

GENOME SEQUENCING

The Complete Genome Sequence of *Portunus pelagicus* (Portunidae, Decapoda), the Blue Swimming Crab

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Biodiversity Genomes

Portunus pelagicus is a large crab found in the Indo-Pacific. We present the whole genome sequence of this species. Illumina paired-end reads were assembled by a de novo method followed by a finishing step. The raw and assembled data are publicly available via GenBank: Sequence Read Archive (SRR25655135) and assembled genome (JAWWMC000000000).

Introduction

Portunus pelagicus, also known as the flower crab, blue crab, blue swimming crab, blue manna crab or sand crab is a species of large crab found in the Indo-Pacific, including off the coasts of Indonesia, Malaysia, Cambodia, Thailand, the Philippines, and Vietnam, and in the intertidal estuaries around most of Australia and east to New Caledonia (Seines, Willette, Romena, et al. 2014). The males are bright blue in color with white spots and with characteristically long chelipeds, while the females have a duller green/brown, with a more rounded carapace. They stay buried under sand or mud most of the time, particularly during the daytime and winter and come out to feed during high tide on various organisms such as bivalves, fish and, to a lesser extent, macroalgae.

Methods

A single wild-caught specimen was used for this study. DNA extraction was performed using the Qiagen DNAeasy genomic extraction kit using the standard process. A paired-end sequencing library was constructed using the Illumina TruSeq kit, according to the manufacturer's instructions. The library was sequenced on an Illumina Hi-Seq platform in paired-end, 2 × 150bp format. The resulting fastq files were trimmed of adapter/primer sequence and low-quality regions with Trimmomatic v0.33 (Bolger, Lohse, and Usadel 2014). The trimmed sequence was assembled by SPAdes v2.5 (Bankevich et al. 2012) followed by a finishing step using Zanfona v1.0 (Kieras 2021) to make additional contig joins based on conserved regions in related species.

Data availability

Raw reads (SRR25655135) and the assembled genome (JAWWMC000000000) are available in Genbank.

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Conflict of Interest Statement

The authors declare they have no conflicts of interests.

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