

## ABYSSINIA

Coal deposits are known to exist at several places in this practically unknown country. Near Addis Abbaba, the capital, they are being worked for fuel by the inhabitants, but we, unfortunately, possess no definite information concerning the extent and thickness of the beds, nor of the quality of the coal.

Credible reports have been received concerning the existence of coal deposits at Gondar, north of Lake Tsana, and upon the Island of Derke in the lake itself. Mr. C. Dupuis, who visited this district in the winter of 1903, says as follows in his "Report upon Lake Tsana and the rivers of the Eastern Sudan" (Cairo, 1904)—bound in one volume with Sir William Garstin's report upon the Basin of the Upper Nile): "The geological formation is almost everywhere of the same primitive character that seems to be universal in the Eastern Sudan, granite, gneiss, and quartz, varied only by tracts of lava, basalt and eruptive rock. Sandstone is reported by some travellers, and limestone is said to be found near Gondar, but I saw none myself." This statement hardly supports the hopes raised by the traders and natives, who have reported the existence of coal-beds in this neighbourhood.

A Greek trader in 1909 reported the discovery of coal in the valley of the Didessa river, about fifty kilometres from its junction with the Blue Nile, and took some of the coal with him to Addis Abbaba, to verify his report.

The late Mr. Thomas Barron, of the Egyptian and afterwards, until his untimely death, of the Sudan Geological Survey, in the early months of 1904, visited and reported upon the occurrence of coal at Chelga, about thirty kilometres north of Lake Tsana, and west of Gondar, and about a hundred and ten kilometres from Gallabat, an important frontier town in the Sudan. The district lies in the valley of the Goang river, as the Atbara is called in Abyssinia, near its source, and the coal-beds are exposed over an area about thirteen kilometres long and two to three kilometres wide.

According to Mr. Barron the deposits owe their existence to having been let into the surrounding igneous rocks by a trough fault.

"Of the two faults forming this trough, the eastern one has the greater throw, and the general trend of the beds is from west to east, the younger beds on this account always occurring near the side of the Goang. This stream marks the line of fault on the east and the two faults meet at the northern extremity of the plain." Mr. Barron examined several sections exposed by the Goang river and its tributaries, and came to the general conclusion that the deposits were of Tertiary age, and were those of the edge of a large lake. In the best section examined, 78 metres were exposed, the beds dipping  $7^{\circ}$  S. of E. — in other sections they were almost horizontal. In this particular section there were seven beds of good lignite, varying in thickness from 15 to 53 centimetres, and four narrow seams less than 15 centimetres in thickness.

Unfortunately the results of the analysis of the samples brought back are not available as we write; but Mr. Barron in his field report evidently regarded the deposits as worth working, to supply the local needs for fuel in the Sudan and Abyssinia.