

Redescription of the largest ice bug, *Namkungia magnus* com. nov. (Grylloblattodea, Grylloblattidae) from Korea

BYUNG-WOO KIM* & WONCHEOL LEE

Department of Life Science, College of Natural Sciences, Hanyang University, Seoul 133-791, Korea

*Corresponding author

Abstract

The largest ice bug species, *Namkungia magnus* (Namkung, 1986) from Balgudeuk cave at Jeongseon, Gangwon-do, Korea is transferred from the genus *Galloisiana* and redescribed with setae and trichobothria patterns, and with mouthpart, basisternum and genital structure descriptions based on the morphological characters. This species resembles *N. biyongensis* (Namkung, 1974) by its large size (longer than 30 mm), eyeless condition, more than 47 antennomeres, and 12 cercomeres but is distinguished by asymmetrical supra-anal plate of the bulging 9th abdominal tergite with truncate projection, 52 antennomeres, the cervical sclerite with nine setae (11 on right) on the lateral margin of the left, and copulatory sclerites of the genital structure.

Key words: Taxonomy, ice bug, Grylloblattodea, *Namkungia*, cave, Korea

Introduction

The extant Grylloblattodea as the least diverse of modern insect orders is a polyneoptera, and was first described by Walker (1914) in the Canadian Rocky Mountains. This group consists of one extant family Grylloblattidae, ‘living fossils’ with relict distributions, and 44 families in three suborders: Lemmatophorina, composed of five Carboniferous to Triassic families; Protoperlina, composed of 16 Carboniferous to Lower Cretaceous families; and Grylloblattina, composed of 24 Permian to Lower Cretaceous families (Storozhenko 1997). To date, 27 species including *Namkungia magnus*, revised in five genera of Grylloblattidae have been described from cooler areas in the northern hemisphere: 11 species are from North America, six from Japan, four from Korea, five from Russia and one from China (Walker 1914; Caudell & King 1924; Gurney 1948, 1953, 1961; Bey-Bienko 1951; Asahina 1959, 1961; Kamp 1963, 1979; Namkung 1974a, b, 1986; Pravidin & Storozhenko 1978; Storozhenko & Oligier 1984; Storozhenko 1986, 1988,