

= Lactarius fallax =

*Lactarius fallax* , commonly known as the velvety milk cap , is a species of fungus in the Russulaceae family . Found in both spruce and mixed conifer forests , it is a fairly common species in the Pacific Northwest region of North America , with a northerly range extending to Alaska . Its fruit bodies are medium @-@ sized , with velvety , brown to blackish caps up to 3 ? 9 cm ( 1 @.@ 2 ? 3 @.@ 5 in ) in diameter bearing a distinct pointed umbo . The caps are supported by velvety stems up to 6 cm ( 2 @.@ 4 in ) long and 1 @.@ 5 cm ( 0 @.@ 6 in ) thick . The mushroom oozes a whitish latex when it is cut , and injured tissue eventually turns a dull reddish color . The eastern North American and European species *Lactarius lignyotus* is closely similar in appearance , but can be distinguished by its differing range .

= Taxonomy and classification =

The species was originally described by American mycologists Alexander H. Smith and Lexemuel Ray Hesler in a 1962 publication . Smith made the initial collection in late October 1944 , in *Rhododendron* , Oregon . The publication also described the variety *Lactarius fallax* var. *concolor* based on specimens collected in Mount Hood . According to Smith and Hesler , this variety had been to that point generally identified as *Lactarius lignyotus* in the Pacific Northwest . They described the variety *L. lignyotus* var. *americanus* to account for differences such as " spore ornamentation , distant gills at maturity , and the typically slightly acrid taste " . However , in their 1979 monograph of North American *Lactarius* species , they considered *L. lignyotus* var. *americanus* to be equivalent ( and thus synonymous ) to *L. fallax* var. *concolor* . The specific epithet *fallax* is derived from the Latin word " deceptive " . The mushroom is commonly known as the " velvety milk cap " .

*Lactarius fallax* is classified in the section *Plinthogalus* of the subgenus *Plinthogalus* of the genus *Lactarius* . Species in this section have brown to blackish caps , and a cap cuticle that contains a dissolved brown pigment . The cuticle of most species is of the trichoderm type ? where the outermost hyphae emerge roughly parallel , like hairs , perpendicular to the cap surface .

= Description =

The cap of *L. fallax* is 3 ? 9 cm ( 1 @.@ 2 ? 3 @.@ 5 in ) wide , ranging in shape from convex to nearly flat with a small umbo , expanding to plane or becoming shallowly depressed , with or without the umbo . The margin ( cap edge ) is even or scalloped . The cap surface is dry and velvety , finely wrinkled over the center , azonate ( without concentric lines ) , and dark sooty brown to blackish . The gills are attached to subdecurrent ( running shortly down the length of the stem ) , narrow , crowded , not forked , white at first , and become creamy buff with age . The edges of the gills are brown like the cap , and slowly stain vinaceous ( redwine @-@ colored ) when bruised . There are several tiers of lamellulae ( short gills that do not reach the stem ) interspersed among the full @-@ length gills . The stem is 2 @.@ 5 ? 6 cm ( 1 @.@ 0 ? 2 @.@ 4 in ) long , 8 ? 15 mm ( 0 @.@ 3 ? 0 @.@ 6 in ) thick , nearly equal in width throughout , dry , solid , unpolished or velvety , and a paler brown than the cap . The flesh is thin , brittle , staining pale vinaceous . The odor is not distinctive , and the taste mild or faintly acrid . The latex is copious , white on exposure , unchanging , slowly staining flesh and gills vinaceous . The spore print is yellowish . The edibility of the mushroom has not been officially documented . The species is one of several brown to nearly black milkcaps that are , according to David Arora , " notable for their beauty , and therefore likely to attract the attention of even the casual collector . "

The variety *Lactarius fallax* var. *concolor* is nearly identical to the main species in appearance and distribution , but has gill edges that are colored like the gill face .

= Microscopic characteristics =

The spores are spherical , and ornamented with warts and ridges that form a partial reticulum ( a net @-@ like pattern of lines ) with prominences up to 2 µm high . They are hyaline ( translucent ) , amyloid ( meaning they will absorb iodine when stained with Melzer 's reagent ) , and measure 7 @.@ 5 ? 10 @.@ 0 by 7 ? 9 @.@ 5 µm . The cap cuticle is a trichoderm . The basidia ( the spore @-@ bearing cells ) are 38 ? 56 by 10 ? 13 µm , club @-@ shaped , four @-@ spored , and hyaline when mounted in a dilute solution of potassium hydroxide ( KOH ) . There are abundant cheilocystidia ( cystidia found on the edge of gills ) , with contents ranging in color from dingy yellow to hyaline in KOH . They measure 32 ? 50 by 3 @-@ 6 µm , and may be shaped somewhat like a spindle ( tapered on each end ) or a cylinder , or they may be flexuous ( winding from side to side ) . The pleurocystidia ( cystidia found on the gill face ) are filamentous , 2 @.@ 5 ? 5 µm in diameter , and rare to scattered .

= = = Similar species = = =

*Lactarius lignyotellus* and *L. lignyotus* are similar to *L. fallax* , and they are all associated with *Picea* and *Abies* ; examination of microscopic features cannot be used to distinguish between them . *L. lignyotus* is restricted in distribution to eastern North America and Europe . *Lactarius pseudomucidus* is another milk cap with a dark brown cap , but it has a smooth ( not velvety ) and slimy cap and stem . Another brown @-@ capped eastern North American species is *L. gerardii* ; it has distantly spaced white gills that run down the stem . *L. fuliginellus* , which prefers to grow near hardwoods , has close gills .

= = Habitat and distribution = =

The fruit bodies of *L. fallax* grow scattered to grouped together on the ground , or on very rotten conifer logs in alpine areas under standing conifers . They are fairly common , and typically found between August and October . *L. fallax* is distributed in the western United States and Canada , with the northern range extending to Alaska ; the eastern range is bounded on the east by the Great Plains . Field observations suggest that the fungus can form ectomycorrhizal associations with *Tsuga heterophylla* . Hesler and Smith noted that the variety *concolor* was prevalent under species of Fir .