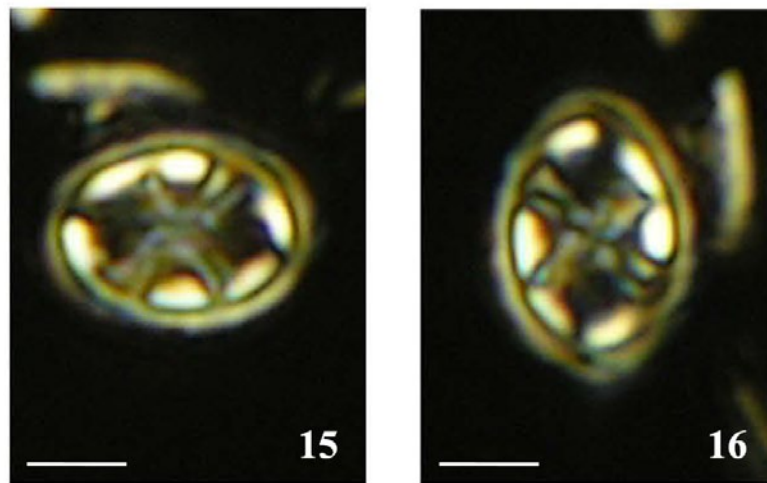
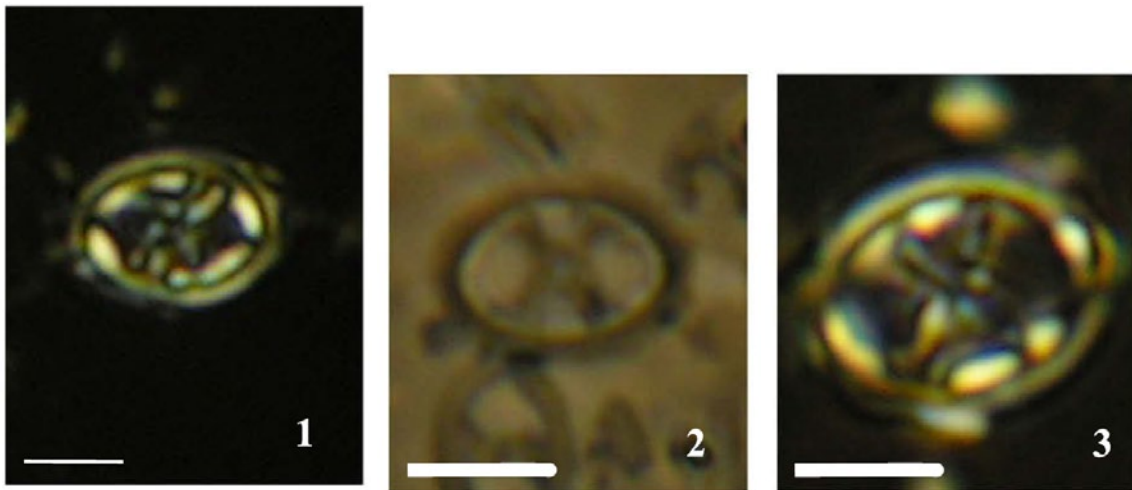


108. *Helicolithus tectufissus* Blair & Watkins (2009)



Pl. 2, figs 15–16



Pl. 3, figs 1–3

Description. This ellipsoidal coccolith has a bicyclic rim and a thin, diagonal cross. The proximal rim cycle exhibits pronounced birefringence in LM while the distal cycle remains dull. The narrow central area contains a delicate diagonal cross that overlaps the proximal rim and is composed of eight elements. The central area lacks a back plate. Each diagonal arm is composed of two calcite elements. When the major axis aligned north to south in cross-polarized light, visible sutures divide the dextral crossbar. The sinistral crossbar of the diagonal cross will also exhibit a divisional suture when the major axis is 10–30° away from the north-south orientation. This second sutural split is much more subtle. There is no central spine.

Holotype. Plate 2, Figs. 15–16

Holotype size. length: 5.6 μm ; width: 4.24 μm

Holotype material. Chalk from Locality 13 of the Smoky Hill Member type area (northwestern Kansas)

Etymology. *tectus*-, Latin for concealed, secret; *fissus*-, Latin for split

Occurrence. *Helicolithus tectufissus* comprise up to 5.6% of the assemblage with an average abundance of 1.3% at Locality 13. From the Ten Mile Creek section, *H. tectufissus* composes up to 2.2% of the assemblage with an average of 1.0%.

Remarks. *Helicolithus tectufissus* averages 5.44 μm in length and 4.08 μm in width (Table 4). It can be separated from all Helicolithid and Eiffellithid species by the unique sutural division of the sinistral crossbar of the diagonal cross. This species differs from *H. trabeculatus* and *H. compactus* by its delicate diagonal cross and the absence of a back plate. *Helicolithus anceps* also contains a central spine making it easily distinguishable from *H. stellafissus*. *Helicolithus tectufissus* is a rare to common taxon within the Smoky Hill type area and Ten Mile Creek section and is seen consistently throughout both of these sections.

Blair, S.A. & Watkins, D.K., 2009. High-resolution calcareous nannofossil biostratigraphy for the Coniacian/Santonian Stage boundary, Western Interior Basin. *Cretaceous Research*, **30(2)**: 367-384.