

NOTE ON THE IDENTITY OF *LEPIDODENDRON*
MANSFIELDENSE MCCOY MS. WITH
L. VELTHEIMIANUM STERNBERG.

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(Plate XII.)

In the National Museum collection of fossils from the Lower Carboniferous of Mansfield, are two specimens of a *Lepidodendron* to which Sir F. McCoy gave the MS. name *L. mansfieldense*. The earliest record of this name is in a paper by G. Sweet and is based on a memorandum given to that author by McCoy (Sweet, 1890, p. 2); in this memorandum McCoy states that the species is "quite distinct from the *Lepidodendron australe* McCoy of the Avon River, Gippsland."

Professor Birbel Sahni (1926, p. 238) confuses the two species, in saying: "In Victoria the characteristic Upper Devonian species, *Lepidodendron* (*Leptophloeum*) *australe*, persists into the Avon Sandstones which are strongly unconformable to the Middle Devonian strata in that region, and have moreover, been assigned by McCoy on palaeontological evidence, to a Lower Carboniferous horizon. In the Mansfield beds of Victoria *L. australe* is found in association with Lower Carboniferous fish remains."

The first intention of this note was to establish the cheironymic record of *L. mansfieldense*, but a detailed examination of two specimens marked by McCoy for figuring, proves their identity with *Lepidodendron Veltheimianum* Sternberg.

Lepidodendron Veltheimianum Sternberg.

Lepidodendron Veltheimianum Sternberg, 1825, pl. iii, fig. 1.

Sagenaria Veltheimianum (Sternberg) Goeppert, 1852, pls. xvii-xxiv.

Lepidodendron Veltheimianum Sternberg, Feistmantel, 1890, p. 139, pl. x, figs. 4, 5; Seward, 1910, p. 171, text figs. 157, 185, 186a, b.

The two examples of "*L. mansfieldense*" marked "Figured specimen" by McCoy in the National Museum collection were McCoy's selected syntypes for his *L. mansfieldense*. They are now plesiotypes of *L. Veltheimianum*.

One of these (Pl. XII, fig. 1), is the more perfectly preserved and may represent the inner cortex of the stem, the

specimen being in the "Bergeria" stage, in which the leaf-cushions are distinct but much elongated. A wax impression shows these leaf-cushions in relief (see Seward, 1910, figs. 185b). In places the ligular pit is clearly seen as a small oval depression, through which passes the leaf-strand. This specimen measures 10 cm. in length and 4.6 cm. in greatest width.

The second example (fig. 2) is a flattened convex stem more decorticated than the first specimen (fig. 1). It represents the "Knorria" stage of a *Lepidodendroid* stem. In this the leaf-cushions have been nearly destroyed, their position being shown as longitudinal furrows. Occasionally, however, the leaf-cushions are indistinctly seen (see Seward, 1910, figs. 185a). This example has a length of 23 cm. and a width of 9.6 cm.

Age.—In Australia and elsewhere this species is characteristic of rocks of Lower Carboniferous age.

Distribution.—*Victoria*: Gippsland; Mansfield; Glen Falloch (det. F.C., Nat. Mus. Coll.). *New South Wales*: Smith's Creek; Rouchel River, near Stroud (W. B. Clark and O. Feistmantel): Burindi Series. *Queensland*: Bobuntungen, Drummond Range (T. Woods). *Western Australia*: Kimberley area, N. of Derby (*L. cf. Veltheimianum* fide, David, 1932, p. 61).

This species is also typical of the Lower Carboniferous in many other parts of the world, including Europe, Asia, North America and Brazil.

A variety of *Lepidodendron Veltheimianum*, which corresponds to the "Knorria" stage of the Mansfield specimen (Pl. XII, fig. 2), occurs in the Lower Coal Measures of Missouri. It was named *L. rimosum* Sternberg var. *retro-corticatum* by David White (1899, p. 196, pl. liv, figs. 3, 4).

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EXPLANATION OF PLATE XII.

- Fig. 1. *Lepidodendron Veltheimianum* Sternberg. Impression of cortical layer of stem, representing the "Bergeria" stage of fossilization. Plesiotype (formerly cheirotypes of *L. mansfieldense* McCoy). Nat. Mus. Coll. (Reg. No. 14,048). Nat. size.
- Fig. 2. *L. Veltheimianum* Sternberg. Decorticated stem showing the "Knorria" stage. Plesiotype (formerly cheirotypes of *L. mansfieldense* McCoy). Nat. Mus. Coll. (Reg. No. 14,049). Circ. $\frac{2}{3}$ nat. size.



Lepidodendron Veltheimianum Sternberg from Mansfield.
(*L. mansfieldense* McCoy MS.)



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