

64. *ARCANGELIELLA crassa* Singer & Smith sp. nov.

Fig. 81.

Gastrocarpio circa 3.5 cm lato, convex-depresso, pallide alutaceo, glaber, impolito; stipite columellaque 1 cm altis, 5-8 mm crassis, pallidis; gleba sublamellata; spores 8-11 \times 6.5-8 μ , reticulatis; reticulatione amyloidea; Specimen typicum, legit Cow Creek, Stanislaus National Forest, 25 Jul. 1931, Frank A. Patty (NY).

Gastrocarp (as dried) up to 3.5 cm broad, convex-depressed, pale pinkish buff (dried), glabrous but unpolished; stipe-columella 5-8 mm broad, about 1 cm high, becoming hollow in largest specimen, pallid, surface unpolished; gleba pale pinkish buff, varying lamellate to lacunose on same specimen; peridium up to 5 mm thick as dried, pale pinkish-buff within, margin remaining attached to the stipe (hence gastrocarp remaining closed, —condition shown in largest specimen) or not reaching the stipe in places thus exposing the gleba (younger specimens).

Spores ellipsoid, 8-11 \times 6.5-8 μ (not including sterigmal appendage); sterigmal appendage 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 μ high, spore wall slightly thickened and inamyloid.

Hymenium. Basidia 42-53 \times 10-12 μ , pedicellate-clavate, 4-spored; sterigmata straight-conic, 4-7 μ long. Cystidia rare, pseudocystidial type, 52-65 \times 7-12 μ , flexuous, often pointed at apex.

Hyphal layers. Subhymenium cellular, some cells enlarged to sphaerocyst size; hymenopodium of subparallel hyphae and 2-3 hyphae thick; yellowish in KOH; mediostratum interwoven, hyphae yellow to hyaline, enlarged cells (8-12 μ) seen in groups, but these may represent cut ends of hyphae; laticiferous hyphae abundant. Epicutis of pileus of appressed filamentose hyphae 3-6 μ 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. Clamp connections none. Laticiferous hyphae very numerous.

Under duff in a coniferous forest, Stanislaus National Forest, Cow Creek, July 25, 1931. Coll. Frank A. Patty. Determined as *Arcangelietta alveolata* by Zeller & Dodge and as *Elasmomyces russuloides* by Lee Bonar.

This is a most distinctive species because of the sphaerocysts in the context having thickened somewhat refractive walls, because of the ellipsoid, reticulate spores, and because of the undifferentiated peridium—there is no layering to speak of. Although it stands out very distinct in the series as a species we have some reservations as to the proper genus in which to place it. Sections mounted in KOH give off a slightly whitish-milky dissolved substance when first mounted. This in addition to the very abundant laticiferous hyphae which resemble in content those of many species of *Lactarius* has led us to place the species in *Arcangelietta*. But there are no notes whatever with the specimen. The mediostratum of the tramal plates does not contain sphaerocysts like those found in the peridial context. Smith did note clusters of small cells which could have been the cut ends of large laticiferous hyphae. Hence, if it is ever found

that this species actually does not have a latex, it should be transferred to *Elasmomyces*.