한국응용곤충학회지
Korean J. Appl. Entomol. 60(3): 335-338 (2021)
DOI: https://doi.org/10.5656/KSAE.2021.08.0.031

pISSN 1225-0171, eISSN 2287-545X

First Record of Subgenus *Pronocerodes* Plavilstshikov (Coleoptera: Cerambycidae: *Ropalopus*) from Korea

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한국산 미기록아속 *Pronocerodes* Plavilstshikov (딱정벌레목: 하늘소과: 삼나무하늘소속)에 대한 보고

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ABSTRACT: The subgenus *Pronocerodes* Plavilstshikov (Coleoptera: Cerambycidae: Cerambycinae) is reported from Korea for the first time with a species of *Ropalopus* (*Pronocerodes*) *aurantiicollis* Plavilstshikov, 1940. The morphological information is provided with a key to the Korean *Ropalopus* and photographs of an adult specimen.

Key words: Cerambycidae, Cerambycinae, *Ropalopus*, *Pronocerodes*, New record

초 록: 하늘소아과 검정삼나무하늘소속의 미기록아속인 호리검정삼나무하늘소아속(신칭)에 속하는 *Ropalopus* (*Pronocerodes*) *aurantiicollis* Plavilstshikov, 1940의 한반도 분포를 처음으로 보고한다. 형태적 기재와 사진, 국내 검정삼나무하늘소속의 검색표를 함께 제공한다.

검색어: 하늘소과, 하늘소아과, *Ropalopus*, *Pronocerodes*, 미기록아속, 한국

The subfamily Cerambycinae is the second-largest group of the family Cerambycidae with approximately 11,000 species from 1,700 genera worldwide (Švácha and Lawrence, 2014, Lee and Lee, 2020). In Korea, 114 species from 54 genera of the subfamily were reported by far (Jang et al., 2015; Lee and Lee, 2016, 2018). Among Cerambycinae, *Ropalopus* Mulsant, 1839 is a small genus composed of 25 species from three subgenera worldwide: The West Palaearctic subgenus *Ropalopus* Mulsant, 1839 contains 21 species, the East Palaearctic subgenera *Prorrhopalopus* Plavilstshikov, 1921 and *Pronocerodes* Plavilstshikov, 1940 contains two species respectively (Tavakilian and Chevillotte, 2012). Until now, two species from a subgenus *Prorrhopalopus* were reported in South Korea: *Ropalopus* (*Prorrhopalopus*) *signaticollis* Solsky, 1872 and *Ropalopus* (*Prorrhopalopus*) *speciosus* Plavilstshikov, 1921 (Jang et al., 2015; Oh and Jang, 2015). Both species occur in the northern deciduous forest of South Korea with a low population level (Jang et al., 2015). In this paper, the subgenus *Pronocerodes* is reported for the first time in Korea with a species *Ropalopus* (*Pronocerodes*) *aurantiicollis* Plavilstshikov, 1940.

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Received June 15 2021; **Revised** August 25 2021
Accepted August 30 2021

Materials and methods

In 2015, one dead female specimen was found near the construction site in Yongdae national recreational forest (Gangwon-do, South Korea). The authors have visited the collection site numerous times after the first discovery but no additional specimen has been found thereafter. The single specimen used in this study was deposited in Insect Collection in the College of Agriculture and Life Sciences, Seoul National University [CALS], Korea. Illustrations were made with a Canon digital camera EOS 70D, Tamron 60mm f/2, or Canon MP-E 65 mm f/2.8 1−5x macro lens mounted, controlled by Cognisys Stackshot. Multiple layers of photographs were stacked using Zerene Stacker 1.04 software (Zerene Systems 2014; http://www.zerenesystems.com/cms/stacker).

Systematic accounts

Tribe Callidiini Kirby, 1837 삼나무하늘소족

Genus *Ropalopus* Mulsant, 1839 검정삼나무하늘소속

Ropalopus Mulsant, 1839: 40. type species *Callidium clavipes* Fabricius, 1775

Subgenus *Pronocerodes* Plavilstshikov, 1940: 248 type species *Rhopalopus ruficollis* Matsumura, 1911 호리검정삼나무하늘소아속(신칭)

***Ropalopus* (*Pronocerodes*) *aurantiicollis* Plavilstshikov, 1940 호리검정삼나무하늘소(신칭) (Figs. 1, 2)**

Ropalopus aurantiicollis Plavilstshikov, 1940: 250

Morphological comments. Easily recognized from other *Ropalpus* species by elongated elytra and absence of punctuation on pronotum. Body length 15.3 mm. Head black without punctuation, sparsely pubescent with golden hairs. Frons with short longitudinal suture in the middle. Antennae black, slightly shorter than body length in female. Antennomere I moderately enlarged, minute proximal spine present on apex of antennomere 3-7. Pronotum red, anterior and posterior margin darkened, marginally punctured but punctureless in middle, slightly wider than long, markedly convex, smoothly projected laterally in anterior half, narrow more in posterior half. Prosternum red with darkened margin, transverse wrinkles present

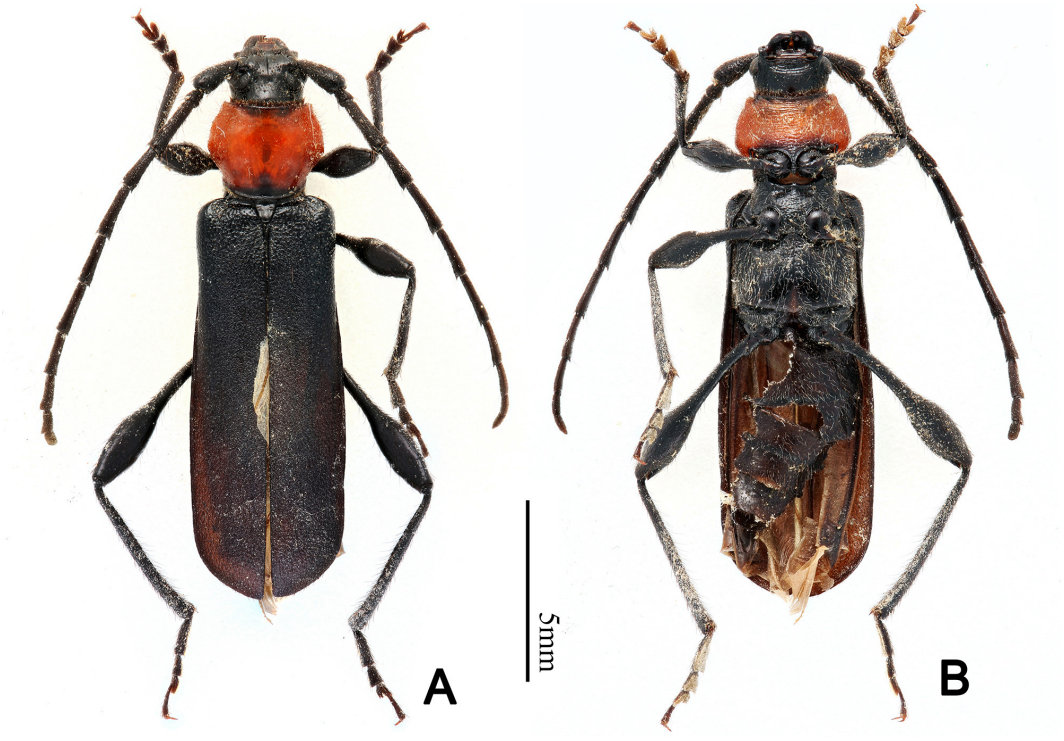

Fig 1. *Ropalopus* (*Pronocerodes*) *aurantiicollis* Plavilstshikov, 1940 A. Dorsal habitus, female. B. Ventral habitus, female. (scale bar: 5 mm).

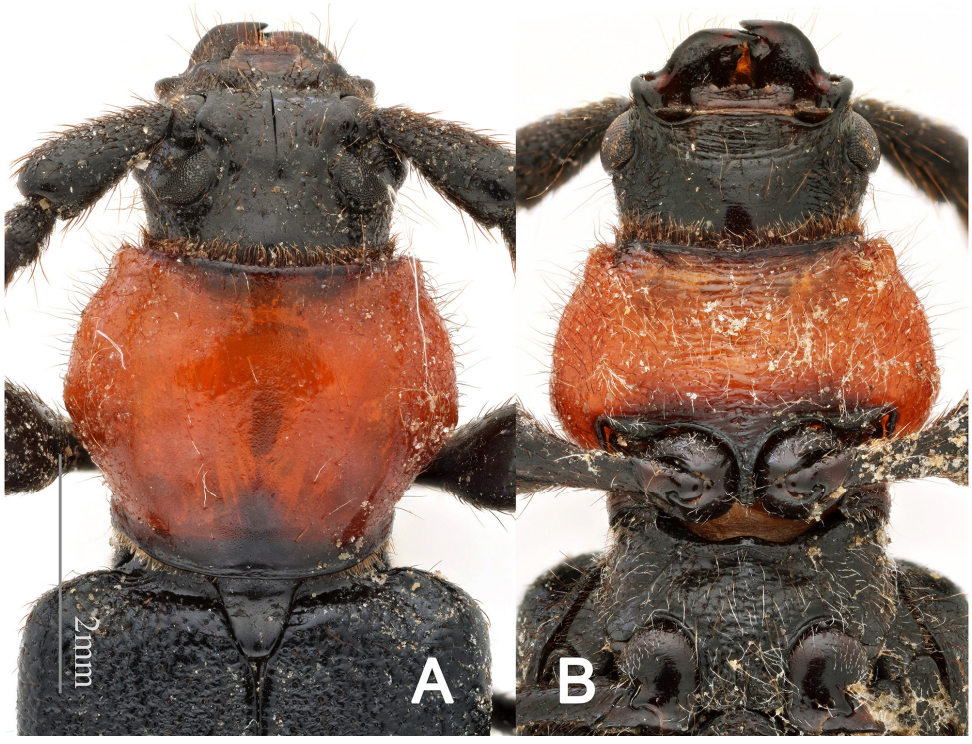

Fig. 2. *R. aurantiicollis* Plavilstshikov A. Head and pronotum enlarged, dorsal. B. Head and prosternum enlarged, ventral. (scale bar: 2 mm).

in middle, intercoxal prosternal process relatively narrow, slightly dilated at apex. Elytra black with faint metallic navy sheen, glabrous, finely wrinkled, notably longer than wide, almost parallel with rounded apex. Mesoventrite, metaventrite and abdominal segments black with pale hairs. Legs black, sparsely pubescent, distal half of fore and middle femora, distal third of hind femora notably swollen. Ovipositor missing.

Material Examined. [SNU] 1♀, Yongdae-ri, Buk-myeon, Injae-gun, Gangwon-do, Korea, 2014. vi. 06. Seunghyun Lee leg.

Distribution. Korea (new record) and Russian Far East.

Remarks. Biology (e.g. host plants, feeding habit of larva, etc.) of *R. aurantiicollis* is unknown. The species is rare in Russian Far East (Cherepanov, 1981).

Key to species of the genus *Ropalopus* in Korea

1. - Pronotum without distinct punctuation. Pronotum round, not angulated laterally ····· **subgenus *Pronocerodes: Ropalopus* (*Pronocerode*) *aurantiicollis* Plavilstshikov, 1940**

- Pronotum with uneven minute punctuation but partly punctureless in center. Pronotum laterally projected forming smooth or distinct angulationQ ····· ····· 2 (**subgenus *Prorrhopalopus*)**

2. - Head with distinct longitudinal suture. Pronotum reddish or black with dense rugose punctuation, pronotum abruptly projected forming distinct lateral angulation. Elytra matte black ····· ***Ropalopus* (*Prorrhopalopus*) *signaticollis* Solsky, 1873**

- Head lacks distinct longitudinal suture. Pronotum red with sparse minute punctuation, pronotum slightly and smoothly projected laterally. Elytra black with metallic blue sheen ····· ***Ropalopus* (*Prorrhopalopus*) *speciosus* Plavilstshikov, 1915**

Acknowledgments

This study is supported by the National Institute of Biological Resources (NIBR), funded by the Ministry of Environment (MOE) of the Republic of Korea (NIBR202002205).

저자 직책 & 역할

이승현 : 중국과학원, 연구원; 채집, 도판작업 및 원고작성
오승환: Longicornia 곤충연구소; 원고작성 및 검토
승진배 : 서울대학교, 박사과정; 채집 및 원고작성
이민혁 : 서울대학교, 박사과정; 채집 및 원고작성
이승환: 서울대, 교수; 논문 총괄, 연구비 지원

모든 저자는 원고를 읽고 투고에 동의하였음.

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