

A New Species of the Genus *Protocypus* Müller of the Family Staphylinidae (Insecta: Coleoptera) from Central Japan

Shun-ichiro Naomi¹⁾ and Yoshiaki Tahira²⁾

¹⁾ Natural History Museum and Institute, Chiba
Aoba-cho 955-2, Chuo-ku, Chiba 260-8682, Japan
E-mail: naomi@chiba-muse.or.jp

²⁾ Carrot House 405, Takamatsu 2-7-1,
Suruga-ku, Shizuoka 422-8034, Japan
E-mail: yshkthr_shizuo@ybb.ne.jp

Abstract A new species of the staphylinid genus *Protocypus* Müller, *P. amagiensis* Naomi et Tahira sp. nov., is described from Izu-Peninsula, Shizuoka Prefecture, central Japan. This new species belongs to the species group of *dorsalis* Sharp, 1889, and is closely related to *P. dorsalis* Sharp, 1889, *P. izayoi* Naomi, 1992b, and *P. fujiensis* Naomi, 1992b of the species group, but it is clearly separable from them by the paramere of aedeagus distinctly emarginate at apex, with three pairs of setae along its apical margin.

Key words: Insecta, Coleoptera, Staphylinidae, *Protocypus*, new species, Japan.

The staphylinid genus *Protocypus* Müller, 1923 of Japan, belonging to the subfamily Staphylininae, was once revised by Naomi (1992a, 1992b, 1992c), and was classified into four species groups (*scutiger*-group, *dorsalis*-group, *iyonus*-group and *kisonus*-group) and 18 species. Since then, Naomi (2004) described a new species *P. watarasensis* from Tochigi Prefecture, Kanto District, which is in itself to form a new species group, viz., *watarasensis*-group. Thus, up to the present, 19 species belonging to five species groups are recorded from Japan. Of these groups, the *dorsalis* group is composed of five species: two species from Kii Peninsula and three species from Chubu and Kanto Districts. However, until now, no member of this species group has been reported from Izu-Peninsula, Shizuoka Prefecture. In the course of this study, we discovered an undescribed species of this species group from Mt. Amagi, Izu Peninsula. In this paper, we describe a new species under the name of *Protocypus amagiensis*.

This study is based on five specimens collected by Mr. Toru Kato. The holotype of the new species is deposited in the Natural History Museum and Institute, Chiba (CBM-Z1).

Taxonomic Account

Protocypus amagiensis Naomi et Tahira, sp. nov.
(Figs. 1, 2)

Description. Male and female. Body 19.7-21.6 mm in

length; head, pronotum and elytra almost black to dark brown, weakly shining to dull; abdomen in general dark brown, weakly shining, but posterior segments a little paler in color than anterior segments, paratergites and posterior marginal area in each of 3rd to 6th abdominal segments dark red; labrum reddish brown with dark brown anterior margin; antennae dark reddish brown to reddish brown and moderately shining in basal segments, reddish brown to reddish yellow and weakly shining to dull in apical segments; legs entirely reddish brown.

Head suborbicular, broader than long (1 : 0.78); anterior margin between antennal tubercles very weakly arcuately emarginate or nearly straight; posterolateral margins behind eyes moderately rounded; eyes small, very weakly swollen dorsally; surface covered with very small, round, regular, shallow and somewhat obsolete punctures, and short, fine and reddish brown to yellowish red pubescence, with 7 pairs of macrosetae. Antennae slender, reaching behind the middle of pronotum, apical part of 1st segment a little narrower than 10th segment; 10th segment a little broader than long; 11th segment strongly asymmetrical when seen dorsally, pointed, with relative lengths of antennal segments from base to apex as 25 : 13 : 14 : 10 : 10 : 9 : 8 : 8 : 7 : 7 : 10.

Pronotum moderately convex dorsally, about as long as broad, almost straight or very weakly arcuately emarginate at median part of anterior margin, strongly declivous anterolaterally, moderately

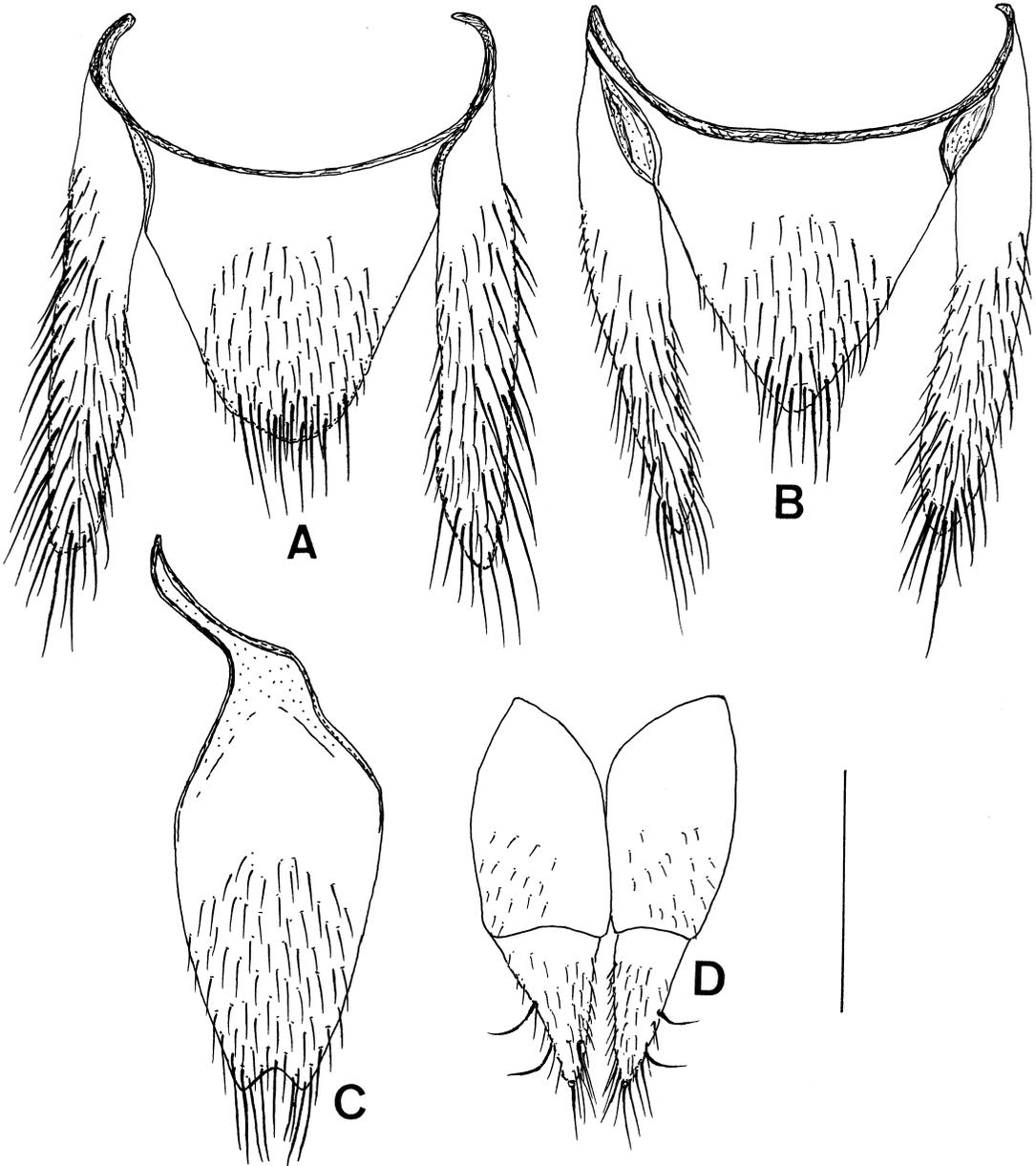


Fig. 1. *Protocypus amagiensis* sp. nov. A, C, holotype, male; B, D, paratype, female. A, ninth and tenth tergites of male (dorsal view); B, ninth and tenth tergites of female (dorsal view); C, ninth sternite of male (ventral view); D, ninth sternite of female (ventral view). Scale: 1 mm for A to D.

rounded at posterolateral and posterior margins; surface similarly punctate and pubescent as on head, with a pair of macrosetae at anterior marginal area, another pair of macrosetae at anterolateral corners, and the other pair at the middles of lateral margins, median impunctate area running at posterior half of pronotum, very thin but distinct. Mesoscutellum

large, densely pubescent and minutely regularly punctured.

Elytra broader than long (1:0.82), weakly narrowed anteriorly, gently rounded laterally, hind margins together forming a large wide emargination of almost elytral width; surface weakly uneven; punctures very dense, small and somewhat obsolete;

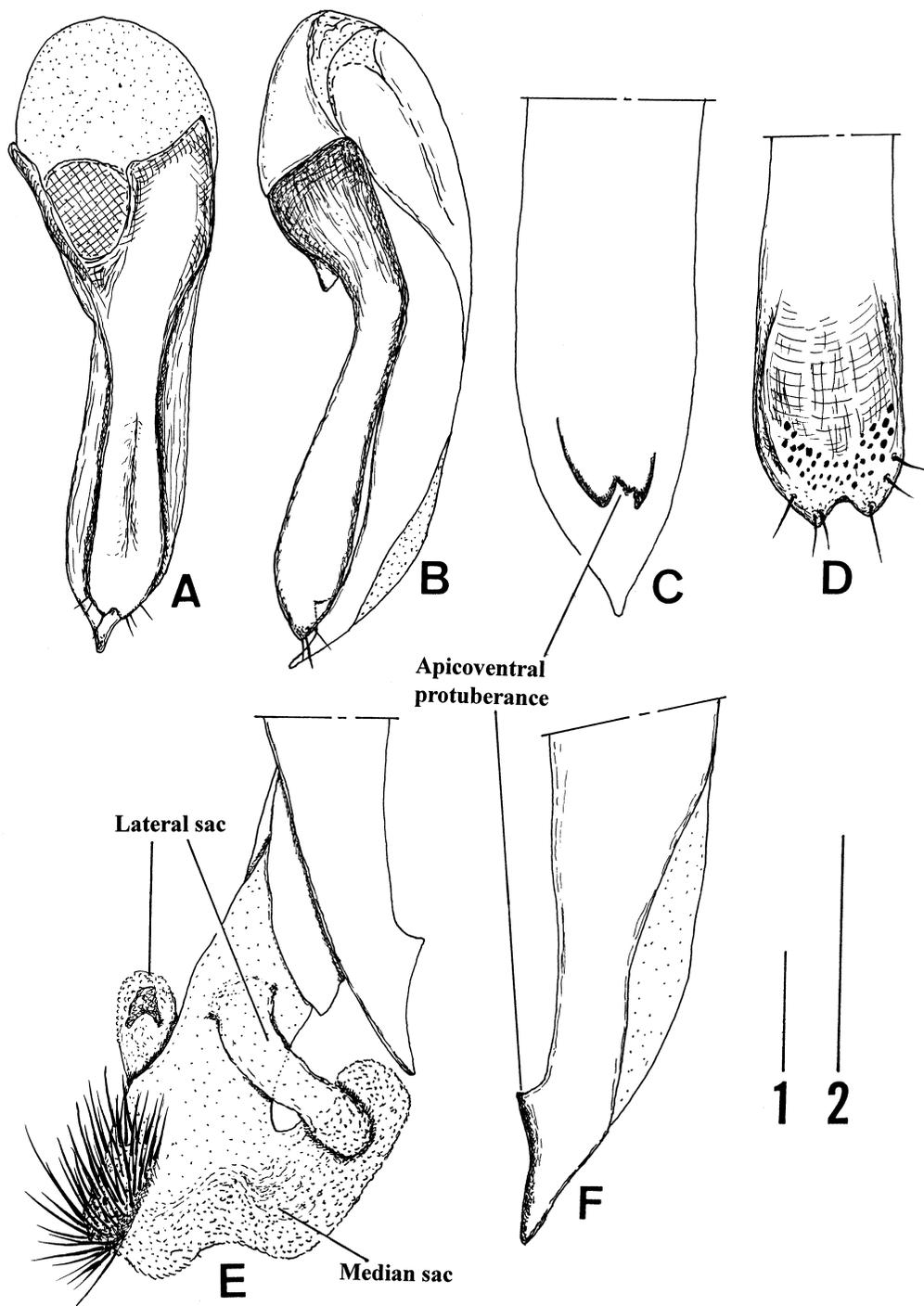


Fig. 2. *Protocypus amagiensis* sp. nov. Holotype, male. A, aedeagus (ventral view); B, aedeagus (lateral view); C, apical part of median lobe (ventral view); D, apical part of paramere (dorsal view); E, inverted internal sac of median lobe (lateral view); F, apical part of median lobe (lateral view). Scale 1: 0.25 mm for C - F; scale 2: 1mm for A, B.

pubescence very dense, reddish brown to reddish yellow, with 2 pairs of macrosetae at side margins, other two pairs of macrosetae on elytra.

Legs robust, anterior tibiae moderately thickened anteriorly, each with several thick setae at apical margin; anterior tarsi with first to fourth tarsomeres much dilated laterally, but becoming gradually narrower apically; middle tarsi each with thick setae in their full length; hind tarsi each also provided with thick setae at apical half, but the setae smaller and narrower than those on the middle tibiae.

Abdomen well-developed, weakly broadened posteriorly, broadest at hind margin of fifth segment; each abdominal segment with erect and robust paratergites; surface almost coriaceous, very densely pubescent; 6th tergite with a large basimedial marking composed of golden yellow pubescence; seventh tergite with a similar marking as on sixth tergite but the marking a little smaller.

Male. Seventh sternite with very shallow arcuate emargination at middle of posterior margin; eighth sternite with deep triangular emargination at middle of posterior margin; ninth tergite (Fig. 1A) composed of a pair of broadly separated, densely setose lobes; ninth sternite (Fig. 1C) equipped with slender anterior strut turned right, with posterior half moderately setose, and posterior margin with V-shaped emargination; 10th tergite (Fig. 1A) entire, moderately pubescent in posterior part, with apical portion broader than that of female.

Aedeagus with median lobe moderately bulbous and mostly submembranous at base (Fig. 2A,B), constricted a little before middle when seen ventrally (Fig. 2A), gently curved ventrally when seen laterally (Fig. 2B), with apicalmost portion pointed when seen ventrally (Fig. 2A,C), very acutely pointed when seen laterally (Fig. 2B, E, F), apicoventral protuberance distinct, slightly asymmetrical, almost W-shaped when seen ventrally (Fig. 2C), acutely pointed when seen laterally (Fig. 2F); internal sac of median lobe (Fig. 2E) strongly membranous, when inverted, composed of a large median sac and paired small lateral sacs which are located near the base of median sac; median sac strongly bent ventrally, equipped with a densely setose area located at apicodorsal part; surface of apical portions of both inverted median and lateral sacs covered with very minute tubercles; paramere extending posteriorly just before apex of median lobe (Fig. 2A, B), robust at base, strongly constricted before the middle, then weakly broadened apically when seen ventrally (Fig. 2A), with small V-shaped emargination at the middle

of apical margin (Fig. 2A,D), and with 3 pairs of moderately long setae at apicolateral margins (Fig. 2B,D), dorsal surface of apical part of paramere weakly concave, with black sensory tubercles characteristically arranged as in Fig. 2D.

Female. External structure very similar to that of male; eighth sternite entire; ninth tergite (Fig. 1B) very similarly structured as in male; ninth sternite (Fig. 1D) with hemisternites large, each very shallowly arcuately emarginate at posterior margin; coxites each almost triangular in shape; styli each very minute but distinct; 10th tergite (Fig. 1B) well-developed, almost triangular in shape, moderately pubescent in posterior part.

Type series. Holotype: male (CBM-ZI 122104), Amagi-Pass, Nashimoto, Kawazu-cho, Kamo-gun, Shizuoka Prefecture, 23 August to 2 October 2007, Toru Kato leg. Paratypes: 1 male, 2 females, same data as holotype; 1 female, same locality, 24 July to 5 August 2007, Toru Kato leg.

Distribution. Izu Peninsula, central Honshu, Japan.

Remarks. *Protocypus amagiensis* sp. nov. possesses typical characteristics of the *dorsalis* group in that the legs are entirely reddish brown, and the apicalmost portion of median lobe of the aedeagus is minutely pointed when seen ventrally (Fig. 2A, C), and is very acutely pointed when seen laterally (Fig. 2B, E, F). This new species is closely allied to *P. dorsalis* Sharp, 1889, *P. izayoi* Naomi, 1992b, and *P. fujiensis* Naomi, 1992b of the *dorsalis* group, but it is clearly separable from them as follows: the paramere is distinctly emarginate at the apical margin (Fig. 2A, D) in *P. amagiensis*, while in the latter three allied species, it is entire at the apical margin; the apical margin of the paramere is provided with three pairs of setae in *P. amagiensis* (Fig. 2A, B, D), while it bears four pairs of setae in the three allied species.

Etymology. The specific epithet of this new species is derived from the name of the type-locality "Amagi-Pass".

Acknowledgements

We thank Mr. Toru Kato (Hamamatsu, Shizuoka Prefecture) for his kind donation of the interesting staphylinid specimens for the present study.

References

- Müller, J. 1923. Contributo alla conoscenza del genere *Staphylinus* L. Boll. Soc. Ent. Ital. 55: 135-144.
Naomi, S.-I. 1992a. Taxonomic studies on the subgenus *Protocypus* Müller of the genus *Ocypus* Leach (Coleoptera: Staphylinidae) of Japan. I. Nat. Hist.

- Res. 2: 53-64.
- Naomi, S.-I. 1992b. Taxonomic studies on the subgenus *Protocypus* Müller of the genus *Ocypus* Leach (Coleoptera: Staphylinidae) of Japan. II. Akitu, N. S. 127: 1-12.
- Naomi, S.-I. 1992c. Taxonomic studies on the subgenus *Protocypus* Müller of the genus *Ocypus* Leach (Coleoptera: Staphylinidae) of Japan. III. Jpn. J. Ent. 60: 137-147.
- Naomi, S.-I. 2004. Descriptions of two new species of the family Staphylinidae (Coleoptera) from Japan. Ent. Rev. Jpn. 59: 153-159.
- Sharp, D. 1889. The Staphylinidae of Japan. Ann. Mag. Nat. Hist., (6) 3: 28-44, 108-121, 246-267, 319-334, 406-419, 463-476.

静岡県伊豆半島から発見されたサビイロ モンキハネカクシ属の1新種の記載

直海俊一郎¹⁾・多比良嘉晃²⁾

¹⁾千葉県立中央博物館

〒260-8682 千葉市中央区青葉町 955-2

E-mail: naomi@chiba-muse.or.jp

²⁾〒422-8034 静岡市駿河区高松 2-7-1

キャロットハウス 405

E-mail: yshkthr_shizuoo@ybb.ne.jp

サビイロモンキハネカクシ属の1新種 *Protocypus amagiensis* Naomi et Tahira sp. nov. (新和名: アマガイサビイロモンキハネカクシ) を、静岡県天城峠産 2

3 の計5個体に基づいて記載した。本新種は、外形や色彩に関して、本州南東部から関東西部にかけて分布する3近縁種(つまり *Protocypus dorsalis* Sharp, *P. Izayoi* Naomi や *P. Fujiensis* Naomi) に良く似る。しかし、本新種は、以下の点で近縁の3種から区別できる。第1に、本新種では、雄交尾器側片の先端中央部に、明瞭なV字状の切れ込みが存在するが、近縁の3種においては、その先端部は単純に丸まる。第2に、本新種では、側片先端縁に3対の剛毛を有するが、近縁の3種においては、その先端縁には4対の剛毛を有する。