Note on the Walloon Jurassic Flora.

By J. H. Reid.

(*Read before the Royal Society of Queensland, 31st August,* 1922.)

Until the past two years very little geological work had been devoted to the Walloon formation in Southern Queensland, and although fossil plants are abundant therein, the lack of systematic collecting and of stratigraphical data has been a serious drawback to previous palæontological work. The Flora of the Ipswich and Walloon Series has been described by Dr. Walkom on all the local material available up to 1916.[1] Since then, as the result of field work by officers of the Geological Survey, extended collecting has been possible and the material available is now much more complete.

This work comprises a reconnaissance survey of the Roma District by Dr. H. I. Jensen[2]; also a detailed survey of the Rosewood Coalfield[3] and a reconnaissance survey of the West Moreton district by the writer (in Press). No detailed work has been done in the Darling Downs area, but the omission is probably not important, since the beds there are undoubtedly continuous with the Moreton beds under a narrow strip of basalt along the Toowoomba Range, and the northern portion of the Downs is probably on the same stratigraphical horizon as some of those examined in the Moreton district. It is tolerably certain that the Walloon formation extends unbroken between Beaudesert and Roma districts, covered in places by more recent deposits. Certain important palæontological conclusions present themselves as a result of this work, which were not so obvious previously, and which connote marked differences between the Ipswich Flora and that of the Walloon, other than those noted by Walkom.

The predominant species of the Ipswich formation are the various species of *Thinnfeldia*, and the following are

[1] "Mesozoic Floras of Queensland," Pt. I. Q.G.S.P. 252 (1915), 257 and 259 (1919).

[2] Summary of report published in *Queensland Government Mining Journal,* March, 1921.

[3] Geology of Walloon-Rosewood Coalfield, *ibid,* June-September, 1921.

characteristic amongst others:—*Tæniopteris Tenison-Woodsi, T. Dunstani,* the large-leaved *T. Carruthersi, T. lentriculiforme,* and *T. Wianamattæ;* also *Cladophlebis australis.*

In the Walloon of Moreton district, *Cladophlebis australis* and, to a less degree, *Tæniopteris spatulata* are the predominant species. This holds good through a vertical section of strata probably 5,000 feet thick in the area lying between Marburg and Wilson's Peak. Both are recorded from Darling Downs and from Roma.

An important feature, however, is that no undoubted species of *Thinnfeldia* nor any of the *Tæniopteridæ*, except *T. spatulata,* were found in the Walloons of the Moreton district, nor during the detailed survey of Rosewood, where fossilferous beds are abundant, and where an intensive search for fossil evidence may be claimed to have been made.

Dr. Jensen has informed me that *C. australis* is the most abundant form in the Walloon at Roma, and that no species of *Thinnfeldia,* nor of *Tæniopteris,* other than *T. spatulata* were found in those beds. *Thinnfeldia odontopteroides* is, however, found there in Ipswich Beds underlying barren sandstones below the Walloon, but not associated with the Walloon plants. Walkom likewise does not record *Thinnfeldia,* and of the *Tæniopteridæ* only *T. spatulata,* from the Walloon of South-east Queensland, Darling Downs, and Roma.[4]

The only record of *Thinnfeldia* in the Walloon of Moreton District is *T. odontopteroides* var. *falcata,* from Rosewood Scrub, 10 miles from Ipswich, identified by Tenison-Woods[5] and included in the synonymy of *T. lancifolia* by Walkom.[6] A provisional determination by Tenison-Woods[7] of a specimen as *Gleichenia lineata* from the same locality is regarded by Walkom as a doubtful synonym of *T. acuta,* but this can be disregarded owing to the degree of doubt as to its identity. I can only assert that during the detailed survey of the Rosewood coalfield,

[4] Geology of the Lower Mesozoic Rocks of Queensland. A. B. Walkom. Proc. Linn. Soc. of N.S.W. Vol. XLIII., Pt. 1, pp. 78 and 79.

[5] Fossil Flora of the Coal Deposits of Australia. J. E. Tenison-Woods. Proc. Linn. Soc. of N.S.W. Vol. VIII., 1883.

[6] Q.G.S.P. 257, pp. 21-24.

[7] Op Cit., p. 94

all the fossiliferous horizons detected throughout the district were collected from and no species of *Thinnfeldia* were found. Tenison-Woods, however, asserts that the species described by him is by far the most abundant form in that locality, but that position I find undoubtedly belongs to *Cladophlebis australis*, which is present in practically every specimen collected. *T. spatulata* and *Sphenopteris* sp. are also prominent.

From all this evidence emerges the following conclusions:—(1) That *Thinnfeldia*, the predominant genus of the Ipswich Beds, appears to be practically, if not absolutely, absent from the Walloon in the districts mentioned; (2) that the large-leaved *Tæniopteridæ*, as well as *T. Tenison-Woodsi* and *T. Dunstani*, similarly do not ascend into the Walloon, as far as we know, this genus being only represented (though in great abundance) so far by *T. spatulata;* and (3) the overwhelming predominance of *Cladophlebis australis* in the Walloon.

In view of the field work done, involving the examination of many hundreds of specimens from widely separated horizons, I think these conclusions can be stated with confidence; and it is to be noted that the evidence from the three areas of Moreton, Darling Downs, and Roma districts is wholly in agreement on these points, and indicates a strong palæontological break between the Ipswich Series and the Esk Series on the one hand, and the Walloon on the other. There are other differences, of course, to which Dr. Walkom has drawn attention, notably those relating to the Gingkoales, Conifers, and Cycads. While *Thinnfeldia* has not been found associated with *Tæniopteris spatulata* in the Walloon in these areas, it is, of course, known that they have been recorded together in the Clarence Series and are frequently associated in the Talbragar Beds of New South Wales.

It is also of interest that *Thinnfeldia* has not so far been recorded from the Lower Cretaceous of Maryborough or the Styx Coalfield, and that the one record of the genus from the Burrum Lower Cretaceous Series is to be regarded as a doubtful determination.[8] Its range in Queensland rocks would thus appear to be possibly much more restricted than was previously thought to be the case.

[8] A. B. Walkom. Floras of the Burrum and Styx River Series, Q.G.S.P. 263, p. 15.

Reid, J. H. 1923. "Note on the Walloon Jurassic Flora." *The Proceedings of the Royal Society of Queensland* 34, 168–170. https://doi.org/10.5962/p.351482.

View This Item Online: https://www.biodiversitylibrary.org/item/49272
DOI: https://doi.org/10.5962/p.351482
Permalink: https://www.biodiversitylibrary.org/partpdf/351482

Holding Institution
American Museum of Natural History Library

Sponsored by
Biodiversity Heritage Library

Copyright & Reuse
Copyright Status: Public domain. The BHL considers that this work is no longer under copyright protection.
Rights: https://www.biodiversitylibrary.org/permissions/

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at https://www.biodiversitylibrary.org.

This file was generated 2 January 2024 at 22:51 UTC