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Crinoid ancestry without blastozoans

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At present, a debate in the paleontologic literature focuses on whether or not the immediate ancestry of the Crinoidea lies in an unidentified member of the Blastozoa, which includes eocrinoids and an assemblage known variously as the “cystoids”. Those proposing to derive crinoids from within the blastozoans have recently argued for homologies in the construction of the oral region of certain derived taxa from both groups. An opposing viewpoint, outlined here, finds evidence that aside from plesiomorphies, proposed similarities are superficial and homoplastic. We suggest these superficialities represent convergent adaptive strategies. Earliest crinoids express ambulacral traits unlike any blastozoan but that are expressed in the only other pentaradial echinoderms with a known record early enough to be considered in the context of crinoid origins, edrioasteroids and edrioasteroid-like stem echinoderms.

Key words: Blastozoa, Edrioasteroidea, Crinoidea, origin, homoplasy, Ordovician.

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