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## *Cherax (Astaconephrops) gherardii*, a new crayfish (Decapoda: Parastacidae) from West Papua, Indonesia

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### Abstract

*Cherax (Astaconephrops) gherardii* n. sp. is a moderate burrowing crayfish endemic to the Ajamaru Lakes of West Papua, Indonesia. This species is one of the crayfish species from this region that are exploited for ornamental purposes. Its commonly used commercial name in the pet trade is “Rainbow Crayfish” or “Blue Moon Crayfish”, and its native name is “udang kuku biru”. The new species is genetically and morphologically similar to *Cherax boesemani*, however, both species may be easily distinguished morphologically or by using sequence divergence, which is substantial for considering *C. gherardii* n. sp. to be a valid species.

**Key words:** *Cherax gherardii* n. sp., new species, taxonomy, morphology, phylogeny, pet trade

### Introduction

Crayfish from the genus *Cherax* belong to a group of freshwater decapod crustaceans that are exploited for ornamental purposes (Chucholl 2013; Papavlasopoulou *et al.* 2014; Patoka *et al.* 2014). *Cherax* crayfish from West Papua are captured in the field and subsequently exported by Indonesian wholesalers to European, USA and Japanese pet markets (Lukhaup & Herbert 2008; Patoka *et al.* 2015). Inasmuch as certain traded *Cherax* crayfish from West Papua are scientifically undescribed and their captured quantities are not registered by relevant authorities, the related potential decline of abundance of these species can be easily overlooked. Scientifically undescribed species are advertised only under trade names as noted by Patoka *et al.* (2014). The new species of *Cherax* crayfish presented in our paper is known under the commercial name “Rainbow Crayfish” (Mendoza Alfaro *et al.* 2011) and “Blue Moon Crayfish” (Schäfer 2014). However these names are also used for certain other scientifically undescribed *Cherax* crayfish. Three crayfish species native in regions of West Papua and adjoining Papua (formerly known as Irian Jaya), *Cherax boesemani* Lukhaup and Pekny, 2008, *C. holthuisi* Lukhaup and Pekny, 2006, and *C. peknyi* Lukhaup and Herbert, 2008, were described following their ornamental exploitation in recent years (Lukhaup & Pekny 2006; Lukhaup & Herbert 2008; Lukhaup & Pekny 2008). The new species complements this collection and its description is crucial for proper management of this crayfish in its native range.

The new species, *Cherax (Astaconephrops) gherardii* n. sp., is genetically and morphologically most similar to *Cherax boesemani*, which is endemic to the Ajamaru Lakes and the Ajamaru River in West Papua, Indonesia (Lukhaup & Pekny 2008). Both species may be easily distinguished using sequence divergence or by coloration; chelae shape; position and color of the uncalcified patch on the outer margin of chelae of adult males; rostral reaching; and large teeth on propodal cutting edges.