DIS-Fossil-Crinoid

# Northeastern Section (39th Annual) and Southeastern Section (53rd Annual) Joint Meeting (March 25–27, 2004)

Paper No. 4

Presentation Time: 9:00 AM

# COMATULID CRINOIDS FROM THE CASTLE HAYNE LIMESTONE, SOUTHEASTERN NORTH CAROLINA

[**CIAMPAGLIO, Charles N.**](mailto:chuck.ciampaglio@wright.edu), Geology, Wright State Univ, 7600 State Route 703, Celina, OH 45822 and WEAVER, Patricia G., Paleontology, North Carolina Museum of Nat History, 11 West Jones Street, Raleigh, NC 27601, chuck.ciampaglio@wright.edu

The middle Eocene Castle Hayne Limestone in North Carolina is well known for its abundant and varied invertebrate fauna. While much work has been done on echinoids found within the Castle Hayne Limestone, other echinoderm taxa such as ophioroids, asteroids, and crinoids have been collected by several workers but not published upon. This may be due in part to the small size of the non-echinoid echinoderms and the difficulty of isolating, recognizing, and identifying these faunal elements.

With the exception of the description of *Microcrinus conoideus* and *Democrinus*, crinoids from the Castle Hayne Limestone have been virtually overlooked.

Careful examination of prepared bryozoan-echinoid calcirudite from the Martin Marietta Quarry near Castle Hayne, New Hanover County, North Carolina has yielded numerous centrodorsals and brachials from several comatulid crinoid species.

In all, seven comatulid crinoids, *Palaeantedon caroliniana*, *Microcrinus conoideus*, *Hertha plana*, *Himerometra bassleri*, *Amphorometra parva*, *Glenotremites carentonensis*, and *Placometra* n. sp., have been identified from the Martin Marietta Quarry near Castle Hayne, New Hanover County, North Carolina. Identification of *Hertha plana*, *Amphorometra parva* and *Glenotremites carentonensis*, though possibly reworked from sediments below the Eocene Castle Hayne Limestone from North Carolina, extends the paleobiogeographic range of European species to southeastern North America. Extension of the paleobiogeographic ranges of these three species has implications for timing Tethyan influence upon distribution of comatulid taxa.

Session No. 60

[Cenozoic to Recent Paleontology](https://gsa.confex.com/gsa/2004NE/webprogram/Session12654.html)

Saturday, 27 March 2004: 8:00 AM-12:00 PM

Geological Society of America Abstracts with Programs. Vol. 36, No. 2, p.133

I have been searching the Castle Hayne Formation (Mid to Late Eocene) for crinoids for many years. Here are a few that I wanted to share. All but one species of crinoid in the Castle Hayne Formation are comatulid crinoids. Comatulids are stalkless and are better known today as "feather stars". Here is a picture of a modern comatulid from Wikipedia-

Here is a view of a dried comatulid showing the underside - referred to as the dorsal side even though in life it faces downward-



In the center of this dried specimen is an ossicle known as the centrodorsal. There are cirri that grow out of the centrodorsal that act as legs and there are 5 plates known as radials that are attached to the centrodorsals in living comatulids that are frequently still attached on the fossil comatulids. Circular scars are found on the centrdorsals where cirri were once attached. These scars can be important for identification.

The first Castle Hayne comatulid was identified by Ebenezer Emmons in 1858. He named it Microcrinus conoideus. Here is his drawing and one of my examples.

