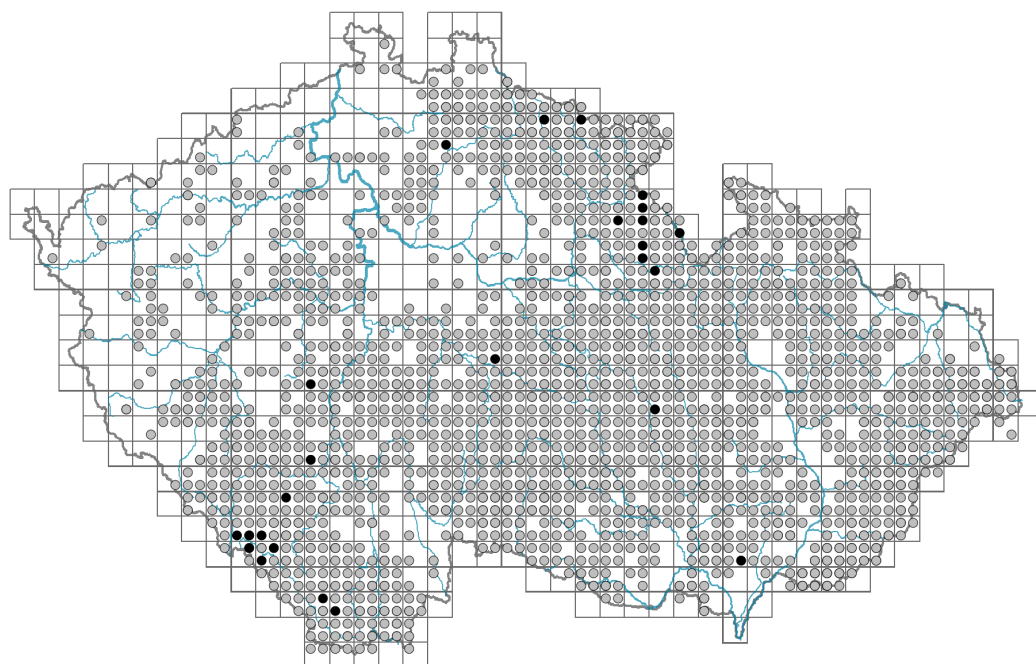


Carlina acaulis

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]: **0.01-0.4**

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

Life form: **hemicryptophyte**

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

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

Life strategy (Pierce method, C-score): **79.9 %**

Life strategy (Pierce method, S-score): **12.9 %**

Life strategy (Pierce method, R-score): **7.1 %**

Leaf

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

Leaf arrangement (phyllotaxis): **alternate, rosulate**

Leaf shape: **simple - pinnately divided**

Stipules: **absent**

Petiole: **mainly absent**

Leaf life span: **summer green**

Leaf anatomy: **scleromorphic**

Flower

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

Flowering phase: **8 Clematis vitalba-Galium sylvaticum (mid-summer)**

Flower colour: **white, brown**

Flower symmetry: **actinomorphic**

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

Perianth fusion: **fused**

Shape of the sympetalous corolla or syntepalous perianth: **tubular**

Calyx fusion: **pappus**

Inflorescence type: **anthodium solitarium**

Dicliny: **synoecious**

Generative reproduction type: **facultative allogamy**

Pollination syndrome: **insect-pollination**

Fruit, seed and dispersal

Fruit type: **dry fruit - achene/cypsela/samara**

Fruit colour: **brown**

Reproduction type: **by seed/spores and vegetatively**

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

Dispersal strategy: **Epilobium (mainly anemochory and autochory)**

Myrmecochory: **probably myrmecochorous**

Belowground organs and clonality

Shoot metamorphosis: **pleiocorm**

Root metamorphosis: **primary storage root, root shoot**

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

Shoot life span (cyclicality): **monocyclic shoots prevailing**

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

Primary root: **present**

Position of root buds: **primary root**

Role of root buds in life-history of a plant: **additive**

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 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): **21**

Number of buds per shoot at a depth greater than 10 cm (root buds included): **15**

Size of the belowground bud bank (root buds included): **41**

Depth of the belowground bud bank (root buds included) [cm]: **8**

Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**

Carnivory: **non-carnivorous**

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



Karyology

Chromosome number (2n): **20**

Ploidy level (x): **2**

2C genome size [Mbp]: **8780.45**

1Cx monoploid genome size [Mbp]: **4390.23**

Taxon origin

Origin in the Czech Republic: **native**

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: **5 - moderate heat indicator, occurring from lowland to montane belt, mainly in submontane-temperate areas**

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

Reaction indicator value: **5x - indicator of moderate acidity, occurring rarely in strongly acidic as well as in neutral to alkaline conditions (generalist)**

Nutrient indicator value: **3 - occurring at nutrient-poor sites more frequently than at average sites and exceptionally at rich sites**

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

Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-0.35**

Herb layer disturbance frequency indicator value: **-0.24**

Whole-community disturbance severity indicator value: **0.25**

Herb layer disturbance severity indicator value: **0.29**

Whole-community structure based disturbance indicator value: **0.59**

Herb layer structure-based disturbance indicator value: **0.73**

Habitat and sociology

Occurrence in habitats

1 Vegetation of cliffs, screes and walls

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

2 Alpine and subalpine grasslands

2A Alpine grasslands on siliceous bedrock: **1 - rare occurrence**

2B Subalpine tall-forb and tall-grass vegetation: **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: **2 - optimum**

7 Acidophilous grasslands

7A Subalpine and montane acidophilous grasslands: **2 - optimum**

7B Submontane Nardus grasslands: **2 - optimum**

8 Dry grasslands



© Pavel Veselý



© Pavel Veselý



© Jaroslav Zámečník



- 8A Hercynian dry grasslands on rock outcrops: **1 - rare occurrence**
 8B Submediterranean dry grasslands on rock outcrops: **1 - rare occurrence**
 8C Narrow-leaved sub-continental steppes: **1 - rare occurrence**
 8D Broad-leaved dry grasslands: **2 - optimum**
 8E Acidophilous dry grasslands: **2 - optimum**
 8F Thermophilous forest fringe vegetation: **1 - rare occurrence**
 11 Heathlands and scrub
 11A Dry lowland to subalpine heathlands: **2 - optimum**
 11H Subalpine deciduous scrub: **1 - rare occurrence**
 11L Tall mesic and xeric shrub: **1 - rare occurrence**
 11N Low xeric scrub: **1 - rare occurrence**



- 12 Forests
 12F Limestone beech forests: **1 - rare occurrence**
 12H Peri-Alpidic basiphilous thermophilous oak forests: **1 - rare occurrence**
 12J Acidophilous thermophilous oak forests: **1 - rare occurrence**
 12K Acidophilous oak forests: **1 - rare occurrence**
 12L Boreo-continental pine forests: **1 - rare occurrence**
 12W Pine and larch plantations: **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: [TEC *Violion caninae*](#), [THF *Bromion erecti*](#)

Diagnostic taxon of associations: [TDC02 *Anthoxantho odorati-Agrostietum tenuis*](#), [THF01 *Carlino acaulis-Brometum erecti*](#)

Constant taxon

Constant taxon of alliances: [THF *Bromion erecti*](#)

Constant taxon of associations: [TDC02 *Anthoxantho odorati-Agrostietum tenuis*](#), [THF01 *Carlino acaulis-Brometum erecti*](#)

Ecological specialization indices

Ecological specialization index for all vegetation types: **5.4**

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

Ecological specialization index for forest vegetation: **5**

Colonization ability

Index of colonization success (ICS): **3**

Index of colonization potential (ICP): **1**

Optimum successional age [years]: **18**

Distribution and frequency

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

Floristic region: **Europe**

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

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid

mapping cells: 547

taxon.data.freq_in_quad: 1653

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **1.8 %**

Occurrence frequency in vegetation plots with a cover above 5%: **5.4 %**

Occurrence frequency in vegetation plots with a cover above 25%: **0.5 %**

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

Mean percentage cover in vegetation plots: **2.8 %**

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: **24**

Number of narrow habitats in which the taxon has its optimum: **8**

Number of broad habitats in which the taxon occurs: **7**

Number of broad habitats in which the taxon has its optimum: **4**

Threats and protection

Legal protection: **not protected by law**