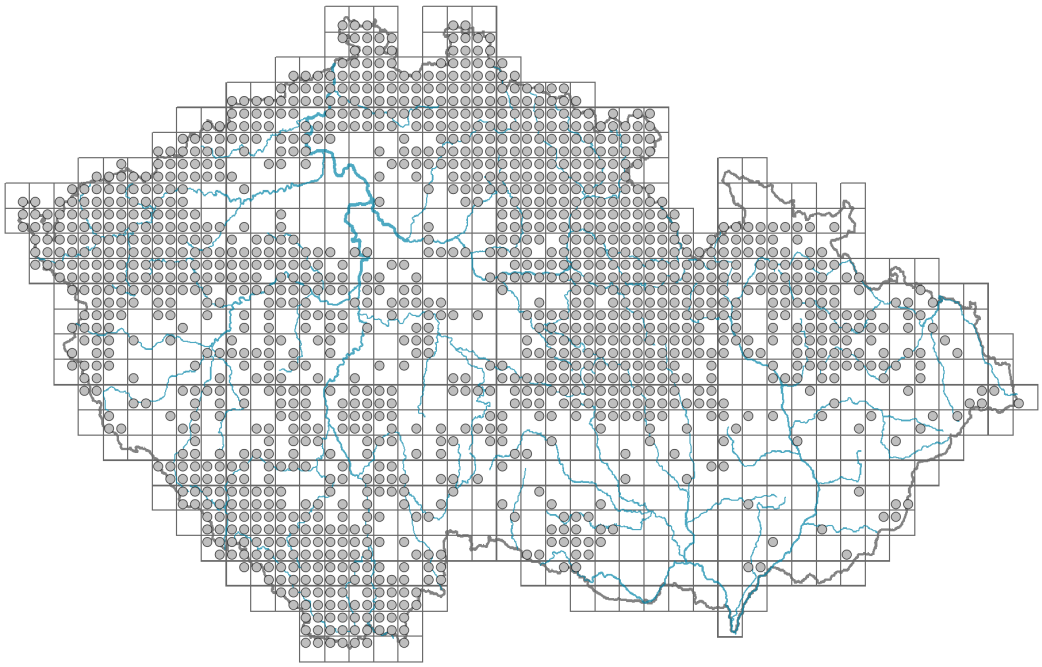
Bistorta officinalis

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]: **0.3–0.8**
Growth form: **clonal herb**
Life form: **geophyte**
Life strategy: **CS – competitor/stress-tolerator**
Life strategy (Pierce method based on leaf traits): **C/CR**
Life strategy (Pierce method, C-score): **76 %**
Life strategy (Pierce method, S-score): **0 %**
Life strategy (Pierce method, R-score): **24 %**

Leaf

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

Flower

Flowering period [month]: **May–August**

Flowering phase: **6 Cornus sanguinea-Melica uniflora (start of early summer)**
Flower colour: **pink**
Flower symmetry: **actinomorphic**
Perianth type: **homochlamydeous**
Perianth fusion: **fused**
Shape of the sympetalous corolla or syntepalous perianth: **tubular**
Inflorescence type: **pseudospica**
Dicliny: **synoecious, gynomonoecious, gynodioecious**
Pollination syndrome: **insect-pollination, geitonogamy**

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: **Allium (mainly autochory)**
Myrmecochory: **probably non-myrmecochorous**

Belowground organs and clonality

Shoot metamorphosis: **stolon, rhizome**
Storage organ: **stolon, rhizome**
Type of clonal growth organ: **epigeogenous rhizome**
Freely dispersible organs of clonal growth: **absent**
Shoot life span (cyclicity): **monocyclic shoots prevailing**
Branching type of stem-derived organs of clonal growth: **monopodial**
Primary root: **absent**
Persistence of the clonal growth organ [year]: **4**
Number of clonal offspring: **0.5**
Lateral spreading distance by clonal growth [m]: **0.05**
Clonal index: **2**

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**

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Karyology

Chromosome number (2n): **48**
Ploidy level (x): **4**
2C genome size [Mbp]: **5353.87**
1Cx monoploid genome size [Mbp]: **1338.47**
Genomic GC content: **42.2 %**

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: **4 – transition between values 3 and 5**
Moisture indicator value: **7 – humidity indicator, focus on well moistened, but not wet soils**
Reaction indicator value: **5 – indicator of moderate acidity, occurring rarely in strongly acidic as well as in neutral to alkaline conditions**
Nutrient indicator value: **5 – occurring at moderately nutrient-rich sites, and less frequently at poor and rich sites**
Salinity indicator value: **0 – not salt tolerant, glycophyte**

Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-0.74**
Herb layer disturbance frequency indicator value: **-0.45**
Whole-community disturbance severity indicator value: **0.26**
Herb layer disturbance severity indicator value: **0.29**
Whole-community structure based disturbance indicator value: **0.53**
Herb layer structure-based disturbance indicator value: **0.69**

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

4 Wetland and riverine herbaceous vegetation

4D Riverine reed vegetation: **1 – rare occurrence**
4G Tall-sedge beds: **1 – rare occurrence**
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**

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5D Calcareous fens: **1 – rare occurrence**
5E Acidic moss-rich fens and peatland meadows: **1 – rare occurrence**
5F Transitional mires: **1 – rare occurrence**
5G Raised bogs: **1 – rare occurrence**
5H Wet peat soils and bog hollows: **1 – rare occurrence**

6 Meadows and mesic pastures

6A Mesic Arrhenatherum meadows: **1 – rare occurrence**
6B Montane mesic meadows: **2 – optimum**
6C Pastures and park grasslands: **1 – rare occurrence**
6D Alluvial meadows of lowland rivers: **1 – rare occurrence**
6E Wet Cirsium meadows: **2 – optimum**
6F Intermittently wet Molinia meadows: **2 – optimum**
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**

10 Saline vegetation

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

11 Heathlands and scrub

11A Dry lowland to subalpine heathlands: **1 – rare occurrence**
11D Subalpine acidophilous Pinus mugo scrub: **1 – rare occurrence**
11H Subalpine deciduous scrub: **2 – optimum**
11I Willow carrs: **1 – rare occurrence**
11J Willow galleries of loamy and sandy river banks: **1 – rare occurrence**
11L Tall mesic and xeric shrub: **1 – rare occurrence**
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**
12E Herb-rich beech forests: **1 – rare occurrence**
12I Sub-continental thermophilous oak forests: **1 – rare occurrence**
12K Acidophilous oak forests: **1 – rare occurrence**
12L Boreo-continental pine forests: **1 – rare occurrence**
12P Peatland pine 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

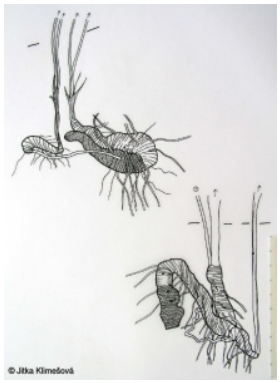
13E Perennial nitrophilous herbaceous vegetation of mesic sites: **1 – rare occurrence**

Affinity to the forest environment

Affinity to the forest environment in Thermophyticum: **2.2 – 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 classes: **AB *Juncetea trifidi***
Diagnostic taxon of alliances: **ABA *Juncion trifidi*, ADA *Calamagrostion villosae*,**



ADC *Salicion silesiacae*, **TDB *Polygono bistortae-Trisetion flavescentis***, **TEA *Nardion strictae***, **TEB *Nardo strictae-Agrostion tenuis***

Diagnostic taxon of associations: **ABA01 *Cetrario-Festucetum supinae***, **ADA02 *Crepido conyzifoliae-Calamagrostietum villosae***, **ADA03 *Violo sudeticae-Deschampsietum cespitosae***, **ADC01 *Salici silesiacae-Betuletum carpaticae***, **ADD02 *Salicetum lapponum***, **RAD02 *Swertietum perennis***, **RBC04 *Bartsio alpinae-Caricetum nigrae***, **TDB02 *Melandrio rubri-Phleetum alpini***, **TDF05 *Polygono bistortae-Cirsietum heterophylli***, **TEA02 *Thesio alpini-Nardetum strictae***, **TEB01 *Sileno vulgaris-Nardetum strictae***

Constant taxon

Constant taxon of classes: **AB *Juncetea trifidi***, **AD *Mulgedio-Aconitetea***

Constant taxon of alliances: **ABA *Juncion trifidi***, **ABB *Nardo strictae-Caricion bigelowii***, **ADA *Calamagrostion villosae***, **ADC *Salicion silesiacae***, **TDB *Polygono bistortae-Trisetion flavescentis***, **TEA *Nardion strictae***, **TEB *Nardo strictae-Agrostion tenuis***

Constant taxon of associations: **AAA01 *Avenello flexuosae-Callunetum vulgaris***, **ABA01 *Cetrario-Festucetum supinae***, **ABB01 *Carici bigelowii-Nardetum strictae***, **ACA01 *Saxifrago oppositifoliae-Festucetum versicoloris***, **ADA01 *Sphagno compacti-Molinietum caeruleae***, **ADA02 *Crepido conyzifoliae-Calamagrostietum villosae***, **ADA03 *Violo sudeticae-Deschampsietum cespitosae***, **ADC01 *Salici silesiacae-Betuletum carpaticae***, **ADD01 *Ranunculo platanifolii-Adenostyletum alliariae***, **ADD02 *Salicetum lapponum***, **ADE02 *Adenostylo alliariae-Athyrietum distentifolii***, **RAD02 *Swertietum perennis***, **RBC04 *Bartsio alpinae-Caricetum nigrae***, **TDB01 *Geranio sylvatici-Trisetetum flavescentis***, **TDB02 *Melandrio rubri-Phleetum alpini***, **TDB03 *Meo athamantici-Festucetum rubrae***, **TDF03 *Angelico sylvestris-Cirsietum palustris***, **TDF05 *Polygono bistortae-Cirsietum heterophylli***, **TDF14 *Chaerophyllo hirsuti-Filipenduletum ulmariae***, **TEA01 *Festuco supinae-Nardetum strictae***, **TEA02 *Thesio alpini-Nardetum strictae***, **TEB01 *Sileno vulgaris-Nardetum strictae***

Dominant taxon

Dominant taxon of associations: **TDB03 *Meo athamantici-Festucetum rubrae***, **TDF01 *Angelico sylvestris-Cirsietum oleracei***, **TDF03 *Angelico sylvestris-Cirsietum palustris***, **TDF04 *Crepido paludosae-Juncetum acutiflori***, **TDF05 *Polygono bistortae-Cirsietum heterophylli***, **TDF10 *Scirpo sylvatici-Caricetum brizoidis***, **TEB01 *Sileno vulgaris-Nardetum strictae***

Ecological specialization indices

Ecological specialization index for all vegetation types: **5.2**

Ecological specialization index for non-forest vegetation: **5.3**

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

Colonization ability

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

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

Optimum successional age [years]: **15**

Distribution and frequency

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

Floristic region: **Europe, Asia, Americas**

Continentality degree: **7**

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Distribution range extension along the continentality gradient: **7**
Elevational belt in the Czech Republic: **submontane belt, montane belt, subalpine belt (lowlands)**
Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: 507
taxon.data.freq_in_quad: 1367

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **3.8 %**
Occurrence frequency in vegetation plots with a cover above 5%: **25.6 %**
Occurrence frequency in vegetation plots with a cover above 25%: **8.1 %**
Occurrence frequency in vegetation plots with a cover above 50%: **1.9 %**
Mean percentage cover in vegetation plots: **7.6 %**
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: **41**
Number of narrow habitats in which the taxon has its optimum: **8**
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

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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