

Dr. Allan Thomson has prepared a palæontological bulletin entitled "Materials for the Palæontology of New Zealand," which has been forwarded to the printer. Mr. Henry Suter has furnished a report entitled "A Revision of Captain F. W. Hutton's 'Catalogue of the Tertiary Mollusca of New Zealand, 1873,'" and this it is hoped to publish at an early date.

A manuscript index to the reports of the old Geological Survey (Vols. 1 to 22) has been prepared by Dr. Henderson. This it is proposed to publish as soon as a revision now under way can be completed.

#### LIBRARY.

A few books have been added by purchase to the library during the year. The usual journals and exchanges, many of a most valuable character, have been received.

### FIELD-WORK IN THE BULLER-MOKIHINUI SUBDIVISION.

#### INTRODUCTION.

During the past year topographical work in the Buller-Mokihinui Subdivision was conducted from the middle of August, 1911, until the beginning of June, 1912. The country mapped was chiefly in the watersheds of the Blackburn River and St. Patrick's Stream (tributaries of the Ngakawau River) and in the valley of the Mackley or Orikaka River, a little-explored tributary of the Buller. Geological work began in October, and, with various interruptions, continued until the middle of May. It was spread over a much greater area than the topographical survey, the work done extending over a belt of country north of the Mokihinui River to Mount Rochfort, south of Denniston. The greater part of the area topographically surveyed was also examined.

#### GENERAL GEOLOGY.

A brief sketch of the general geology of the district was given in the last annual report. To this little need be added on the present occasion. Mention of a quartz-porphyry which occurs near Coalbrookdale, in Mount William Creek, and elsewhere, must be made. This rock intrudes argillites and grauwackes of possible Ordovician age, and is certainly antecedent to the coal-measures; but otherwise there is little to indicate its age. Possibly it may be contemporaneous, or nearly so, with the granitic intrusions of the district. The rock is distinguished by an abundance of quartz phenocrysts and of angular inclusions of altered argillite and grauwacke, which in places are so numerous as to give the rock the appearance of a breccia.

Some interesting data concerning faulting and tilting of the coal-measure strata in the Buller-Mokihinui Subdivision have been obtained, but presentation of these is deferred until a detailed report is written.

#### ECONOMIC GEOLOGY.

The main object in view throughout the season was the collection of data bearing on the chief mineral asset of the Westport district—its coal-resources. Alluvial gold has been found in many places. Quartz lodes, some of which carry gold, occur in various localities. Stream-tin has been reported from the Mackley Valley, but none was found by the Geological Survey party. The mineral doubtless occurs only in limited amount. Barite is found near Coalbrookdale in the quartz-porphyry mentioned above, but in such small quantity as to be of no economic value. The same mineral is reported as occurring in a small vein that penetrates coal-measure grits on the Westport-Stockton Company's ground.\* The remarks which follow will be placed under the headings of (1) coal, (2) alluvial gold, and (3) auriferous-quartz lodes.

##### (1.) *Coal.*

The resurvey of the coal-bearing country explored by Cox and Denniston is incomplete, but has shown the general correctness of their results. It has to be stated, however, that exploratory work by the Westport-Stockton Company has shown that an area within their lease considered barren by Cox and Denniston is in great part coal-bearing. On the other hand, workable coal appears to be absent from a considerable area mapped as coal-bearing north-east of Millerton, although the coal-horizon is present.

The results of exploration of the country to the eastward of that already well known to be coal-bearing have not been altogether satisfactory. They will be stated under two heads—(a) Upper Blackburn and adjoining district, (b) Mackley or Orikaka district.

(a.) *Upper Blackburn and Adjoining District.*—The Blackburn, as shown by the accompanying map, is a tributary of the Upper Ngakawau, which has its sources on the north side of the low irregular ridge separating the Upper Ngakawau from the Mackley or Orikaka River. The Blackburn flows at first east, and then northward, till it joins the Ngakawau some six miles (in a straight line) from the mouth of the latter stream.

In the reports of Cox and Denniston the upper portion of the Blackburn is called the Tio,† and is erroneously stated to flow into the Orikaka. Hence their remarks under the heading of "Tio or Orikaka" refer to the Upper Blackburn, and not to the Mackley watershed. The error was probably discovered by Mr. W. M. Cooper, the surveyor to whom we owe an excellent topographical map of the greater part of the Buller Coalfield, for his pegs have been found some distance down the Blackburn, but was never publicly corrected.

\* Information from Mr. Frank Reed, Inspecting Engineer, Mines Department.  
originally been T 10, the number of one of W. M. Cooper's trigonometrical stations.

† The name may have