Harvesting Wild Indiana Mushrooms

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Spring Time

- Late March to May
Morels are a valuable commodity

- Often sell for $40 or $50 per pound. Sometimes more.
- Thus, there has always been people looking to harvest and sell wild mushrooms.

- There are many more wild mushrooms other than morels.

Mushrooms of Indiana

- Indiana probably has 3000 – 4000 species of mushrooms

- Very few are deadly poisonous.
How Many Are Poisonous?

• Very Few Deadly

How many field guides are there for Indiana?

None

For the Midwest?
How many mycologists are in Indiana?

Why can identification be difficult?

- There are over 100 all white mushrooms in Indiana.
Why are mushrooms difficult to study?

- Most of the organism is underground or in wood
- Fungi are microscopic organisms
- Most species have a very short lifespan for the fruitbody
- Significant morphological variation within the same species
- Few common names
- Large land areas unexplored
- Large number of species
- We don’t know what species we have – No Mycoflora

My current interests

- Knowing all of the macrofungi (mushrooms) that exist in Indiana.
- Finding the answer by engaging citizen scientists.
- Producing technological solutions that lower barriers to entry and increase efficiency.
The Essential Guide to Cultivating Mushrooms

Wild mushrooms can be harvested year-round.

- But what are the rules and food safety implications?

- Current code leaves ambiguity – for potential buyers, sellers, and regulators.
312 IAC 8-2-10 Preservation of habitat and natural and cultural resources

Authority: IC 14-10-2-4; IC 14-11-2-1
Affected: IC 14 Sec. 10.
Except as authorized by a license, a person must not do any of the following within a DNR property:
1. Molest an animal den or bird nest.
2. Collect any wild animal, except as authorized by section 3 or 4 of this rule.
3. Damage or collect a plant or pick flowers. **Exempted from this subdivision** are the following:
   - (A) Berries.
   - (B) Fruits.
   - (C) Nuts.
   - (D) Fallen cones.
   - (E) Mushrooms.
   - (F) Leaves.
   - (G) Greens.
4. Pick berries, fruits, nuts, fallen cones, mushrooms, leaves, or greens on a nature preserve, or another property administered by the division of nature preserves, unless the property is located at any of the following.....

Indiana’s Definition of Mushroom

- **312 IAC 8-1.5-15 "Mushroom" defined**
- Authority: IC 14-10-2-4; IC 14-11-2-1
- Affected: IC 14
- Sec. 15. "Mushroom" means edible fungi.
410 IAC 7-24-164 Wild mushrooms

Authority: IC 16-42-5-5
Affected: IC 16-42-5
Sec. 164.
(a) Except as specified in subsection (b), mushroom species picked in the wild shall be obtained from sources where each mushroom is individually inspected and found to be safe by a mushroom identification expert.
(b) This section does not apply to the following:
   (1) Cultivated wild mushroom species that are grown, harvested, and processed in an operation that is regulated by the food regulatory agency that has jurisdiction over the operation.
   (2) Wild mushroom species if they are in packaged form and are the product of a food processing plant that is regulated by the food regulatory agency that has jurisdiction over the plant.

Origins of the Indiana rules

• Conference for Food Protection (1980’s)
  • Required mushrooms be individually inspected by a “mushroom identification expert,” but did not define what that means
  • Also did not give guidance on how to become one

• Guidance document updated 5/5/14
Mushroom Certification Program

- Iowa, Missouri, Michigan, Wisconsin, and others
- Indiana – Saturday, April 6, 2019 – West Lafayette, IN
- Register at hoosiermushrooms.org

Goals of the course

- Personal level – to allow people across the state to become skilled at identifying common edible mushrooms.

- Greater goal – to help a safe market for wild mushrooms to develop in Indiana.
Updated Guidance - CFP

1. Resources & criteria to select wild mushroom species for service or sale;
2. Record-keeping and traceability to assure safety of wild-harvested mushrooms;
3. Written buyer specifications that include:
   a. Identification by the scientific name and the common name of the mushroom species;
   b. A statement that the mushroom was identified while in the fresh state;
   c. The name and contact information of the person who identified the mushroom and the mushroom seller; and
   d. A statement as to the qualifications and training of the identifier, specifically related to mushroom identification.

The Annex also recommends that the regulatory authority establish qualifications or training for mushroom identifiers.

Criteria to Select Wild Mushrooms

- already in commerce according to foragers, chefs and dealers in the jurisdiction;
- easily identified with field characteristics as determined by the jurisdiction;
- common, in a specific jurisdiction as determined by a committee;
- generally considered a low allergic reaction risk as determined by a committee; or
- approved for sale in other states.
Selecting Mushrooms cont.

If a regulatory authority chooses to form a committee to establish a list of approved wild-harvested mushroom species or serve as a resource to the regulatory authority, the committee may include:

- regulatory agencies from departments that oversee restaurants, markets and farmers’ markets;
- local Poison Control Centers;
- local mycological organizations;
- restaurant associations;
- college or university personnel who are competent identifiers of wild mushrooms;
- commercial wild mushroom foragers;
- wild mushroom brokers;
- retailers and food markets; or
- chefs who serve fresh wild harvested mushrooms.

Wild Edible Mushrooms of Indiana

- Morels – *Morchella Americana, Morchella*
- Chicken of the Woods – *Laetiporus sulphureus & L. cincinnatus (with caution)*
- Hen of the Woods – Maitake – *Grifola frondosa*
  - Lookalikes – *Bondarzewia berkeleyi, Meripilus giganteus, Polyporus umbellatus*
- Lion’s Mane – *Hericium erinaceus, H. coralloides, H. americanus*
- Puffballs – *Calvatia gigantean, Lycoperdon pyriforme, etc.*
  - Poisonous lookalikes – Earthballs, Stinkhorns, & Amanita eggs
- Chanterelles – *Cantharellus lateritius, C. cibarius (No others)*
  - Poisonous lookalikes – Jack ’O Lanterns – *Omphalotus illudens, Hygrophoropsis aurantiaca*
- Black Trumpets – *Craterellus cornucopiodes*
- Oysters – *Pleurotus ostreatus & P. pulmonarius*
  - Lookalikes – *Crepidotus sp. Hypsizygus ulmarius; Lentinus levis; Lentinus ursinus, others*
Yellow & Black Morels

- *Morchella Americana, Morchella angusticeps*
- *Morchella diminutive, Morchella punctipes*

Where to find Morels?

- Woods
- Hillsides
- Valleys
- Lowlands
- Uplands
- Yards
- Creekside
- Orchards
- Railroad Tracks
- Around Mayapples
- Private Land (with permission)
- Out West
  - Burnsites
  - Landscaping
Where can you hunt?

- State Parks
- State Forests
- Nature Preserves, as long as they are on state land
- State Recreational Areas
- Some National Forests – Allowed in Hoosier National
- Some Land Trusts allow hunters
- Private Property (with permission)

Numbers Game

- Go where you have the best odds
Common Trees

- Elm
- Ash
- Tulip Poplar
- Sycamore
- Black Cherry
- Many Others

Morel Lookalikes & Other Spring Mushrooms

Noah Siegel – Mushroom Observer
Verpa

- Brain-like surface instead of “pits and ridges”
- Cap only attached at very top
- Stem not hollow
Gyromitra

- Also called “beefsteak” & “False Morel”
- Poisonous

Patrick Harvey - Mushroom Observer
Chicken of the Woods – *Laetiporus sulphureus* 
& *L. cincinnatus*

Hen of the Woods – *Grifola frondosa*
Lions Mane – *Hericium erinaceus, H. coralloides, H. americanum*

Cauliflower Mushrooms – *Sparassis crispa* and *Sparassis spathulata*
Calvatia gigantea

Chanterelles
Black Trumpets – *Craterellus* sp.

*Pleurotus pulmonarius*
Criteria to Select Wild Mushrooms

- Already in commerce
- Easily identified
- Common
- Considered a low allergic reaction
- Approved for sale in other states

Record Keeping / Traceability

- Purpose is to aid in traceback when foodborne illness occurs
- Buyer records should remain attached to container mushrooms are sold in until container is empty
- Try to not comingle lots of mushrooms
- Records should be retained for at least 90 days by entity who buys the mushrooms
Buyer Specification

This _____ lbs of ______ Morels / M. _______ (species)

Harvested in ___________, __________ (County and State)

Were freshly identified by ___________/ ___________ (print/sign)

Who by the successful completion of the Hoosier Mushroom Society’s training course in Morel Identification is recognized as an Indiana State Morel Inspector.

This individual can be reached at


The Indiana Program

- Morels & Food Safety course in March.
  - Typically 3 hours.
  - Past locations have included Indianapolis, Bloomington, and South Bend.
  - No pass/fail exam.
- Wild mushroom course in summer.
  - Past locations have included Indianapolis, Evansville, Bloomington, and South Bend
  - Typically 5-6 hours long
  - Graded exam at the end.
Critical learning objective elements include:

• 1. Illness information
• 2. Identification
• 3. Harvesting
• 4. Best handling practices
• 5. Regulatory requirements

Illness Information (Symptoms, Cause and Prognosis)

• **Identify foodborne illnesses** associated with the consumption of wild harvested mushrooms and the mushrooms who cause those symptoms.
Identification

• Describe the **anatomy of a mushroom** as it relates to identification.

• Demonstrate **accurate identification of edible species** of mushrooms from physical specimens.

• Demonstrate ability to differentiate between edible and their **poisonous look-a-likes** from physical specimens.

Harvesting

• Describe specific information in regards to the **habitat and seasonality** in which mushrooms can be harvested, including areas that are considered inappropriate for harvest (treated areas, contaminated sites, etc.)

• Describe proper **collection and harvesting techniques**.

• Demonstrate the **seasonality and locality differences**, if any, between edible mushrooms and their look-a-likes.
Best Handling Practices

- Recognize and describe the conditions and practices that could contribute to post harvest contamination.
- Describe storage and transportation methods that would prevent the contamination of mushrooms.
- Describe the relationship between personal hygiene and the potential for contamination that could contribute to foodborne illness.
- Be able to describe picking area/conditions where mushrooms should not be harvested due to soil or other conditions that may lead to foodborne illness (ex. Feedlots, mushrooms that appear to be contaminated by birds or other animal species).

Regulatory Requirements

- Cite the regulatory requirements in the local jurisdiction for wild mushroom harvesting location and distribution.
Thanks for attending

- Questions?
- Contact me by email or phone.
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