

6. PERMO-CARBONIFEROUS PLANTS *from* VEREENIGING (TRANSVAAL).  
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[PLATES IX & X.]

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I. INTRODUCTION.

THE township of Vereeniging, on the northern bank of the Vaal River, close to its junction with the Klip River, is situated on the southern boundary of the Transvaal Colony, rather more than 40 miles south of Johannesburg on the railway which runs to Bloemfontein and Naauw Port. Geologically, Vereeniging is important as the locality from which the greater number of Palæozoic South African plants have been obtained; the species hitherto described are frequently cited by authors—not always with the same conclusions—in reference to the geological age of the strata in this part of the Transvaal.

The large striated boulders weathered out of the surrounding matrix on the bank of the Vaal River afford a striking demonstration of the nature of the Glacial Conglomerate, the term advocated by Mr. E. T. Mellor<sup>1</sup> in preference to that of the Dwyka. We are not concerned with the precise method of formation of the conglomerate, but we are convinced that Sutherland was correct in his opinion, expressed more than 40 years ago, that the boulder-beds owe their origin to the action of ice, and this (we believe) is the view of those geologists who have had an opportunity of examining the evidence at first hand. The conglomerate, as shown in the accompanying section (fig. 1, p. 110), is succeeded by coal-seams, sandstones, and shales; it is mainly from the sandstones that the plants have been obtained. Most of the specimens were found in a sandstone-quarry a mile and a half from Vereeniging,<sup>2</sup> on the banks of the Klip River about 1 mile from its confluence with the Vaal; others were collected from a sandstone-bar which crosses the Vaal channel a mile and a half west of Vereeniging.

In 1897 Mr. D. Draper, who sent to one of us for description a few plants from a quarry 2 miles east of Vereeniging, contributed a paper in which he assigned a Triassic age to the coal-bearing

<sup>1</sup> Mellor (04) p. 21. The numerals in parentheses after authors' names refer to the dates of publication; see Bibliography, p. 123.

<sup>2</sup> Leslie (04) p. 85.