

## Is the Japanese rhinoceros beetle, *Trypoxylus dichotomus* (Linnaeus, 1771), (Coleoptera, Scarabaeidae) a native species in Sakhalin and Kunashir Islands?

### Является ли японский жук-носорог *Trypoxylus dichotomus* (Linnaeus, 1771) (Coleoptera, Scarabaeidae) аборигенным видом на Сахалине и Кунашире?

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**Ключевые слова:** японский жук-носорог, *Trypoxylus dichotomus*, Кунашир, новые находки.

**Abstract.** The Japanese rhinoceros beetle, *Trypoxylus dichotomus* (Linnaeus, 1771) was newly collected in the Kunashir Island, at its western bank, in Early September 2024. Its status in Russia is discussed.

**Резюме.** Японский жук-носорог *Trypoxylus dichotomus* (Linnaeus, 1771) впервые собран на западном побережье острова Кунашир в начале сентября 2024 г. Обсуждается его обитание на территории России.

The Japanese rhinoceros beetle, *Trypoxylus dichotomus* (Linnaeus, 1771) [Löbl, Löbl, 2016] (formerly known as *Allomyrina dichotoma* [Krell, 2006]) was described from «Indiis» (South-East Asia). After a modern revision [Yang et al., 2021], it consists of 8 subspecies from East and South-East Asia, namely: the nominotypical one inhabits Central and South-East China; *T. dichotomus politus* Prell, 1934 [Prell, 1934] occurs in North-Eastern India, Myanmar (Burma), Thailand, Laos, and Vietnam; *T. dichotomus xizangensis* (Li, Gao et Zhang, 2015) [Li et al., 2015] in Tibet (China); *T. dichotomus shennongjii* Satoru, 2014 [Satoru, 2014] in Hubei Province of China; *T. dichotomus tsunobosonis* Kôno, 1931 [Kôno, 1931] in Taiwan; four subspecies are known from the Ryu Kyu Islands [Kusui, 1976; Nagai, 2006; Adachi, 2017], namely: *T. dichotomus inchachina* (Kusui, 1976) (Kumejima Island), *T. dichotomus takarai* (Kusui, 1976) (Okinawa Island), *T. dichotomus tsuchiya* Nagai, 2006 (Kuchinoerabu-jima Island) and *T. dichotomus shizuae* Adachi, 2017 (Yakushima and Tanegashima Islands); the northernmost subspecies *T. dichotomus septentrionalis* Kôno, 1931 occurs in North-Eastern China (Jiling, Liaoning, Heilongjiang [Löbl, Löbl, 2016]), Korea (north to Musan on a border with China) [Kim, 2011], and main

islands of Japan (Shikoku, Kyushu, Honshu, Tsushima and Hokkaido [Takahashi, 1997]). The new record from Kunashir Island is a fist for the Russian Far East.

Material is deposited in the Institute of Systematics and Ecology of Animals, Siberian Branch of the RAS, Novosibirsk.

The present work is registered in ZooBank (www.zoobank.org) under LSID urn:lsid:zoobank.org:pub:CF21B07F-5590-4339-B2EC-A0D9B9A1B46C

#### *Trypoxylus* Minck, 1920

Type species: *Scarabaeus dichotomus* Linnaeus, 1771.

= *Xyloscapes* Prell, 1934, type species: *Xylotrupes davidis* Deyrolle, 1878.

#### *Trypoxylus dichotomus* (Linnaeus, 1771)

Fig. 1.

*Scarabaeus dichotomus* Linnaeus, 1771: 529 (Indiis) [Linnaeus, 1771];

*Trypoxylus dichotomus* f. *septentrionalis* Kôno, 1931: 160 (Honshu ... Iwate).

**Material.** Russia, Kuril Islands: Kunashir, Danilovskii Kordon (=ranger station), 43°57'17" N, 145°35'34" E, on light, 1–2.IX.2024, Dubatolov, Zinchenko — 1♀, idem, 5–6.IX.2024, Dubatolov, Zinchenko — 1♀.

**Remarks.** The beetles were caught at a coastal plain with tall herbs like Japanese knotweed, not far from a slope with an oak forest. Like all Dynastinae, *T. dichotomus* larvae develop in wood dust, compost, rotten trunks and stumps, and are often bred in captivity.

In Russia there were few findings of this species in Khasan District of Primorskii Krai (Ryazanovka and Kraskino) and in Sakhalin Island, from the western sea coast, by K. Tamanuki from August, 1931 [Bezborodov

et al., 2014]. However, K. Bezborodov considered the published specimens from Khasan District and Sakhalin as occasional introductions from Japan.

The Kunashir western coast is located not more northerly than observations of the beetle in Central Hokkaido. At least, A.V. Vertyankin from Yuzhno-Sakhalinsk informed us that he has collected two females of this beetle nearly at the same latitude in North Hokkaido (Abashiri-shichō, Maruseppu, 43°59'47.74" N, 143°19'41.90" E, mountain valley, anthropogenic landscape, in a ditch with fallen leaves) as in Danilovskii Kordon in Kunashir. So, there are no reasons to consider Japanese rhinoceros beetles in Kunashir as an invasion from Japan. Most probably, there is a local population of this big and curious beetle on the western coast of Kunashir. The same is quite possible with population at the SW coast of Sakhalin. Khasan district (with two localities not from the sea coast) in Primorskii Krai [Bezborodov et al., 2014] is located also not very far from the northernmost locality of this species in Korea (Musan).

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Fig. 1. External appearance of *Trypoxylus dichotomus* (Linnaeus, 1771) female. Scale bar 1 cm.

Рис. 1. Внешний вид самки *Trypoxylus dichotomus* (Linnaeus, 1771). Масштаб: 1 см.