
AN ADDITIONAL NEW SPECIES OF TRICHADENOTECNUM FROM JAPAN

By KAZUNORI YOSHIKAWA

Abstract

YOSHIKAWA, K. 2022: An additional new species of *Trichadenotecnum* from Japan (Psocodea: Psocidae). *Ins. matsum. n. s.* 78: 21–25.

A new species of the genus *Trichadenotecnum* (Psocodea: Psocidae) belonging to the *corniculum* species group, *Trichadenotecnum okuyamai*, was described from Awajishima Island, Japan. This is the 25th species of the genus and the third species of the *corniculum* group recorded from Japan.

Author's address. Systematic Entomology, School of Agriculture, Hokkaido University, Sapporo 060-8589, Japan. psocid@res.agr.hokudai.ac.jp

INTRODUCTION

The Japanese fauna of the barklouse genus *Trichadenotecnum* has been extensively studied by Yoshizawa (2001, 2003), in which a total of 24 Japanese species classified into seven species groups of the genus have been recorded. Most of them (19 species) were described as new in those papers and are so far endemic to this region.

Recently, I had the opportunity to examine a *Trichadenotecnum* specimen (Fig. 1) collected in Awaji-shima, a small island located between Honshu and Shikoku islands. Close examination of this specimen revealed that it represents an undescribed species of the *corniculum* species group.

In this paper, the new species is described and illustrated, and its systematic placement is discussed.

DESCRIPTION

Trichadenotecnum okuyamai n. sp.
(Figs 1–3)

Holotype male. Parking at Senkou-ji Shrine (34°21'38" N, 134°50'18" E: light trap), Awaji-shima Is., Hyogo Pref., Japan, 2. xi. 2021, F. Okuyama leg.



Figure 1. Habitus of the holotype male of *Trichadenotecnum okuyamai* n. sp. (photographed by Futaro Okuyama).

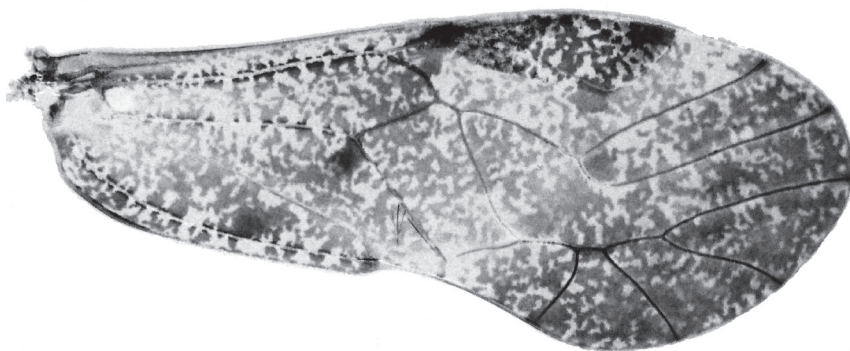


Figure 2. Forewing of the holotype male of *Trichadenotecnum okuyamai* n. sp.

Head. Almost uniformly blackish brown, including mouthparts and antennae, except for pair of white spots next to ocellar field, two pairs of pale regions on frons, and white dorsal region of postclypeus. Eyes black, IO/D = 0.7; ocellar field black.

Thorax. Blackish brown except for white membranous regions, white longitudinal line in middle of mesoscutum, and white spot on posterior region of each lateral lobe of mesoscutum; metascutum with small white spot on posterior end of each lobe; sutures of all thoracic segments black.

Legs. Blackish brown.

Wings. Forewing extensively and densely spotted as in Fig. 2; hindwing transparent, with uniform pale brownish tinge, veins dark brown.

Abdomen. Membranous segments brown, anterior segments paler; terminalia dark brown.

Terminalia. Epiproct (Fig. 3AB) expanded anterodorsally, dorsal margin with distally rounded conical projection medially. Paraproct (Fig. 3A) with papillate trichobothrial process medially; with dorsal swelling at base of distal lobe; distal process slender. Hypandrium (Fig. 3C) with three lamellate processes, left one with narrow base and broadened distally, distal margin serrated, median one shortest and smallest, partly fused to right one at base, right one with broad base, posterointernal corner serrated; right corner densely covered with denticles. Phallosome (Fig. 3D) with pair of posterior processes, base of each process with dorsal projection covered by tiny spines, and with pair of weakly sclerotized long lateral expansions arising from base of posterior processes.

Lengths. Body 2.0 mm, forewing 3.2 mm, hindwing 2.4 mm.

Female unknown.

Etymology. The specific epithet is dedicated to Futaro Okuyama who collected the holotype male of this species.

Remarks. This species can clearly be distinguished from the other species of the *corniculum* group by the shape of the hypandrium (with three lamellae: Fig. 3C) and the phallosome (with a pair of long lateral projections arising from the base of the posterior processes: Fig. 3D).

Species of the *corniculum* group have been recorded from the Oriental (China

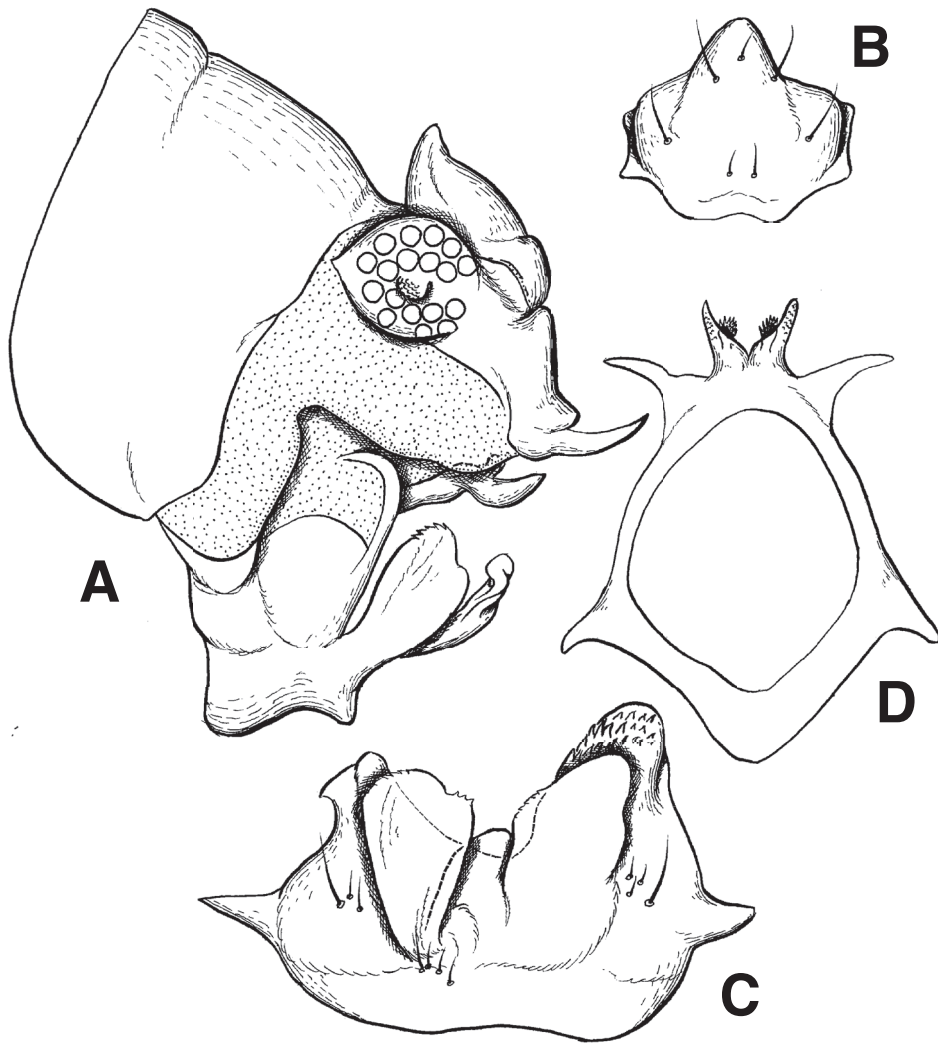


Figure 3. Terminalia of the holotype male of *Trichadenotecnum okuyamai* n. sp. A. Abdominal apex, lateral view. B. Epiproct, posterodorsal view. C. Hypandrium, posteroventral view. D. Phallosome, ventral view.

including Hong Kong, Indonesia, Singapore, Malaysia and Thailand) and eastern Palaearctic (Japan) Regions (summarized in Yoshizawa & Lienhard, 2020). Two Japanese species (*T. corniculum* Yoshizawa, 2003 and *T. germinatum* Yoshizawa, 2003) are considered to form a monophyletic group within the *corniculum* group (supported by the presence of a trichobothrial process arising from the distal end of the trichobothrial field: Yoshizawa, 2003) which represents the sister group of the clade composed of the species distributed in the Oriental Region (Yoshizawa & Lienhard, 2020). The Oriental clade can be characterized by the following apomorphies: thin lamellate hypandrial processes; apically bifurcated phallosome (Yoshizawa & Lienhard, 2020).

T. okuyamai has the lamellate hypandrial processes (Fig. 3C) and the apically bifurcated phallosome (Fig. 3D) which strongly suggest that this species belongs to the Oriental clade and is distantly related to the other Japanese species. Within the Oriental clade, *T. okuyamai* resembles to *T. cinnamomum* Endang & New, 2005 (Sumatra and Malayan Peninsula) and *T. imrum* New & Thornton, 1976 (Malayan Peninsula) in having a pair of lateral projections arising from the base of the phallosomal distal processes (Fig. 3D), but the projections of these species are much shorter than those of *T. okuyamai*. This feature may indicate their close affinity.

ACKNOWLEDGMENTS

I thank F. Okuyama for supplying the specimen and the habitus photo, M. Maruyama for giving me a chance to examine the specimen, and Charles Lienhard for reviewing the manuscript. This study was partly supported by JSPS grant number 19H03278.

REFERENCES

- Endang, S. K. & New, T. R. 2005. The genus *Trichadenotecnum* (Insecta: Psocoptera: Psocidae) in Sumatra, Indonesia, with description of thirteen new species. Records of the Australian Museum 57: 15–38.
- New, T. R. & Thornton, I. W. B. 1976. Psocomorpha (Psocoptera) from the Malayan Peninsula. Oriental Insects 9: 375–418.
- Yoshizawa, K. 2001. Systematic revision of Japanese *Trichadenotecnum* Enderlein (Psocodea: "Psocoptera": Ptyctini), with redefinition and subdivision of the genus. Invertebrate Taxonomy 15: 159–204.
- Yoshizawa, K. 2003. Two new species that are likely to represent the most basal clade of the genus *trichadenotecnum* (Psocoptera: Psocidae). Entomological Science 6: 301–308.
- Yoshizawa, K. & Lienhard, C. 2020. The *Trichadenotecnum corniculum* species group from Thailand (Psocodea: Psocidae). Dugesiana 27: 173–181.

