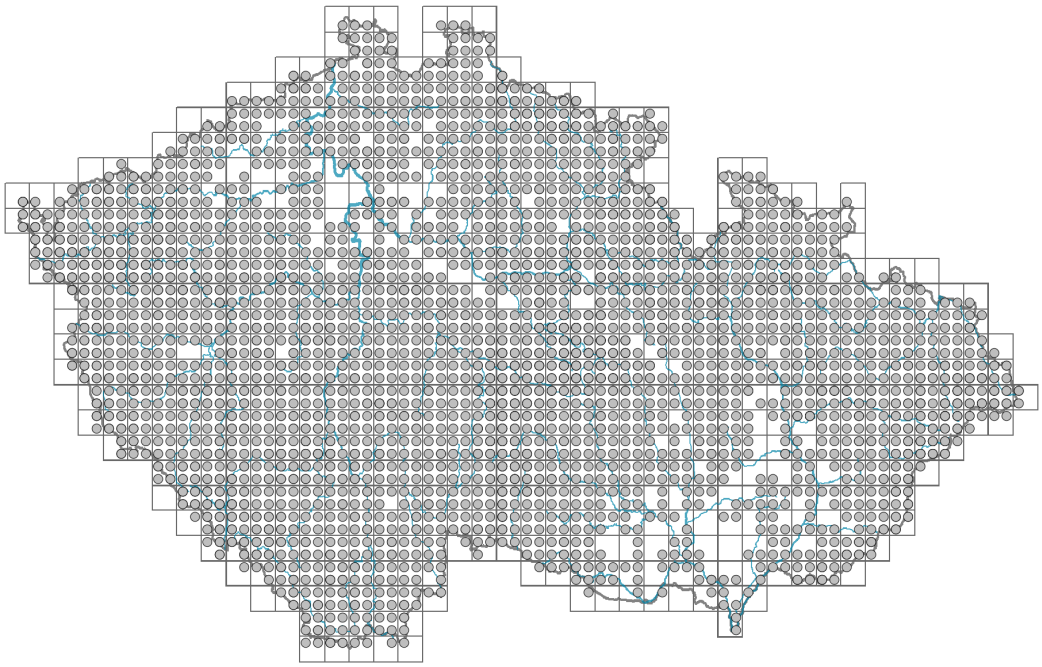
Caltha palustris

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]: **0.2–0.7**
Growth form: **clonal herb**
Life form: **hemicryptophyte**
Life strategy: **CSR – competitor/stress-tolerator/ruderal**
Life strategy (Pierce method based on leaf traits): **C/CR**
Life strategy (Pierce method, C-score): **74.6 %**
Life strategy (Pierce method, S-score): **0.1 %**
Life strategy (Pierce method, R-score): **25.3 %**

Leaf

Leaf presence and metamorphosis: **leaves present, not modified**
Leaf arrangement (phyllotaxis): **alternate**
Leaf shape: **simple – entire**
Stipules: **present**
Petiole: **present**
Leaf life span: **summer green**
Leaf anatomy: **hygromorphic, helomorphic**

Flower

Flowering period [month]: **April–June**

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Flowering phase: **3 Prunus avium-Ranunculus auricomus (end of early spring)**
Flower colour: **yellow**
Flower symmetry: **actinomorphic**
Perianth type: **homochlamydeous**
Perianth fusion: **free**
Inflorescence type: **flores solitarii**
Dicliny: **synoecious, andromonoecious, androdioecious**
Generative reproduction type: **allogamy self-incompatibility**
Pollination syndrome: **insect-pollination**
Pollinator spectrum: **flies s. l. (honeybee, other Hymenoptera, hoverflies, meat flies s. l., other Diptera, beetles, nitidulids)**

Fruit, seed and dispersal

Fruit type: **dry fruit – cluster of follicles**
Fruit colour: **green, brown**
Reproduction type: **by seed/spores and vegetatively**
Dispersal unit (diaspore): **seed, shoot fragment**
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 (cyclicity): **dicyclic or polycyclic shoots prevailing**
Branching type of stem-derived organs of clonal growth: **sympodial**
Primary root: **absent**
Persistence of the clonal growth organ [year]: **2**
Number of clonal offspring: **2**
Lateral spreading distance by clonal growth [m]: **0.01**
Clonal index: **3**

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): **11**
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): **15**
Depth of the belowground bud bank (root buds exluded) [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): **11**
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): **15**
Depth of the belowground bud bank (root buds included) [cm]: **4**

Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**

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Carnivory: **non-carnivorous**
Symbiotic nitrogen fixation: **no nitrogen-fixing symbionts**

Karyology

Chromosome number (2n): **32 (56)**
Ploidy level (x): **2 (4)**
2C genome size [Mbp]: **17704.15**
1Cx monoploid genome size [Mbp]: **8852.07**
Genomic GC content: **43.6 %**

Taxon origin

Origin in the Czech Republic: **native**

Ecological indicator values

Ellenberg-type indicator values

Light indicator value: **6 – transition between values 5 and 7; rarely at less than 20% 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: **9 – wetness indicator, focus on often soaked, poorly aerated soils**
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: **6 – transition between values 5 and 7**
Salinity indicator value: **0 – not salt tolerant, glycophyte**

Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-1.1**
Herb layer disturbance frequency indicator value: **-0.46**
Whole-community disturbance severity indicator value: **0.26**
Herb layer disturbance severity indicator value: **0.27**
Whole-community structure based disturbance indicator value: **0.44**
Herb layer structure-based disturbance indicator value: **0.54**

Habitat and sociology

Occurrence in habitats

2 Alpine and subalpine grasslands

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

3 Aquatic vegetation

3C Macrophytic vegetation of oligotrophic lakes and pools: **1 – rare occurrence**

4 Wetland and riverine herbaceous vegetation

4A Reed-beds of eutrophic still waters: **1 – rare occurrence**
4D Riverine reed vegetation: **1 – rare occurrence**
4E Reed vegetation of brooks: **1 – rare occurrence**
4F Mesotrophic vegetation of muddy substrata: **2 – optimum**

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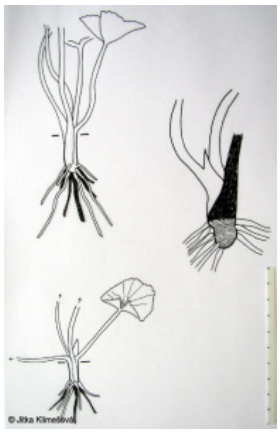

4G Tall-sedge beds: **2 – optimum**
4J River gravel banks: **1 – rare occurrence**
4K Petasites fringes of montane brooks: **2 – optimum**

5 Vegetation of springs and mires

5A Hard-water springs with tufa formation: **1 – rare occurrence**
5B Lowland to montane soft-water springs: **2 – optimum**
5C Alpine and subalpine soft-water springs: **1 – rare occurrence**
5D Calcareous fens: **2 – optimum**
5E Acidic moss-rich fens and peatland meadows: **2 – optimum**
5F Transitional mires: **2 – optimum**

6 Meadows and mesic pastures

6D Alluvial meadows of lowland rivers: **1 – rare occurrence**
6E Wet Cirsium meadows: **2 – optimum**
6F Intermittently wet Molinia meadows: **1 – rare occurrence**
6G Vegetation of wet disturbed soils: **1 – rare occurrence**

7 Acidophilous grasslands

7B Submontane Nardus grasslands: **1 – rare occurrence**

10 Saline vegetation

10I Inland saline meadows: **1 – rare occurrence**
10J Saline steppes: **1 – rare occurrence**

11 Heathlands and scrub

11H Subalpine deciduous scrub: **1 – rare occurrence**
11I Willow carrs: **2 – optimum**
11J Willow galleries of loamy and sandy river banks: **2 – optimum**

12 Forests

12A Alder carrs: **2 – optimum**
12B Alluvial forests: **2 – optimum**
12E Herb-rich beech forests: **1 – rare occurrence**
12Q Peatland birch forests: **1 – rare occurrence**
12R Acidophilous spruce forests: **1 – rare occurrence**
12S Basiphilous spruce forests: **1 – rare occurrence**

13 Anthropogenic vegetation

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

Affinity to the forest environment

Affinity to the forest environment in Thermophyticum: **2.1 – taxon occurring both in the forest and open vegetation**
Affinity to the forest environment in Mesophyticum and Oreophyticum: **2.1 – taxon occurring both in the forest and open vegetation**

Diagnostic taxon

Diagnostic taxon of classes: **LA *Alnetea glutinosae***
Diagnostic taxon of alliances: **LAA *Alnion glutinosae***, **TDF *Calthion palustris***
Diagnostic taxon of associations: **LAA03 *Carici acutiformis-Alnetum glutinosae***, **RBA03 *Valeriano simplicifoliae-Caricetum flavae***, **TDF03 *Angelico sylvestris-Cirsietum palustris***, **TDF04 *Crepido paludosae-Juncetum acutiflori***, **TDF06 *Chaerophyllo hirsuti-Calthetum palustris***, **TDF09 *Caricetum cespitosae***

Constant taxon

Constant taxon of classes: **LA *Alnetea glutinosae***

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Constant taxon of alliances: **LAA *Alnion glutinosae*, TDF *Calthion palustris***
Constant taxon of associations: **LAA02 *Carici elongatae-Alnetum glutinosae*, LAA03 *Carici acutiformis-Alnetum glutinosae*, LBA01 *Alnetum incanae*, LBA03 *Carici remotae-Fraxinetum excelsioris*, LFC03 *Equiseto sylvatici-Piceetum abietis*, MCG04 *Comaro palustris-Caricetum cespitosae*, MCG05 *Caricetum diandrae*, MCG06 *Caricetum appropinquatae*, RAD01 *Crepido paludosae-Philonotidetum seriatae*, RBA01 *Valeriano dioicae-Caricetum davallianae*, RBA03 *Valeriano simplicifoliae-Caricetum flavae*, RBC03 *Agrostio caninae-Caricetum diandrae*, TDF01 *Angelico sylvestris-Cirsietum oleracei*, TDF02 *Cirsietum rivularis*, TDF03 *Angelico sylvestris-Cirsietum palustris*, TDF04 *Crepido paludosae-Juncetum acutiflori*, TDF06 *Chaerophyllo hirsuti-Calthetum palustris*, TDF07 *Scirpo sylvatici-Cirsietum cani*, TDF08 *Scirpetum sylvatici*, TDF09 *Caricetum cespitosae*, TDF10 *Scirpo sylvatici-Caricetum brizoidis*, TDF12 *Filipendulo ulmariae-Geranietum palustris*, TDF13 *Lysimachio vulgaris-Filipenduletum ulmariae*, TDF14 *Chaerophyllo hirsuti-Filipenduletum ulmariae***

Dominant taxon

Dominant taxon of associations: **MCG06 *Caricetum appropinquatae*, RAA01 *Caricetum remotae*, RAA02 *Cardamino-Chrysosplenietum alternifolii*, RAB01 *Brachythecio rivularis-Cratoneuretum*, RBA03 *Valeriano simplicifoliae-Caricetum flavae*, RBA04 *Campylio stellati-Caricetum lasiocarpae*, TDF01 *Angelico sylvestris-Cirsietum oleracei*, TDF03 *Angelico sylvestris-Cirsietum palustris*, TDF04 *Crepido paludosae-Juncetum acutiflori*, TDF06 *Chaerophyllo hirsuti-Calthetum palustris*, TDF08 *Scirpetum sylvatici***

Ecological specialization indices

Ecological specialization index for all vegetation types: **4.9**
Ecological specialization index for non-forest vegetation: **5.4**
Ecological specialization index for forest vegetation: **5.3**

Colonization ability

Index of colonization success (ICS): **2**
Index of colonization potential (ICP): **1**
Optimum successional age [years]: **75**

Distribution and frequency

Floristic zone: **arctic, boreal, northern temperate, southern temperate, submeridional, meridional**
Floristic region: **circumpolar**
Distribution range extension along the continentality gradient: **8**
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: 663
taxon.data.freq_in_quad: 2302

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **6.1 %**
Occurrence frequency in vegetation plots with a cover above 5%: **23.3 %**
Occurrence frequency in vegetation plots with a cover above 25%: **6.2 %**
Occurrence frequency in vegetation plots with a cover above 50%: **1 %**
Mean percentage cover in vegetation plots: **6.5 %**
Maximum percentage cover in vegetation plots: **88 %**

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Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **32**
Number of narrow habitats in which the taxon has its optimum: **12**
Number of broad habitats in which the taxon occurs: **10**
Number of broad habitats in which the taxon has its optimum: **5**

Threats and protection

Legal protection: **not protected by law**

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