

tact with intrusive, and by acute folding." It is important to note that in several instances these banded rocks are auriferous, especially where they are intersected or interrupted by quartz reefs. Unfortunately, owing to the large amount of work to be done for the field staff, a continuation of the investigation has had to be deferred.

In August, besides a considerable number of determinations for Mr. Blatchford and a report on other Southern Cross rocks, an examination was made of several specimens from the Whim Well Copper Mine, West Pilbara Goldfield. These were all highly altered rocks, now consisting some almost wholly of chlorite and secondary quartz, others of kaolinised feldspars and quartz.

Following on a determination in September of an obscure rock for Mr. Turner of the Ingliston Extended Mine, Meekatharra, a batch of the country rocks of the lode formations in this field was sent down, and since, hitherto, descriptions of these rocks had been couched in the vaguest terms, a thorough petrological examination of them has been made and an attempt to arrive at some conclusions as to the original rock and the original of the lode material. The results will be published in a forthcoming Bulletin. From the 13th to the 14th I visited Kelmescott to report on a supposed building stone in the vicinity. In spite of a diligent search, none of any quality was discovered. From the 19th to the 22nd, inclusive, I was at Collie with a view to the examination of the district.

From the beginning of October to the middle of November, my time was largely spent in reporting on rocks from Coolgardie and Burbanks for Mr. Blatchford, on specimens from the Yilgarn and Yalgoo Goldfields for the Government Geologist, on some Meekatharra specimens, and on rocks from Recovery G.M.L. The results will very shortly be published.

About the middle of November, seeing that for months previously it had been pretty evident that there was considerable confusion with regard to rock terminology and the principles on which it is based, I undertook to write a paper which should contain not only descriptions of the more important rock-forming minerals from the point of view of those characters which would enable an identification of them to be made with the naked eye or a lens and a pocket-knife, but also a rock classification with the names and a brief account of the chief rocks of general occurrence. This paper will be published in the forthcoming Bulletin containing the various miscellaneous Reports. During December the paper was finished, numerous determinations were made for Mr. Woodward's Report on the Peak Hill District, for Mr. Talbot's Report on his flying Survey of the North Coolgardie Country, and a report was made on a collection of specimens from the deep mines of Kalgoorlie for the Royal Commission on Miners' Lung Diseases. These latter rocks, though very much altered, can be roughly classified under two or three heads, and a close comparison of them with others in the collection will throw a considerable amount of light on the original rock facies of that field.

#### PALAEONTOLOGICAL WORK.

During a short visit to the Collie Coalfield in the month of September, Mr. Farquharson collected several fossil leaf impressions at West Collie, of which a more or less preliminary examination has been made. The results of this investigation have once more raised doubts as to the Permo-Carboniferous Age of the Coal Measures. No impressions demonstrably of "*Glossopteris browniana*" were obtained by Mr. Farquharson; on the other hand there were one or two extremely like those of certain Upper Mesozoic and Early Tertiary plants from New South Wales. It is contemplated making a fuller collection before any definite conclusions on the question are published.

#### LIBRARY.

As has been the case in the past, the Library has received a considerable number of additions during the year under review, having been increased by 741 presentations and 95 purchases.

#### GEOLOGICAL SURVEY COLLECTION.

The additions to the Survey Collection during the year 1911 amounted to 761, bringing the total number registered up to 12,097. The accessions comprised 174 minerals, 535 rocks, 39 fossils, and 13 bore-cores. Of microscope slides 228 were prepared during the year, and added to the collection under the care of the Petrologist, bringing the total number now on the books up to 1,675.

The officers of the Survey have, in the ordinary course of their duties in the field and the office, taken 87 photographs of geological and mining subjects, bringing the total number of negatives now registered up to 789.

In the Annual Report for 1908 reference was made to the transfer of the National Geological Collection to the Survey. In consequence of the passing of the Public Library, Museum, and Art Gallery of Western Australia Act, whereby all property, other than that which was on loan, became vested in trustees, the collection transferred was handed back to the trustees and the Survey specimens rearranged in our own cases, which are at present housed in the mineral gallery of the Western Australian Museum. Three show cases containing the Survey collection of fossils have been lent to the trustees, pending other arrangements being made regarding the housing of the Geological staff and its belongings.

A duplicate collection of about 1,200 minerals and rocks has been presented to the Museum trustees, and arrangements made whereby further duplicates will be donated as opportunity offers.

#### PUBLICATIONS.

During the past year the following publications were issued to the public:—

Annual Progress Report for the Year 1910.

Topographical Map of Meekatharra.

Bulletin No. 41—The Geology and Ore Deposits of the West Pilbara Goldfield: by H. P. Woodward.

In addition to the above, there are now in the hands of the Government Printer:—

Bulletin No. 42.—Contributions to the Study of the Geology and Ore Deposits of Kalgoorlie. Part I.: by E. S. Simpson and C. G. Gibson.

whilst the following Bulletins, which represent the results of last season's field work, will very shortly be in the hands of the Printer:—

Bulletin No. 43.—Petrological Contributions to the Geology of Western Australia. I.: by R. A. Farquharson.

Bulletin No. 44.—A Geological Reconnaissance of a portion of the South-West Division of Western Australia: by E. C. Saint-Smith.

Bulletin No. 45.—Geological Investigations in the country lying between Latitude 28° and 29° 45' South and Longitude 118° 15' and 120° 40' East, embracing part of the North Coolgardie and East Murchison Goldfields: by H. W. B. Talbot.