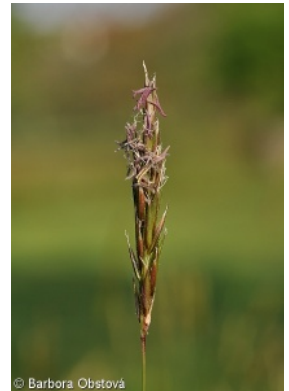
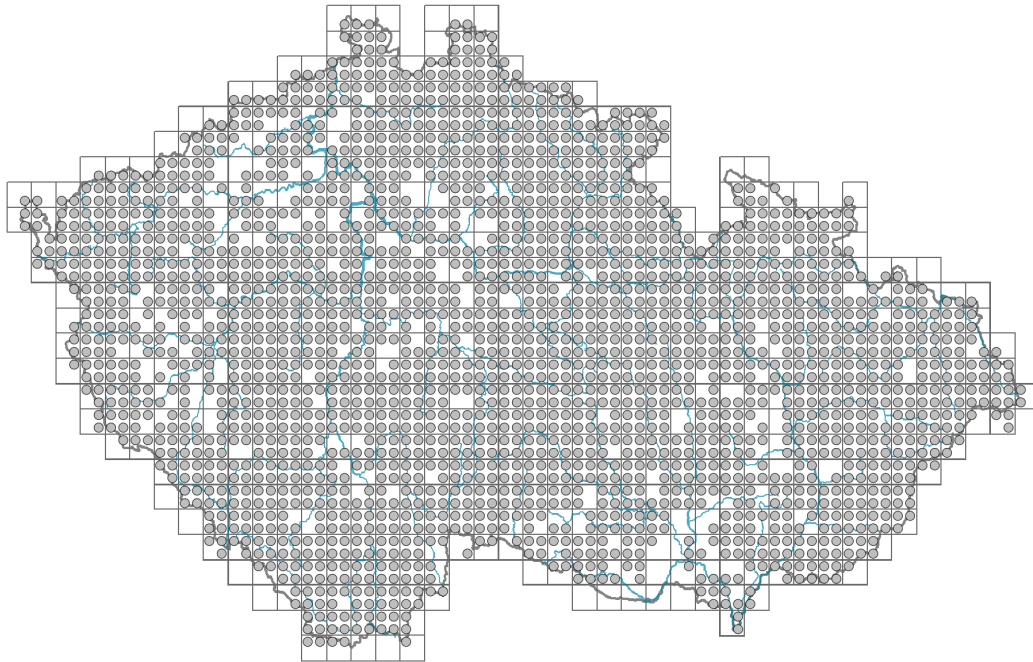


# Anthoxanthum odoratum

## 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]: **0.15-0.5**

Growth form: **clonal herb**

Life form: **hemicryptophyte**

Life strategy: **CSR - competitor/stress-tolerator/ruderal**

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

Life strategy (Pierce method, C-score): **8.4 %**

Life strategy (Pierce method, S-score): **67.5 %**

Life strategy (Pierce method, R-score): **24.2 %**



© Dana Michalcová

## Leaf

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

Leaf arrangement (phyllotaxis): **alternate**

Leaf shape: **simple - entire**

Stipules: **absent**

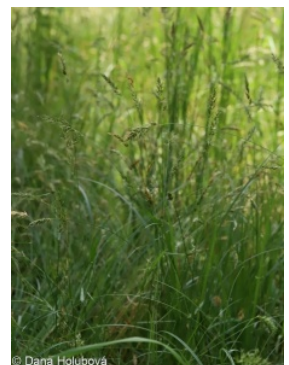
Petiole: **absent**

Leaf life span: **evergreen**

Leaf anatomy: **mesomorphic**

## Flower

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



© Dana Holubová

Flowering phase: **4 Fagus sylvatica-Galeobdolon (start of mid-spring)**

Flower colour: **green**

Perianth type: **reduced**

Perianth fusion: **reduced**

Inflorescence type: **pseudospica e spiculis composita**

Dicliny: **synoecious**

Generative reproduction type: **facultative allogamy**

Pollination syndrome: **wind-pollination, selfing**

## 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 (b)**

## Belowground organs and clonality

Shoot metamorphosis: **rhizome**

Storage organ: **rhizome, tuft**

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: **sympodial**

Primary root: **absent**

Persistence of the clonal growth organ [year]: **3.6**

Number of clonal offspring: **4.3**

Lateral spreading distance by clonal growth [m]: **0.03**

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): **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): **16**

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): **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): **16**

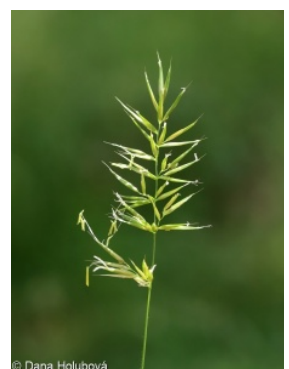
Depth of the belowground bud bank (root buds included) [cm]: **4**

## Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**

Carnivory: **non-carnivorous**

Symbiotic nitrogen fixation: **no nitrogen-fixing symbionts**



## Karyology

Chromosome number (2n): **20**

Ploidy level (x): **4**

2C genome size [Mbp]: **11067.21**

1Cx monoploid genome size [Mbp]: **2766.8**

Genomic GC content: **48.4 %**

## 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: **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: **4 - transition between values 3 and 5**

Nutrient indicator value: **4x - transition between values 3 and 5 (generalist)**

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

## Habitat and sociology

Occurrence in habitats

2 Alpine and subalpine grasslands

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

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

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

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: **1 - rare occurrence**

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

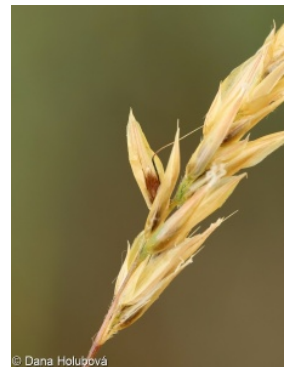
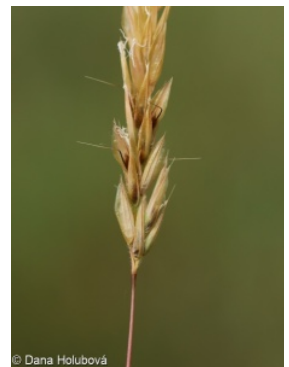
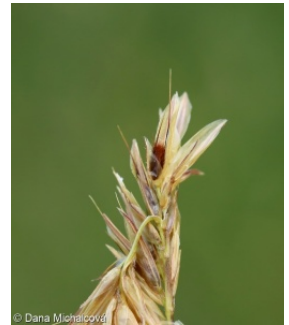
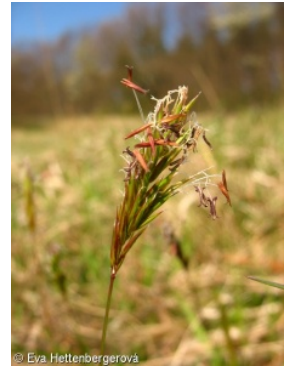
6 Meadows and mesic pastures

6A Mesic Arrhenatherum meadows: **2 - optimum**

6B Montane mesic meadows: **2 - optimum**

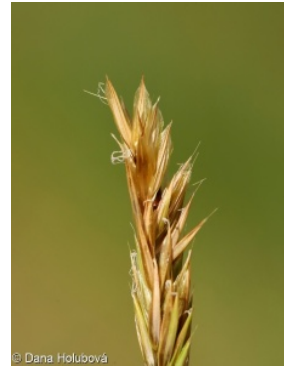
6C Pastures and park grasslands: **2 - optimum**

6D Alluvial meadows of lowland rivers: **2 - optimum**





- 6E Wet Cirsium meadows: **2 - optimum**  
 6F Intermittently wet Molinia meadows: **2 - optimum**  
 7 Acidophilous grasslands  
 7A Subalpine and montane acidophilous grasslands: **4 - constant dominant**  
 7B Submontane Nardus grasslands: **2 - optimum**  
 8 Dry grasslands  
 8A Hercynian dry grasslands on rock outcrops: **1 - rare occurrence**  
 8B Submediterranean dry grasslands on rock outcrops: **1 - rare occurrence**  
 8C Narrow-leaved sub-continental steppes: **1 - rare occurrence**  
 8D Broad-leaved dry grasslands: **1 - rare occurrence**  
 8E Acidophilous dry grasslands: **2 - optimum**  
 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: **2 - optimum**  
 9D Pannonian sand steppes: **1 - rare occurrence**  
 9E Acidophilous vegetation of spring therophytes and succulents: **1 - rare occurrence**  
 10 Saline vegetation  
 10I Inland saline meadows: **1 - rare occurrence**  
 11 Heathlands and scrub  
 11A Dry lowland to subalpine heathlands: **2 - optimum**  
 11D Subalpine acidophilous Pinus mugo scrub: **2 - optimum**  
 11H Subalpine deciduous scrub: **1 - rare occurrence**  
 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**  
 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**  
 12C Oak-hornbeam forests: **1 - rare occurrence**  
 12F Limestone beech forests: **1 - rare occurrence**  
 12G Acidophilous beech forests: **1 - rare occurrence**  
 12H Peri-Alpidic basiphilous thermophilous oak forests: **1 - rare occurrence**  
 12I Sub-continental thermophilous oak forests: **1 - rare occurrence**  
 12J Acidophilous thermophilous oak forests: **1 - rare occurrence**  
 12K Acidophilous oak forests: **1 - rare occurrence**  
 12L Boreo-continental pine forests: **1 - rare occurrence**  
 12R Acidophilous spruce forests: **1 - rare occurrence**  
 12T Robinia pseudacacia plantations: **1 - rare occurrence**  
 12W Pine and larch plantations: **1 - rare occurrence**  
 13 Anthropogenic vegetation  
 13B Annual vegetation of arable land: **1 - rare occurrence**  
 13F Herbaceous vegetation of forests clearings and Rubus scrub: **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 alliances: [TEC \*Violion caninae\*](#)

Constant taxon

Constant taxon of alliances: [RBC \*Caricion canescenti-nigrae\*](#), [TDA \*Arrhenatherion elatioris\*](#), [TDB \*Polygono bistortae-Trisetion flavescens\*](#), [TDD \*Molinion caeruleae\*](#), [TDE \*Deschampsion cespitosae\*](#), [TEC \*Violion caninae\*](#), [TEE \*Euphorbio cyparissiae-Callunion vulgaris\*](#)

Constant taxon of associations: [LCB02 \*Carici fritschii-Quercetum roboris\*](#), [RBA03 \*Valeriano simplicifoliae-Caricetum flavae\*](#), [RBB01 \*Sphagno warnstorffii-Eriophoretum latifolii\*](#), [RBC01 \*Caricetum nigrae\*](#), [TDA02 \*Ranunculo bulbosi-Arrhenatheretum elatioris\*](#), [TDA03 \*Poo-Trisetetum flavescens\*](#), [TDA04 \*Potentillo albae-Festucetum rubrae\*](#), [TDB01 \*Geranio sylvatici-Trisetetum flavescens\*](#), [TDB03 \*Meo athamantici-Festucetum rubrae\*](#), [TDD01 \*Molinietum caeruleae\*](#), [TDE02 \*Holcetum lanati\*](#), [TDE04 \*Cnidio dubii-Deschampsietum cespitosae\*](#), [TDF01 \*Angelico sylvestris-Cirsietum oleracei\*](#), [TDF02 \*Cirsietum rivularis\*](#), [TDF03 \*Angelico sylvestris-Cirsietum palustris\*](#), [TDF04 \*Crepido paludosae-Juncetum acutiflori\*](#), [TEC01 \*Festuco capillatae-Nardetum strictae\*](#), [TEC02 \*Campanulo rotundifoliae-Dianthetum deltoidis\*](#), [TEE01 \*Euphorbio cyparissiae-Callunetum vulgaris\*](#), [TFC02 \*Erysimo diffusi-Agrostietum capillaris\*](#), [THF02 \*Brachypodio pinnati-Molinietum arundinaceae\*](#), [THG01 \*Potentillo heptaphyllae-Festucetum rupicola\*](#)

Colonization ability

Index of colonization success (ICS): **6**

Index of colonization potential (ICP): **2**

Optimum successional age [years]: **32**

**Distribution and frequency**

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

Floristic region: **Europe, Western Asia**

Distribution range extension along the continentality gradient: **6**

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

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: 653

taxon.data.freq\_in\_quad: 2222

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **52**

Number of narrow habitats in which the taxon has its optimum: **15**

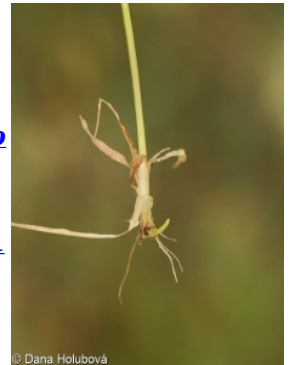
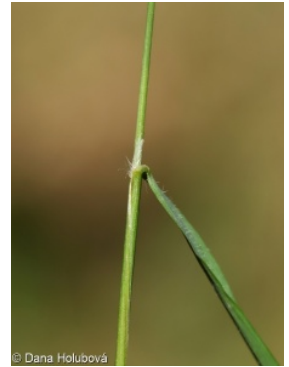
Number of broad habitats in which the taxon occurs: **12**

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)**



**List)**

Legal protection: **not protected by law**