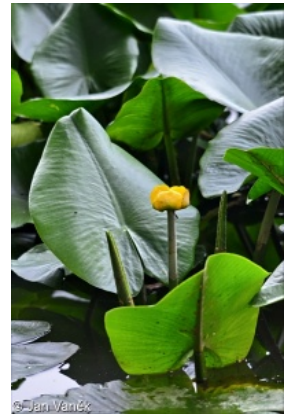
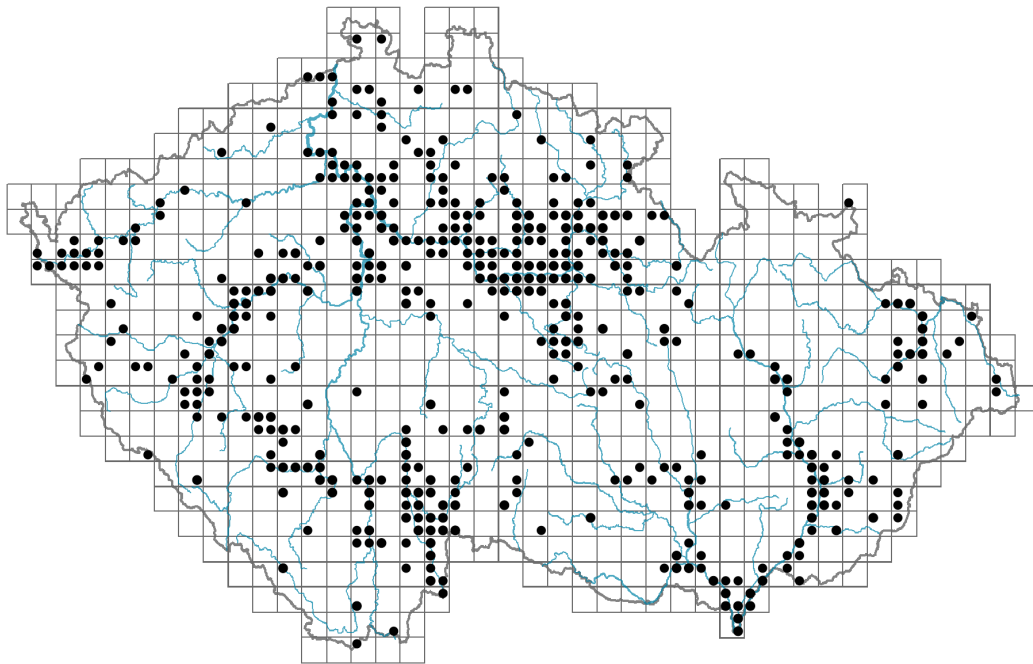


# *Nuphar lutea*

## Distribution

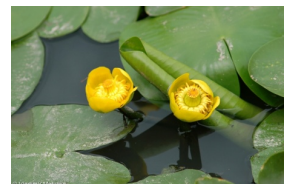
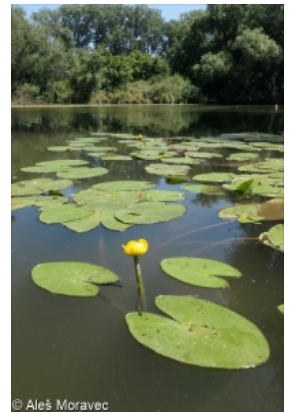


### Map info

● 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]: **0.5-2.5**

Growth form: **clonal herb**

Life form: **hydrophyte**

Life strategy (Pierce method based on leaf traits): **C**

Life strategy (Pierce method, C-score): **87 %**

Life strategy (Pierce method, S-score): **0.9 %**

Life strategy (Pierce method, R-score): **12.1 %**

## Leaf

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

Leaf arrangement (phyllotaxis): **rosulate**

Leaf shape: **simple - entire**

Stipules: **absent**

Petiole: **present**

Leaf life span: **evergreen**

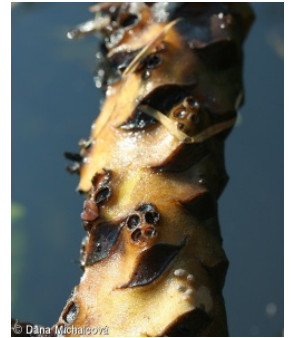
Leaf anatomy: **hydromorphic**

## Flower

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

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

Flower colour: **yellow**  
 Flower symmetry: **actinomorphic**  
 Perianth type: **calyx and corolla**  
 Perianth fusion: **free**  
 Calyx fusion: **aposepalous**  
 Inflorescence type: **flores solitarii**  
 Dicliny: **synoecious**  
 Generative reproduction type: **facultative allogamy**  
 Pollination syndrome: **insect-pollination**



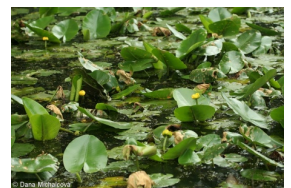
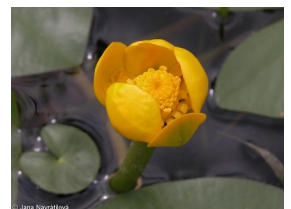
## Fruit, seed and dispersal

Fruit type: **fleshy fruit - special type**  
 Reproduction type: **by seed/spores and vegetatively**  
 Dispersal unit (diaspore): **seed, fruit, infrutescence or its part**  
 Dispersal strategy: **Wolffia (mainly hydrochory)**  
 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: **present**  
 Shoot life span (cyclicity): **monocyclic shoots prevailing**  
 Branching type of stem-derived organs of clonal growth: **monopodial**  
 Primary root: **absent**  
 Persistence of the clonal growth organ [year]:  
 Number of clonal offspring: **0.5**  
 Lateral spreading distance by clonal growth [m]: **0.13**  
 Clonal index: **3**



## Bud bank

Number of buds per shoot at the soil surface (root buds excluded):  
 Number of buds per shoot at a depth of 0–10 cm (root buds excluded):  
 Number of buds per shoot at a depth greater than 10 cm (root buds excluded):  
 Size of the belowground bud bank (root buds excluded):  
 Depth of the belowground bud bank (root buds excluded) [cm]:  
 Number of buds per shoot at the soil surface (root buds included):  
 Number of buds per shoot at a depth of 0–10 cm (root buds included):  
 Number of buds per shoot at a depth greater than 10 cm (root buds included):  
 Size of the belowground bud bank (root buds included):  
 Depth of the belowground bud bank (root buds included) [cm]:

## Trophic mode

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

## Karyology

Chromosome number (2n): **34**

Ploidy level (x): **2**

2C genome size [Mbp]: **4730.72**

1Cx monoploid genome size [Mbp]: **2365.36**

Genomic GC content: **41 %**

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

Moisture indicator value: **11 - aquatic plant rooted under water, but at least temporarily with leaves above the surface, or a plant floating on the water surface**

Reaction indicator value: **7 - indicator of slightly acidic to slightly basic conditions, never occurring in very acidic conditions**

Nutrient indicator value: **7 - occurring at nutrient-rich sites more often than at average sites and only exceptionally at poor sites**

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

Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-0.55**

Herb layer disturbance frequency indicator value: **-0.54**

Whole-community disturbance severity indicator value: **0.14**

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

Whole-community structure based disturbance indicator value: **0.49**

Herb layer structure-based disturbance indicator value: **0.51**

## Habitat and sociology

Occurrence in habitats

3 Aquatic vegetation

3A Macrophytic vegetation of eutrophic and mesotrophic still waters: **3 - dominant**

3B Macrophytic vegetation of water streams: **1 - rare occurrence**

3C Macrophytic vegetation of oligotrophic lakes and pools: **1 - rare occurrence**

4 Wetland and riverine herbaceous vegetation

4A Reed-beds of eutrophic still waters: **2 - optimum**

4C Eutrophic vegetation of muddy substrata: **2 - optimum**

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 does not spontaneously occur in Czech forests**

## Diagnostic taxon

Diagnostic taxon of alliances: [VBA \*Nymphaeion albae\*](#)

Diagnostic taxon of associations: [VAC02 \*Stratiotetum aloidis\*](#), [VBA01 \*Nymphaeo albae-Nupharetum luteae\*](#), [VBA02 \*Nymphaeetum albae\*](#), [VBA03 \*Nymphaeetum candidae\*](#), [VBB11 \*Potametum denso-nodosi\*](#)

## Constant taxon

Constant taxon of alliances: [VBA \*Nymphaeion albae\*](#)

Constant taxon of associations: [VBA01 \*Nymphaeo albae-Nupharetum luteae\*](#)

## Dominant taxon

Dominant taxon of associations: [VBA01 \*Nymphaeo albae-Nupharetum luteae\*](#), [VBA02 \*Nymphaeetum albae\*](#)

## Ecological specialization indices

Ecological specialization index for all vegetation types: **5.3**

Ecological specialization index for non-forest vegetation: **5.3**

## Colonization ability

Index of colonization success (ICS): **2**

Index of colonization potential (ICP): **1**

Optimum successional age [years]: **45**

## Distribution and frequency

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

Floristic region: **Europe, Siberia**

Distribution range extension along the continentality gradient: **7**

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: **268**

taxon.data.freq\_in\_quad: **452**

## Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **1.1 %**

Occurrence frequency in vegetation plots with a cover above 5%: **68.4 %**

Occurrence frequency in vegetation plots with a cover above 25%: **53.3 %**

Occurrence frequency in vegetation plots with a cover above 50%: **42.4 %**

Mean percentage cover in vegetation plots: **41.2 %**

Maximum percentage cover in vegetation plots: **99 %**

## Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **5**

Number of narrow habitats in which the taxon has its optimum: **3**

Number of broad habitats in which the taxon occurs: **2**

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

## Threats and protection

Red List 2017 (national categories): **C4a - near threatened taxon**

Red List 2017 (IUCN categories): **LC - least concern**

Legal protection: **not protected by law**