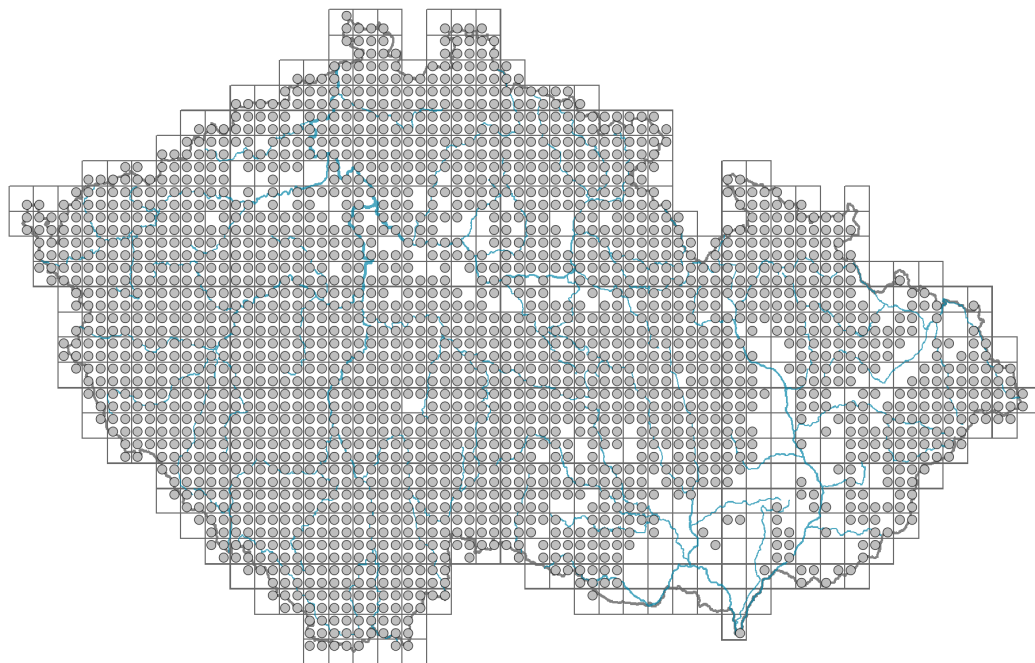


# *Avenella flexuosa*

## 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.



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## Habitus and growth type

Height [m]: **0.3-0.7**

Growth form: **clonal herb**

Life form: **hemicryptophyte**

Life strategy: **CS - competitor/stress-tolerator**

Life strategy (Pierce method based on leaf traits): **S/SR**

Life strategy (Pierce method, C-score): **1.5 %**

Life strategy (Pierce method, S-score): **70.1 %**

Life strategy (Pierce method, R-score): **28.4 %**

## Leaf

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

Leaf arrangement (phyllotaxis): **alternate**

Leaf shape: **simple - entire**

Stipules: **absent**

Petiole: **absent**

Leaf life span: **evergreen**

Leaf anatomy: **mesomorphic**

## Flower

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



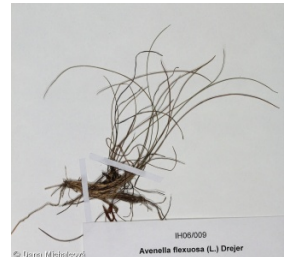
© Ales Zvara

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**  
 Generative reproduction type: **allogamy self-incompatibility**  
 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: **Allium (mainly autochory)**  
 Myrmecochory: **non-myrmecochorous (a)**



### Belowground organs and clonality

Shoot metamorphosis: **stolon**  
 Storage organ: **stolon, tuft**  
 Type of clonal growth organ: **epigeogenous rhizome**  
 Freely dispersible organs of clonal growth: **absent**  
 Shoot life span (cyclicality): **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]: **4**  
 Number of clonal offspring: **5.4**  
 Lateral spreading distance by clonal growth [m]: **0.07**  
 Clonal index: **5**



### Bud bank

Number of buds per shoot at the soil surface (root buds excluded): **8**  
 Number of buds per shoot at a depth of 0–10 cm (root buds excluded): **10**  
 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): **18**  
 Depth of the belowground bud bank (root buds excluded) [cm]: **3**  
 Number of buds per shoot at the soil surface (root buds included): **8**  
 Number of buds per shoot at a depth of 0–10 cm (root buds included): **10**  
 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): **18**  
 Depth of the belowground bud bank (root buds included) [cm]: **3**

### Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**  
 Carnivory: **non-carnivorous**  
 Symbiotic nitrogen fixation: **no nitrogen-fixing symbionts**

## Karyology

Chromosome number (2n): **28**

Ploidy level (x): **4**

2C genome size [Mbp]: **10631.18**

1Cx monoploid genome size [Mbp]: **2657.79**

Genomic GC content: **47.7 %**

## Taxon origin

Origin in the Czech Republic: **native**

## Ecological indicator values

### Ellenberg-type indicator values

Light indicator value: **6x - transition between values 5 and 7; rarely at less than 20% of diffuse radiation incident in an open area (generalist)**

Temperature indicator value: **5x - moderate heat indicator, occurring from lowland to montane belt, mainly in submontane-temperate areas (generalist)**

Moisture indicator value: **5x - indicator of fresh soils, focus on soils of average moisture, missing on wet and on soils that frequently dry out (generalist)**

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

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: **-1.78**

Herb layer disturbance frequency indicator value: **-0.83**

Whole-community disturbance severity indicator value: **0.28**

Herb layer disturbance severity indicator value: **0.18**

Whole-community structure based disturbance indicator value: **0.17**

Herb layer structure-based disturbance indicator value: **0.21**

## Habitat and sociology

### Occurrence in habitats

1 Vegetation of cliffs, screes and walls

1B Siliceous cliffs and block fields: **3 - dominant**

1D Mobile calcareous screes: **1 - rare occurrence**

2 Alpine and subalpine grasslands

2A Alpine grasslands on siliceous bedrock: **4 - constant dominant**

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

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: **1 - rare occurrence**

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

- 5F Transitional mires: **1 - rare occurrence**  
5G Raised bogs: **2 - optimum**  
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**  
6E Wet Cirsium meadows: **1 - rare occurrence**  
6F Intermittently wet Molinia meadows: **1 - rare occurrence**  
6G Vegetation of wet disturbed soils: **1 - rare occurrence**  
7 Acidophilous grasslands  
7A Subalpine and montane acidophilous grasslands: **4 - constant dominant**  
7B Submontane Nardus grasslands: **3 - dominant**  
8 Dry grasslands  
8A Hercynian dry grasslands on rock outcrops: **1 - rare occurrence**  
8B Submediterranean dry grasslands on rock outcrops: **1 - rare occurrence**  
8D Broad-leaved dry grasslands: **1 - rare occurrence**  
8E Acidophilous dry grasslands: **1 - rare occurrence**  
8F Thermophilous forest fringe vegetation: **1 - rare occurrence**  
9 Sand grasslands and rock-outcrop vegetation  
9B Open vegetation of acidic sands: **1 - rare occurrence**  
9C Festuca grasslands on acidic sands: **1 - rare occurrence**  
9E Acidophilous vegetation of spring therophytes and succulents: **1 - rare occurrence**  
9F Basiphilous vegetation of spring therophytes and succulents: **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: **2 - optimum**  
11I Willow carrs: **1 - rare occurrence**  
11L Tall mesic and xeric shrub: **1 - rare occurrence**  
11N Low xeric scrub: **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**  
12C Oak-hornbeam forests: **1 - rare occurrence**  
12D Ravine forests: **1 - rare occurrence**  
12E Herb-rich beech forests: **2 - optimum**  
12F Limestone beech forests: **2 - optimum**  
12G Acidophilous beech forests: **2 - optimum**  
12H Peri-Alpidic basiphilous thermophilous oak forests: **1 - rare occurrence**  
12I Sub-continental thermophilous oak forests: **1 - rare occurrence**  
12J Acidophilous thermophilous oak forests: **2 - optimum**  
12K Acidophilous oak forests: **4 - constant dominant**  
12L Boreo-continental pine forests: **4 - constant dominant**  
12O Peri-Alpidic pine forests: **1 - rare occurrence**  
12P Peatland pine forests: **2 - optimum**

- 12Q Peatland birch forests: **2 - optimum**  
 12R Acidophilous spruce forests: **4 - constant dominant**  
 12S Basiphilous spruce forests: **2 - optimum**  
 12T Robinia pseudacacia plantations: **1 - rare occurrence**  
 12U Plantations of broad-leaved non-native trees: **1 - rare occurrence**  
 12V Spruce plantations: **4 - constant dominant**  
 12W Pine and larch plantations: **2 - optimum**

### 13 Anthropogenic vegetation

- 13F Herbaceous vegetation of forests clearings and Rubus scrub: **2 - optimum**

#### 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: [AA \*Loiseleurio-Vaccinietea\*](#), [AB \*Juncetea trifidi\*](#), [KC \*Roso pendulinae-Pinetea mugo\*](#), [LD \*Quercetea robori-petraeae\*](#), [LF \*Vaccinio-Piceetea\*](#), [XE \*Epilobietea angustifolii\*](#)

Diagnostic taxon of alliances: [AAA \*Loiseleurio procumbentis-Vaccinion\*](#), [ABA \*Juncion trifidi\*](#), [ABB \*Nardo strictae-Caricion bigelowii\*](#), [ADA \*Calamagrostion villosae\*](#), [KCA \*Pinion mugo\*](#), [LBE \*Luzulo-Fagion sylvaticae\*](#), [LDA \*Quercion roboris\*](#), [LFB \*Dicrano-Pinion sylvestris\*](#), [LFC \*Piceion abietis\*](#), [TEA \*Nardion strictae\*](#), [XEA \*Fragarion vescae\*](#)

Diagnostic taxon of associations: [AAA01 \*Avenello flexuosae-Callunetum vulgaris\*](#), [AAA02 \*Junco trifidi-Empetretum hermaphroditi\*](#), [ABA01 \*Cetrario-Festucetum supinae\*](#), [ABB01 \*Carici bigelowii-Nardetum strictae\*](#), [ADA01 \*Sphagno compacti-Molinietum caeruleae\*](#), [ADA02 \*Crepido conyzifoliae-Calamagrostietum villosae\*](#), [ADC02 \*Pado borealis-Sorbetum aucupariae\*](#), [KBC06 \*Piceo abietis-Sorbetum aucupariae\*](#), [LBE04 \*Vaccinio myrtilli-Abietetum albae\*](#), [LDA01 \*Luzulo luzuloidis-Quercetum petraeae\*](#), [LDA03 \*Vaccinio vitis-idaeae-Quercetum roboris\*](#), [TEA01 \*Festuco supinae-Nardetum strictae\*](#), [TEA02 \*Thesio alpini-Nardetum strictae\*](#), [TEF03 \*Festuco supinae-Vaccinietum myrtilli\*](#), [XEA02 \*Digitali purpureae-Epilobietum angustifolii\*](#), [XEA04 \*Junco effusi-Calamagrostietum villosae\*](#)

#### Constant taxon

Constant taxon of classes: [AA \*Loiseleurio-Vaccinietea\*](#), [AB \*Juncetea trifidi\*](#), [AC \*Elyno-Seslerietea\*](#), [AD \*Mulgedio-Aconitetea\*](#), [KC \*Roso pendulinae-Pinetea mugo\*](#), [LD \*Quercetea robori-petraeae\*](#), [LF \*Vaccinio-Piceetea\*](#), [TE \*Calluno-Ulicetea\*](#), [XE \*Epilobietea angustifolii\*](#)

Constant taxon of alliances: [AAA \*Loiseleurio procumbentis-Vaccinion\*](#), [ABA \*Juncion trifidi\*](#), [ABB \*Nardo strictae-Caricion bigelowii\*](#), [ACA \*Agrostion alpinae\*](#), [ADA \*Calamagrostion villosae\*](#), [ADB \*Calamagrostion arundinaceae\*](#), [ADC \*Salicion silesiaca\*](#), [ADE \*Dryopterido filicis-maris-Athyrium distentifolii\*](#), [KCA \*Pinion mugo\*](#), [LBE \*Luzulo-Fagion sylvaticae\*](#), [LDA \*Quercion roboris\*](#), [LFB \*Dicrano-Pinion sylvestris\*](#), [LFC \*Piceion abietis\*](#), [SAD \*Androsacion alpinae\*](#), [TDB \*Polygono bistortae-Trisetion flavescentis\*](#), [TEA \*Nardion strictae\*](#), [TEB \*Nardo strictae-Agrostion tenuis\*](#), [TED \*Nardo strictae-Juncion squarrosi\*](#), [TEE \*Euphorbio cyparissiae-Callunion vulgaris\*](#), [TEF \*Genisto pilosae-Vaccinion\*](#), [XEA \*Fragarion vescae\*](#)

Constant taxon of associations: [AAA01 \*Avenello flexuosae-Callunetum vulgaris\*](#), [AAA02 \*Junco trifidi-Empetretum hermaphroditi\*](#), [ABA01 \*Cetrario-Festucetum\*](#)

[supinae](#), [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 Violo sudeticae-Deschampsietum cespitosae](#), [ADB01 Bupleuro longifoliae-Calamagrostietum arundinaceae](#), [ADC02 Pado borealis-Sorbetum aucupariae](#), [ADD01 Ranunculo platanifolii-Adenostyletum alliariae](#), [ADE02 Adenostylo alliariae-Athyrietum distentifolii](#), [KBC06 Piceo abietis-Sorbetum aucupariae](#), [KCA01 Dryopterido dilatatae-Pinetum mugo](#), [LBE01 Luzulo luzuloidis-Fagetum sylvaticae](#), [LBE02 Calamagrostio villosae-Fagetum sylvaticae](#), [LBE03 Luzulo-Abietetum albae](#), [LBE04 Vaccinio myrtilli-Abietetum albae](#), [LDA01 Luzulo luzuloidis-Quercetum petraeae](#), [LDA02 Viscario vulgaris-Quercetum petraeae](#), [LDA03 Vaccinio vitis-idaeae-Quercetum roboris](#), [LDA04 Holco mollis-Quercetum roboris](#), [LFB01 Cladino-Pinetum sylvestris](#), [LFB02 Vaccinio myrtilli-Pinetum sylvestris](#), [LFB03 Hieracio pallidi-Pinetum sylvestris](#), [LFB04 Asplenio cuneifolii-Pinetum sylvestris](#), [LFC01 Calamagrostio villosae-Piceetum abietis](#), [LFC02 Athyrio distentifolii-Piceetum abietis](#), [LFC04 Soldanello montanae-Piceetum abietis](#), [LFD04 Vaccinio uliginosi-Piceetum abietis](#), [SAD01 Cryptogrammetum crispae](#), [TDB02 Melandrio rubri-Phleetum alpini](#), [TDB03 Meo athamantici-Festucetum rubrae](#), [TEA01 Festuco supinae-Nardetum strictae](#), [TEA02 Thesio alpini-Nardetum strictae](#), [TEB01 Sileno vulgaris-Nardetum strictae](#), [TED01 Juncetum squarrosi](#), [TEE01 Euphorbio cyparissiae-Callunetum vulgaris](#), [TEF01 Vaccinio-Callunetum vulgaris](#), [TEF02 Calamagrostio arundinaceae-Vaccinietum myrtilli](#), [TEF03 Festuco supinae-Vaccinietum myrtilli](#), [XEA01 Senecioni-Epilobietum angustifolii](#), [XEA02 Digitali purpureae-Epilobietum angustifolii](#), [XEA03 Rubo idaei-Calamagrostietum arundinaceae](#), [XEA04 Junco effusi-Calamagrostietum villosae](#), [XEA06 Pteridietum aquilini](#), [XEA07 Gymnocarpio dryopteridis-Athyrietum filicis-feminae](#)

#### Dominant taxon

Dominant taxon of associations: [ABA01 Cetrario-Festucetum supinae](#), [ABB01 Carici bigelowii-Nardetum strictae](#), [KBC06 Piceo abietis-Sorbetum aucupariae](#), [KBE02 Poo nemoralis-Robinetum pseudoacaciae](#), [KCA01 Dryopterido dilatatae-Pinetum mugo](#), [LBE01 Luzulo luzuloidis-Fagetum sylvaticae](#), [LDA01 Luzulo luzuloidis-Quercetum petraeae](#), [LDA02 Viscario vulgaris-Quercetum petraeae](#), [LDA03 Vaccinio vitis-idaeae-Quercetum roboris](#), [LFB02 Vaccinio myrtilli-Pinetum sylvestris](#), [LFB03 Hieracio pallidi-Pinetum sylvestris](#), [LFB04 Asplenio cuneifolii-Pinetum sylvestris](#), [LFC01 Calamagrostio villosae-Piceetum abietis](#), [TDB03 Meo athamantici-Festucetum rubrae](#), [TEA01 Festuco supinae-Nardetum strictae](#), [TEA02 Thesio alpini-Nardetum strictae](#), [TEB01 Sileno vulgaris-Nardetum strictae](#), [TEF02 Calamagrostio arundinaceae-Vaccinietum myrtilli](#), [XEA01 Senecioni-Epilobietum angustifolii](#), [XEA02 Digitali purpureae-Epilobietum angustifolii](#), [XEA03 Rubo idaei-Calamagrostietum arundinaceae](#), [XEA04 Junco effusi-Calamagrostietum villosae](#)

#### Ecological specialization indices

Ecological specialization index for all vegetation types: **3.7**

Ecological specialization index for non-forest vegetation: **3.6**

Ecological specialization index for forest vegetation: **4.4**

#### Colonization ability

Index of colonization success (ICS): **8**

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

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

## Distribution and frequency

Floristic zone: **arctic, boreal, northern temperate, southern temperate, submeridional, meridional, subtropical, tropical, austral or antarctic**

Floristic region: **circumpolar**

Distribution range extension along the continentality gradient: **5**

Elevational belt in the Czech Republic: **lowlands, 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: **638**

taxon.data.freq\_in\_quad: **2178**

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **7.1 %**

Occurrence frequency in vegetation plots with a cover above 5%: **37 %**

Occurrence frequency in vegetation plots with a cover above 25%: **13.8 %**

Occurrence frequency in vegetation plots with a cover above 50%: **3.6 %**

Mean percentage cover in vegetation plots: **10.9 %**

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: **57**

Number of narrow habitats in which the taxon has its optimum: **23**

Number of broad habitats in which the taxon occurs: **11**

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

## 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**