

DISCOVERY OF THE GENUS OLDHAMIA IN AMERICA.

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IN 1865 Prof. James Hall referred a fossil found associated with *Buthograptus* in the Trenton Limestone at Plattville, Wis., to the genus *Oldhamia*, under the specific name of *fruticosa*.* He described this form as "stems of cornens or carbonaceous texture, frequently branched, the branches again dividing and sometimes, if not always, in whorls, in one of which six divisions were counted." Prof. Hall's reference to *Oldhamia* was tentative and, from the study of Dr. J. R. Kinnehan's† beautiful illustrations of the genus *Oldhamia*, I am led to think it exceedingly doubtful if the species *fruticosa* should be referred to it.

Prof. Charles Lapworth mentions the occurrence of an *Oldhamia* in the purple slates of Farnham, Province of Quebec, like *O. radiata*, but does not describe or illustrate it.‡ It is placed in the horizon of the Upper Cambrian. Dr. R. W. Ells, of the Geological Survey of Canada, writes me that the Farnham slates belong to the Sillery formation. A poorly preserved specimen, received from the Survey, proves the presence of *Oldhamia*, but does not afford data for a specific determination.

During the field season of 1893, Mr. T. Nelson Dale, while surveying the areal geology of the Troy sheet of the U. S. Geological Survey, collected, in a belt of reddish shale that extends north and south, west of the Rensselaer plateau, a lot of annelid trails and plant-like impressions, which were sent to me with other material for determination. The only form that I can identify is a species of *Oldhamia* that is closely related to *Oldhamia antiqua* of the Cambrian rocks of Ireland.

* Canadian Organic Remains, Decade II, 1865, p. 49.

† Trans. Royal Irish Acad., xxiii, 1859, p. 547.

‡ Trans. Roy. Soc. Can., IV, 1877, Table A, p. 183.

No other fossils were identified; and the determination of the geologic horizon is somewhat uncertain.

GENUS *OLDHAMIA*, Forbes.*

The best illustrations of *Oldhamia* are given by Dr. J. R. Kinnahan† and Mr. J. W. Salter.‡ Prof. Brady§ discussed the genus and its relations to living forms, in 1865. He proposed to limit the genus to the *O. radiata*, and to refer the *O. antiqua* to a new genus—*Murchisonites*.

OLDHAMIA (MURCHISONITES) OCCIDENS, new species.

FronD with a jointed, slightly flexuous stem; fan-shaped fronds, formed of numerous simple filaments or attached to the upper end of each joint; the filaments being somewhat longer than the joints and giving the entire frond the appearance of a succession of tufts of filaments, each springing from the summit of the tuft below.

The specimens are preserved as casts on the surface of a smooth siliceous slate. No trace of cells or vesicles appear; and the position of *Oldhamia* in the classification of organic forms is not advanced. The

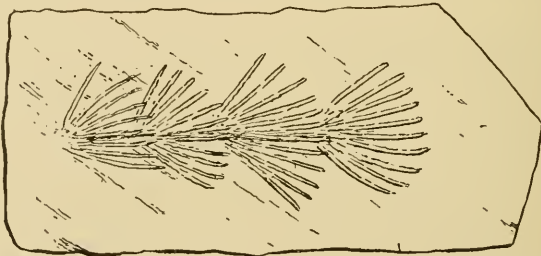


FIG. 1. *Oldhamia (M.) occidens*. View of a single frond from the gorge of the Poestenkill. Natural size.

suggestion that it is a calcareous alga appears to be as satisfactory as any. This species differs from *Oldhamia (M.) antiqua* Forbes|| in the form of growth and arrangement of the tufts of filaments.

The specimens are from the Cambrian (?) slates.

The *Oldhamia* was first found in reddish shales associated with greenish shales and beds of quartzite, ranging from one to nearly twenty-two inches in thickness, at a saw-mill dam midway between Burden Lake and Nassau Pond in the township of Nassau; again in similar rocks about 2 miles farther up the same stream and 1½ miles SSE. from the south end of Burden Lake. It occurs also on the Moordener Kill,

* Journ. Geol. Soc. Dublin, 1848, VII, p. 184.

† Trans. Royal Irish Acad., XXIII, 1859, pp. 547-561.

‡ Mem. Geol. Soc. Great Britain; Geology of North Wales, 2d ed., 1881, pp. 471, 472, pl. 26.

§ Geol. Mag., II, 1865, p. 6.

|| Trans. Geol. Soc. Dublin, 1848.

about $1\frac{1}{4}$ miles NE. of Schodack depot, in the township of Schodack, and in great abundance in the gorge of the Poestenkill, $1\frac{3}{4}$ miles east of Troy, near the Eagle Mills road, along the right bank of the river, which there flows south. The *Oldhamia* is here associated with various trails, and both cover large surfaces of the rock.

The slates are post-Lower Cambrian and pre-Trenton, but their exact stratigraphic position is not fully determined. They are either Upper Cambrian or Lower Ordovician.