MINERALOGICAL NOTES: No. IV.—ORTHOCLASE IN NEW SOUTH WALES

By C. Anderson, M.A., B.Sc., Mineralogist.

(Plates xlviii.-lii.).

Macroscopic crystals of felspar are of common occurrence in the granitic area of Northern New South Wales and have been noted by various observers, but so far no crystallographic description has appeared. It is proposed in this paper to describe and illustrate some of the more interesting orthoclase crystals comprised in the Australian Museum collection, plagioclase felspars being reserved for a subsequent article.

The specimens figured were with one exception acquired by the Trustees from Mr. D. A. Porter, of Tamworth, to whom also I am under obligation for particulars of their finding and mode of occurrence. Mr. E. C. Andrews, of the Geological Survey of New South Wales, who possesses an extensive knowledge of the granites of New England, has been good enough to examine the collection, and has given me valuable information regarding the field relations of the rocks in which the felspars are found.

For identification purposes Becke's method was employed; by the use of a liquid with a refractive index greater than those of orthoclase and about equal to the mean index of albite, orthoclase was easily distinguished from plagioclase. This method was supplemented by observation of the extinction angles on cleavage flakes. The crystal forms were determined by inspection corroborated by measurement with a contact goniometer.

Cockburn Creek.

(Plate xlviii., fig. 1).

A single specimen from "Beadle's Conditional Purchase," Cockburn Creek, near Tamworth, is in the Museum collection. It consists of an aggregate of glassy crystals of a typical adularia habit, accompanied by small brownish crystals of axinite. The felspar presents the simple combination *c* (001), *m* (110), *x* ($\bar{1}01$), *c* and *x* having a tendency to oscillate with one another and give a somewhat rounded termination.