EC 1496
Reprinted October 1998
$1.00

SPECIAL • FOREST • PRODUCTS

Harvesting and Marketing
Edible Wild Mushrooms

G. Filip

When conditions are right, Oregon and Washington forests are carpeted with tiny treasures: edible wild mushrooms. Whether you're a woodland owner, weekend hobbyist, or fungus aficionado, harvesting and selling wild mushrooms can be a source of fun and additional income.

This publication provides an introduction to the biology, habitat, and uses of mushrooms, along with tips on collecting, storing, and selling. For more information, please refer to the list of publications on page 4.

Biology

Mushrooms are the reproductive portion of microscopic strands of fungi that live in soil or wood.

To reproduce, mushrooms release spores carried by wind or animals to new locations. On a suitable surface, these spores germinate into fungal strands and eventually form new mushrooms.

Some mushrooms, such as morels and shaggy parasols, are *saprophytes*. Saprophytes live off dead plant material. Other mushrooms, such as cauliflower mushrooms and coral tooth mushrooms also can live on dead plant material, but sometimes are *parasites* and can cause decay in living trees. Most other commercially important mushrooms are *mycorrhizal* fungi, which infect living tree roots yet are beneficial to them.

Habitat

Edible mushrooms grow in conifer and/or hardwood forests of the Pacific Northwest, primarily appearing above ground during fall or spring when the weather is warm and wet. Because mycorrhizal mushrooms rely on living trees, they most often are found under total or partial forest canopies.

morels

OREGON STATE UNIVERSITY EXTENSION SERVICE

Greg Filip, Extension forest protection specialist, Oregon State University.

Usage

Native Americans and immigrants from Europe and Asia used mushrooms for food, medicine, and dyes.

Interest in mushrooms exploded in the 1960s and '70s as natural foods and hallucinogens increased in popularity. In the early 1970s, commercial mushroom harvesting increased, although markets were restricted mostly to produce retailers and restaurants. Once foreign markets were developed, the wild mushroom business "mushroomed" throughout the Pacific Northwest.

Western medical science is just beginning to experiment with mushrooms as medicine. For example, some mushroom species contain powerful immune system stimulants. Additional medicinal properties likely will be uncovered in the future.

Mushrooms also have been used to make colorful dyes. Fresh or dried mushrooms simmered in water make a variety of colors useful for dying fibers.

Harvesting and marketing

In the past 5 years, commercial mushroom harvesting in the Pacific Northwest has increased, especially of matsutakes, king boletes, morels, and golden chanterelles. Harvesters can earn hundreds of dollars per day when the picking is good.

Commercial or personal harvesting permits sometimes are required to pick mushrooms on public land. On federal lands, for example, personal use permits are free, but there is a fee for commercial harvesting permits.

Pickers typically sell mushrooms at the roadside or at buying stations. Buyers resell the mushrooms to dealers for processing and eventual resale to outlets such as restaurants. Oregon currently has no laws on buying mushrooms on private or state lands where permitted.

Washington, however, requires annual licensing of all mushroom buyers and dealers. Restaurant owners who buy mushrooms from buyers are considered "dealers" and need a dealer's license. Restaurant owners who buy directly from pickers are considered "buyers" and qualify for a lower-cost buyer's license.

Frequently asked questions about harvesting

- *Does heavy or extensive picking reduce future mushroom yields?*
  No scientific data support the theory that heavy or extensive picking reduces future yields.
- *Does logging affect mushroom yields?*
  Because mycorrhizal mushrooms depend on trees to live, they are adversely affected by clearcutting. Other mushrooms, such as morels, actually require disturbances such as logging and even fire to stimulate fruiting.
- *Will there be conflicts with other pickers?*
  Some pickers return to the same area each year and regard it as their territory. Be careful and courteous when picking in new areas to avoid conflicts with other pickers.

Tips for collecting and storing

- Collect mushrooms in paper bags, baskets, or buckets with side holes to increase aeration and prevent molding. Don't use plastic bags; plastic increases humidity and causes mushroom deterioration and molding.
- Discard very young or old mushrooms, which are difficult to identify accurately. Older mushrooms also can be tough or filled with insect larvae.
- Wash mushrooms in cool water after picking. If desired, remove the stalks.
- Keep mushrooms cool. If you want to store them, let them air dry or place them in an electric food dryer. You also can pickle mushrooms for long-term storage.

Be careful!

It's vitally important to identify mushrooms before eating them. Some mushroom species, such as the *Amanita*, contain toxic substances and can be fatal when ingested. Other mushroom species are toxic when raw but nontoxic when cooked, or cause illness if consumed with alcohol. Some species such as *Psilocybe* are hallucinogenic.

If in doubt, don't pick at all. At a minimum, consult an expert or a well-respected and illustrated mushroom identification guide.

Commercial mushroom species			
Name	**Harvest season**	**Associated tree species**	**Poisonous look-alikes**
King bolete or cep *Boletus edulis*	Fall to spring (low elevation) Late spring to summer (high elevation)	Conifers	Other *Boletus* species
Golden chanterelle *Cantharellus cibarius*	Late summer to fall	Conifers Hardwoods	Scaly chanterelle False chanterelle *Clitocybe* species
White chanterelle *Cantharellus subalbidus*	Late summer to fall	Conifers	False chanterelle *Clitocybe* species
Horn of plenty *Craterellus cornucopioides*	Fall (north) Winter/spring (south)	Conifers Hardwoods Mixed forests	None
Coral tooth mushroom *Hericium abietis*	Summer and fall	True firs	None
Spreading-hedgehog mushroom *Hydnum repandum*	Fall (north) Late spring (south)	Conifers Hardwoods Mixed forests	None
Shaggy parasol *Lepiota rhacodes*	Fall to early winter	Under trees, in meadows and lawns	Other *Lepiota* species
Edible morel *Morchella esculenta*	Spring	Conifers	False morels Elfin saddles
Black picoa *Picoa cathusiana*	Winter	Douglas-fir	None
Cauliflower mushroom *Sparassis crispa*	Fall	Conifers	None
Matsutake or pine mushroom *Tricholoma magnivelare*	Fall	Conifers, especially lodgepole pine	None
Oregon white truffle *Tuber gibbosum*	Late fall to early spring	Douglas-fir	None

For more information

Pacific Northwest Extension publications

Drying Fruits and Vegetables, PNW 397, by Marilyn Swanson (University of Idaho, Moscow, 1995) $1.00

Pickling Vegetables, PNW 355, by Carolyn Raab (Oregon State University, Corvallis, reprinted 1994) 50¢

To order copies of the above publications, send the publication's complete title and series number, along with a check or money order for the amount listed, to the address in the box on this page.

We offer discounts on orders of 100 or more copies of a single title. Please call 541-737-2513 for price quotes.

Other publications

Aurora, D. *Mushrooms Demystified* (Ten Speed Press, Berkeley, CA, 1986). This is a good reference for identifying mushrooms.

Molina, R., T. O'Dell, D. Luoma, M. Amaranthus, M. Castellano, and K. Russell. *Biology, Ecology, and Social Aspects of Wild Edible Mushrooms in the Forests of the Pacific Northwest: A Preface to Managing Commercial Harvest* (USDA Forest Service General Technical Report, PNW-GTR-309, Portland, OR, 1993).

Parks, C.G., and C.L. Schmitt. *Wild Edible Mushrooms in the Blue Mountains: Resource and Issues* (USDA Forest Service General Technical Report, PNW-GTR-393, Portland, OR, 1997).

Pilz, D., and R. Molina, eds. *Managing Forest Ecosystems to Conserve Fungus Diversity and Sustain Wild Mushroom Harvests* (USDA Forest Service General Technical Report, PNW-GTR-371, Portland, OR, 1994).

Smith, A.H. *A Field Guide to Western Mushrooms* (The University of Michigan Press, Ann Arbor, MI, 1975).

Additional *Special Forest Products* publications from the OSU Extension Service

Harvesting and Marketing Edible Wild Plants, EC 1494, by Steve Clements (Oregon State University, Corvallis, 1998). $1.00

Harvesting and Marketing Medicinal Wild Plants, EC 1495, by Steve Clements (Oregon State University, Corvallis, 1998). $1.00

Harvesting and Marketing Noble Fir Boughs from Christmas Tree Plantations, EC 1500, by Chal Landgren and James Freed (Oregon State University, Corvallis, 1998). $1.00

Harvesting and Marketing Scotch Broom (Cytisus scoparius), EC 1467, by James Freed (Oregon State University, Corvallis, 1998). $1.00

To order copies of OSU Extension publications, send the title, series number, and amount listed to:

Publication Orders
Extension & Station Communications
Oregon State University
422 Kerr Administration
Corvallis, OR 97331-2119
Fax: 541-737-0817

We offer discounts on orders of 100 or more copies of a single title. Please call 541-737-2513 for price quotes.

You can access our Publications and Videos catalog and many of our publications on the World Wide Web at **eesc.orst.edu**

This publication was produced and distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. Extension work is a cooperative program of Oregon State University, the U.S. Department of Agriculture, and Oregon counties. Oregon State University Extension Service offers educational programs, activities, and materials—*without regard to race, color, religion, sex, sexual orientation, national origin, age, marital status, disability, and disabled veteran or Vietnam-era veteran status*—as required by Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and Section 504 of the Rehabilitation Act of 1973. Oregon State University Extension Service is an Equal Opportunity Employer.

Published March 1998. Reprinted October 1998.