



PRESENTATION (SUMMARY)

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Mushroom hunting in Finland

1. Mushroom hunting

- IF YOU WANT TO COOK FOREST MUSHROOMS, PICK ONLY THOSE EDIBLE MUSHROOMS YOU ARE **100 %** SURE OF!!!
 - If you hesitate, DO NOT pick them OR let somebody who knows mushrooms take a look and recognize them.
- Mushroom must be picked from the ground as a whole. This is important as some of the important details for identifying the mushroom can be below the ground (i.e. *Amanita* species).
- It is wise to start slowly. Learning couple of new species in a year is already enough. For identifying mushrooms you can use books (up to date) and help of people who really knows mushrooms.
- If the mushroom is old or full of maggots, leave it in the forest. Many food poisonings are related to a situation where people have eaten spoiled mushrooms.
 - Some mushrooms may have mold growing on them. Do not pick and prepare mushroom contaminated with mold!
- Radiation:
 - Amounts of radioactive cesium differs in Finland.
 - You can pick up mushrooms for consumption without any concerns. In normal consumption the radioactive amount stays relatively low (lower than 0,01 millisievert from total amount of about 3,2 millisievert in a year).
 - Amount of cesium in a mushroom depends on the place, consumption and preparation.
 - Effects of Chernobyl fallout in Finland (map):
<http://www.stuk.fi/aiheet/sateily-ymparistossa/laskeuma/tsernoby-laskeuma-suomessa-kunnittain>

2. Common mushrooms:

a. Tatti (bolete)

- Fruiting body has usually quite thick flesh and loosely attached cap.



- From below it seems that pores have small holes (pores are detachable by mild force).
- Almost all bolete are edible (beginners mushrooms). In North Karelia you might find such **non-edible** bolete as sappitatti (*Tylopilus felleus*), punaonttotatti (*Boletinus asiaticus*) and äikäätatti (*Chalciporus piperatus*).
- Easy rule is to avoid any bolete with red stipe.

Männynherkkutatti (*Boletus pinophilus*)

- Pores: first white, then turning to yellow and finally olive-green coloured
- Cap is red-brown
- Stipe: Thick and firm (when young)
- Flesh: stays white
- Is commonly mistaken for i.e. *Boletus edulis* or *Tylopilus felleus*
- Considered as delicious mushroom
- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/mannynherkkutatti>

Herkkutatti (*Boletus edulis*)

- Pores: first white, then turning to yellow and finally olive-green coloured
- Cap is light brown
- Stipe: thick and firm (when young)
- Flesh: stays white
- Finely reticulate (net-like) on the upper portion of the body
- Is commonly mistaken for i.e. *Boletus pinophilus* or *Tylopilus felleus*
- Considered as delicious mushroom
- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/herkkutatti>

Sappitatti (*Tylopilus felleus*)

- Pores: First white, but they turn red as mushroom gets older
- Stipe: dark reticulation (characteristic for this mushroom)
- Colour is commonly said to be yellow-brown or olive green
- **Non-edible** (not poisonous, but the taste is very bad)
- Is commonly mistaken for i.e. *Boletus edulis* or *boletus Pinophilus*
- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/sappitatti>

Lehmäntatti (*Leccinum scabrum*)

- Pores: white-gray, later gray. When older, the pores can bulge out from the side (but near the stipe they dent in strongly)
- Flesh: whitish (doesn't change color)



- Stipe: at young age covered with small light grey scales, later on they become dark
- Varies how they look
- Can be mistaken for many *Leccinum* species (i.e. *L. variicolor*, *L. versipelle*, *L. vulpinum*, *L. percandidum*, *L. holopus*). All are eatable (safe mushroom).
- edible (tastes good)
- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/lehmantatti>

Koivunpunikitatti (*Leccinum versipelle*) / Männynpunikitatti (*Leccinum vulpinum*)

- Pores: gray, when damaged they turn darker
- Stipe: covered with small black scales
- *L. Versipelle*: Cap is red-brown or brick red. The flesh will turn red and later on dark violet when damaged or cut. Very common in forests
- *L. Vulpinum*: Cap is red-brown. The flesh will turn red and gets slowly darker when damaged or cut
- Needs to be cooked well or it can give stomach aches (some say even for 30 minutes)
- Can be mistaken for many *Leccinum* species (i.e. *L. variicolor*, *L. scrubum*, *L. percandidum*, *L. holopus*). All are eatable (safe mushroom).
- edible (tastes very good)
- Pictures (*L. versipelle*): <http://www.luontoportti.com/suomi/fi/sienet/koivunpunikitatti>
- Pictures (*L. vulpinum*): <http://www.luontoportti.com/suomi/fi/sienet/mannynpunikitatti>

Kangastatti (*Suillus variegatus*)

- Pores: Olive green colour
- Cap: yellow-brown, dry
- Stipe: same color as the cap
- Flesh: usually turns blue when cut or damaged, but not always
- Very common in forests
- edible (tastes good)
- Is commonly mistaken for i.e. *Suillus bovinus*
- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/kangastatti>

Nummitatti (*Suillus bovinus*)

- Pores: pores are angular (not round).
- Cap: yellowish, sticky, slimey after rain
- Stipe: same color as the cap
- Flesh: whitish/yellowish or clay-coloured
- edible
- Is commonly mistaken for i.e. *Suillus variegatus*, *Chalciporus piperatus* (**non-edible**)



- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/nummitatti>

b. Rousku (*Lactarius*) = Milk-caps

- **Most recognizable character:** milky fluid when broken or damaged. Fluid may change color instantly or over time. Good way for identifying the milk-caps is to make a cut in the gill with your knife.
- Some milk-caps need to be boiled for 5-10 minutes before eating.
- There is only one poisonous milk-cap, *Lactarius helvus*, which irritates the digestive system. There is also one very bitter milk-cap, *Lactarius bertillonii*, which will stay bitter even after boiling.

Lakritsirousku (*Lactarius helvus*)

- Gills: creamy or ochre-yellow
- Cap: beige or light grey
- Stipe: same color as the cap (or a little bit lighter)
- Only milk-cap mushroom which milky fluid is **transparent** as water. Milky fluid may reduce as the mushroom gets older
- Smell: **licorice**
- **Poisonous** (only poisonous milk-cap mushroom growing in Finland)
- Can be mistaken for i.e. *L. rufus*.
- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/lakritsirousku>

Kangasrousku (*Lactarius rufus*)

- Gills: brownish creamy
- Cap: red-brown
- Stipe: a little bit lighter than cap
- Milky fluid: stays white
- Edible: Needs to be boiled 10 minutes before consumption. Very good and prolific.
- Can be mistaken for i.e. *L. helvus* (poisonous) or *L. camphoratus* (edible).
- Can also be mistaken for deadly poisonous *Cortinarius rubellus*.
- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/kangasrousku>

Mustarousku (*Lactarius turpis*)

- Gills: Creamy
- Cap: Olive brown or yellow-green
- Stipe: similar in colour with the cap
- Milky fluid: white, grey when dries
- Edible: Needs to be boiled 10 minutes before consumption.
- Has been considered to be slightly poisonous, but not anymore



- Could be mistaken for *paxillus involutus*, but it doesn't provide milky fluid.
- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/mustarousku>

Haaparousku (*Lactarius trivialis*)

- Gills: creamy color
- Cap: violet grey
- Stipe: stiff, whitish
- Milky fluid: white, but turns slowly green when it dries
- smell: fresh
- Edible: Needs to be boiled before consumption.
- Can be mistaken for many *Lactarius*, i.e. *L. helvus*, *L. mammosus*, *L. vietus*, *L. utilis*.
- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/haaparousku>

c. Some other edible mushrooms

Kantarelli/keltavahvero (*Cantharellus cibarius*).

- Cap: smooth, yellow, usually funnel-shaped
- Gill-like ridges: similar in colour with the cap
- Stipe: lighter in colour (than the cap)
- Edible, tastes delicious
- Can be mistaken for i.e. *Hygrophoropsis aurantiaca* (edibility: not recommended)
- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/keltavahvero>

Suppilovahvero (*Cantharellus tubaeformis*)

- Cap: funnel or trumpet shaped
- Gill-like ridges: yellow (when young), later dark yellow-brown or grey
- Stipe: yellowish (when young), later brown-grey
- Edible, tastes delicious
- Can be mistaken for i.e. *Cantharellus lutescens* (edible) or *Leotia lubrica* (**poisonous**).
- Safe for beginners. There has been occasions where *Cortinarius rubellus* (**deadly poisonous**) has been picked as *C.t.*
- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/suppilovahvero>

Tooth fungi:

Vaaleaorakas (*Hydnum repandum*)

- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/vaaleaorakas>



rusko-orakas (*Hydnum rufescens*)

- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/rusko-orakas>

Russula (*Russula*)

Palterohapero (*R. vesca*)

- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/palterohapero>

Keltahapero (*R. claroflava*)

- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/keltahapero>

Isohapero (*R. paludosa*)

- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/isohapero>

Koivuhapero (*R. aeruginea*)

- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/koivuhapero>

Lampaankääpä (*Albatrellus ovinus*)

- Cap: first smooth. Later with scales. Ground color white, but commonly light brown.
- Under the cap: White, becomes yellow (i.e. when touched), **pores**.
- Flesh: white, breaks easily. **Becomes yellow** from broken points, holes made by maggots, and when cooked. Try to cook the mushroom in the forest with your lighter. It should turn yellow!
- Very common.
- Edible, delicious
- Can be mistaken for *Albatrellus confluens* (more red from the top, doesn't become yellow when cooked → becomes color of a apricot)
- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/lampaankaapa>

d. Some poisonous mushrooms

- There are five deadly poisonous mushrooms which include cytotoxins,
 - Valkokärpässieni (*Amanita virosa*)
 - Kavalakärpässieni (*Amanita phalloides*): Grows mainly in the southwest part of Finland
 - Suippumyrkkyseitikki (*Cortinarius rubellus*)
 - Myrkkynäpikkä (*Galerina marginata*)
 - Korvasieni (*Gyromitra esculenta*): grows in spring/summer.
- There are mushrooms which



- contains neurotoxins
- irritates the digestive system
- harm if they are eaten raw
- reacts with alcohol (i.e. *Coprinus atramentarius*)
- are allergenic (i.e. *Paxillus involutus*)
- Important to understand! There are no shortcuts to learn poisonous mushrooms!
- Beginners:
 - DO NOT pick white mushrooms
 - DO NOT pick mushrooms which grows on tree trunks
 - DO NOT pick mushrooms which have cup-like structure under the leg (The cup/universal veil can easily break and stay in the ground!!!)

Punakärpässi (*Amanita muscaria*)

- Poisonous
- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/punakarpassieni>

Valkokärpässi (*Amanita virosa*)

- Most dangerous mushroom in Finland
- Identification:
 - Completely white
 - Ring (detaches easily)
 - Gills are white
 - Volva (cup)!
 - **usually** if you look at it from different sides the fruiting body is never symmetrical
- **Deadly poisonous**
- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/valkokarpassieni>

Suippumyrkkyseitikki (*Cortinarius rubellus*)

- Cap: red-brown to ochre brown
- Gills: same color as the cap
- Stipe: can have yellow fragments
- Quite common
- **Deadly poisonous**
- Can be mistaken for *Lactarius rufus* or other *Cortinarius* species
- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/suippumyrkkyseitikki>

Myrkkynäpikkä (*Galerina marginata*)

- Cap: cinnamon brown. Color varies when wet/dry



- Gills: light brown
- Stipe: brownish. Above the ring, the stipe has a very fine whitish powder. Fine white fibre at the tip of the stipe
- Smell: smells like flour
- Varies how they look
- **Deadly poisonous**
- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/myrkkynaapikka>

Pulkkosieni (*Paxillus involutus*)

- Cap: light brown or olive green
- Gills: rusty yellow and when touched they get darker instantly
- Stipe: yellow-brown
- Very common
- **Poisonous:** Allergenic.
- Can be mistaken for some *Lactarius* (i.e. *Lactarius turpis*), but they provide milky fluid as *Paxillus involutus* doesn't.
- Pictures: <http://www.luontoportti.com/suomi/fi/sienet/pulkkosieni>

3. Picking up mushrooms

- **Detach** the fruiting body gently from the ground (try not to break it).
- **Clean** the tip of the stipe of dirt with your knife. Use brush to clean the mushroom from rest of the dirt.
- **Cut** (at least bigger) fruiting bodies in half as they might have maggots inside.
- **Prepare/preserve** mushrooms as you come home. Picked mushrooms won't last long in room temperature (in fridge couple of days). Prepare them for food or preserve for later use (fry or boil and freeze, or dry).

4. Preparing for mushroom hunting

- Warm clothes!
- long sleeved shirt (hoodie, etc.)
- long trousers (water resistant, synthetic)
- Rubber boots (best protection against the ticks)!
- Hat or something else to wear (protection against the deer flies)
- Snacks and water!
- knife (with brush)
- bucket, containers, basket... (plastic bags if you don't have any other option...)
- Map and compass might come in handy



References:

- Salo P., Niemelä T., Salo U. *Suomen sieniopas*. Helsinki: WSOY. 2006.
- www.luontoportti.fi
- Pinkka. Lajituntemuksen oppimisympäristö. Helsinki: Helsingin yliopisto.
<http://www.helsinki.fi/pinkka/bio/1vuosi/sienituntemus52063/index>
- Säteilyturvakeskus. www.stuk.fi
- Own experience