

## 2.1. Latinsk navn (Latin name)

*Luronium natans* (L.) Rafin.

## 2.2 Røddlistestatus (redlist status)

Sårbar. (Vulnerable)

## 2.3 Utbredelse (spreading/place)

*Luronium natans* is an European endemic. It occurs in Western and Central Europe, southern part of Scandinavia, in the range of the Atlantic and Subatlantic climate. The Oslo populations seems to be the northernmost in the whole range (the only in Norway?).

## 2.4 Lokalteter i Norge (locations in Norway)

Oslo, Vestfold: Kimtahalvøya i Brunlanes, Larvik (nylig funnet).?

### 2.4.1. Lokalteter i Oslo (locations in Oslo)

3 known

#### Location: 1. DAUSJØEN

Observations were made only from a shore, in eastern part of a lake! Plants could be observed only to the water depth of about 1.5 – 2 m and 3 – 5 m from the shoreline. *Luronium* can grow deeper- down to 3 m deep, but this area could not be examined from the shore (a boat is necessary).

**Individuals:** Very abundant, sometimes as many as 200 individuals / 1m<sup>2</sup>. If we estimate: 10 individuals /m<sup>2</sup> and 2000 m of shoreline x 3 m wide belt of occurrence = 60 000 (for 200 individuals / 1m<sup>2</sup> = 1 200 000) individuals, or more.

**Area:** We estimate that *Luronium* is present on 60 – 70% of the lake shoreline. It grows more often on the Eastern side of the lake with the exception of a steep cliff in the southern part. It does not grow only in shallow, very muddy bays and in places where the water is immediately very deep. See the map.

**Environment (habitat):** Lake with stable water level. Plants prefer the depths between 10 – 100 cm. At that depth floating leaves can be visible. *Luronium* grows preferably on empty sandy bottom with a thin layer of organic sediment, but also together with: *Lobelia dortmanna*, *Juncus bulbosus*, *Equisetum limosum*, *Carex vesicaria*, *Lysimachia thyrsoiflora*, *Alisma plantago-aquatica* (rarely), *Nuphar luteum*

**Condition:** There were two forms of *Luronium*: 1. water form (with floating and immersed leave rosettes) and 2. vegetative immersed form (without floating leaves only with immersed leave rosettes). There were no blooming plants at a time of observation. Floating leaves of *Luronium* were visible only on very shallow water – less than 20 cm.

**Care:**

**GPS-koordinates:**

**Date of watch:** 26.06.2009

**Owner:**

**Photos:** No 2766; 2767 (R. Gramsz)

**Observer:** R. Gramsz,

**Location:** 2. BREISJØEN

Observations were made only from the shore!

**Individuals:** Abundant

**Area:** Luronium is present on ca 50% of the lake shoreline. Does not grow only in shallow, very muddy bays and where the water is immediately very deep. Also there is lack of Luronium close to the dam in Eastern part of a lake. See map.

**Environment (habitat):** This lake has changeable water level. Plants grow both on the expose shore and emerge in water. The highest concentration is observed along the present water level (about 1m below maximum). Luronium grows preferably on empty sandy bottom, but also together with: Lobelia dortmanna, Juncus bulbosus, Ranunculus reptans, Isoëtes echinospora (?), Equisetum limosum, Carex vesicaria, Lysimachia thyrsoiflora.

**Condition:** All forms of Luronium were found: 1.water form (with floating and immersed leave rosettes), 2.vegetative, immersed form (without floating leaves, only with immersed leave rosettes) and 3.water-terrestrial form (only with floating, leathery leaves).

**Care:** !!! – It will be very interesting to know (if it exists – data from limnigraph) the record of water level changes during as many years as possible.

**GPS-koordinates:** (See the map. Map datum (Kartdatum): WGS 84; Position format (Posisjonsformat): UTM UPS) GPS 1: 0603737/ 6650352; GPS 2: 0603700/ 6650374; GPS 3: 0603661/ 6650387; GPS 4: 0603616/ 6650450; GPS 5: 0603672/ 6650527; GPS 6: 0603661/ 6650635

**Date of watch:** 18.07.2009

**Owner:**

**Photos:** No 2887 (R. Gramsz)

**Observer:** R. Gramsz, J. Potocka

**Location: 3. Alunsjøen**

**Individuals:** About 5 + 20 individuals in 2 sites.

**Area:** *Luronium* is present only in 2 places in small bays in Eastern and Southern part of a lake where small streams flow in. Plants takes up about 20 m<sup>2</sup> in site 1 (Eastern) and 100 m<sup>2</sup> in site 2 (Southern) See map.

**Environment (habitat):** This lake is with changeable water level. Plants grows in a very shallow, both standing and flowing water in places where flow in streams forms pools still full of water. During maximum water level in the lake this places may be emerged in water but usually this water level is much lower. At a day of observation the lake water level was higher than last year but still about 1.5 m lower than maximum. With other plants:

Site 1. in water- *Alisma plantago-aquatica*, *Glyceria fluitans*, *Hippuris vulgaris*. On shore- *Carex lasiocarpa* (dominant), *Carex stellulata*, *Carex rostrata*, *Carex vesicaria*, *Comarum palustre*, *Epilobium palustre*, *Equisetum fluviatile*, *Galium palustre*, *Juncus bufonius*, *Lysimachia thyrsoflora*, *Menyanthes trifoliata*, *Peucedanum palustre*, *Polygonum minor*, *Ranunculus reptans*, *Rorippa palustris* cfr., *Sphagnum squarrosum*, *Veronica scutellata*

Site 2. in water- *Alisma plantago-aquatica*, *Alopecurus aequalis*, *Glyceria fluitans*, *Juncus bufonius*, *Rorippa palustris* cfr.,

Seems that *Luronium* become extinct in whole lake except this two places

**Condition:** There were two forms of *Luronium*: water-terrestrial form (only with floating, leathery leaves), water form (with floating and immerse leaves rosette). In both sites it is dramatically fewer visible plants than last year. The explanation may be that the water level in a lake rose just few days before observation and flooded *Luronium*.

**Care:** !!! – It will be very interesting to know (if it exists – data from limnigraph) the record of water level changes during as many years as possible.

**GPS-coordinates:** Site 1. 0603583/ 6648856  
Site 2. 0603376/ 6648625

**Date of watch:** 16.07.2009

**Owner:**

**Photos:** No 2879; 2880; 2881; 2882; 2884; 2885 (R. Gramsz)

**Observer:** R. Gramsz, J. Potocka

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We were looking for *Lurionium natans* also in other lakes and we did **not** find it!

The following lakes were examined:

- Steinbruvannet, Stokkevann, Aurevann, Vesletjern in Lillomarka
- Oyungen, Kalven, Finntjern, Kalvsjoen and partly Gaslungen, Rottungen in Nordmarka
- Maridalsvannet – only small part of Nesbukta was examined

It is very difficult and inefficient to move along a shore of Maridalsvannet on foot. Canoe, kayak or rowing boat will make searching for *Lurionium* much more efficient and easier.