

# Exclusive species of beech forests

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Base	Exposed side	Protected side
<i>Parmeliopsis ambigua</i> mosses	<i>Lecanora subfusca</i> <i>Phlyctis</i> <i>Parmelia saxatilis</i> mosses and <i>Lobaria</i>	<i>Lecanora-Phlyctis</i> <i>Parmelia saxatilis</i>

In his paper on the beech forests in the neighbourhood of Kdyně, Hilitzer (4) describes in detail the epiphytic vegetation of mosses and lichens and distinguishes 21 sociations as accompanying sociations of beech forests.

Very characteristic and different from that of the spruce forests is the mycoflora of the beech forests, especially as regards *Hymenomycetinae*. Numerous contributions on the fungi of our beech forests have been published, but notwithstanding, it is not possible at present to make a sociological analysis of the beech forest mycoflora of the whole state.

#### XV. Exclusive species of beech forests.

Beech forests are one of the rather exceptional communities in which we may perhaps distinguish faithful (exclusive) species, although even here the number of the absolutely exclusive species is insignificant when taking the whole Czechoslovak republic into consideration. Under special conditions, many beech forest species go over also into other sociations, however, avoid spruce forests with acid soils; many are at home in mixed spruce forests with fir, maple, and beech. Many species, and even whole communities, especially *Caricetum pilosae* and *Melicetum uniflorae*, penetrate beyond the limits of beech forests into mixed oak and hornbeam forests. Nevertheless, a rather great number of species is more or less confined to beech forests and these species may by therefore designated as beech forest species. With regard to the whole territory of our state, we can classify these species into three categories according to their more or less frequent occurrence outside of the beech forests. The exclusive species of the beech forests are given in the first group.

##### A. Especially characteristic beech forest species.

*Asperula odorata* (generally in our beech forests, on all kinds of geological substrata, from foothills up to the mountain region).

*Arabis turrata* (a calcicole Carpathian species).  
*Atropa belladonna* (in the whole region).  
*Cynoglossum montanum* (a calciphilous Carpathian species).  
*Dactylis Aschersoniana* (generally, most abundant in the Western Carpathians).  
*Elymus europaeus* (in the whole region).  
*Fraxinus excelsior* (mainly in the Carpathians).  
*Hacquetia epipactis* (a Carpathian species).  
*Hesperis nivea* (a Carpathian species).  
*Phyllitis scolopendrium* (a calciphilous Carpathian species, also on Flysch in Subcarpathian Russia).  
*Polystichum Braunii* (chiefly in the Carpathians).  
*Polystichum Luerksenii* (Eastern Carpathians).  
*Scopolia atropoides* (Eastern Carpathians, also Pienines.).

**B. Rather characteristic beech forest species.**

*Acer platanoides* (in the whole region).  
*Acer pseudoplatanus* (in the whole region).  
*Aconitum vulparia* (generally, with preference on limestone soils).  
*Actaea spicata* (in the whole region).  
*Allium ursinum* (in the Carpathians more frequent than in the Sudetic-Hercynian region).  
*Anthriscus nitida* (in the whole region, more frequent in the Carpathians).  
*Aquilegia longisepala* (in the Western Carpathians, otherwise in the whole region the closely allied *A. vulgaris* (scattered)).  
*Arabis pauciflora* (only here and there).  
*Arum maculatum* (more frequent in the Carpathian region).  
*Bromus asper* (in the whole region).  
*Cardamine trifolia* (from southern Bohemia to Slovakia).  
*Carex alba* (Carpathians).  
*Carex digitata* (common in the whole region).  
*Carex pilosa* (Carpathians, penetrates, however, as far as Central Bohemia).  
*Cephalanthera ensifolia* (in the whole region scattered).  
*Cephalanthera rubra* (in the whole region, most abundant on limestone in the Western Carpathians).

- Cyclamen europaeum* (rarely in the Western Carpathians and in Moravia).
- Cypripedium calceolus* (only scattered in the whole region).
- Daphne mezereum* (in the whole region).
- Dentaria bulbifera* (in the whole region).
- Dentaria glandulosa* (Carpathians, westwards towards Olomouc).
- Dentaria enneaphyllos* (in the whole region, more frequent westwards).
- Epipactis microphylla* (a Western Carpathian type).
- Epipogon aphyllus* (rare except the Carpathian region).
- Erythronium dens canis* (Eastern Carpathians, also Medník on Sáza-va in Bohemia).
- Euphorbia amygdaloides* (rare except the Carpathian region).
- Euphorbia carniolica* (An Eastern Carpathian species, but here also in the polonines).
- Festuca silvatica* (in the whole region).
- Galanthus nivalis* (in beech forests chiefly in the Carpathian region).
- Geranium phaeum* (becoming rare towards the West).
- Geum aleppicum* (Carpathians, penetrates westwards to the Česko-moravská vysočina Mts.).
- Glechoma hirsuta* (a Carpathian species, westwards to Jihlava).
- Hedera helix* (in the whole region).
- Helleborus purpurascens* (Eastern Carpathians).
- Isopyrum thalictroides* (common in the Carpathians, becoming rare in the Sudetic-Hercynian region).
- Lamium luteum* (common in the whole region).
- Lonicera nigra* (in the whole region, abundant at higher altitudes).
- Lunaria rediviva* (in the whole region).
- Melica uniflora* (in the whole region, more frequent in the Carpathian part).
- Mercurialis perennis* (common in the whole region).
- Milium effusum* (in the whole region frequent).
- Oryzopsis virescens* (southwestern Carpathians).
- Parietaria officinalis* (in beech forests, in the Western Carpathians).
- Petasites albus* (in the whole region frequent).
- Polistichum lobatum* (in the whole region).
- Primula vulgaris* (Carpathians).

*Pulmonaria Filarszkyana* (Eastern Carpathians).  
*Ranunculus cassubicus* (abundant in the whole region).  
*Ranunculus dentatus* (An Eastern Carpathian species, but here also  
in the polonines).  
*Sanicula europaea* (in the whole region abundant).  
*Symphytum cordatum* (an Eastern Carpathian species, penetrating  
westwards into the Pieniny Mts. and the Tatras of Biela).  
*Ulmus scabra* (in the whole region).  
*Valeriana sambucifolia* (in the whole region).  
*Verbascum lanatum* (Eastern Carpathians).  
*Veronica montana* (in the whole region).  
*Veronica urticifolia* (Eastern Carpathians).  
*Vinca minor* (only scattered in the whole region).  
*Viola mirabilis* (in the whole region).

**C. Less characteristic beech forest species.**

*Aconitum moldavicum* (Carpathians).  
*Adoxa moschattelina* (in the whole region).  
*Anemone nemorosa* (in the whole region).  
*Brachypodium silvaticum* (in the whole region).  
*Bupleurum longifolium* (in the whole region, chiefly on limestone).  
*Campanula latifolia* (very scattered).  
*Cardamine impatiens* (abundant in the whole region).  
*Carex silvatica* (frequent in the whole region).  
*Cephalanthera alba* (in the whole region).  
*Circaea alpina* (in the whole region).  
*Circaea lutetiana* (in the whole region).  
*Coralliorrhiza trifida* (in the whole region, in the Carpathians, how-  
ever, often in spruce forests).  
*Cortusa Matthiolii* (a Carpathian limestone type with an isolated lo-  
cality in the Moravian Karst district).  
*Dipsacus pilosus* (very scattered, more frequent in the Carpathian  
region).  
*Epilobium montanum* (common in the whole region).  
*Galeopsis grandiflora* (in the whole region).  
*Galium Schultesii* (rare with exception of the Carpathian region).  
*Geranium Robertianum* (common in the whole region).

*Hepatica triloba* (more frequent in the Sudetic-Hercynian part).  
*Knautia silvatica* (scattered in the whole region).  
*Lactuca muralis* (common in the whole region).  
*Lilium martagon* (abundantly scattered in the whole region).  
*Mulgedium alpinum* (in the whole region at higher altitudes).  
*Orobanche flava* (Carpathians, upon *Petasites albus*).  
*Polygonatum verticillatum* (in the whole region, especially in mountains).  
*Polystichum lonchitis* (in the beech forests, only on limestone in the Carpathians rather frequent).  
*Prenanthes purpurea* (in the whole region).  
*Rubus idaeus* (common in the whole region).  
*Rubus saxatilis* (scattered in the whole region, in the Western Carpathians very abundant).  
*Salvia glutinosa* (mainly in the Carpathians, besides in southern Bohemia in the Vltava River valley).  
*Scrophularia Scopolii* (in the Carpathians and in Jeseníky).  
*Senecio Fuchsii* and *S. nemorensis* (abundant in the whole region).  
*Spiraea media* (a Carpathian species, in beech forests only in Subcarpathian Russia).  
*Staphylea pinnata* (scattered, chiefly in the Carpathians).  
*Symphytum tuberosum* (abundant in the whole region).  
*Urtica dioica* (common in the whole region).  
*Viola silvatica* (abundant in the whole region).

#### XVI. Mixed forests with beech.

Beech forests, themselves, may be more or less mixed, in which case evidently the fir and the maple (*Acer pseudoplatanus*) agree with the beech better than the spruce, as the latter sometimes influences the undergrowth, even in small groups, and can even give rise to fragments of various spruce types: Solitarily scattered spruces, however, do not disturb the sociological character of the beech forest.

In estimating mixed forests where the beech is only interspersed, great care must be exercised because of the influence of forest culture. It is, however, quite doubtless that there exist, in our country, mixed forests with beech not only as transitional types but also as distinct sociations. Mountain spruce forests (as well as spruce — fir