

fixed, rarely ample and persistent, usually breaking up and vanishing, especially in small plants.

Type collected on the ground in deep woods near Seattle, Washington, October 20–November 1, 1911, *W. A. Murrill 336*. Also collected on banks in woods as follows: Seattle, Washington, *Murrill 304, 346, 485, 514, Zeller 105*. Related to *L. cristatella* Peck.

2. *LEPIOTA CRETACEA* (Bull.) Morgan, Jour. Myc. 13: 3. 1907

*Lepiota cepaestipes* Quél. Champ. Jura Vosg. 35. 1872.

Seattle, Washington, *Murrill 537*.

3. *Lepiota petasiformis* sp. nov.

Pileus thin, hat-shaped, with prominent conic umbo, scattered or gregarious, 1.5–2.5 cm. broad; surface dry, rosy-isabelline, or about the color of the back of the hand, covered with an abundance of fine powder; lamellae free, subdistant, rather broad, white; spores ellipsoid, smooth, hyaline, minute,  $3.5 \times 2 \mu$ ; stipe slender, tapering upward, clothed with powder like the pileus, reaching 6 cm. long and 2–3 mm. thick; veil fugacious, not forming an annulus.

Type collected in humus in woods near Seattle, Washington, October 20–November 1, 1911, *W. A. Murrill 629*. Also collected in the same region, *Zeller 119*. It suggests some forms of *L. cretacea*.

4. *LEPIOTA CRISTATA* (Bolt.) Quél. Champ. Jura Vosg. 34.  
1872

Seattle, Washington, *Murrill 356, 633, 695*; Stanford University, California, *McMurphy 30, 141*; Berkeley, California, *Harper*; Santa Cruz, California, *G. J. Streator*.

5. *Lepiota castaneidisca* sp. nov.

Pileus fleshy, regular, convex, umbonate, gregarious, 1.5–4 cm. broad; surface dry, white, with small, imbricate, avellaneous to light-chestnut scales, the umbo chestnut with unbroken cuticle; lamellae free, white, broad, ventricose, rather close; spores ellipsoid, smooth, hyaline,  $5-6 \times 3 \mu$ ; stipe cylindrical, equal, hollow, glabrous, brownish-tinted, 4–7.5 cm. long, 3–10 mm. thick; annulus white, superior, delicate, inconspicuous.

Type collected on the ground under redwoods near Searsville Lake, California, December 11, 1911, *James McMurphy 123*. Related to *L. cristata*.

#### 6. *Lepiota amplifolia* sp. nov.

Pileus convex to subexpanded, umbonate, gregarious, reaching 3.5 cm. broad; surface smooth, white, polished, with a few delicate, floccose, isabelline-testaceous scales, the umbo isabelline-testaceous with cuticle subentire; lamellae free, white, not crowded, very broad and triangular; spores oblong-ellipsoid, smooth, hyaline,  $8-9 \times 3.5 \mu$ ; stipe equal, finely fibrillose, hollow, white, becoming rose-tinted on drying, 7-9 cm. long, 2-4 mm. thick; veil white, evanescent, remaining only in small fragments clinging to the margin and stipe.

Type collected on the ground in a dense fir forest at Glen Brook, Oregon, November 7, 1911, *W. A. Murrill 738*. In a dried condition, this species somewhat resembles *L. mutata* Peck, described from Kansas in 1896.

#### 7. *Lepiota Sequoiarum* sp. nov.

Pileus thin, convex to nearly plane, umbonate, gregarious, 2-4 cm. broad; surface dry, finely imbricate-fibrillose-scaly, white, the center more densely fibrillose and tinted with isabelline, the remainder of the surface being at times tinted with the same color in the scales; context loosely woven, thin, white; lamellae white, free, close, narrow; spores ovoid to ellipsoid, smooth, hyaline,  $7-9 \times 3.5-4 \mu$ ; stipe tapering upward, long, slender, white, smooth, glabrous, hollow, reaching 10 cm. long and 5 mm. thick; annulus superior, white, not fixed but collapsed on the stipe, persistent.

Type collected on the ground in Muir Woods, California, November 22, 1911, *W. A. Murrill 1143*.

#### 8. *Lepiota fumosifolia* sp. nov.

Pileus convex, not umbonate, gregarious, 3 cm. broad; surface dry, white with isabelline, granular scales, the center isabelline; lamellae free, broad, rather crowded, white, becoming fumous on drying; spores oblong-fusiform, smooth, hyaline,  $12 \times 7 \mu$ ; stipe equal or tapering upward, cylindrical, smooth, white, furfuraceous, pale-avellaneous below, 6 cm. long, 6 mm. thick;