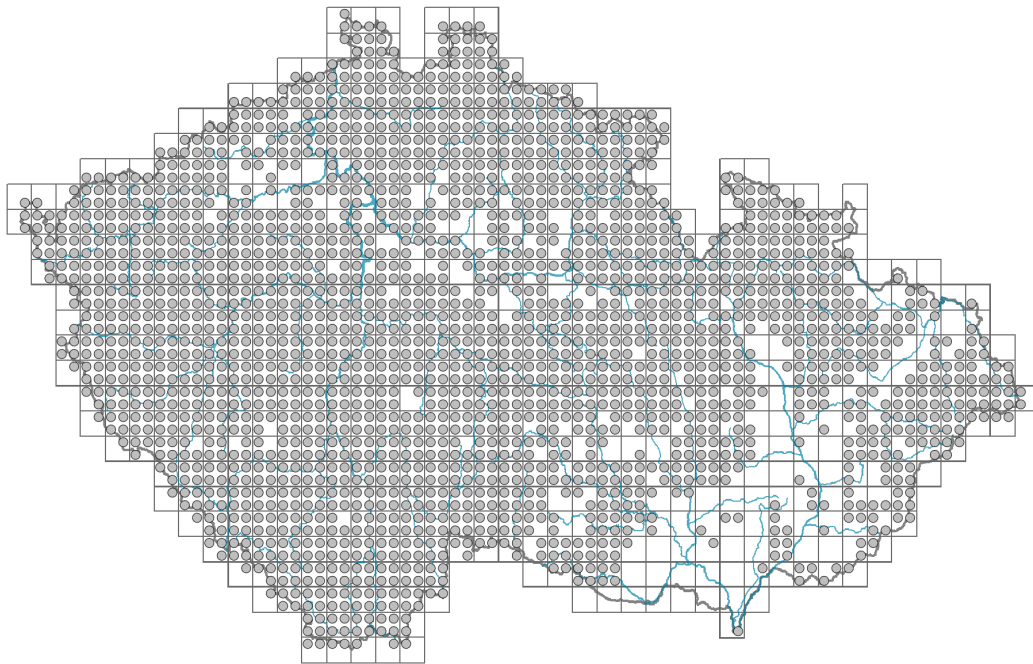


# *Avenella flexuosa*

## 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]: **0.3-0.7**

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**



Flowering phase: **7 Ligustrum vulgare-Stachys sylvatica (end of early summer)**

Flower colour: **green**

Perianth type: **reduced**

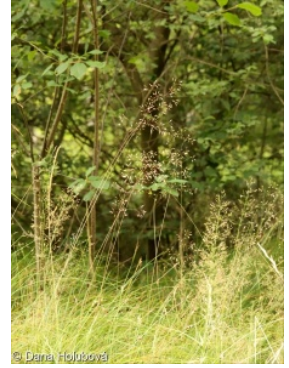
Perianth fusion: **reduced**

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 (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]: **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 silesiacae](#), [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 Saxifraga oppositifoliae-Festucetum versicoloris](#), [ACA02 Saxifraga paniculatae-Agrostietum alpinae](#), [ADA01 Sphagno compacti-Molinietum caeruleae](#), [ADA02 Crepidio conyzifoliae-Calamagrostietum villosae](#), [ADA03 Viola 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**

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: **633**

taxon.data.freq\_in\_quad: **2128**

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**