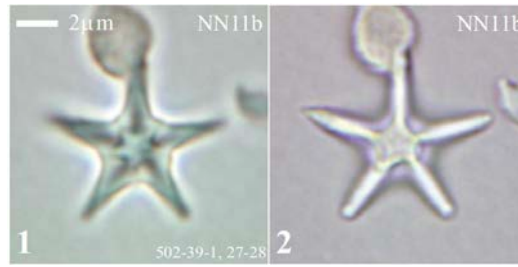


Discoaster berggrenii Bukry (1971) emend. Blair & Bergen in Blair et al. (2017)



Pl. 4, figs 1–2

1969 *Discoaster quinquedramus* Gartner (*pro parte*), p. 598, pl. 1, figs. 7; *non* pl. 1, fig. 6

1969 *Discoaster quintatus* Bukry & Bramlette (*pro parte*), p. 133, pl. 1, figs. 6; *non* pl. 1, figs. 7–8

1971 *Discoaster berggrenii* Bukry, p. 45, pl. 2, figs. 4–6

2003 *Discoaster berggrenii* (Bukry, 1971) *berggrenii* Wei, p. 20, pl. 1, figs. 4–5

Emended description: Medium to very large asterolith with five rays that taper to form pointed to rounded terminations. Free ray length is approximately equal to central area diameter with measured ratios between $2/3$ to less than 1.2. The central area has both a proximal and distal pentagonal projection. The ratio of central area diameter to specimen size is approximately $1/3$ (measured ratios 0.30–0.40). The distal stem is stellate, composed of five narrow elements which extend between the rays and do not fill the central area. The points of the pentagonal proximal knob are typically aligned with the rays. Size range: 8.0–13.0 μm .

Remarks: Bukry (1971, p. 45) described *D. berggrenii* as “a symmetric five-rayed asterolith with the free length approximately equal to the diameter of the central area”. He also mentioned a proximal star-shaped projection that “practically fills the central area”. Bukry (1971) also included a specimen of both *D. quinquedramus* and *D. quintatus* in his synonymy of *D. berggrenii*. Wei (2003) described *D. berggrenii extensus* (see *D. consutus*, this paper) for forms with stems extending beyond the central area periphery and ray lengths $1/2$ to equal the central area diameter. He then provided a very short description restricting *D. berggrenii berggrenii* to forms with free ray lengths longer than the central area diameter, leaving no place to classify specimens with shorter arms and smaller stems. *Discoaster berggrenii* is emended herein to rectify any confusion and also to include its proximal knob (see also discussion of *D. consutus*, this paper). *Discoaster berggrenii* is intermediate between *D. quinquedramus* and *D. bergrenii* in terms of the ratio of free ray length to central area diameter. *Discoaster berggrenii* is distinguished from *D. quinquedramus* by ratios less than 1.2. *Discoaster bergrenii* is reserved for specimens with ratios less than $2/3$, but also stellate distal stems that extend outside the central

periphery. Specimens with short arms and smaller distal stems have been identified as *D. berggrenii* (Pl. 4, figs 3–5), but may represent a new taxon.

Occurrence: *Discoaster berggrenii* is a classic marker taxon in the GoM used by all three heritage companies, its range restricted to Zone NN11. Both the LO and HO are coeval events in Leg 154 and GoM, dated at 8.317Ma and 5.772Ma (Table 1), respectively.

Blair, S., Bergen, J., de Kaenel, E., Browning, E. & Boesiger, T., 2017. Upper Miocene-Lower Pliocene taxonomy and stratigraphy in the circum North Atlantic Basin: radiation and extinction of Amauroliths, Ceratoliths and the *D. quinqueramus* lineage. *Journal of Nannoplankton Research*, **37(2–3)**: 113–144.