

70. *Pedinocyclus annulus* Shamrock & Watkins (2012)



PL. 7, figs 7, 8

Fig. 7. 15-3-124.

Fig. 8. 14-2-50.

**Holotype:** Plate 7, figure 6.

**Paratype:** Plate 7, figure 7; *see also*: Plate 7, figure 8s

**Etymology:** (L.) from ring, for the open CA

**Diagnosis:** Medium to large elliptical placolith with a bright inner cycle and open CA

**Description:** Medium to large, broadly to normally elliptical placolith with a wide, weakly birefringent shield, showing a range of first-order grays. The shield is composed of 35-50 slightly imbricated elements that are radially oriented along most of the shield, but show slight curvature near the longitudinal axis of the ellipse. The open CA occupies ~40% of the longitudinal axis and is surrounded by a thin, birefringent inner cycle. The gyred extinction lines within the inner cycle are off-axis at 0° but approach the long axis when rotated to 45°.

**Dimensions:** Length: 6.7-10.3  $\mu\text{m}$ ,  $\mu = 8.1 \mu\text{m}$ , s.d. = 0.9.; Width: 5.3-8.1  $\mu\text{m}$ ,  $\mu = 6.7 \mu\text{m}$ , s.d. = 0.8; Eccentricity: 1.11-1.30,  $\mu = 1.20$ , s.d. = 0.05; CA Length: 2.6-5.4  $\mu\text{m}$ ,  $\mu = 3.3 \mu\text{m}$ , s.d. = 0.6; CA Length Ratio (% of size): 33.0-52.5%,  $\mu = 40.3\%$ , s.d. = 4.9; CA Width: 1.7-3.1  $\mu\text{m}$ ,  $\mu = 2.3 \mu\text{m}$ , s.d. = 0.3; CA Width Ratio (% of size): 27.3-41.7%,  $\mu = 33.9\%$ , s.d. = 4.2; N = 30 for all data

**Remarks:** The LO is observed near the base of CP13a, and this species is very rare and sporadic throughout its range. This species is tentatively placed into the genus *Pedinocyclus* due to similarities with *P. larvalis* with respect to shape, orientation, and birefringence of the shield elements. *Pedinocyclus annulus* n. sp. can be differentiated from *Calcidiscus ellipticus* n. sp. by the wider shield of the former, and from *C.? henrikseniae* which shows strong, gyred extinction from the CA outward across the shield.

**Type Locality:** ODP Leg 122 Site 762C, Exmouth Plateau

**Type Level:** 14-4-(55-56cm), 289.05 mbsf

**Observed range:** CP12b-CP16a; NP14b-21.

Shamrock, J.L. & Watkins, D.K., 2012. Eocene calcareous nannofossil biostratigraphy and community structure from Exmouth Plateau, Eastern Indian Ocean (ODP Site 762). *Stratigraphy*, **9(1)**: 1–54.