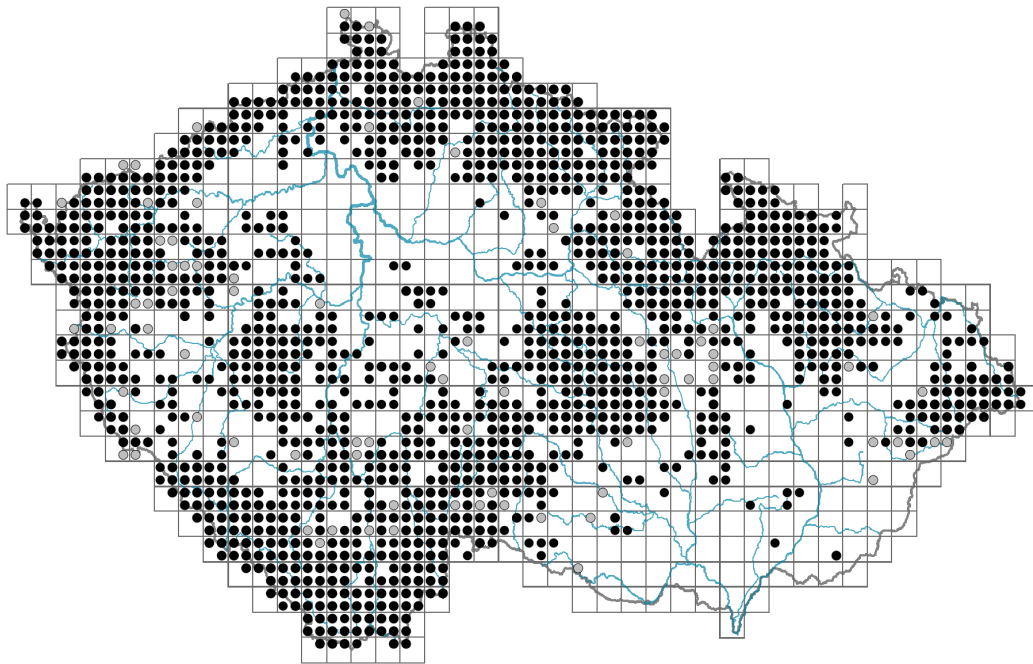


# *Calamagrostis villosa*

## 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.

## Habitus and growth type

Height [m]: **0.5-1.3**Growth form: **clonal herb**Life form: **hemicryptophyte**Life strategy: **C - competitor**Life strategy (Pierce method based on leaf traits): **SR/CSR**Life strategy (Pierce method, C-score): **22.8 %**Life strategy (Pierce method, S-score): **43.3 %**Life strategy (Pierce method, R-score): **34 %**

## Leaf

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

## Flower

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

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Flowering phase: **7 Ligustrum vulgare-Stachys sylvatica (end of early summer)**  
 Flower colour: **green**  
 Perianth type: **reduced**  
 Perianth fusion: **reduced**  
 Inflorescence type: **panicula e spiculis composita**  
 Dicliny: **synoecious**  
 Pollination syndrome: **wind-pollination**



### Fruit, seed and dispersal

Fruit type: **dry fruit - caryopsis**  
 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: **non-myrmecochorous (b)**



### Belowground organs and clonality

Shoot metamorphosis: **stolon**  
 Storage organ: **stolon**  
 Type of clonal growth organ: **hypogeogenous rhizome**  
 Freely dispersible organs of clonal growth: **absent**  
 Shoot life span (cyclicality): **monocyclic shoots prevailing**  
 Branching type of stem-derived organs of clonal growth: **sympodial**  
 Primary root: **absent**  
 Persistence of the clonal growth organ [year]: **4**  
 Number of clonal offspring: **2.3**  
 Lateral spreading distance by clonal growth [m]: **0.07**  
 Clonal index: **4**



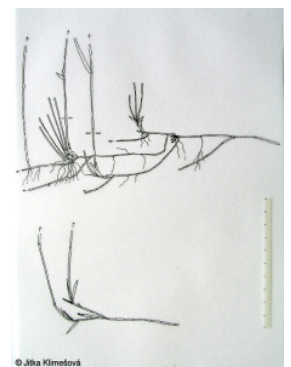
### Bud bank

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): **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): **70**

Ploidy level (x): **10**

2C genome size [Mbp]: **14253.54**

1Cx monoploid genome size [Mbp]: **1425.35**

Genomic GC content: **47.9 %**

## Taxon origin

Origin in the Czech Republic: **native**

## Ecological indicator values

Ellenberg-type indicator values

Light indicator value: **5x - semi-shade plant, only exceptionally occurring in full light, but usually at more than 10% of the diffuse radiation incident in an open area (generalist)**

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

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

Reaction indicator value: **2 - transition between values 1 and 3**

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

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

Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-1.74**

Herb layer disturbance frequency indicator value: **-0.82**

Whole-community disturbance severity indicator value: **0.27**

Herb layer disturbance severity indicator value: **0.2**

Whole-community structure based disturbance indicator value: **0.18**

Herb layer structure-based disturbance indicator value: **0.22**

## Habitat and sociology

Occurrence in habitats

1 Vegetation of cliffs, screes and walls

1B Siliceous cliffs and block fields: **2 - optimum**

2 Alpine and subalpine grasslands

2A Alpine grasslands on siliceous bedrock: **2 - optimum**

2B Subalpine tall-forb and tall-grass vegetation: **3 - dominant**

4 Wetland and riverine herbaceous vegetation

4K Petasites fringes of montane brooks: **1 - rare occurrence**

5 Vegetation of springs and mires

5B Lowland to montane soft-water springs: **1 - rare occurrence**

5C Alpine and subalpine soft-water springs: **2 - optimum**

5E Acidic moss-rich fens and peatland meadows: **1 - rare occurrence**

5F Transitional mires: **1 - rare occurrence**

5G Raised bogs: **1 - rare occurrence**

6 Meadows and mesic pastures

- 6B Montane mesic meadows: **1 - rare occurrence**
- 6G Vegetation of wet disturbed soils: **1 - rare occurrence**
- 7 Acidophilous grasslands
- 7A Subalpine and montane acidophilous grasslands: **2 - optimum**
- 7B Submontane Nardus grasslands: **1 - rare occurrence**
- 8 Dry grasslands
- 8F Thermophilous forest fringe vegetation: **1 - rare occurrence**
- 11 Heathlands and scrub
- 11A Dry lowland to subalpine heathlands: **2 - optimum**
- 11D Subalpine acidophilous Pinus mugo scrub: **4 - constant dominant**
- 11H Subalpine deciduous scrub: **4 - constant dominant**
- 11R Scrub and pioneer woodland of forests clearings: **1 - rare occurrence**
- 12 Forests
- 12A Alder carrs: **1 - rare occurrence**
- 12B Alluvial forests: **1 - rare occurrence**
- 12D Ravine forests: **1 - rare occurrence**
- 12E Herb-rich beech forests: **1 - rare occurrence**
- 12G Acidophilous beech forests: **2 - optimum**
- 12L Boreo-continental pine forests: **1 - rare occurrence**
- 12P Peatland pine forests: **1 - rare occurrence**
- 12Q Peatland birch forests: **2 - optimum**
- 12R Acidophilous spruce forests: **4 - constant dominant**
- 12S Basiphilous spruce forests: **4 - constant dominant**
- 12V Spruce plantations: **2 - optimum**
- 12W Pine and larch plantations: **1 - rare occurrence**
- 13 Anthropogenic vegetation
- 13E Perennial nitrophilous herbaceous vegetation of mesic sites: **1 - rare occurrence**
- 13F Herbaceous vegetation of forests clearings and Rubus scrub: **3 - dominant**
- Affinity to the forest environment
- 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: [AD Mulgedio-Aconitetea](#), [KC Roso pendulinae-Pinetea mugo](#), [LF Vaccinio-Piceetea](#)
- Diagnostic taxon of alliances: [ADA Calamagrostion villosae](#), [ADB Calamagrostion arundinaceae](#), [ADC Salicion silesiaca](#), [ADE Dryopterido filicis-maris-Athyrium distentifolii](#), [KCA Pinion mugo](#), [LFC Piceion abietis](#)
- Diagnostic taxon of associations: [ADA01 Sphagno compacti-Molinietum caeruleae](#), [ADA02 Crepido conyzifoliae-Calamagrostietum villosae](#), [ADB01 Bupleuro longifoliae-Calamagrostietum arundinaceae](#), [ADC01 Salici silesiaca-Betuletum carpaticae](#), [ADC02 Pado borealis-Sorbetum aucupariae](#), [ADD01 Ranunculo platanifolii-Adenostyletum alliariae](#), [ADD02 Salicetum lapponum](#), [ADD03 Trollio altissimi-Geranietum sylvatici](#), [ADE02 Adenostylo alliariae-Athyrietum distentifolii](#), [KBC06 Piceo abietis-Sorbetum aucupariae](#), [KCA01 Dryopterido dilatatae-Pinetum mugo](#), [LBC04 Athyrio distentifolii-Fagetum sylvaticae](#), [LBE02 Calamagrostio villosae-Fagetum sylvaticae](#), [LFC01 Calamagrostio villosae-Piceetum abietis](#), [LFC02 Athyrio distentifolii-Piceetum abietis](#), [LFC03 Equiseto sylvatici-Piceetum abietis](#), [LFC04 Soldanello montanae-Piceetum abietis](#), [TEA01](#)

***Festuco supinae-Nardetum strictae*, TEF03 *Festuco supinae-Vaccinietum myrtilli*, XEA04 *Junco effusi-Calamagrostietum villosae***

Constant taxon

Constant taxon of classes: ***AC Elyno-Seslerietea*, *AD Mulgedio-Aconitetea*, *KC Roso pendulinae-Pinetea mugo***

Constant taxon of alliances: ***ABB Nardo strictae-Caricion bigelowii*, *ACA Agrostion alpinae*, *ADA Calamagrostion villosae*, *ADB Calamagrostion arundinaceae*, *ADC Salicion silesiacae*, *ADD Adenostylion alliariae*, *ADE Dryopterido filicis-maris-Athyrium distentifolii*, *KCA Pinion mugo*, *LFC Piceion abietis*, *SAD Androsacion alpinae*, *TEA Nardion strictae***

Constant taxon of associations: ***ABB01 Carici bigelowii-Nardetum strictae*, *ACA01 Saxifrago oppositifoliae-Festucetum versicoloris*, *ACA02 Saxifrago paniculatae-Agrostietum alpinae*, *ADA01 Sphagno compacti-Molinietum caeruleae*, *ADA02 Crepido conyzifoliae-Calamagrostietum villosae*, *ADA03 Viola sudeticae-Deschampsietum cespitosae*, *ADB01 Bupleuro longifoliae-Calamagrostietum arundinaceae*, *ADC01 Salici silesiacae-Betuletum carpaticae*, *ADC02 Pado borealis-Sorbetum aucupariae*, *ADD01 Ranunculo platanifolii-Adenostyletum alliariae*, *ADD02 Salicetum lapponum*, *ADD03 Trollio altissimi-Geranietum sylvatici*, *ADD04 Laserpitio archangelicae-Dactylidetum glomeratae*, *ADE02 Adenostylo alliariae-Athyrietum distentifolii*, *KBC06 Piceo abietis-Sorbetum aucupariae*, *KCA01 Dryopterido dilatatae-Pinetum mugo*, *KCA02 Adenostylo alliariae-Pinetum mugo*, *LBA02 Piceo abietis-Alnetum glutinosae*, *LBC04 Athyrio distentifolii-Fagetum sylvaticae*, *LBE02 Calamagrostio villosae-Fagetum sylvaticae*, *LFC01 Calamagrostio villosae-Piceetum abietis*, *LFC02 Athyrio distentifolii-Piceetum abietis*, *LFC03 Equiseto sylvatici-Piceetum abietis*, *LFC04 Soldanello montanae-Piceetum abietis*, *LFD04 Vaccinio uliginosi-Piceetum abietis*, *SAD01 Cryptogrammetum crispae*, *TEA01 Festuco supinae-Nardetum strictae*, *TEF03 Festuco supinae-Vaccinietum myrtilli*, *XEA04 Junco effusi-Calamagrostietum villosae*, *XEA06 Pteridietum aquilini***

Dominant taxon

Dominant taxon of associations: ***ADA02 Crepido conyzifoliae-Calamagrostietum villosae*, *ADC01 Salici silesiacae-Betuletum carpaticae*, *KBC06 Piceo abietis-Sorbetum aucupariae*, *KCA01 Dryopterido dilatatae-Pinetum mugo*, *LBA02 Piceo abietis-Alnetum glutinosae*, *LBE02 Calamagrostio villosae-Fagetum sylvaticae*, *LFC01 Calamagrostio villosae-Piceetum abietis*, *LFC02 Athyrio distentifolii-Piceetum abietis*, *LFC03 Equiseto sylvatici-Piceetum abietis*, *LFC04 Soldanello montanae-Piceetum abietis*, *LFD04 Vaccinio uliginosi-Piceetum abietis*, *RBC04 Bartsio alpinae-Caricetum nigrae*, *TEF02 Calamagrostio arundinaceae-Vaccinietum myrtilli*, *TEF03 Festuco supinae-Vaccinietum myrtilli*, *XEA04 Junco effusi-Calamagrostietum villosae*, *XEA06 Pteridietum aquilini***

Ecological specialization indices

Ecological specialization index for all vegetation types: **4.5**

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

Ecological specialization index for forest vegetation: **5.2**

Colonization ability

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

Index of colonization potential (ICP): **6**

Optimum successional age [years]: **8**

## Distribution and frequency

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

Floristic region: **Europe**

Continentality degree: **5**

Distribution range extension along the continentality gradient: **1**

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

Expansive taxon in the region: **Bohemian Moravian Mesophyticum, Bohemian Moravian Oreophyticum, Carpathian Mesophyticum, Carpathian Oreophyticum**

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: **530**

taxon.data.freq\_in\_quad: **1491**

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **3.3 %**

Occurrence frequency in vegetation plots with a cover above 5%: **42 %**

Occurrence frequency in vegetation plots with a cover above 25%: **23.5 %**

Occurrence frequency in vegetation plots with a cover above 50%: **10.4 %**

Mean percentage cover in vegetation plots: **16.3 %**

Maximum percentage cover in vegetation plots: **99 %**

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: **14**

Number of broad habitats in which the taxon occurs: **10**

Number of broad habitats in which the taxon has its optimum: **7**

## 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**