

Short communication

## New Record of the Subfamily Amiseginae (Hymenoptera: Chrysididae) from Korea

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### ABSTRACT

A cuckoo wasp species *Nipponosega yamanei* Kurzenko & Lelej is recorded in Korea for the first time. Of the two forms known from Japan, it is more similar to *yamanei*-form than *kantoensis*-form: eye margin almost evenly rounded in frontal view. The species of the two subfamilies, Chrysidinae and Cleptinae, have been listed for the Korean fauna. This species is the first representative of the third subfamily Amiseginae in Korea. It is known to be endemic to Japan. Thus, the distributional range of this species has been extended to the continental part herein. A description is made for further morphological comprehension on the basis of Korean materials.

**Keywords:** cuckoo wasps, *Nipponosega yamanei*, new record

### INTRODUCTION

To date, two subfamilies of Chrysididae (Hymenoptera: Chrysidoidea), namely Cleptinae and Chrysidinae, are known for the Korean fauna (Ha et al., 2008; Korean Society of Applied Entomology and The Entomological Society of Korea, 2021). Author recently discovered females fall within the genus *Nipponosega* in the middle part of South Korea. They are confirmed as *N. yamanei* Kurzenko & Lelej, 1994. This species is the first representative of the subfamily Amiseginae in Korea. Three species of the genus *Nipponosega* Kurzenko & Lelej has been described from both Palearctic (Japan) and Oriental regions (southern China and Thailand). However, *N. yamanei* known to be endemic to Japan is the sole representative of the genus in Palearctic region so far (Kurzenko and Lelej, 1994; Nagase, 1995; Xu et al., 2003; Mita, 2021). The distributional range of this species has been extended to continental part herein.

Some external features of *N. yamanei* include considerable intraspecific variation (Mita, 2021). For further morphological comprehension of this species, description based on Korean materials is made herein.

Abbreviations for structures and body parts as follows: F, flagellomere; MOD, median ocellus diameter; OL, distance

between median and lateral ocelli; PD, puncture diameter; S, metasomal sternum; T, metasomal tergum.

### SYSTEMATIC ACCOUNTS

Order Hymenoptera

Family Chrysididae

<sup>1</sup>\*Subfamily Amiseginae

<sup>2</sup>\*Genus *Nipponosega* Kurzenko & Lelej

*Nipponosega* Kurzenko & Lelej, 1994: 83. Type species: *Nipponosega yamanei* Kurzenko & Lelej, 1994, original designation; Mita, 2021: 8.

**Female.** Clypeal apex not thickened; malar sulcus absent or indicated as faint track; scapal basin distinct, cross-ridged, with median longitudinal smooth strip; occipital carina present, often reaching gena; eye setose; flagellum fusiform, intermediate segments broader than long, with ventral surfaces flattened. Mesosoma slender, punctate or longitudinally striate; pronotum with a dorsomedian groove and shallow pit before lateral lobe, almost as long as combined length of mesoscutum, mesoscutellum and metanotum; mesoscutum with well-developed notaulices but without parapsides; postero-

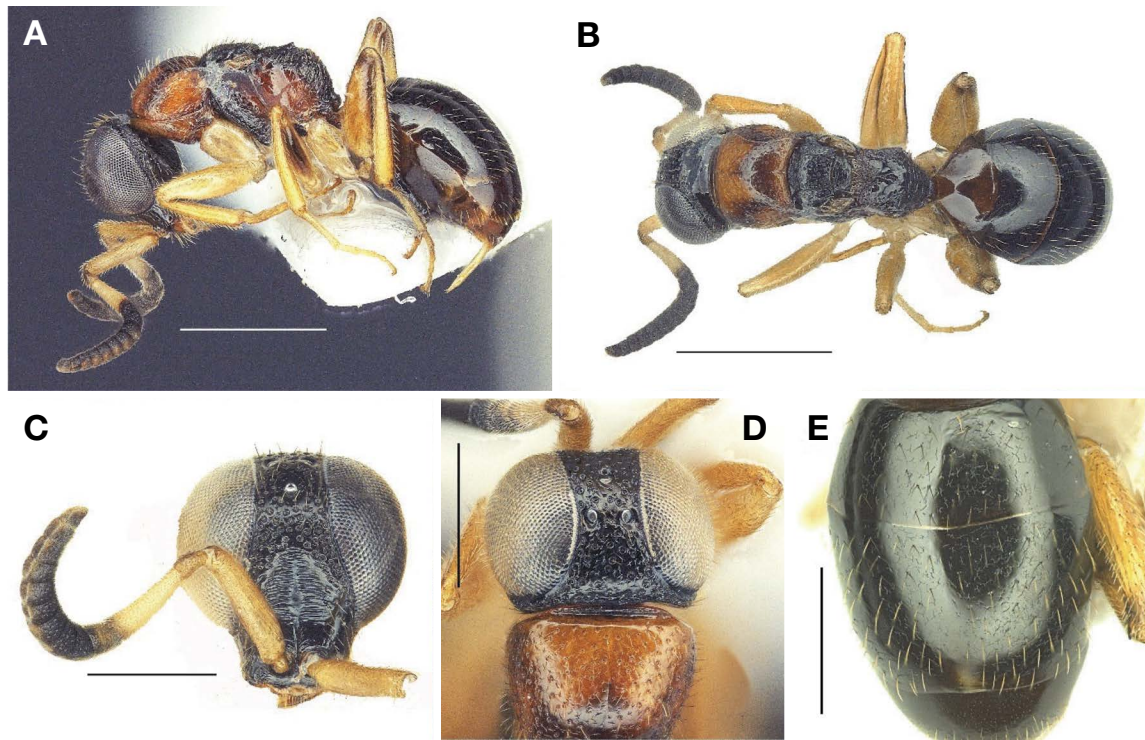
Korean name: <sup>1</sup>\*좀청벌아과 (신칭), <sup>2</sup>\*좀청벌속 (신칭)

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**Fig. 1.** *Nipponosega yamanei*, ♀. A, Habitus in lateral view; B, Habitus in dorsal view; C, Head in full frontal view; D, Head and pronotum in dorsal view; E, Dorsums of T1-2. Scale bars: A, B=1 mm; C-E=0.5 mm.

lateral corner of mesoscutum not lobate; micropterous, forewing pads extending to posterior margin of mesoscutellum; mesopleuron with omaulus; scrobal sulcus lacking; metanotum triangular, longer than mesoscutellum; propodeum with long dorsal surface with paired recumbent teeth, dorsal posterolateral angles bluntly angulate, lateral surfaces abruptly declivous and posterior surface rounded. Hind coxa with several carinae dorsobasally; tarsal claws without inner tooth. Metasoma largely smooth, puncticulate, with crack-like sculptures in *N. yamanei* (slightly modified from Mita, 2021).

<sup>1</sup>\**Nipponosega yamanei* Kurzenko & Lelej, 1994

*Nipponosega yamanei* Kurzenko & Lelej, 1994: 83, ♀ (holotype), Japan: Honshu: Ibaraki Pref.: Tsuchiura City: Shishitsuka Ohike; Mita, 2021: 4 (in key), 15, ♂, ♀, Japan: nationwide various localities.

*Nipponosega kantoensis* Nagase, 1995: 104, ♀ (holotype), Japan: Honshu: Saitama Pref.: Yoriimachi: Sueno. Synonymized by Mita, 2021.

**Material examined.** Korea: 3♀♀, Chungcheongnam-do, Geumsan-gun, Buri-myeon, Buli-ri, (36°03'23.49"N, 127°32'29.64"E), 2–16 Jul 2022 (Malaise trap).

**Description (based on Korean materials).** *Female.* Body length ca. 3.15 mm excluding ovipositor (Fig. 1A, B). Except for scapal basin head (Fig. 1C, D) densely punctate, but not contiguous, interspace smooth; ca. 0.67 × as long as broad in dorsal view, ca. 0.93 × as broad as long in frontal view; punctures 0.3–0.5 MOD, almost contiguous in lower frons above scapal basin, spaced by ca. 1.0 PD in remaining frontal face, 1–3 PD in ocellar region and vertex; scapal basin somewhat deeply excavated, transversely costate by fine grooves, with a median unsculptured line; malar sulcus absent.

Minimum width of frons ca. 0.31 head width; maximum interocular distance ca. 1.8 minimum width of frons; maximum length of malar space ca. 0.33 eye height. OL ca. 1.42 × as long as distance between posterior ocelli, distance between lateral ocellus to posterior margin of vertex or occipital carina ca. 2.8 OL; distance between posterior ocelli ca. 0.9 OL, distance between lateral ocelli and compound eye ca. 0.4 OL, anterior ocelli diameter ca. 0.46 OL (according to Mita 2021, each of above ratios variable). Antenna stout, F1 ca 3.1 as long as broad, F2 ca 1.2 as long as broad, F3 ca. 1.27 as long as broad, F4 ca. 1.12 as long as broad, F4 ca. 1.1 as broad as long, F5–10 much broader (reaching 1.5 × as broad as long), F11 pointed ca. 1.5 as long as broad.

Korean name: <sup>1</sup>\*좀청벌 (신칭)

Occipital carina not strongly developed, obsoletely carinate or edged in upper half of gena or a little more below (according to Mita 2021, carinal state variable: reaching lower gena, occasionally present only behind ocellar triangle, only upper gena, or rarely almost invisible). Clypeus not thickened, medially with yellowish semi-transparent transverse apical rim. Mandible without inner tooth.

Pronotum moderately punctate, spaced by 3–5 PD, punctures slightly smaller than those on frons, 0.3–0.4 MOD; medial longitudinal impressed line in its apical ca. three-fifths; pronotum medially ca.  $0.86 \times$  as long as broad, ca.  $1.3 \times$  as long as mesoscutum and mesoscutellum combined. Mesoscutum ca.  $0.53 \times$  as long as pronotum, sculptures as in vertex; notaulix complete, diverging anteriorly. Mesoscutellum ca.  $0.43 \times$  as long as mesoscutum, punctures almost as in mesoscutum. Mesopleuron sculptured as in pronotum. Metanotum triangular, median length almost as long as broad at base or slightly longer, with shallow punctures. Posterolateral corner of propodeal dorsum bluntly angled; larger median portion of propodeal dorsum almost smooth, with paired broad V-like lobes; lateral portions of propodeal dorsum and propodeal posterior face loosely reticulate; larger median part of propodeal posterior face smooth, with median longitudinal carina and much spaced, somewhat regularly set paralleled transverse carina (but in a specimen herein transverse carina almost lacking); propodeal dorsal and posterior face demarcated by somewhat distinct carina. Metapleuron smooth, only loosely reticulate in its lower one-third. Mid and hind coxae largely smooth and transversely costate in outer posterior face.

Metasoma primarily punctulate, but integuments of dorsum of T1 and entire T2 including ventral parts with sparse irregular crack-like sculptures (Fig. 1E).

Setae of almost entire body being originated from punctures, slanting to suberect, 2–3 MOD in length; metapleuron, propodeal dorsum, larger median part of propodeal posterior face, anterior sloping face and ventral part of T1 and S1 glabrous; antenna, eye and legs with both longer (ca. 1 MOD in length) and shorter setae mixed.

Head largely black. Antennal scape, pedicel, F1, dorsal part of F2 and ventral parts of F4–11 bright yellow (pedicel and apical part of F1 darkened); remainders black. Mandible yellow in basal half, blackish in apical half. Prothorax and pronotum reddish yellow, orange to partially ferruginous, apical half of pronotal dorsum darkened. Posterior half of mesopleuron and metapleuron ferruginous. Tegula, metanotum, anterior sloping face and ventral part of T1, apicomedian and ventral parts of T2, T3–4, S1 and 4 testaceous. All coxa and trochanters creamy yellow; remainder legs pale yellow except for large ventral linear black spots on meso- and meta femur and paler fore femur. Ovipositor pale yellow.

*Male*. Unavailable in this study.

**Distribution.** Korea (Chungcheongnam-do, new record), Japan (Honshu; Shikoku; Kyushu; Tsushima Isl.; Yakushima Isl.).

**Biology.** In Japan, it is an egg parasite of walking stick, *Micadina phluctainoides* (Rehn, 1904). The Korean host is currently unknown.

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## CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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