



Spore-Addict Times

The Newsletter of the Pikes Peak Mycological Society

July 1991

Fairies, rain, mushrooms

by Lee Barzee

Come away, O human child!
To the waters and the wild
With a faery, hand in hand,
For the world's more full of weeping
than you can understand.

W.B. Yeats

Irish poet William Butler Yeats, interested in his country's folklore, described the "fairy ring" of Ken Pals' recent program slide:

"Faeries dancing under the moon
A Druid land, a Druid tune."

The Druids (priests of the Celtic religion) belonged to a cult whose celebration included the ritual Dance of the Faery Ring at sacred sites such as Stonehenge [1]. Whether the inspiration for the original faeries was Celtic or pre-Celtic, don't you agree that fairies, great masters of magic and charm, still delight the modern imagination?

The fairies left evidence of their dances this year in Colorado to indicate the perfect time for morels. The Fairy-slipper Orchid, *Calypso bulbosa*, was found along with morels this spectacular 1991 season! David Arora says, "In Oregon, black morels (*Morchella elata* group) are often found with *Calypso* orchids" [2]. See Walter Johnson's photograph for proof. For sure, fairies can be generous and even helpful!

Have you ever peered into fairy goblets? Do you suppose that after all

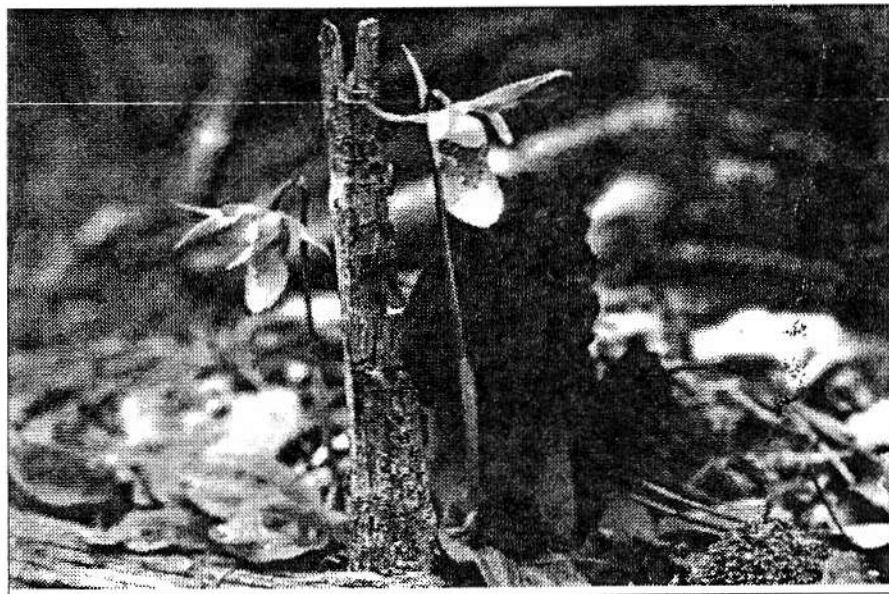
that dancing the fairies needed an egg in their beer? Esther Price found the fairy goblets pictured on the next page growing on lodgepole pine cones this month. They are also called *Crucibulum laeve* (in old literature, *C. vulgare*, which means "common" in Latin), of the family Nidulariaceae. The order Nidulariales, or bird's nest fungi, are gasteromycetes, those basidios that release their spores from a closed fruiting body, rather than forcibly discharging them in the open air as most members of the class do.

These little treasures are usually found in early autumn in moist, often shaded locations on vegetable and lignin-rich debris (stems, twigs, old nut shells, old matting, manure, soil)

according to Smith [3]. However, the fruit bodies are tough and can be found in semiarid Colorado almost any season, still looking quite fresh, the spores still snugly enclosed in the tiny "eggs."

Bird's nest fungi have been familiar to botanists since 1601 according to Tulasne who did a classic study of them in 1844. They were first classified as seed plants simply because of the little seed-like bodies contained in the cup-shaped structures. With the passing of another hundred years, the "seeds" were known to contain spores like those of other fungi, such as puffballs. Yet, there were mysteries to be solved. How did the spores escape and disperse for reproduction?

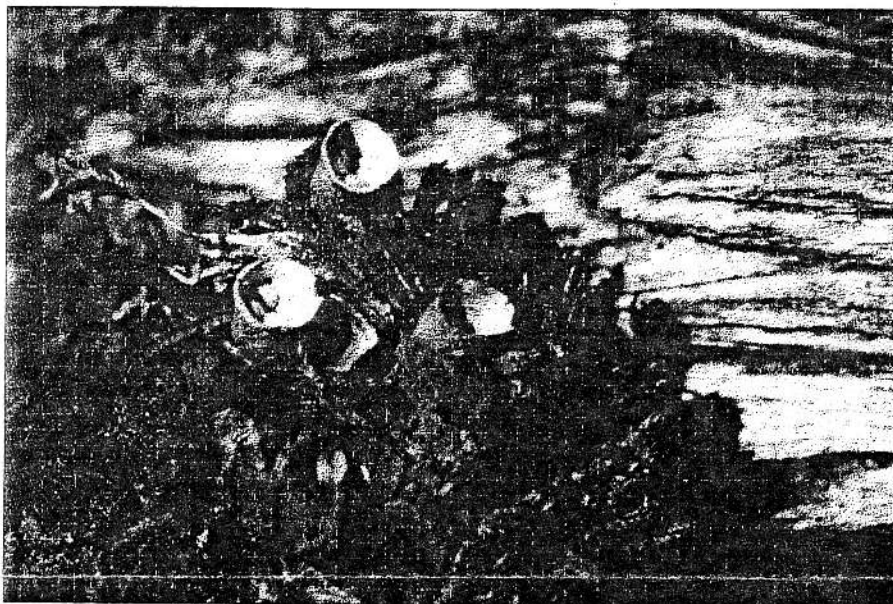
Botanist Harold J. Brodie has spent a distinguished professional lifetime solving these and other myster-



Fairy-slipper orchids and morels growing side-by-side. Proof of the helpful generosity of fairies. (Photo by Walter Johnson.)

ies. Professor Emeritus of Botany at the University of Alberta, Dr. Brodie, now 84 years old, lives in Victoria B.C. His book, *The Bird's Nest Fungi*, published by University of Toronto Press tells all.

A good picture of fresh fairy cups, *C. laeve*, is found in the *Audubon Society Field Guide to North American Mushrooms* [5], plate #633.



Fairy goblets, *Crucibulum laeve*, growing on a lodgepole pine cone. (Photo by Lee Barzee.)

Look it up. The early epiphragm, or lid, is shown before it detaches to expose the peridioles (eggs).

Perhaps you knew that the spore dispersal mechanism involves raindrops falling at just the right angle. But the *Crucibulum* genus also has a funicular cord, like an umbilical attachment to each peridiole. It must require a smart-bomb raindrop direct hit to dislodge it from its cup.

With a razor blade I cut one little goblet with eggs off the cone and soaked it in water awhile to soften it. Then I cut the 5mm goblet lengthwise for a look under magnification. The cord was scrunched up into the center part of the cup. I tried to remove the tiny lens-like peridiole; it was not easy. Still wet, it did finally pull away from the cup and reveal the marvelous, minute, clear-gelatinous, elastic cable of the funicular cord, still

attached to the egg. As fine as it was, the cord did not break, in spite of my tugging to remove it from the peridiole. It simply stuck to my forceps and remained attached to the little disc. Eventually, I cut the egg and separately mounted the spores from within it onto a slide for a microscopic check. They proved to be the thick-walled, elliptical spores of the species

size, textbook perfect.

Bombed out of the goblet-nest by a raindrop, the peridiole-egg flies out a distance of several feet. Its funicular cord hits some debris object and sticks instantly like glue. The little egg is jerked back by the limit of the cord like an original bungee jump, even if travelling in an upward direction. It may swing or settle into the new substrate, presumably spilling spores, (or waiting for the fairies to spread them during the next rain dance) to begin a new life cycle. Enchanting!

Dr. Brodie may not have given credit to fairies, but he did give credit in his book to others for their involvement with bird's nest fungi. For example, he mentioned a cartoonist and included a picture of smiling-faced Jamaican boys (his assistants), the joyful spirit of fairies in the flesh.

I suggest that Dr. Brodie himself was charmed by the fairies. He showed me that even a slight shift in viewpoint enhances the pleasure which anyone can derive from fungi.

REFERENCES

1. *The Impossible People*, Georghess McHargue, 1972, Holt, Rinehart, and Winston, N.Y.
2. *Mushrooms Demystified*, David Arora, 1986, Ten Speed Press, CA.
3. *How to Know the Non-gilled Mushrooms*, Alexander H. Smith, Helen V. Smith, and Nancy Weber, Wm. C. Brown Co.
4. *The Bird's Nest Fungi*, Harold J. Brodie, 1975, University of Toronto Press.
5. *The Audubon Society Field Guide to North American Mushrooms*, Gary H. Lincoff, 1981, Alfred A. Knopf, Inc., N.Y.

Spore-Addict Times

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Spore-Addict Times is published monthly from April through October by the Pikes Peak Mycological Society. Submissions of articles, book reviews, letters, artwork, recipes, and ideas are encouraged.

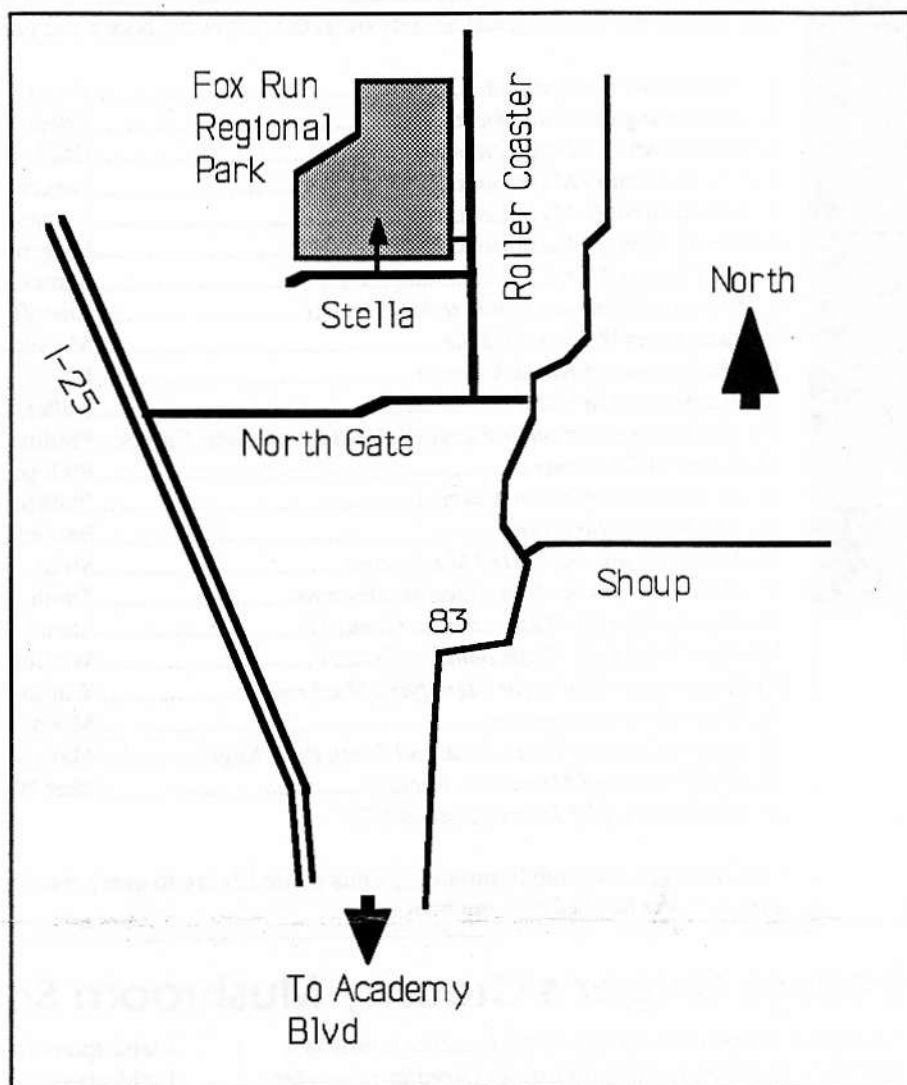
The Pikes Peak Mycological Society is a non-profit organization dedicated to advancing interest in, and understanding of, the field of mycology. Membership is open to all persons interested in mycology. A gastronomic passion for wild fungi is not required. Annual dues are \$10 for individual and family memberships.

President.....Mary Will
(719) 599-0118
Vice President.....Mike Chladek
.....(719) 597-6723
Secretary.....Annette Campbell
(719) 593-9912
Treasurer.....Liz Ras
(719) 473-1248
Foray Coordinator..Lori Ligon
(719) 635-2213
Newsletter Editor...David Watson
(719) 593-9912

The picnic

The plan for the second annual Fox Run Park Picnic is nearly complete, thanks to George Singer and Don Berrigan. The menu this year includes steak for the adults and hot dogs or hamburgers for the kids. Cost for non-members is \$5 for adults and \$1.50 for children; members eat for free. The deadline for signing up is the meeting on 22 July. Participants should bring a covered dish to share and their own drinks (glass bottles and alcohol are not allowed).

The map below shows the location of the park. Once inside the park, bear left where the road forks. The picnic is at pavilion number 2 near the lake.



During his wild edible plant presentation at last month's meeting, Reynolds Bane was visibly salivating as he described this recipe. This is one of the many interesting recipes in *Common Edible and Medicinal Plants of Colorado*, by Kathryn G. March and Andrew L. March (Meridian Hill Publications, 1979).

to make 4 cups

Watercress Soup

- 2 tablespoons butter
- 1 small onion, chopped
- 3 scallions, including some green, chopped
- 2 small-medium potatoes, peeled and cut into 1" cubes
- 1/4 teaspoon salt
- freshly ground black pepper to taste
- 2 cups chicken or vegetable stock
- 1 cup watercress, washed and chopped (about 1 1/2 ounces)
- 1 cup milk

In a 2-3 quart saucepan, over moderate heat, melt the butter. When the foam subsides, sauté the onion and scallion until they are wilted but not browned. Stir in the potatoes, salt and pepper and add the stock. Bring to a boil, cover and simmer for 20 minutes or until the potatoes are tender. Add the watercress, simmer another 15 minutes.

The Pikes Peak Mycological Society owns the following books and periodicals.

1. *Mushrooms Demystified*.....Arora, David
2. *Celebrating the Wild Mushroom*.....Friedman, Sara Ann
3. *The Mushroom Trail Guide*.....Glick, Phyllis
4. *How to Identify Mushrooms to Genus I*.....Largent, David
5. *How to Identify Mushrooms to Genus II*.....Largent, D./ Thiers, H.
6. *How to Identify Mushrooms to Genus III*.....Largent, D./ Johnson, D.
7. *The Curious Morel*.....Lanick, Larry
8. *Simon and Shusters Guide to Mushrooms*.....Lincoff, Gary
9. *Mushrooms Wild and Edible*.....Marteka, Vincent
10. *Mushrooms of North America*.....Miller, Orson
11. *Mushrooms in Color*.....Miller, Orson and Hope
12. *Mushrooms and other Fungi of Great Britain and Europe*.. Phillips, Roger
13. *Edible Wild Plants*.....Phillips, Roger
14. *Mushrooms of North America*.....Phillips, Roger
15. *The Morel Mushroom*.....Ratzloff, John
16. *How to Know the Gilled Mushrooms*.....Smith, Smith, and Weber
17. *How to Know the Non-gilled Mushrooms*.....Smith, Smith, and Weber
18. *How to Identify Mushrooms to Genus IV*.....Stuntz, Daniel
19. *How to Identify Mushrooms to Genus V*.....Watling, Roy
20. *A Literature Guide for Identifying Mushrooms*..... Watling, Ann and Roy
21. *Wild About Mushrooms*.....Mycol. Soc. of San Francisco
22. *Hikers Guide to Pikes Peak and South Park Region*..... Malocsay, Zoltan
23. *Old Fashioned Mushroom Recipes*..... Bear Wallow Books
24. *Mushroom, The Journal, Issues 1-23*

Pat Gustafsen, the club librarian, lugs this entire library to every meeting. She would love to loan some of these to you so she has fewer to lug home.

George Singer's Creamy Mushroom Soup

The original recipe calls for use of the meadow mushroom (*Agaricus campestris*), white matsutake (*Armillaria ponderosa*), king bolete (*Boletus edulis*), and shaggy mane (*Coprinus comatus*). George substituted shiitake (*Lentinus edodes*) for the matsutake and oyster mushrooms (*Pleurotus* sp.) for meadow mushrooms.

Preparation time: 25 minutes. Cooking time: 15 minutes.
Makes four servings.

- 1 lb small whole mushrooms or large mushrooms cut into small pieces. If using dried mushrooms, rehydrate them and save the excess water for use in the broth.
- 4 strips bacon
- 6 tablespoons butter or margarine or 3 tablespoons plus bacon drippings
- 1 medium yellow onion, finely chopped
- 2 tablespoons all-purpose flour
- 1 teaspoon salt
- 1/4 teaspoon dried thyme leaves
- 2 teaspoons catsup
- 3 cups chicken or beef broth
- 1 cup half-and-half
- 1 egg

- 1 tablespoon fresh lemon juice
- 1 tablespoon dry sherry
- 1 tablespoon soy sauce
- 1 clove garlic, minced
- 2 green onions, chopped
- cayenne pepper
- fresh chives and parsley to taste

Fry bacon until crisp; crumble into fine pieces. Sauté mushrooms in butter in saucepan until lightly brown. Remove and reserve about 1/3 of the mushrooms. To the remaining mushrooms, add onion, garlic, and green onion. Cook until limp and golden brown. Mix in flour; cook until bubbly. Add salt, thyme, and catsup. remove from heat. Gradually mix in broth and cook, stirring, until soup boils gently. Reduce heat and simmer 15 minutes, covered. In blender, whirl soup until smooth, then return to saucepan. Stir in half-and-half. Heat until soup steams. Beat egg with lemon juice and small dash of cayenne pepper. To the egg mixture, add a small amount of hot soup, then pour egg mixture into remaining soup. Add reserved mushrooms, bacon, fresh chives, and parsley. Mix in sherry and cook while stirring until very hot. Do not boil. Season to taste with salt and white pepper.

Forays

by Lori Ligon

Several people have been lost (or rather they just didn't know where they were) on forays to Rampart Range. According to Zoltan Malocsay in *Trails Guide to Pikes Peak Country*, Rampart has very unusual geology and requires extra caution while hiking in the area. Most roads are on ridges where water drains down some very woody gulches. Consequently, water flow direction is not helpful. The back-country roads become increasingly narrow toward the uncivilized end, growing wider and nicer toward civilization. Personally I feel that knowing this isn't much help when you're lost! However, he also says "Remember you will be found, either alive or dead, so concentrate on staying alive no matter how long you have to stay lost."

PPMS has purchased two horns that produce a sonic blast which we will use to guide people back to their cars. Also Jay Kilgore will give a presentation on the use of a compass at the next meeting, 22 July. Then those interested can participate in a practical experience in orienteering while on the foray 3 August at Fox Run Regional Park, before the picnic.

Please bring a compass to the meeting and the picnic. Maps will be provided.

The foray with the Denver club that took place at Indian Creek on 22 June was most productive in that 25 persons attended, 11 from Denver and 14 from Colorado Springs. It was great to meet new people and see old friends. Dennis Craig led the foray and provided topographical maps of the area. However, that location was rather dry and only produced a few *Coprinus comatus* and a lone *Amanita pantherina*. So off we went to Rampart Range where morels were still to be found. The memorable spring season for those honeycombed caps seems to have finally ended.

Meeting News

July. The July meeting will be on Monday, 22 July, in the usual place at the usual time (the Junior League office at 2914 Beacon Street, just south of Fillmore, at 7:00 p.m.).

Society member Jay Kilgore will present a program on foray essentials: use of map and compass, what to do if you get lost, and what to take with you. If you have a compass, Jay asks that you take it to the meeting.

To whet our appetites for upcoming forays, Jay will also raffle three packages of *Lactarius deliciosus* that he sautéed in butter and garlic and froze last season.

Last Month. Last month's meeting was a busy one. Reynolds Bane made an enthusiastic and inspiring presentation on wild edible plants. The Society's charter members were granted free lifetime memberships. George and Frieda Davis are organizing an overnight trip to La Veta Pass for 10 and 11 August.

From the mail bag...

June 23, 1991

Pikes Peak Mycological Society
Spore-Addict Times

Dear Editor,

First, let me compliment you on a beautiful newsletter. I saw the May issue of Spore-Addict Times for the first time when Larry Renshaw sent over a packet of various newsletters from across the country for me to read. You really do set high standards for newsletters and I was so proud of our sister Mycological Society.

The reason I am writing is to thank the members of the Pikes Peak Mycological Society who attended the Morel Hunt June 22nd for their warm and generous hospitality to us from the Colorado Mycological Society of Denver. This was my first joint foray with your club and my family and I had a simply wonderful day.

Dennis Craig was a well organized and thoughtful foray leader who made us all feel welcome and well cared-for. If the Colorado Springs members who attended this foray are an example of your generous and charming southern club, you must have a great time on all of your forays. Thank you all for a truly unforgettable day hunting and finding morels.

Sincerely,

Dottie McClure
Editor, Spores Afield
Colorado Mycological Society

Stems and pieces



Lee made a boo-boo. Lee Barzee has discovered an error in her June article on desert shaggy mane, *Podaxis pistillaris*. According to David Arora in *Mushrooms Demystified* (Ten Speed Press, 1986), *P. pistillaris* is not the only North American species of *Podaxis* as Lee asserted. There are also *P. argentinus*, *P. microsporus*, and *P. longii*. Arora says, "All of these occur in the Southwest, but are not nearly as common as *P. pistillaris*."

Beware the bracken. During last month's presentation on wild edible plants, some members discussed eating fiddleheads, the young curled leaves of ferns. This is a potentially harmful practice. Peter Root writes in the March/April 1991 *Aquilegia* (the

newsletter of the Colorado Native Plant Society), that the fiddleheads of bracken (*Pteridium aquilinum*), the most conspicuous fern in Colorado, contain carcinogens. If you wish to avoid all possible carcinogens, he advises against eating bracken. He suggests as an alternative the ostrich fern (*Matteuccia struthiopteris*), which is available canned or frozen in grocery stores.

Telluride reminder. The eleventh annual Telluride Mushroom Conference is fast approaching. It will be held 22-25 August in Telluride. For more information, contact Fungophile at (303) 296-9359.

Rain Report

Actual total rainfall for June was 3.07 inches, 52% more than the normal of 2.02 inches. But from 1 to 15 July, Colorado Springs received only 0.76 inch of rain, off 36% from the normal for those two weeks of 1.18 inch. Last month's vague prediction of reduced rainfall proved true.

The National Weather Service thirty-day outlook for Colorado Springs predicts normal temperatures and normal rainfall through 15 August. Normal rainfall for the period is 3.02 inches, and normal high temperatures are in the mid-eighties.

The Old Farmer's Almanac (Yankee Publishing Inc., 1990) predicts average to below-average rainfall for both July and August in the mountains and plains. It also predicts, in agonizing detail, a pattern of alternating rain and sun for this period.

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Pikes Peak Mycological Society
P.O. Box 1961
Colorado Springs, CO 80901

Lee Barzee

38 Friendship Lane
Colorado Springs, CO 80904

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