6) slender; tergites III-V with moderately deep, tergite VI with shallow anterior impressions.

♂: unknown.

♀: shapes of tergite and sternite VIII (Figs 11-12) not distinctive; posterior margin of sternite VIII with stout modified setae, these setae denser in the middle than laterally; spermatheca (Fig. 14) similar to that of many other Oxypodini, not distinctive.

**Comparative notes:** The new genus belongs to the Oxypodina and, among the general of this subtribe, is characterized particularly by the conspicuously shape of the head, the shape and chaetotaxy of the labrum, and by the distinctive shape of the pronotum. It is additionally distinguished from other East Palaearctic genera of similar habitus as follows:

from *Drepasiagonusa* PACE, 2012 by much shorter and stouter mandibles;

from *Chinecousya* ASSING, 2006 by a much larger head, much finer punctation of the forebody, much finer and denser punctation of the abdomen, distinct microsculpture on the whole body, much more slender maxillary and labial palpi, a longer galea of the maxilla, an anteriorly convex labrum (anteriorly concave in *Chinecousya*), finer antennae with less transverse antennomeres IV-X, more slender tarsi with a longer metatarsomere I, and a much longer spermatheca;

from *Cousya* by a smaller pronotum of different shape, a much larger and differently shaped head, an anteriorly convex labrum (concave in *Cousya*), a long galea, a ligula of different shape and chaetotaxy, longer meso- and metatarsomeres I, and a distinctly sclerotized spermatheca.

For illustrations of *Drepasiagonusa*, *Chinecousya*, and *Cousya* see ASSING (2006, 2018a, c) and PACE (2012).

***Notocousya quadriceps* nov.sp.** (Figs 1-14)

**Type material:** Holotype ♀: "CHINA (N-Yunnan) Zhongdian Co., Xue Shan, 10 km SW Zhongdian, 3700-3800 m, 27°46.5'N, 99°36.5'E (primary mixed forest, leaf litter sifted) 20.VIII.2003 Wrase [10A] / Holotypus ♀ *Notocousya quadriceps* sp. n., det. V. Assing 2018" (Museum für Naturkunde, Berlin).

**Etymology:** The specific epithet is an adjective composed of the Latin noun *quadra* (cuboid) and the adjectival suffix *ceps* (-headed). It alludes to the conspicuous shape of the head.

**Description:** Body length 4.6 mm; length of forebody 2.2 mm. Habitus as in Fig. 1. Coloration: head and pronotum blackish; elytra blackish-brown; abdomen blackish, with the apex (segments VIII-X and posterior margin of segment VII) paler; legs with dark reddish-brown femora and dark-reddish tibiae and tarsi; antennae blackish-brown with the basal two antennomeres slightly paler; maxillary palpi dark-brown with the apical palpomere yellowish.

Head (Fig. 2) of oblong quadrangular shape, 1.1 times as long as broad; temples long, nearly as long as eyes, and parallel; punctation fine, dense, and shallow; interstices with distinct microreticulation. Eyes of moderate size and moderately convex. Antenna (Fig. 4) 1.2 mm long and weakly incrassate; antennomeres IV-VI approximately as long as broad, VII weakly transverse, VII-X of gradually increasing width and increasingly transverse, X less than 1.5 times as broad as long, and XI approximately as long as the combined length of IX and X.

Pronotum (Fig. 5) small, approximately 1.15 times as broad as long and 1.1 times as broad as head, broadest at the sharply marked posterior angles; punctation extremely fine and dense, barely noticeable in the distinct microreticulation.

Elytra (Fig. 5) large and long in relation to pronotum, 1.3 times as long as pronotum; punctation and microsculpture similar to those of pronotum. Hind wings present. Legs slender (Fig. 7); metatarsi nearly as long as metatibiae; meso- and metatarsomeres distinctly elongate.

Abdomen (Fig. 6) much narrower than elytra; punctation extremely fine and dense, barely visible in the distinct microsculpture; posterior margin of tergite VII with palisade fringe.

♂: unknown.

♀: posterior margin of tergite VIII convex (Fig. 11); posterior margin of sternite VIII convex, in the middle indistinctly angled, with modified marginal setae, these setae dense in the middle (Figs 12-13); spermatheca as in Fig. 14.

**Distribution and natural history:** The type locality is situated in the Xue Shan near Zhongdian, Northwest Yunnan, China. The holotype was sifted from litter in a primary mixed forest at an altitude of 3700-3800 m. Since only a single specimen has been collected despite some collecting activity in the region, it appears likely that the record is somewhat accidental and that the true reproduction habitat is of a cryptic nature.

### Acknowledgements

Michael Schülke (Berlin) made the holotype available for study. Benedikt Feldmann (Münster) proof-read the manuscript.

### Zusammenfassung

*Notocousya* nov.gen. *quadriceps* nov.sp. (China: Yunnan), Tribus Oxypodini, Subtribus Oxypodina, wird beschrieben und abgebildet. Die neue Gattung enthält derzeit nur die Typusart *N. quadriceps* und ist durch die auffällige Morphologie des Kopfes (einschließlich der Mundteile) und des Pronotums charakterisiert. Die Abwesenheit früherer Nachweise deutet auf ein verborgenes Reproduktionshabitat hin.

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