

## A New Species of *Paraneseuthia* Franz (Insecta, Coleoptera, Scydmaenidae) from Japan

Paweł Jaloŝzyński

Os. Wichrowe Wzgórze 22/13, 61-678 Poznań, Poland  
email: japawel@man.poznan.pl

**Abstract** A new species of *Paraneseuthia* Franz, *P. inexpectata* sp. nov., is described. The type material has been collected in Kanagawa Pref., central part of Honshu, and the new species is the third representative of the genus known to occur in Japan. External morphology of *P. inexpectata* is very similar to that of *P. trepida* Kurbatov and *P. saga* Kurbatov (both known from the Russian Far East); unique structures of the aedeagus allow for unambiguous discrimination between these three allied species. Illustrations of the aedeagus and habitus photo are given.

**Key words:** Coleoptera, Scydmaenidae, *Paraneseuthia*, taxonomy, new species, Japan.

### Introduction

Two species of *Paraneseuthia* Franz have been reported to occur in Japan: *P. paradoxa* (K. Sawada) (originally described in *Euthiconus* Reitter), and *P. holzneri* (Franz) (originally placed in *Eutheia* Stephens). Both species were very recently redescribed, and the genus was transferred from the tribe Cephenniini to the Eutheini (Jaloŝzyński & Hoshina, 2004). *Paraneseuthia paradoxa* is known from scarce findings in eight prefectures in Honshu and Kyushu, and the holotype male of *P. holzneri* collected in Tokyo Pref. is the only known specimen of that mysterious species. The beginning of my second stay in Japan (from July 2005) brought an unexpected finding of three individuals of *Paraneseuthia*, found in Sagamiko environs, in the northern part of Kanagawa Pref., central Honshu. The beetles, collected from a wet rotten wood accumulated inside a hollow deciduous tree, included two males and a female, clearly representing an undescribed species. Interestingly, mountains and river valleys around Sagamiko were visited by me nearly twenty times during my previous stay in Japan, and rotten wood from the same hollow tree was already sifted two years before. At that time, individuals of *Morana elegans* Tanokuchi and *Trib-*

*asodes* sp. (Staphylinidae, Pselaphinae) were found, but no scydmaenids. Also this time the hollow tree was found to be inhabited by pselaphines: *Diartiger kubotai* Nomura, and an undescribed species of *Tribasodes*. The new *Paraneseuthia* is described herein under the name of *P. inexpectata* sp. nov.; the type material is deposited in the National Science Museum, Tokyo, Japan (NSMT) and the private collection of the author, Poznań, Poland (PCPJ).

### *Paraneseuthia inexpectata* sp. nov.

(Figs. 1, 2A, B)

**Diagnosis.** This species differs from all congeners in the shape of the aedeagus, which has bilobate apex of the median lobe and a pair of blunt, curved rod-like sclerites covered with minute denticles.

**Description.** Body small, elongate, relatively convex, testaceous, legs, palpi and antennae slightly lighter, vestiture yellowish.

Male. (Fig. 1). Body length: 1.03–1.06 mm (mean 1.04 mm); head widest at large, very convex and coarsely faceted eyes, length 0.15–0.16 mm (mean 0.155 mm), width 0.20 mm, vertex and frons convex, covered with sparse and fine punctures; setation sparse, composed of short,



Fig. 1. *Paraneuseuthia inexpectata* sp. nov., holotype male. Actual length 1.06 mm.

suberect setae. Antennae 0.32–0.35 mm in length (mean 0.33 mm), antennomere I 2.5 times as long as broad, slightly flattened dorso-ventrally, antennomere II as long as 1.5 length of I, 1.5 times as long as broad, antennomeres III–V each about as long as broad and half as long as II, VI–VIII each slightly larger than V, IX broader than long, about 1.5 times as broad as VIII, X slightly broader and slightly longer than IX, transverse, antennomere XI subconical with rounded sides and blunt apex, about as long as IX–X together, slightly broader than X.

Pronotum nearly subquadrate, slightly broader than long, broadest near middle or slightly anterior to middle, length 0.25–0.26 mm (mean 0.255 mm), width 0.27–0.3 mm (mean 0.28 mm). Anterior margin broadly rounded; lateral margins only slightly rounded, very finely serrate; hind angles

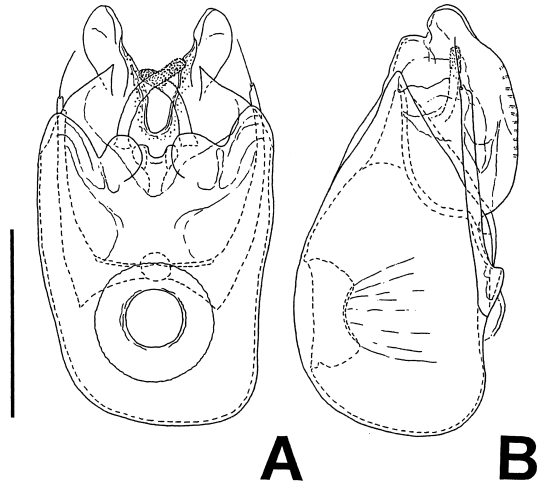


Fig. 2. *Paraneuseuthia inexpectata*; aedeagus in dorsal (A) and lateral (B) views. Scale: 0.1 mm.

obtuse; basal margin nearly straight; base with pair of shallow lateral impressions. Punctuation moderately dense, very fine but sharply marked and well visible under 40 $\times$  magnification; setation moderately dense, relatively short, composed of thin, recumbent to suberect setae.

Elytra oval, broadest between middle and anterior third, length 0.54–0.55 mm (mean 0.545 mm), width 0.40–0.42 mm (mean 0.41 mm), EI (elytral index=length/width) 1.31–1.35. Humeral calli only slightly raised; single basal fovea on each elytron very shallow and barely visible, located closer to humeral callus than to large, triangular scutellum with shallow circular median impression near its anterior margin; apices of elytra broadly rounded. Punctuation dense and composed of punctures much larger than those on pronotum, punctures are slightly irregular so that surface of elytra appears coarse; setation distinctly longer than that on pronotum, composed of thicker setae, which are moderately dense and suberect. Hind wings well developed, about twice as long as elytra.

Pygidium subtriangular with rounded sides and apex, covered with moderately dense punctures and short suberect setae.

Metasternum regularly convex, with fine but

relatively dense punctation.

Legs long and slender, with protibiae curved inwards and distinctly angulate between basal third and middle of inner margin; mesotibiae recurved; metatibiae nearly straight; all tarsi longer than half length of tibiae.

Aedeagus (Figs. 2A, B) small, 0.22 mm in length, with pair of oval lobes protruding from apex, deeply emarginate between lobes, and with pair of rod-like, blunt sclerites covered with coarse sculpture resembling minute denticles; parameres slender, not exceeding apex of median lobe, each bearing single, long apical seta.

Female. Externally similar to male, differs in less distinctly curved protibiae and slightly more stout elytra; body length 1.01 mm, length of head 0.16 mm, width of head 0.20 mm, length of antenna 0.32 mm, length of pronotum 0.26 mm, width of pronotum 0.29 mm, length of elytra 0.50 mm, width of elytra 0.40 mm, EI 1.25.

Holotype, ♂, white printed label “JAPAN, Kanagawa Pref., Mt. Arashiyama ad Sagamiko, ca. 300 m, 23. vii. 2005, in rotten wood of hollow, alive tree, P. Jałoszyński leg.” and red printed label “*PARANESEUTHIA inexpectata* m., det. P. Jałoszyński, 2006, HOLOTYPUS” (NSMT). Paratypes: 1 ♂, 1 ♀, same data as for holotype, except for yellow label with “PARATYPUS” (PCPJ).

*Distribution.* Japan, Central Honshu (Kanagawa Prefecture).

*Etymology.* This species is named “*inexpectata*” because of its surprising discovery in a place where frequent previous collectings have not brought any *Paraneseuthia*.

*Remarks.* Far Eastern species of *Paraneseuthia* have a very uniform morphology, and only Japanese *P. paradoxa* is easily distinguishable on the basis of a minute denticle located on

the internal margin of protibiae in males (Fig. 2F in Jałoszyński & Hoshina, 2004). Moreover, males of this species have modified, impressed metasternum. Males of the remaining species — *P. holzneri*, *P. saga* Kurbatov, *P. trepida* Kurbatov, and the newly described *P. inexpectata* — have protibiae bent and distinctly angulate, but their internal margin does not bear any denticle, and their metasterna are regularly convex. They are externally almost identical, and can be unambiguously distinguished only by examination of the aedeagus. *Paraneseuthia saga* and *P. trepida* are known from the Russian Far East, whereas *P. holzneri* was described from Tokyo Prefecture, Honshu, Japan. Its type locality is in the Okutama area, relatively close to the type locality of *P. inexpectata*. The only known male specimen of the former species is distinctly smaller than males of the new member of the genus (0.89 mm vs. 1.03–1.06 mm). The aedeagus of *P. inexpectata* is most similar to that of *P. trepida*, which also has elongate lobes in the apical part of the median lobe. However, the median part of apex is distinctly different in those two species, with a T-shaped median structure in *P. trepida*, not present in *P. inexpectata*.

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### Reference

- Jałoszyński, P., & H. Hoshina, 2004. Revision of Japanese species of *Paraneseuthia* Franz (Coleoptera, Scydmaenidae). *Jpn. J. syst. Ent.*, **10**: 133–143.