Diagnosis: A small- to medium-sized, circular to elliptical species of *Ansulasphaera* with a distally extended element cycle.

Description: The circular to elliptical placolith is constructed of three shields. A narrow distal shield is constructed of a single cycle of vertical to subvertical elements. The broad, subhorizontal median shield is constructed of imbricated elements having nonradial sutures. The proximal shield is formed by a single cycle of subvertical, blocky elements. The distal shield height is approximately one-third of the proximal shield height. The central area is open. In cross-polarized light, this species is easily distinguished in lateral view. In plan view, both the proximal and distal cycles exhibit a first-order white birefringence, whereas the median cycle is faintly birefringent to dark. The proximal element cycle can be distinguished from the distal element cycle by its greater thickness and height.

Size: 4.0 to 6.0 μm (holotype: 4.6 μm).

Remarks: *Ansulasphaera covingtonii* differs from *Ansulasphaera Helvetica* by its distally extended element cycle and younger stratigraphic occurrence. *A. covingtonii* is described herein from the Tithonian and may range into the Cretaceous, whereas *A. helvetica* is not known to have survived the Callovian.
**Derivation of name:** In honor of the nannofossil paleontologist James Mitchener Covington.

**Holotype:** Plate 1, Figures 4-8, specimen transferred from the LM to the SEM.

**Type locality:** ODP Site 901, Iberia Abyssal Plain.

**Type level:** ODP Sample 149-901A-5R-1, 31 cm; Tithonian.

**Occurrence:** Rare to common in Tithonian sediments from ODP Hole 901A.