Taxonomic and faunistic notes on East Palaearctic Colymbetes species, with the description of a new species from the Far East (Coleoptera: Dytiscidae)

Anders N. Nilsson


Colymbetes pseudostriatus n. sp. (Coleoptera: Dytiscidae) is described from Sakhalin in the Russian Far East. The new species that is recorded also from E Siberia, NE China and Japan was earlier confused with C. dolabratus (Paykull) and C. striatus (Linnaeus). A lectotype is designated for C. tolli Zaitzev, 1907, and this name is synonymized with Dytiscus dolabratus Paykull, 1798, n. syn. A record of C. fuscus (Linnaeus) from Thibet is confirmed.

Anders N. Nilsson, Department of Biology and Environmental Science, SE-901 87 Umeå University, Sweden; E-mail: Anders.Nilsson@bmg.umu.se

Received 25 April 2002, accepted 5 September 2002

1. Introduction

The Holarctic genus Colymbetes Clairville includes 21 species, of which 16 are known from the Palearctic Region (Nilsson 2001). The Nearctic species of the genus were revised by Zimmerman (1981). The most recent review of the Palearctic species was provided by Zaitzev (1953; English translation 1972), although Dettmer (1983) later reviewed the European species when describing the new Mediterranean species C. schildknechti. Consequently, it is the Asian species that remain least well-known today.

This paper focuses on the identity of an East Palaearctic Colymbetes species very similar to the chiefly European C. striatus (Linnaeus). I first met with this species in material from Sakhalin collected by Sergey Kholin in 1993. Since only females were available for study for several years, no firm conclusion could be made at the time. Instead I decided to identify this material as belonging to the relatively unknown C. tolli Zaitzev, described from Yakutia (Nilsson & Kholin 1994).

As I now am in possession of a male Colymbetes from Sakhalin plus type material of C. tolli, I am ready to revise all my former identifications. Quite unexpectedly, C. tolli turns out to be a junior synonym of the Holarctic C. dolabratus (Paykull). Consequently, the material I have previously attributed to this species represents an undescribed species that needs to be named.

The following abbreviations are used: (CAL) coll. R. Angus, London; (CAS) California Academy of Science, San Francisco; (CHB) coll. L. Hendrich, Berlin; (CNU) coll. A.N. Nilsson.
2. Taxonomy and faunistics

*Colymbetes striatus* (Linnaeus) (Fig. 1a)

*Dytiscus striatus* Linnaeus, 1758:411 (orig. descr.).

*Colymbetes striatus* (Linnaeus): Konve 1976:57 (faun.);
Nilsson & Holmen 1995: 142 (descr.).


C. pseudostriatus sp. n. — c. Holotype. — d. Amur. Scale bar 2.5 mm.

Note. As the studied material from West Kazakhstan and West Siberia represent the true *C. striatus*, I have accepted Konev’s (1976) records from East Kazakhstan as valid (see Fig. 2). The penis is very characteristic (Fig. 1a). There is a marked sexual dimorphism in elytral sculpture in this species. The transverse striae are much broader in the female than in the male, and the interstrial spaces are more convex. No females with less coarse, male-like striation are known.

*Colymbetes dolabratus* (Paykull) (Fig. 1b)

*Dytiscus dolabratus* Paykull, 1798:204 (orig. descr.).


*Cymatopterus striatus* (Linnaeus): Poppius 1905: 23 (misident.).

Type material. Syntypes of *dolabratus* not seen; probably in coll. Paykull SMNH. — Lectotype σ of *talli* in ZISP here designated, labelled: “Ozero v okrestn. Yakutska. Bar. Tol VIII 93”, “Colymbetes Tolli sp.n. Zaicev det.” and my lectotype label; paratype σ with same locality label and my paralectotype label, and genitalia dissected and glued to a card by me (Fig. 1b).

Additional material. σ MZH “Nikolskaja, Fl. Lena m., B. Poppius”.

Note. The type locality is shown on the map (Fig. 2). Poppius locality is situated slightly north of the type locality. A lectotype of *C. tolli* was designated in order to fix the identity of this poorly known nominal species. Besides the relatively large size, the studied specimens from Yakutia show no distinct deviations from the Scandinavian...
material they were compared with. As the widespread Holarctic *C. dolabratus* is known for its marked geographic variation (Nilsson & Holmen 1995, Zimmerman 1981) a more detailed study of this species, including molecular markers, would be most welcome.

*Colymbetes pseudostriatus* sp. n. (Fig. 1c–d)

*Colymbetes striatus* (Linnaeus): J.Balfour-Browne 1947: 451 (misident.).


*Colymbetes* sp.: Mori & Kitayama 1993: 125 (male genitalia depicted).


*Colymbetes* sp.: Mori & Kitayama 1993: 125 (male genitalia depicted).

**Diagnosis.** The new species is very similar to *C. striatus* from which it differs in the more slender and evenly narrowed penis and in the female elytral sculpture that is more or less similar to the male.

**Description.** Length 16.2–18.2 mm, width 7.9–8.9 mm. Head black; two posteromedial spots and area anterior to eyes testaceous. Antenna rufotestaceous, segments 4–11 with more or less developed apical infuscation. Palpi testaceous, apically piceous. Pronotum testaceous with well-defined black transverse medial mark somewhat narrower and shorter than in *C. striatus*. Elytron dark testaceous with transverse striae black. Ventral surface mainly black; hypomeron and epipleuron testaceous; metacoxal processes and posterior margins of abdominal sterna 3–6 rufous. Legs rufotestaceous; metafemur more or less brown. Pronotum on disc with deep striae forming open elongate cells oriented towards anterolateral angle; striae in average slightly shorter and less dense than in *C. striatus*. Elytron with transverse striae narrow and interspaces flat in male; in most females striae only slightly deeper and interspaces barely more raised; in some of the Sakhalin females striae wider and interspaces raised, almost like in *C. striatus*. Metasternal process between mesocoxae narrow, subequal to minimum width of prosternal process. Metasternal
wing broad. Abdominal sternum 2 with more than 30 narrow short ridges in each stridulatory file. Male pro- and mesotarsomeres 1–3 very broadly dilated; prototarsomeres 1–3 ventrally with about 22 rounded scales; prototarsomere 5 with ventral excavation bordered with setal rows; prototarsal claws of subequalllength, basally denticulate, and anterior claw ventrally expanded with margin straight; mesotarsal claws subequal in length, posterior claw apically curved in dorsal view; penis long and slender, evenly narrowed to apex, with apical hook, and without subapical ventral serration (Fig. 1c–d).

**Etymology.** The specific epithet means false striatus, and refers to the great similarity and earlier confusion of the two species.

**Biology.** In Sakhalin collected in coastal ponds and river lagoons with silty bottoms. Adults were collected from June to September. Three mature final-instar larvae collected in a silt pond 13 km W of Okhotskaya in South Sakhalin on 20 June 1993 probably belong to *C. pseudostriatus*.

**Distribution** (Fig. 2). Russia (Buryatia, Amur, Primorye, Sakhalin), China (Heilongjiang), and Japan (Hokkaido and North Honshu). The *Colymbetes* sp. recorded from the Upper Kolyma in the Magadan Province by Matis & Gramma (1975) may also belong to this species, or may be more likely to *C. dolabratus* because of the high latitude of the record.

*Colymbetes fuscus* (Linnaeus)  

*Dytiscus fuscus* Linnaeus, 1758: 411 (orig. descr.).  

**Material studied.** 1♂ 1♀ MNHN “Thibet, Duteuil de Rhins, 1893”.

**Note.** This species was overlooked in my review of Chinese Dytiscidae (Nilsson 1995). It was recorded from Thibet with a question-mark by Guignot (1961), and later this record was repeated by Dettner (1983). It is here confirmed. The male is almost black, maybe due to post-mortem change, but the penis and male stridulatory file are identical to European specimens.

### 3. Discussion

Besides the general similarity, *Colymbetes pseudostriatus* and *C. striatus* share the ventral excavation bordered with setal rows on male prototarsomere 5. This character is present also in *C. koenigi* Zaitzev, 1927, described from the Caucasus. I have studied 5 syntypes of Zaitzev’s species in ZISP and conclude that it is a valid species, to be separated from *C. striatus* on the smaller penis that is more abruptly narrowed subapically.

One species unknown to me that may have the same modification of the male prototarsomere 5 as these three species or not is *C. magnus* Feng, 1936, described from Tianjin in China. I have not been able to locate the unique holotype of this species. Feng’s (1936) original drawing of the penis does not exclude the possibility that his species is identical with *C. pseudostriatus*. However, based on my earlier misinterpretation of *C. tolli*, I do not want to take the risk to repeat this kind of error.

The two species *C. pseudostriatus* and *C. striatus* are seemingly allopatric east/west vicariants within the Palearctic Region. The easternmost records of *C. striatus* are from the Yenisey, whereas *C. pseudostriatus* reaches its western limit at Lake Baikal (Fig. 2). The in-between area needs additional documentation. A female in ZISP from Irkutsk (leg. V. E. Jakovlev) has the elytral sculpture typical for *C. striatus*. As some *C. pseudostriatus* females from Sakhalin display a similar sculpture, the identity of the Irkutsk female is uncertain.

I have so far not been able to examine any material of *C. pseudostriatus* from Japan. However, as the male genitalia of the "*Colymbetes* sp." illustrated by Mori & Kitayama (1993) appear identical with the ones I have seen in material from China and Russia, my conclusion is that they are conspecific. The faunas of Hokkaido and South Sakhalin are very similar indeed (Nilsson & Kholin 1994).

**Acknowledgements.** The following collectors and curators are thanked for making material available for study: Dr. R. Angus (London), Mr. J. Bergsten (Umeå), Dr. O. Biström (Helsinki), Mrs. R. Brett (San Francisco), Mr. L. Hendrich (Berlin), Dr. A. G. Kirejtshuk (St. Petersburg), Dr. S. K. Kholin (Vladivostok), Mr. N. Minakawa (Seattle), and Mr. B. Viklund (Stockholm).
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