

**Article IV.**—DESCRIPTION OF A NEW FORM OF MYALINA FROM THE COAL MEASURES OF TEXAS.

By R. P. WHITFIELD.

Among some invertebrate fossils presented to the Museum in 1896 by Miss F. A. M. Hitchcock, Ph.D., there are several specimens of a *Myalina* so remarkably different from any known species of the genus that I venture to present it as a new form.

Shells of the genus *Myalina*, although quite abundant in the Coal Measures of the United States, are usually so monotonous in character, as regards their general form, that it is quite difficult to distinguish one species from another. There are about thirty species recognized in catalogues, but it is not easy to identify more than a few satisfactorily, unless one considers the localities and the different geological horizons at which they occur to be evidences of specific difference. The interior of the shell also presents the same monotonous features, even among the forms usually considered to be distinct species; at any rate, this may be stated of the American specimens.

In the original description of the genus, which was based upon Upper Carboniferous shells from Visé, Belgium, the valves are stated to be equal, and most of the authors who have considered the genus reiterate the statement, though McCoy, King, and a few others have distinctly stated that the opposite is the case. In the American shells the inequality of the valves is very pronounced. Another feature of the usual diagnosis is the assertion of the existence of an internal septum within the beak of one or both valves. This feature I have never found in any American specimen. There is sometimes seen in casts of *Myalina angulata* Meek & Worthen from the Chester Limestone horizon a horizontal slit beneath the beaks of specimens, where the substance of the shell has been quite thin. This results from the cavity of the beak extending under the cartilage area, but that area is external

and not internal, and consequently the slit is not from an internal septum, like that of *Septifer* or *Dreissena*, on which the anterior adductor muscle is situated. In our *Myalinas*

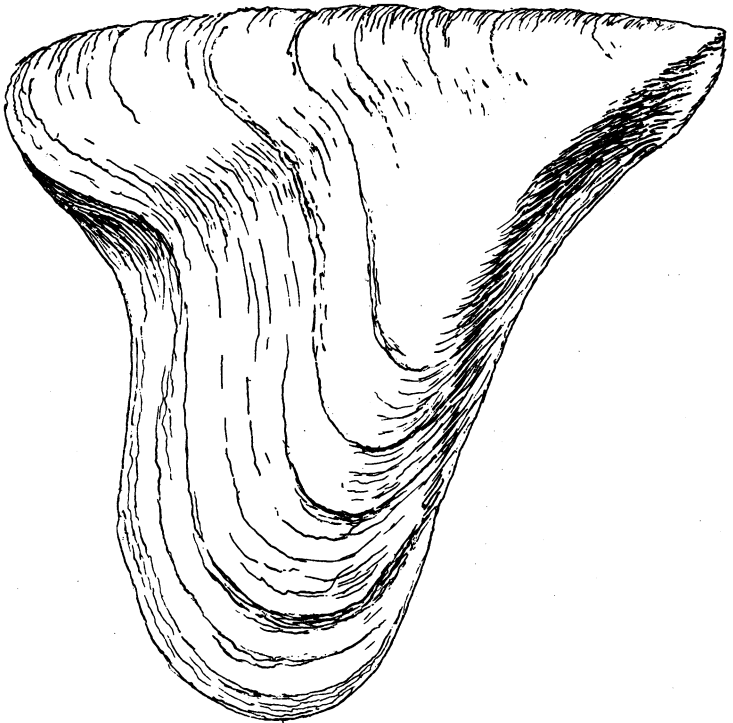


Fig. 1.—*Myalina copei*, sp. nov. Exterior of right valve.

this muscle is deeply sunken on the interior of the beak cavity. May not this be the case in the European shells also?

The species now in question may be described as follows:

***Myalina copei*, sp. nov.**

Shell rather large, somewhat ponderous, much thickened. Sub-triangular in general outline, the greatest convexity of the valves being along the umbonal ridge parallel to and a little within the buccal border, whence the body of the valves slopes gradually to the posterior margin. Left valve larger, longer, and deeper than the op-

posite. Hinge-line long, straight, or slightly arcuate; posterior extremity of the hinge extending beyond the body of the shell and forming a large posterior wing, which is more or less sharply rounded at the end; between the wing and the body of the shell the margin is rather deeply and broadly sinuate. Basal line short, rather narrowly rounded. Beaks slightly twisted in front and characterized by a lobe-like protuberance of moderate size between the beak and the byssal area. Ligamental area broad, longitudinally grooved by the lines for the ligament. From under the beak of the left valve a double ligamental groove extends to the interior of the valve, while the ligamental markings extend across it and down the anterior side of the

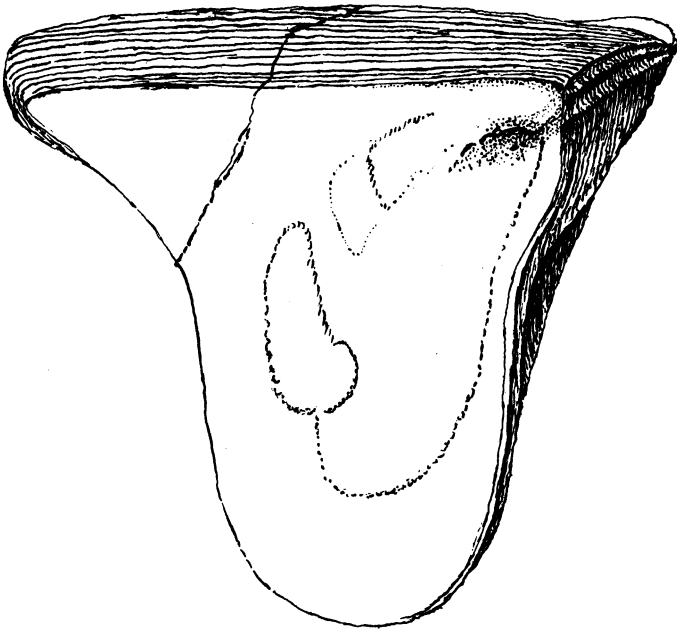


Fig. 2.—*Myalina copei*, sp. nov. Interior of left valve.

shell to the byssal opening, which is long, but not conspicuous. Right valve smaller and shallower than the left valve, and marked with a ligamental ridge corresponding with the groove in the beak of the left valve.

Exterior surface of the shell strongly lamellose with heavy lines of growth. Interior of each valve provided with a large, elongated posterior muscular impression; anterior muscular impression faintly

[January, 1902.]

outlined; pallial line distinct, nearly marginal along the byssal border. Cavity of the shell deep, substance very thick.

*Formation and locality.*—From the Coal Measures on the McKenzie trail near Fort Griffin, Texas. Originally from collections made by Professor Edward D. Cope.