It's Green-Gill Time Again

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WITH THE COMING of summer, mushrooms and "toadstools" will again appear in the lawns in Los Angeles and neighboring counties. "Toadstools," of course, is a name used by many to denote the poisonous varieties of mushrooms. Most of the handbooks on mushroom identification tend to stress spring and fall (with their accompanying rains) as the best collecting periods. The Los Angeles region is, however, rather different and many mushrooms appear during the warmer period of the year because of frequent cool nights, high humidity and abundant lawn fertilization and watering. Several other varieties appear in lawns and other places from about mid-November to April during the rainy season.

There are many varieties of mushrooms in the Southern California region, some of which are quite poisonous. The poisonous ones are infrequently observed unless one is specifically searching in various sections of the hills and mountains. Three varieties of mushrooms are quite abundant during the summer in Los Angeles and nearby counties: *Agaricus silvicola, Lepiota molybdites* and *Lepiota rachodes.* One of these, *L. molybdites,* is toxic. Adequate descriptive information may prevent gastrointestinal distress. These mushrooms are described below.

AGARICUS SILVICOLA, the Sylvan Agaric (Fig. 1), is the most prominent of lawn mushrooms in the Los Angeles area, but it may also be found in duff and decaying leaves beneath trees and shrubs. This species may appear in varying numbers throughout the year, but it is somewhat less prominent during the summer months.

In lawns: CAP 1½ to 4 inches broad, hemispherical at first, then becoming rather convex upon expansion; white,

Figure 1

dirty white, gray or buff in color, turning yellowish when rubbed, bruised or cut. The surface may be smooth, cracked or scaly. FLESH white, thick with a slightly acrid or phenolic taste. STEM 2 to 5 inches long, somewhat thick and occasionally bulbous on the basal portion buried in the grass, turning yellowish when bruised. RING usually prominent on the stem, often appearing two-layered and occasionally disappearing in age. GILLS occasionally whitish or pinkish white when very young, becoming pink, changing to brown and finally purple-brown (almost black) when fully mature; free from and not attached to the stem.

In moulding leaves and in denser shade: CAPS 2 to 5 inches broad, very white, surface smooth and quickly changing to yellow when bruised or rubbed. FLESH thick, white, changing to yellow when cut or broken; taste slightly acrid. STEM 3 to 6 inches tall, often wavy, white, smooth and frequently abruptly bulbous at the basal portion buried in the leaves; on being rubbed or bruised, changes to yellow. RING prominent, almost double or two layered, quite persistent. GILLS at first pink, changing to brown and finally purple-brown (almost black); free from and not attached to the stem.

This variety is closely related to the mushroom commonly sold at the vegetable market. The acrid taste that is present when the mushroom is raw disappears upon cooking. This mushroom is edible and quite good to eat.

LEPIOTA MOLYBDITES, the Green-Gill (Fig. 2), is abundant from about mid-June to mid-September during the warmest summer months. I have seen "Fairy Rings" of this mushroom nearly 35 feet in diameter in some lawns in the Los Angeles area. This variety is almost always found in lawns; rarely in deep shade or in decaying organic matter.

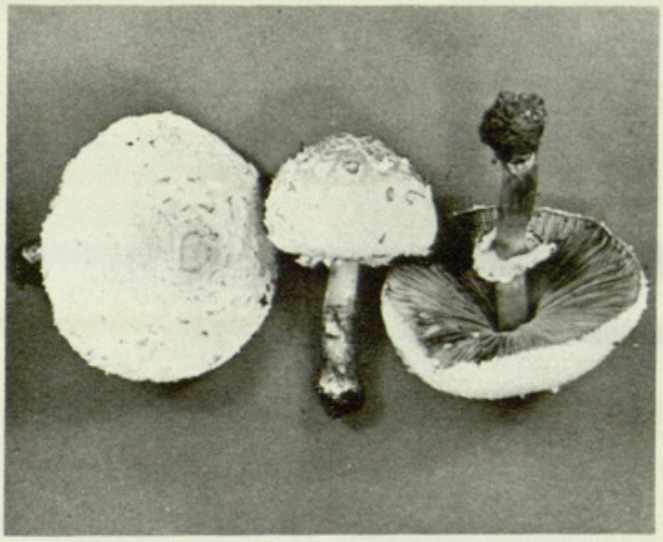

Figure 2

CAP 3 to 10 inches broad, at first hemispherical, becoming convex or flat, whitish with more or less concentric rings of irregular gray to brown patches or scales. FLESH thick, white; taste mild. STEM 4 to 8 inches tall, tapering more or less gradually from a bulbous base, whitish or pale brown changing to reddish when cut, smooth. RING prominent and becoming moveable as the mushroom matures, persistent. GILLS at first white, but changing to an iridescent green and finally to a dirty green at maturity; free from and not attached to the stem.

One variety, occasionally found in certain areas in western Los Angeles, possesses gills which are green before the cap is fully expanded. The Sylvan Agaric and the Green-Gill may sometimes be found growing together in the lawns.

Young specimens of the Green-Gill are pleasant and mild to the taste, but produce a very severe gastric upset that includes vomiting, diarrhea, cramps and other unpleasant symptoms. As little as one tablespoon of the raw mushroom will bring about symptoms in 4 to 6 hours after ingestion. Cooking does not destroy the toxic principle and intake of alcoholic beverages while eating this species will increase the severity of the reaction. Peculiar reactions have also been reported by individuals who have

used alcohol while eating mushrooms of the Inky Cap variety.

Should illness occur from partaking of this toxic mushroom, a physician should be called. The Poison Information Center at the Children's Hospital should also be notified for they can provide information regarding the proper treatment for such poisonings. Symptoms may last for as long as 18 hours; longer if a physician's aid is not available. I have never heard of any deaths caused by this variety despite the violence of the upset. In fact, I have heard reports of two individuals who claim that they eat the Green-Gill regularly with relative impunity. However, I have been made ill by this mushroom and have no desire to try it again.

LEPIOTA RACHODES, the Summer Parasol (Fig. 3), is usually found in

Figure 3

piles of decaying leaves in well shaded areas or in duff beneath various types of trees. This variety has not been found growing in open areas in lawns and appears to be restricted to the cooler shaded locations.

CAP 1½ to 6 inches broad, hemispherical at first, but becoming convex or nearly flat at maturity, occasionally with a hump in the center; more or less dirty white with gray to brown irregular scales or patches in concentric rings from the center outward. FLESH thick, white, becoming brownish or reddish when bruised or cut; taste mild. STEM 3 to 8 inches tall, white to brownish, often enlarged or bulbous at the base, tapering upward to the gills. RING prominent, moveable upon aging, persistent. GILLS white, becoming somewhat grayish in age; free from and not attached to the stem.

This mushroom is edible and quite good, especially when young, but it is somewhat bitter when old. Caution should be exercised to prevent confusion of this species with young specimens of the Green-Gill because their appearance is very similar. An error in identification would be uncomfortable and perhaps costly.

Mushroom hunting can be very pleasant and such pleasantness can be increased enormously if the mushrooms collected are good edible ones. A reasonable amount of caution during identification and prior to eating may prevent much unexpected discomfort.

Since 1962 when he took his doctorate in mycology at UCLA, Dr. G. F. Orr has served as Botanist-Mycologist Consultant for the Children's Hospital in Los Angeles and Supervisory Mycologist at the National Communicable Disease Center in Kansas City. He is currently Research Microbiologist at the Desert Test Center in Dugway, Utah. Dr. Orr has published numerous technical papers on fungal taxonomy, physiology, distribution and isolation.

Photos by Dr. F. E. Swatek and Miss Harriet E. Baker.