NOTES ON A COLLECTION OF PLANT IMPRESSIONS FROM THE HENTY RIVER.

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Lower Coal Measures.

Until very recently we were ignorant of the existence of the extension of members of the Carboniferous Rocks to the west of the Eldon Bluff. About six months ago I received a collection of fossils from Mr. T. P. H. Jones, taken from a deposit extending eastward along the northern side of the Henty River, commencing at its junction with its tributary, The Badger, and apparently occupying a patch of about 4 miles square, lying between these rivers eastward of the fork. Mr. Jones states that he has traced some of its members forming a narrow curved strip bending northwards towards, and nearly approaching the vicinity of Mount Dundas.

Mr. Montgomery also visited the locality at this time, and we may hope to learn from him further particulars regarding the stratigraphic relations of the various members of this deposit at an early date. Having expressed to Mr. Jones my desire to obtain a more complete collection of the plant impressions, he very kindly undertook to do so, and recently, through the kindness of Mr. Meiring, I received a collection of Lower Coal Measure plants, containing some of the finest examples of *Glossopteris Browniana* that I have yet seen in Tasmania. One of these is nearly perfect, and must have been originally 14 inches in length, having a breadth of $2\frac{7}{8}$ inches at its greatest diameter.

Another fine example of *Glossopteris*, which I regard as a new species, is 9 inches in length, and 4 inches broad at its greatest diameter. These beautiful ferns are very remarkable, and are associated with abundant remains of the following species—all of which also occur in the shales of The Lower Coal Measures at the Mersey River: viz.:—

Gangamopteris spatulata. M'Coy.
——————— obliqua. ,,
Noeggerathiopsis media. Ettings.

The shales in which these plants are imbedded are hard and fissile, and of a very dark grey colour. They contain many curious botryoidal concretions; some rounded or nut-shape, and all of them having a bright glazed surface. I am yet unable to account for them.

Intimately associated with these shales occur fossiliferous mudstones and impure limestones identical with similar deposits in the Mersey, and throughout the eastern part of Tasmania.

The more numerous fossils in these beds are the following:—

Spirifera Tasmaniensis.
-———- avicula.
-———- convoluta.
Sanguinolites Etheridgei.
Fenestella internata.
———- plebeia.
Protoretepora ampla.
Stenopora Tasmaniensis.

There can be no doubt, therefore, that these beds are the equivalents of the Coal Measures of the Mersey, and there is some hope that Mr. Jones may be successful in his search for coal in this neighbourhood.

Lignite Beds.

Mr Jones informed me that the Coal Measures at the Henty are flanked by beds of lignite, and among the specimens sent to me were several small fragments of lignite, no doubt obtained from the same place. On examination I was successful in obtaining casts of two or three new leaf forms. One of the forms is undoubtedly a species of *Fagus* with very minute leaves, closely allied to the existing *Fagus Cunninghami* of Tasmania. Another is a well-preserved impression of the phyllodium of a species of Acacia, closely resembling the existing *Acacia melanoxlyon*.

Descriptions of the principal forms of the Lower Coal Measures, together with these of the Tertiary lignites, are given hereafter.

One of the forms I have named *Fagus Jonesii*, in honour of Mr. Jones, to whom we are indebted for their discovery. Another has been named *Acacia Meiringii*, in honour of Mr. Meiring, to whom also I am indebted for placing such a fine collection at my disposal. The close resemblance which these two forms bear to existing species, incline me to the opinion that the lignites at this place are of a more recent date than any other lignite formation hitherto described.

Glossopteris Browniana.

Frond lanceolate-elongate, obtusely acuminate; costa thick, gradually diminishing, but extending to the apex; veins, close parallel, ascending from costa acutely, at an angle of about 50 deg., and gradually curving outwards, where they emerge at an angle of 30 deg. Anastomoses, long and

narrow, only slightly broader close to the mid-rib. Large specimen, 14 inches long; breadth at greatest diameter, $2\frac{7}{8}$ inches. Locality, dark shales, associated with Carboniferous Marine Beds, near junction of Henty and Badger River.

Glossopteris ovata. *Nov. sp.*

Frond, broadly-ovate; margin, slightly undulating; apex rounded, not produced; costa, moderately thick towards base, diminishing, but extending to apex; veins, closely parallel, diverging from costa at an angle from 11 deg. to 22 deg.; anastomoses, obscure, but do not appear to be frequent. Specimen, 9 inches long, greatest breadth at middle of frond, 4 inches. The broad, rounded form, obscure anastomoses, and the low angle at which the sharp veins diverge from mid-rib, seems to justify the separation from G. ampla to which it is most closely related.

Locality.—Henty River Lower Coal measures.

Fagus Jonesii. *Nov. sp.*

Leaves, very minute, shortly petiolate, broadly ovate or deltoid, flat, or slightly convex, coriaceous: margin, strongly dentate: mid-rib, somewhat prominent: primary veins, scarcely visible. Lignite Beds, Henty River.

Acacia Meiringii. *Nov. sp.*

Phyllodium, lanceolate: apex obtuse, narrowed towards the base; slightly coriaceous, with five fine longitudinal nerves.

Anastomosing veins appear to be much closer and finer than in the existing *A. melanoxlyon* with which this form seems to be closely allied.

Length, $3\frac{7}{8}$ inches; breadth at middle, $\frac{7}{8}$ inch.

Locality.—Lignite Beds, Henty River; associated with leaves of extinct species.