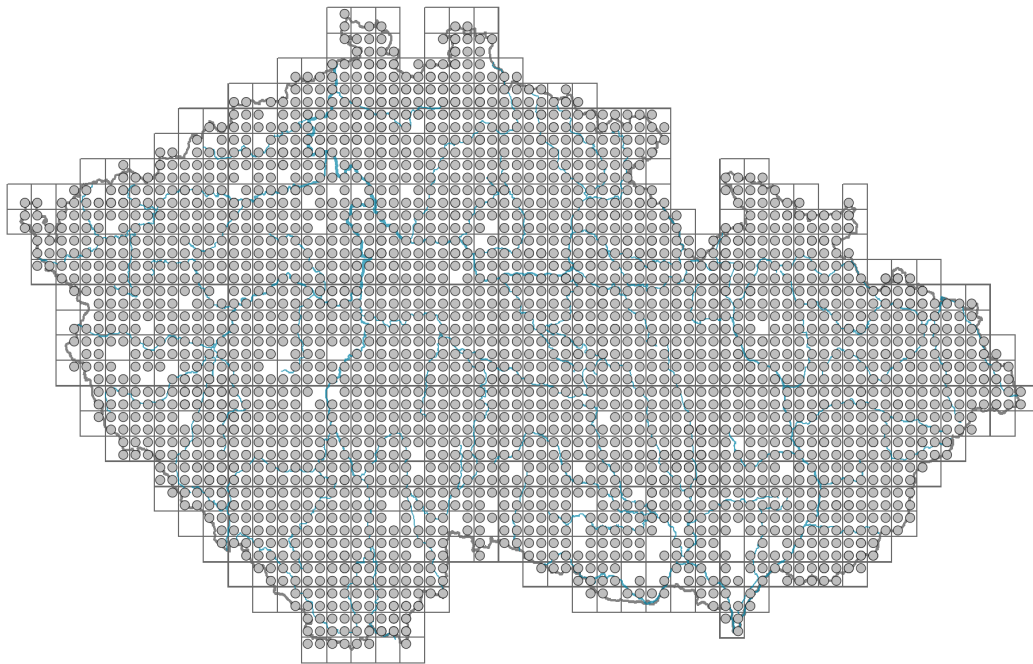


# *Heracleum sphondylium*

## Distribution



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### Map info

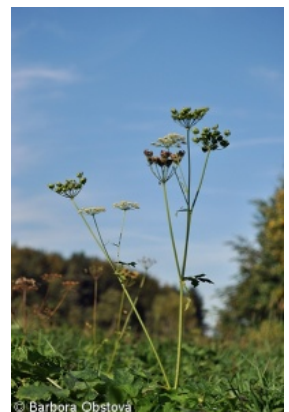
● revised records

○ unrevised records

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



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## Habitus and growth type

Height [m]: **0.3-2**

Growth form: **polycarpic perennial non-clonal herb**

Life form: **hemicryptophyte**

Life strategy: **C - competitor**

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

Life strategy (Pierce method, C-score): **81.8 %**

Life strategy (Pierce method, S-score): **7.7 %**

Life strategy (Pierce method, R-score): **10.6 %**

## Leaf

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

Leaf arrangement (phyllotaxis): **alternate**

Leaf shape: **compound - ternate, compound - imparipinnate**

Stipules: **absent**

Petiole: **present**

Leaf life span: **summer green**

Leaf anatomy: **mesomorphic**

## Flower

Flowering period [month]: **June-September**

Flowering phase: **6 Cornus sanguinea-Melica uniflora (start of early summer)**

Flower colour: **white, green-white, yellow-green**

Flower symmetry: **actinomorphic, zygomorphic**

Perianth type: **calyx reduced, corolla present**

Perianth fusion: **free**

Calyx fusion: **aposepalous**

Inflorescence type: **umbrella composita**

Dicliny: **synoecious, gynomonoecious, andromonoecious**

Generative reproduction type: **facultative allogamy**

Pollination syndrome: **insect-pollination, geitonogamy**

Pollinator spectrum: **flies s. l., meat flies s. l., other Diptera (honeybee, bumblebees, solitary bees, other Hymenoptera, hoverflies, butterflies, beetles, nitidulids, thrips, other pollinators, unknown)**

## Fruit, seed and dispersal

Fruit type: **dry fruit - cremocarp**

Reproduction type: **mostly by seed/spores, rarely vegetatively**

Dispersal unit (diaspore): **fruit, infructescence or its part**

Dispersal strategy: **Allium (mainly autochory)**

Myrmecochory: **non-myrmecochorous (b)**

## Belowground organs and clonality

Shoot metamorphosis: **pleiocorm**

Root metamorphosis: **primary storage root**

Storage organ: **pleiocorm, primary storage root**

Shoot life span (cyclicity): **dicyclic or polycyclic shoots prevailing**

Branching type of stem-derived organs of clonal growth: **sympodial**

Primary root: **present**

## Bud bank

Number of buds per shoot at the soil surface (root buds excluded): **5**

Number of buds per shoot at a depth of 0–10 cm (root buds excluded): **12**

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): **17**

Depth of the belowground bud bank (root buds excluded) [cm]: **4**

Number of buds per shoot at the soil surface (root buds included): **5**

Number of buds per shoot at a depth of 0–10 cm (root buds included): **12**

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): **17**

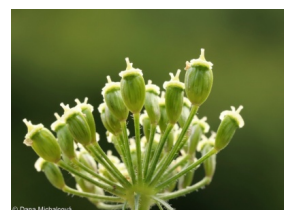
Depth of the belowground bud bank (root buds included) [cm]: **4**

## Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**

Carnivory: **non-carnivorous**

Symbiotic nitrogen fixation: **no nitrogen-fixing symbionts**



## Karyology

Chromosome number (2n): **22**

Ploidy level (x): **2**

2C genome size [Mbp]: **4017**

1Cx monoploid genome size [Mbp]: **2008.5**

Genomic GC content: **39.9 %**

## Taxon origin

Origin in the Czech Republic: **native**

## Ecological indicator values

### Ellenberg-type indicator values

Light indicator value: **7 - half-light plant, mostly occurring at full light, but also in the shade up to about 30% of diffuse radiation incident in an open area**

Temperature indicator value: **5x - moderate heat indicator, occurring from lowland to montane belt, mainly in submontane-temperate areas (generalist)**

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: **6x - transition between values 5 and 7 (generalist)**

Nutrient indicator value: **8 - pronounced nutrient indicator**

Salinity indicator value: **1 - salt tolerant, mostly on low-salt to salt-free soils, but occasionally on slightly salty soils**

### Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-1.2**

Herb layer disturbance frequency indicator value: **-0.45**

Whole-community disturbance severity indicator value: **0.39**

Herb layer disturbance severity indicator value: **0.38**

Whole-community structure based disturbance indicator value: **0.36**

Herb layer structure-based disturbance indicator value: **0.46**

## Habitat and sociology

### Occurrence in habitats

1 Vegetation of cliffs, screes and walls

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

1B Siliceous cliffs and block fields: **1 - rare occurrence**

1C Walls: **1 - rare occurrence**

1D Mobile calcareous screes: **1 - rare occurrence**

2 Alpine and subalpine grasslands

2B Subalpine tall-forb and tall-grass vegetation: **1 - rare occurrence**

4 Wetland and riverine herbaceous vegetation

4A Reed-beds of eutrophic still waters: **1 - rare occurrence**

4B Halophilous reed and sedge beds: **1 - rare occurrence**

4D Riverine reed vegetation: **1 - rare occurrence**

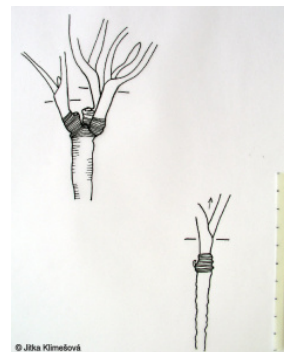
4G Tall-sedge beds: **1 - rare occurrence**



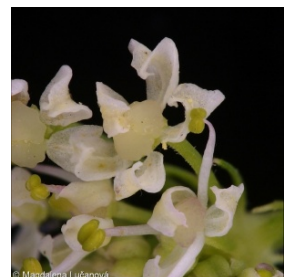
- 4I Vegetation of nitrophilous annual hygrophilous herbs: **1 - rare occurrence**
- 4J River gravel banks: **1 - rare occurrence**
- 4K Petasites fringes of montane brooks: **2 - optimum**
- 4L Nitrophilous herbaceous fringes of lowland rivers: **2 - optimum**
- 5 Vegetation of springs and mires
- 5B Lowland to montane soft-water springs: **1 - rare occurrence**
- 5D Calcareous fens: **1 - rare occurrence**
- 5E Acidic moss-rich fens and peatland meadows: **1 - rare occurrence**
- 6 Meadows and mesic pastures
- 6A Mesic Arrhenatherum meadows: **2 - optimum**
- 6B Montane mesic meadows: **2 - optimum**
- 6C Pastures and park grasslands: **1 - rare occurrence**
- 6D Alluvial meadows of lowland rivers: **2 - optimum**
- 6E Wet Cirsium meadows: **1 - rare occurrence**
- 6F Intermittently wet Molinia meadows: **1 - rare occurrence**
- 6G Vegetation of wet disturbed soils: **1 - rare occurrence**
- 7 Acidophilous grasslands
- 7A Subalpine and montane acidophilous grasslands: **1 - rare occurrence**
- 7B Submontane Nardus grasslands: **1 - rare occurrence**
- 8 Dry grasslands
- 8D Broad-leaved dry grasslands: **1 - rare occurrence**
- 8E Acidophilous dry grasslands: **1 - rare occurrence**
- 8F Thermophilous forest fringe vegetation: **1 - rare occurrence**
- 9 Sand grasslands and rock-outcrop vegetation
- 9C Festuca grasslands on acidic sands: **1 - rare occurrence**
- 10 Saline vegetation
- 10I Inland saline meadows: **1 - rare occurrence**
- 11 Heathlands and scrub
- 11H Subalpine deciduous scrub: **1 - rare occurrence**
- 11J Willow galleries of loamy and sandy river banks: **2 - optimum**
- 11L Tall mesic and xeric shrub: **2 - optimum**
- 11N Low xeric scrub: **1 - rare occurrence**
- 11R Scrub and pioneer woodland of forests clearings: **1 - rare occurrence**
- 12 Forests
- 12B Alluvial forests: **2 - optimum**
- 12C Oak-hornbeam forests: **2 - optimum**
- 12D Ravine forests: **1 - rare occurrence**
- 12E Herb-rich beech forests: **1 - rare occurrence**
- 12F Limestone beech forests: **2 - optimum**
- 12H Peri-Alpidic basiphilous thermophilous oak forests: **1 - rare occurrence**
- 12I Sub-continental thermophilous oak forests: **1 - rare occurrence**
- 12J Acidophilous thermophilous oak forests: **1 - rare occurrence**
- 12K Acidophilous oak forests: **1 - rare occurrence**
- 12O Peri-Alpidic pine forests: **1 - rare occurrence**
- 12T Robinia pseudacacia plantations: **2 - optimum**
- 12U Plantations of broad-leaved non-native trees: **2 - optimum**



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12V Spruce plantations: **1 - rare occurrence**

12W Pine and larch plantations: **1 - rare occurrence**

13 Anthropogenic vegetation

13A Annual vegetation of ruderal habitats: **1 - rare occurrence**

13B Annual vegetation of arable land: **1 - rare occurrence**

13C Annual vegetation of trampled habitats: **1 - rare occurrence**

13D Perennial thermophilous ruderal vegetation: **2 - optimum**

13E Perennial nitrophilous herbaceous vegetation of mesic sites: **2 - optimum**

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

Affinity to the forest environment

Affinity to the forest environment in Thermophyticum: **2.2 - taxon occurring partly in the forest, but mainly in open vegetation**

Affinity to the forest environment in Mesophyticum and Oreophyticum: **2.2 - taxon occurring partly in the forest, but mainly in open vegetation**

Diagnostic taxon

Diagnostic taxon of associations: [XDE06 \*Anthriscus nitidae-Aegopodietum podagrariae\*](#)

Constant taxon

Constant taxon of alliances: [XDB \*Petasition hybridi\*](#)

Constant taxon of associations: [ADD03 \*Trollio altissimi-Geranium sylvatici\*](#), [ADD04 \*Laserpitio archangelicae-Dactylidetum glomeratae\*](#), [KAB02 \*Salicetum purpureae\*](#), [TDA01 \*Pastinaco sativae-Arrhenatheretum elatioris\*](#), [TDA04 \*Potentillo albae-Festucetum rubrae\*](#), [TDB01 \*Geranio sylvatici-Trisetetum flavescens\*](#), [XDB01 \*Petasitetum hybridi\*](#), [XDE01 \*Elytrigio repentis-Aegopodietum podagrariae\*](#), [XDE02 \*Symphyto officinalis-Anthriscetum sylvestris\*](#), [XDE03 \*Chaerophylletum aromatici\*](#), [XDE04 \*Chaerophylletum aurei\*](#), [XDE05 \*Chaerophylletum bulbosi\*](#), [XDE06 \*Anthriscus nitidae-Aegopodietum podagrariae\*](#)

Dominant taxon

Dominant taxon of associations: [XDE04 \*Chaerophylletum aurei\*](#)

Ecological specialization indices

Ecological specialization index for all vegetation types: **4.2**

Ecological specialization index for non-forest vegetation: **4.8**

Ecological specialization index for forest vegetation: **5.1**

Colonization ability

Index of colonization success (ICS): **7**

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

Optimum successional age [years]: **32**

## Distribution and frequency

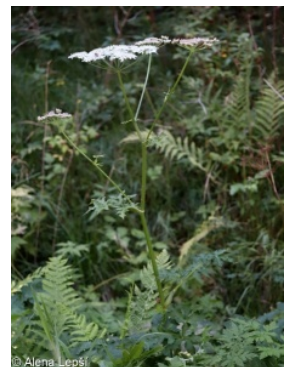
Floristic zone: **boreal, northern temperate, southern temperate, submeridional, meridional**

Floristic region: **Europe, Western Asia**

Distribution range extension along the continentality gradient: **7**

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

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: **665**



taxon.data.freq\_in\_quad: 2394

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **6.5 %**

Occurrence frequency in vegetation plots with a cover above 5%: **6.5 %**

Occurrence frequency in vegetation plots with a cover above 25%: **0.7 %**

Occurrence frequency in vegetation plots with a cover above 50%: **0.1 %**

Mean percentage cover in vegetation plots: **3 %**

Maximum percentage cover in vegetation plots: **63 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **55**

Number of narrow habitats in which the taxon has its optimum: **14**

Number of broad habitats in which the taxon occurs: **12**

Number of broad habitats in which the taxon has its optimum: **5**

### Threats and protection

Legal protection: **not protected by law**

