

SPECIES IDENTIFICATION OF THAI RICE-FIELD CRAB IN THE LOWER NORTH-EASTERN REGION OF THAILAND

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Abstract

A stereomicroscope and scanning electron microscopy (SEM) were used to classify Thai rice-field crabs collected from the lower north-eastern region of Thailand. To achieve this, morphological aspects based on the dorsal surface of the carapace and the male first gonopod were investigated. As a result, six species (sp.I, sp.II, sp.III, sp.VII, sp.XII, and sp.XIII) belonging to the genus *Esantheiphusa* could be identified. It was also found that the same crab species could be classified with both the stereomicroscope and SEM, but the latter generally performed better. Therefore, it is suggested that SEM might be used as a new effective tool for the identification of uncertain crab species.

Keywords: Thai rice-field crab, *Esantheiphusa*, identification

Introduction

There are three families of fresh water crabs in Thailand, Parathelphusidae, Potamidae, and Gecarcinucidae (Naiyanetr, 1999), of which 63 species have been described (38 Potamidae, seven Gecarcinucidae and 18 Parathelphusidae) (Ng and Naiyanetr, 1993). Among these, three genera of Thai rice-field crabs, *Sayamia*, *Chulathelphusa* and *Esantheiphusa* (family Parathelphusidae) have been reported (Naiyanetr, 1994) where the genus *Esantheiphusa* was previously described as *Somanniathelphusa*. Formerly, the taxonomy of the *Esantheiphusa* genus has been categorized into 11 species (Naiyanetr, 1994). However, at present more than 12 new Thai species of *Esantheiphusa* have been discovered (Naiyanetr and Ng in preparation), which included the six species, *Esantheiphusa*

sp.I, *E. sp.II*, *E. sp.III*, *E. sp. VII*, *E. sp.XII*, and *E. sp.XIII*. All these species were found in the lower north-eastern region of Thailand (Pramual, 1990 and Kwantong, 1995). Normally, these species are classified, based on the dorsal surface of the carapace (post-orbital crests, epigastric crests, cervical groove and H-groove, Figure 1), and the shape of the male first gonopods, using a stereomicroscope. However, the results sometimes look similar among species, leading to difficulty of identification. Therefore, to gain more accuracy in the classification process, a more effective technique must be employed. Scanning electron microscopy (SEM), which has precise focusing, automatic brightness and contrast, would be appropriate.

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