

191. *Senilatus Self-Trail & Pospichal in Self-Trail (1999)*

Type species: *Senilatus zipperum* (Bukry, 1969) n. gen. and comb., by monotypy.

Diagnosis: Outline pseudo-hexagonal, with central perforated area and cross situated slightly oblique to the major and minor axes. Murolith has two to three distal rims elliptical in out-line, and proximal rim pseudo-hexagonal in outline. Proximal rim consists of six distinct crystal units that correspond to the six sides of the pseudo-hexagon.

Description: Pseudo-hexagonal in outline with three distinct rims that are visible when viewing proximal surface (Fig. 5.13). Distal rim appears hexagonal from the distal surface (Figs. 5.12, 6.1), and the three basal proximal rims are elliptical in outline. Proximal rims are smaller than distal rim. Central area is convex distally and higher than both the proximal and distal rims. Central cross, formed by the juncture of the four central segments, is visible in both proximal and distal views (Fig. 5.12, 5.13). Outer rim consists of six irregularly-shaped crystal units. The optical and physical discontinuity of these segments, visible in both light microscope (Figs. 5.7, 5.8, 6.15) and scanning electron microscope from both proximal and distal surfaces (Figs. 5.13, 6.1, 6.4), is consistent rather than dissolutional feature of this genus. Two segments oblique to one another appear non-birefringent under crossed polarizers, becoming birefringent as the stage is rotated.

Etymology: From the Latin *seni*, meaning six and *latus*, meaning side.

Discussion: *Senilatus* n. gen. differs from *Gartnerago* Bukry, 1969 by having two to three rather than four or five closely appressed rim tiers and a pseudo-hexagonal outline of the distal rim. The distinctive juncture pattern formed by the six crystallographic units of both the distal and proximal rims is a trait not present in *Gartnerago* (Fig. 6.9, 6.15). *Senilatus* n. gen. is easily distinguished from *Gartnerago* with the light microscope, where the distinctive proximal rim structure produces an easily identified extinction pattern not seen in specimens from the genus *Gartnerago*. The tongue-in-groove interlocking segments on the distinct crystallographic structure of the segments, which are aligned with the short axis, all distinguish *Senilatus* n. gen. from *Gartnerago*.

Self-Trail, J.M., 1999. Some New and Rarely Documented Late Cretaceous Calcareous Nannofossils from Subsurface Sediments in South Carolina. *Journal of Paleontology*, **73(5)**: 952-963.