

**Description and note on Japanese *Byrrhus* Linnaeus, 1767
(Coleoptera: Byrrhidae)**

Takanobu KITANO

101, 6-17-8 Toro, Surugaku, Shizuoka-shi, 422-8033 Japan

Taxonomy, new species, Coleoptera, Byrrhidae, *Byrrhus*, Honshu, Japan

Abstract. A new species *Byrrhus kusakarii* sp. nov. from Honshu, Japan is described, illustrated and compared. *Byrrhus imafukui* Nakane, 1963 is discussed taxonomically and separated from *Byrrhus arietinus* Steffahn, 1843.

INTRODUCTION

In Honshu of Japan the members of the genus *Byrrhus* Linnaeus, 1767 are restricted to mountainous area, so their specimens are relatively rare. Mr. Kusakari and Mr. Saito have captured specimens of *Byrrhus* in the tip of mountain. Their habitus were rather peculiar and distinguished from 4 species occurring within Honshu.

MATERIALS AND METHODS

All materials were collected by Kusakari with the collecting permit, no. 1407114 from Tohoku Regional Environmental Office. Holotype will be deposited in the Osaka Museum of Natural History, Japan. Paratypes are in the author's collection. The habitus was taken by the camera, Stylus TG-4, Olympus and the microscope, SMZ 745, Nikon. The genital structures were drawn by the microscope, SMZ 745.

TAXONOMY

***Byrrhus* (s. str.) *kusakarii* sp. nov.**
(Figs. 1, 2)

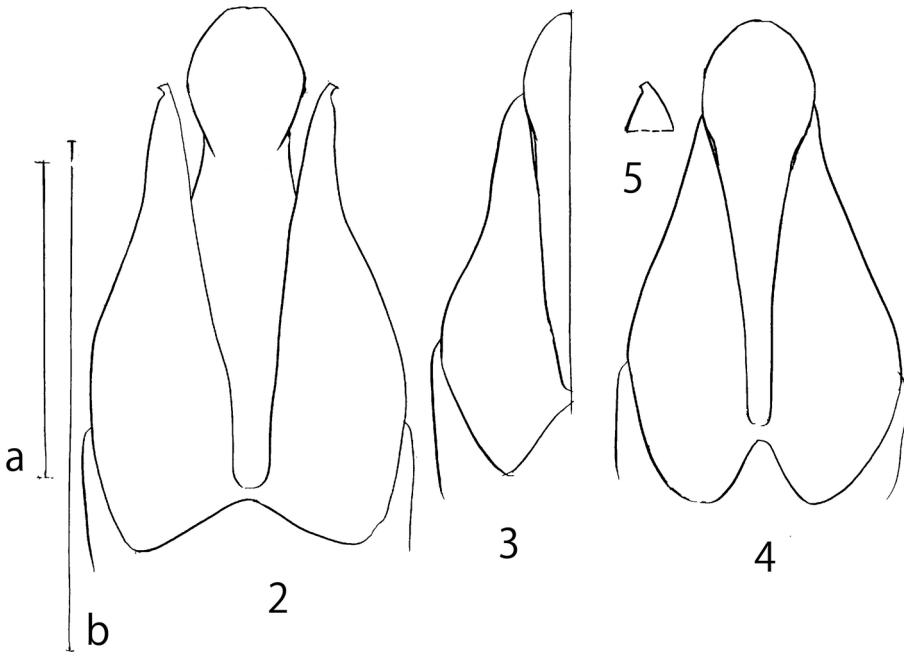
Type material. Holotype (♂): Fukushima-ken, Kitagata-shi, Kouboushimizu, alt. 1945 m, 14.VIII.2016, K. Kusakari leg. Paratypes: (2 ♀♀): same date as the holotype; (1 ♀): same locality and collector, 22.VII.2016. The holotype has one pair of depression behind the anterior angle of the pronotum. But paratypes lack such depressions.

Description. Holotype. Male. Body (Fig. 1) large, 7.0 mm length, 4.0 mm width, 1.75 times as long as wide, ovate, highly convex above. Colour dark brown: mouth parts and tarsi pale brown. Integument covered with brown hairs and golden hairs: golden ones forming vague maculation on pronotum and a wide ring on elytra; under surface covered with golden, short, and recumbent hairs. Head large, weakly convex, densely punctate, with one pair of depression on disc: golden pubescence on head conspicuous, somewhat long,



Fig. 1. Habitus of *Byrrhus kusakarii* sp. nov.

irregularly directed; labrum simply rounded at apex. Antennae 11-segmented: 3rd 1.5 times as long as 4th; last 6 segments forming club; 11th 1.6 times as long as 10th. Pronotum highly convex above: anterior angle pointed. Elytra long, moderately convex above, weakly and gently sloping posteriad: sides widest slightly behind the middle; humeral striae irregularly sinuate and contiguous to each other at basal half. Hind wing short, apart from the tip of elytra. Prosternal process widely rounded at apex. Cavity of prosternal process occupying almost all length of mesosternum. Metasternum large, densely punctate, becoming sparser toward longitudinal suture: longitudinal suture short; pleura gently tapering posteriad. Femora and tibiae dilated and flattened; external margin



Figs. 2-5. Male genitalia: 2- *Byrrhus kusakarii*; 3- *B. imafukui*; 4- *B. arietinus*; 5- tip of lateral lobe of *B. arietinus*. Scales 1 mm, a for Figs. 2-4, b for Fig. 5

of tibiae fringed with rather short spines; apices of tibiae with two spines. Claws simple, well curved, becoming thick toward base. Abdomen densely punctate: surrounded area by femoral line shallowly punctate. Male genitalia trilobed: median lobe well dilated; lateral lobes weakly sinuate in external side, pointed at the apical projection.

Female. Externally similar to male. 6.7-7.2 mm length; 4.0-4.3 mm width. 1.65-1.75 times as long as wide.

Differential diagnosis. This species resembles *B. arietinus* Steffahny, 1843 and *B. imafukui* Nakane, 1963 by having the rounded apex of the median lobe of the male genitalia. From them it may be distinguishable by the brighter body colour, the body form, the sinuated elytral striae, the well dilated median lobe.

Etymology. The specific epithet is derived from the name of collector.

***Byrrhus imafukui* Nakane, 1963**

(Fig. 3)

This species was described from Mt. Komagatake, Kiso, Honshu, Japan by Nakane (1963). Subsequently Takizawa and Nakane (1983) regarded this species as a subspecies of *B. arietinus* Steffahny. Although I failed to find out the reason for the combination in their article, this species should resemble *B. arietinus* (Fig. 4) by having the simple striae on the elytra, the large elytral ring, and the rounded apex of the median lobe of the male genitalia. Furthermore Pütz (2002, 2007) treated *B. imafukui* as a junior synonym of *B. arietinus* by the male genitalia. But this species may be distinguishable from the latter by the gently tapering pronotum, the dark hairs on the pronotum, the short hind wings, the pointed apex of the lateral lobe, and the sinuate side of lateral lobe. This species resembles *B. kusakarii* by having the large ring on the elytra, the short hind wing, the pointed apex of the lateral lobes, and the sinuate side of the lateral lobes. But this species may be distinguishable from *B. kusakarii* by the darker body colour, the simple elytral striae and the weakly dilated median lobe.

KEY TO SPECIES BELONGING TO *BYRRHUS* IN HONSHU OF JAPAN

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|---|----------------------|
| 1. Body small, less than 6 mm in length. | <i>B. pustulatus</i> |
| - Body large, more than 7 mm in length. | 2 |
| 2. Two humeral striae broken, connected to each other. | <i>B. fasciatus</i> |
| - Humeral striae not broken. | 3 |
| 3. Head small, less than half as wide as pronotum. | <i>B. geminatus</i> |
| - Head large, half as wide as pronotum. | 4 |
| 4. Elytral striae relatively simple, faintly sinuate. | <i>B. imafukui</i> |
| - Elytral striae strongly sinuate. | <i>B. kusakarii</i> |

Four species in this key except for *B. kusakarii* have various names in synonymy, so that these names may be revised like *B. imafukui*.

ACKNOWLEDGEMENTS. I thank to K. Kusakari and M. Saito for sending materials which had been collected in the protected area with official permission.

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Received 30.8.2017
Accepted: 10.10.2017
Printed: 31.3.2018