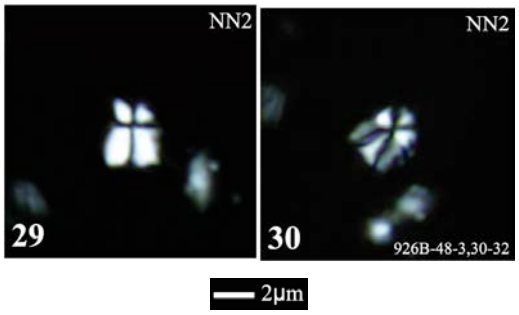
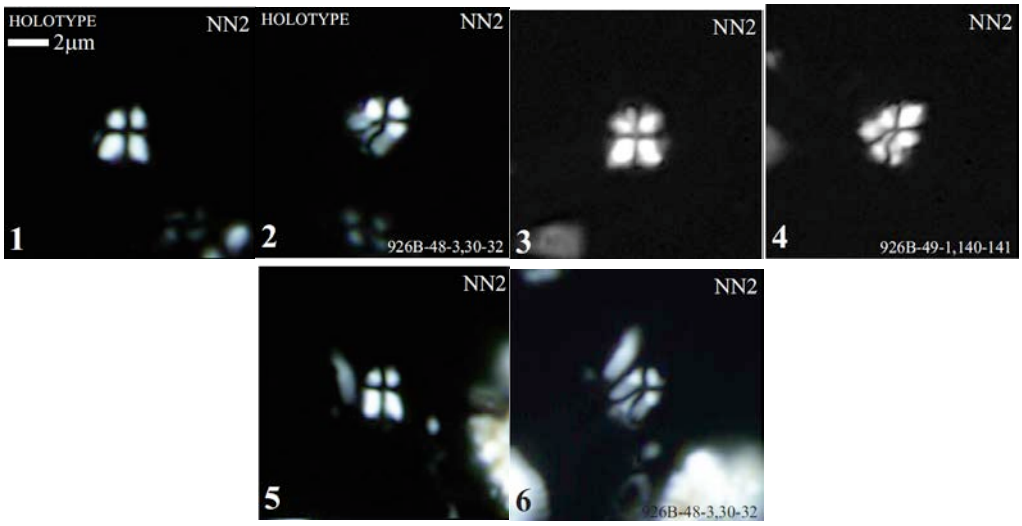
Sphenolithus paratintinnabulum Bergen & de Kaenel in Bergen et al. (2017)



Pl. 3, figs 29–30



Pl. 4, figs 1–6

Derivation of name: from Greek *para*, meaning beside, near, or by, and from Latin *tintinnabulum*, meaning small bell.

Diagnosis: Equant cylindrical sphenolith with a very short compound spine.

Description: Small to medium, roughly cylindrical sphenolith. The height to width ratio of the base is equant to nearly equant (1.0–1.1). The compound conical spine is very short (spine to specimen length ratio 0.25–0.50). When oriented 45° to the polarizer, the lateral cycle displays a 1st order white birefringence, while the proximal cycle is faintly birefringent. At 0° in XPL, the upper quadrant (lateral cycle) appears shorter than the lower quadrant (proximal cycle). L = 2.2–3.6μm; W = 1.8–2.8μm (holotype: 2.8μm x 2.4μm). Length to width ratios of specimens 1.14–1.29. Ten specimens measured, including the four illustrated herein.

Remarks: *Sphenolithus paratintinnabulum* is distinguished from *S. tintinnabulum* by its roughly cylindrical shape, as the conical *S. tintinnabulum* is strongly tapered and triangular in lateral view.

Holotype: Pl. 4, figs 1–2

Type locality: ODP Leg 154, Hole 926B, Ceará Rise, western equatorial Atlantic.

Type level: Sample 48-3, 30–32cm (22.208Ma), Zone NN2, Lower Miocene.

Occurrence: The HO of *S. paratintinnabulum* is a useful Lower Miocene marker in the GoM, dated at 18.612Ma in Leg 154 (Table 1). The LO of *S. paratintinnabulum* extends into the terminal Oligocene (NP26) in the GoM and Leg 154, dated at 23.274Ma (Sample 926B-51-3, 30–31cm; 0.019Ma error).

Bergen, J., de Kaenel., E., Blair, S., Boesiger, T. & Browning, E., 2017. Oligocene-Pliocene taxonomy and stratigraphy of the genus *Sphenolithus* in the circum North Atlantic Basin: Gulf of Mexico and ODP Leg 154. *Journal of Nannoplankton Research,* **37(2–3):** 77–112.