## SPECIES: *Psilocybe cyanescens* Wakefield
## = *Geophila cyanescens* (Maire) Kuhn. & Romagn.
## = *Psilocybe mairei* Singer

**Figure 165** ***Psilocybe cyanescens*** **fruiting indoors in a tray of alder chips.**

**STRAINS:** St. Clair.
Many wild strains can be adapted to cultivation.

**COMMON NAMES:** Cyan; Grandote.

**GREEK AND LATIN ROOTS:** *Psilocybe* comes from the Greek "psilos" or bald head. The species name *cyanescens* is from "cyaneus" or blue for the color reaction of the flesh upon bruising.

**GENERAL DESCRIPTION:** Cap 20-50 mm. broad, convex to broadly convex to plane in age with an elevated and undulating margin which is, in turn, translucent-striate. The cap surface is smooth and viscid when moist from a separable gelatinous pellicle ("skin"). The color is caramel

brown, fading to yellow-brown to straw colored from the center. The gills are attached in an adnate to adnexed fashion, dull brown with whitish edges. The stem is 60-80 mm. long by 2-5 mm. thick, fibrous and enlarged towards the base. Its surface is smooth or powdered (pruinose). The stem color is whitish, silky and becomes blue where injured, with rhizomorphs protruding about the stem base. The partial veil is cortinate (cobweb-like), leaving little or no trace on the stem. Its spore print is dark purplish brown.

**NATURAL HABITAT:** Clustered in woody habitats; in soils high in the tissue of deciduous trees; or in tall rank grass. This species grows throughout the Pacific Northwest in areas well mulched by woody debris of deciduous and coniferous trees (typically not associated with bark). It has been reported from England and is thought to be broadly distributed throughout the European continent.

## GROWTH PARAMETERS

**Mycelial Types:** Rhizomorphic to closely linear; whitish in color.

**Spawn Medium:** Sawdust/bran or rye grain spawn.

**Fruiting Substrate:** A lignicolous species utilizing a number of wood types, most notably alder, maple and fir. It is able to grow on a wide variety of cellulosic wastes including newspaper and cardboard.

**Method of Preparation:** Branches and other small diameter wood are chipped into 1-3 inch pieces, preferably in the spring when the sap content is highest. This material is spawned with sawdust/bran (4:1) and made into prepared beds outdoors amongst ornamental shade plants (especially rhododendrons) or tall grass. Another method is to use sawdust/bran or rye grain spawn to inoculate soaked corrugated cardboard. When fully colonized, sheets of cardboard are laid at the bottom of trays which are then covered with a 2-4 inch layer of freshly cut alder chips. (Wood chips are far superior to sawdust as a fruiting substrate).

**Spawn Run:**

*Substrate Temperature:* 65-75°F.
*Duration:* 30-60 days.
*Relative Humidity:* 90+%
*$CO_2$:* 10,000 ppm or higher.
*Fresh Air Exchanges:* 0 per hour.

**Type of Casing:** None required.

**Primordia Formation**

*Relative Humidity:* 95%.
*Air Temperature:* 50-60°F.
*$CO_2$:* 5000 ppm or below.
*Fresh Air Exchanges:* 2 per hour.
*Light requirements:* Diffuse natural or grow-lights.

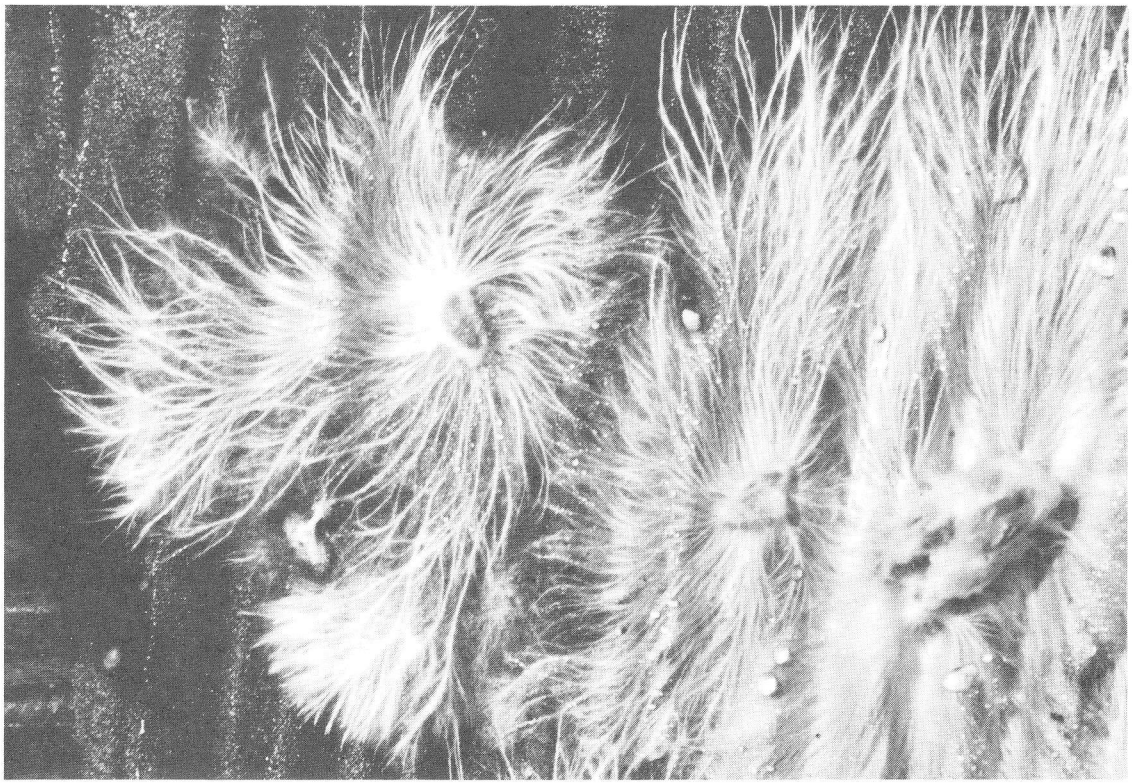

**Figure 166** ***Psilocybe cyanescens*** **mycelium growing on soaked corrugated cardboard inoculated with grain spawn.**

**Cropping:**

*Relative Humidity:* 85-92%.
*Air Temperature:* 50-60°F.
$CO_2$: 5000 ppm or below.
*Fresh Air Exchanges:* 2 per hour.
*Harvest Stage:* When the caps become nearly plane.
*Light:* Diffuse natural or grow-lights.

**Yield Potential:** In natural outdoor culture on alder chips, 1 lb. wet weight per square foot in one growing season is easily obtained.

**Moisture Content:** 90-92% water; 8% dry matter in fruitbodies.

**Comments:** *Psilocybe cyanescens* in a primary decomposer, readily digesting newly cut alder and other deciduous woods. Considered the grandote of the Pacific Northwest, this species is both

robust and potently psilocybian. Much sought after for its high psilocybin and psilocin content, it is a favored mushroom by those seeking entheogenic experiences.

*Psilocybe cyanescens'* adaptability to natural outdoor culture makes this species attractive to beginning and connoisseur cultivators alike. Virgin spawn can be collected from the wild and implanted in prepared beds (see Chapter VI) or spawn can be grown out on bran/sawdust or grain and inoculated directly onto unsterilized soaked corrugated cardboard. Grain spawn inoculated onto untreated wood chips is associated with a higher contamination rate than the same spawn implanted onto soaked cardboard, owing to the partial selectivity of the latter material.

Although fruitbodies can form on fresh sawdust, they do so reluctantly and belatedly. The fact that sawdust so readily loses its moisture may explain, in part, why *Psilocybe cyanescens* has difficulty fruiting on it.

*Psilocybe cyanescens* has a mycelium that is typically whitish and strandy (rhizomorphic). Tissue and spore cultures are easy to obtain. Outdoor colonies can be maintained for years with minimal effort and produce two to three flushes within a season.

*See Color Photos 17 & 18.*

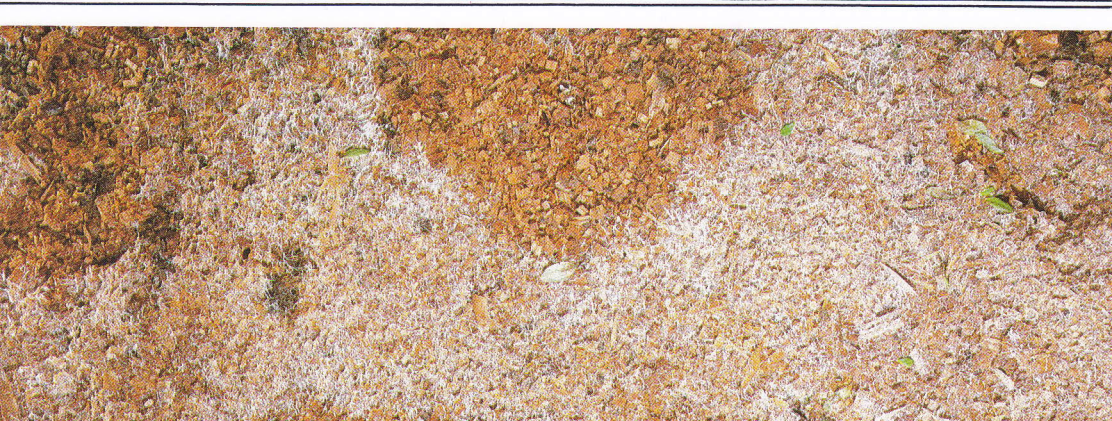

Plate 16. *Psilocybe cyanescens* mycelium running through moist alder sawdust

Plate 17 *Psilocybe cyanescens* fruiting on alder chips