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A PRELIMINARY REPORT ON THE BIOLOGY AND ECOLOGY OF THE SNOWY RIVER AREA IN NORTH-EASTERN VICTORIA.

(Plates 11-13).

This report deals with a primary visit to the area, provides a generalized description of the country, and lists the plants and animals collected.

The Snowy River and its tributaries between Buchan and the Victoria-New South Wales border traverse much country which is unpopulated and remains in its virgin state. It is steeply mountainous, consisting of an unbroken series of ranges and valleys which support a varied flora, and which extend northwards towards Mt. Kosciusko in New South Wales. With the exception of the Snowy River itself, no ground survey of the country has ever been made, and it is almost unknown biologically.

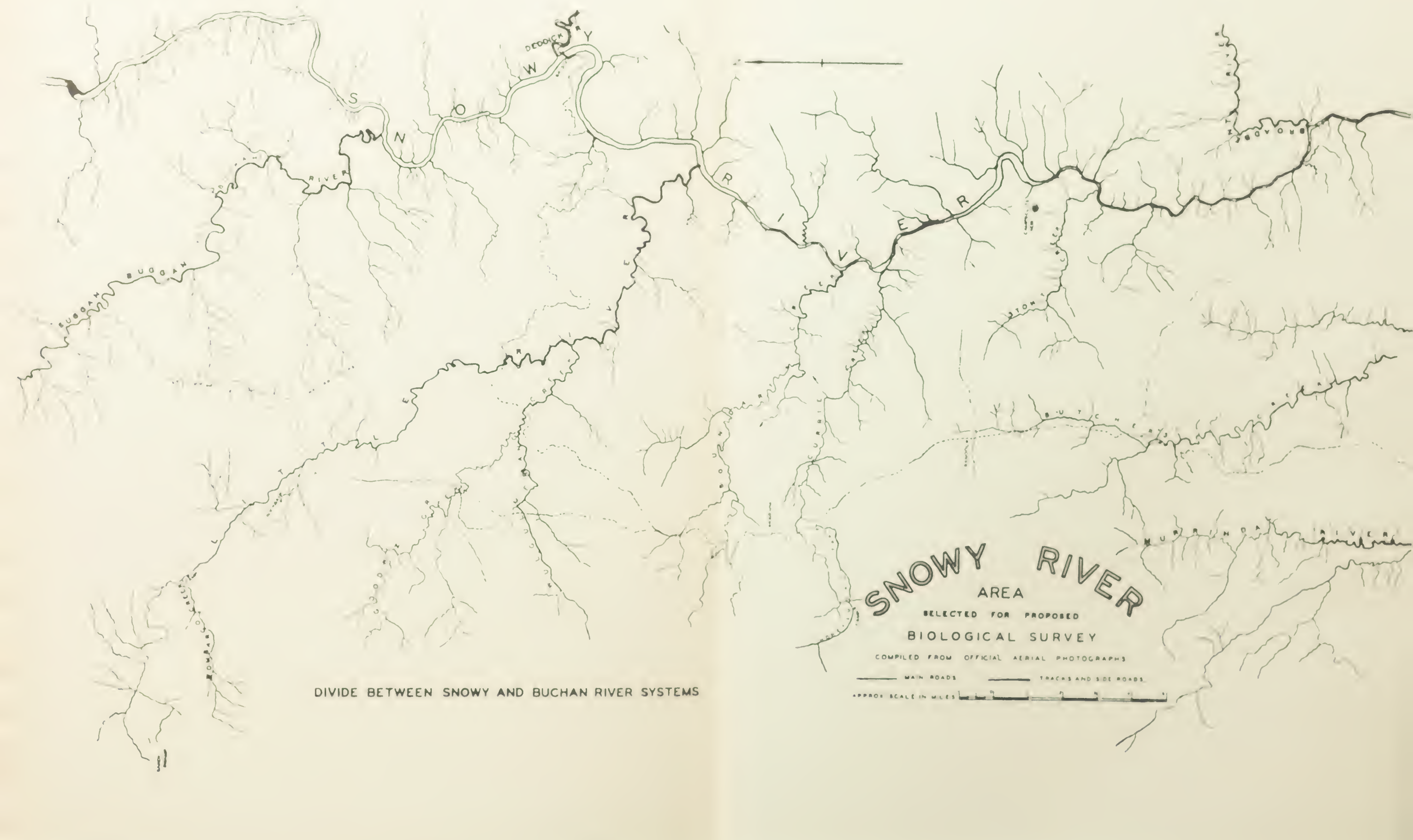
These conditions alone make the area a desirable one for an ecological study, but there is also another consideration. There is a proposal by Governmental bodies to divert the water of the Snowy River for use in the generation of hydro-electric power and for irrigation. This may have some repercussion on the biological balance of the area below the diversion, and could, in the future, form the subject for an interesting comparison.

The above facts outline the reasons for the investigation by the National Museum of Victoria.

Museum personnel on the primary visit consisted of C. W. Brazenor (Mammalogist), J. H. Macpherson (Conchologist), S. G. Whincup (Mineralogist), and R. Boswell (Preparator).

A camp on the Snowy River, planned from the very meagre maps and information available before the trip, proved to be impractical when the area was reached. Headquarters was therefore established near Gelantipy, and two- or three-day excursions were made from there. In this manner the party visited the Snowy River, at Campbell's Nob and at its junction with the Deddick River, the Suggan Buggan River, the Little River and Wombargo Creek, the Murrindal River gorge, and high country between the source of the Buchan River and Wombargo Creek. From observations made during these excursions, the following sketch of the area may be made.

The country rock of the area is mainly Snowy River porphyry. Under this heading is included varied rock types, a number of


SNOWY RIVER
AREA
SELECTED FOR PROPOSED
BIOLOGICAL SURVEY
COMPILED FROM OFFICIAL AERIAL PHOTOGRAPHS
MAIN ROADS
TRACKS AND SIDE ROADS
APPROX SCALE IN MILES
DIVIDE BETWEEN SNOWY AND BUCHAN RIVER SYSTEMS

which can be described as volcanic agglomerates whilst others are true quartz porphyries; in places they are many hundreds of feet thick. Underlying this is granite, which outcrops in some areas. There are also exposures of Ordivician, isolated small outcrops of basalt, and, to the south, some limestone. The steep mountainsides hold practically no soil and there is little alluvial deposition in river valleys.

The bare country absorbs little of the rainfall, which averages 30 inches per year, and the run-off causes a very rapid change of river rise and fall which is accentuated at the time of melting snow.

The northern slopes of the mountains are dry and open; the southern slopes are less dry and carry more scrub. In the high country (4,000 to 5,000 feet) there are large areas of Snow Grass (*Poa caespitosa*) and stands of Snow Gum (*Eucalyptus pauciflora*). The northern lower slopes carry White Gums (*Eucalyptus viminalis* and *E. rubida*) and Box (probably *Eucalyptus albens*), and have little or no ground cover though some areas have a sparse growth of the low-growing Tea Tree (*Leptospermum attenuatum*). The principal tree on the southern slopes is the Woollybutt (*Eucalyptus gigantea*). Still lower in the gullies is a varying amount of scrub including Blanket-leaf (*Bedfordia salicina*), Musk (*Olearia argophylla*), and several species of Tea Tree (*Leptospermum lanigerum*, *Bæckea Gunniana*, and *Kunzia pedunedaris*). In the deeper gully-heads, the scrub thickens to jungle proportions, and besides Blanket-leaf and Musk contains Lilly-pilly (*Eugenia Smithii*), Wire Grass (*Tetrarrhena juncea*) and Lianes including Clematis (*Clematis aristata*) and Supplejack (*Lyonsia straminea*).

Such a short, generalized outline of the country must necessarily leave many gaps, but is intended to present only an overall view which, as specific localities are more intensively worked, may be filled in.