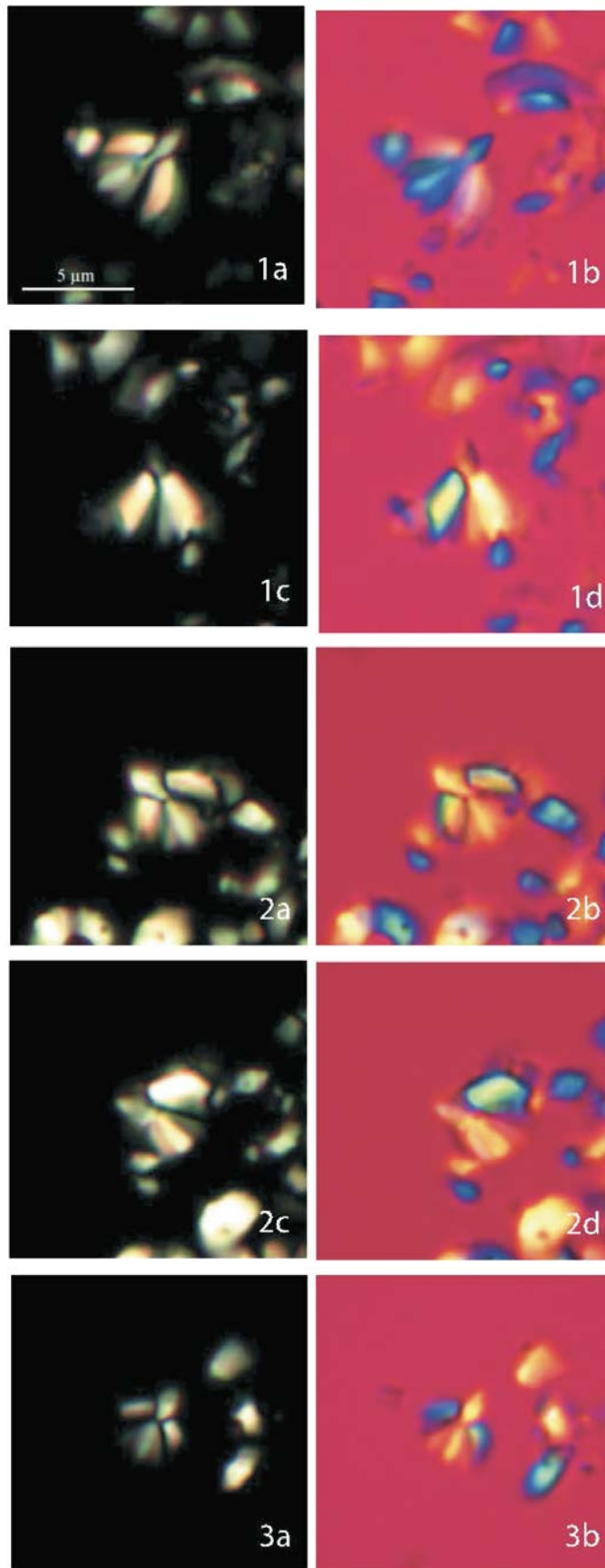
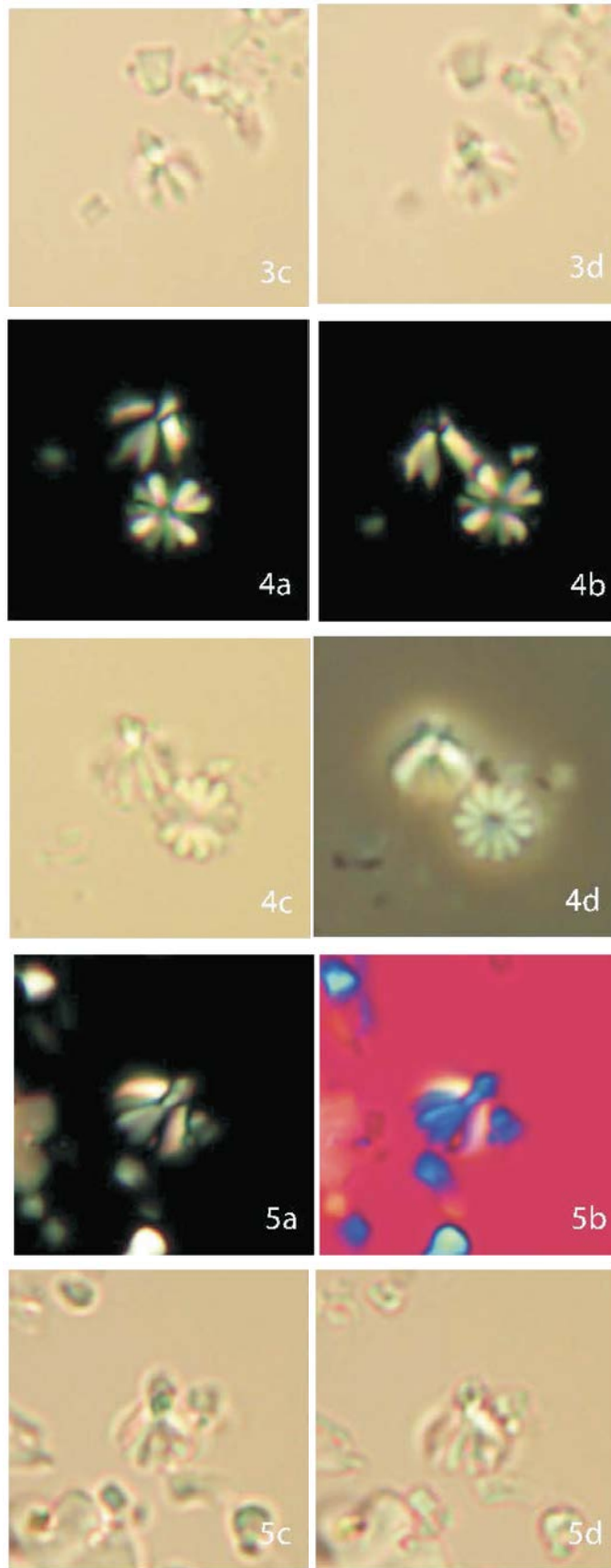


86. *Sphenolithus avis* Aljahdali et al. (2015)

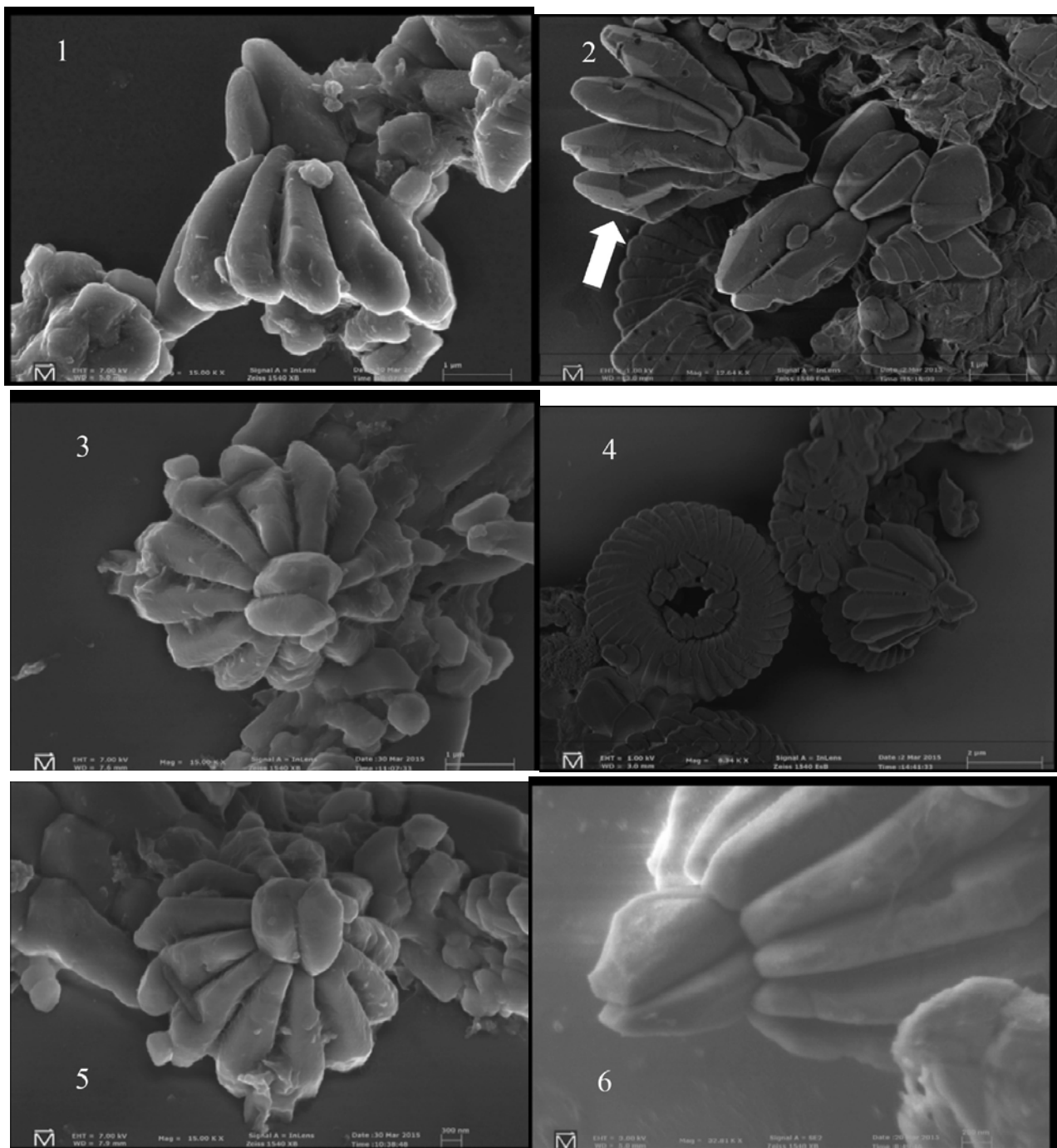




Pl. 1, figs 1a-d, 2a-d, 3a-d, 4a-f, 5a-b

Petrographic microscope images of *Sphenolithus avis* n. sp. Scale bar = 5 $\mu$ m. All specimens are lateral view except figure 4 where lower specimen is top view.

Figs 1a-d. Holotype. Sample 1237B-29-7, 48-50cm (271.53 mbsf); a, c, crossed nichols; b, d, gypsum plate.  
 Figs 2a-d. Paratype. Sample 1237B-29-7, 48-50cm; a, c, crossed nichols; b, d, gypsum plate.  
 Figs 3a-d. Paratype. Sample 709C-23-1, 98-99cm; a, crossed nichols; b, gypsum plate; c, d, plain light.  
 Figs 4a-d. Paratype. Sample 709C-23-1, 57-58cm; a, b, crossed nichols; c, plain light; d, phase contrast.  
 Figs 5a-d. Paratype. Sample 1237B-29-7, 48-50cm; a, crossed nichols; b, gypsum plate; c, d, plain light.



Pl. 2, figs 1-6

SEM images of *Sphenolithus avis* n. sp. Scale bar = 1 μm, except in fig. 5 the bar = 300nm.

Fig. 1. Paratype; Sample 1237B-29-7, 68-70cm.

Fig. 2. Paratype; Sample 709C-23-1, 48-49cm.

Fig. 3. Paratype; Sample 1237B-29-7, 68-70cm.

Fig. 4. Paratype; Sample 709C-23-1, 48-49cm.

Fig. 5. Paratype; Sample 1237B-29-7, 68-70cm.

Fig. 6. Paratype; Sample 709C-23-1, 48-49cm

*Sphenolithus ciperensis* ROTH, FRANZ and WISE 1971, p. 1112-1113, Pl. 3, fig. 4. – HUANG 1977, p. 170-171, fig. 7B.

*Sphenolithus* sp. aff. *S. ciperensis* OKADA 1990, p. 153, Pl. 2, figs. 3, 4.

**Holotype:** Southeast Pacific Ocean, Plate 1, Figure 1a-d.

**Etymology:** from the Latin *avis* (feminine noun) = bird, referring to the bird-like appearance of the outline when observed in side view under the light microscope.

**Diagnosis:** Small to medium (height 4.0-6.5 $\mu$ m) with a short tapered apical spine, and wide flaring proximal basal elements that at the end taper proximally.

**Description:** Under the light microscope (LM), *S. avis* n. sp. has wide flared proximal elements and a large base (feet) along with a short apical spine. The tips of the basal elements taper proximally and form an arc. Some specimens of *S. avis* are roughly symmetrical with the same height and width, whereas others have a larger width than the height. The apical spine is short, tapered and goes extinct at 30 degrees to the polarizer.

**Remarks:** A Scanning Electron Microscope (SEM) examination of *S. avis* n. sp. reveals large proximal elements and a short apical spine. *Sphenolithus avis*, n. sp. has 10-12 large proximal elements. The apical spine is composed of two slightly offset elements. SEM investigation also shows different views (e.g., lateral, distal and proximal) of *S. avis* n. sp. in which it looks similar to a badminton shuttlecock (Plate 2, Figures 1-6).

**Differentiation:** *Sphenolithus avis* n. sp. is easily distinguished from *S. ciperensis* and other *Sphenolithus* species by much more flared basal (proximal) elements (Plate 2, Figure 2). The flared base is similar in *S. umbrellus*, but *S. avis* differs from this species by having a short apical spine (Plate 2, Figures 3, 6).

**Holotype size:** Height: 4.33 $\mu$ m and width: 4.33 $\mu$ m.

**Paratype:** Plate 1, Figures 2a-5d, Plate 2, Figures 1-6.

**Type locality:** Southeast Pacific Ocean; ODP Hole 1237B (16°0.421'S, 76°22.685'W).

**Type level:** Oligocene (Zone NP25) ODP Sample 1237B-29-7, 48-50cm (271.73 mbsf).

**Stratigraphic range:** Middle Zone NP23 - top Zone NP25.

**Depository:** All slides are deposited at the Department of Earth, Ocean and Atmospheric Sciences at Florida State University, Tallahassee, Florida.

Aljahdali, M., Wise, S.W. Jr., Bergen, J. & Pospichal, J.J., 2015. A new biostratigraphically

significant Late Oligocene *Sphenolithus* species from the equatorial region.  
*Micropaleontology*, **61(3)**: 193–197.