Reconnaissance limnology of Tasmania IV.
The distribution and ecological preferences of Tasmanian species of freshwater calanoid copepods (Crustacea: Centropagidae)

R. G. J. Walsh¹ and P. A. Tyler²

With 17 figures and 2 tables in the text

Abstract: The species of calanoid copepods occurring in 323 lakes chosen to cover all of the broad spectrum of limnological conditions experienced in Tasmania has been determined. Some species are distinctly segregated into two assemblages across the abrupt limnological divide that sets apart eastern and western montane limnological provinces. These species show distinct limnological preferences aligned with the dichotomy in limnological conditions. Some of these species occur also in the third limnological province of coastal lagoons, preserving their preferences. Distribution patterns in these three provinces are essentially natural and, in montane regions, a post-glacial event. In settled regions of the state, ubiquitous, opportunistic species have spread as agricultural ponds have been created, and even into the highland regions in the wake of development for hydro-electricity. A few species have restricted, disjunct distributions, such as in the few Tasmanian salt lakes where species characteristic of such habitats on mainland Australia occur. Two species (Boeckella propinqua longiseta and Boeckella rubra) are Tasmanian endemics. Another (Boeckella nyoraensis) is now known only from the island.

Introduction

The highland lakeland of Tasmania is divisible into two major limnological provinces, eastern and western, separated by an east-west change in climate, geology, soils, and vegetation (Tyler 1992). These changes, which take place more or less congruently and relatively abruptly, are matched by changes in physicochemical properties of many lakes of Tasmania’s highlands, recog-