Descriptions of Two New Species of the Genus *Euconnus* (Coleoptera: Scydmaenidae) from Japan

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Abstract. Two new species of the genus *Euconnus* are described, under the names, *E. (Pycnophus) tsugaruensis* sp. nov. and *E. (P.) otorii* sp. nov. from Honshu, Japan. They can be easily distinguished from the other Japanese species of *Euconnus* by having the head and elytra almost glabrous.

The genus *Euconnus* is the major group of the family Scydmaenidae and includes about 2,500 species world wide. SHARP (1874) made a pioneer taxonomic work of the Japanese Scydmaenidae, and described *Scydmaenus japonicus* and *S. fustiger* which were transferred to *Euconnus* by SHARP (1886). Later, SHARP (1886), REITTER (1891), and FRANZ (1976) recorded, 5, 1, and 1 new species, respectively. As a result, 9 species have been hitherto known to occur in Japan.

Recently, the second author collected some specimens of *Euconnus*, whose head and elytra are almost glabrous, from Kantō District, Honshu. Moreover, the first author had an opportunity to examine 3 specimens which have similar dorsum and were collected from northern Honshu. After our careful examinations, we concluded that they belong to two new species of the sub-genus *Pycnophus* of the genus *Euconnus*. Therefore, we will describe them as two new species, under the names, *E. (Pycnophus) tsugaruensis* sp. nov. and *E. (P.) otorii* sp. nov. in this paper.

The holotypes designed in this study are deposited in the collections of the Museum of Nature and Human Activities, Hyōgo (MNHA). Most paratypes are preserved in the collection of the first author and one paratype in the Laboratory of Insect Resources, Tokyo University of Agriculture.

Before going further, we wish to express our sincere gratitude to Dr. Paweł JAŁOSZYŃSKI (Ibaraki Pref.) for his continuous help. We also owe thanks to Dr. Toshihiro OZAKI (Akita Pref.) and Mr. Koji TOYODA (Saitama Pref.) who lend us the valuable specimens.
**Euconnus** (*Pycnophus*) *tsugaruensis* HOSHINA et ARAI, sp. nov.

[Japanese name: Tsugaru-tsuya-hime-kokemushi]

(Figs. 2–4, 8–10)

Male and female. Coloration. Dorsum of body shining, almost concolorous and dark reddish brown; antennae reddish brown; meso- and metasterna, venter, coxae, and trochanters dark-reddish brown; femora reddish brown; tibiae a little lighter than femora; tarsi light brown.

Measurement of holotype: Body 1.7 mm in length; head 0.30 mm in length and 0.32 mm in width; pronotum 0.47 mm in length and 0.42 mm in width at a maximal point; elytra 0.86 mm in length and 0.78 mm in width at a maximal point.

Head almost round and sharply narrowed towards the base from eyes at lateral margins (Fig. 2), almost glabrous, but sparsely and finely pubescent along the front margin and on the occiput, impunctate and almost smooth on dorsum; vertex weakly and simply raised; eyes oval, and about 0.42 times as long as the length of head; frons almost flat; distance between antennal insertions about 0.30 times as wide as the width of head; clypeus transverse; the width of occiput at the minimal point about half as wide as the maximal width of head; antennae 0.95–0.97 mm in length; antennal club composed of terminal 4 segments, and slightly shorter than the combined length of 1st–7th segments; 1st–2nd, 7th, and 11th segments longer than wide, 3rd–6th segments almost as long as wide, 8th–10th segments a little wider than long; relative lengths of antennal segments from 1st to 11th segments as follows: 13.3 : 11.4 : 7.21 : 6.52 : 6.27 : 6.46 : 9.00 : 10.5 : 10.5 : 10.8 : 18.4 (Fig. 3); 11th segment ovate.

Pronotum hemispherical and convex on dorsum, impunctate and almost smooth, widest at about half of lateral margins, with dense, stiff, and thick setae; anterior margins almost straight in dorsal view; lateral margins feebly and simply curved from the base to the middle, and straightly narrowed thence to the anterior margins in dorsal view; posterior margins feebly produced posteriorly in the middle to scutellum in dorsal view; basal 2 foveae shallow and distant from the lateral margins in position (Fig. 4); basal transverse groove absent.

Scutellum weakly microreticulate, without punctures and pits.

Elytra widest at about the middle, impunctate and smooth on dorsum, almost glabrous except for 8–13 fine pubescence; humeri distinct; each elytron with 1 basal impression deep or shallow (varying among specimens) and 2 basal foveae small and distinct, located more closely to scutellum than lateral margins; sutural groove present on basal two-fifths of elytra along scutellum and suture (Fig. 4).

Hind wings normal.

Legs not showing sexual dimorphism; hind coxae distant from each other by one-third of length of hind coxa; front tibiae almost as long as middle tibiae; hind tibiae about 1.2 times as long as front tibiae; all tibiae stick-shaped, strongly narrowed from about basal one-third or one-fourth towards the base.

Metasternum microreticulate, with a high median carina; mesosternum smooth and convex.

Male. Aedeagus oval (Figs. 8–10), 0.26 mm in length, 0.19 mm in width; median lobe protuberant triangularly near the apex and narrowly rounded at apex in ventral and dorsal views, sharply curved in the middle and pointed apically in lateral view; parameres slender and almost
straight in ventral view and curved in an arc in lateral view; horny process triangular and curved inward at posterior margins in dorsal view.

Body length: 1.7–1.8 mm.
Distribution. Japan: Honshu (Aomori Pref.)


Notes. Female is a little thicker than that of male, pronotum and elytra about 1.2 and 1.1 times as wide as those of male, respectively. However, we examined only one male specimen, therefore can not conclude that those differences are based on the sexual dimorphism.

Biology. The subgenus Nudatoconus was described by FRANZ (1980) and was regarded as a synonym of the subgenus Pycnophus in FRANZ (1985a). FRANZ (1980) mentioned that some species belonging to Nudatoconus inhabited near banks of rivers. Three specimens of E. (P.) tsugaruensis sp. nov. were also collected from the similar environment (a collector of type series, Dr. T. Ozaki's private communication).

Remarks. Euconnus (Pycnophus) tsugaruensis sp. nov. can be distinguished easily from the other Japanese species of Euconnus by having the head and elytra almost glabrous. The present species is similar to Taiwanese species, Euconnus (Pycnophus) taiwanicus described by
FRANZ (1985b), but the hind wings are normal and the aedeagus is curved strongly in lateral view; in contrast, E. \((P.)\) taiwanicus has the atrophied hind wings and the aedeagus curved more bluntly in lateral view.

**Etymology.** The specific epithet is derived from a regional name of the western district of Aomori Pref., Tsugaru, which is the type locality.

**Euconnus (Pycnophus) otorii** Hoshina et Arai, sp. nov.

[Japanese name: Bandō-tsuya-hime-kokemushi]

(Figs. 1, 5–7, 11–13)

Male and female. Coloration. Dorsum of body shining, almost concolorous and reddish brown or dark reddish brown; antennae brown or reddish brown; meso- and metasterna, venter, coxae, and trochanters reddish brown or dark reddish brown; femora reddish brown; tibiae a little lighter than femora; tarsi light brown.

Measurement of holotype: Body 1.8 mm in length; head 0.30 mm in length and 0.37 mm in width; pronotum 0.50 mm in length and 0.44 mm in width at a maximal point; elytra 1.0 mm in length and 0.74 mm in width at a maximal point.

Head subrounded and weakly curved and narrowed towards the base from eyes at lateral margins (Fig. 5), almost glabrous except for a few pubescence along the front margin and on the occiput, impunctate and almost smooth on dorsum; vertex weakly and simply raised; eyes oval, and about 0.33 times as long as the length of head; frons almost flat; distance between antennal insertions about 0.26 times as wide as the width of head; clypeus transverses; the width of occiput at the minimal point about one-third as wide as the maximal width of head; antennae
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Figures 8–13. Male genitalia of *Euconus* spp. — 8–10, *E. (Pycnophus) tsugaruensis* Hoshina et Arai, sp. nov., 11–13, *E. (P.) otorii* Hoshina et Arai, sp. nov.; 8 and 11, ventral view; 9 and 12, dorsal view; 10 and 13, lateral view. Scale A: 0.1 mm for figs. 8–10. Scale B: 0.2 mm for figs. 11–13.

0.88–0.95 mm in length; antennal club composed of terminal 4 segments, and about 0.80 times as long as the combined length of 1st–7th segments; 1st–7th and 11th segments longer than wide, 8th–10th segments slightly wider than long or almost as long as wide; relative lengths of antennal segments from 1st to 11th segments as follows: 12.1 : 10.4 : 7.10 : 9.05 : 8.55 : 9.02 : 10.1 : 10.4 : 12.2 : 12.9 : 18.6 (Fig. 6); 11th segment ovate.

Pronotum hemispherical and convex on dorsum, impunctate and almost smooth, widest at about four-ninths of lateral margins, with dense, stiff, and thick setae; anterior margins almost straight in dorsal view; lateral margins feebly and simply curved along lateral margins; posterior margins very feebly produced posteriorly in the middle to scutellum; basal foveae and basal transverse groove absent (Fig. 7).

Scutellum weakly microreticulate, without punctures and pits.
Elytra widest at about nine-twentieths of the lateral margins, impunctate and smooth on dorsum, almost glabrous except for 4–11 fine pubescence which are present on basal half area of elytra; humeri distinct; each elytron with 1 shallow basal impression and 2 basal foveae small and distinct located along posterior margins of pronotum; sutural grooves absent (Fig. 7).

Hind wings normal.

Legs showing sexual dimorphisms; male front femora thicker than those of female, and its width 0.15–0.16 mm in male and 0.10–0.12 mm in female at the maximal points; male middle and hind femora a little wider than or almost as wide as those of female; hind coxae distant each other by three-eighths of length of hind coxa; front tibiae almost as long as middle tibiae; hind tibiae about 1.2 times as long as front tibiae; front and middle tibiae weakly curved at external margins and feebly sinuate at inner margins; hind tibiae stick-shaped, sharply narrowed from about basal one-third towards the base.

Metasternum microreticulate, with a high median carina; mesosternum smooth and convex.

Male. Aedeagus longitudinal and complex, 0.49 mm in length, 0.21 mm in width (Figs. 11–13); median lobe forked apically and its apex bluntly pointed in ventral and dorsal views, sharply narrowed from the apical two-fifths towards the apex in lateral view; parameres slender and almost straight in ventral view and feebly curved in an arc in lateral view; horn process large and its apical and basal parts round in dorsal view, curved in an arc in lateral view.

Body length: 1.6–1.9 mm.

Distribution. Japan: Honshu (Kantō District)


Biology. All specimens were collected from small wetland near ponds and from leaf litter of the dry riverbed, where high humidity was maintained. Therefore, it is possible that two Japanese species belonging to the subgenus Pycnopus of the genus Eucnus prefer the moist environment though most of Japanese species of Eucnus are collected from litter layers in forests.

Remarks. Eucnus (Pycnopus) otorii sp. nov. can be distinguished easily from the other Japanese species of Eucnus by having the head and elytra almost glabrous. This new species is similar to E. (P.) tsugaruensis sp. nov., but the head is more weakly narrowed behind eyes towards the base (Fig. 5), the elytra have no sutural grooves (Fig. 7), and the median lobe of the aedeagus is forked apically in ventral and dorsal views (Figs. 11–12). In contrast, E. (P.) tsugaruensis sp. nov. has the head sharply narrowed behind eyes (Fig. 2), the elytra with a sutural groove (Fig. 4), and the median lobe of the aedeagus triangular apically on ventral and dorsal views (Figs. 8–9).

Etymology. This new species is dedicated to a diplomat, Keisuke Ōtori (1833–1911), who played an active part in Tochigi Pref. which is the type locality.
要約

保科英人・新井志保・牛嶋啓明：本州産コケムシ科 Euconns 属の 2 新種の記載。青森県と関東地方から Euconns 属の 2 新種が、尾崎俊寛博士と第 2 著者の新井によって採集され、本論文にてそれぞれ E. (Pycnothrus) tsugaruensis sp. nov.（ツガルツヤヒメコケムシ）と E. (P.) otorii sp. nov.（バンドウツヤヒメコケムシ）として記載した。この 2 種は、頭部と上翅がほとんど無毛であることから、日本産 Euconns 属の既知種と簡単に区別できる。

References


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