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A SURVEY
OF THE INVERTEBRATE FAUNA
OF MT. WELLINGTON STREAMS

BY

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Submitted to the University of
Tasmania, Department of Zoology,
1977, as partial fulfillment towards
the degree of Bachelor of Science
with Honors.



ABSTRACT

Five streams, Sorell Creek, New Town Rivulet, Robert Rivulet, Browns River and North West Bay River, which flow down Mt. Wellington, were studied.

Physical and chemical properties of the water were measured and factors likely to affect the distinction of the fauna were described.

The invertebrate fauna was sampled seasonally at three sites on each stream.

The effects of disturbances, including pollution, on the stream fauna were studied.

The main features of the fauna are its uniqueness to Tasmania, its susceptibility to destruction by disturbance of the environment, and the presence of a distinct high altitude fauna.

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CHAPTER 1:INTRODUCTION

In contrast to the mainland of Australia, which is the most arid of the world's inhabited continents, containing only some 400 rivers, Tasmania has an abundance of freshwater systems throughout its area. The lack of study of lotic environments, noted by Bayly and Williams (1975), on the mainland may be explained in part by this lack of running water, but the almost complete absence of such studies in Tasmania is surprising.

Survey work in Australia, such as the Tasmanian Biological Survey, has involved the listing of animals as a prelude to an investigation of the distribution of animals, the relation between plant and animal communities and the influence of the environment on the fauna (Hickman, 1938). Few studies of this kind have been published in Australia, and those which have, such as those by Jolly and Chapman (1966) and Walker et al. (1976) have concentrated on larger lowland streams. Similarly, although lotic environments have been better studied in New Zealand, studies such as those of Allen (1951) and Stout (1969) are confined to larger and generally low altitude rivers.

In fact, this seems to have been the trend throughout the world, where although a large number of surveys on stream fauna have been carried out, such as the vast descriptive European literature, only a few, such as those by Hynes (1961), Morgan and Egglisshaw (1965), Woodall and Wallace (1972) and Arnold and Macan (1973) have studied small, torrential mountain streams.

ABSTRACT

Five streams, Sorell Creek, New Town Rivulet, Hobart Rivulet, Browns River and North West Bay River, which flow down Mt. Wellington, were studied.

Physical and chemical properties of the water were measured and factors likely to affect the distinction of the fauna were described.

The invertebrate fauna was sampled seasonally at three sites on each stream.

The effects of disturbances, including pollution, on the stream fauna were studied.

The main features of the fauna are its uniqueness to Tasmania, its susceptibility to destruction by disturbance of the environment, and the presence of a distinct high altitude fauna.