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The steinkern of a camerate crinoid found in rocks of Middle Pennsylvanian age is of considerable interest in that very few genera or species have been reported. *Megaliocrinus johnsoni*, new species, is from the Cherokee Group, exposed in the Collinson quarry near Milan, Rock Island County, Illinois. Internal nerve canals radiating from the chambered organ are preserved as ridges.

INDEX DESCRIPTORS: Pennsylvanian Camerate Crinoid; Cherokee Group; Milan, Rock Island County, Illinois; *Megaliocrinus johnsoni*, n. sp.

Camerate crinoids are extremely rare in Pennsylvanian strata of North America, where they are represented by the families Paragaricocrinidae Moore and Laudon, 1942; Acrocrinidae Wachsmuth and Springer, 1885; Platycrinitidae Bassler, 1938; and Dichocrinidae S. A. Miller, 1889. Considered herein is the family Paragaricocrinidae, which is represented in Pennsylvanian strata by *Megaliocrinus* Moore and Laudon, 1942, and is further restricted to two species known from about a half-dozen specimens found in Morrowan rocks of northeastern Oklahoma.

A single theca, a steinkern in a limonite concretion, found by Keith Johnson, a student at Augustana College, Rock Island, Illinois, in the Collinson quarry near Milan, Rock Island County, Illinois, leaves much to be desired in preservation, but it is distinctive and is such an important discovery that formal description appears to be required. The specimen is obviously descended from *Megaliocrinus* but is considerably more advanced in that non-axillary primibrach *1*, which is present in other species of *Megaliocrinus*, has been resorbed or deleted from the calyx of the new species, here named *Megaliocrinus johnsoni* Strimple, new species. The evolutionary trend (i.e., the elimination of one primibrach) is not in accord with the morphology of other stratigraphically younger genera ascribed to the family, that is, *Paragaricocrinus* Yakovlev, from the Permian of Sicily, and *Wannerocrinus* Oyens, from the Permian of Timor (Indonesia), both of which genera retain both primibrach *1* and axillary primibrach 2. Both of the Permian genera are advanced in the arrangement of the plates of the posterior interray, that is, primanal (anal X) is followed by two plates. In *M. johnsoni* the primanal is followed above by three plates.

Pennsylvanian strata in the area near Milan, Illinois, overlie rock of Devonian age and are mainly non-marine, as substantiated by plant remains; however, marine fossils have been found on occasion. Most references suggest a Cherokee age for the Pennsylvanian strata. The Cherokee is typically Desmoinesian in age, but is known to extend down into the Atokan in Iowa. In that *M. johnsoni* is more advanced than Morrowan species of *Megaliocrinus*, a post-Morrowan age is indicated for the new species. If more or better preserved specimens of *M. johnsoni* were known, proposal of a new genus would be warranted.

SYSTEMATIC DESCRIPTIONS

Family PARAGARICOCRINIDAE Moore and Laudon, 1942

Genus MEGALIOCRINUS Moore and Laudon, 1942

MEGALIOCRINUS JOHNSONI Strimple, new species

FIGURE 1 a-c

Diagnosis: calyx large, subglobose; sutures in basal circlet obscured; five large radials are in contact all around except in the posterior, where a large primanal comprises the sixth plate in the circlet; primanal followed by three large plates which are subsequently followed by three plates in the next circlet; primibrach *1* axillary and separated by a single interbrachial in all interrays except the posterior. The calyx has an estimated width of 36.0 mm, height 13.0 mm.

Discussion: the basal circlet is obscured by canals and an irregular median portion (shown as elevations on the steinkern) marking the position of the chambered organ (nerve center) and paths of radiating nervous system.

The species is more advanced than species of the genus of Morrowan age in having axillary primibrach *1*.

Species name is in honor of Keith Johnson.

Holotype: SUI 37949, reposited Geology Department Repository, The University of Iowa, Iowa City, Iowa.

Occurrence: Cherokee Group, Desmoinesian Stage, Middle Pennsylvanian, Collinson quarry (NW ¼ sec. 25, T. 17 N., R. 2 W.) near Milan, Rock Island County, Illinois.

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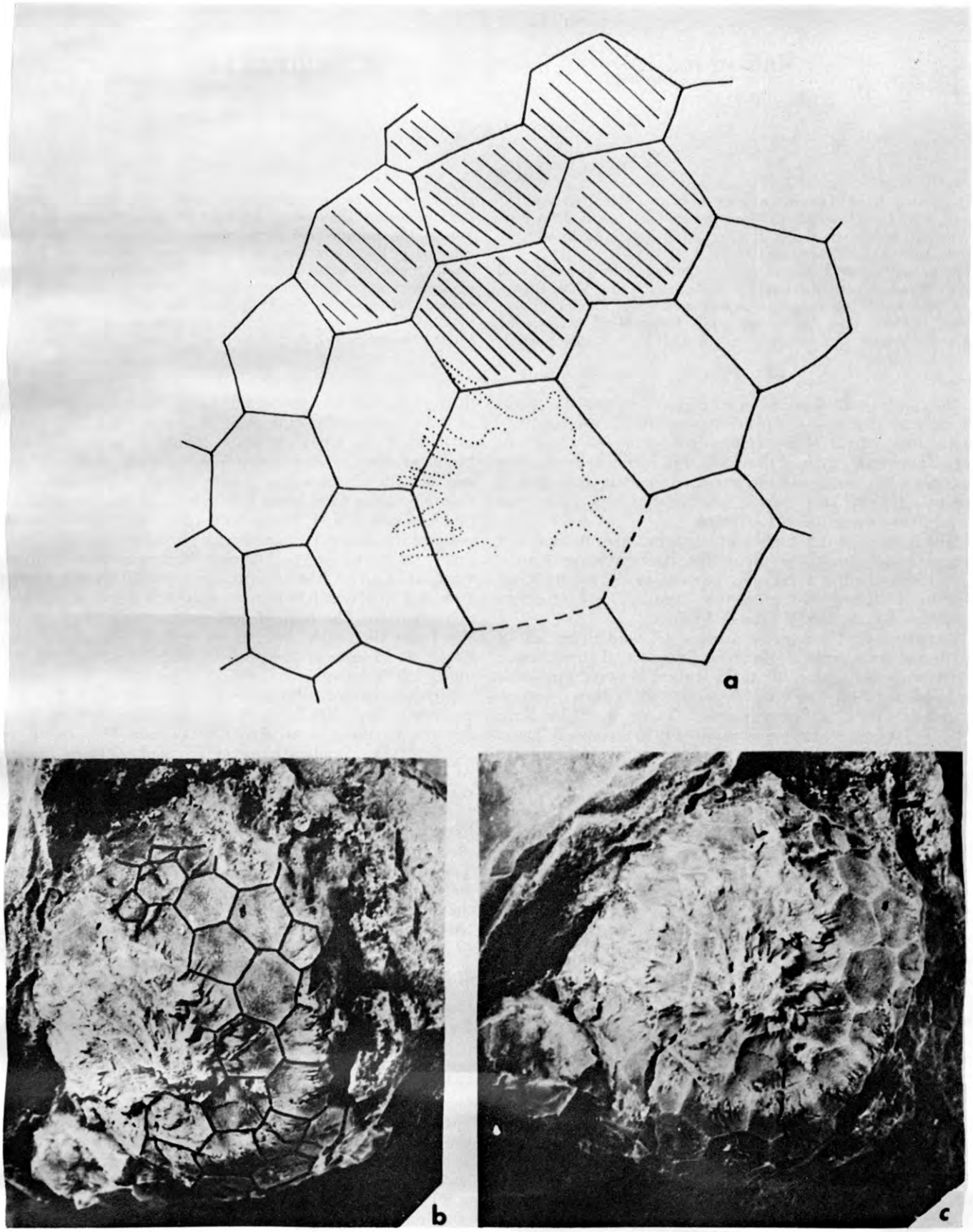
Figure 1. *Megaliocrinus johnsoni*, n. sp., from Cherokee rocks of Illinois. a. Diagram of part of calyx from base, showing proximal outline of chambered organ (which covers the basal circlet), major radiating nerve canals and primanal (anal X) above followed by secondary anals, all of which are designated by diagonal lines. Radial plates and primanal surround the rest of the basal circlet and are followed directly above by axillary first primibrachs. b. Steinkern (internal cast) tilted slightly to the left with many sutures accentuated by ink. c. Unretouched photograph, approx. X2.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