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The freshwater Amphipoda (Crustacea) of New Zealand: a review

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Although it is >100 years since the first taxonomic descriptions appeared, the freshwater and groundwater amphipod fauna of New Zealand is still poorly known During the nineteenth century, the New Zealand groundwater fauna became renowned through the work of Charles Chilton, in particular The currently known amphipod fauna comprises 19 species in 9 genera among 8 families Although apparently poor in species, the fauna is diverse at generic and family levels, and recent studies show that several more epigean and hypogean taxa await description This paper reviews each genus and species diagnoses genera, and provides synonymies of genera and species, as well as discussing their taxonomic status

Keywords Amphipoda freshwater, groundwater taxonomy

INTRODUCTION

The epigean and hypogean freshwater amphipod fauna of New Zealand has long been regarded as well known and relatively limited in species diversity Interest in the New Zealand hypogean fauna was stimulated about 100 years ago when Charles Chilton described large amphipods from the alluvial groundwaters of Canterbury Plains Chilton pioneered the study of hypogean faunas at a time when subterranean aquatic life was poorly understood His work climaxed with his 1894 monograph on the subterranean Crustacea of New Zealand and subsequent papers focussed on range extensions and intraspecific variation (Chilton 1884, 1906, 1909a, 1912, 1924) Work on amphipods from epigean freshwaters paralleled this G M Thomson, an Otago taxonomist, was also very active, describing several amphipod species over the same period (1879, 1884, 1885, 1889, 1899)

It was not until the 1950s that the taxonomy of our freshwater amphipods received further attention within Dr Des Hurley's (e g , 1954a, 1954b, 1954c, 1957) series of papers on New Zealand amphipods Some 20 years later, Dr G (Willy) Kuschel mounted an extensive collecting effort after residents of the Waimea Plains showed him specimens from their well water His subsequent survey of wells throughout New Zealand collected insects, crustaceans, and molluscs The resulting amphipod collections contained several new taxa Casual collecting of freshwater amphipods by the author since the 1970s and Dr Ann Chapman's more recent, intensive collecting efforts also produced a number of new taxa (A Chapman pers comm 1999) Collections from groundwater and springs by Prof Mike Winterbourn and his students, and by Mr Lester Sinton (1984) in wells near Christchurch, contributed additional valuable material

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