



Edible mushrooms and poisonous mushrooms in Norway

– a handy field guide for beginners



Soppognyttevekster.no

Soppkontroll.no

Make Safe Mushroom Foraging Choices

Feeling tempted to hunt for edible mushrooms in the fall, but too daunted to get started? The Norwegian Association for Mycology and Foraging has got you covered!

This booklet provides the information you need to get started safely. Once you get started, you can get your finds checked by our mushroom identification experts in the app Soppkontroll or you can visit one of our mushroom identification stations.

Check soppkontroll.no to get more information about the app and the mushroom identification stations.



Stay Safe Advice:

- Teach yourself a couple of common edible mushrooms.
- Learn the four most poisonous mushrooms, see pages 12-13.
- Get your mushrooms checked the app or at the mushroom identification stations.
- Only eat mushrooms you know how to identify.

What to do with the mushrooms you find:

- Collect your mushrooms in a basket or a stiff paper shopping bag. That will prevent your mushrooms from smashing and crumbling.
- Sort the mushrooms in boxes inside the basket or bag. Reuse boxes you get when buying certain fruits, they are great for this use. Use one box for mushrooms you are certain of and one for those you want to learn more about.
- You will eliminate a lot of work if you do an initial cleaning in the woods. Remove soil, grass, and pine needles. Cut away anything that has been nibbled on by insects or snails. You will save yourself so much time later.
- Mushroom field handbooks are perishable goods. We recommend recent field guides written by Norwegian authors. That way you ensure updated and accurate instructions on edibility.

Know What You Eat

There are four dangerous poisonous mushrooms in Norway. These are giftslørsopp *Cortinarius rubellus*, butt giftslørsopp *Cortinarius orellanus*, grønn fluesopp *Amanita phalloides* and hvit fluesopp *Amanita virosa*. Even a tiny bit of any of these mushrooms can cause life threatening illness.

The mushroom identification expert will ask you to throw everything you collected if you have placed one of these in your basket together with edible mushrooms. This is the reason we recommend that you sort your haul in different boxes.

The Four Dangerous One:

Grønn fluesopp

Amanita phalloides

Hvit fluesopp

Amanita virosa

Butt giftslørsopp

Cortinarius orellanus

Spiss giftslørsopp

Cortinarius rubellus

Nordic Fungus Day!

The first Sunday in September is Nordic Fungus Day, or Soppens dag in Norwegian. Check soppognyttevekster.no/kalender for family events where you live.

Please note that this leaflet is made for English speaking people in Norway. This is why we use Norwegian names as main mushroom names, in addition to scientific names.

Look Beneath the Cap

Mushroom experts always start with checking the underside of the cap. That is where you find the hymenium, and the pattern can help you figure out what type of mushroom you have found.

- **Gilled mushrooms** – gills radiate from the middle of the cap. These are called agarics and they are very common. All four of the deadly poisonous mushrooms belong in this category.
- **Sponge mushrooms** – thin tubes placed side by side points down towards the ground. These are called boletes and there are no poisonous boletes in Norway, although some of them taste nasty.
- **Tooth mushrooms** – soft, light-colored spikes. These edible mushrooms are sometimes called hedgehog mushrooms. You haven't found tooth mushrooms if the spikes are brown and hard.
- **Folded mushrooms** – funnel shaped fruit bodies with more or less pronounced folds along the outside. These are called chanterelles. Both edible and non-edible fungus belong to this group.
- **Polypore mushrooms** - shallow or deep dimples. The shallowest dimples is almost reminiscent of smooth Styrofoam surfaces.
- **Puffball mushrooms** – round mushrooms without cap and stem. They are edible if they are white inside.

Check the next page for images that will help you learn the differences.



Save time in the woods by avoiding....

... brown mushrooms with brown gills. Will prevent you from picking **spiss giftslørsopp** *Cortinarius rubellus* and **butt giftslørsopp** *Cortinarius orellanus*.

... white fleshed mushrooms with white gills. Will prevent you from picking **grønn fluesopp** *Amanita phalloides* and **hvit fluesopp** *Amanita virosa*.

Basic Mushroom Identification Skills

The hymenium beneath the cap is where to start when you want to identify mushrooms. Are there textures or patterns on the cap or stem? What colors do you see? Does the hymenium connect to the stem or not? Viscosity, taste, and flavor can also provide important identifying information.

Gills

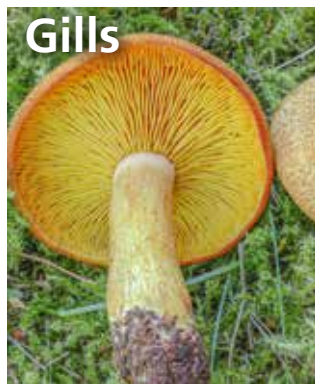


Photo: Per Marstad



Photo: Per Marstad



Illustration: Hermod Karlén

Sponge



Photo: Per Marstad



Photo: Per Marstad



Illustration: Hermod Karlén

Teeth

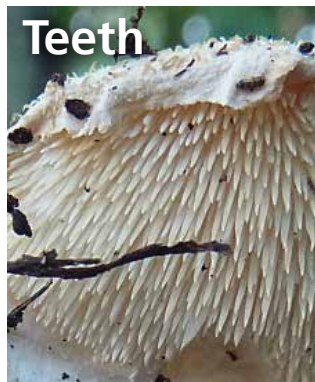


Photo: Rüdiger Braathen



Photo: Archenzo CC BY-SA 4.0



Illustration: Hermod Karlén



Polypore

Photo: Per Marstad



Photo: Per Marstad

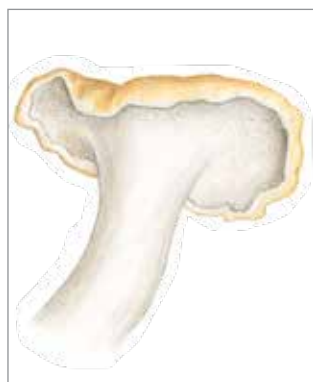


Illustration: Hermod Karlsen



Folds

Photo: Inger Kristoffersen



Photo: Per Marstad



Illustration: Hermod Karlsen

Other types



Cup mushrooms

Photo: Inger Kristoffersen



Puffballs

Photo: Per Marstad



Morels

Photo: Beentree CC BY-SA 4.0

Edible mushrooms, without danger

Steinsopp

Steinsopper, large mushrooms with a brown cap and white spongy hymenia. The sponge will turn yellow or greenish-yellow with age. There are three species in this genus in Norway. Steinsopp *Boletus edulis* is the most common of them. The stem is white overlayed with light brown, and barrel-shaped when young. Look for a finely masked white net along the top of the stem. That net is a key characteristic for all steinsopper. This species is found with spruce and birch.



Photo: Inger Kristoffersen

Gallerørsopp *Tylopilus felleus* is a bitter tasting mushroom with a white spongy hymenium and a cap with a color similar to steinsopp. Beginners often confuse these two of species. The hymenium on gallerørsopp will turn pink with age and the stem has a brown coarse mesh pattern. If you are in doubt, place your tongue on the hymenium and you can taste the bitter flavor. Gallerørsopp is not poisonous, but the flavor will ruin your dinner.



Photo: Tund Nakling Kristiansen

ous lookalikes

Kantarell

Kantarell *Cantharellus cibarius* is a funnel shaped, medium sized mushroom. The fungus has the same color as egg yolk, but when you split it, the flesh is white. The hymenium has sharp folds or ridges that terminates gradually along the stem. The smell is fruity and peppery and is reminiscent of apricot. Kantarell is often mistaken for **falsk kantarell** *Hygrophoropsis aurantiaca*, which is an orange mushroom with gills. The gills can easily be removed by scraping, without damaging the mushroom flesh. The flesh is orange all the way through. Falsk kantarell is not poisonous.



Photo: Inger Kristoffersen

Traktkantarell

Traktkantarell *Craterellus tubaeformis* is a small, hollow funnel shaped mushroom with a brown cap and yellow stem. The hymenium has a greyish color and shallow folds. They appear in large clusters well into the late fall in mossy spruce forests.



Matpiggsopper

Hydnum spp. is a genus with several species, which are all edible. Matpiggsopper are fleshy, whitish mushrooms which vary in size. The hymenium is crowded with soft, light-colored spikes. The two most common species are **blek piggsopp** *Hydnum repandum* and **rødgul piggsopp** *Hydnum rufescens*. Matpiggsopper have a long season.



Photo: Inger Kisloffsen

Fåresopp

Fåresopp *Albatrellus ovinus* are large polypore mushrooms. The cap is white to greyish brown and irregularly domed. The hymenium is shallowly dimpled, and the stem is short, and off-center. Fåresopp is found in mature spruce forests and the cap is often partially poking out from the debris. The flesh turns yellow when heated. The cap of the similar looking **franskbrødsopp** *A. confluens* have more red-toned colors, and franskbrødsopp does not turn yellow when heated. It is not poisonous, but can have an off taste.



Photo: Inger Kisloffsen

Matblekksopp

Matblekksopp *Coprinus comatus* is a medium sized mushroom with gills. The white cap has large scales and a conical, tall, and narrow shape. This fungus belongs to a group of three genera which spread their spores by turning into a black liquid. These are often referred to as ink caps. The matblekksopp in the image on the right have no pink or black discoloration along the bottom edge of the cap, which you will see on older specimens. If you find matblekksopp with pink or black discoloration, just cut away the discolored parts. Place the mushrooms in a bowl of water for a day or two if you cannot eat them right away. The stems can be fibrous, but are usable as seasoning if they are dehydrated and ground up.



Photo: Per Marstad

Matrisker

Matrisker *Lactarius seksjon Deliciosi* are four species in the genus *Lactarius* which secrete an orange or carrot-colored juice when they are cut into. Matrisker are dull orange mushrooms with gills that starts out with flat, convex caps, which become slightly funnel shaped as they age. Matrisker are loved by bugs, cut through them to check if the specimen is worth taking with you, that way you also check for the orange color liquid.



Photo: Inger Kraufferen

Skrubber

Skrubber *Leccinum* spp. is a genus of fleshy medium and large sized mushrooms with spongy hymenia. They have convex caps in colors ranging from black to brown to orange or red. They are easy to learn, because their stems are covered in small scales that makes it look like they haven't shaved for a couple of days. There are 17 species in the genus skrubber in Norway, they can roughly be divided into the ones that bruise bluish or greyish when you cut through them, and the ones that do not. The ones that bruise must be cooked 15 to 20 minutes before eating, to avoid unwanted gastrointestinal symptoms.



Foto: Kålgjern Malm Jensen

Cooking with Mushrooms

These basic recipes will get you started with cooking mushrooms. They are super easy. Finish cleaning off the mushrooms you found, and cut them into pieces measuring 2-4 cm.

Mushroom Sandwich

Fried mushrooms on a sandwich. Easy peasy!

Set your stove top to medium heat, place a cold frying pan on top. Add mushrooms. Give it a couple of minutes and the mushrooms will start releasing liquid. Maintain the heat until the liquid starts evaporating. Then add butter or oil and turn the heat up to give them a nice brown finish. Season with salt and pepper. You can add a pinch of thyme if you like. Make sure the mushrooms are heated all the way through, especially if there are skrubber in your mix. Pile the mushrooms on a slice of good bread.



Photo: Øyvind Holmstad
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Mushroom Omelet

Set your stove top to medium heat, place a cold frying pan on top. Add mushrooms. Give it a couple of minutes and the mushrooms will start releasing liquid. Maintain the heat until the liquid starts evaporating. Then add butter or oil. Season with salt and pepper. Whisk up an egg or two per person, pour over the mushrooms and wait for the mixture to stiffen up. Fold the omelet over on itself to make the top stiffen up.

Mushroom Soup

Set your stove top to medium heat, place a cold frying pan on top. Add about 500 gr mushrooms. Give it a couple of minutes and the mushrooms will start releasing liquid. Maintain the heat until the liquid starts evaporating. Then add butter or oil. Add a finely chopped onion. Season with salt and pepper. When the onions become soft and shiny, add 2 dl water, 3 dl cream, and a couple of cubes of chicken stock. Bring it to a boil and leave it to simmer for five to ten minutes. Purée the soup with an immersion blender. Once the soup has a creamy consistency, season and serve!



Photo: Public domain

Health Advice

Do not eat old or rotten mushrooms. If the mushrooms are in such poor condition that you would not buy them in a shop, just leave them in the woods.

Never eat mushrooms raw. All mushrooms must be heated – fried or boiled – before being eaten. Some mushrooms need cooking for an extra long time; we recommend 15-20 minutes.

Four Mushrooms You Need to Learn

There are a range of poisonous mushrooms in Norway, but there are four that we worry about in particular. These four can cause life threatening injuries, even if you only swallowed a tiny bite. We taught you to avoid brown mushrooms with brown gills on page 3. That will prevent you from picking **spiss giftslørsopp** and **butt giftslørsopp**. Avoiding white fleshed mushrooms with white gills, which will prevent you from picking **grønn fluesopp** and **hvit fluesopp**. Here you will learn how to recognize these four species.

Hvit fluesopp and grønn fluesopp

Hvit fluesopp *Amanita virosa* is a medium sized white mushroom with white gills. If you look beneath the cap, you will see that the gills are not attached to the stem. This is a character trait for all the species in the genus fluesopp *Amanita*. It can also have a ring around the top of the stem, although this can be worn off. Hvit fluesopp is found in mossy forests with both conifers and deciduous trees.



Hvit fluesopp is completely white. Beginners might confuse it with sjampinjonger *Agaricus* spp. However, sjampinjonger have colored gills, ranging from light pink to deep black.

Photo: Inger Kristoffersen

Fluesopper are enveloped in a membrane called a universal veil.



Photo: Inger Kristoffersen



Photo: Inger Kristoffersen

Grønn fluesopp *Amanita phalloides* is a medium sized mushroom with white gills and an olive colored cap. The gills are not attached to the stem. Green fluesopp is found with beech and oak.

Symptoms of poisoning with hvit fluesopp or grønn fluesopp will appear 6-24 hours after ingestion.

Giftslørsopper

Spiss giftslørsopp *Cortinarius rubellus* and **butt giftslørsopp** *Cortinarius orellanus* are reddish-brown, medium sized mushrooms with gills. The gills on mature mushrooms will look like they are covered in cinnamon powder. The yellow belts on spiss giftslørsopp might wash away with rain. Spiss giftslørsopp is found in mossy coniferous forests. Butt giftslørsopp is found with oak, linden, and hazel.



Photo: Inger Kistoffersen

Be aware that spiss giftslørsopp and traktkantarell (page 7) live in the same habitat. It is easy to get other mushrooms mixed in when you are picking traktkantarell by the handful. Slow down and pick one at a time to avoid accidental poisoning.

Symptoms of poisoning with spiss giftslørsopp or butt giftslørsopp will appear 36 hours to six days after ingestion.



Photo: Rørdun Braathen

Rød fluesopp and brun fluesopp

Rød fluesopp *Amanita muscaria* is probably the most easily recognizable mushroom with its red cap with white spots. It is found in coniferous forests and with birch. Rød fluesopp has a lookalike cousin with brown cap with yellowish-white spots called **brun fluesopp** *Amanita regalis*. Both are large mushrooms with white gills. This mushroom is found in coniferous forests, especially with spruce.



Photo: Inger Kristoffersen



Photo: Inger Kristoffersen

The spots on fluesopper are caused by the universal veil breaking into pieces. They can be washed off by rain.

Fluesopper has an inner veil that leaves a hanging ring around the top of the stem.

Panterfluesopp

Panterfluesopp *Amanita pantherina* is a medium sized mushroom with white gills and greyish-brown cap with small, spikey spots. It has a striated ring around the stem and pronounced edge around the base. Most commonly found with beech, oak, and linden.

Symptoms of poisoning with rød fluesopp, brun fluesopp, or panterfluesopp will appear 30 minutes to three hours after ingestion.



Photo: Inger Kristoffersen

Flatklokkehatt

Flatklokkehatt *Galerina marginata* is a small mushroom with yellowish-brown cap and gills. The stem is greyish brown with light, longitudinal fibers. They appear in clusters on rotted wood. They can be mistaken for the edible mushroom **stubbekjellsopp** *Kuehneromyces mutabilis*.

Symptoms of poisoning with flatklokkehatt will appear six to 24 hours after ingestion.



Photo: Inger Kristoffersen

Pluggsopp

Pluggsopp *Paxillus involutus* is a medium sized, funnel shaped mushroom. It has a brown cap and yellowish white gills that easily bruise brown when pressed. It can be found almost everywhere, in parks and forests alike.

Symptoms of poisoning with pluggsopp will appear 30 minutes to three hours after ingestion.



Photo: Inger Kristoffersen

What you need to know

- Get in touch with the Norwegian Poison Information Centre (Giftinformasjonen) in case of suspected poisoning. Their phone number is 22 59 13 00.
- Do not throw away pictures, remainders of meals, or vomit.
- Some mushrooms produce symptoms several hours or days after ingestion.
- Edible mushrooms in other countries may have poisonous lookalikes in Norway.

Get Your Mushrooms Checked at the Mushroom Identification Station

Our membership association organizes mushroom identification stations all over the country each fall. Bring your foraging haul, and our certified mushroom identification experts will check each and every mushroom you bring to ensure you only walk home with edible mushrooms. Check soppkontroll.no to find out where there is a mushroom identification station close to you.

The app Soppkontroll is open every day during peak mushroom season. Take a photo of your mushroom, submit the image through the app, and one of our mushroom identification experts will let you know if the mushroom is edible. You can find the app Soppkontroll at soppkontroll.no, in the Appstore and on Google Play.



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