

Amanita constricta sp. nov.

Pileus 5-13 cm latus, convexus dein plano-convexus

vel planus demum subumbonatus vel umbonatus, margine valde sulcatus vel tuberculato-striatus, griseus vel brunneo-griseus, disco glaber vel fragmento veli universalis obtectus; fragmentum album vel griseum, in statu humido tactu salmoneum dein album. Lamellae adnatae vel decurrentes dein liberae, albae demum griseae. Stipes 10-16(-20) cm longus, apice 7-17(-30) mm crassus, aequalis vel deorsum angustior, non bulbosus, exannulatus; volva membranacea, inferne arcte adhaerens dein margine liberae denique collabens, in statu humido tactu rufescens deinde decolorans. Sporae 9.6-12.8(-14.4) x 8-10.4(-11.2) μ m, hyalinae, globosae vel ovatae, inamyloideae. Holotypus: G. A. Breckon 302, San Mateo County, California. SFSU.

Pileus 5-13 cm broad, convex when young, becoming plano-convex to plane, eventually subumbonate to umbonate in age; margin decurved at first, soon plane to undulate, slightly uplifted in age, entire becoming rimose, strongly sulcate to tuberculate striate, striations 5-15 mm long; surface often with inconspicuous radial, dark streaks, viscid when moist, colored gray to brownish gray, "pale mouse gray" to "light drab gray", to "drab" to "hair brown", disc at times as dark as "chaetura black", furrows of striations a paler shade of pileus color; disc glabrous or covered with a patch of universal veil tissue, patch membranous, somewhat fibrillose, typically less than 1 mm thick, in age often breaking at edges into smaller plaques, colored white to buff to "smoke gray", or sometimes with pale vinaceous shades, bruising salmon color when wetted, slowly returning to white. Context colored next to the cuticle gray to drab, below white, sometimes becoming very faintly pinkish when exposed, especially in young basidiocarps, fragile, thin, 5-17 mm thick at disc, thinning toward the margin. Odor and taste not distinctive.

Lamellae adnate to decurrent by a short hook when young becoming free, white at first becoming gray, "smoke gray" to "pallid mouse gray" to "pale drab gray"; close to crowded, moderately broad; edge usually gray, fimbriate; lamellulae in several series.

Stipe 10-16(-20) cm long, 7-17 mm broad at the apex, equal or tapering downward, not bulbous; stuffed becoming hollow; no annulus; surface at the apex with longitudinal striations or pruinose resulting from contact with the lamellae, becoming appressed fibrillose below, upon expan-

sion outer layer of stipe often rupturing and forming rings of appressed fibrillose scales which are gray in color, darkening when bruised; surface under scales white and silky fibrillose. Volva membranous, tightly adhering and apparently interwoven with surface layer to lower one-third to one-half of the stipe, then developing a flaring free margin resembling an annulus, collapsing with age, white to pale buff or pale yellow, bruising reddish when wet, then fading.

Spores white in mass, 9.6-12.8(-14.4) x 8-10.4(-11.2) μm , globose to subglobose to obovoid, thin-walled, smooth, hyaline in KOH, nonamyloid, apiculus strongly developed, eccentric. Basidia 4-spored, occasionally 1- and 2-spored, 56-70(-77) x 11-16 μm , clavate, hyaline in KOH. Pleurocystidia and cheilocystidia not differentiated. Marginal cells of lamellae abundant to absent, 30-40 x 15-22 μm , saccate to sphaeropedunculate, hyaline in KOH. Lamellar trama bilateral, hyphae diverging from a narrow, central strand of short, ellipsoid elements, hyaline to golden yellow in KOH, 10-15 μm wide. Pileal trama floccose, of loosely interwoven, thin-walled, hyaline hyphae, 5-15 μm wide, laticiferous hyphae abundant. Pileal cuticle a thin gelatinous layer composed of interwoven, radially appressed to upright, septate hyphae, hyaline to pale yellowish in KOH, 3-5 μm wide. Universal veil remnants on pileus with solitary to scattered patches of sphaerocysts, 21-35 x 14-29 μm , globose to saccate, terminal or intercalary on narrow (3-8 μm wide), interwoven, connective hyphae, occasionally in short chains, bright yellow walls in KOH. Volva rim with scattered to abundant sphaerocysts, 8-21 x 6-14 μm , globose to saccate, hyaline with smooth, thin, yellow walls in KOH; connective hyphae interwoven, 3-8 μm wide, hyaline or with brownish pigment diffused throughout in KOH. Caulocystidia abundant at stipe apex, 23-57 x 11-38 μm , clavate to saccate to short sphaeropedunculate, hyaline, yellow in KOH. Clamp connections absent.

Habit, habitat and distribution. Amanita constricta occurs singly to scattered during December through January along the Pacific Coast. At present it appears to be limited to the coastal forests where it occurs mainly under hardwoods such as coastal oaks and madrones, but it has, on occasion, also been found under Douglas fir.

Material studied. CALIFORNIA. Marin Co.: G. A.

Breckon 865, 904; D. Madden 906; H. D. Thiers 11146. San Mateo Co.: G. A. Breckon 302 (Holotype), 669, 684; H. D. Thiers 11184, 12064, 12211. Solano Co.: W. A. Sundberg 1167.

Observations. Amanita constricta is readily recognized by its strongly striate, gray pileus, the conspicuously constricted volva with its flaring apex and, when moist, the characteristic reddish staining of the universal veil. It belongs in section Vaginatae as it has inamyloid spores, no annulus and lacks a bulbous stipe base. Like A. vaginata, A. pachycolea and A. inaurata Secr. it has a distinctly pigmented, cellular hypodermis. A. vaginata and A. pachycolea differ by having their volva attached only at the base of the stipe and nonstaining universal veil tissue in the manner described above. Also A. vaginata is usually glabrous. Amanita inaurata lacks a saccate volva and its universal veil shows no staining reaction. A. velosa (Peck) Lloyd is easily distinguished by its buff to pink to salmon colored pileus.

The species epithet was suggested by Gary Breckon in a masters thesis on the Amanita flora of northern California submitted to the Department of Biology of San Francisco State University. We are pleased to accept his name and to officially recognize the species.