

SOUTH SLAVE



***Morel
Mushrooms***

HARVESTER'S HANDBOOK



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INTRODUCTION

Forest fires are naturally-occurring events in the Northwest Territories (NWT) that produce a valuable renewable resource: morel mushrooms. These are choice edible mushrooms, a prized delicacy and a valuable commodity in high demand on world markets. **Morels can be harvested in large numbers in burn areas mostly during the first year after a forest fire.** When harvested and processed properly, morels can provide a significant source of income.



Photo Credit: ITI





Typical Fire Morel
Morchella conica

Photo Credit: Joachim Obst



Yellow Morel
M. esculenta

Photo Credit: Joachim Obst



Black Morel
M. elata

Photo Credit: Joachim Obst



1. ECOLOGY, GROWING SEASON AND HABITAT

The mushroom “body” we see and harvest is the “fruit” of the invisible spider-web-like “mycelium” growing underground which is the actual living organism. The “growing” of mushrooms is called “fruiting”. The ecology of morels is not well understood except that wild fire, other disturbances, and dying or dead trees trigger mass fruiting and reproduction and the dispersal of millions of mushroom spores or “seeds”.



In the NWT, edible “true morels” appear for six to seven weeks from mid or late May to about mid July in both burned and unburned forests. Prolific fruiting of morels usually happens in the first year after a forest fire but can occur continuously



over a period of up to four years with successive but diminishing harvests in the same area. Fruiting may also occur at intervals over a period of up to six to eight years. In some cases, only a few morels will appear in the first year after a fire in a particular area while they may be abundant in nearby areas, or they may become plentiful in the second or third year after a fire.

Morels appear about one week after the first green leaves open on poplar, aspen and birch trees. Morels prefer burned forests with pine, spruce, aspen, poplar and birch trees. They occur in flat terrain, on slopes and in depressions – wherever sufficient soil moisture and warm temperatures are present. Morels grow continuously over the course of the season in “flushes” and a productive area can be re-visited and harvested several times.



2. IDENTIFICATION OF MORELS

In the NWT, six species and many varieties of edible “true morels” and several species of poisonous “false morels” are known and described in field guide books.

WARNING!

“False morels” are poisonous and can be lethal. “False morels” look very similar to “true morels” and both can grow beside each other in the same habitat. Harvesters should always consult mushroom experts (mycologists) and buyers, and up-to-date wild mushroom field guide books when identifying morels.

Morels should never be eaten raw and must be well cooked for at least fifteen minutes. Alcohol should also be avoided when consuming morels.



In addition, some people have food allergies and sensitivities towards morels. If you have never eaten morels before, it is advisable to consume only a small helping the first few times you try them. If you notice any symptoms, you should not eat morels.

It is critical to avoid harvesting contaminated morels. Morels can accumulate toxic heavy metals and other contaminants. Consuming contaminated morels can have serious adverse effects on human health.

Harvesters should avoid harvesting in the following areas: where there are naturally elevated levels of heavy metals in the bedrock; near exploration and mining sites; along road corridors and dust zones of former and current gravel roads; near any infrastructure or settlement.

It is in everyone's best interest to safeguard the human health of consumers and foster a responsible morel mushroom industry that will benefit northern communities for generations to come.



3. HARVESTING

Morel mushrooms are a sustainable resource. Practicing proper harvesting techniques can help to ensure a succession of harvests over time. Harvesting is not difficult. A brief orientation in the field is all a first-time picker needs in order to know what to do. Pickers only need a small knife and suitable containers to put their mushrooms in. Five gallon pails are recommended. Several dozen holes should be drilled in the walls and bottom of the pails. This allows for air flow around the mushrooms which can be very moist when first harvested and it also lets dirt fall out through the bottom of the pail. A slot cut near the rim and wrapped with duct tape makes a convenient handle.



Always keep your containers of morels in the shade whenever you take a break and never let them stand in the rain. Be careful not to disturb the forest floor in the vicinity of morels. This could harm the mycelium growing underground.

Pickers should never “clear cut” a patch of morels. Close observation will show that some morels may be either too mature or too small. Harvest only healthy specimens and never pull



Photo Credit: ITI



the mushroom out of the ground by hand. Always cut off the morel cap at the top of the stem with a sharp knife. It is important to handle morel mushrooms properly, especially when picking commercially. Be gentle and keep your mushrooms as clean and dry as possible. Mushroom buyers have certain specifications and they may refuse to buy mushrooms that have not been harvested or handled properly. At the end of each day, pickers bring their fresh morels to a buying station. Each picker's take is weighed and they are paid cash on the spot. The buyers then sort and dry the mushrooms overnight in specially-designed dryers and store them for shipment at a later date.



Photo Credit: ITI



4. DRYING

Depending on the circumstances, harvesters may choose to dry their own morels but special care must be taken when doing so. **The drying process must begin immediately and must continue straight through without interruption or else problems can develop with mould and rot.** Morels can be dried on large-mesh drying screens with simple wooden frames placed in the open air. Food-safe plastic screens are recommended. More often, galvanized metal screens with $\frac{1}{4}$ in. mesh are used. If large numbers of morels are being harvested or wet weather persists, a drying tent may become necessary. This could be a simple enclosure using tarps or vapour barrier with racks inside where the drying screens can be stacked. Ambient air is blown through the tent



using a fan powered by a generator. This phase of the drying takes approximately two days.

After air drying, the mushrooms appear to be dry but they still contain a small amount of moisture.

They are then put into a flash dryer. This could be a small simple plywood structure with an airtight stove inside. When the mushrooms are brought up to temperatures ranging from



Photo Credit: ITI



140 to 170 degrees F (about 60-70 degrees C) for eight to ten hours the last of the moisture is driven off. The high temperatures also kill off any eggs laid by moths and other insects. The mushrooms can then be safely stored without fear of losing them to rot, mould or damage from hatching insect larvae. This ensures a clean and long-lasting product. When properly dried, morels retain all their quality for several years and can be sold when prices are highest.

One five gallon pail holds approximately 10 lbs. of fresh morels. The weight ratio between fresh and dried varies between 6:1 and 9:1 depending on weather and soil conditions. Dried morels have approximately half the volume of fresh morels.



Photo Credit: ITI



5. PUBLIC LAND, PRIVATE PROPERTY AND ABORIGINAL PRIVATE LANDS

In the NWT, you can pick morel mushrooms for personal use without a permit on public or Commissioner's Lands where public access is allowed, including in Territorial Parks.

You may also pick mushrooms for commercial purposes in Territorial Parks if you obtain a Commercial Use Permit from the Department of Industry, Tourism and Investment (ITI), Government of the Northwest Territories (GNWT). For Commercial Use Permits in Territorial Parks, please contact your local ITI Regional Office. Harvesting is currently not allowed in National Parks located in the NWT.



You are also required to obtain a Business Licence for any commercial morel harvesting in the NWT.

For Business Licences and inquiries contact:

**Consumer Services,
Public Safety Division,
Municipal and
Community Affairs (MACA),
GNWT,
#600 5201 50th Avenue,
Yellowknife, NT, X1A 3S9
Phone: (867) 873-7334
Email: nadira_begg@gov.nt.ca**



Land Use Permits are required for camps with over 200 person days (e.g. 20 people for 10 days equals 200 person days). Permits are issued by the Mackenzie Valley Land and Water Board (**www.mvlwb.com/mvlwb/apply-permit-licence**). For more information regarding activities requiring a land use permit see sections 4 and 5 of the *Mackenzie Valley Land Use Regulations*.



The Department of Lands, GNWT, oversees inspection services for the land use permits issued by the Board. Land Use Inspectors with the Department of Lands are available to assist applicants for land use permits with regulatory processes.

For more information, contact:

GNWT Department of Lands,
Resource Management (Inspector)
Phone: (867) 765-6648
Fax: (867) 873-9754
Email: Clint_Ambrose@gov.nt.ca



Mushroom pickers need permission from land owners if they want to harvest on private property. Harvesters should be aware that some public lands have traditional or historic values or may be actively used by local residents for specific purposes. Where harvesting sites exist on Aboriginal private lands, pickers are advised to contact that Aboriginal government's office prior to any harvesting activities.

SOUTH SLAVE REGION FIRE MAP





6. RESPECT THE LAND

Please show respect for the environment. Preventing damage to the fragile environment is your responsibility. You are not permitted to cut live, healthy trees or erect any permanent structures. Food, garbage and unsanitary practices can attract animals and result in unsightly and unhealthy camp conditions. Do not leave any garbage behind and collect garbage left behind by others. Ensure that all human wastes are dealt with in a sanitary fashion.

7. FOREST PROTECTION

Commercial mushroom harvesters must adhere to the “Forest Fire Prevention and Suppression Guidelines for Industrial Activities”. For information on the guidelines, current fire situation and tips for building a safe campfire please visit www.NWTFire.com. Report any fires to 1-877-NWT-FIRE.



Proper Collection Techniques

Photo Credit: Walter Brown



8. SAFETY

Remember that you are in bear country and follow the instructions given in the Environment and Natural Resources (ENR) “Safety in Bear Country” (available at GNWT Regional ENR Offices and online).

When harvesting in remote wilderness areas you are on your own! The nearest community may be more than a hundred kilometres away and you may not be able to access the services and supplies you need, including medical assistance.

Bring your personal wilderness survival equipment including first aid supplies, bear deterrent, mosquito protection, compass, GPS, map, satellite phone, harvesting equipment, food supplies, drinking water and bottles, proper



footwear and clothing, camping gear and whatever else you think you may need. Be aware of fires that may still be burning underground from the previous year and watch for falling trees.



Photo Credit: ITI



9. ECONOMICS, MARKETING AND INCOME

People can generate income from the morel mushroom harvest in several ways:

Local harvesters can sell fresh morels to **independent buyers in the field** for a negotiated price or they can make pre-arrangements with **established food and mushroom distributors** and sell exclusively to them.

Local harvesters and communities can also **sell pre-dried morels** to the same buyers and distributors **for higher prices** than they can get selling fresh morels to buyers onsite.

Local harvesters and communities working co-operatively can sell flash-dried morels directly to lucrative



markets in Europe and the USA. Current and daily world market prices for dried morels can easily be looked up online (e.g. eBay).

It is recommended to review seasonal variations in world market prices for both fresh and dried morels before entering into any negotiated agreements. Talk to several buyers in the field or contact several markets before making a final decision. This will help you secure the highest return for your efforts.

In addition to increased trade for established businesses, local entrepreneurs and communities can generate income by providing goods and services to pickers in the field (e.g., for food, water, gas or for garbage pickup and sanitary disposal at officially designated dump sites.)



Photo Credit: ITI



10. GOVERNMENT, COMMUNITY AND EMERGENCY CONTACTS

Government of the Northwest Territories (GNWT)

Environment and Natural Resources (ENR)

600, 5102 – 50th Avenue

Yellowknife, NT X1A 3S8

General Inquiries: (867) 873-7379

Government of the Northwest Territories (GNWT)

Industry, Tourism and Investment (ITI)

South Slave Regional Office

Phone: (867) 872-6430

Government of the Northwest Territories (GNWT)

Department of Lands

Resource Management (Inspector)

140 Bristol Avenue

Yellowknife, NT X1A 3T2

Phone: (867) 765-6648

Fax: (867) 873-9754

Email: clint_ambrose@gov.nt.ca

Business Licenses and Inquiries

Consumer Services

Public Safety Division

Municipal and Community Affairs (MACA)

Government of the NWT

#600 5201 50th Avenue

Yellowknife, NT X1A 3S9

Phone: (867) 873-7334

Email: nadira_begg@gov.nt.ca



Government of the Northwest Territories (GNWT)

Environment and Natural Resources (ENR)

Regional Superintendent

P.O. Box 900

Fort Smith, NT X0E 0P0

Phone: (867) 872-6400

Cell: (867) 872-4250

Fax: (867) 695-2381

Email: tony_vermillion@gov.nt.ca

Duty Officer: (867) 872-6422

Local ENR Offices

Fort Providence: (867) 699-3002

Fort Resolution: (867) 394-4596

Hay River: (867) 875-5550

Lutsel K'e: (867) 370-3141

Environmental and Wildlife

Emergency Numbers

24-Hour Spill Report Line:

Call Collect: (867) 920-8130

Report a Wild Fire: Toll Free 1-877-NWT-FIRE;

Please visit www.NWTFire.com

Report a Poacher: Toll Free 1-866-762-2437

Report Bison in the Control Zone:

Toll Free 1-866-629-6438

Wildlife Emergencies

Fort Smith: (867) 872-0400

Hay River: (867) 875-7640



South Slave Regional Contacts

Municipal and

Community Affairs (MACA)

Community of Fort Providence

Senior Administrative Officer
Hamlet of Fort Providence
Box 290
Fort Providence, NT X0E 0L0
Phone: (867) 699-3441
Fax: (867) 699-3360
Email: sao@fortprovidence.ca

Community of Fort Smith

Senior Administrative Officer
Town of Fort Smith
Box 147
Fort Smith, NT X0E 0P0
Phone: (867) 872-8400
Fax: (867) 872-8401
Email: jhood@fortsmith.ca
Website: www.fortsmith.ca

Community of Hay River

Senior Administrative Officer
Town of Hay River
73 Woodland Drive
Hay River, NT X0E 1G1
Phone: (867) 874-6522
Fax: (867) 874-3237
Email: dsteale@hayriver.com
Website: www.hayriver.com

Hay River Reserve

Senior Administrative Officer
K'atlodeeche First Nation
Box 3060
Hay River, NT X0E 1G4
Phone: (867) 874-6701
Fax: (867) 874-3229
Email: kfnceo@katlodeeche.com
Website: www.katlodeeche.com

Community of Kakisa

Senior Administrative Officer
Ka'a'gee Tu First Nation
Box 4428
Hay River, NT X0E 1G4
Phone: (867) 825-2000
Fax: (867) 825-2002
Email: jhood@fortsmith.ca
Website: www.fortsmith.ca

**Community of Fort Resolution**

Hamlet of Fort Resolution
General Delivery
Fort Resolution, NT X0E 0M0
Hay River, NT X0E 1G4
Phone: (867) 394-4556
Fax: (867) 394-5415
Email: tausia.sao@gmail.com

**GNWT Territorial
Park Contacts**

Hay River
(South Slave Region)
Phone: (867) 875-5566

Wood Buffalo National Park

Box 750
Fort Smith, NT X0E 0P0
Email: wbnp.info@pc.gc.ca

Park Administration
Phone: 867-872-7900
Fax: 867-872-3910

RCMP, Ambulance, Search and Rescue contacts

Royal Canadian Mounted Police (RCMP)
and Ambulance Emergency:

Fort Providence: (867) 699-1111

Fort Resolution: (867) 394-1111

Fort Smith: (867) 872-1111

Hay River: (867) 874-1111

Civil Air Search and Rescue Association,
Yellowknife, Emergency Only: (867) 873-2962



Information Sources:

Industry, Tourism and Investment
www.iti.gov.nt.ca

Environment and Natural Resources
www.enr.gov.nt.ca

Lands
www.lands.gov.nt.ca

Municipal and Community Affairs
www.maca.gov.nt.ca

Transportation
www.dot.gov.nt.ca



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