

with abundant remains of terrestrial vegetation.²¹⁶ Some of the more characteristic fishes are *Strepsodus sauroides* (Fig. 372), *Rhizodopsis sauroides*, *Megalichthys Hibberti*, *Cheirodus granulosis* (Fig. 372), *Janassa linguiformis*, *Sphenacanthus hybodoideis* (Fig. 361), *Pleuracanthus lævissimus*, *Ctenoptychius apicalis*. Some species range from bottom to top of the Coal-measures; e.g. *Callopristodus* (*Ctenoptychius*) *pectinatus* and *Gyracanthus formosus*.²¹⁷

Little has yet been done in working out the stratigraphical distribution of the Coal-measure flora of Britain, but some recent progress in this direction has been made by Mr. Kidston, who believes the Coal-measures to be divisible into Upper (Radstock, Somerset), Middle (South Staffordshire, part of Yorkshire), and Lower (part of Yorkshire, Northumberland, Scotland).²¹⁸ The late D. Stur, correlating the Coal-measures of this country with those of central Europe mainly by means of the plants, regarded the Coal-measures of Wales and the west of England generally as equivalent to the higher series of Germany, those of central and northern England and Scotland as equivalent to the lower series, both of these series being represented in Lancashire.²¹⁹ From plant-remains obtained recently from the chalk at Dover, Zeiller regards the Coal-measures there as belonging to the upper part of the middle Coal-measures of France.²²⁰

On the continent of Europe the Carboniferous system occupies many detached areas or basins—the result partly of original deposition, partly of denudation, and partly of the spread and overlap of more recent formations. There can be no doubt that the English Carboniferous Limestone once extended continuously eastward across the north of France, along the base of the Ardennes, through Belgium, and across the present valley of the Rhine into Westphalia. From the western headlands of Ireland this calcareous formation can thus be traced eastward for a distance of 750 English miles into the heart of Europe. It then begins to pass

²¹⁶ Wheelton Hind, Quart. Journ. Geol. Soc. xlix. 1893, p. 259.

²¹⁷ My friend Dr. Traquair has been kind enough to furnish me with information on this subject, which he has so carefully studied.

²¹⁸ Trans. Roy. Soc. Edin. xxxv. 1890–91, pp. 63, 391; xxxvii. 1893, p. 307.

²¹⁹ Jahrb. k. k. Geol. Reichsanst. 1889.

²²⁰ Compt. Rend. Oct. 24, 1892. The details of this Dover boring, which has proved the existence of coal-bearing strata beneath the southeast of England, are given by Lorieux, Ann. Mines, ser. 9, vol. ii. 1892, p. 227. Bertrand has discussed the relations of this Dover coal-field to those of northern France and Belgium, op. cit. iii. 1893, p. 1.