

Lepiota decorata



Lepiota decorata is by far the most beautiful species in the genus I have ever seen. It is a rare apparition, known from one locality in the East Bay, close to Berkeley. But, it is also growing around the house of a Portland mycologist, so it might be more common! One of the funny things is that it is very good at timing. It comes up around Christmas, and we have been seeing this on our Christmas afternoon walks several years in a row. However, 2006 was too weird a year for it, and we missed it dearly.

It was originally described by Zeller from central Oregon under the name *L. pulcherrima* – the most beautiful one, also a very good name. Unfortunately, there was already another *Lepiota pulcherrima*, and as there can only be one, ours changed name. Technically speaking, it is not a *Lepiota* species. It does not group with species like *L. clypeolaria*, *L. magnispora* and *L. cristata*. It is closely related to species in the *Leucoagaricus/Leucocoprinus* group of the *Agaricaceae*. But as the systematics of this group is still in flux (is it best to be regarded as one genus or split it up into several smaller genera?), the genus name *Lepiota* for this species is maintained for the time being.

Zeller found his collection under an old Douglas fir tree; ours was growing under *Eucalyptus* (!), and the modern Oregonians were found in a mixed wood with maples, alders and western cedars.

There is nothing else in the group to confuse it with. The pink-purple colours, the velvety appearance, the size, they all set this species apart. In Europe there is one species that might be the same, *Leucoagaricus idae-fragum*. The only other Californian species that comes a bit close is *L. roseolivida*, also a beauty, but more subtle. It is much smaller and more slender and is not as intense in colour as *L. decorata*.

The colours change rapidly when the mushroom has been picked. The second picture shows a much browner cap than the first.

It fits in with those species in *Leucoagaricus* that turn red when scratched, like *L. flammeotincta*, *L. roseifolia* and *La. cupresseus*.

Technical description of *Lepiota decorata* (colour codes are from Methuen Handbook of Colour):

Pileus 38-80 mm, campanulate with umbo, hemispherical-convex with inflexed margin when young, to wavy plano-convex with low umbo with age, beautiful rose-vinaceous purple, pink purplish, or pink-purple, darkest at centre, and slightly paler at margin (at centre 10D5, 10E5, around centre 10A3, 11C6-11C5, or in the range of 12AB3-4), velvety-tomentose at centre and closed, around centre in some places breaking open into small fibrillose adnate tufts on whitish background, or velvety to fine squamulose in outer part of pileus, in one specimen slightly radially fibrillose near margin; margin exceeding lamellae, entire or slightly fringed with age, white at first, brownish with age and pressure.

Lamellae, L = 90-100, l = 0-3, crowded, free, but not remote from stipe, slightly or not ventricose, up to 7 mm wide, white to pale cream with white, irregularly eroded cystidiose edge.

Stipe 75-90 x 7-11 mm, cylindrical, but in some specimens gradually widening towards base, at utmost base up to 14 mm wide, at apex white to whitish, when young only with some pink tinges at base, but with age below annulus with pinkish sheen or with a wash of lilac-rose (11A3-2), strongest near base, caused by long coloured adnate fibrils, and pubescent (lens!) in basal part, hollow, protruding into pileus; with copious white mycelium or mycelial mat at base. Annulus easily torn apart, consisting of an ascending or descending pale pink cuff with an up to 4 mm wide flaring part, with pink underside, concolorous with pileus or slightly paler, and dark pink rim, and white to pale pink inner upper side.

Context relatively thick in pileus (c. 5 mm thick), white and dull, white to creamy shiny in stipe, not discolouring when cut.

Smell astringent lepiotoid, strong and fungoid or indistinct; taste not recorded.

Spores [55,4,4] in side view 5.4-7.6 x 3.2-4.9 μm , avl x avw = 5.8-6.8 x 3.7-4.0 μm , Q = 1.37-1.88, avQ = 1.47-1.71, ellipsoid to oblong, with abaxial side in most spores straight, in most spores with rounded apex, rarely slightly amygdaliform, in frontal view ellipsoid-oblong, with one guttule, thick-walled, without a germ pore, dextrinoid, congophilous, and metachromatic in Cresyl blue (see fig.)

Basidia 18-36 x 6.5-8.5 μm , 4-spored, rarely 2-spored.

Lamella edge sterile; cheilocystidia 23-65 x 7-13 μm , narrowly clavate, cylindrical, slightly utriform, colourless (see fig.).

Pleurocystidia absent.

Pileus covering in young specimens more or less a cutis with long tapering terminal elements; these terminal elements are more erect and give a trichodermal aspect to the covering in mature specimens; terminal elements 120-250 x 9-18 μm , cylindrical or slightly widened above base, with rounded apex, with pinkish or brownish intracellular pigment, and incrusting pigment in lower hyphae (see fig.).

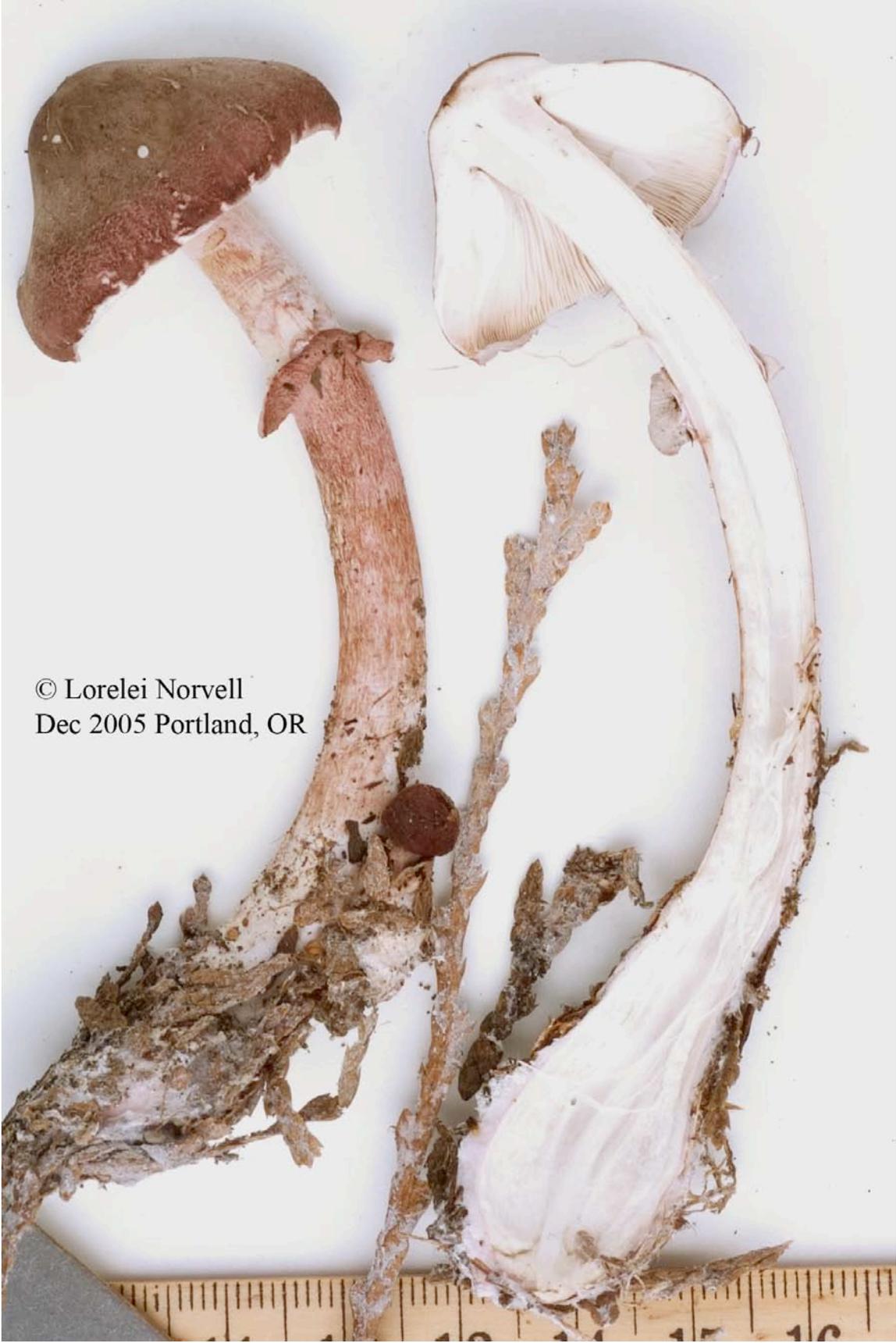
Stipe covering of lower part of stipe a tomentum made up of narrow, 2-3 μm wide, interwoven hyphae with yellow refracting walls.

Clamp connections absent.

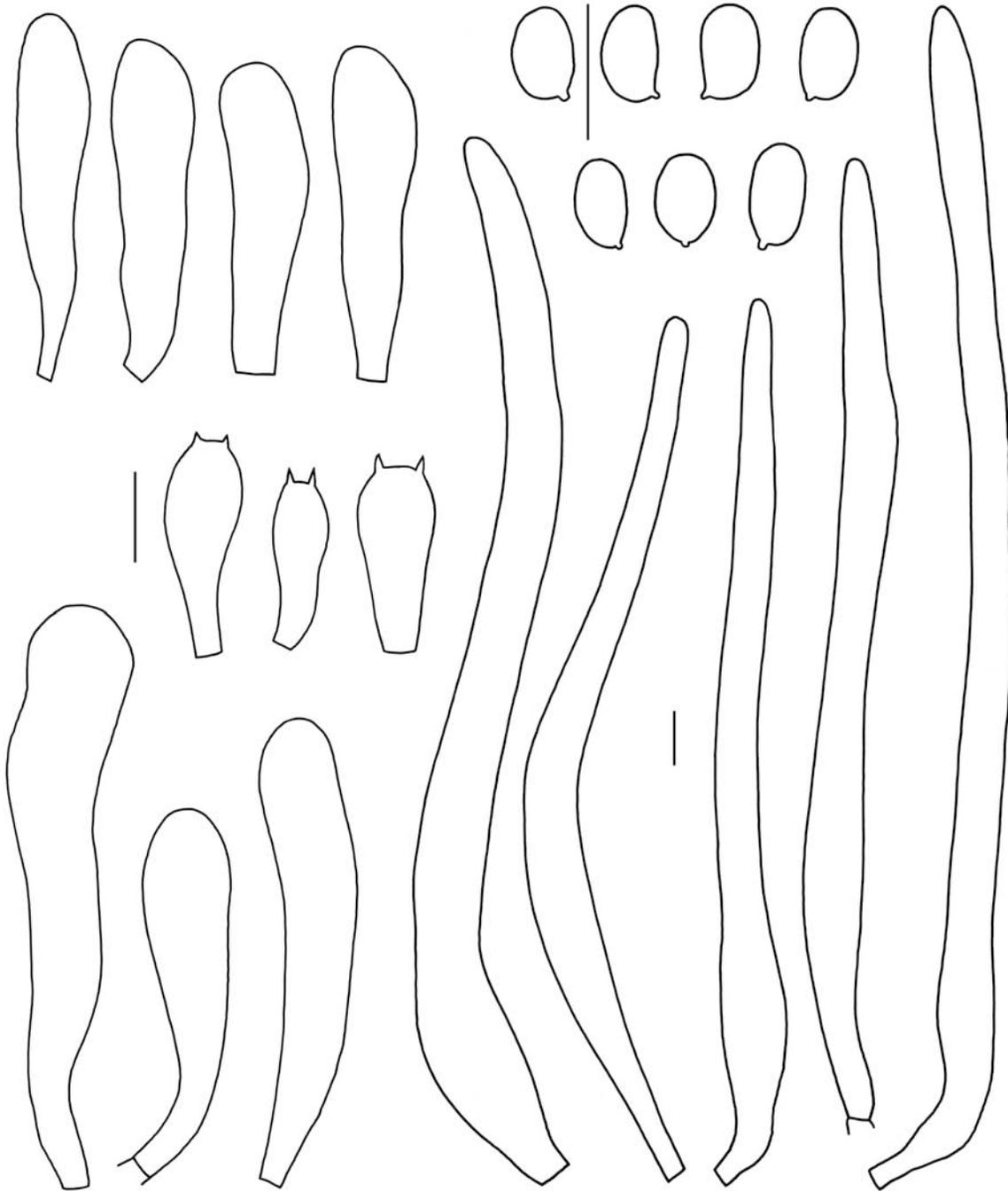
A big thank you to Lorelei Norvell who sent me the pictures and material of her very own *L. decorata*!

Further reading on this species and its relatives:

Vellinga, E.C., 2007. Lepiotaceous fungi in California, U.S.A. – 3. Pink and lilac species in *Leucoagaricus* sect. *Piloselli*. Mycotaxon 98: 213-224.



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Spores, basidia, cheilocystidia, and elements of pileus covering of two different collections from the same spot. The scale bar is 10 μ m.