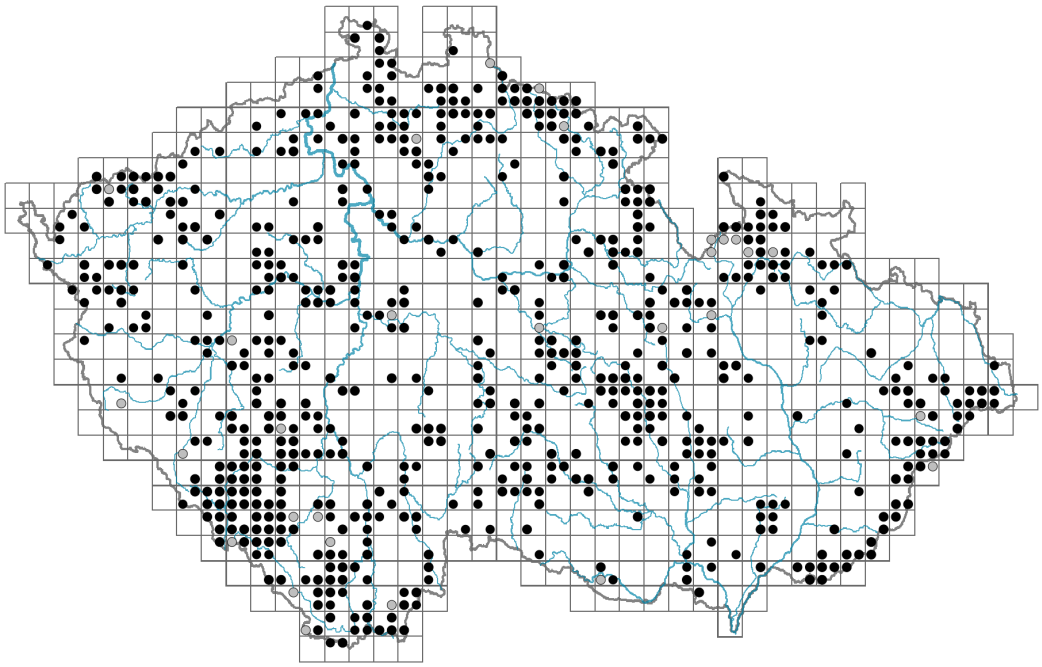
Botrychium lunaria

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]: **0.1–0.25**
Growth form: **clonal herb**
Life form: **geophyte**
Life strategy: **S – stress-tolerator**
Life strategy (Pierce method based on leaf traits): **R/CSR**
Life strategy (Pierce method, C-score): **25.4 %**
Life strategy (Pierce method, S-score): **23.9 %**
Life strategy (Pierce method, R-score): **50.7 %**

Leaf

Leaf presence and metamorphosis: **leaves present, not modified**
Leaf shape: **compound – imparipinnate, compound – bipinnate**
Stipules: **absent**
Petiole: **present**
Leaf life span: **summer green**
Leaf anatomy: **scleromorphic, mesomorphic**

Flower

Flowering period [month]: **June–August**
Dicliny: **synoecious**

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Fruit, seed and dispersal

Reproduction type: **only by seed/spores**
Dispersal unit (diaspore): **spore**
Dispersal strategy: **Lycopodium (mainly anemochory)**
Myrmecochory: **non-myrmecochorous (b)**

Belowground organs and clonality

Shoot metamorphosis: **rhizome**
Storage organ: **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: **dichotomous**
Primary root: **absent**
Persistence of the clonal growth organ [year]: **4**
Number of clonal offspring: **1**
Lateral spreading distance by clonal growth [m]: **0.01**
Clonal index: **3**
Position of root buds: **lateral roots**
Role of root buds in life-history of a plant: **additive**

Bud bank

Number of buds per shoot at the soil surface (root buds excluded): **0**
Number of buds per shoot at a depth of 0–10 cm (root buds excluded): **5**
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): **5**
Depth of the belowground bud bank (root buds exluded) [cm]: **5**
Number of buds per shoot at the soil surface (root buds included): **0**
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): **15**
Size of the belowground bud bank (root buds included): **25**
Depth of the belowground bud bank (root buds included) [cm]: **11**

Trophic mode

Parasitism and mycoheterotrophy: **partial or initial mycoheterotroph**
Carnivory: **non-carnivorous**
Symbiotic nitrogen fixation: **no nitrogen-fixing symbionts**

Karyology

Chromosome number (2n): **90**
Ploidy level (x): **2**
2C genome size [Mbp]: **23714.92**
1Cx monoploid genome size [Mbp]: **11857.46**
Genomic GC content: **45.5 %**

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Taxon origin

Origin in the Czech Republic: **native**

Ecological indicator values

Ellenberg-type indicator values

Light indicator value: **8 – light plant, only exceptionally occurring at less than 40% of diffuse radiation incident in an open area**
Temperature indicator value: **5 – moderate heat indicator, occurring from lowland to montane belt, mainly in submontane-temperate areas**
Moisture indicator value: **4 – transition between values 3 and 5**
Reaction indicator value: **5x – indicator of moderate acidity, occurring rarely in strongly acidic as well as in neutral to alkaline conditions (generalist)**
Nutrient indicator value: **2 – transition between values 1 and 3**
Salinity indicator value: **0 – not salt tolerant, glycophyte**

Habitat and sociology

Occurrence in habitats

1 Vegetation of cliffs, screes and walls

1B Siliceous cliffs and block fields: **1 – rare occurrence**
1D Mobile calcareous screes: **1 – rare occurrence**

2 Alpine and subalpine grasslands

2B Subalpine tall-forb and tall-grass vegetation: **1 – rare occurrence**

6 Meadows and mesic pastures

6A Mesic Arrhenatherum meadows: **1 – rare occurrence**
6B Montane mesic meadows: **1 – rare occurrence**

7 Acidophilous grasslands

7A Subalpine and montane acidophilous grasslands: **2 – optimum**
7B Submontane Nardus grasslands: **1 – rare occurrence**

8 Dry grasslands

8B Submediterranean dry grasslands on rock outcrops: **1 – rare occurrence**
8D Broad-leaved dry grasslands: **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**
9F Basiphilous vegetation of spring therophytes and succulents: **1 – rare occurrence**

11 Heathlands and scrub

11A Dry lowland to subalpine heathlands: **1 – rare occurrence**

12 Forests

12K Acidophilous oak forests: **1 – rare occurrence**
12L Boreo-continental pine forests: **1 – rare occurrence**

Affinity to the forest environment

Affinity to the forest environment in Thermophyticum: **0 – taxon that does not spontaneously occur in Czech forests**
Affinity to the forest environment in Mesophyticum and Oreophyticum: **0 – taxon that**

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does not spontaneously occur in Czech forests

Ecological specialization indices

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

Ecological specialization index for non-forest vegetation: **4.6**

Colonization ability

Index of colonization success (ICS): **1**

Distribution and frequency

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

Floristic region: **circumpolar**

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

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: 372

taxon.data.freq_in_quad: 671

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **0 %**

Occurrence frequency in vegetation plots with a cover above 5%: **0 %**

Occurrence frequency in vegetation plots with a cover above 25%: **0 %**

Occurrence frequency in vegetation plots with a cover above 50%: **0 %**

Mean percentage cover in vegetation plots: **1.9 %**

Maximum percentage cover in vegetation plots: **3 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **15**

Number of narrow habitats in which the taxon has its optimum: **1**

Number of broad habitats in which the taxon occurs: **8**

Number of broad habitats in which the taxon has its optimum: **1**

Threats and protection

Red List 2017 (national categories): **C2b – endangered taxon, rare and declining**

Red List 2017 (IUCN categories): **VU – vulnerable**

Legal protection: **vulnerable taxon**

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