

A Unique Case of Pearl Discovery in *Duvalia*

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It is widely known that pearls form within the shells of mollusks. They typically develop in the shells of marine and freshwater bivalves, but are also found in gastropods. Pearls have likewise been reported in both extant and fossil cephalopods, such as nautiloids and ammonites. Despite their distant phylogenetic relationships, all these mollusks share a common feature: their shells are external. The soft tissues of these organisms are enclosed within the shell, and pearls grow either within the body cavity or on the inner surface of the shell.

In members of the subclass Coleoidea within the class Cephalopoda—including cuttlefish, squids, octopuses, and the extinct belemnitids—the shell became internalized during evolution. Belemnitids additionally developed a calcitic guard, the rostrum, which was also located within the body. Considering the body structure of belemnitids, the occurrence of pearls in these organisms had long been considered improbable. However, recent studies have demonstrated that true pearls may form within the mantle of belemnitids, although not from aragonite, as in modern mollusks, but from calcite, similar to the composition of the rostrum.