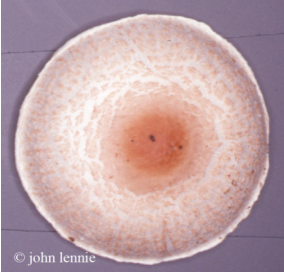


Lepiota castaneidisca



Lepiota castaneidisca is common in the San Francisco Bay Area, where it is most often encountered in Redwood and Monterey Cypress woods. It has been found as far north as Humboldt Co. in California, but it is not known whether it grows in the Sierra foothills nor how far south it occurs.

The name of this species means: the scaly one (*Lepiota*) with the chestnut coloured disc (*castaneidisca*).

Lepiota castaneidisca has been confused with *L. cristata* in California, and in guide books and web sites it is often found under that name (e.g. in Arora's *Mushrooms Demystified* at p. 306 and at http://www.mykoweb.com/CAF/species/Lepiota_cristata.html). It differs from *L. cristata* in the more rounded cap and the warm reddish brown colours. *Lepiota cristata* has an umbonate cap, with orange scales. Microscopically the species are extremely similar. *Lepiota castaneidisca* is a California native, and possibly endemic, while *L. cristata* is widespread throughout the Northern Hemisphere. In the redwood forests of northern California a third taxon has been found. *Lepiota cristata* grows mainly in cities, in ruderal situations, and in the wild it can be found in river and creek beds where nutrients are accumulated and the habitat is constantly in flux. *Lepiota castaneidisca* grows in more stable, natural habitats, but can also be found in gardens and parks.



Technical description of *Lepiota castaneidisca*:

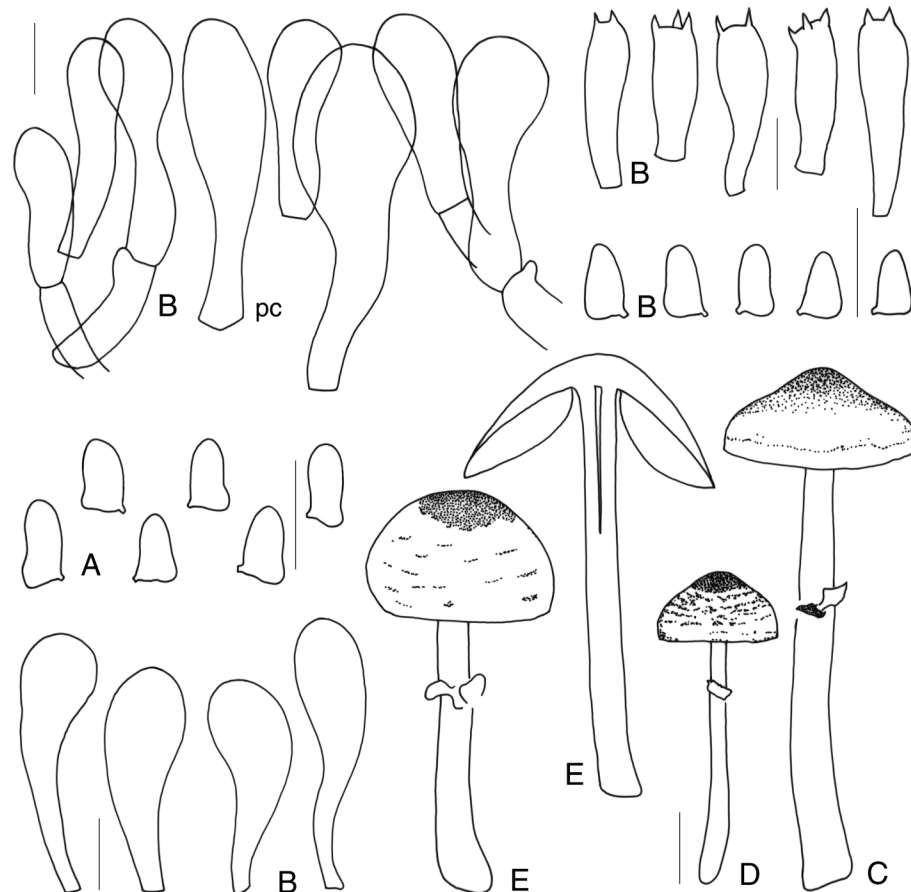
Pileus 8-32 mm, when young blunt-conical-paraboloid with inflexed margin, expanding via conico-convex, and campanulate-convex to convex with slightly inflexed to deflexed margin, orange reddish, warm (pinkish to reddish) brown to pale orange-brown (2.5 YR 4/4, between 5 YR 5/6 and 2.5 YR 5/8, 5 YR 5-4/6, 7.5 YR 7/8) at centre, in old specimens fading and losing the reddish tinges (c. 7.5 YR 6-5/4-6), smooth and closed, much paler around umbo (5 YR 7/5, 5 YR 7/3, 5 YR 8/4, 7.5 YR 8/5), and splitting up, especially in outer zone, into small pale, sometimes pale pink-cream, concentric patches, on radially fibrillose whitish background; margin exceeding lamellae. Lamellae, L = c. 40-45, l = 1-5, moderately crowded to moderately distant, free, slightly ventricose 2.5-5 mm wide, whitish when young, distinctly cream-coloured in older specimens, sometimes with pinkish sheen, with white irregular to fimbriate edge. Stipe 25-65 x 2-6 mm, cylindrical, slightly widened towards base, hollow, lengthwise creamy innately fibrillose, pinkish in lower part, discolouring reddish when bruised, especially in lower half, and in older specimens, with annulus, with white mycelial cords. Annulus ascending when young, in old specimens present as some remnants on stipe, completely brownish or with patches on underside

Lepiota castaneidisca – else c. vellinga June 2007 – ecvellinga@comcast.net/vellinga@nature.berkeley.edu

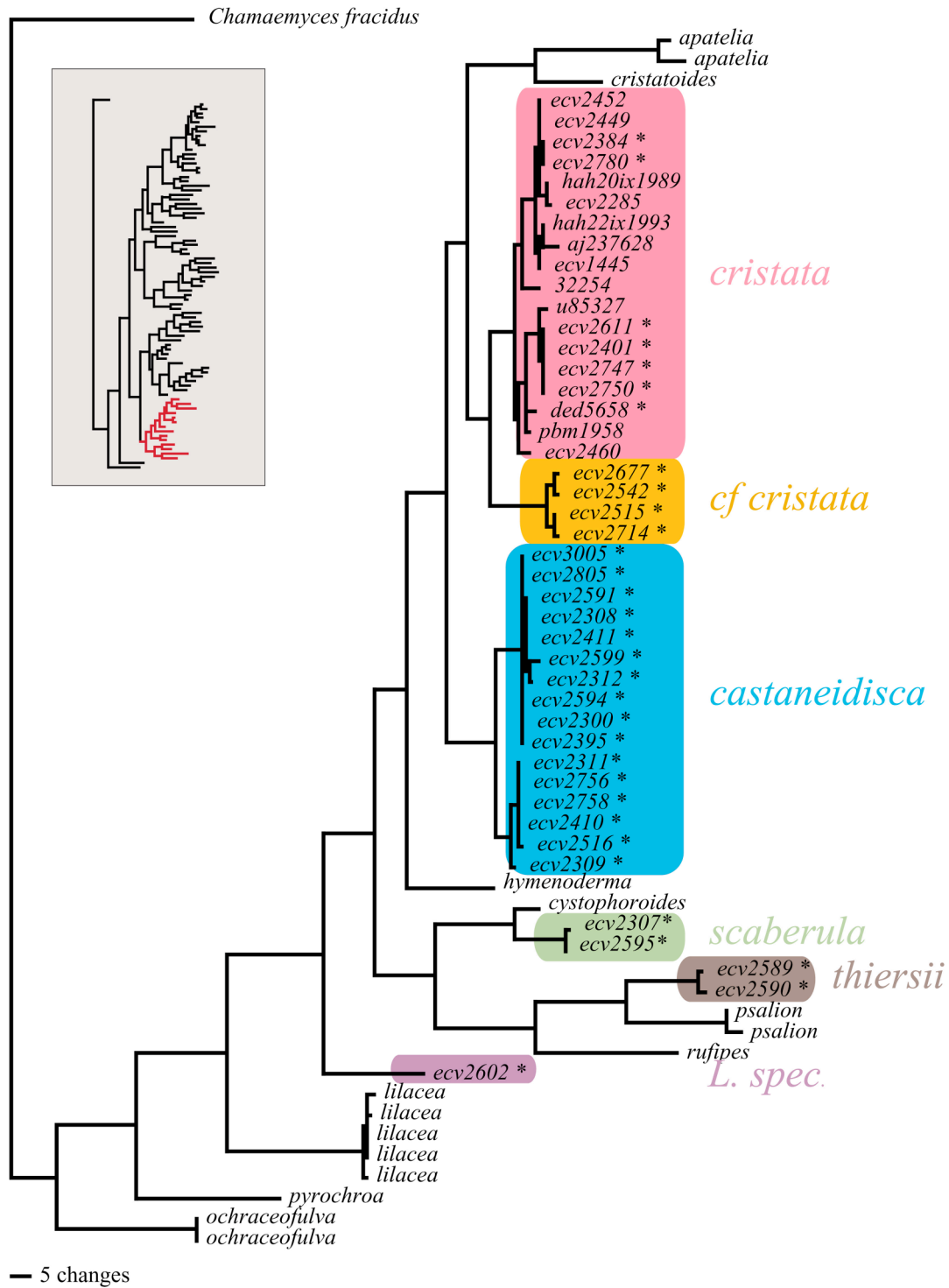
as on pileus, with fringed upper rim, and cottony white inside. Context whitish, white-cream in pileus, firm and dull, in stipe shiny cream to red-brown in old specimens in lower half. Smell strong, sweet fruity-aromatic, of cut basidiocarps with rubber component of the *L. cristata* smell, sometimes with cod-liver oil component. Taste not recorded.

Spores [119,8,8] 5.0-9.0 x 3.0-4.0 μm , avl x avw = 6.4-8.1 x 3.1-3.7 μm , Q = 1.6-2.5, avQ = 1.95-2.2, in side-view triangular, cylindrical with spurred base, in frontal view oblong, hardly congophilous, dextrinoid, not colouring in Cresyl Blue. Basidia 18-30 x 5.0-8.0 μm , 4-spored; a few 2-spored basidia present. Lamella edge sterile; cheilocystidia 20-44 x 6.5-13.5 μm , narrowly clavate, clavate, more rarely cylindrical or spheropedunculate with short to long pedicel. Pleurocystidia not observed. Pileus covering a hymeniderm made up of elements of different length, 16-62 x 8.0-18 μm ; most elements colourless, some with brown intracellular pigment, with slightly thickened walls; elements covered by a colourless layer. Stipitipellis a cutis of cylindrical non-coloured hyphae, c. 2.0-3.0 μm wide. Clamp-connections present in all tissues.

Habitat & distribution – Gregarious, terrestrial, and apparently saprotrophic, in *Sequoia sempervirens* groves, in stands of *Cupressus macrocarpa*, and in mixed *Quercus agrifolia* forests. November to February. Widespread in coastal central and northern California.



Basidiocarps, cheilocystidia, cells of the pileus covering (pc) and spores from several collections of *L. castaneidisca*. The scale bar is 1 cm for the fruitbodies, and 10 μm for the microscopical features.



Coloured species occur in California; * indicates that the collection came from California

The relationship among the *Lepiota* species with a hymeniderm as pileus covering, based on a parsimony analysis of the nrITS sequences. The position of the genus *Lepiota* within the *Agaricaceae* is indicated in red in the inset. Note that there is considerable variation within *L. cristata* and that *L. castaneidisca* harbours two distinct nrITS-types.

Further reading on this species and its relationship to *Lepiota cristata*:

Vellinga, E.C., 2001. Studies in *Lepiota* IV. *Lepiota cristata* and *L. castaneidisca*. Mycotaxon 80: 297-306.