

# ***Carnarvonis* gen. nov. and *Warregoensis* gen. nov.: Two New Genera and Species of Subterranean Amphipods (Crangonyctoidea: Chillagoeidae) Described from North-eastern Australia**

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**ABSTRACT.** Biological surveys are crucial and appropriate approaches for capturing invertebrate biodiversity data and specimens, particularly considering that a significantly high proportion of Australian invertebrates are thought to be undescribed. During the 2014 Carnarvon Station Reserve Bush Blitz Biological Survey, specimens of stygobiotic amphipod crustaceans were collected from a spring-fed groundwater site. Taxonomic analyses revealed that the specimens comprised two new genera and species of stygobiotic amphipods belonging to the family Chillagoeidae. Further examination required a revision of the family, which is presented herein along with the descriptions of *Carnarvonis katjae* gen. et sp. nov. and *Warregoensis lowryi* gen. et sp. nov. Importantly, the description of two new genera and species increases the total number of described stygobiotic amphipods in Queensland to three genera and species and indicates that additional and potentially diverse stygobiont taxa are likely to be discovered in the largely unexplored groundwater habitats across the region.

## **Introduction**

A biological survey of groundwater associated sites (springs, marshes, gravel beds) on Carnarvon Station Reserve, ca. 600 km west of Bundaberg in central Queensland, Australia, was carried out in October 2014 as part of a Bush Blitz Biological Survey (<https://bushblitz.org.au>). This survey was coordinated by Bush Blitz (an Australian Government, BHP, and Earthwatch Australia partnership), partnered with Bush Heritage Australia and the Queensland Museum (Commonwealth of Australia, 2017). From a single spring-fed groundwater site, approximately 20 specimens comprising two separate species of stygobiont crangonyctoid

amphipod crustaceans were collected. Initial identifications concluded that these were “paramelitid-like” amphipods based largely on the morphology of their gnathopods, gills, and uropods, but with a unique looking uniramous uropod 3.

The Paramelitidae comprise a significant component of the Australian freshwater amphipod fauna, with 14 currently described genera encompassing stygobiont and epigeal taxa (Bradbury & Williams, 1999; Lowry & Myers, 2012). Yet, this family has historically remained ambiguously defined from at least two other existing freshwater amphipod families (Neoniphargidae Bousfield, 1977 and Perthiidae Williams & Barnard, 1988 (Bradbury & Williams, 1999)). Lowry & Myers (2012, 2013) attempted to extensively redefine and

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