

How to Distinguish Seven Species in the *Boletus edulis* group

Make sure you are starting with fresh young or just mature mushrooms. If they are one of the *Boletus edulis* group species, they will have round, convex caps and centrally attached stems with no ring or partial veil. The pores will be white in young specimens and pale yellow in mature specimens. They should not be pinkish, bright yellow, orange, red, or other colors. In very young specimens, the white pores will be “stuffed” (not open). The stems will be solid and may be even, expanded downward, or bulbous. If the cap is cut in half, the flesh should be white and non-changing or only slowly changing very weakly bluish. The flesh and pore layer should be quite thick (>1 cm). The stem should not stain readily when handled. The stem may or may not have net-like reticulation. The smell should be mushroomy, non-distinct, or slightly lemony. If you nibble-test it, it should taste nutty, sweet, or non-distinctive, but certainly not bitter.

Examine the stem. If it has distinct, white reticulation on at least the upper third, chances are you have *Boletus edulis*, *B. chippewaensis*, *B. subcaerulescens*, or *B. variipes*.

If the reticulation at the top of the stem is white, but changes to brown or rusty brown part way down, and if the stem is white at the base, it is likely to be *B. subcaerulescens*, the “Somewhat-Bluing Bolete”. If so, scratching the pore surface will produce bluish-gray staining that turns brownish with time. *B. subcaerulescens* generally grows under pines or Norway spruce from spring through fall. Check the detailed description to make sure the rest of the characters match.

If the cap is grayish-tan, yellowish tan, or pale brown and the stem is grayish-brown with distinct prominent white reticulation, and if there is white mycelium covering the base of the stem, you probably have *B. variipes*. The species grows in mixed deciduous forests with oak and beech from July through September. Check the detailed description for other characteristics.

The other 2 possibilities, *B. edulis* and *B. chippewaensis*, can be more difficult to distinguish. Both occur in conifer forest during summer and fall. If the cap is pale lemon yellow with patches of brick red or rusty red, it is more likely to be *B. chippewaensis*. If the cap is more bun brown to orange-brown to cinnamon brown, it is more likely *B. edulis*. Although the difference between “cinnamon brown” and “rusty red” is quite subjective. Another reported distinction is that the pores of *B. chippewaensis* turn grayish-olive when bruised, while in *B. edulis* bruised pores are not supposed to change, but this is not strictly true – they can bruise a dull olive color. To be more certain, you can do a spore print. For *B. edulis* it will be olive-brown, for *B. chippewaensis* it will be yellowish brown.

If the stem is dingy white with brown reticulation, and assuming it does not taste bitter, then a reasonable conclusion would be that it is *Boletus atkinsonii*. If so, it will have a tan or yellowish-brown cap that’s slight roughened with tiny tufts of hyphae. In mature specimens, the surface of the cap is likely to be cracked. *Boletus atkinsonii* grows in mixed deciduous woods, usually with beech and oak, summer and fall.

If the cap and stem have lilac tints the likely candidate is *Boletus separans*, whose common name is the Lilac Bolete. If so, the stem will be equal or only slightly enlarged downward. The lilac, pinkish, or purplish tint will be in the mid-section of the stem and the rest of the stem will be white. If you look very closely, you may see very indistinct fine white reticulation. Check the detailed description to make certain that the additional characters match.

The last species in the group is *Boletus nobilis* named for its tall upright stature. Frequently, the stem length is 2 to 3 times the diameter of the cap. The stem is typically equal rather than enlarged downward and white to pale yellowish. It is not prominently reticulate. If cut in half, the cap flesh is white, but somewhat yellowish near the tubes. *Boletus nobilis* grows in mixed deciduous woods, usually with beech and oak, summer and fall.