

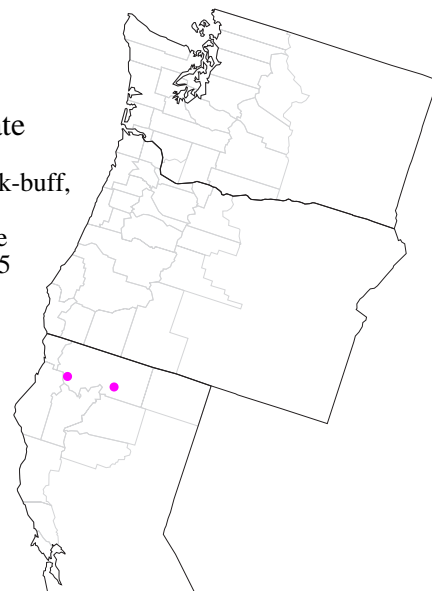
## *Arcangeliella crassa* Singer & Smith

**ROD name** *Arcangeliella crassa*

**Family** Russulaceae

**Morphological Habit** sequestrate

**Description:** **SPOROCARPS** up to 3.5 cm broad, convex depressed, pale pink-buff, glabrous but unpolished. **STIPE-COLUMELLA** 5-8 mm broad, about 1 cm high, becoming hollow in largest specimen, pallid, surface unpolished. **GLEBA** pale pink-buff, varying lamellate to lacunose on same specimen. **PERIDIUM** up to 5 mm thick as dried, pale pink-buff within, margin remaining attached to the stipe or not, reaching the stipe in places thus exposing the gleba (younger specimens). **PERIDIAL EPICUTIS** of appressed filamentose hyphae 3-6  $\mu\text{m}$  broad, the outermost ochraceous in KOH but the walls smooth; context of interwoven, hyaline hyphae with nests of large sphaerocysts with refractive somewhat thickened walls hyaline in KOH. **TRAMA** of interwoven, hyphae yellow to hyaline, enlarged cells (8-12  $\mu\text{m}$ ) seen in groups, but these may represent cut ends of hyphae. **LATICIFEROUS HYPHAE** abundant. **CYSTIDIA** rare, pseudocystidial type, 52-65 x 7-12  $\mu\text{m}$ , flexuous, often pointed at apex. **SUBHYMENIUM** cellular, some cells enlarged. **BASIDIA** 42-53 x 10-12  $\mu\text{m}$ , pedicelate-clavate, 4-spored; sterigmata straight-conic, 4-7  $\mu\text{m}$  long. **CLAMP CONNECTIONS** absent. **SPORES** ellipsoid, 8-11 x 6.5-8  $\mu\text{m}$  (not including sterigmal attachment); sterigmal attachment oblique and prominent, with a nearly smooth but well marked plage with an amorphous mass of amyloid material on it; ornamentation in the form of a small-meshed reticulum or broken amyloid reticulum, prominences  $\pm 0.25$   $\mu\text{m}$  high, spore wall slightly thickened and inamyloid.



**Distinguishing Features:** Characterized by a combination of sphaerocysts in the context of the peridium having thickened somewhat refractive walls, the ellipsoid, amyloid, reticulate spores, and the undifferentiated peridium.

**Distribution:** Endemic to California. Known from three sites within the range of the northern spotted owl: **CALIFORNIA, Siskiyou Co.**, Klamath National Forest, junction of Cecilville Rd. and The Pacific Crest trail; Shasta-Trinity National Forest, flats just below Sand Flats; head of the south fork of the Salmon River. There are also 3 other sites on Federal land outside the assessment area in California: Stanislaus National Forest, Cow Creek; Lassen National Forest, at Mineral Ranger Station; Tahoe National Forest, San Francisco State University Field Station.

**Substrate and habitat:** Forms sporocarps beneath the soil surface associated with various Pinaceae spp. in mixed forests containing *Abies concolor*, *A. magnifica*, *Pinus contorta*, *P. jeffreyii* or *P. ponderosa* from 2,000 to 2,200 m elevation.

**Season:** Fruits from June through October.

**References:** PEGLER, D.N., AND YOUNG, T.W.K. 1979. The gastroid Russulales. Trans. Brit. Mycol. Soc. 72: 353-388. SINGER, R., AND SMITH, A.H. 1960. Studies on secotiaceous fungi. IX. The astrogastraceous series. Mem. Torr. Bot. Club 21:1-112.



Photo courtesy of H. Saylor