



Painted bolete (*Suillus lakei*) ©

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Douglas fir (*Pseudotsuga menziesii*), like all of the major forest trees of the world, is dependent on mycorrhizal fungi that inhabit its fine roots. Without these mycorrhizal fungi Douglas fir would become yellow and stunted through a lack of phosphorus and other nutrients supplied by the fungus. Some of the mycorrhizal fungi produce edible mushrooms and one of the choice ones on Douglas fir is the painted bolete (*Suillus lakei*). So close is the bond between the painted bolete and Douglas fir that the fungus will not grow on any other species of tree. If it is found under a different tree then invariably there will be a Douglas fir nearby.



Mature painted bolete caps are from 4 cm to more than 15 cm in diameter and the stalks are up to 10 cm high and 4 cm wide with a poorly developed ring close to the top. When mature the upper surface of the caps are covered in characteristic divided scales arranged in irregular radial rows.



The undersides of the caps are covered by yellow pores that often run a little way down the stalk. As the caps age the pores become a dirty yellow to ochre with light brown patches where damaged. When rubbed the insides of the caps turn a greenish blue. Other New Zealand species of *Suillus* do not do this. For example, young caps of the larch bolete (*Suillus grevillei*) turn light brown.



Roger Phillips says the caps are edible and good and David Arora states it is highly touted by some. However, the quality of painted bolete depends on where and when it is picked. It should be collected when the caps are mature and dry and not when very young and in wet weather when the caps are often gelatinous.

The painted bolete can be used in a variety of dishes where porcini might otherwise have been used such as soups, stews and casseroles. A snack treat can be made by first removing the pores from the fleshy cap and then fast frying slices in hot olive oil - a lingering aroma and a superb flavour. The painted bolete omelette described by Freyburger (http://fungi.0catch.com/Suillus_lak.htm#Recipes) is very good particularly if the caps are browned in the pan first.

More than 500 mycorrhizal fungi can be found on Douglas fir in its natural habitats but in planted Douglas fir forests in Patagonia (Argentina) only 15 species of mycorrhizal fungi can be found. A similar situation occurs in New Zealand which means there is less competition for the painted bolete in New Zealand's Douglas fir plantations. Where conditions suit the painted bolete fruiting body production can be very high particularly on poor, exposed, mineral soils. Production in the Douglas fir plantation shown in the photograph below was estimated to be not less than 100 kg per hectare which included the non-productive areas.



For technical advice on the painted bolete contact Dr Ian Hall, P.O. Box 268, Dunedin, New Zealand, telephone +64-3-454 3574, +64-27-226 1844, email truffle1@ihug.co.nz

For information on the availability of painted bolete mycorrhized trees contact Kevin Fearn, De Licio®, P.O. Box 384, Oamaru, New Zealand, telephone +64-3-431 3627, +64-27-450 4605, email kevin@oregonnurseries.co.nz