

**A STUDY OF THE LAND
IN THE CATCHMENT
OF THE
KIEWA RIVER**

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TABLE OF CONTENTS

SUMMARY 5

LIST OF PLATES

Plate 1. The Bogong High Plains and the McKay Creek power-station development. The high country in the south of the Kiewa catchment has a high value for water production., including the generation of hydro-electric power, and for timber and as a recreation area..... 4

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Plate 1. The Bogong High Plains and the McKay Creek power-station development. The high country in the south of the Kiewa catchment has a high value for water production., including the generation of hydro-electric power, and for timber and as a recreation area.

SUMMARY

The Kiewa River which drains a catchment of about 675 square miles, is one of the major tributaries in north-eastern Victoria of the Murray River.

Although much of the southern part of the catchment and the eastern and western boundaries are mountainous, the valley of the Kiewa River north of Mt. Beauty township and the valleys of the several important tributaries contain wide alluvial plains and rolling to hilly footslopes which have been developed for agriculture. The Bogong High Plains in the south, the Stanley plateau in the north-west and several small plateaux on the Baranduda Range and the Big Ben massif are all relics of an ancient mature landscape.

Most of the catchment is within the extensive belt of metamorphic rocks in north-eastern Victoria. A large area of granite occurs to the east and north-east of Mt. Stanley in the vicinity of Yackandandah. Smaller areas of granodiorite and numerous basaltic residuals of Tertiary age occur in the southern mountains and high plains area.

The climate is strongly influenced by the elevation of the land which ranges from about 600 feet in the northern valleys to over 6,500 feet on Mt. Bogong. In the high mountains a total annual precipitation of up to 90 inches occurs with much winter snow. In the northern valleys, annual rainfall is about 30 inches and snow is rare. Summer and autumn are the drier seasons.

The soils of the mountainous higher rainfall areas range from organic loams at the greater elevations, through friable brownish gradational soils to friable reddish gradational soils at the lesser elevations. In the broad valley bottoms, the soils are friable reddish gradational soils, weakly bleached reddish gradational soils and red duplex soils on the upper, well-drained parts of the landscape. Yellowish duplex soils occur in the far north; reddish gradational soils on alluvium, yellowish-brown gradational soils on alluvium, brown loams on alluvium, and undifferentiated sands and loams occur on the stream terraces and flood plain.

The native vegetation of the valleys ranges from savannah woodland of white box and forest red gum in the north, through dry sclerophyll forest of red stringybark, long-leaf box, broad-leaf peppermint, candlebark gum and others, to wet sclerophyll forest of narrow-leaf peppermint with candlebark gum, blue gum and broad-leaf peppermint in the higher rainfall areas of the southern valleys.

Wet sclerophyll forests dominated by narrow-leaf peppermint also occur on the lower slopes of the mountainous country in the south, and at the higher elevations are replaced by wet sclerophyll forests of alpine ash. In areas where snow persists in winter, alpine ash gives way to tall woodlands of mountain gum and snow gum or sub-alpine woodlands of snow gum. The land at the highest elevation has grassland or herbfield, in which snow grass is the dominant species, and low shrub communities. Bogs and fens occupy the wet situations on the high plains.

The agricultural land is mainly under permanent pasture and the main enterprises are dairying and fattening stock. The mountainous parts of the catchment are an important source of both scantling-quality and seasoning-quality timber, and are a valuable source area for water. The large Kiewa Hydro-electric Scheme is based on water from the upper reaches of the Kiewa river.

Erosion is not common in the catchment although there are specific problem areas. On the high plains there is a high hazard of erosion adversely affecting infiltration and the general hydrologic condition of the area. Stream-bank erosion occurs sporadically along most of the main streams but is not extensive.

In general, the present forms of land use appear to be those best suited to the environment but there is room for improvement in management.