



Phylum Mollusca Class Cephalopoda Subclass Nautiloidea

The phylum Mollusca includes the familiar classes Gastropoda (snails), Pelecypoda (clams, oysters and scallops), and Cephalopoda (squids, octopuses, and the chambered Nautilus).

This class is represented in the fossil record by members who built a hard outer shell like that of the modern chambered Nautilus. We also find the record of cephalopods which lacked an outer shell but, like the modern squid, had a hard internal pin.

The shape of fossil cephalopod shells is highly variable and they cannot be distinguished from snails on shape alone. However, there is one important difference which serves to distinguish the two. Cephalopod shells are partitioned transversely. These partitions called septa cannot be seen on the shell's outer surface, but internal molds of shells show that the trace of each septum is marked by a line called a suture. Each suture is actually a plane that separates the fillings of adjacent chambers.

*Top drawing and excerpt from Fossils of Arkansas by Tom Freeman, 1965.

Nautiloids are cephalopods with straight or coiled shells. Nautiloids have an inner "tube" or siphuncle that is positioned in the center or sub-center of the animal. The majority of nautiloids are preserved in Ordovician through Mississippian age rocks in Arkansas. The only living representative of this group is the genus Nautilus which lives in the deep slopes along coral reefs in tropical waters of the Indo-Pacific.



Ordoevician nautiloid from the Fernvale Limestone. Mississippian nautiloid from the Fayetteville Shale.



Mississippian nautiloid showing central siphuncle.



Mississippian coiled nautiloid. Dime for scale.

Freeman, Tom, 1966, Fossils of Arkansas: Arkansas Geological Commission
Bulletin 22, 53 p., 12 pls., 15 figs., 1 map.