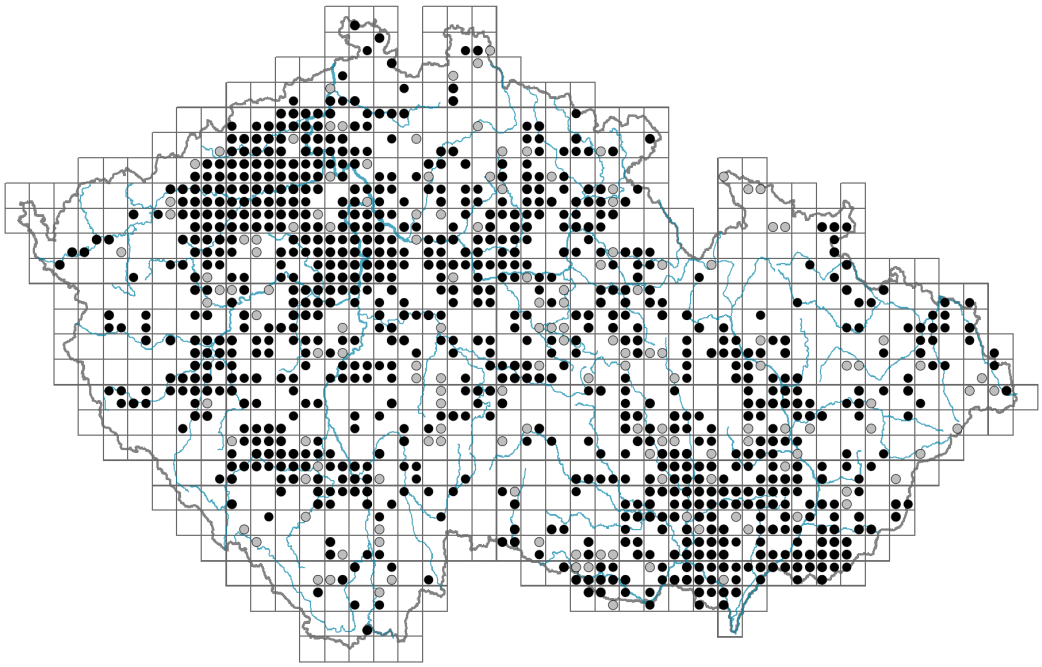
Echinops sphaerocephalus

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]: **0.6–2.2**
Growth form: **monocarpic perennial non-clonal herb**
Life form: **hemicryptophyte**
Life strategy: **C – competitor**

Leaf

Leaf presence and metamorphosis: **leaves present, not modified**
Leaf arrangement (phyllotaxis): **alternate**
Leaf shape: **simple – pinnately divided**
Stipules: **absent**
Petiole: **both present and absent**
Leaf life span: **summer green**
Leaf anatomy: **scleromorphic**

Flower

Flowering period [month]: **July–August**
Flowering phase: **8 Clematis vitalba-Galium sylvaticum (mid-summer)**
Flower colour: **white, blue**
Flower symmetry: **actinomorphic**
Perianth type: **calyx reduced, corolla present**

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Perianth fusion: **fused**
Shape of the sympetalous corolla or syntepalous perianth: **tubular**
Calyx fusion: **pappus**
Inflorescence type: **anthella ex capitulis anthodiorum composita**
Dicliny: **synoecious**
Generative reproduction type: **facultative allogamy**
Pollination syndrome: **insect-pollination**
Pollinator spectrum: **honeybee, bumblebees, solitary bees**



Fruit, seed and dispersal

Fruit type: **dry fruit – achene/cypsela/samara**
Fruit colour: **yellow, brown**
Reproduction type: **only by seed/spores**
Dispersal unit (diaspore): **fruit, infrutescence or its part**
Dispersal strategy: **Bidens (mainly autochory and epizoochory)**
Myrmecochory: **probably myrmecochorous**



Belowground organs and clonality

Root metamorphosis: **primary storage root**
Storage organ: **primary storage root**
Shoot life span (cyclicity): **dicyclic or polycyclic shoots prevailing**
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): **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): **20**
Depth of the belowground bud bank (root buds exluded) [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): **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): **20**
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): **32**
Ploidy level (x): **4**
2C genome size [Mbp]: **6948.16**
1Cx monoploid genome size [Mbp]: **1737.04**
Genomic GC content: **41 %**



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Taxon origin



Origin in the Czech Republic: **neophyte**
Invasion status: **invasive**
Geographic origin: **Europe, Mediterranean**
Year of the first record in the wild: **1802**
Period of introduction: **Late Modern Period (1800–1950)**
Introduction pathway: **intentional – nature, intentional – other, unintentional – anthropogenic**

Ecological indicator values



Ellenberg-type indicator values

Light indicator value: **8 – light plant, only exceptionally occurring at less than 40% of diffuse radiation incident in an open area**
Temperature indicator value: **7 – heat indicator, occurring in relatively warm lowlands**
Moisture indicator value: **4 – transition between values 3 and 5**
Reaction indicator value: **7 – indicator of slightly acidic to slightly basic conditions, never occurring in very acidic conditions**
Nutrient indicator value: **7 – occurring at nutrient-rich sites more often than at average sites and only exceptionally at poor sites**
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: **-0.37**
Herb layer disturbance frequency indicator value: **-0.37**
Whole-community disturbance severity indicator value: **0.62**
Herb layer disturbance severity indicator value: **0.62**
Whole-community structure based disturbance indicator value: **0.46**
Herb layer structure-based disturbance indicator value: **0.48**

Habitat and sociology



Occurrence in habitats

4 Wetland and riverine herbaceous vegetation

4L Nitrophilous herbaceous fringes of lowland rivers: **1 – rare occurrence**

6 Meadows and mesic pastures

6A Mesic Arrhenatherum meadows: **1 – rare occurrence**

8 Dry grasslands

8C Narrow-leaved sub-continental steppes: **1 – rare occurrence**
8D Broad-leaved dry grasslands: **1 – rare occurrence**

10 Saline vegetation

10I Inland saline meadows: **1 – rare occurrence**

11 Heathlands and scrub

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

13 Anthropogenic vegetation

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

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

13E Perennial nitrophilous herbaceous vegetation of mesic sites: **1 – rare occurrence**

Affinity to the forest environment

Affinity to the forest environment in Thermophyticum: **0 – taxon that does not spontaneously occur in Czech forests**

Affinity to the forest environment in Mesophyticum and Oreophyticum: **0 – taxon that does not spontaneously occur in Czech forests**

Diagnostic taxon

Diagnostic taxon of alliances: **XCB *Dauco carotae-Melilotion***

Diagnostic taxon of associations: **XBG12 *Ivaetum xanthiifoliae***, **XCB08 *Artemisio vulgaris-Echinopsietum sphaerocephali***

Constant taxon

Constant taxon of associations: **XCB08 *Artemisio vulgaris-Echinopsietum sphaerocephali***

Dominant taxon

Dominant taxon of associations: **XCB08 *Artemisio vulgaris-Echinopsietum sphaerocephali***

Ecological specialization indices

Ecological specialization index for all vegetation types: **4.1**

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

Colonization ability

Index of colonization success (ICS): **6**

Index of colonization potential (ICP): **9**

Optimum successional age [years]: **16**

Distribution and frequency

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

Floristic region: **Europe, Western Asia**

Continentality degree: **6**

Distribution range extension along the continentality gradient: **6**

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: 453

taxon.data.freq_in_quad: 1007

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **0.4 %**

Occurrence frequency in vegetation plots with a cover above 5%: **57.1 %**

Occurrence frequency in vegetation plots with a cover above 25%: **50.8 %**

Occurrence frequency in vegetation plots with a cover above 50%: **23.8 %**

Mean percentage cover in vegetation plots: **27.8 %**

Maximum percentage cover in vegetation plots: **88 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **9**

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

Number of broad habitats in which the taxon occurs: **6**

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

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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**

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