

A new species of the genus *Formosotoxotus* Hayashi, 1960 from China, with additions to the description of *Agastophysis meiyingae* Miroshnikov, 2014 (Coleoptera: Cerambycidae)

Новый вид рода *Formosotoxotus* Hayashi, 1960 из Китая с дополнениями к описанию *Agastophysis meiyingae* Miroshnikov, 2014 (Coleoptera: Cerambycidae)

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KEY WORDS: Coleoptera, Cerambycidae, Apatophyseini, *Formosotoxotus*, new species, China, Tibet, *Agastophysis meiyingae*, holotype, new data.

КЛЮЧЕВЫЕ СЛОВА: Coleoptera, Cerambycidae, Apatophyseini, *Formosotoxotus*, новый вид, Китай, Тибет, *Agastophysis meiyingae*, голотип, новые данные.

ABSTRACT. A new species *Formosotoxotus gressitti* sp.n. from Tibet, China is described. New data on the holotype of *Agastophysis meiyingae* Miroshnikov, 2014 are given.

РЕЗЮМЕ. Описывается новый вид *Formosotoxotus gressitti* sp.n. из Тибета (Китай). Приведены новые данные о голотипе *Agastophysis meiyingae* Miroshnikov, 2014.

## Introduction

Until recently *Formosotoxotus auripilosus* (Kano, 1933), an insular species from Taiwan, was the only known representative of this genus in the fauna of China [Ohbayashi, 2007]. Discovery of *F. kucerai* Rapuzzi et Sama, 2014, described from Shaanxi Province [Rapuzzi & Sama, 2014], not only brought the first continental Chinese species for the genus, but also it considerably expanded the generic distribution boundary northwards. A new species from eastern Tibet, described here, somewhat fills the gap between the known distributional records of *F. kucerai* and the other two species, *F. masatakai* N. Ohbayashi, 2007 and *F. nobuoi* Vives et Niisato, 2006, known from Sikkim, India and eastern Nepal, respectively. Furthermore, we are aware of another new, yet undescribed species of this genus from Tibet that has already been mentioned by one of the authors [Miroshnikov, 2014].

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IZAS — Institute of Zoology, Chinese Academy of Sciences, Beijing, China;

MNHN — Muséum national d'Histoire naturelle, Paris, France;

cAM — coll. Alexandr Miroshnikov (Krasnodar, Russia);

cCC — coll. Chang-Chin Chen (Tianjin, China);

cEV — coll. Eduard Vives (Barcelona, Spain);

cNO — coll. Nobuo Ohbayashi (Kamimiyada, Miura City, Japan);

cWB — coll. Wen-Xuan Bi (Shanghai, China).

## *Formosotoxotus gressitti* Miroshnikov et Lin, sp.n.

Figs 1–3, 5, 10–12

MATERIAL. China, Xizang (Tibet) Province: holotype ♂ (IZAS, IOZ(E) 1905132), Linzhi Distr., Bomi, Tongmaizhen, 30°06'09" N, 95°04'47" E, 2060 m, 14.VIII.2012, light trap, leg. Gan-Yan Yang; paratype ♂ (IZAS, IOZ(E) 1905133), same label; paratype ♂ (cAM, ex IZAS, IOZ(E) 1905134), same label; 2 paratype ♂♂ (IZAS, IOZ(E) 1905135 & 1905297), same locality, but 2070 m, 29.VIII.2006, leg. Ming Bai.

The type series includes also the paratypes either studied by their pictures alone or examined by Wen-Xuan Bi, Chang-Chin Chen or Nobuo Ohbayashi: 5 paratypes ♂♂ (cCC), same locality as holotype, but with 2100 m, 29.VIII.2005, leg. Song; 2 paratypes ♂♂ (cNO), same label; 2 paratypes ♂♂ (cWB), same label; 2 paratypes ♂♂ (cCC), same label, but with 30.VIII.2005; 51 paratypes ♂♂ (cCC), same locality, but with 22.VIII.2011, leg. Hai-Lin Yang & Jian-Yun Wang; 2 paratypes ♂♂ (will be stored in IZAS), same label; 2 paratypes ♂♂ (will be stored in cAM), same

label; 4 paratypes ♂♂ (cNO), same label; 2 paratypes ♂ and ♀ (cWB), Bomi, Pailong, 2000 m, 2.IX.2011, leg. Wen-Xuan Bi; 2 paratypes ♂♂ (cCC), Bomi, Suotong, 2065 m, 14.VIII.2012, leg. Xiao-Dong Yang; 2 paratypes ♂♂ (cNO), same label.

COMPARATIVE MATERIAL. *Formosotoxotus masatakai* N. Ohbayashi, 2007: holotype ♂ (Fig. 6) (MNHN), "Mus.Hist.Nat., Harmand, Sikkim, 1890", "Holotype *Formosotoxotus masatakai* N. Ohbayashi, 2007" (Fig. 7); *Formosotoxotus nobuoi* Vives et Niisato,



Figs 1–9. *Formosotoxotus* ssp.: 1–3, 5 — *F. gressitti* sp.n.; 4, 6–7 — *F. masatakai*; 8–9 — *F. nobuoi*; 1, 3–6, 8 — holotypes males; 2 — paratype female (photograph by W.-X. Bi); 3–4 — left metatibia, inner view; 5 — tergite 8, dorsal view; 7, 9 — labels of the holotype.

Рис. 1–9. *Formosotoxotus* ssp.: 1–3, 5 — *F. gressitti* sp.n.; 4, 6–7 — *F. masatakai*; 8–9 — *F. nobuoi*; 1, 3–6, 8 — голотипы, самцы; 2 — паратип, самка (фотография В. Би); 3–4 — левая задняя голень, вид с внутренней стороны; 5 — 8-й тергит, вид сверху; 7, 9 — этикетки голотипа.

2006: holotype ♂ (Fig. 8) (cEV), “nr. Taplejung ca, 2000 m alt., Nechi Province, E. Nepal, 13–18.VI.2000, local collector”; “Holotipo ♂ *Formosotoxotus nobuoi* Vives — Niisato leg. (Fig. 9); paratype female (cEV), same geographical label.

**DIAGNOSIS.** *Formosotoxotus gressitti* **sp.n.** seems to be especially similar to *F. masatakai*, but differs clearly in the structure of all tibiae (at least so in the male), less strongly developed antennal tubercles, evidently deeper median dorsal groove on the head, more strongly transverse pronotum with more strongly developed tubercles on its disk, more strongly convex tuberculiform elevation at the base of elytra, somewhat different form of tarsomere 2, more strongly elongated antennomeres 2 and 3, different form of tergite 8, and usually darker body coloration. A new species can also be compared to *F. nobuoi*, from which it differs in more robust body, more strongly narrowed towards the apex and less strongly elongated elytra, shorter antennae, as well as (as and from *F. masatakai*) in the structure of tibiae, in the more strongly convex tuberculiform elevation at the base of elytra, as well as in different shape of the pronotum, tarsomere 2 and tergite 8. *F. gressitti* **sp.n.** differs from *F. kucerai* at least in the form of the pronotum, structure of tibiae, coloration of the body integument and setation.

**DESCRIPTION.** Male (Fig. 1). Body length 11.6–18.0 mm, humeral width 4.0–6.3 mm. Dark reddish-brown, sometimes mostly reddish-brown.

Head with well-developed antennal tubercles and a sharp deep median groove; with moderately dense, small puncturation; eyes evidently but shallowly emarginate, with large ocelli; genae long, barely shorter than transverse diameter of eye; antennae non-serrate, evidently shorter than body; antennomere 1 subequal in length to 3<sup>rd</sup>, 1.08–1.14, 0.93–1.03 or 1.02–1.09 times as long as 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup>, respectively; antennomere 2 elongated, 1.30–1.44 times as long as wide.

Pronotum at level of lateral tubercles 1.19–1.27 or 1.24–1.33 times as wide as width at base and length, respectively; base 1.15–1.25 times as wide as apex; lateral tubercles well-developed; disk with four strong tubercles, the ones at base being obliquely transverse; with small, more or less dense puncturation, mainly on discal tubercles and between them.

Scutellum moderately narrowed towards apex; in length much shorter than width at base; apex truncate; with evident longitudinal median impression.

Elytra 1.96–2.05 times as long as width at base; moderately narrowed towards apex; with distinct longitudinal ribs but unclear puncturation; each elytron at base evidently tuberculiform, elevated; apices of both together rounded.

Prosternal process very narrow between coxae; mesosternal process moderately wide; base of mesosternum with clear dense transverse wrinkles; metasternum and sternites with heterogeneous, mainly small, partly moderately dense puncturation; last (visible) sternite not impressed.



Figs 10–12. Male genitalia of *Formosotoxotus gressitti* **sp.n.** (holotype): 10 — dorsal view; 11 — ventral view; 12 — lateral view.  
Рис. 9–12. Гениталии самца *Formosotoxotus gressitti* **sp.n.** (голотип): 10 — вид сверху; 11 — вид снизу; 12 — вид сбоку.

Legs robust, moderately long; femora not claviform; all tibiae on inner side, meso- and metatibiae on external side, with well-expressed broad longitudinal impression extending throughout apical half and partly on basal half (Fig. 3) (tibiae in *F. masatakai* — Fig. 4, and *F. nobuoi* with weak or very weak longitudinal impression); tarsomere 2 of all tarsi strongly broadened from base towards apex, relatively short, width at apex barely shorter than length (tarsomere 2 of all tarsi of *F. masatakai* and *F. nobuoi* moderately broadened from base towards apex, width at apex evidently or much shorter than length).

Recumbent setation well-developed, greyish, with silver tint.

Genitalia (Figs 5, 10–12). Tergite 8 in length much shorter than width at base, apex rounded (in *F. masatakai* and *F. nobuoi*, tergite 8 at apex widely or narrowly truncate, respectively), with numerous long setae. Median lobe about 1.5 times as long as tegmen, moderately curved; median struts about 0.6 times as long as total length of median lobe; dorsal plate slightly shorter than ventral plate; median foramen not elongated; internal sac without basal armature or rods. Tegmen with lateral lobes about 0.18 times as long as total length; each lobe thick, at apex with long setae.

Female (Fig. 2). Resembles the male, but body slenderer while antennae and legs less robust; body length 17.5 mm, humeral width 6.0 mm.

DISTRIBUTION. Eastern Tibet, China.

ETYMOLOGY. The new species is named in the memory of Dr. Judson Linsley Gressitt, whose centenary is celebrated this year.

#### *Agastophysis meiyingae* Miroshnikov, 2014

This species has just been described from Tibet as well [Miroshnikov, 2014]. However, when preparing the layout of the volume for publication which contained the description, a text fragment concerning the studied material was inadvertently omitted. In this connection, the error is corrected with the following missing information given below.

*Agastophysis meiyingae* has been described, based on the following material (one male only): holotype [IZAS, IOZ(E)1905117], China, Xizang Prov., Shannan Distr., Naidong, 1981, leg. Xin-Nian Li & Bao-Hai Wang. It is this

precise locality that must be taken as the *locus typicus* of the present taxon.

Considering the original description of *A. meiyingae*, it is noteworthy that, although the information about the material was missing, the colour pictures of the holotype and the corresponding figure captions are available, with the necessary references to these pictures given directly in the text [Miroshnikov, 2014, pp. 27, 47, figs 91–92, 98]. In this connection, the holotype designation of *A. meiyingae*, as well as the taxon's validity as quoted in the original description remain unquestioned.

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