ART. XXXI.—*The Devonian of North Missouri, with notice of a new fossil*; by G. C. BROADHEAD.

THERE is probably not over fifty feet thickness of the Devonian in North Missouri where it is chiefly exposed in the counties of Lincoln, Pike, Ralls and Callaway. In Pike and Ralls the upper portion consists of a few feet of black shales at top with limestone beds below. The fossils contained are chiefly *Atrypa reticularis*, *A. aspera*, *Spirifer eruteines* and a few corals. Westwardly in Warren and Montgomery the Devonian is inconspicuous. In Callaway it is better developed and in several neighborhoods fossils are abundant, the most prominent being *Atrypa reticularis*, *A. affinis*, *Cyrtia* —, several species of *Strophodonta*, *Orthis iowensis*, *Stromatopora*, *Zaphrentis gigantea*, *Favosites* several species, and several species of Cephalopoda.

At Providence, Boone County, about 25 feet of Devonian limestone is exposed containing a few rare and interesting fossils, including *Spirifer eruteines*, *Favosites alpenensis* and *Stromatopora expansa*, and four feet below the top we find *Loxonema robusta*, *Murchisonia* and an interesting gasteropod not heretofore found in Missouri and not described. The following is a description of it.

Pleurotomaria Providencis.

Shell subglobose, depressed, spire moderately elevated, apex apparently eroded. Volutions three or four, the last whorl much expanded. Aperture circular. Surface marked by numerous striæ or lines of growth which are occasionally imbricated, strongly marked and unevenly fasciculated.

A sulcus one-tenth of an inch broad and about one-half as deep divides the upper and lower part of each whorl. The striæ as they pass from the suture curve backwards, increasing in curvature as they approach the medial sulcus, where they are so much crowded as to form a low border to the sulcus. In crossing the sulcus they are concave in front. On the lower side of the sulcus they also curve backward and form a sharp border to the sulcus similar to that formed above.

In average-sized specimens there is a row of prominent nodes about half way between the sulcus and the suture. These nodes at their upper and lower portions are elongated into a low ridge which follows the direction of the lines of growth of the shell, but is soon blended into the body whorl. There is also another range of nodes below the sulcus and some-

times a faint appearance of a second row. The shell also presents a somewhat nodular appearance just below the suture. The suture is well defined.

The lower side of the last volution is regularly curved, the upper side more often rough-looking from the presence of nodes and the occasional prominence of the lines of growth.

On the last volution of old shells the nodes almost disappear but the sulcus continues to be well marked. Columellar lip thick, flattened, making an angle of about 80° with the outer surface of the shell.

Height of an average specimen.....	2 inches
Breadth " " "	2 inches
Some shells are one-half larger.	

This shell in general form resembles *Turbo shumardi* of De Vernuill, but the latter is crossed with swollen ridges instead of nodes and they cross the lines of growth instead of following them. The *T. Shumardi* also has no sulcus. The sulcus in our shell seems to be a filled slit and, therefore, we have placed it in the genus *Pleurotomaria*.

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FIGURE 1.—Average specimen.

FIGURE 2.—Under side of last whorl showing umbilical region.

FIGURE 3.—Part of an old shell showing ornamentation on last whorl.

FIGURE 4.—Vertical section.

FIGURE 5.—Part of whorl showing nodes with sulcus between.

FIGURE 6.—Part of an old shell crushed.

FIGURE 7.—Section across back of whorl showing sulcus and elevation of ridges and nodes.

All of natural size.