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) Russula emetica (Schaeff. ex Fr.) Pers. ex S.F.Gray Nat. Arr. Brit. Pl. 1: 618. 1821

ENGLISH NAME(S) the sickener, emetic Russula

NOTES distinguishing features medium-sized to large size, strong to moderate red or reddish orange to deep pink cap, strongly acrid taste, growth usually on Sphagnum, large spores, and commonly multiseptate hyphal ends (pseudocystidia) on cap and stem (Shaffer); Thiers lists for California a similar species, Russula silvicola Shaffer (listed also by Jumpponen for WA), but does not list R. emetica: "Until recently R. silvicola was frequently misidentified as R. emetica."; R. emetica not common in Pacific Northwest, included in PNW keys, presence in PNW implied by inclusion in Ammirati, reported from BC (Redhead(5)), Grund reported from WA, Shaffer examined collections from MI, MN, also found in Europe, CHEMICAL REACTIONS negative reaction to FeSO4 on cap flesh, cystidia positive in SV, (Grund)

CAP 6-9cm, scarlet pink, light blood red, sometimes paling to white; viscid, shining when dry, margin grooved, easily peeling, (PNW keys); 2.5-8.5cm, when young cushion shaped with incurved margin, becoming convex to flat-convex with a depressed disc and eventually irregularly concave or somewhat funnel-shaped, somewhat umbonate or not; strong, vivid, or moderate red, strong to deep reddish orange, or less commonly deep pink, occasionally spotted deep red centrally, sometimes partly colored also with moderate to pale orange yellow to moderate orange; viscid, bald, rugulose (wrinkled) outward from disc or not, sometimes minutely areolate when old, not striate when young but becoming tuberculate-striate 0.2-0.7cm from edge inward, cap skin thin, easily separable 1/2-2/3 or radius, (Shaffer)

FLESH white, pink under cap skin, (PNW keys), moderately thick (0.4-0.9cm thick at disc), soft-brittle; sometimes tinged red just beneath cap skin, otherwise white, (Shaffer)

Michael Beug

GILLS creamy (PNW keys), adnexed to adnate or sometimes sinuate, close, unequal, the subgills rare and of various lengths, moderately broad, 0.3-0.8cm, rounded near cap margin, occasionally forked near stem, fragile, interveined; yellowish white, unchanging when injured; edges entire, (Shaffer), broad; pure white to pale cream, (Phillips), adnate to adnexed or free (Arora for emetica group)

STEM white tending to yellow, (PNW keys), 4.5-10.5cm x 0.7-2.4cm, flared at top, elsewhere widening to base, or rarely narrowing at very base, stuffed at first, becoming partly hollow; white to yellowish white, sometimes discolored grayish yellow basally, but not changing when injured; dry, dull, longitudinally rugulose (wrinkled), (Shaffer), equal or thicker below, (Arora for emetica group)

VEIL none

ODOR slightly fruity (PNW keys), with a Lycoperdon like odor (Shaffer), fruity (Phillips), mild (Arora for emetica group)

TASTE very peppery (PNW keys, Shaffer, Phillips)

EDIBILITY poisonous, may cause vomiting, parboiling may destroy toxins, (Arora for emetica group)

HABITAT mossy, swampy woods (PNW keys), solitary, scattered, gregarious, or rarely cespitose (tufted), usually on Sphagnum, rarely on very rotten wood or humus, often in boggy areas of coniferous or deciduous-coniferous woods, (Shaffer)

SPORE DEPOSIT white, Crawshay A, (PNW keys), yellowish white to almost white (Shaffer), white, Crawshay A, (Phillips)

MICROSCOPIC spores 9-10 x 7-8 microns, ornamentation Patterson type C-2, E-2, (PNW keys), spores 8.0-11.3 x 6.7-9.0 microns, elliptic to obovate, often broadly so, or rarely nearly round, warts and spines cylindric to conic, up to 0.7-1.7 microns high,

NAME ORIGIN means 'causing vomiting'

SIMILAR R. silvicola Shaffer has smaller fruiting body, has somewhat different pigmentation, often develops pallid to yellow areas on cap when old, is not restricted to Sphagnum habitats,(Thiers), silvicola has smaller fruiting body or at least shorter stem, with less deep red and less uniformly red stem, and although spore sizes overlap, has generally smaller spores with lower ornamentation, the commonly multiseptate pseudocystidia on cap and stem surfaces of emetica are a more distinctive microscopic difference, (Shaffer); bicolor is commoner, has cap orange-red splotched with yellow or cream, grows on rotted conifer logs, (PNW keys); rosacea has red to rosy stem and deep yellow spore deposit, (PNW keys)

SOURCES Shaffer(6), Phillips*, Lincoff(2)*, Lincoff(1)*, Ammirati*, Schalkwijk-Barendsen*, Courtecuisse*, Arora, Barron*, PNW keys, Thiers(3)

FAMILY Russulaceae of Order Russulales