

THE GENUS *ZAPHRENTIS* AND ITS RELATIVES

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Zaphrentis (as a subgenus), and five new species, including *Z. phrygia* (later selected as type species), were named by Rafinesque and Clifford, 1820, based on corals from lower Middle Devonian rocks at the Falls of the Ohio River, near Louisville, Kentucky. At nearly the same time Lesueur, 1821, described a number of American corals, one of which, *Caryophyllia cornicula* was from upper Middle Devonian rocks in lake cliffs, a few km southwest of Buffalo, New York, but „also found in Kentucky.“ Descriptions of all of these new taxa were minimal and none was illustrated. The species names were essentially unused until the 1850's when *C. cornicula* Lesueur became better known and generally accepted as the senior synonym of *Z. phrygia*. During this time, workers in New York had realized that the probable source of *C. cornicula* was a coral bed in the Lake Erie cliffs in which *Heliophyllum* was prominent and fit Lesueur's brief description. Beginning in the 1880's, the name *Heliophyllum corniculum* (Lesueur) was commonly used.

For most of the 19th Century and well into the 20th, the words *Zaphrentis* and Zaphrentidae were used very loosely for relatively simple rugosans with distinct bilateral symmetry and a cardinal fossula; dissepiments were seldom mentioned. Species of Ordovician to Permian age, from many parts of the world, were placed in the genus.

In the early 1900's, it was shown that Rafinesque and Clifford had publishing priority, reinstating *Z. phrygia* as type species. During the same decade, the first important revision of *Zaphrentis* since its initial description was published. However, it was the late 1930's before any description of *Z. phrygia* was based on specimens from the Falls of the Ohio and only then that a morphological basis for the genus was recognized. Controversy regarding the presence or absence of dissepiments continued until after World War II when the naming and sectioning of a lectotype demonstrated the presence of a narrow dissepimentarium.

At this time, I recognize only four zaphrentid genera: *Zaphrentis* (Eifelian), *Heliophyllum* (middle Emsian through Givetian), *Aemulophyllum* (middle Emsian), and *Cyathocylindrium* (Eifelian). All four seem to have originated in the Eastern Americas (eastern North America and northern South America). *Heliophyllum* is the most common, has the longest range, and is the only one known to occur outside of the area of origin.

References:

- Lesueur, C.A., 1821: Description de plusieurs Animaux appartenant aux Polypiers Lamellifères de M. le Cher. de Lamarck.- Mém. Mus. Hist. Nat. Paris 6: 271-299.
- Rafinesque, C.S. & Clifford, J.D., 1820: Prodrome d'une monographie des Turbinolies fossiles du Kentucky (dans l'Amériq. septentr.).- Ann. Génér. Sci. Phys. Bruxelles 5: 231-235.