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Contribution to the Fauna of the Lower Coal Measures of Central Iowa

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CONTRIBUTION TO THE FAUNA OF THE LOWER COAL MEASURES
OF CENTRAL IOWA.

BY CHARLES R. KEYES.

(ABSTRACT.)

Among a large number of species recently discovered in the lower coal measures near Des Moines are some hitherto unrecognized forms. The following are the descriptions of three of the most important shells.*

CHONETES LEVIS.

Shell small; much wider than long; transversely semi-elliptical; the cardinal line as long as the greatest width of the shell, or often slightly extended beyond the lateral margins. Ventral valve convex, with no indication of a mesial sinus; beak not prominent; cardinal area rather narrow but well defined centrally, becoming linear toward the extremities; foramen moderately wide; cardinal margin bearing from four to seven oblique spines on each side of the beak. Dorsal valve flat or very slightly concave; with no mesial fold. Surface of both valves apparently perfectly smooth; but under a magnifier it is seen to be marked by numerous fine concentric striae, and more prominent, often somewhat imbricated, lines of growth; these are sometimes crossed by fine nearly obsolete radiating striae.

Length 7 mm.; breadth 12 mm.

This species is found in the superimposing black shales of coal No. 3 at Des Moines; and is associated with *Chonetes mesoloba*, *Productus muricatus*, and the minute gasterpods mentioned elsewhere. The glabrate character, and the absence of a mesial fold and sinus, as is constant in all eight of the specimens found, forms a marked contrast with the associated congeneric forms, in which the radiating striae are unusually sharp and well defined; and also with the other carboniferous forms of the same genus. This species is closely allied to, and perhaps identical¹ with, the form described by Geinitz¹ as *Chonetes glabra*; but this name, however, was preoccupied by Hall in 1857, for a species from the Upper Helderberg.

PLEUROTOMARIA MODESTA.

Shell small, sublenticular, spire greatly depressed, volutions six, obliquely flattened above; body whorl very large, rapidly increasing in size, sharply angular on

* Described and figured along with other forms in the Proceedings of the Academy of Natural Sciences of Philadelphia, for 1888, pp. 222-246.

¹ Carbonformation and Dyas in Nebraska. 1866, p. 60.

the periphery, flattened or very slightly concave above, prominently rounded below, suture line linear; spiral band very narrow almost linear, very slightly impressed and occupying a position just above the peripheral angle; on the spire the band is obscured by a single series of conspicuous nodes; aperture subquadrate, or subrhombic; umbilical region slightly impressed, but not perforated; surface glabrate; under a glass exhibiting fine lines of growth; the last whorl with a series of small transverse folds, or wrinkles, toward the tuberculated margin; each fold apparently originating at a node and extending about one-half or two-thirds the distance to the periphery.

Twenty or more specimens of this beautiful little species have been obtained from the black superimposed shales of coal, No. 3, at the Giant Mine, No. 1. It approaches more closely than any other the form described by Cox as *P. depressa* and may eventually prove identical with it. *P. depressa*, however, was preoccupied by Phillips in 1836; and this name was also used by de Koninck and by Passy.

SOLENISCUS HUMILIS.

Shell very small, short, subfusiform, or elongate-subovate; spire prominent, forming one-third or more of the entire length of the shell; volutions about six, increasing moderately in size, slightly convex. Test rather thin. Columellar fold distinctly visible within the aperture, which is subelliptical; callosity clearly defined but not conspicuous; outer lip thin, sharp. Suture well-defined but not deeply impressed. Surface smooth, but under a glass exhibiting lines of growth. Length 6 mm.; width 3.5 mm.

This little species is from the superimposed black shales of coal No. 3, at the Giant mine; and is found associated with the numerous other small gasteropods mentioned in another place.

A NEW CONOCARDIUM FROM THE IOWA DEVONIAN.

BY CHARLES R. KEYES.

CONOCARDIUM ALTUM.*

Shell of medium size, subtrigonal, anterior view broadly cordate. Anterior end truncate, with a forward slope from the umbones to the lower anterior sharply rounded extremity. Dorsal margin behind the beaks slightly curved, with the edges of the valves incurved, while in front of the beaks it is produced forward into a more or less prominent alate extension; basal margin crenate within; posterior extremity at the hinge line decidedly angular. Beaks rather prominent, gibbous, incurved. Hiatus lanceolate; occupying about two-thirds of the lower posterior margin. Surface marked by simple, regular, radiating costae, about forty in number, twenty-five of which occupy that portion of the shell behind the umbonal slope; the umbonal slope is broad, bordered on each side by a prominent costa

* Described and figured with other forms in the Proceedings Academy Natural Science of Philadelphia, 1888. pp. 247-248.