

# Quercus robur

## 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.

## Habitus and growth type

Height [m]: **15-45**

Growth form: **tree**

Life form: **macrophanerophyte**

Life strategy: **C - competitor**

Life strategy (Pierce method based on leaf traits): **CS/CSR**

Life strategy (Pierce method, C-score): **37.6 %**

Life strategy (Pierce method, S-score): **45.1 %**

Life strategy (Pierce method, R-score): **17.3 %**

## Leaf

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

Leaf arrangement (phyllotaxis): **alternate**

Leaf shape: **simple - entire, simple - pinnately divided**

Stipules: **present**

Petiole: **present**

Leaf life span: **summer green**

Leaf deciduousness in woody plants: **winter deciduous**

Leaf anatomy: **mesomorphic**

Functional leaf type in woody plants: **broad deciduous or semi-deciduous**



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## Flower

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

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

Flower colour: **green**

Perianth type: **reduced**

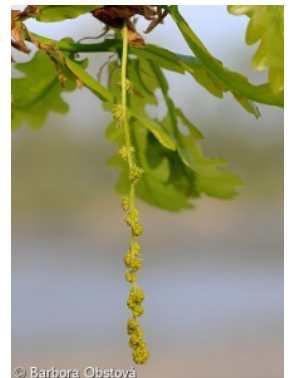
Perianth fusion: **reduced**

Inflorescence type: **amentum e floribus masculis, flores solitarii feminei**

Dicliny: **monoecious**

Generative reproduction type: **allogamy**

Pollination syndrome: **wind-pollination**



## Fruit, seed and dispersal

Fruit type: **dry fruit - achene/cypsela/samara**

Fruit colour: **brown**

Reproduction type: **only by seed/spores**

Dispersal unit (diaspore): **fruit, infrutescence or its part**

Dispersal strategy: **Cornus (mainly autochory and endozoochory)**

Myrmecochory: **non-myrmecochorous (b)**



## Belowground organs and clonality

Position of root buds: **lateral roots**

Role of root buds in life-history of a plant: **regenerative**

### 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): **0**

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): **0**

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): **0**

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): **0**



## Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**

Carnivory: **non-carnivorous**

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

## Karyology

Chromosome number (2n): **24**

Ploidy level (x): **2**

2C genome size [Mbp]: **1559.6**

1Cx monoploid genome size [Mbp]: **779.8**

Genomic GC content: **38.5 %**

## 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: **6 - transition between values 5 and 7**

Moisture indicator value: **6x - transition between values 5 and 7 (generalist)**

Reaction indicator value: **6x - transition between values 5 and 7 (generalist)**

Nutrient indicator value: **5x - occurring at moderately nutrient-rich sites, and less frequently at poor and rich sites (generalist)**

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

Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-1.93**

Herb layer disturbance frequency indicator value: **-0.77**

Whole-community disturbance severity indicator value: **0.24**

Herb layer disturbance severity indicator value: **0.08**

Whole-community structure based disturbance indicator value: **0.05**

Herb layer structure-based disturbance indicator value: **0.14**

## Habitat and sociology

Occurrence in habitats

1 Vegetation of cliffs, screes and walls

1A Calcareous cliffs: **1 - rare occurrence**

1B Siliceous cliffs and block fields: **1 - rare occurrence**

5 Vegetation of springs and mires

5A Hard-water springs with tufa formation: **1 - rare occurrence**

5B Lowland to montane soft-water springs: **1 - rare occurrence**

5D Calcareous fens: **1 - rare occurrence**

8 Dry grasslands

8D Broad-leaved dry grasslands: **1 - rare occurrence**

8E Acidophilous dry grasslands: **1 - rare occurrence**

8F Thermophilous forest fringe vegetation: **1 - rare occurrence**

11 Heathlands and scrub

11A Dry lowland to subalpine heathlands: **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: **2 - optimum**

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: **3 - dominant**



- 12C Oak-hornbeam forests: **4 - constant dominant**
- 12D Ravine forests: **2 - optimum**
- 12E Herb-rich beech forests: **1 - rare occurrence**
- 12F Limestone beech forests: **2 - optimum**
- 12G Acidophilous beech forests: **1 - rare occurrence**
- 12H Peri-Alpidic basiphilous thermophilous oak forests: **1 - rare occurrence**
- 12I Sub-continental thermophilous oak forests: **2 - optimum**
- 12J Acidophilous thermophilous oak forests: **1 - rare occurrence**
- 12K Acidophilous oak forests: **3 - dominant**
- 12L Boreo-continental pine forests: **1 - rare occurrence**
- 12O Peri-Alpidic pine forests: **2 - optimum**
- 12Q Peatland birch forests: **2 - optimum**
- 12T Robinia pseudacacia plantations: **2 - optimum**
- 12U Plantations of broad-leaved non-native trees: **2 - optimum**
- 12V Spruce plantations: **1 - rare occurrence**
- 12W Pine and larch plantations: **2 - optimum**
- 13 Anthropogenic vegetation
- 13F Herbaceous vegetation of forests clearings and Rubus scrub: **1 - rare occurrence**

Affinity to the forest environment

Affinity to the forest environment in Thermophyticum: **2.1 - 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: [LD Quercetea robori-petraeae](#)

Diagnostic taxon of alliances: [LCB Aceri tatarici-Quercion](#), [LDA Quercion roboris](#)

Diagnostic taxon of associations: [LBA06 Ficario vernaе-Ulmetum campestris](#), [LBA07 Fraxino pannonicae-Ulmetum glabrae](#), [LCB02 Carici fritschii-Quercetum roboris](#), [LDA04 Holco mollis-Quercetum roboris](#)

Constant taxon

Constant taxon of alliances: [LCB Aceri tatarici-Quercion](#)

Constant taxon of associations: [LBA05 Pruno padi-Fraxinetum excelsioris](#), [LBA06 Ficario vernaе-Ulmetum campestris](#), [LBA07 Fraxino pannonicae-Ulmetum glabrae](#), [LCB02 Carici fritschii-Quercetum roboris](#), [LDA04 Holco mollis-Quercetum roboris](#)

Dominant taxon

Dominant taxon of associations: [LBA06 Ficario vernaе-Ulmetum campestris](#), [LBA07 Fraxino pannonicae-Ulmetum glabrae](#), [LBB01 Galio sylvatici-Carpinetum betuli](#), [LBB02 Stellario holosteaе-Carpinetum betuli](#), [LBB03 Carici pilosae-Carpinetum betuli](#), [LCB01 Quercetum pubescenti-roboris](#), [LCB02 Carici fritschii-Quercetum roboris](#), [LCC03 Melico pictae-Quercetum roboris](#), [LDA01 Luzulo luzuloidis-Quercetum petraeae](#), [LDA02 Viscario vulgaris-Quercetum petraeae](#), [LDA03 Vaccinio vitis-idaeae-Quercetum roboris](#), [LDA04 Holco mollis-Quercetum roboris](#)

Ecological specialization indices

Ecological specialization index for all vegetation types: **4.3**

Ecological specialization index for non-forest vegetation: **3.2**

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

Colonization ability



Index of colonization success (ICS): **8**  
Index of colonization potential (ICP): **8**  
Optimum successional age [years]: **33**

## Distribution and frequency

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

Floristic region: **Europe**

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

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

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

taxon.data.freq\_in\_quad: **2362**

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **2.4 %**

Occurrence frequency in vegetation plots with a cover above 5%: **51.1 %**

Occurrence frequency in vegetation plots with a cover above 25%: **29.8 %**

Occurrence frequency in vegetation plots with a cover above 50%: **13.4 %**

Mean percentage cover in vegetation plots: **19.5 %**

Maximum percentage cover in vegetation plots: **90 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **33**

Number of narrow habitats in which the taxon has its optimum: **12**

Number of broad habitats in which the taxon occurs: **6**

Number of broad habitats in which the taxon has its optimum: **2**

## 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**

