

FOSSILS OF THE KANSAS CITY GROUP

By: Dennis Whitney

The DENNIS Formation: with two members.

Stark Shale Member

Parizek (1) considers fossils in the Stark Shale to be scarce. Moore (3) contends that the shale contains conodonts, and a limited fauna of pelecypods and brachiopods represented by *aviculopecten* and *Derbia crassa*. He also states that the distinctive brachiopod *Liorhynchus rockymontanum* is present. *Liorhynchus* may be an Index fossil for this member.

Winterset Limestone Member

The Winterset Limestone member has a rich and varied fossil fauna. The limestone stratum alternates between a shallow marine reef deposit with marine faunas such as trilobites and cephalopods, to near shore deposits with terrestrial plants and fresh water mollusks. The variance of the fossil fauna within the Winterset is attributed to the presence of sub-units which represent the phases of cyclothems in the Pennsylvanian sea, Lane (9).

Parizek (1) presents the following fauna list for the Winterset Limestone.

The Fauna of the Winterset Limestone after Parizek(1):

Brachiopoda (Brachipods):

Composita subtilita

Derbia crassa

Dictyoclostus americanus

Hustedia mormoni

Kozlowskia splendens

Echinochoncus semipunctatus

Juresania nebrascensis

Linoproductus missouriensis

Neospirifer latus

Neospirifer dunbari

Chonetes sp.

Crurithyris sp.

Mollusca

Myalina sp.

Aviculopinna sp.

Bryozoa :

Fenestella sp.

Rhombopora sp.

Arthropodia (Trilobites):

Phillipsia, sp.

Ameura major

Coelenterata (corals):

Lophophyllum sp.

Echinodermata: (Echoderms):

Crinoid ossicles.

Protozoa

Fusulinida and Triticites sp.

The Winterset has an extraordinary Cephalopod fauna. This was first noted by Lane (9), and the expounded upon by Miller, et al (10), who listed twelve species of cephalopods common to the member. Miller, et al (11), and Condon (12) have published additional references useful in the identification of cephalopods encountered in the Kansas City Group.

The Cephalopod Fauna of the Winterset Limestone after Miller, Lane and Unklesbay, University of Kansas Paleontological Contributions, 1947 (10)

Morreoceras bakeri

Morreoceras conicum

Knightoceras abundum

Metacoceras jackson

Morreoceras normale
Bactrites wintersetensis
Liroceras milleri
Condraoceras primum

Metacoceras muitabile
Domatoceras kleihegei
Solenochilus missouriensis
Ephippioceras ferratum

As the avarious sub-members of the Winterset include near shore terrestrial paleo-environments, the plant kingdom is well represented. Plant fossils, including the seeds of the cordaites and gymnosperms have been reported by Smith (13).

Plants: *Pecopteris*, *Neuropteris*, *Cyclopertis*, *Cordaites*, *Lepidodendron* and *Calamites*.

Bibliography:

(1) Parizek, E. J., 1965, Stratigraphy of the Kansas City Group: Missouri Geological Survey and Water Resources, Report of Investigations No. 31, pp. 32 – 49

(3) Moore, 1949, Divisions of the Pennsylvanian System in Kansas: Kansas Geological Survey, Bulletin 21, 203 pp.

(9) J. H. Lane, Jr., 1939. The Stratigraphy and Fauna of the Winterset Limestone of Jackson County, Missouri, Masters Thesis, University of Kansas.

(10) Miller, A. K., Lane J. H., and Unklesbay, A. K., 1947, A Nautiloid Cephalopod fauna from the Pennsylvanian Winterset Limestone of Jackson County Missouri, University of Kansas Paleontological Contributions, pp. 1-11.;

(11) Miller, A. K., Dunbar C. O., and Condra G. E., 1933, The Nautiloid Cephalopods of the Pennsylvanian system of the Mid-Continent Region, Nebraska Geological Survey, Bulletin 9.

(12) Unklesbay, A. K., 1962, Pennsylvanian Cephalopods of Oklahoma, Oklahoma Geological Survey, Bulletin 96.

(13) Rolland Smith, personal communication.