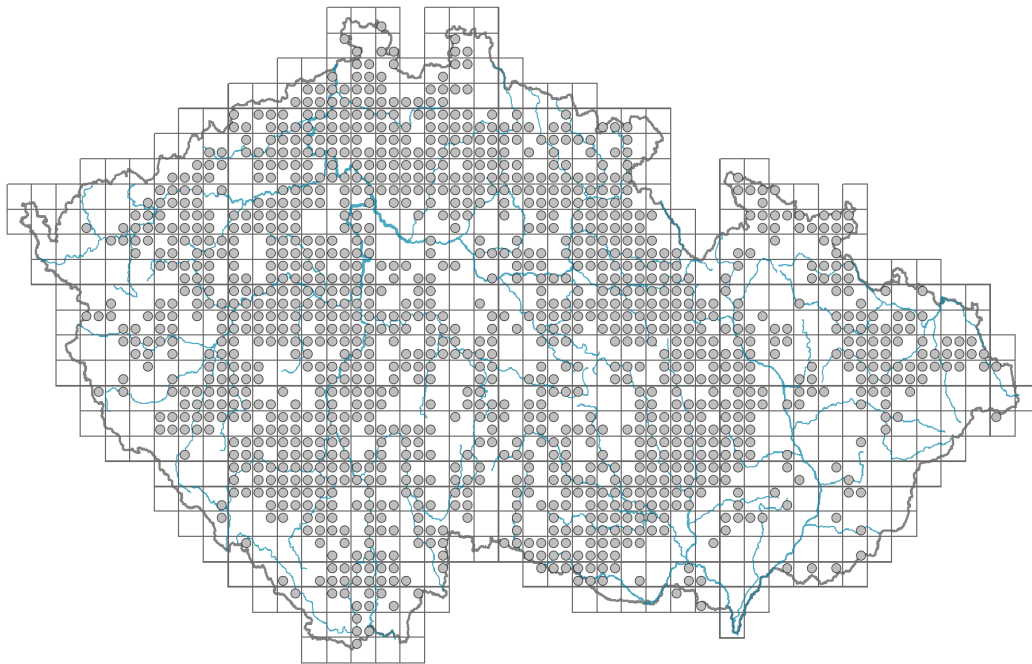


# *Hepatica nobilis*

## Distribution



Map info

- revised records
- unrevised records

On the map are not visualized records without the coordinates and records marked as incorrect or doubtful.



## Habitus and growth type

Height [m]: **0.05-0.15**

Growth form: **clonal herb**

Life form: **hemicryptophyte**

Life strategy: **CSR - competitor/stress-tolerator/ruderal**

Life strategy (Pierce method based on leaf traits): **CR**

Life strategy (Pierce method, C-score): **46.5 %**

Life strategy (Pierce method, S-score): **10.5 %**

Life strategy (Pierce method, R-score): **43.1 %**

## Leaf

Leaf presence and metamorphosis: **leaves present, not modified**

Leaf arrangement (phyllotaxis): **rosulate**

Leaf shape: **simple - palmately divided**

Stipules: **absent**

Petiole: **present**

Leaf life span: **evergreen**

Leaf anatomy: **scleromorphic, mesomorphic**

## Flower

Flowering period [month]: **March-April**



Flowering phase: **1 Corylus avellana-Leucojum vernum (pre-spring)**  
 Flower colour: **white, pink, blue**  
 Flower symmetry: **actinomorphic**  
 Perianth type: **homochlamydeous**  
 Perianth fusion: **free**  
 Inflorescence type: **flores solitarii**  
 Dicliny: **synoecious, gynomonoecious, gynodioecious**  
 Generative reproduction type: **mixed mating**  
 Pollination syndrome: **insect-pollination, selfing**

### Fruit, seed and dispersal

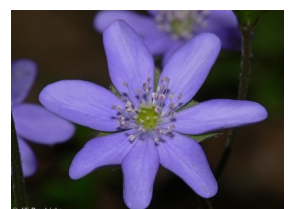
Fruit type: **dry fruit - head of achenes**  
 Fruit colour: **brown**  
 Reproduction type: **by seed/spores and vegetatively**  
 Dispersal unit (diaspore): **fruit, infructescence or its part**  
 Dispersal strategy: **Allium (mainly autochory)**  
 Myrmecochory: **myrmecochorous**

### Belowground organs and clonality

Shoot metamorphosis: **rhizome**  
 Storage organ: **rhizome**  
 Type of clonal growth organ: **epigeogenous rhizome**  
 Freely dispersible organs of clonal growth: **absent**  
 Shoot life span (cyclicality): **monocyclic shoots prevailing**  
 Branching type of stem-derived organs of clonal growth: **monopodial**  
 Primary root: **absent**  
 Persistence of the clonal growth organ [year]: **4**  
 Number of clonal offspring: **0.5**  
 Lateral spreading distance by clonal growth [m]: **0.03**  
 Clonal index: **2**  
 Bud bank  
 Number of buds per shoot at the soil surface (root buds excluded): **4**  
 Number of buds per shoot at a depth of 0–10 cm (root buds excluded): **15**  
 Number of buds per shoot at a depth greater than 10 cm (root buds excluded): **0**  
 Size of the belowground bud bank (root buds excluded): **19**  
 Depth of the belowground bud bank (root buds excluded) [cm]: **4**  
 Number of buds per shoot at the soil surface (root buds included): **4**  
 Number of buds per shoot at a depth of 0–10 cm (root buds included): **15**  
 Number of buds per shoot at a depth greater than 10 cm (root buds included): **0**  
 Size of the belowground bud bank (root buds included): **19**  
 Depth of the belowground bud bank (root buds included) [cm]: **4**

### Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**  
 Carnivory: **non-carnivorous**  
 Symbiotic nitrogen fixation: **no nitrogen-fixing symbionts**



## Karyology

Chromosome number (2n): **14**

Ploidy level (x): **2**

2C genome size [Mbp]: **28844.28**

1Cx monoploid genome size [Mbp]: **14422.14**

Genomic GC content: **42.3 %**

## Taxon origin

Origin in the Czech Republic: **native**

## Ecological indicator values

### Ellenberg-type indicator values

Light indicator value: **4 - transition between values 3 and 5**

Temperature indicator value: **6 - transition between values 5 and 7**

Moisture indicator value: **5 - indicator of fresh soils, focus on soils of average moisture, missing on wet and on soils that frequently dry out**

Reaction indicator value: **7 - indicator of slightly acidic to slightly basic conditions, never occurring in very acidic conditions**

Nutrient indicator value: **5 - occurring at moderately nutrient-rich sites, and less frequently at poor and rich sites**

Salinity indicator value: **0 - not salt tolerant, glycophyte**

### Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-1.97**

Herb layer disturbance frequency indicator value: **-0.74**

Whole-community disturbance severity indicator value: **0.23**

Herb layer disturbance severity indicator value: **0.05**

Whole-community structure based disturbance indicator value: **0.07**

Herb layer structure-based disturbance indicator value: **0.17**

## Habitat and sociology

### Occurrence in habitats

1 Vegetation of cliffs, screes and walls

1A Calcareous cliffs: **1 - rare occurrence**

8 Dry grasslands

8B Submediterranean dry grasslands on rock outcrops: **1 - rare occurrence**

8D Broad-leaved dry grasslands: **1 - rare occurrence**

8F Thermophilous forest fringe vegetation: **1 - rare occurrence**

11 Heathlands and scrub

11L Tall mesic and xeric shrub: **1 - rare occurrence**

11N Low xeric scrub: **1 - rare occurrence**

12 Forests

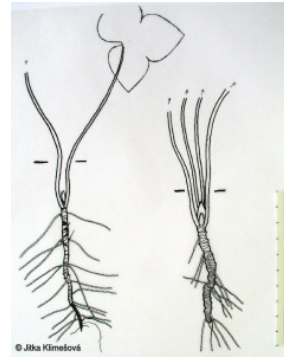
12B Alluvial forests: **1 - rare occurrence**

12C Oak-hornbeam forests: **2 - optimum**

12D Ravine forests: **2 - optimum**



- 12E Herb-rich beech forests: **2 - optimum**  
 12F Limestone beech forests: **2 - optimum**  
 12G Acidophilous beech forests: **1 - rare occurrence**  
 12H Peri-Alpidic basiphilous thermophilous oak forests: **2 - optimum**  
 12I Sub-continental thermophilous oak forests: **2 - optimum**  
 12J Acidophilous thermophilous oak forests: **1 - rare occurrence**  
 12K Acidophilous oak forests: **1 - rare occurrence**  
 12T Robinia pseudacacia plantations: **1 - rare occurrence**  
 12V Spruce plantations: **1 - rare occurrence**  
 12W Pine and larch plantations: **1 - rare occurrence**



### 13 Anthropogenic vegetation

- 13F Herbaceous vegetation of forests clearings and Rubus scrub: **1 - rare occurrence**

### Affinity to the forest environment

Affinity to the forest environment in Thermophyticum: **1.1 - taxon occurring mainly in the closed forest**

Affinity to the forest environment in Mesophyticum and Oreophyticum: **1.1 - taxon occurring mainly in the closed forest**

### Diagnostic taxon

Diagnostic taxon of classes: [LB Carpino-Fagetea](#), [LC Quercetea pubescentis](#)

Diagnostic taxon of alliances: [LBB Carpinion betuli](#), [LBD Sorbo-Fagion sylvaticae](#), [LBF Tilio platyphylli-Acerion](#), [LCA Quercion pubescenti-petraeae](#)

Diagnostic taxon of associations: [KBB03 Populo tremulae-Coryletum avellanae](#), [KBC04 Senecioni fuchsii-Coryletum avellanae](#), [LBB01 Galio sylvatici-Carpinetum betuli](#), [LBB02 Stellario holostea-Carpinetum betuli](#), [LBD01 Cephalanthero damasonii-Fagetum sylvaticae](#), [LBF01 Aceri-Tilietum](#), [LBF04 Seslerio albicantis-Tilietum cordatae](#), [LCA01 Lathyro collini-Quercetum pubescentis](#), [LCA03 Euphorbio-Quercetum](#)

### Constant taxon

Constant taxon of alliances: [LBB Carpinion betuli](#), [LBD Sorbo-Fagion sylvaticae](#), [LCA Quercion pubescenti-petraeae](#)

Constant taxon of associations: [KBB03 Populo tremulae-Coryletum avellanae](#), [KBC04 Senecioni fuchsii-Coryletum avellanae](#), [LBB01 Galio sylvatici-Carpinetum betuli](#), [LBB02 Stellario holostea-Carpinetum betuli](#), [LBD01 Cephalanthero damasonii-Fagetum sylvaticae](#), [LBF01 Aceri-Tilietum](#), [LBF04 Seslerio albicantis-Tilietum cordatae](#), [LCA01 Lathyro collini-Quercetum pubescentis](#), [LCA03 Euphorbio-Quercetum](#), [LCC03 Melico pictae-Quercetum roboris](#)

### Ecological specialization indices

Ecological specialization index for all vegetation types: **5.3**

Ecological specialization index for non-forest vegetation: **4**

Ecological specialization index for forest vegetation: **5.4**

### Colonization ability

Index of colonization success (ICS): **5**

Index of colonization potential (ICP): **4**

Optimum successional age [years]: **4**

### Distribution and frequency

Floristic zone: **northern temperate, southern temperate, submeridional**

Floristic region: **Europe, Eastern Asia**

Continentality degree: **5**

Distribution range extension along the continentality gradient: **3**

Elevational belt in the Czech Republic: **lowlands, colline belt, submontane belt**

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: **491**

taxon.data.freq\_in\_quad: **1296**

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **2.4 %**

Occurrence frequency in vegetation plots with a cover above 5%: **15.4 %**

Occurrence frequency in vegetation plots with a cover above 25%: **1 %**

Occurrence frequency in vegetation plots with a cover above 50%: **0 %**

Mean percentage cover in vegetation plots: **4.1 %**

Maximum percentage cover in vegetation plots: **38 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **20**

Number of narrow habitats in which the taxon has its optimum: **6**

Number of broad habitats in which the taxon occurs: **5**

Number of broad habitats in which the taxon has its optimum: **1**

### **Threats and protection**

Red List 2017 (national categories): **taxon is not on the Red List**

Red List 2017 (IUCN categories): **LC(NA) - least concern (taxon is not on the Red List)**

Legal protection: **not protected by law**