

Matchmaker: Mushrooms of the Pacific Northwest

Below are written descriptions and images of fruiting bodies, mushrooms, of the fungal species in this ectomycorrhizal association. The information is from the web version of the Matchmaker: Mushrooms of the Pacific Northwest (MMPNW) created by the Canadian Forest Service and based on the Windows MMPNW version 1.3 by Ian and Eli Gibson.

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LATIN NAME(S) *Agaricus hondensis* Murrill Mycologia 4: 296. 1912; *Agaricus bivelatoides* Murrill; *Agaricus hillii* Murrill; *Agaricus mcmurphyi* Murrill; *Agaricus glabrus* Zeller; *Agaricus subrufescentoides* Murrill

ENGLISH NAME(S) felt-ringed *Agaricus*

NOTES distinguished by pale cap fibrils which often darken when old, pale pinkish to pinkish gray gills at first, the thick felty ring, smooth bald stem, phenol odor when base of stem broken open, usually pale yellowish staining in base of stem, yellow staining of cap in KOH, and woodland habitat; synonyms include *bivelatoides*, *hillii*, *mcmurphyi*, (all according to A.H.Smith), *glabrus* (Ammirati), and *subrufescentoides* (Kerrigan - the darkest form, "more commonly in the pacific northwest but only rarely in California"); indicated for BC, CA in Smith(15), WA and OR by Isaacs, AB by Schalkwijk-Barendsen, **CHEMICAL REACTIONS** cap surface staining bright yellow in KOH, (Arora), bright yellow with 3% KOH, (Isaacs)

CAP 6-15(20)cm convex becoming flat; "whitish or with pale pinkish-brown to pinkish-gray to fawn-colored flattened fibrils or fine fibrillose scales (at least at center), the fibrils often darkening when old to brown, reddish-brown, or reddish-gray, but in one northern form darker brown from the beginning"; dry, smooth, (Arora), 8-15cm broad, hemispheric becoming broadly convex then flat; pallid to buff, sometimes darker brown, especially when old, background whitish; dry, bald or appressed fibrillose - fine-scaly or subareolate (somewhat cracked like mud), (Kerrigan)

FLESH thick; "white, unchanging or staining pale yellowish when bruised, then often slowly discoloring pinkish", "flesh in extreme base usually bruising pale yellowish", (Arora), up to 1.5cm thick; white, unchanging, in stem lustrous, white, unchanging or becoming somewhat yellow in lower part, (Kerrigan)



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GILLS free at maturity, close; "pale pinkish to pinkish-gray becoming brown, then chocolate brown or darker", (Arora), free, close, up to 1cm broad; pinkish at first, becoming dull pinkish and finally dark blackish-brown, (Kerrigan), grayish pink, becoming purplish brown, (Lincoff), free, close to crowded, narrow; pink to pale grayish lilac in early stages, becoming more or less deep reddish brown at maturity; edges even, (Ammirati), white in buttons, then pinkish, finally lilac-gray to reddish brown or chocolate brown, (PNW keys)

STEM 7-20cm x 1-2.5cm thick but with a thicker or more bulbous base, firm; "white or discoloring dingy pinkish or brownish in age or after handling"; smooth, naked, (Arora), 12-20cm x 1-1.5cm, 2-3cm wide in lower part, stuffed-hollow, base fairly shallowly rooted even though often developing under deep litter; white, unchanging; "smooth, or with some fibers subtending annulus", (Kerrigan), usually with an abrupt bulbous base (Ammirati)

VEIL "membranous, white, forming a thick, feltlike, superior ring on stalk, ring skirtlike but often flaring outward instead of collapsing against stem", (Arora), veils forming a thick pendant subapical white ring, rather stiff, flaring broadly, tending not to collapse until very old, smooth upper surface, (Kerrigan), membranous, moderately thick, apical on stem, upper surface of ring white and striate, lower surface typically with loose dark pink to grayish vinaceous cottony fibrillose patches, or merely white-fibrillose, universal veil lacking, (Ammirati)

ODOR crushed flesh mild or faintly phenolic but usually distinctly phenolic in base of stem when crushed, (Arora), phenolic or often indistinct, usually strongly phenolic in base, (Kerrigan)

TASTE astringent-metallic (Arora), indistinct (Ammirati)

EDIBILITY poisonous to many causing vomiting or stomach distress, (Arora)

HABITAT solitary or in groups, troops, or fairy rings in woods on ground, particularly where there are thick accumulations of fallen twigs and other debris, (Arora), in arcs, subcespitate (somewhat tufted), gregarious, or single, under conifers in needle duff or under brush (Rubus, Holodiscus) in leaves, (Isaacs), gregarious in litter of Sequoia, Pinus, Quercus, rarely Cupressus and other trees, usually in deep woods, (Kerrigan for California), low elevation conifer duff (PNW keys)

SPORE DEPOSIT chocolate-brown (Arora)



Boleslaw Kuznik

MICROSCOPIC spores 4.5-6 x 3-4 microns, elliptic, smooth, (Arora), spores (3.4)4.7-5.7(6.0) x (3.0)3.3-3.5(5.3) microns, elliptic to elongate, hilar appendix somewhat prominent, germ pore not evident; basidia 4-spored, 22-25 x 6 microns, cylindro-clavate to clavate, sterigmata 3-4 microns long; cheilocystidia 10-15 x 10-15 microns, nearly spherical, or possibly also basidiole-like and about 17 x 7.5 microns, uncommon, gill margin primarily composed of narrow hyphae oriented parallel to margin, almost sterile, (Kerrigan), spores (5.1)5.8-7.3(8.8) x 3.7-4.4 microns, broadly elliptic, slightly inequilateral in side view, smooth, thick-walled, without germ pore; pleurocystidia lacking, cheilocystidia 18.3-25.6 x 7.3-11.0 microns, colorless to pale yellowish brown; clamp connections not seen, (Ammirati)

NAME ORIGIN refers to La Honda California where originally described

SIMILAR like *campestris* or *bisporus* somewhat, but prominent ring, crooked stem, whitish gills in button stage, and unpleasant odor; like *crassistipus* which has flesh that turns orange to wine color with nitric acid or alpha naphthol, (bicolored flesh, first yellow then wine-colored), stem short for breadth of cap, massively club-shaped, ring recumbent never flaring, gills grayish then reddish brown; like *haemorrhoidarius* which stains red and has a pleasant odor; like *silvicola* if pallid, but *silvicola* has almond odor; like *californicus* which is smaller with gray-brown fibrils on inrolled cap

SOURCES Kerrigan(1), Arora*, Lincoff(2)*, Schalkwijk-Barendsen*, PNW keys, Ammirati(11)*, Smith(15), Isaacs

FAMILY Agaricaceae of Order Agaricales