

THE SPREAD OF THE AUSTRALIAN REDCLAW CRAYFISH (*Cherax quadricarinatus* von Martens, 1868) IN MALAYSIA

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Abstract: The introduction of alien crayfish species has resulted in changes of native species communities throughout the world. The Australian redclaw crayfish *Cherax quadricarinatus* were introduced in Malaysia for aquarium and aquaculture industry since 1980s. The current paper presents the distribution of the species in Malaysia through sampling trips, market surveys and focused interviews. Multiple size specimen in populations obtained from Sungai Benut (Johor) and Suai (Sarawak) confirms the establishment of the species in both west (Malaysian Peninsular) and east Malaysia (Borneo). There are no reports yet of any native species displacement or other ecological impacts in Malaysia caused by the redclaw introduction, although the potential cannot be dismissed totally. The growing redclaw culture industry could facilitate the spread of *C. quadricarinatus* faster and further in the near future.

Keywords: Alien species, *C. quadricarinatus*, biological invasion, decapoda.

Introduction

Introduced species can be defined as species that were translocated outside its natural or historical range, either accidentally or on purpose, by various means ([Khairul Adha et al., 2013](#)). In their new environment, these species can be classified as non-native or alien species. In Malaysia, the introduction of alien species and issues related to it in the freshwater ecosystem are undervalued, resulting in the low number of research and scarcity of information related to the invaders ([Othman & Hashim, 2003](#); [Khairul Adha, 2013](#)).

The redclaw crayfish (*Cherax quadricarinatus* von Martens, 1868) is a species native to river catchments in northern Australia and south-eastern Papua New Guinea ([Lawrence & Jones, 2002](#)). It is a non-burrowing and physically robust species that grows relatively quickly in a wide range of environments ([Wingfield, 2002](#); [Souty-Grosset et al., 2006](#); [Jones & Ruscoe, 2001](#)). The broad tolerance to environmental factors and attractive colours makes the species ideal for both aquaculture and aquarium industry and translocated to various locations within

Australia and Oceania region ([Doupé et al., 2004](#); [Coughran & Leckie, 2007](#); [Rubino et al., 1990](#)), Southern Europe ([D'Agaro et al., 1999](#); [Koutrakis et al., 2007](#); [Gozlan 2010](#)), Eastern and Southern Africa ([Nakayama et al., 2010](#); [de Moor, 2002](#)), the Americas ([Medley et al., 1994](#); [Wickins & Lee, 2002](#); [Vazquez & López Greco, 2007](#); [Romero, 1997](#); [Volonterio, 2009](#)), the Caribbean ([Medley et al., 1994](#); [Vazquez, 2008](#)), the Middle east ([Karplus et al., 1998](#)), Eastern and South East Asia ([Medley et al., 1994](#); [Xiaoxuan & Edgerton, 2001](#); [He et al., 2012](#); [Chang, 2001](#); [Alimon et al., 2003](#); [Edgerton, 2005](#)).

In Malaysia, the redclaw is locally known as freshwater lobster due to its lobster-like appearance and habitat. The exact year of the redclaw introduction into Malaysia are unknown but commercial scale culturing activity of this species was recorded since 2003 in the southern part of Malaysian peninsula ([Alimon, 2003](#)). The culture of redclaw crayfish has become an interest for the local population and viewed as a way to gain extra income. Culture are usually for food with target size of 6 to 8 inch length but high demand on