FUNGAL ECOLOGY

(sometimes with special regard to macromycetes)

Fungi and their environment • Life strategies and interactions of fungi • Ecological groups of fungi, saprotrophs (terrestrial fungi, litter and plant debris, wood substrate, etc.) • Fungal symbioses (ectomycorrhiza, endomycorrhiza, endophytism, lichenism, bacteria, animal relationships) • Parasitism (parasites of animals and fungi, phytopathogenic fungi, types of parasitic relations) • Fungi in various habitats (coniferous forests, broadleaf forests, birch stands and non-forest habitats, fungal communities) • Fungal dispersal and distribution • Threat and protection of fungi

(the study material has not been corrected by native speaker)

Birch stands:
Cortinarius armillatus, *Tricholoma fulvum*
– mycorrhizal species;
Piptoporus betulinus
– saproparasite on wood of trunks and branches.

Note: A more accurate expression would probably be mixed stands with a predominance of birch, evolved by the invasion of heliophilous birch on treeless sites (clearings, abandoned pastures).

Birch stands: *Lactarius torminosus*, *Lactarius pubescens*, *Leccinum scabrum*, *Leccinum versipelle*. All mycorrhizal species.

Photo Dan Dvořák

Birch stands on peat soil:
Russula claroflava, *Leccinum holopus*, *Leccinum variicolor*.
All mycorrhizal species.

Treeless **raised bogs and transition mires** – mainly bryophilous and sphagnophilous parasites and saprotrophs: *Galerina paludosa*, *Hypholoma elongatum*, *Lyophyllum palustre*, *Arrhenia sphagnicola*.

Photo
Dan Dvořák
(2x left),
Josef Hlásek
(2x right)

Reed beds and high sedge stands:

Mycena typhae, *Psathyrella typhae*, *Epithele typhae*, *Marasmius limosus*

Alpine treeless vegetation: In the Czech Republic it is represented almost exclusively by arcto-alpine tundra (mainly in the Giant Mts. = Krkonoše) – several typical (mostly rare) species are presented here: *Entoloma alpicolum* – mykorrhizal symbiont of willows; *E. fuscotomentosum*, *Ramariopsis subarctica*, *Chromosera lilacina* (syn. *Hygrocybe l.*) – humus saprotrophs.

Photo Dan Dvořák (4x)




Wet meadows and grasslands: *Hygrocybe coccinea*, *Hygrocybe miniata*, *Gliophorus psittacinus* (syn. *Hygrocybe psittacina*), *Entoloma porphyrophaeum*. All humus-decomposing saprotrophs.

Pastures and meadows (middle water-saturated, from lowlands to mountains)**:** *Marasmius oreades*, *Agaricus crocodillinus* (syn. *A. urinascens*, *A. macrosporus*), *Leucoagaricus leucothites*, *Stropharia coronilla*. All humus-decomposing saprotrophs.

Pastures and meadows: *Coprinus comatus*, *Melanoleuca brevipes*, *Lepista saeva*. All humus-decomposing saprotrophs.

Photo Dan Dvořák

Ruderal habitats:
Agrocybe praecox –
humus-decomposing saprotroph;
strongly eutrophic sites:
Panaeolina foenisecii –
litter-decomposing saprotroph;
open sites under rosaceous trees or shrubs: *Entoloma clypeatum* –
mycorrhizal species.


Photo Dan Dvořák

Slope and rock steppes
(on acidic and base-rich substrates)**:**
Pleurotus eryngii, *Polyporus rhizophilus*
– saproparasites on basal parts of herbs;
Tulostoma brumale – humus-decomposing saprotroph, growing on calcareous bedrock.

Grasslands on sandy soil host **psammophilous species:** *Geopora arenosa*;
grasslands on xerothermic base-rich habitats: *Geastrum floriforme*;
grasslands under black locust: *Phallus hadriani*. All humus-decomposing saprotrophs.