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On the presence of the Andaman lobster, *Metanephrops andamanicus* (Wood-Mason, 1891) (Crustacea Astacidea Nephropidae) in Palabuhanratu bay (S-Java, Indonesia)

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ABSTRACT The first Andaman lobster, *Metanephrops andamanicus* (Wood-Mason, 1891) (Crustacea Astacidea Nephropidae) record from south of Java waters, part of Indian Ocean is reported in this paper. A total of 3 specimens were collected at a fish harbor in Palabuhanratu bay in May 2015. Morphological characters are illustrated and described. This finding enhances the biodiversity lists of Indonesian crustaceans.

KEY WORDS Andaman lobster; Decapoda; Indian Ocean; Java Island; morphological descriptions.

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INTRODUCTION

The lobsters of the family Nephropidae are deep-sea forms and commonly found at depths from 150 to more than 1893 m (Chang et al., 2014). In general nephropid lobsters are bottom-dwellers with a preference for soft sediments, and living within their self-made burrows is the biological behavior in some species (Chan, 1998).

The family Nephropidae currently includes 57 species belonging to 14 genera (Holthuis, 1991; Chan, 1998; Türkay, 2001; Chan, 2010; Ahyong et al., 2012; Chan et al., 2014). Previously, genus *Metanephrops* Jenkins, 1972 was divided into four morphological groups, namely *thomsoni* (Bate, 1888), *binghami* (Boone, 1927), *arafurensis* (De Man, 1905) and *japonicus* (Tapparone-Canefri, 1873) (Holthuis, 1991). However, with molecular analysis approach, Chan et al. (2009) refuted monophyly of the *arafurensis* and *thomsoni* groups. Among the groups, *japonicus* has the highest number of species.

Some of the current researches on Indonesian crustaceans, reported the presence of first records species, especially hippoid crabs, such as *Albunea symmysta* (Linnaeus, 1758) (Mashar et al., 2015), *Hippa marmorata* Hombron et Jacquinot, 1846) (Wardiatno et al., 2015), *Hippa adactyla* Fabricius, 1787 (Ardika et al., 2015).

This paper presents a new record of the Andaman lobster, *Metanephrops andamanicus* (Wood-Mason, 1891) from south of Java, Indonesia.

MATERIAL AND METHODS

Three *M. andamanicus* specimens were collected in May 2015, from a fish harbor in Palabuhanratu bay, District Sukabumi, South of Java, Indonesia (Fig. 1). They were preserved in 96%

alcohol and taken to the laboratory for analysis. Identification was based on the morphological characters using taxonomic key books from FAO (Holthuis, 1991; Chan, 1998). One example of the specimens is presented in figure 2. The specimens were lodged in the Department of Aquatic Resources Management, Bogor Agricultural University, Indonesia.

RESULTS

SYSTEMATICS

Infraorder ASTACIDEA Scholts et Richter, 1995
Family NEPHROPIDAE Dana, 1852
Genus *Metanephrops* Jenkins, 1972

Metanephrops andamanicus (Wood-Mason, 1891)

EXAMINED MATERIAL. 3 males: carapace length 51.04, 55.97, and 57.20 mm, total length 141.82, 149.34, and 154.23 mm, weight 65, 78, and 88 gram. 17.V.2015, Palabuhanratu fishing harbor, South of Java, Indonesia.

DIAGNOSIS. Carapace of *M. andamanicus* smooth between ridges and large spines (Fig. 3). Eyes large and black, postrostral carinae with three teeth (Fig. 4). Surface of abdominal tergites conspicuously sculptured; raised parts of dorsal surface of abdominal somites smooth and naked; second to fifth abdominal somites with marked dorsomedian carina, flanked by pair of conspicuous longitudinal grooves (Fig. 5). Fifth abdominal somite without distinct spines on carina separating tergite from pleuron. Dorsomedian carina of sixth abdominal somite without submedian spines. Spine in middle of lateral margin of sixth abdominal somite short, tip far from posterolateral margin of somite. Chelae of first pereiopods heavily ridged and spinulose, without large spines; no prominent basal spine on outer edge of movable finger of large chela. Inner margin of merus of first pereiopod weakly spinulose (Fig. 6).

DISTRIBUTION. Indo-West Pacific region: East Africa (Tanzania, Zanzibar, Kenya and Somalia), the Andaman Sea, the South China Sea (not including the Philippines), and Indonesia, and perhaps also Papua New Guinea (Holthuis, 1991; Chan, 1998; Tshudy et al., 2007).

DISCUSSION

Holthuis (1991), Chan (1998) and Tshudy et al. (2007) revealed the distribution of *M. andamanicus* in Indo-West Pacific region from eastern Africa to the Andaman Sea, the South China Sea (but not the Philippines), Indonesia, and perhaps also Papua New Guinea. According to the IUCN Red List of Threathened Species the occurence of the species in Indonesia was reported in Kalimantan, Sumatra and Sulawesi. However, in a short survey on May 2015 we could find this species in Palabuhanratu bay located in south of Java and it is a new record. Some lobster species were previously reported from several parts of Indonesia, and they were highly valuable species, such as *Panulirus penicillatus* (Olivier, 1791) (Chow et al., 2011; Kalih, 2012; Abdullah et al., 2014), *Linuparus somniosus* Berry et George, 1972 (Wowor, 1999), *P. versicolor* (Latreille, 1804) (Ongkers et al., 2014), *P. homarus*, (Linnaeus, 1758), *P. longipes* (A. Milne-Edwards, 1868), *P. ornatus* (Fabricius, 1798), *Parribacus antarcticus* (Lund, 1793) (Kalih, 2012). Consequently, the presence of *M. andamanicus* in Palabuhanratu bay increases the list of lobster biodiversity in Indonesian waters.

In fishery point of view, some species of genus *Metanephrops* have commercial potential and become the deep water fishery targets lobster and catched by trawl; those species are *M. mozambicus* (Macpherson, 1990) in Africa (Fennessy & Groeneveld, 1997; Groeneveld & Everett, 2015), *M. thomsoni* in northern part of the East China Sea (Choi et al., 2008), *M. challengeri* (Balls, 1914) in New Zeland (Tuck et al., 2015), *M. andamanicus* in east coast of Southern Africa (Mutagyera, 1979). In the fish market located in Palabuhanratu bay, south of Java *M. andamanicus* can be regularly found indicating its economical value in the area.

As fishery target, biological information of this species is needed for its sustainable management. Exploration in biological aspects of *M. andamanicus* is open for future studies.

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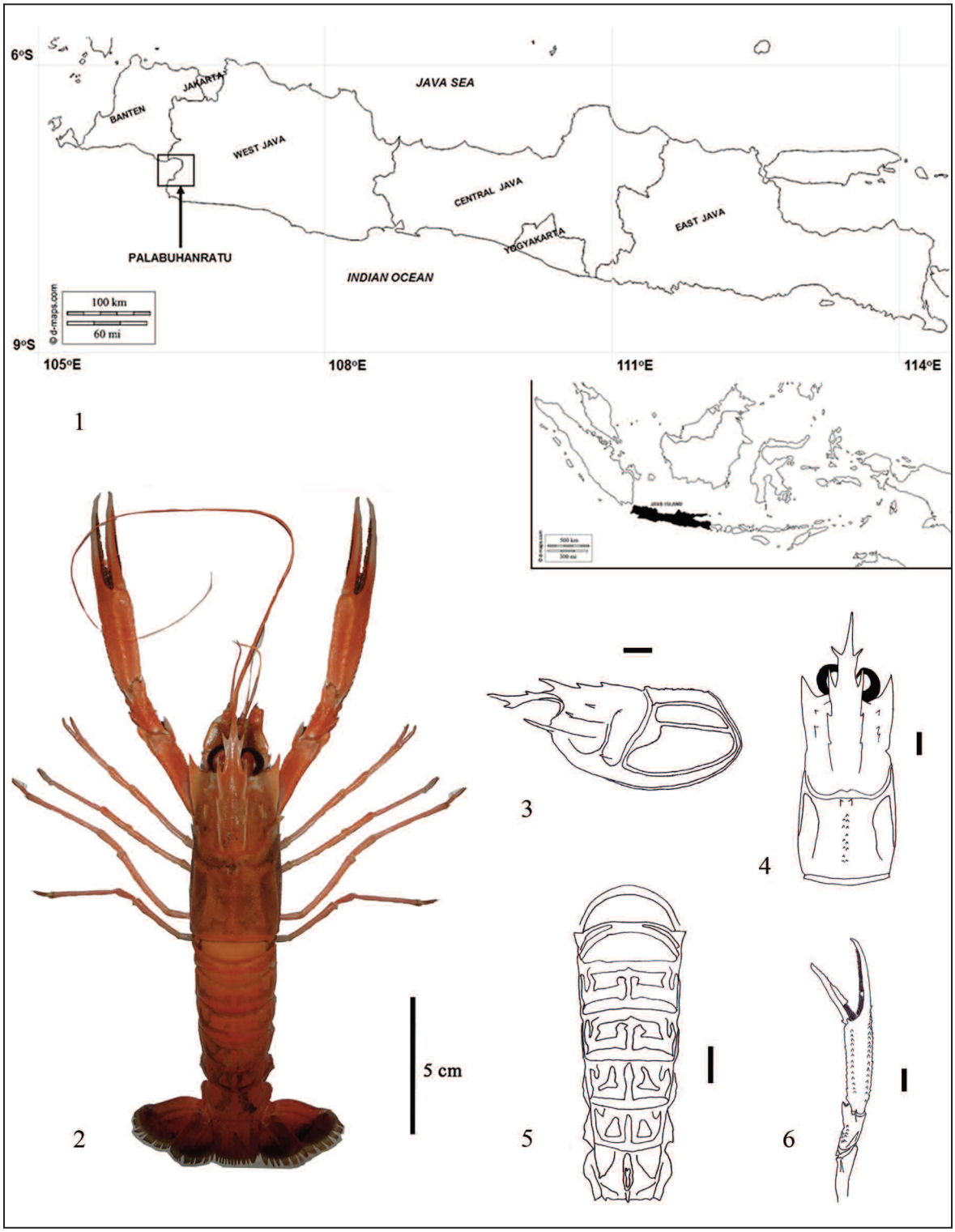

Figure 1. Map of Java Island with the insert map of Indonesia. Palabuhanratu bay is indicated by open-square and pointed with an arrow. Figure 2. *Metanephrops andamanicus* (male) collected from a fish harbor in Palabuhanratu Bay, south of Java, Indonesia. Figures 3–6. *Metanephrops andamanicus*, south of Java (Indian Ocean), male (carapace length 55.97 mm). Fig. 3: carapace, lateral view. Fig. 4: carapace, dorsal view. Fig. 5: abdomen, dorsal view. Fig. 6: first pereiopod. Scale bars 10 mm.

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