

# Årsmelding

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**Formålet** til stiftelsen Norsk Naturarv er å bidra til å bevare og formidle Norges naturarv (§ 4 i vedtektene).

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#### **Revisor**

Hverven Revisjon AS

## **2. Overvåking og registrering av utvalgte arter**

### **2. A. Overvåking og registrering av planter**

Ansvar: Roman Gramsz (hovedansvar) og Katarzyna Bociąg

## Luronium – 2018



### 2.1. Latinsk navn (Latin name)

*Luronium natans* (L.) Rafin.

### 2.2 Rødlistestatus (redlist status)

Sterkt truet - Endangered (EN)

### 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 (and the only natural sites in Norway). The main range of distribution of this plant is Western and Central Europe, including Poland.

### 2.4 Lokalteter i Norge (locations in Norway)

In Norway *Luronium natans* is known from 5 lakes in Oslo municipality where their occurrence were noticed during last 100 years. Information about *Luronium* in “Kinnhalvøya i Brunlanes, Larvik i Vestfold” was based on the false identification of the species. The location of Oppedgård given in 1999 is not confirmed and “Roppestaddammen” from Fredrikstad was implanted.

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

##### 5 known locations:

- Alunsøen, Breisjøen, Dausjøen, Maridalsvannet, Svartkulp.

#### 2.4.2. Location in Fredrikstad – Roppestaddammen.

## ***Luronium natans* growth forms and Methodology.**

According to the English botanical literature, *Luronium natans* has two distinct forms: *submersum* - with submerged linear-lanceolate leaves, which are flat and only grow in water, and *repens* - with "expanded" leaves. Expanded leaves have petioles and blades, and may float or be submerged (WILLBY & EATON 1993, LANSDOWN & WADE 2003). Thus, the division line is between forms having only submerged leaves and forms having both submerged and expanded floating leaves. Forms growing on the not flooded, exposed substrate, are not described in details.

In turn, in Polish botanical literature (f.e. SZMEJA 2001) there are described two forms either. The division line is between submerged plants (even they have expanded floating leaves) and terrestrial forms. The latter grow on the exposed substrate, not in the water, and they have aerial ovate leaves, sometimes with remnants of a rosette of submerged leaves. However, the causes of variation in growth form are apparently environmental rather than genetic, and these forms are not consistent.

So, we distinguish three forms for the purposes of this study - it makes it easier to inventory *Luronium* in the field and better shows the diversity of the population of this plant in the area of research although these forms are often a continuum in space or in time:

- (i) **Submerge vegetative form** - completely submerged form with rosettes of linear-lanceolate leaves connected with white or green stolons but without "expanded" floating leaves. It occurs in deeper water – one to several meters.
- (ii) **Submerge form with floating leaves** - form with submerged leaves rosettes, stolons and with "expanded" floating leaves (elliptical to ovate, on long petioles which grow out of underwater leaves rosette); white flowers (~1 cm of diameter) occur on the water surface (on long pedunculates); forms grow in not very deep water, usually up to 1 m depth.
- (iii) **Terrestrial form** - with "expanded" aerial leaves, elliptical to ovate shape, on short petioles, sometimes with white flowers; they occur on exposed muddy bottom or in not very deep water (up to several centimeters).

This year, short, observations from the shore were made at the end of June and at the beginning of July. Using hot and dry weather and low water level in Maridalsvannet ashore observations on Western and Southern part of the lake were completed.

In the second half of July all lakes have been investigated using boat and diving. **The result of this work is a map of the distribution of the entire *Luronium* population (also a hardly known underwater vegetative form) in all 5 lakes.**

Description of this method:

I cooperate in this work with Dr Katarzyna Bociąg – hydrobotanist and skilled diver.

We sailed on a boat or a pontoon along the shore, checking the presence of *Luronium* in a belt with a depth of 0 - 5m. The diver penetrated deeper places and the person on the pontoon checked the shallow places often with the help of "vatennkikare".

The size and depth range of each found vegetation patch was recorded in the GPS with an additional description of the growth forms and densification. Then, based on these data, digital maps of the *Luronium* distribution were made for 4 of the lakes studied. The research on Svartkulp took place (in 2016) only by diving method without the participation of boat and GPS. The map was sketched on the basis of direct information from the diver.

**Location: 1. DAUSJØEN**



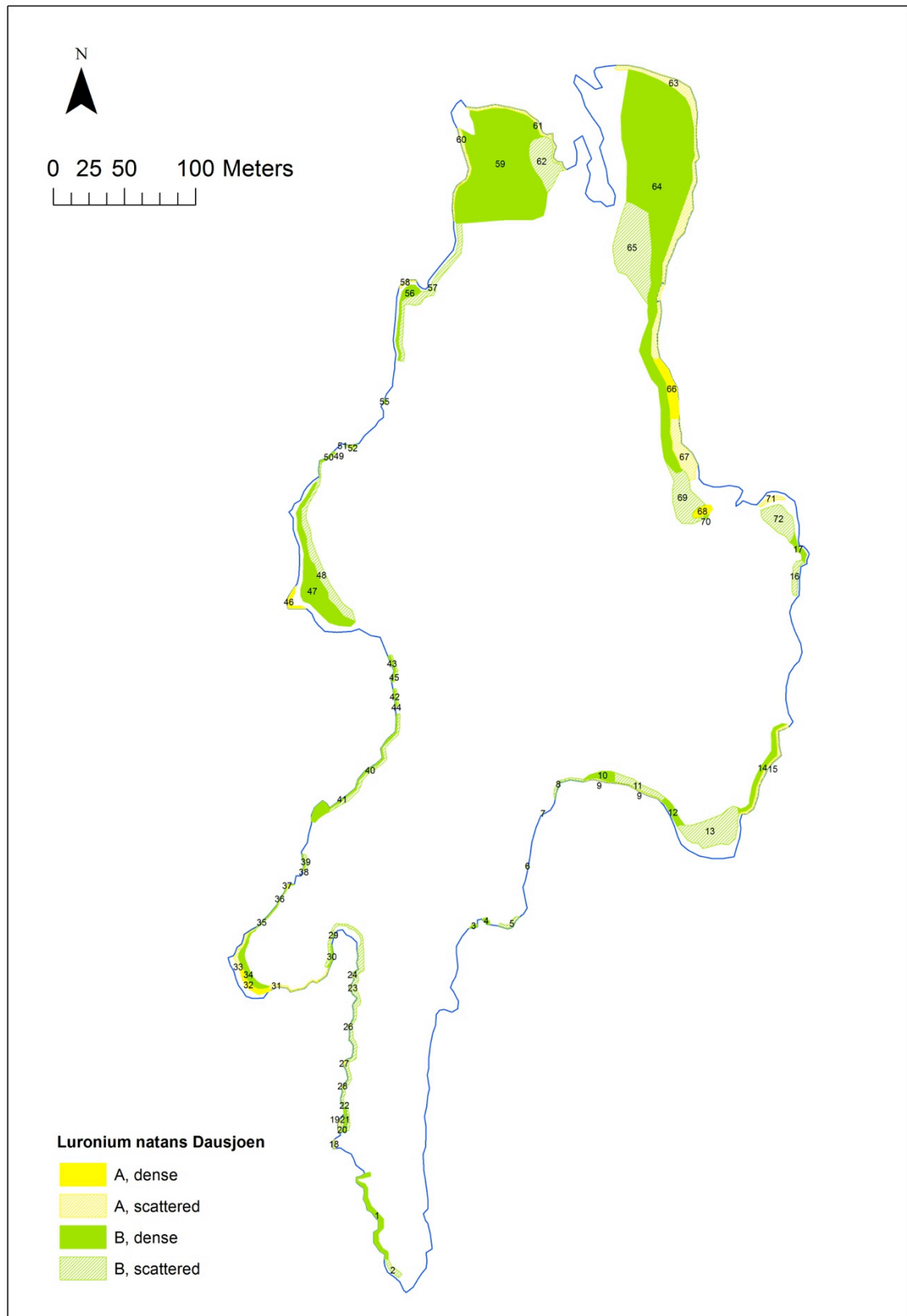
Photo 1. Researches on Dausjøen using a pontoon and diving. 31.07.2018.

**Individuals:** Very abundant, sometimes as many as 200 individuals / 1m<sup>2</sup>. If we estimate as average: 30 individuals /m<sup>2</sup> x 20223 m<sup>2</sup> = 606 690 individuals (for 200 individuals / 1m<sup>2</sup> = over 4 milions! Individuals)

**Area:** Sum = 20223 m<sup>2</sup>. The size of set surfaces - see map 1. :

<b>razem</b>	<b>wszystkie</b>	<b>20223,13401</b>	<b>m2</b>
	A dense	529,827	m2
	A scattered	2108,165	m2
	B dense	12105,58	m2
	B scattered	5479,563	m2

We estimate that *Luronium* is present on ca. 70% of the lake shoreline. The most abundantly it grows in Northern bays of Dausjøen with the exception of very muddy bays and in places where the water is immediately very deep -as along a steep cliff in the southern part. See the map. Maximum depth where *Luronium* is growing in Dausjøen – 2,2 m



Map. 1 On the map: "A" - underwater form with floating leaves and flowers (usually growing not deeper than 1.5 m), "B" - underwater vegetative form (growing deeper than 1.5 m)

**Environment (habitat):** Lake with stable (not regulated by dam) water level. Plants which are growing on the depths between 10 -100 cm, usually with floating leaves and flowers could be visible from ashore. **In this summer we discovered the area which is covered by submerge vegetative form of *Luronium*. Appears that it makes up 87% of the entire population in Dausjøen.** *Luronium* grows preferably on empty sandy (mineral) bottom with a thin layer of organic sediment, but also together with: *Lobelia dortmanna*, *Juncus bulbosus*, *Equisetum fluviatile*, *Carex vesicaria*, *Lysimachia thyrsiflora*, *Alisma plantago –aquatica* (rarely), *Nuphar luteum* and in deeper parts with *Isoetes lacustris*, *I. echinospora*.

**Condition:** During first visit to the lake (11.06) I have already notice floating leaves at the depth 20-25 cm (with 15 cm lower than max water level). It was the earliest time that floating leaves were noticed in this lake during observations since 2008. The hot and dry weather continue during most of summer with a temperature of surface water 25-27°C at days of observations. In the end of July water level rise to maximum. Plants developed a lot of floating leaves and flowers this year but they were sunk and thus less visible.

Some interesting observations:

-We observe floating leaves (floating on the surface when water level was 15 -20 cm lower) now submerge in water and yellowing. Probably petioles when the leaf reaches the surface of the water ceases to grow and can not resume growth when the water level rises.

- in the particularly warm water this year the "clouds" of filamentous algae spread enormously. (photo 2.)

- in many places the oldest leaves of underwater vegetative rosettes reached a length of 30 - 35 cm! (usually it is 5 - 15 cm). (photo 3.)

**GPS-coordinates:** 60° 0'31.70"N 10°47'23.08"E

[Luronium-Dausjoen1](#)

**Date of watch:** 11.06; 27; 29; 31.07.2018

**Photos:** R. Gramsz

**Observer:** R. Gramsz and K. Bociąg



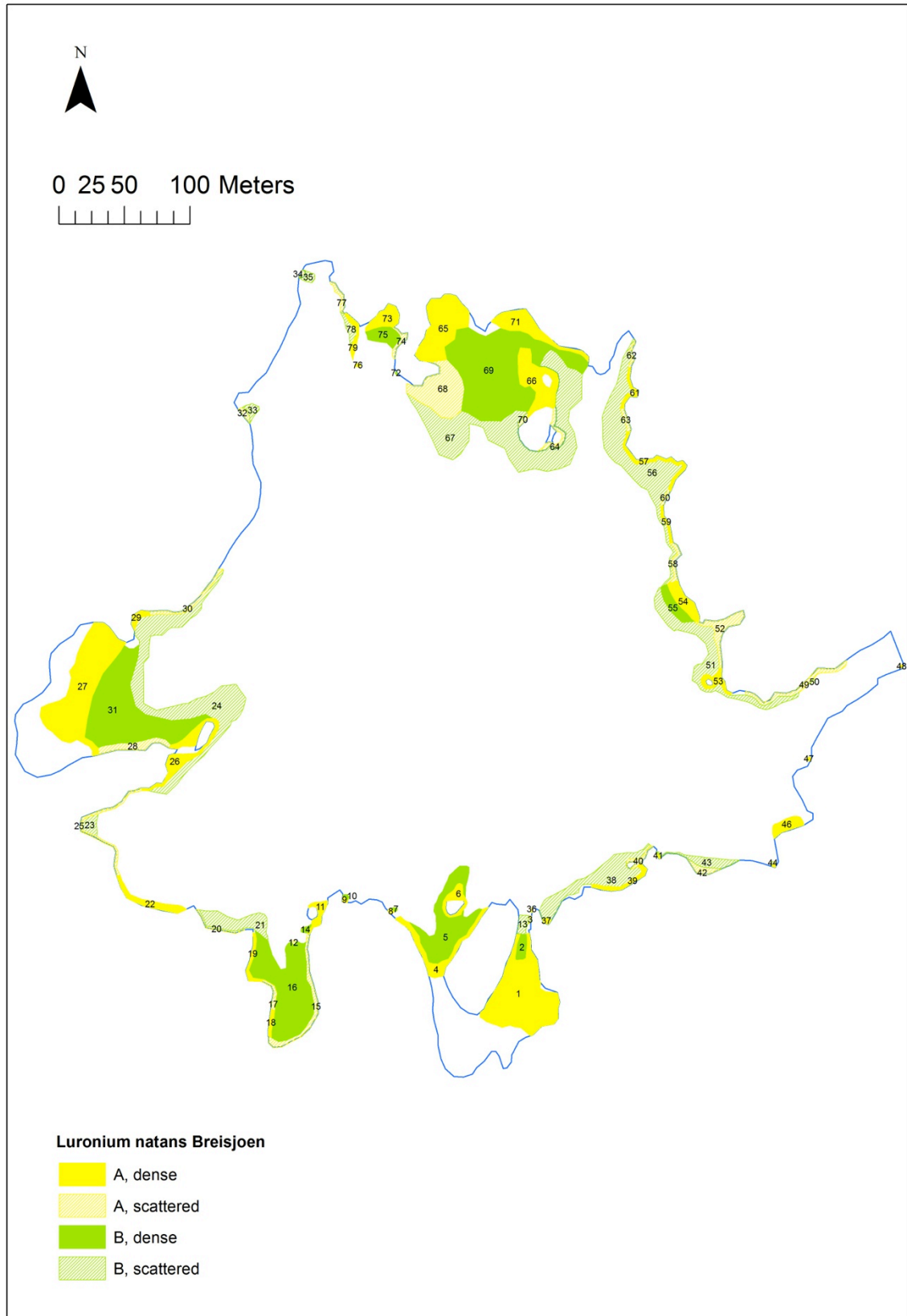
Photo 2. "Clouds" of filamentous algae spread enormously. 31.07.2018.



Photo 3. The oldest leaves of underwater vegetative rosettes reached a length of 30 - 35 cm!  
31.07.2018.



**Location: 2. BREISJØEN**



Map. 1 On the map: "A" - underwater form with floating leaves and flowers (usually growing not deeper than 1.5 m), "B" - underwater vegetative form (growing deeper than 1.5 m)

**Individuals:** The most abundant population in Norway. In some places can grow as much as 200 individuals/m<sup>2</sup>. After our research, it turned out that *Luronium* is growing on an area of 37 716 m<sup>2</sup>! Even if we accept only 30 individuals / m<sup>2</sup>, we will receive more than 1 million individuals.

**Area:** Sum = 37716 m<sup>2</sup>. The size of set surfaces - see map 1. :

<b>RAZEM</b>	<b>wszystkie</b>	<b>37716,50745</b>	<b>m2</b>
	A dense	11295,89	m2
	A scattered	3682,576	m2
	B dense	10998,78	m2
	B scattered	11739,26	m2

*Luronium* is present on ca. 70% of the lake shoreline. It does not grow only in shallow, very muddy bays and where the water is immediately very deep and stony. See map 1.

Maximum depth where *Luronium* is growing in Breisjøen – 3,2 m.

**Environment (habitat):** This lake has variable water level. Plants can grow both on the expose shore and submerge in water. *Luronium* grows preferably on empty sandy (mineral or mix mineral-organic) bottom. On the depth of water to about 1m *Luronium* grows together with: *Lobelia dortmanna*, *Juncus bulbosus*, *Ranunculus reptans*, *Isoëtes echinospora* (?), *Equisetum fluviatile*, *Carex vesicaria*, *Lysimachia thyrsoiflora*. Vegetation at a places deeper than 1.5m is very pure so, it is less competition for *Luronium*. The water in the lake is very transparent which allows the plant to grow to a depth of 3.2 m.

**Condition:** *Luronium* grows particularly abundantly this year due to hot weather and high temperature of water – ca. 26<sup>oC</sup> in surface water. Floating leaves appears on the surface of water even from plants growing on the depth of 2m (usually 0.2 – 1m). Plants were blooming very abundantly.

Some interesting observations:

- Very often in places with a depth about 1m and deeper the plants were produced a lot of flowers but without floating leaves.

- In many places the progeny plants created on the stolons have not taken root on the bottom but still attached to the mother plant formed very dense thickets in the water depth. (Photo 2.)

**GPS-Coordinates:** 59°58'47.17"N 10°51'38.11"E

[Luronium-Breisjoen2](#)

**Date of watch:** 6; 9; 19; 20; 21.07.2018;

**Photos:** R. Gramsz ;

**Observer:** R. Gramsz and K. Bociąg

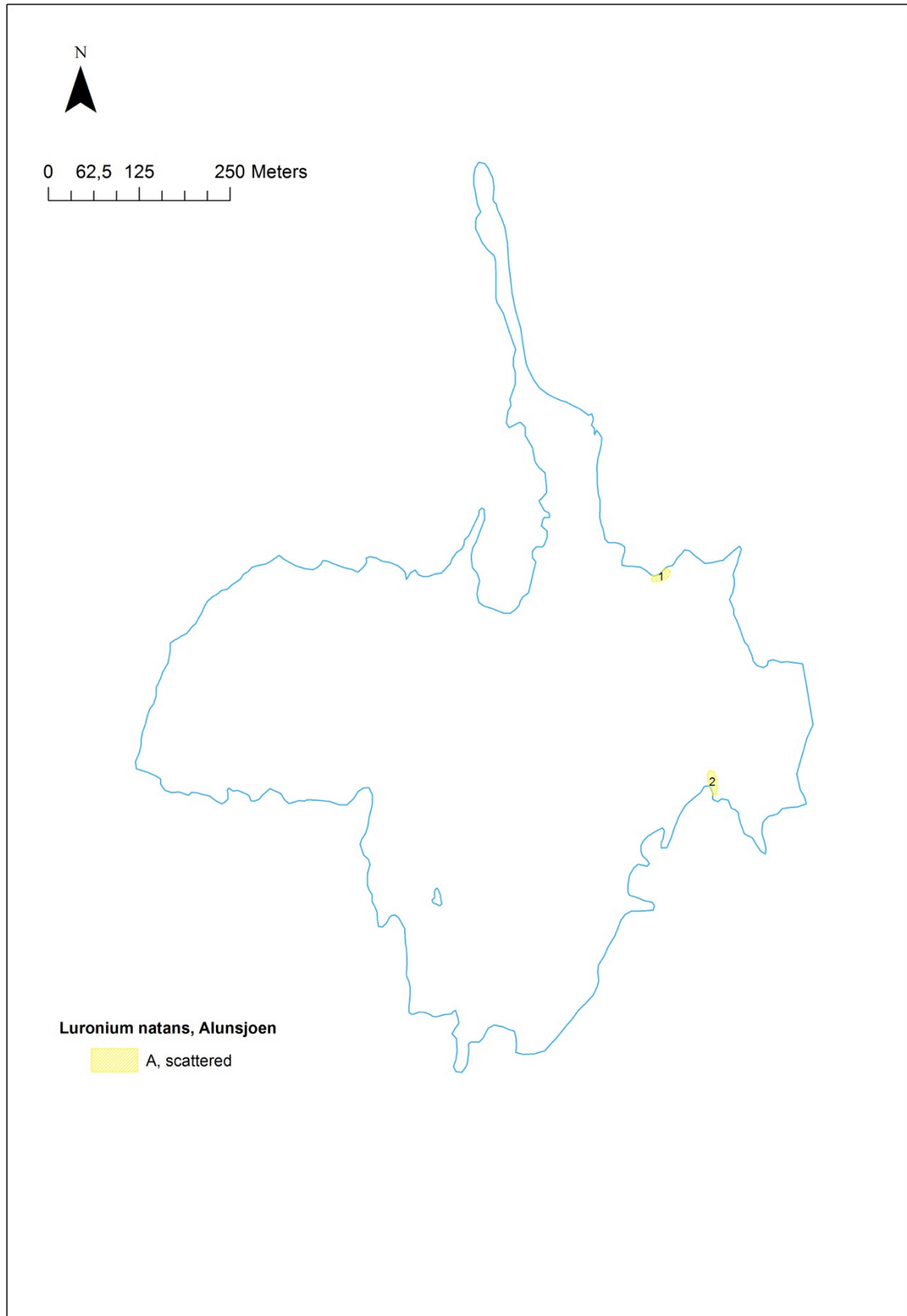


Photo 1. Abundant growth of *Luronium* in a depth ca. 50 cm. Together with blooming *Lobelia Dortmana*. Breisjøen. 6.07.2018.



Photo 2. Thicket of *Luronium* with a lot of flowers but not so many floating leaves. Western bay of Breisjøen. 20.07.2018.

**Location: 3. ALUNSJØEN**



Map.1. On the map: "A" - underwater form with floating leaves and flowers (usually growing not deeper than 1.5 m).

**Individuals:** Plants are spread in both locations creating one bigger and a dozen or so small concentrations (clusters) with a 100 – 200 as a sum of individuals.

**Area:** Sum = 586m<sup>2</sup>. 2 places in SE and NE part of a lake, close to the dam.

	forma	zagęszczenie	area [m2]
1	A	scattered	258,146346
2	A	scattered	328,175164
		suma powierzchni	586,32151

**Environment (habitat):** The littoral belt of Alunsjøen is still very pure with vegetation after dam rebuilding in 2007 -2008. So, *Luronium* behaves a little as pioneer plant. In a day of observation water level was about 60 cm lower than max.

**Condition:** Plants that grew on the exposed bottom have taken the terrestrial form. The rest of them growing not deeper than 20 -30 cm produced floating leaves and flowers.

**Care:**

**GPS-coordinates:** 59°57'57.94"N 10°51'4.54"E

[Luronium-Alunsjoen3](#)

**Date of watch:** 23.07.2018

**Photos:** R. Gramsz

**Observer:** R. Gramsz and K. Bociąg



Photo 1. Alunnsjøen. Big cluster in SE part of lake with 60 cm lower water level. 23.07.2018.



Photo 2. In NE location most of clusters grow as terrestrial form. With *Ranunculus reptans* in this photo. 23.07.2018.

#### Location: 4. SVARTKULP



Map.1. Diving observation of *Luronium* in Svartkulp **from the year 2016.**

- white marked places - **submerge form with floating leaves** (growing in depth 0 – 0.5m) possible to observation from ashore.
- **red marked places** - **submerge vegetative form** (growing in depth 0.5 – 1.5m, dense concentration) not possible to observation from ashore.
- **yellow marked places** - **submerge vegetative form** (growing in depth 0.5 – 3m, scattered concentration and individual plants) not possible to observation from ashore.

**Individuals:** This year observations, **only from ashore**, confirm *Luronium* existence (floating leaves) in few places on Northern and Eastern shore. *Luronium* is not growing so abundant in Svartkulp as in Breisjøen and Dausjøen but after our **underwater observation we estimate that it is growing on area of about 1600 m<sup>2</sup>.** That means (if we use 10 individuals/1 m<sup>2</sup>) = 16000 individuals.

**Area:** Ca. 1600 m<sup>2</sup> – as found out by diving in year 2016. (with submerge vegetative form)

**Environment (habitat):** This lake has rather stabile water level. Is relatively small and surrounded by forest and high, steep rocks on Eastern side. Western and North - Western shallow shore is overgrown by mire vegetation. *Luronium* plants are growing preferably on empty mineral (or mix mineral/organic) bottom, but also together with: *Nuphar luteum*,

*Potamogeton natans*, *Juncus bulbosus*, *Equisetum fluviatile*, *Carex vesicaria*, *Lysimachia thysiflora*. *Sparganium* sp. Observations with the help of diving discovered the occurrence of single-growing, large rosettes also opposite the muddy western shore.

**Condition:** Only a few clusters of floating leaves were visible on Northern and Eastern shore. (As usually with observation from ashore.)

**Care:**

**GPS-Coordinates:** 59°58'30.95"N 10°50'51.30"E

[Luronium-Svartkulp4](#)

**Date of watch:** 6.07.2018

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz (+ K. Bociąg -2016)



Photo 1. A few floating leaves growing from plants on the depth about 20 – 30 cm. SE part of Svartkulp. 6.07.2018.



## Location: 5. MARIDALSVANNET

In the beginning of July water level in Maridalsvannet was 60 -80 cm lower than max. Using this possibility for making observations from ashore I manage to check W and S shore of Maridalsvannet (part of a shore remained for investigation after 2013). Later in the end of July together with Katarzyna Bociąg we check whole lake and the outlet section of Dausjøelva using observations from boat and diving. At that time water level was a little higher but still ca. 40 cm below max.



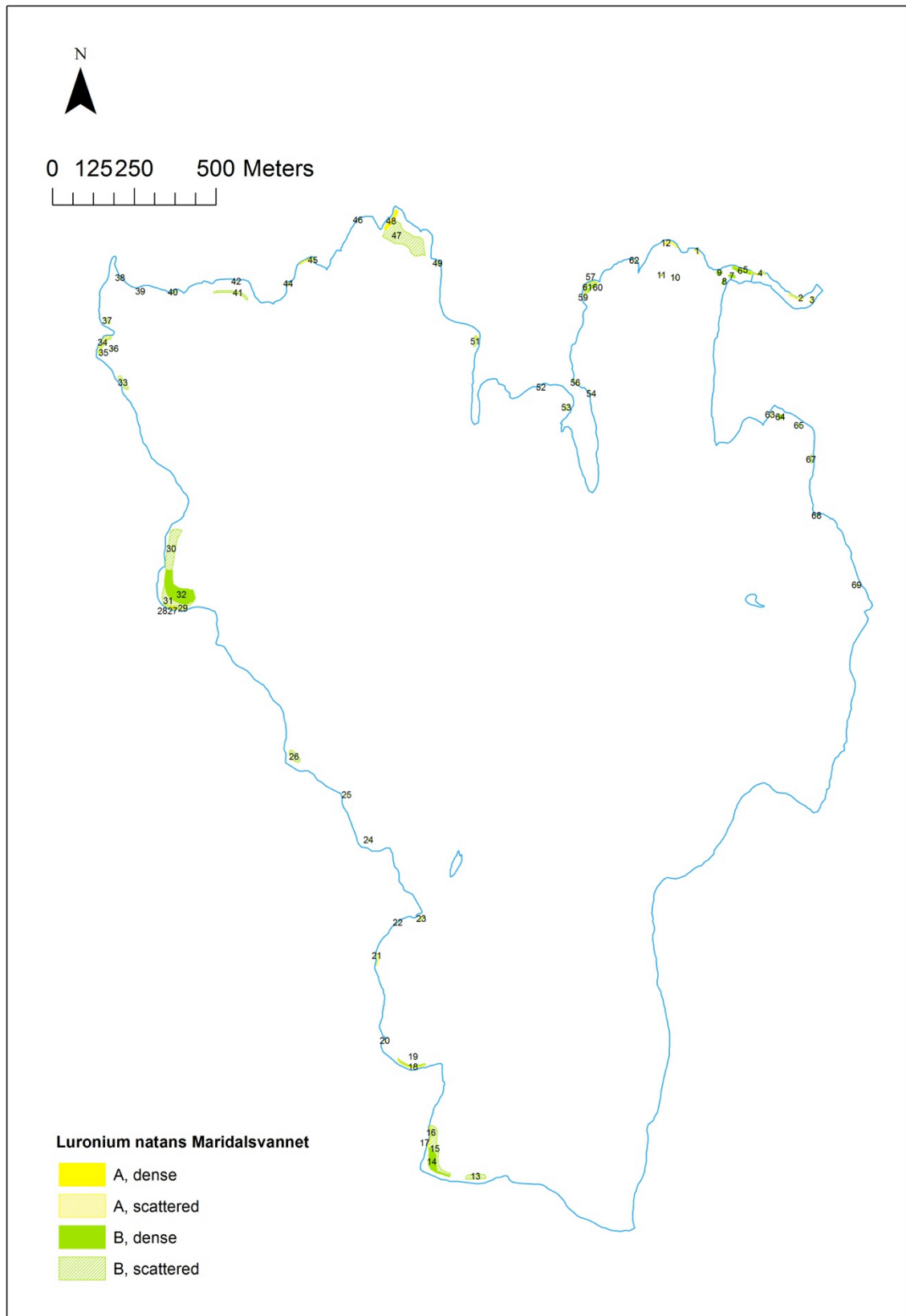
Photo 1. Researches in Maridalsvannet were made in the period 24.07 – 30.07.2018 by using boat and diving. 30.07.2018.

**Individuals:** *Luronium* in most places is growing spread, not as dense as it can grow in Breisjøen and Dausjøen. So, if we estimate  $20 \text{ individuals/m}^2 \times 29650 \text{m}^2 = 593 \text{ 000}$  individuals. Maximum depth – 2m.

**Area:** Sum =  $29650 \text{m}^2$ . The size of set surfaces - see map 1. :

<b>razem</b>	<b>wszystkie</b>	<b>29650,69935 m2</b>
	A dense	1380,594 m2
	A scattered	2573,699 m2
	B dense	7738,293 m2
	B scattered	17958,11 m2

**Environment (habitat):** Big lake with variable water level. The spots with *Luronium* we have found at Maridalsvannet are less abundant than in Dausjøen or Breisjøen. Surface of water in the lake can strongly wave because of its size. *Luronium* avoids exposure to waves and it is possible to find it only in sheltered bays, behind rocky spurs or protected against waving by other plants and in places located deeper than 30 cm. Transparency of water is smaller than in Breisjøen and Alunsjøen. Typically, *Luronium* were found at a depth of 30 to



Map.1. On the map: "A" - underwater form with floating leaves and flowers (usually growing not deeper than 1.5 m), "B" - underwater vegetative form (growing deeper than 1.5 m)

150 cm (max. 2m) from maximum water level. In this year for a few weeks in beginning of summer water level in the lake was 60 – 80 cm lower than max. That made possible to do some observations from ashore and notice terrestrial form of *Luronium* on the exposed lake bottom. We also have a chance to check a slow flowing estuary part of Dausjøelva with few small locations of *Luronium* and some interesting plants like: *Limosella aquatica*; *Subularia aquatica* and other most common plants in Maridalsvannet: *Alisma plantago aquatica*, *Lobelia dortmanna*, *Littorella uniflora*, *Juncus bulbosus*, *Heleocharis acicularis*, *Ranunculus reptans*, *Isoetes lacustris*, *Equisetum fluviatile*, *Carex vesicaria*, *Lysimachia thyrsiflora*, *Nuphar luteum*, *Myriophyllum alterniflorum*, *Potamogeton natans*, *Sagittaria sagitifolia*, *Sparganium sp div.*

**Condition:** Very hot weather during June and July warms the surface water of the lake to 26°C. Under such conditions, a large part of the *Luronium* population produces floating leaves and flowers. In addition low water level caused that the exposed plants continued to grow as a terrestrial form.

**Date of watch:** 11.06; 11; 14; 15; 24; 25; 26; 29; 30.07.2018

**Photos:** R. Gramsz, **Observer:** R. Gramsz and K. Bociąg



Photo 2. Terrestrial form of *Luronium* growing on exposed bottom in Western bay of Maridalsvannet. 14.07.2018.



Photo 3. Estuary part of Dausjøelva – there is some sites with *Luronium* in water and *Ranunculus reptans* and *Subularia aquatica* growing on exposed shore. 24.07.2018.



Photo 4. *Subularia aquatica* in estuary part of Dausjøelva. 24.07.2018.

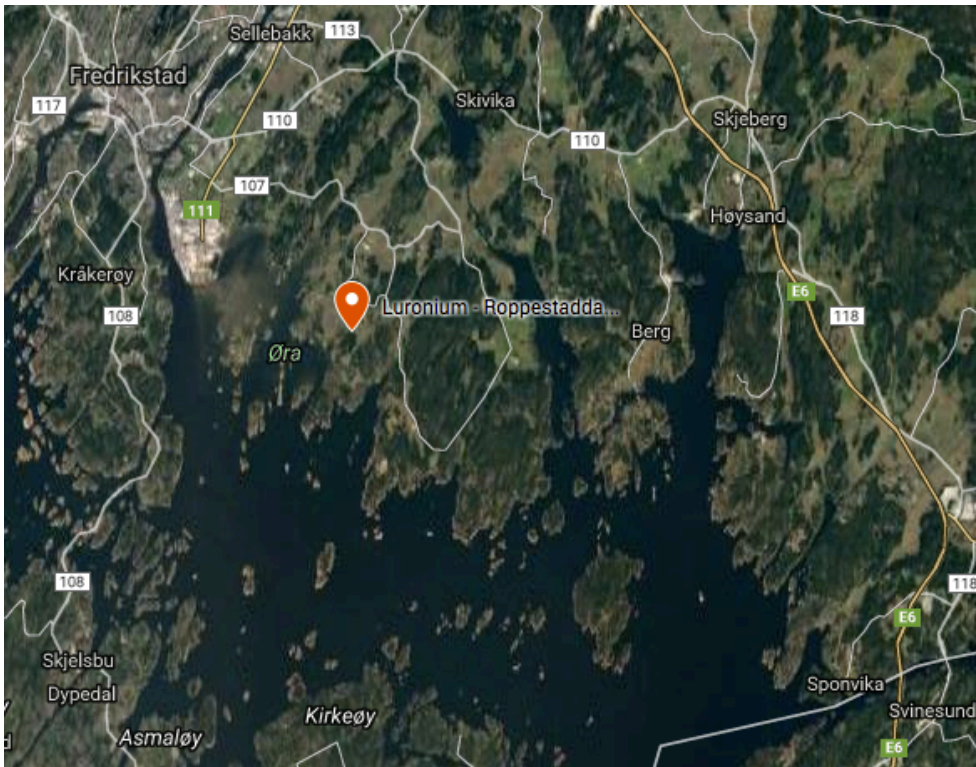


Photo 5. Higher water level... Floating leaves are not following new, higher water level. They are getting yellow and dying (?) 26.07.2018.



Photo 6. Beach on the NE part of Maridalsvannet. Waves makes this part of the beach impossible to live for *Luronium*. 29.07.2018.

## Location 6: FREDRIKSTSD - ROPPESTADDAMEN



Map. General localization of Luronium site – Roppestaddamen.

**Individuals:** Very abundant

**Area:** *Luronium* occurs in two small ponds.

- Roppestaddammen with a size ca. 60m x 15m and *Luronium* is growing on at least 40% of it area.
- Roppestadmyra ca. 20m x 40m with *Luronium* growing on at least 50% of it area in this year ( more than estimated in last year).

**Environment (habitat):** Both ponds are located on the site of a small, disused granite quarry or close to it. Roppestaddammen fills irregular rock cavity and this place is quite well sunlit. Roppestadmyra has an oval shape and looks as if it was dug in the peat. This pond is surrounded by forest and shaded. Both ponds are not deeper than 1m (Roppestaddamen) and maybe 1.5m (Roppestadmyra).

In Roppestaddamen besides *Luronium natans* is possible to find: *Acorus calamus*, *Baldelia (ranunculoides?)*, *Calla palustris*, *Carex acutiformis*, *C. rostrata*, *C. pseudocyperus*, *C. stellulata*, *Comarum palustre*, *Equisetum fluviatile*, *Glyceria fluitans*, *Juncus conglomeratus*, *J. effusus*, *J. ensifolius?* *J. bulbosus*, *Lemna minor*, *Lysimachia vulgaris*, *Menyanthes trifoliata*, *Nymphaea alba*, *Ranunculus flamula*, *R. lingua*, *Utricularia vulgaris*, *U. intermedia*,

In Ropestadmyra: *Luronium natans*, *Carex rostrata*, *C. stellulata*, *Comarum palustre*, *Glyceria fluitans*, *Juncus effusus*, *Nymphaea alba*, *Utricularia sp.div*,

**Condition:** This year observation is taking part very early (ca. 10 days earlier than before but the end of May and June was very hot and dry). *Luronium* plants were visible in both pounds with floating leaves and flowers but not as abundantly as last year. In this shallow pounds most of *Luronium* population can exist as submerge form with floating leaves. Regardless of the competition of other aquatic plants *Luronium* created a compact pieces that concern no less than 30 - 50% of the entire surface of ponds. In this year water level was about 25 - 30 cm lower than maximum.

**Care:** *Luronium* was planted in those pounds.

**GPS-coordinates:** 59.1667, 11.02638

**Date of watch:** 19.06.2018.

**Owner:**

**Photos:** R. Gramsz   **Observer:** R. Gramsz



Photo 1. Ropestadmyra. Not so many *Luronium* flowers as last year, but it is 10 days earlier- 19.06.2018.



Photo 2. *Luronium* in Roppestadmyra. Floating leaves are very big – up to 2 x 4 cm. 19.06.2018.



Photo 3. *Luronium* with a lower water level. 19.06.2018.



## Microstylis – 2018

### 2. Bakgrunn (data)

#### 2.1. Latinsk navn (Latin name)

*Microstylis monophyllos* (L.) Lindley

A shoot with flowers or a vegetative form (usually only one small leaf) is regarded as individual.

#### 2.2 Rødlistestatus (redlist satus)

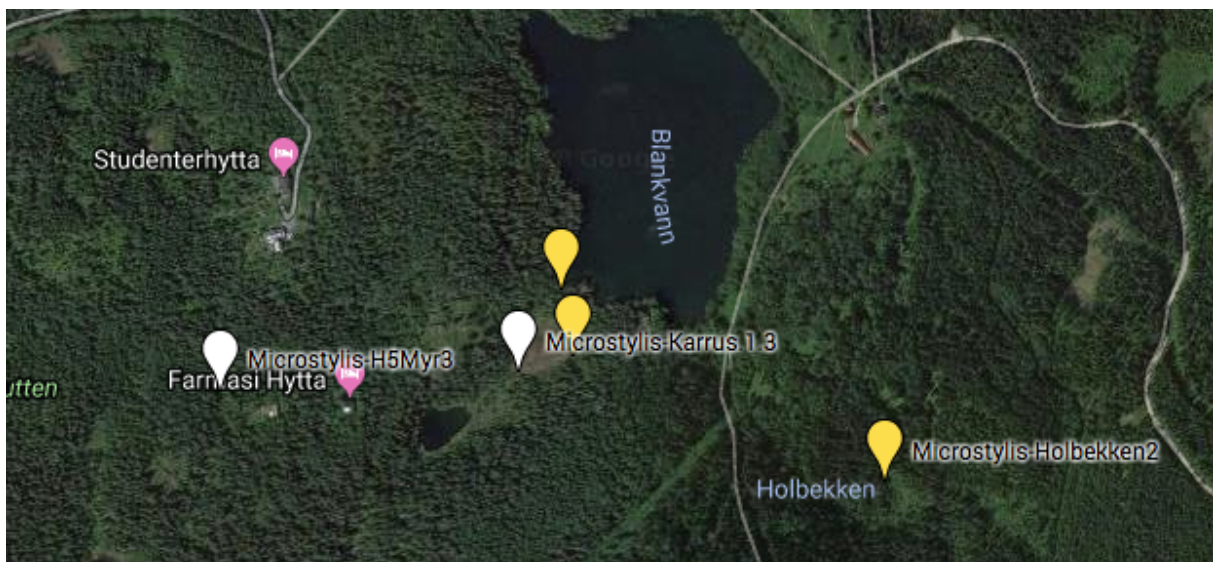
(Critically endangered)

#### 2.3 Utbredelse (spreading/place)

*Microstylis monophyllos* occurs in Northern, Central and Eastern Europe as far West as C. Norway and C. Switzerland and southwards to Northern Italy and Southern Russia.

#### 2.4 Lokalteter i Norge (locations in Norway)

##### 2.4.1. Lokalteter i Oslo (locations in Oslo) - 3 known (Karrusputten, Holbekken, H5-Myr)



Map. Microstylis Blankvann 2018.

< 10 specimens (white)

11 – 50 specimens (yellow)

51 – 100 specimens (red)

> 100 specimens (violet)

### Location: 1. Mire SW from Blankvann (Karrusputten)

In this mire (Karrusputten) after a very precise searching in a year 2009 - 3 stands with *Microstylis* were found. Stands are situated in the same mire but about 100 m apart from each other so they were described separately. In years 2010, 2011, 2012, 2013 and 2014 we did not found any individuals on stand no. 1.3. From year 2015 again few individuals each year could be found on that location. Very hot and dry weather from middle of May accelerates flowering so, in the end of June the plants were fully flowering.

**Location: 1.1 Karrusputten,** (Eastern part of a mire close to ski trail.)



**Individuals:** 30 (17 blooming + 13 vegetative)

**Area:** ca. 10 x 40 m (0.032 ha)

**Environment (habitat):** Eastern part of mire, rich fen, with dominant *Carex lasiocarpa* and *Menyanthes trifoliata*. Site is on a ski trail, sometimes used in summer as a footpath and spread 20 m to the North East and South West from ski trail. It was relatively dry this year – there was not standing water in small concavities on mire. With other species: *Comarum palustre*, *Filipendula ulmaria*, *Potentilla erecta*, *Triphorum alpinum*, *Eriophorum latifolium*, *Dactylorhiza incarnata*, *D. traunsteineri*, *Drosera rotundifolia*, *D. anglica*

**Condition:** Blooming period was very early this year. At 30.06 plants were in full blooming. Their distribution on this site was similar like last year but no plants were found on distant location on ski trail. As usually most plants were found in already known from last year concentrations. Most of blooming plants were small 3 -5 cm and only few quite big (20 cm).

**GPS-coordinates:** 60° 1'24.49"N 10°39'53.37"E

[Microstylis-Karrusputten1.1.kmz](#)

**Date of watch:** 13.06; 30.06.2018

**Photos:** Roman Gramsz **Observer:** Roman Gramsz



Photo 1. Concentration of few biggest, blooming individuals. 30.06.2018.



Photo 2. The main part of location 1.1. with places of *Microstylis* occurrence marked with white cards. 30.06.2018.

**Location: 1.2 Karrusputten,** (Northern side of a mire, close to Blankvann)



**Individuals:** 15 (8 blooming + 7 vegetative)

**Area:** ca. 8 x20 m (0.014 ha)

**Environment (habitat):** Northern edge of a mire, rich fen with domination of *Menyanthes trifoliata*. Site is on a ski trail just 5 m from the shore of Blankvann. With other species: *Bistorta vivipara* (*Polygonum viviparum*), *Carex flava*, *Carex nigra*, *Carex panicea*, *Comarum palustre*, *Drepanocladus sp.*, *Equisetum palustre*, *Eriophorum latifolium*, *Filipendula ulmaria*, *Geum rivale*, *Menyanthes trifoliata*, *Molinia caerulea*, *Pedicularis palustris*, *Pinguicula vulgaris*, *Potentilla erecta*, *Salix sp.*, *Trichophorum caespitosum*, *Triglochin palustre*, *Trollius europaeus*,

**Condition:** Blooming period starts very early this year. I could find only 6 concentrations with much less individuals. *Microstylis* plants were small (up to 15 cm) and all of them under cover of *Menyanthes trifoliata* leaves.

**Care:** It would be nice to get a bit more light on this surface by cutting the bushes in the close surroundings.

**GPS-coordinates:** 60° 1'27.12"N 10°39'52.40"E

[Microstylis-Karrusputten1.2.kmz](#)

**Date of watch:** 13.06; 30.06.2018

**Owner:**

**Photos:** Roman Gramsz

**Observer:** Roman Gramsz

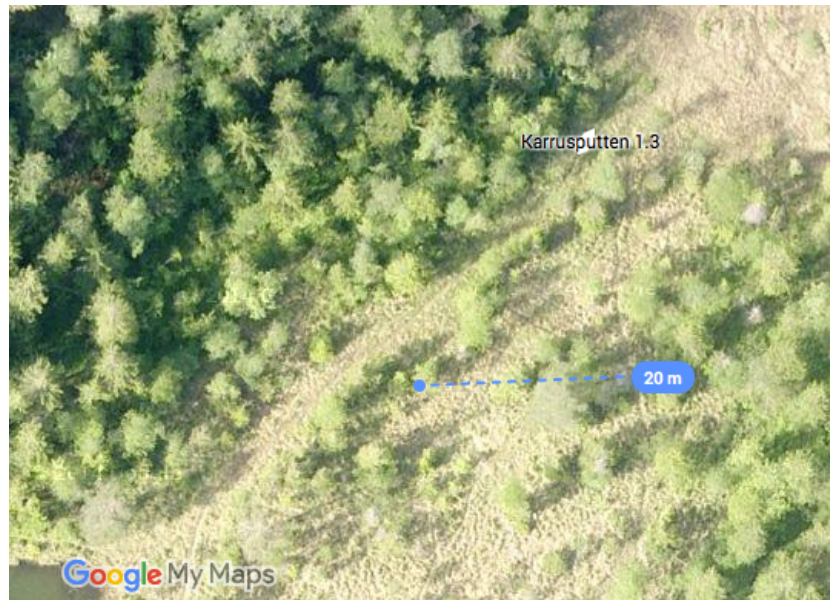


Photo 1. Only 6 concentrations of *Microstylis* this year. 30.06.2018.



Photo 2. Blooming individuals were not bigger than 15 cm. 30.06.2018.

**Location: 1.3 Karrusputten,** (Central part of a mire)



**Individuals:** 3 (1 blooming + 2 vegetative)

**Area:** 3 m<sup>2</sup>

**Environment (habitat):** Central part of a mire, rich fen, with dominant *Carex lasiocarpa*. With other species: *Molinia caerulea*, *Menyanthes trifoliata*, *Filipendula ulmaria*, *Potentilla erecta*, *Carex rostrata*, *Eriophorum latifolium*, *Dactylorhiza incarnata*, *D. traunsteineri*, *Drosera rotundifolia*, *Pyrola rotundifolia*, *Polygonum viviparum*...

**Condition:** Site is along a footpath – ca. 20 - 50 cm West from footpath axis. Plants are growing in 2 concentrations. Less plants than last year.

**Care:**

**GPS-coordinates:** 60° 1'23.81"N 10°39'48.95"E

[Microstylis-Karrusputten1.3.kmz](#)

**Date of watch:** 13; 30.06.2018

**Photos:** Roman Gramsz

**Observer:** Roman Gramsz



Photo 1. Location 1.3 with 2 marked *Microstylis* concentrations. 30.06.2018.



Photo 2. Blooming individual not bigger than 5 cm. 30.06.2018.

**Location: 2. Holbekken,**



**Individuals:** 11 (2 blooming + 9 vegetative)

**Area:** ca. 10 x 60 m (0.083 ha)

**Environment (habitat):** The mire, rich fen (H<sub>4</sub> on vegetation map) on a left side of Holbekken, on a ski trail. Site is along a footpath (ski trail in winter). With dominant *Menyanthes trifoliata* and *Eriophorum latifolium* and another species: *Carex flava*, *Carex rostrata*, *Crepis paludosa*, *Equisetum silvaticum*, *Pedicularis palustris*, *Pinguicula vulgaris*, *Polygonum viviparum*, *Potentilla erecta*, *Trichophorum caespitosum*, *Salix sp.* ...

**Condition:** It's drier on the mire than usually and *Microstylis* is blooming earlier. The distribution of *Microstylis* plants is similar like last year – only 1 vegetative individual was found in central part of mire and the rest in lowest part of mire. Blooming plants are 15 and 10 cm high.

**Care:**

**GPS-coordinates:** 60° 1'19.50"N 10°40'18.00"E

[Microstylis-Holbekken2.kmz](#)

**Date of watch:** 4.07.2018.

**Owner:**

**Photos:** Roman Gramsz

**Observer:** Roman Gramsz





Photo 1. Central part of mire with only 1 marked *Microstylis* individual. 4.07.2018.



Photo 2. Concentration in lower part of mire with 1 blooming and 4 vegetative *Microstylis* individuals. 4.07.2018.

**Location: 3. "H<sub>5</sub> Myr"**



**Individuals:** 8(5 blooming + 3 vegetative)

**Area:** ca. 10 x 30m (0.015 ha)

**Environment (habitat):** A small (ca. 20 x 80m) mire, rich fen (H<sub>5</sub> on vegetation map) overgrown by bushes on sides (*Alnus glutinosa*, *Alnus incana*, *Picea abies*, *Betula pubescens*) with open central part. With: *Carex lasiocarpa*, *Carex flava*, *Carex pauciflora*, *Carex rostrata*, *Dactylorhiza maculata*, *Dactylorhiza traunsteineri* cfr., *Eriophorum latifolium*, *Equisetum sylvaticum*, *Filipendula ulmaria*, *Menyanthes trifoliata*, *Molinia caerulea*, *Pedicularis palustris*, *Pinguicula vulgaris*, *Trichophorum alpinum*, *Trichophorum caespitosum*, *Vaccinium oxycoccos*

**Condition:** Surface of mire is drier than usually and less plants were found this year. Plants were in full blooming and some of blooming plants were very big - up to 27 cm.

**Care:**

**GPS-coordinates:** 60°1'23.10"N 10°39'25.40"E

[Microstylis-H5Myr3.kmz](#)

**Date of watch:** 29.06.2018.

**Owner:**

**Photos:** Roman Gramsz

**Observer:** Roman Gramsz



Photo 1. Location "H<sub>5</sub> Myr" with marked *Microstylis* concentrations. 29.06.2018.



Photo 2. Quite big blooming specimen - very unusual on this mire. 29.06.2018.

## Pyrola – 2018



### 2.1. Latinsk navn (Latin name)

*Pyrola media* Sw

Leave rosette (with or without flower) was treated as individual.

### 2.2 Rødlistestatus (red list status)

Not in red list

### 2.3 Utbredelse (spreading/place)

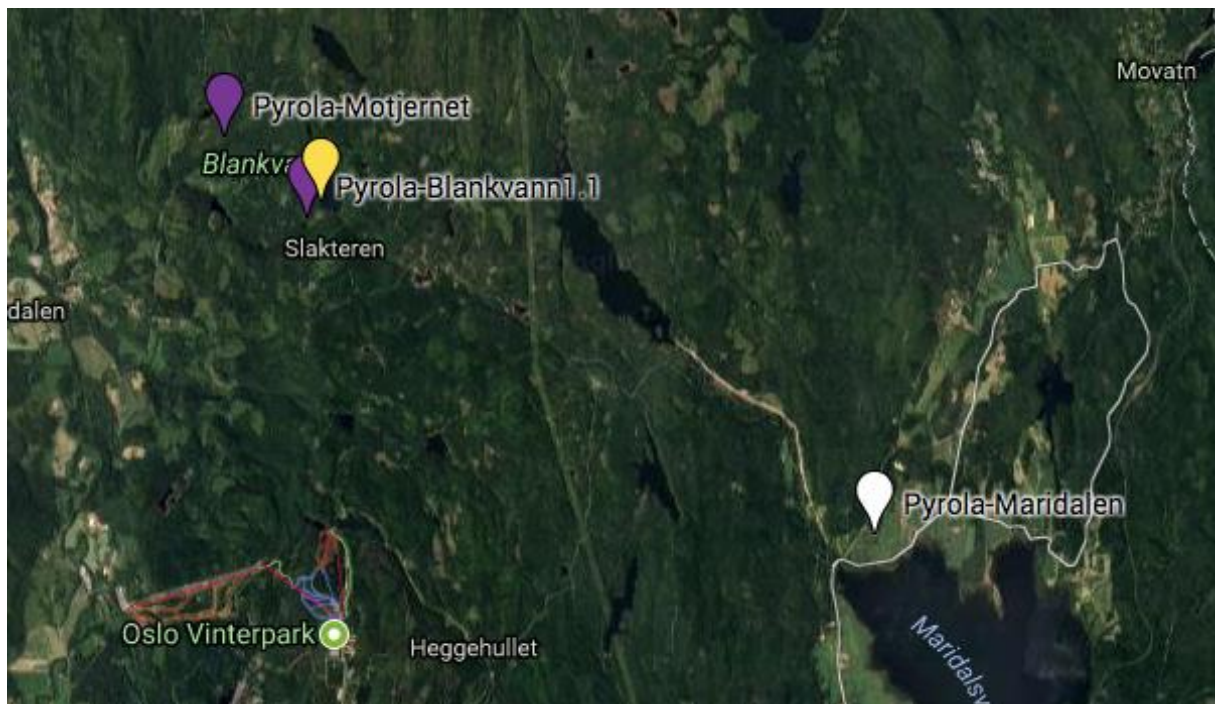
Northern and central Europe, extending southwards locally, and mainly in the mountains, to N. Italy, Macedonia, Krym, and S.Ural.

### 2.4 Lokalteter i Norge (locations in Norway)

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

3 locations: [Pyrola-Blankvann1.1](#) + [Pyrola- Blankvann1.2](#) and [Pyrola-Motjernet](#)

## Map. Pyrola 2018.



< 10 specimens (white)

11 – 100 specimens (yellow)

101 – 300 specimens (red)

> 300 specimens (violet)

**Location: Maridalen.**



**Individuals:** not found (!)

**Area:** 5 x 10 m. (0.012 ha)

**Environment (habitat):** Open area with SE exposure. Pasture or extensive kept meadow close to edge of spruce forest. This location in fact is no longer on the edge of spruce forest after cutting down some big spruces during some last years.

**Condition:** This *Pyrola* location is disappearing overgrown by toll grass.

**Care:**

**GPS-coordinates:** 59°59'47.92"N 10°45'33.00"E

[Pyrola-Maridalen](#)

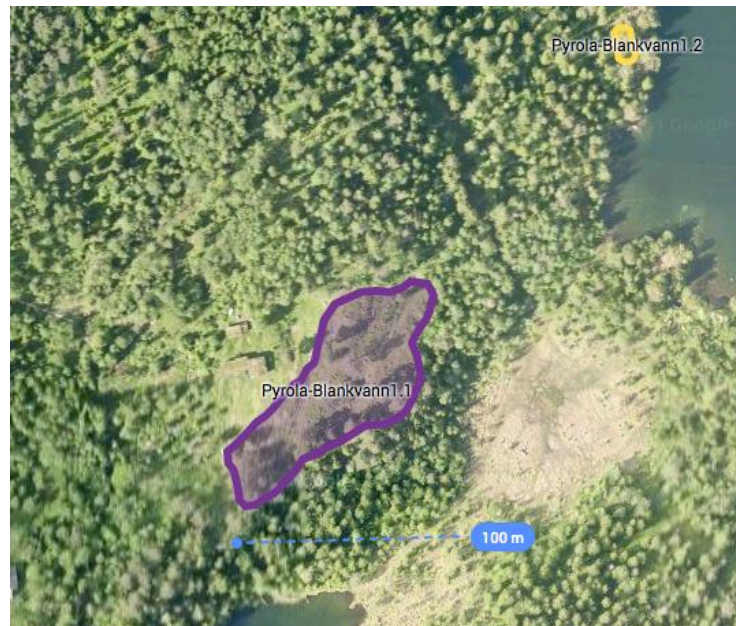
**Date of watch:** 11.07.2018

**Owner:**

**Photos:**

**Observer:** R. Gramsz

## Nordmarka. Blankvann.



Map 1. Locations Pyrola-Blankvann 1.1 and Pyrola-Blankvann 1.2.

**Location: Nordmarka. Blankvann 1.1** (top of a hill)

**Individuals:** ca. >500 (60 flowering specimens)

**Area:** 80 x 130m (0.442 ha)

**Environment (habitat):** Open surroundings of a cabin on the hill top. Mostly grassland on a shallow and rocky but fertile soil. Because of a very hot and dry weather all vegetation was low and dispersed. With other species: *Anemone nemorosa*, *Briza media*, *Calamagrostis arundinacea*, *Convallaria majalis*, *Dryopteris filix-mas*, *Epipactis atrorubens* cfr., *Fragaria vesca*, *Galium boreale*, *Gymnadenia conopsea*, *Hepatica nobilis*, *Hieracium* sect. *hieracium*, *Juniperus communis*, *Listera ovata*, *Orthilia secunda*, *Pinus sylvestris*, *Polygala vulgaris*, *Potentilla erecta*, *Pyrola chlorantha*, *P. minor*, *P. rotundifolia*, *Rubus* sp., *Solidago virgaurea*, *Sorbus aucuparia*, *Vaccinium myrtillus*, *Vaccinium vitis-idaea*, *Viola* sp.

**Condition:** *Pyrola media* is growing in (about 10) concentrations, with a few to dozen or so flowering plants in each concentration. Plants were in the beginning of blooming at 13.06 and they were finishing blooming at a day of counting 5.07 – very early this year. Proportion between flowering rosettes and vegetative were counted in concentration on the top of a hill, close to flag mast: 29/206. So to estimate number of all individuals I use proportion 1:7.1. In the rest of concentrations I was counting only flowering individuals. There were 60 flowering individuals on whole location.

*Pyrola chlorantha* which is growing in the same area was in full blooming already in 13.06.  
(only 8 blooming individuals)

**GPS-coordinates:** 60° 1'24.87"N 10°39'44.16"E

[Pyrola-Blankvann1.1](#)

**Date of watch:** 13.06; 5.07.2018

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo 1. Location Blankvann 1.1. *Pyrola media* concentration on the top of a hill. 5.07.2018.





Photo 2. Due to the heat and drought the plants are not very impressive and in the end of blooming at a day of observation. 5.07.2018.



Photo 3. *Pyrola chlorantha* in full blooming but very small this year. 13.06.2018.

**Location:** Nordmarka. Blankvann 1.2 (close to lake)

**Individuals:** 21 (1 flowering specimen)

**Area:** 6 m x 12 m (0.017 ha)

**Environment (habitat):** *Pyrola media* grows on shady slope (slope of 45 degrees, the eastern exposure) under spruce, 15-20 m from the lake shore. Habitat is homogeneous, but rather with a small amount of places to germination. Herb layer vegetation split into two sub-layers, the higher of *Calamagrostis*, and lower of *Pyrola*, *Vaccinium*, etc. *Calamagrostis* species is considered to be expansive, however its coverage area in this stand does not exceed 25%. With other species: *Anemone nemorosa*, *Calamagrostis arundinacea*, *Convallaria majalis*, *Calluna vulgaris*, *Gymnadenia conopsea*, *Hepatica nobilis*, *Hieracium sect. hieracium*, *Linna borealis*, *Melampyrum pratense*, *Potentilla erecta*, *Pteridium aquilinum*, *Rubus sp.*, *Solidago virgaurea*, *Sorbus aucuparia*, *Vaccinium myrtillus*, *Vaccinium vitis-idaea*, *Viola sp.* Trees and bushes: *Betula pubescens*, *Daphne mezereum*, *Juniperus communis*, *Picea abies*, *Pinus sylvestris*, *Sorbus aucuparia*

**Condition:** Only one flowering individual of *Pyrola media* was found close to footpath this year. Most of vegetative rosettes were found on Eastern slope of small mound – place were they usually grows.

**Care:**

**GPS-coordinates:** 60° 1'29.90"N 10°39'53.00"E

[Pyrola-Blankvann1.2](#)

**Date of watch:** 5.07.2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz

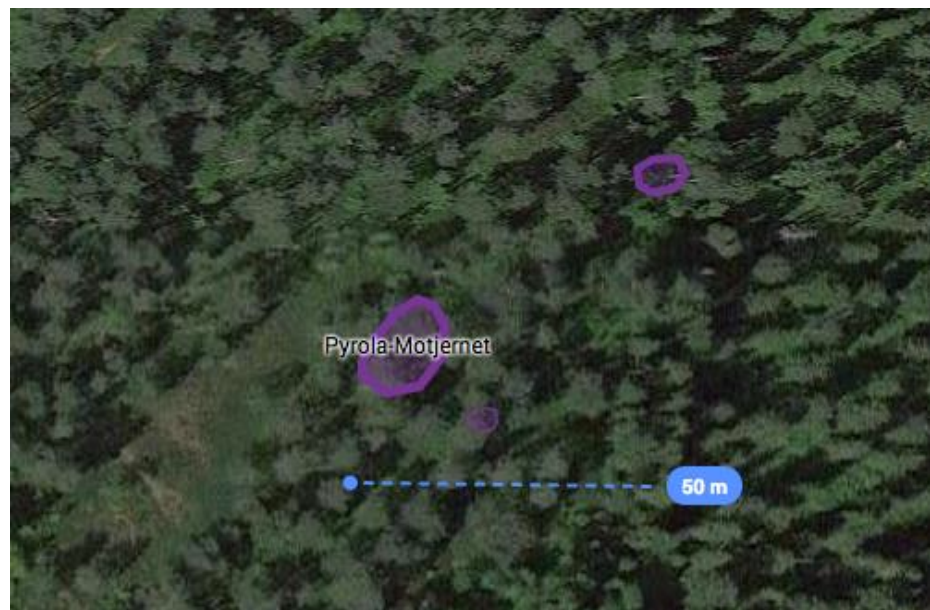


Photo 1. A View over location 1.2 close to Blankvann. 5.07.2018.



Photo 2. Some vegetative rosettes on Eastern slope of small mound. 5.07.2018.

**Location:** Nordmarka. Motjernet.



**Individuals:** ca. 500 (18 flowering specimens)

**Area:** 10 m x 20 (0.017 ha) + 5 x 5 m (0.005 ha) + 2 x 2 m

**Environment (habitat):** *Pyrola media* grows on open pine forest on a flat height between mire and small stream. This habitat creates spread old pines *Pinus sylvestris* (40% coverage) and *Calluna vulgaris* (15%) and *Vaccinium myrtillus* (80%), which dominate in herb layer. Trees and bushes: *Betula pubescens*, *Juniperus communis*, *Picea abies*, *Pinus sylvestris*, *Sorbus aucuparia*. With other species: *Dactylorhiza maculata*, *Empetrum nigrum*, *Linnaea borealis*, *Melampyrum pratense*, *Potentilla erecta*, *Vaccinium vitis-idaea*, .

**Condition:** *Pyrola media* grows in 2 concentrations (+ 1 very small, close to bigger one). Due to hot and dry weather plants were in the end of blooming period and barely seen. On smaller concentration all blooming and vegetative individuals have been counted – 6 blooming/ 66 vegetative. On bigger site only 12 blooming individuals were found but vegetative rosettes looks fresh. This location was not as dry as Blankvann 1.1.

**Care:**

**GPS-coordinates:** 60°1'49.10"N 10°38'53.80"E

[Pyrola-Motjernet](#)

**Date of watch:** 5.07.2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo 1. Location Motjernet. 5.07.2018.



Photo 2. *Pyrola media* plants were at the end of blooming and even the blueberries were already ripe but small. 5.07.2018.

## **Dracocephalum ruyschiana – 2018**



### **2.1. Latinsk navn (Latin name)**

*Dracocephalum ruyschiana* L.

As **individual** we treat a tuft (cluster, or – ecological term – ramet) with shoots growing visibly from one place.

**Juvenile individual** - if a lot of young plants are spread evenly without creating visible tufts we treat area of 25 cm<sup>2</sup> as an individual.

Old desintegrating tufts are counted as more than one individual if it covers more than 25 cm<sup>2</sup>.

### **2.2 Rødlistestatus (redlist status)**

Sårbar. (Vulnerable)

### **2.3 Utbredelse (spreading/place)**

The species is found from the Oslofjord to Gudbrandsdalen. Norway has the main population in North-western Europe. Eastern and Central Europe and western and central Asia, extending locally westwards to Norway and the Pyrenees.

### **2.4 Lokalteter i Norge (locations in Norway)**

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

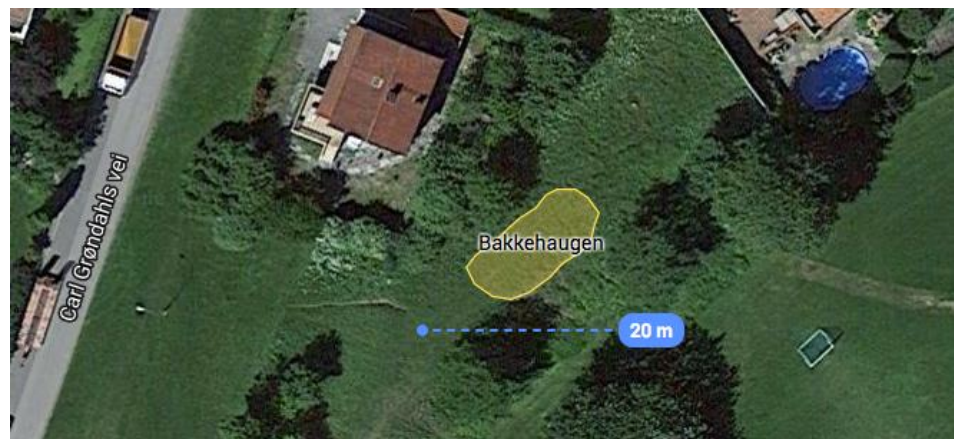
Now 30 locations observed.

**On the maps depending on the number of individuals locations are color-coded:**

< 10 specimens (white); 11 – 100 specimens (yellow); 101 – 300 specimens (red);

> 300 specimens (violet)

## BAKKEHAUGEN – 2018



**Location:** Bakkehaugen

**Individuals:** ca. 20 (?)

**Area:** 5 x 10 m (potential area 20 x 100m)

**Environment (habitat):** Slope SE, W and top of the ridge. Its slopes and top are not mowed but the ridge is surrounded by lawns. Small ridge is covered by rich vegetation. There is rather meadow, than kind of vegetation, which is characteristic for *Dracocephalum* locations. For this reason it is difficult to see vegetative individuals. Trees and bushes: *Ulmus (glabra?)*. Herbaceous plants: *Agrostis capillaris*, *Allium oleraceum*, *Anthriscus sylvestris*, *Avenastrum pubescens*, *Campanula persicifolia*, *Campanula trachelium*, *Carex digitata*, *Dactylis glomerata*, *Daucus carota*, *Galium boreale*, *Galium verum*, *Geranium sanguineum*, *G. silvaticum*, *Knautia arvensis*, *Fragaria vesca*, *Festuca rubra*, *Plantago media*, *Polygonatum odoratum*, *Poa pratensis s. lato*, *Solidago virgaurea*, *Thymus pulegioides*, *Trifolium alpestre*, *Viscaria vulgaris*, *Rumex acetosa*,

**Condition:** *Dracocephalum* grows at the top of a small ridge among lush, low vegetation of a meadow character. This year due to hot and dry weather all vegetation was small and dry. I did not find a small cluster of plants situated closer to fence. Plants were small and blooming very poorly. Seems that flowers dried out after they start blooming.

**Care:** Botanists from Norsk Botanisk Forening are taking care of this site.

**GPS-coordinates:** 59°56'47.30"N 10°45'09.60"E

[Dracocephalum- Bakkehaugen](#)

**Date of watch:** 11, 12.06.2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo 1. Bakkehaugen. Very low and dry vegetation this year. 11.06.2018.



Photo 2. The best looking *Dracocephalum* among meadow vegetation. 11.06.2018.



**BLEIKØYA** - 2018



**Map. *Dracocephalum ruyschiana* - Bleikøya.**

< 10 specimens (white)

**11 – 100 specimens** (yellow)

**101 – 300 specimens** (red)

**> 300 specimens** (violet)

**Location: Bleikøya 1**



**Individuals:** ca. 350

**Area:** ca.100 x 60m, (0.2ha)

**Environment (habitat):** Open top of a ridge and a slope facing South. Also in western very steep slope is a concentration of about 20 big tufts and a few other plants are spread around. With other species: *Alchemilla sp.*, *Allium vineale*, *Avenula pratensis cfr.*, *Berberis vulgaris*, *Centaurea jacea*, *Centaurea scabiosa*, *Cotoneaster sp.*, *Festuca rubra cfr.*, *Filipendula vulgaris*, *Fragaria vesca*, *Fraxinus excelsior*, *Galium verum*, *Geranium sanguineum*, *Hylolephium telephium ssp. maximum* (*Sedum telephium* = *Sedum maximum*), *Hypericum perforatum*, *Pimpinella saxifraga*, *Polygonatum odoratum*, *Potentilla argentea*, *Rumex acetosella*, *Sedum album*, *Thymus pulegioides*, *Veronica spicata*.

**Condition:** Location is very dry, especially on small ridges and a little more “green” in concavities. Plants are small, hardly visible with a small amount of dried flowers.

**Care:** This location has not been mowed this year.

**GPS-coordinates:** 59°53'26.52"N 10°44'33.99"E

[Dracocephalum-Bleikoya1](#)

**Date of watch:** 24.06.2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo 1. Top and S hill slope on Bleikøya I with very dry ridges and a little more “green” concavities. 24.06.2018.



Photo 2. Relatively big tuft with few already dried flowers. 24.06.2018.

**Location: Bleikøya 2**



**Individuals:** ca. 200

**Area:** 40 x 30 m, (0.109 ha) (potential area 40 x 40 m)

**Environment (habitat):** Open top of a hill and a slope facing NWN and lower terrace on the East from top. With other species: *Acer platanoides*, *Alchemilla* sp., *Achillea millefolium*, *Allium vineale*, *Anthyllis vulneraria*, *Asplenium trichomanes*, *Avenula pratensis* cfr., *Berberis vulgaris*, *Centaurea jacea*, *Centaurea scabiosa*, *Cirsium vulgare*, *Convallaria majalis*, *Cotoneaster* sp., *Erysimum strictum* cfr., *Festuca ovina*, *Festuca rubra* cfr., *Filipendula ulmaria*, *Filipendula vulgaris*, *Fragaria vesca*, *Fragaria viridis*, *Fraxinus excelsior*, *Galium boreale*, *Galium verum*, *Geranium robertianum*, *Geranium sanguineum*, *Geum urbanum*, *Hepatica nobilis*, *Hieracium pilosella*, *Hylotelephium telephium* ssp. *maximum* (*Sedum telephium* = *Sedum maximum*), *Hypericum perforatum*, *Leucanthemum vulgare*, *Lonicera xylosteum*, *Origanum vulgare*, *Phedimus spurius* (*Sedum spurium*), *Pimpinella saxifraga*, *Pastinaca sativa*, *Plantago media*, *Poa nemoralis*, *Polygonatum odoratum*, *Polypodium vulgare*, *Potentilla argentea*, *Rhamnus cathartica*, *Ribes alpinum* cfr., *Rosa* sp., *Rubus* sp., *Sedum album*, *Sorbus aucuparia*, *Sorbus domestica* cfr., *Syringa vulgaris*, *Thymus pulegioides*, *Trifolium alpestre*, *Verbascum* sp., *Veronica spicata*, *Viola tricolor*, *Viscaria vulgaris*

**Condition:** Location is very dry, especially on small ridges and a little more “green” in concavities. Plants are small, hardly visible with a small amount of dried flowers.

**Care:** This location has been partly (part S from footpath) mowed (especially bushes and *Phedimus spurius*) this year.

**GPS-coordinates:** 59°53'23.00"N 10°44'33.46"E

[Dracocephalum-Bleikoya2](#)

**Date of watch:** 24.06.2018. + 23.08.2018 (mowing)

**Photos:** R. Gramsz,

**Observer:** R. Gramsz



Photo 1. Top of a ridge on location Bleikøya 2. 24.06.2018.



Photo 2. Eastern part of location Bleikøya 2, below the main area. 24.06.2018.

**Location: Bleikøya 3**



**Individuals:** Not found

**Area:** 3 x 4 m, (0.001 ha)

**Environment (habitat):** Part of a beach used for boats storage and a rocky ledge about 50 m North from this already known location “3”. With: *Rosa sp.*, *Fragaria vesca*, *Fraxinus excelsior*, *Geranium sanguineum*, *Hylotelephium telephium ssp. maximum* (*Sedum telephium* = *Sedum maximum*), *Thymus pulegioides*, *Polygonatum odoratum* and the others.

**Condition:** Dracocephalum plants were not found.

**Care:** Overgrowing bushes were removed this year.

**GPS-coordinates:** 59°53'24.40"N 10°44'26.22"E [Dracocephalum-Bleikoya3](#)

Under a footpath on the northern side of a place for boat storage in winter.

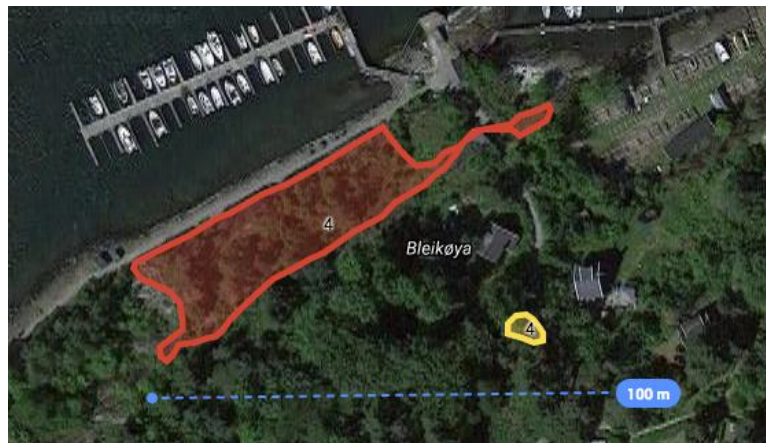
**Date of watch:** 24.06.2018. + 3.09.2018. (bushes)

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz

**Location: Bleikøya 4**



**Individuals:** ca.110

**Area:** 100 (120) x 30m, (0.133 ha) + 5 x 5m, (0.005 ha)

**Environment (habitat):** The slope facing NW mostly overgrown by high bushes and trees (covering ca 60%). *Dracocephalum* grows rather sparsely both in the open area and under the bushes. Open area in “winter boat storage place” is included to the main location but another concentration, some 50 m apart is shown separately on the map. Bushes and low trees: *Fraxinus excelsior*, *Cotoneaster sp.*, *Rosa sp.*, *Juniperus communis*, *Crataegus sp.*, *Pinus sylvestris* (several), *Rhamnus cathartica*, *Rosa sp.*, *Sorbus aucuparia*, *Syringa vulgaris* (several); herbs: *Anthyllis vulneraria*, *Asplenium trichomanes*, *Avenula pratensis cfr.*, *Berberis vulgaris*, *Briza media*, *Carex pallescens*, *Campanula rotundifolia*, *Centaurea jacea*, *Filipendula ulmaria*, *Filipendula vulgaris*, *Fragaria vesca*, *Galium verum*, *Geranium sanguineum*, *Hepatica nobilis*, *Inula salicina*, *Melilotus officinalis cfr.*, *Origanum vulgare*, *Phydimus spurium* (*Sedum spurium*), *Pimpinella saxifraga*, *Plantago media*, *Polygonatum odoratum*, *Polypodium vulgare*, *Potentilla argentea*, *Prunella vulgaris*, *Sedum album*, *Solidago virgaurea*, *Thymus pulegioides*, *Veronica spicata*

**Condition:** It was fewer plants than last year but only in this site on Bleikøya I could find some still blooming plants. No plants on site close to place with boats and 12 on site over footpath – 15 -30 cm high, 50% sparsely blooming plants. After very hot and dry end of May and June this shaded and on the NW slope location, comparing with other in Bleikøya was in relatively good condition.

**Care:** Part of this location has been mowed in this year.

**GPS-coordinates:** 59°53'23.33"N 10°44'20.56"E

[Dracocephalum-Bleikoya4](#)

**Date of watch:** 24.06.2018. + 3,10.09.2018. (mowing)

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo 1. The main part of location Bleikøya 4 with some still blooming plants. 24.06.2018.



Photo 2. *Dracocephalum* on steep western slope. 24.06.2018.



**Location: Bleikøya 5**



**Individuals:** ca. 36

**Area:** 10 x 30 m, (0.043 ha)

**Environment (habitat):** Open ridge and a SE slope sparsely overgrown by bushes. With other species: *Achillea millefolium*, *Artemisia campestris*, *Berberis vulgaris*, *Centaurea jacea*, *Cotoneaster sp.*, *Festuca rubra cfr.*, *Fragaria vesca*, *Fragaria viridis*, *Galium verum*, *Geranium sanguineum*, *Geum urbanum*, *Hylotelephium telephium ssp. maximum* (*Sedum telephium* = *S. maximum*), *Origanum vulgare*, *Phydium spurium* (*Sedum spurium*), *Plantago media*, *Polygonatum odoratum*, *Prunus spinosa*, *Rosa sp.*, *Thymus pulegioides*, *Trifolium arvense*, *Trifolium pratense*, *Veronica spicata*

**Condition:** It was much less visible plants as last year. Only few plants were sparsely blooming. Few of them quite high – 30 cm.

**Care:** Some bushes were cut in S part of location.

(This site can be treated as a little “bushy” one. *Dracocephalum* plants are growing quite well here, so let it be a “bushy” site on SE slope on Bleikøya. Another “bushy” site is no 4 but on NW slope. That treatment gives a better diversity of habitats in all locations on Bleikøya.)

**GPS-coordinates:** 59°53'18.52"N 10°44'12.15"E

[Dracocephalum-Bleikoya5](#)

Top of the hill with the war monument and S and SE slope

**Date of watch:** 24.06.2018. + 3.09.2018 (cutting)

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo 1. SE end of the ridge – seems too much overgrown by bushes. 24.06.2018.



Photo 2. A few tufts were quite big (30 cm) but they already finish blooming. 24.06.2018.

## Bleikøya 6a



**Individuals:** Ca. 75

**Area:** 5 x 15 m, (0.010 ha)

**Environment (habitat):** On the open slope facing South, on shallow stony soil. With other species: *Allium vineale*, *Anthyllis vulneraria*, *Artemisia campestris*, *Avenula pratensis* cfr., *Centaurea jacea*, *Cotoneaster* sp., *Festuca ovina*, *Filipendula vulgaris*, *Fragaria viridis*, *Galium verum*, *Geranium sanguineum*, *Hepatica nobilis*, *Hylotelephium telephium* ssp. *maximum* (*Sedum telephium* = *Sedum maximum*), *Hypericum perforatum*, *Hypochoeris maculata* cfr., *Jovibarba sobolifera*, *Origanum vulgare*, *Pimpinella saxifraga*, *Polygonatum odoratum*, *Potentilla argentea*, *Sedum album*, *Solidago virgaurea*, *Syringa vulgaris*, *Thymus pulegioides*, *Trifolium arvense*, *Veronica spicata*, *Viscaria vulgaris*

**Condition:** Location was very dry. *Dracocephalum* plants were weak and small 10 – 15 (20) cm. Only about 30% were blooming and all flowers were already dry at the time of observation.

**Care:** Location was mowed in this year.

**GPS-coordinates:** 59°53'16.97"N 10°44'5.59"E

[Dracocephalum-Bleikøya6](#)

**Date of watch:** 24.06.2018. + 4.09.2018. (mowing)

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo 1. Location Bleikøya 6a. 24.06.2018.



Photo 2. View over location Bleikøya 6a after mowing. 4.09.2018.

**Location: Bleikøya 7**



**Individuals:** Ca.78

**Area:** 30 x 40m, (0.080 ha)

**Environment (habitat):** On the open ridge and slope facing south , on shallow stony soil. With other species: *Alchemilla sp.*, *Allium vineale*, *Anthyllis vulneraria*, *Artemisia campestris*, *Astragalus gliciphyllus*, *Campanula rotundifolia*, *Cerastium sp.*, *Centaurea jacea*, *Centaurea scabiosa*, *Erysimum strictum cfr.*, *Festuca ovina*, *Filipendula vulgaris*, *Fragaria vesca*, *Fraxinus excelsior*, *Galium verum*, *Geranium sanguineum*, *Hieracium pilosella*, *Inula salicina*, *Origanum vulgare*, *Phydimus spurius (Sedum spurium)*, *Pimpinella saxifraga*, *Plantago media*, *Polygonatum odoratum*, *Rhamnus cathartica*, *Rosa sp.*, *Sedum album*, *Solidago virgaurea*, *Sorbus hybrida*, *Syringa vulgaris*, *Thymus pulegioides*

**Condition:** Location was very dry. *Dracocephalum* plants were weak and small 10 – 15 (20) cm. Only about 20% were blooming and all flowers and some whole plants were already dry at the time of observation.

**Care:** Some bushes and lilac shrubs were cut. *Vincetoxicum rossicum* and *Phedymus spurius* were pulled out of the ground (by Bjørn Smevold).

**GPS-coordinates:** 59°53'16.23"N 10°44'2.88"E [Dracocephalum-Bleikoya7](#)

**Date of watch:** 24.06.2018. + 4.09.2018. (active protection)

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz

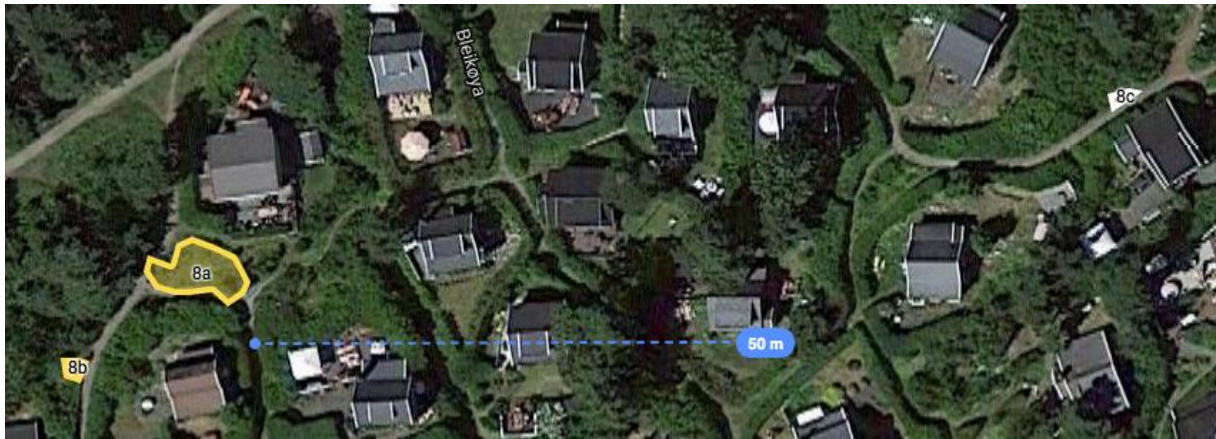


Photo 1. View over main part of location Bleikøya 7. 24.06.2018.



Photo 2. *Vincetoxicum rossicum* and *Phedymus spurius* is present on location 7. 24.06.2018.

**Location: Bleikøya 8**



**Individuals:** ca. 46 (33 + 10 + 3)

**Area:** 4 x 6 m, (0.005 ha) + 2 x 4 m, (0.001 ha) +(new from 2013) 2 x 3 m

**Environment (habitat):** In a line of bushes aside foot path – 3 places. With other species: *Anthyllis vulneraria*, *Avenula pratensis* cfr., *Berberis vulgaris*, *Cotoneaster* sp., *Festuca ovina*, *Filipendula vulgaris*, *Fragaria vesca*, *Galium verum*, *Geranium sanguineum*, *Hylothelephium telephium* ssp. *maximum* (*Sedum telephium* = *Sedum maximum*), *Juniperus communis*, *Plantago media*, *Rhamnus cathartica*, *Syringa vulgaris*, *Thymus pulegioides*

**Condition:** Surprisingly – this is the only location with no less plants in this year. But they are smaller and were blooming sparsely.

**Care:** Locations were mowed in this year.

**GPS-coordinates:** 59°53'20.62"N 10°44'22.02"E

[Dracocephalum-Bleikoya8](#)

Between houses no. 40 and 42, and the toilet.

New place along main path: 59°53'21.4"N 10°44'28.7"E

[Dracocephalum-Bleikoya8c](#)

**Date of watch:** 24.06.2018. + 4.09.2018. (mowing)

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo1. Location Bleikøya 8a - bigger place, close to toilet. 24.06.2018.



Photo 2. Location Bleikøya 8b - smaller place. 24.06.2018.





Photo 3. Location Bleikøya 8c. 24.06.2018.

**Location: Bleikøya 9**



**Individuals:** 3

**Area:** 5 x 30 m, (0.011 ha)

**Environment (habitat):** Open and partly overgrown by bushes ridge in the highest part of Bleikøya over the house no 104. With other species: *Achillea millefolium*, *Artemisia campestris*, *Berberis vulgaris*, *Centaurea jacea*, *Cotoneaster sp.*, *Festuca rubra cfr.*, *Fragaria vesca*, *Fragaria viridis*, *Galium verum*, *Geranium sanguineum*, *Geum urbanum*, *Hylotelephium telephium ssp. maximum* (*Sedum telephium* = *S. maximum*), *Origanum vulgare*, *Phydimus spurium* (*Sedum spurium*), *Plantago media*, *Polygonatum odoratum*, *Prunus spinosa*, *Rosa sp.*, *Thymus pulegioides*, *Trifolium arvense*, *Trifolium pratense*, *Veronica spicata*

**Condition:** Only 3 poorly blooming plants were found on the ridge. Nothing in open area close to the footpath.

**Care:** No cutting this year.

**GPS-coordinates:** 59°53'20.81"N 10°44'17.07"E

[Dracocephalum-Bleikøya9](#)

Top of the hill on the highest part of Bleikøya, close to main footpath.

**Date of watch:** 24.06.2018.

**Owner:**

**Photos:** R.Gramsz

**Observer:** R. Gramsz



Photo 1. Only 3 poorly blooming *Dracocephalum* on location Bleikøya 9. 24.06.2018.

**Location: Bleikøya 10**



**Individuals:** ca. 100

**Area:** 5 x 20m, (0.013 ha)

**Environment (habitat):** Small, dry clearing on the top of a hill surrounded by a small forest and thicket with trees: *Pinus silvestris*, *Fraxinus excelsior* and *Acer platanoides*. This clearing itself is partly overgrown by bushes: *Rhamnus cathartica*, *Berberis vulgaris*, *Cotoneaster* sp., *Rosa* sp. And other species: *Achillea millefolium*, *Agrostis capillaris* cfr., *Avenastrum pratensis*, *Calamagrostis arundinacea* cfr., *Centaurea jacea*, *Daucus carota*, *Festuca ovina*, *Festuca rubra* cfr., *Fragaria vesca*, *Fragaria viridis*, *Filipendula vulgaris*, *Galium boreale*, *Galium verum*, *Geranium sanguineum*, *Geum urbanum*, *Hylotelephium telephium* ssp. *maximum* (*Sedum telephium* = *S. maximum*), *Hypericum perforatum*, *Lotus corniculatus*, *Melica nutans*, *Origanum vulgare*, *Phydium spurium* (*Sedum spurium*), *Plantago media*, *Polygonatum odoratum*, *Prunus spinosa*, *Thymus pulegioides*, *Trifolium arvense*, *Trifolium pratense*, *Veronica spicata*.

Height of sward about 30 cm. There are only few places to germination within the patch of *Dracocephalum*, more places to germination are on the slope.

**Condition:** The open, central part on location was very dry so, also *Dracocephalum* plants were small and partly dry. Plants growing under bushes were more green and with a few flowers.

**Care:** No cutting this year but the owner of nearby cottage cleared NE slope from trees and bushes.

**GPS-coordinates:** 59°53'22.70"N 10°44'30.00"E

[Dracocephalum-Bleikoya10](#)

**Date of watch:** 24.06.2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



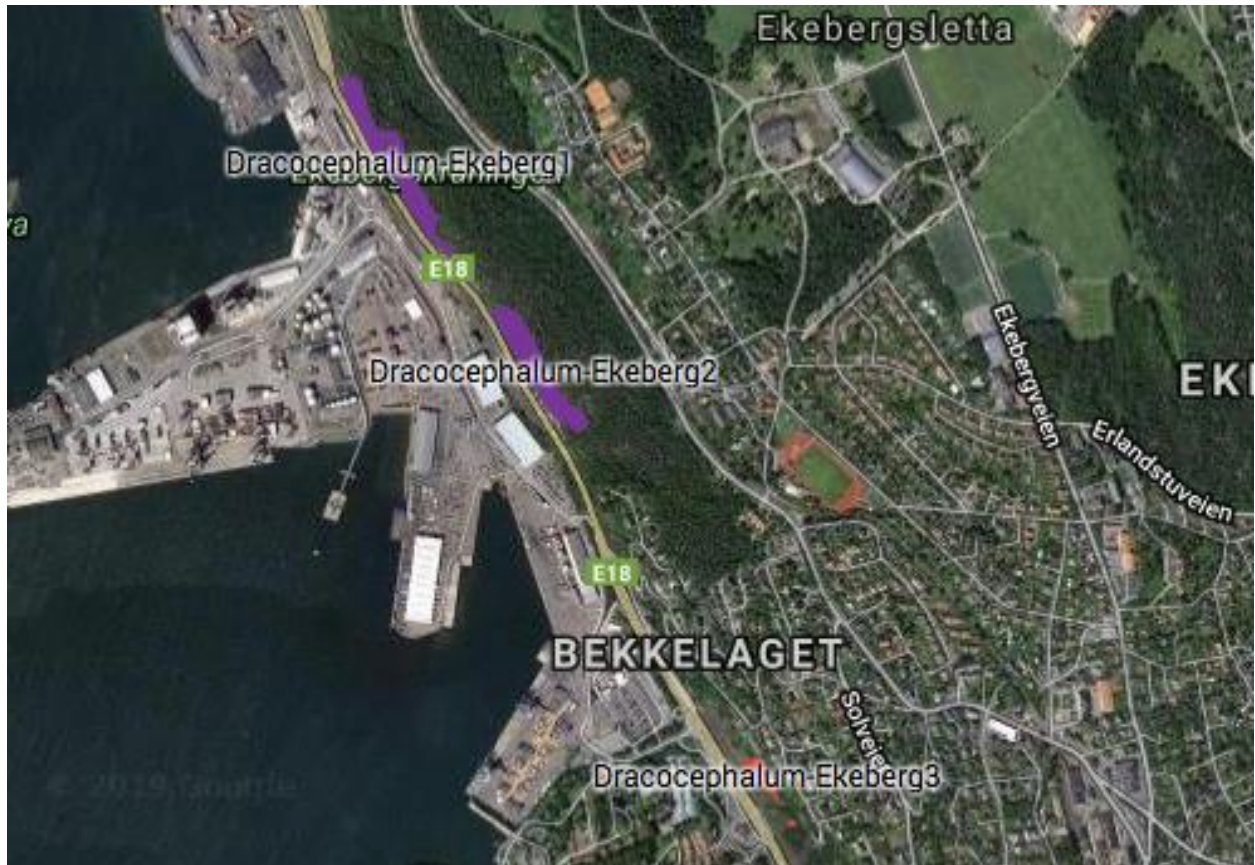
Photo 1. Location Bleikøya 10. Top of the ridge. 24.06.2018.



Photo 2. Only plants growing in the shadow of a shrub were in better condition and with a few flowers. 24.06.2018.

## EKEBERG – 2018

Map. Dracocephalum – Ekeberg 2018



< 10 specimens (white)

11 – 100 specimens (yellow)

101 – 300 specimens (red)

> 300 specimens (violet)

## Location: Ekeberg 1 (A)



**Individuals:** ca. 600

**Area:** 300 x 50 m (1.32 ha)

**Environment (habitat):** SW and W rocky slope in lower (below Kongsveien) part of Ekebergskråningen Naturreservat. Inclination of slope is between 10° to 50°. There is very shallow soil and bare rock on most of area. Cover of trees and bushes is about 30% so, the location is quite open and sunny. Trees and bushes layers: *Berberis vulgaris*, *Frangula alnus*, *Fraxinus excelsior*, *Juniperus communis*, *Pinus silvatica*, *Populus tremula*, *Prunus spinosa*, *Rhamnus cathartica*, *Rosa sp.*, *Sorbus sp. div.* Other plants: *Achillea millefolium*, *Alium sp.*, *Artemisia campestris*, *Asplenium trichomanes*, *Asplenium septentrionale*, *Asplenium septentrionale x trichomanes*, *Calluna vulgaris*, *Campanula rotundifolia*, *Filipendula vulgaris*, *Fragaria vesca*, *Galium verum*, *Geranium sanguineum*, *Geum urbanum*, *Hylotelephium telephium*, *Hypericum perforatum*, *Inula salicina*, *Lotus corniculatus*, *Origanum vulgare*, *Polypodium vulgare*, *Sedum album*, *Trifolium alpestre*, *Polygonatum odoratum*, *Woodsia ilvensis*, *Viscaria vulgaris*.

**Condition:** This location is very dry this year. Only about half of this site population start to grow and now plants are small, wilted and in many places completely dry. Some plants have scarcely bloomed but now the flowers are dried up.

**Care:** There is still some garbage left on this location.

### GPS-coordinates:

Central part of location 59°53'30.50"N 10°45'41.40"E [Dracocephalum-Ekeberg1](#)

North edge of location 59°53'35.20"N 10°45'35.50"E [Dracocephalum-Ekeberg1\(N\)](#)

South edge of location 59°53'26.70"N 10°45'46.30"E [Dracocephalum-Ekeberg1\(S\)](#)

**Date of watch:** 11.06.2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo 1. Location Ekeberg 1 – very dry this year. 11.06.2018.



Photo 2. Some of *Dracocephalum* tufts were completely dry out. 11.06.2018.



**Location: Ekeberg 2 (B) Jomfrubråten**



**Individuals:** ca. 500

**Area:** 250 x 80 m (1.08 ha)

**Environment (habitat):** SW and W rocky slope in lower part of Ekebergskråningen Naturreservat (Jomfrubråten, below Kongsveien). Inclination of slope is between 10° to 50°. There is very shallow soil and bare rock on most of area. Trees and bushes cover varies between 30 and 50% so, the location is quite open and sunny, but comparing with location Ekeberg 1 habitat on this site seems more acid. Dominant in tree layer is pine *Pinus sylvestris* and in undergrowth: *Calluna vulgaris* and *Arctostaphylos uva-ursi*. The rest of plants are similar as in Ekeberg 1. Trees and bushes layers: *Berberis vulgaris*, *Frangula alnus*, *Fraxinus excelsior*, *Juniperus communis*, *Pinus sylvestris*, *Populus tremula*, *Prunus spinosa*, *Rhamnus cathartica*, *Rosa sp.*, *Sorbus sp. div.* Other plants: *Achillea millefolium*, *Alium sp.*, *Artemisia campestris*, *Asplenium trichomanes*, *A. septentrionale*, *A. septentrionale x trichomanes*, *Calluna vulgaris*, *Campanula rotundifolia*, *Filipendula vulgaris*, *Fragaria vesca*, *Galium verum*, *Geranium sanguineum*, *Geum urbanum*, *Hylotelephium telephium*, *Hypericum perforatum*, *Inula salicina*, *Lotus corniculatus*, *Origanum vulgare*, *Polypodium vulgare*, *Sedum album*, *Trifolium alpestre*, *Polygonatum odoratum*, *Woodsia ilvensis*, *Viscaria vulgaris*.

**Condition:** This location is very dry this year. Only about half of this site population start to grow and now plants are small, wilted and in many places completely dry. Some plants have scarcely bloomed but now the flowers are dried up.

**Care:** Some small trees (*Pinus silvestris*) and bushes overgrowing this location were cut.

**GPS-coordinates:**

Central part of location 59°53'15.70"N 10°45'59.70"E [Dracocephalum-Ekeberg2](#)

North edge of location 59°53'21.10"N 10°45'53.60"E [Dracocephalum-Ekeberg2\(N\)](#)

South edge of location 59°53'14.60"N 10°45'01.40"E [Dracocephalum-Ekeberg2\(S\)](#)

**Date of watch:** 11.06.2018

**Photos:** R. Gramsz

**Observer:** R. Gramsz

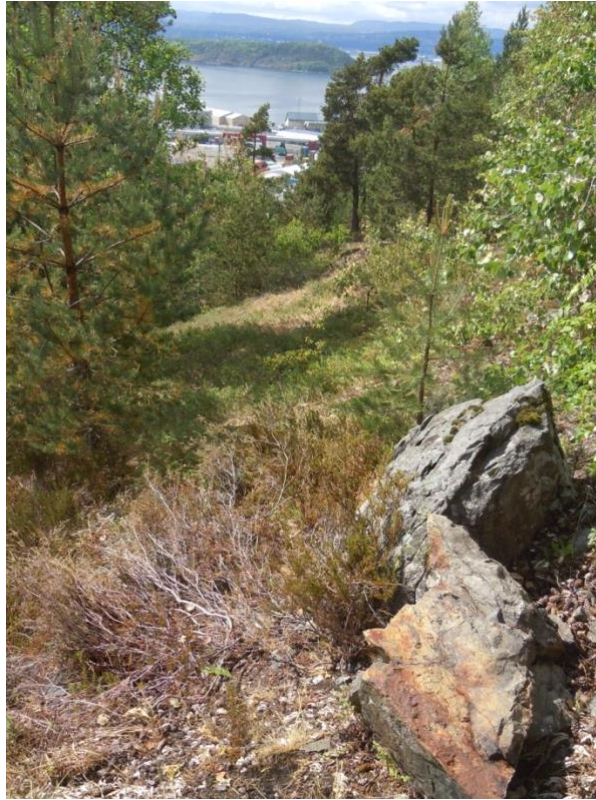


Photo 1. The largest patch with *Dracocephalum* in location Ekeberg 2 – very dry. 11.06.2018.



Photo 2. *Dracocephalum* plants are small, wilted and flowers dried out. 11.06.2018.

**Location: Ekeberg 3 (C) Bekkelaget**



**Individuals:** ca. 200

**Area:** 150 x 50 m (0.221 ha) + 10 x 10 m (0.012 ha)

**Environment (habitat):** Very steep part of SW slope between railway and buildings on Grottanveien. Inclination of slope is 20° to 80°. Trees and bushes cover varies between 30% and 80% in Southern part of this location. Trees and bushes layer: *Acer platanoides*, *Berberis vulgaris*, *Frangula alnus*, *Fraxinus excelsior*, *Ligustrum vulgare*, *Pinus sylvestris*, *Populus tremula*, *Ribes sp.*, *Rhamnus cathartica*, *Rosa sp.*, *Sorbus sp. div.*, *Tilia cordata*. Other plants: *Achillea millefolium*, *Artemisia campestris*, *Asplenium trichomanes*, *Asplenium septentrionale*, *Calluna vulgaris*, *Campanula rotundifolia*, *Filipendula vulgaris*, *Fragaria vesca*, *Galium verum*, *Geranium sanguineum*, *Geum urbanum*, *Hylotelephium telephium*, *Hypericum perforatum*, *Inula salicina*, *Lotus corniculatus*, *Origanum vulgare*, *Polypodium vulgare*, *Sedum album*, *Trifolium alpestre*, *Polygonatum odoratum*, *Viscaria vulgaris*.

**Condition:** Most of plants are small and wilted and in many places completely dry. Only plants growing under bushes or trees or in some concavities are in better condition.

**Care:**

**GPS-coordinates:**

Central part of location 59°52'51.96"N 10°46'26.78"E [Dracocephalum-Ekeberg3](#)

North edge of location 59°52'53.59"N 10°46'24.15"E [Dracocephalum-Ekeberg3\(N\)](#)

South edge of location 59°52'49.80"N 10°46'29.30"E [Dracocephalum-Ekeberg3\(S\)](#)

**Date of watch:** 21.06.2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz

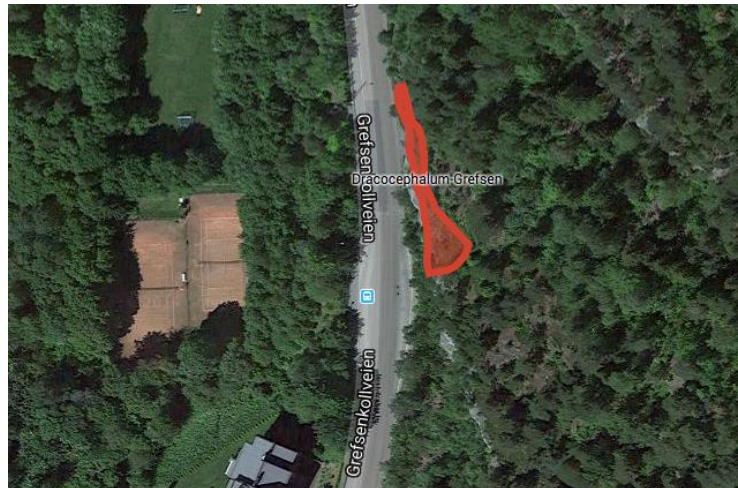


Photo 1. Southernmost site on the location Ekeberg 3. 21.06.2018.



Photo 2. The main part of location, view to the South. 21.06.2018.

## GREFSEN – 2018



**Location: Grefsen 1**

**Individuals:** ca. 110

**Area:** 10 x 40 m (0.032 ha) (potential habitat 20 x 80 m)

**Environment (habitat):** Location is some 10 - 15 m over Grefsenkollenveien on the edge of rocky wall. Part of this site is covered by steel protective net but seams that it not disturbs growth of *Deacocephalum* tufts. Location is surrounded by pine forest with dominating in undergrowth *Calluna vulgaris* and *Vaccinium myrtillus*. On the location grows only small trees and bushes covering ca. 30%. Trees and bushes layer: *Berberis vulgaris*, *Corylus avellana*, *Cotoneaster* sp., *Daphne mezereum*, *Juniperus communis*, *Pinus sylvestris*, *Populus tremula*, *Prunus avium*, *Rhamnus cathartica*, *Rosa* sp. *Sorbus aucuparia*, *S. intermedia*. Other plants: *Atocion rupestris*, *Cirsium heterophyllum*, *Convallaria majalis*, *Fragaria vesca*, *Geranium sanguineum*, *G. silvaticum*, *Hieracium pilosella*, *Hylotelephium telephium*, *Inula salicina*, , *Lathyrus linifolius*, *Lotus corniculatus*, *Origanum vulgare*, *Polygonatum odoratum*, *Polypodium vulgare*, *Potentilla argentea*, *Rubus saxatilis*, *Sedum album*, *Trifolium pratense*, *Woodsia ilvensis*.

**Condition:** Plants are growing in few concentrations in the edge of precipice over the road, sometimes under steel protective net. *Dracocephalum* plants were in good condition as for drought and about 50% were bloomed. Tufts were 15 -25 cm high.

**Care:**

**GPS-coordinates:**

North edge of location 59°57'21.0"N 10°47'55.6"E

South edge of location 59°57'20.0"N 10°47'56.3"E

**Date of watch:** 23.06.2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo 1. Location Grefsen 1, View towards South. 23.06.2018.



Photo 2. *Dracocephalum* on location Grefsen 1, plants were in good condition as for drought but the flowers were already overblown and dried. 23.06.2018.

## HEGGHOLMEN – 2018



### Location: Heggholmen 1

**Individuals:** ca. 215

**Area:** ca. 10 x15 m (0.026 ha)

**Environment (habitat):** SW part of the flat top of the hill. In thermophilous vegetation on shallow soil. With: ~~*Fraxinus excelsior*, *Sobus aucuparia*~~, (unnecessarily cut last year) *Rosa sp.*, *Berberis vulgaris* and *Allium vineale*, *Cotoneaster sp.*, *Filipendula vulgaris*, *Fragaria vesca*, *Geranium sanguineum*, *Hylotelephium telephium ssp. maximum* (*Sedum telephium* = *Sedum maximum*) *Polygonatum odoratum*, *Sedum album*, *Thymus pulegioides*, *Vincetoxicum rossicum*.

**Condition:** *Dracocephalum* plants were in good condition as for drought and were already overblown. There were 50 tufts on western side of footpath (15 – 25 cm high) and 165 counted on eastern side (15 -25(50) cm). I estimate 50% plants were blooming. This location of *Dracocephalum* seems to be stable but plants grow still on the same area (without expanding).

**Care:** This area should be mowed by motor scythe once every 2 - 3 years after *Dracocephalum* seeds are ripen. The area was last mowed in August 2014.

**GPS-coordinates:** 59°52'55.90"N 10°42'42.10"E [Dracocephalum-Heggholmen1](#)

SW part of Heggholmen, flat top of the hill and part of slope facing SW.

**Date of watch:** 25.06.2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R.Gramsz



Photo1. General view of location on Heggholmen. 25.06.2018.



Photo 2. Some of *Dracocephalum* plants growing in the shadow reach 50 cm. 25.06.2018.



## **KILLINGEN** – 2018

### Map. Dracocephalum-Killingen



< 10 specimens (white)

**11 – 100 specimens** (yellow)

**101 – 300 specimens** (red)

**> 300 specimens** (violet)

**Location: Killingen**



**Individuals:** ca. 155

**Area:** 8 x 10 m. (0.008 ha) Potential habitat: 15m x 80m

**Environment (habitat):** Western part of Killingen. Open area between lawn close to house and rocky coast. Site is slightly bending westwards, sunny, with shallow stony soil. Trees and bushes: *Juniperus communis*, *Pinus sylvestris*, *Sorbus aucuparia*, *Syringa vulgaris*, *Rosa sp.* (covers less than 10%).

Herbaceous plants and dwarf shrubs: *Agrostis capillaris*, *Anthyllis vulneraria*, *Artemisia campestris*, *Avenastrum pubescens*, *Campanula rotundifolia*, *Carlina vulgaris*, *Convallaria majalis*, *Daucus carota*, *Festuca ovina*, *Filipendula vulgaris*, *Fragaria vesca*, *Galium boreale*, *Galium verum*, *Geranium sanguineum*, *Hypericum perforatum*, *Melica nutans*, *Origanum vulgare*, *Polygonatum odoratum*, *Pimpinella saxifraga*, *Poa pratensis s. lato*, *Rubus sp.*, *Solidago virgaurea*, *Thymus pulegioides*

**Condition:** Plants existed as low tufts or single twigs. Average height of tufts was 5 – 15(20) cm and some plants were completely dried. Only about 10% tufts were blooming. There were few very small alive plants on very dry lawn.

**Care:** Owner of this area was not watering his lawn and *Dracocephalum* location in this year.

**GPS-coordinates:** 59°54'29.80"N 10°39'26.50"E [Dracocephalum-Killingen](#)

**Date of watch:** 23.06.2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo 1. Killingen, location was very dry this year. 23.06.2018.



Photo 2. Few very small, alive *Dracocephalum* twigs existed on dry lawn. 23.06.2018.

**MALMØYA – 2018**



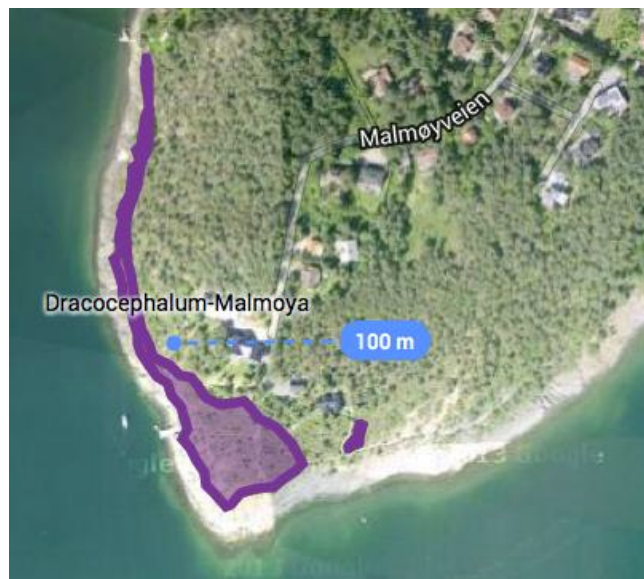
< 10 specimens (white)

11 – 100 specimens (yellow)

101 – 300 specimens (red)

> 300 specimens (violet)

**Location: Malmøya**



**Individuals:** ca. 635

**Area:** 400 x 80 - 20m (0.655 ha + 0.019 ha)

Potential habitat: 600 x 100 m (...but there was no *Dracocephalum* on SE cost of Malmøya – checked 22.06.2015)

**Environment (habitat):** South end of Malmøya, deforested hillside sloping South, South – West and West towards the sea. The slope to the west is getting steeper. Habitat is the belt between the forest (with the houses) and devoid of vegetation, rocks over the water. Habitat is fairly homogeneous, open, with single pines, junipers, mountain ashes, barberries. Sward height about 30 cm (mainly *Geranium sanguineum*).

Trees and bushes: *Juniperus communis*, *Pinus sylvestris*, *Sorbus aria*, *Sorbus x hybrida*, *Rosa sp.*, *Rosa mollis* cfr., *Cotoneaster scandinavicus* cfr.

Herbaceous plants and dwarf shrubs: *Anthyllis vulneraria*, *Arctostaphylos uva-ursi*, *Artemisia campestris*, *Campanula rotundifolia*, *Carex digitata* cfr., *Carlina vulgaris*, *Convallaria majalis*, *Epipactis atrorubens*, *Festuca ovina*, *Filipendula vulgaris*, *Galium boreale*, *Geranium sanguineum*, *Inula salicina*, *Melica nutans*, *Origanum vulgare*, *Polygala vulgaris*, *Polygonatum odoratum*, *Pimpinella saxifraga*, *Poa pratensis s. lato*, *Solidago virgaurea*. (lack of *Thymus pulegioides*!!!);

**Condition:** As last years *Dracocephalum* could be found on 3 concentrations on steep western slope, one big concentration in SW part of location and 1 in Eastern part. Due to hot and dry weather *Dracocephalum* tufts were small and quite often grows only as a single twigs. It was end of very sparse blooming. Anyway *Dracocephalum* survive hit and drought quit well comparing with other plants.

**Care:**

**GPS-coordinates:**

Central part of location 59°51'42.10"N 10°45'04.20"E [Dracocephalum-Malmøya](#)

East edge of location 59°51'42.40"N 10°45'10.10"E [Dracocephalum-Malmoya\(E\)](#)

North edge of location 59°51'49.70"N 10°45'01.00"E [Dracocephalum-Malmoya\(NW\)](#)

**Date of watch:** 21.06.2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo 1. The most NW part of *Dracocephalum* location. 21.06.2018.



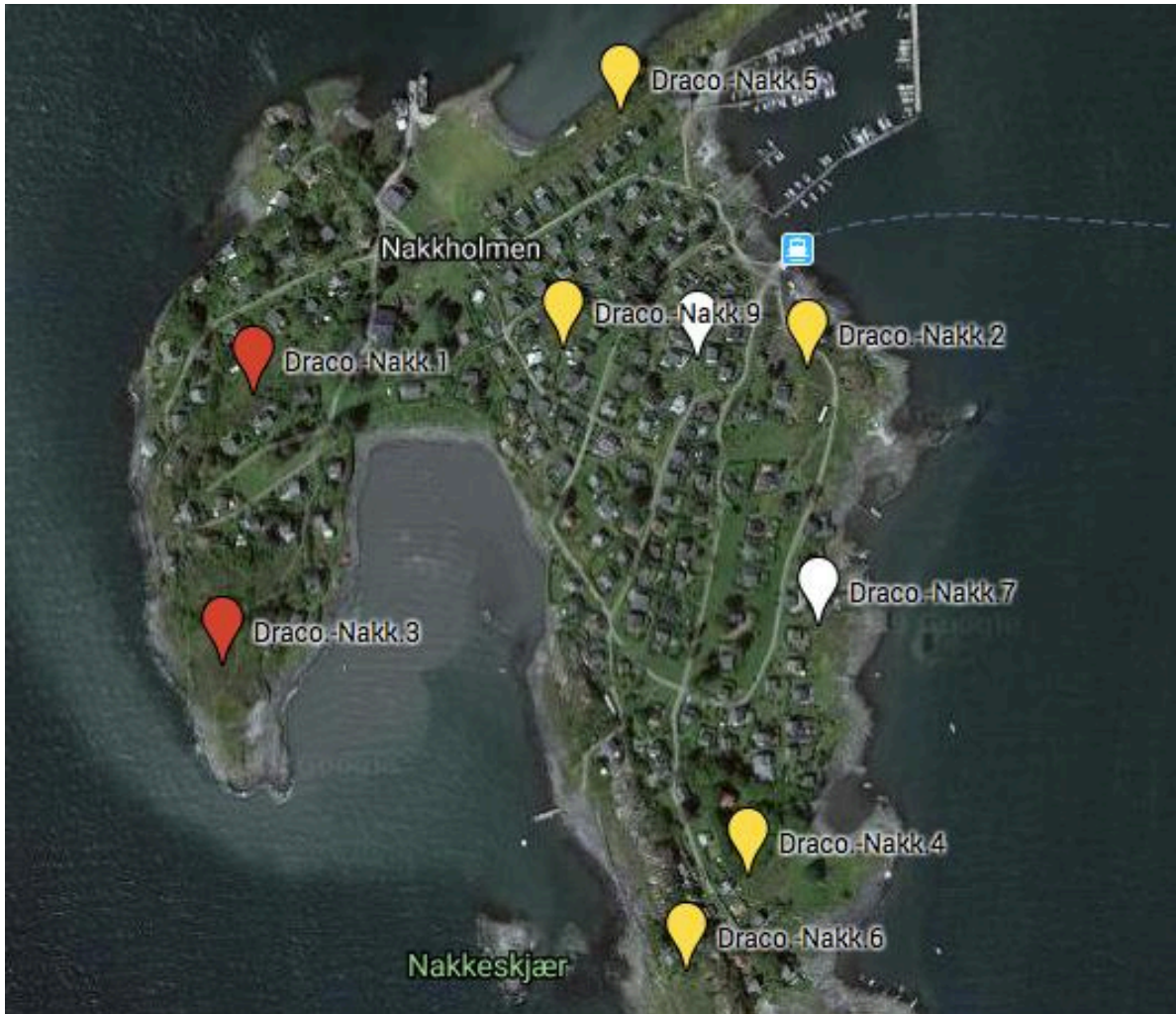
Photo 2. Central part of Malmøya location. 21.06.2018.



Photo 3. *Dracocephalum* survive hit and drought quit well comparing with other plants. 21.06.2018.

**NAKKHOLMEN** – 2018

Map. *Dracocephalum ruyschiana* - Nakkholmen.



< 10 specimens (white)

11 – 100 specimens (yellow)

101 – 300 specimens (red)

> 300 specimens (violet)



## Location: Nakkholmen 1



**Individuals:** ca. 150

**Area:** 100m x 15m (0.124 ha) + 5 x 5 m (0.004 ha)

**Environment (habitat):** The ridge of a hill partly overgrown by bushes (covering ca. 30% of the area). In thermophilous vegetation on shallow soil, with: *Syringa vulgaris*, *Fraxinus excelsior*, *Rosa sp.*, *Cotoneaster sp.*, *Berberis vulgaris*, *Geranium sanguineum*, *Dianthus deltoides*, *Fragaria vesca*, *Polygonatum odoratum*, *Verbascum sp.*, *Sedum spurium*, *Filipendula vulgaris*. *Dracocephalum* plants can be found in concentrations along a whole top of the ridge. The area of this location has been extended to the South for small concentration behind house no 17.

**Condition:** Location was very dry at a time of observation. In many places *Dracocephalum* plants were completely dry. Usually they were 15 – 30 cm high, long time after poorly blooming.

**Care:** Group of local people [Dragehodegrupper](#) has taken care of this place for a few years. They regularly do some cutting on the main area and also herbicidal control of overgrowing lilac bushes. That opens the area and gives more light for already existing *Dracocephalum* plants. Herbicides at last killed lilac in this area but also other characteristic for this habitat species. This place is overgrown now by tall grass, and thicket of *Myosotis arvensis*, *Stellaria graminea*, *Potentilla argentea*, *Geranium robertianum*, *Phedymus spurius*... - seems that is better in that situation only reduce clusters of bushes by cutting hanging branches and possibly shrubs – not the whole cluster! And no chemical treatment!

**GPS- coordinates:** 59°53'23.97"N 10°41'29.46"E

[Dracocephalum-Nakkholmen1](#)

Stony hill in the central part of W side of the island.

**Date of watch:** 25.06.2018.

**Owner:**

**Photos:** R.Gramsz

**Observer:** R.Gramsz



Photo 1. Area after cutting and chemical treatment of lilac bushes. 25.06.2018.



Photo 2. Location Nakkholmen 1 on top of the hill. 25.06.2018.



Photo 3. Site in NE part of location 1. 25.06.2018.

## Location: Nakkholmen 2



**Individuals:** ca. 90

**Area:** ca. 10 x 15 m, 0.019 ha (potential area 20 x 50 m)

**Environment (habitat):** Open NE slope of a small hill. In thermophilous vegetation with *Geranium sanguineum* on shallow soil. With: *Geranium sanguineum*, *Filipendula vulgaris*, *Arctostaphylos uva-ursi*, *Hylotelephium telephium* ssp. *maximum* (*Sedum telephium* = *Sedum maximum*), *Syringa vulgaris*, *Rosa* sp., *Berberis vulgaris*, *Sorbus aucuparia* x, *Cotoneaster* sp. (cult. - *lucidus?* *scandinavicus?* ), *Sedum spurium*, *Festuca* (ovina agg.?), *Galium boreale*, *Thymus* sp, *Fragaria vesca*, *Plantago media*, *Veronica spicata*, *Polygonatum odoratum*, *Convallaria majalis*. *Rubus Saxatilis*

**Condition:** Location is dry but looks “green”. *Dracocephalum* plants were 15 – 20(25) cm high and there were fewer of them than last year. Plants already finish blooming and about 50% of them were blooming.

**Care:** Seems that location becomes richer in vegetation – it should be mowed every 2-3 years and all cut vegetation removed from the location.

**GPS-coordinates:** 59°53'24.43"N 10°41'48.97"E [Dracocephalum-Nakkholmen2](#)

Open NE slope of a small hill, close to the shore, 100 m S from the harbour, over the compost deposit.

**Date of watch:** 25.06.2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo 1. General view over location Nakkholmen 2. 25.06.2018.



Photo 2. Seams that vegetation becomes too rich as for *Dracocephalum* habitat. Cutting and removing vegetation every 2-3 years is recommended. 25.06.2018.

**Location: Nakkholmen 3**



**Individuals:** ca. 200

**Area:** whole area ca. 80 x 100 m, 2 parts: 0.123 ha + 0.135 ha

**Environment (habitat):** The ridge and slopes of a hill partly overgrown by bushes. In thermophilous vegetation with: *Geranium sanguineum* on shallow soil. With: *Sorbus acuparia*, *S. intermedia*, *Cotoneaster* sp., *Rosa* sp., *Ligustrum vulgare*, *Syringa vulgaris*, *Lycium barbarum*, *Berberis vulgaris*, *Pinus silvaticus*, *Filipendula vulgaris*, *Sedum spurium*, *Hylotelephium telephium* ssp. *maximum* (*Sedum telephium* = *Sedum maximum*), *Geranium sanguineum*, *Thymus* sp., *Origanum vulgare*, *Plantago media*, *Fragaria vesca*, *Campanula persicifolia*, *Polygonatum odoratum*.

**Condition:** Location was dry, all plants were small and wilted. *Dracocephalum* usually 10 – 20cm high, not more than 50% were blooming and at the time of observation flowers were overblown and dry.

**Care:** Light clearing of bushes and mowing open areas once for 2 – 3 years is recommended.

**GPS-coordinates:** 59°53'19.20"N 10°41'28.40"E [Dracocephalum-Nakkholmen3](#)

Stony hill in the southern peninsula of the W side of the island.

**Date of watch:** 26.06.2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo 1. Southern part of the location Nakkholmen 3. 26.06.2018.



Photo 2. Northern part of the location Nakkholmen 3. 26.06.2018.

**Location: Nakkholmen 4**



**Individuals:** ca. 33 (30 + 3)

**Area:** 10 x 6m, 0.015 ha + 4 x 3m, 0.002 ha (potential area 40 x 50 m)

**Environment (habitat):** Small hill partly overgrown by bushes (mainly *Syringa vulgaris*). In thermophilous vegetation on shallow soil. With: *Geranium sanguineum*, *Thymus pulegioides*, *Filipendula vulgaris*, *Fragaria vesca*, *Cotoneaster sp.*

**Condition:** Location was quite dry, *Dracocephalum* were found in both places – on the main site located close to fence of a house no.168 and strongly shorten lilac bushes and another small one about 10 m to the North-East also along edge of lilac bushes. Plants were 10 – 20 cm high and only 50% were poorly blooming.

**Care:** Cluster of Lilac was strongly shorten probably last year.

**GPS-coordinates:** 59°53'15.47"N 10°41'46.87"E [Dracocephalum-Nakkholmen4](#)

**Date of watch:** 26.06.2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz





Photo 1. Main area of location Nakkhomen 4. Cluster of Lilac was cut quite strong (left on the photo). 26.06.2018.

**Location: Nakkholmen 5**



**Individuals:** ca. 55

**Area:** ca. 15m x 60m, 0.055 ha

**Environment (habitat):** Top of the ridge and NW slope of a hill partly overgrown by bushes from surroundings of a house no 182 to the toilet building. There is a great influence of human presence but *Dracocephalum* plants are growing even on the edges of flowerbeds in gardens. In thermophilous vegetation with *Geranium sanguineum* on shallow soil. With: *Syringa vulgaris*, *Rosa sp.*, *Filipendula vulgaris*, *Sedum spurium* (*Phedimus spurium*), *Hylotelephium telephium ssp. maximum* (*Sedum telephium* = *Sedum maximum*), *Geranium sanguineum*, *Thymus sp.*, *Origanum vulgare*, *Plantago media*, *Polygonatum odoratum*.

**Condition:** Location was very dry. There were much less plants than last year. They were 10 – 20(30) cm high and only about 40% were blooming. It was the end of blooming period.

**Care:** Seems that this location is main place of interest of [Dragehodegruppa](#). Most of *Dracocephalum* concentrations are fence with rope and/or mark with sticks. Dragehodegruppa also do all bushes catting - maybe too much as in such weather as this year *Dracocephalum* would better grow in shadow.

**GPS-coordinates:** 59°53'28.93"N 10°41'42.38"E [Dracocephalum-Nakkholmen5](#)

A middle part of a long ridge sticks out as a peninsula in NE part of island.

**Date of watch:** 25.06.2018.

**Owner:**

**Photos:** no photo

**Observer:** R.Gramsz

**Location: Nakkholmen 6**



**Individuals:** 11

**Area:** ca. 15 x 35 m, 0.045 ha (potential area ca. 30 x 100 m)

**Environment (habitat):** Western slope of a rocky ridge on the southernmost peninsula in Nakkholmen. Location is without trees and about 10% of bushes cover. With: *Berberis vulgaris*, *Cotoneaster sp.*, *Fraxinus excelsior*, *Rosa sp.*, *Rhamnus catharticus*, *Sorbus aucuparia*, *Syringa vulgaris*. In thermophilous vegetation with *Geranium sanguineum* and *Filipendula vulgaris* on shallow soil and: *Leucanthemum vulgare*, *Sedum acre*, *S. spurium* (*Phedimus spurium*), *Hylotelephium telephium ssp. maximum* (*Sedum telephium* = *Sedum maximum*), *Thymus sp.*, *Origanum vulgare*, *Plantago media*, *Polygonatum odoratum*, *Lotus corniculatus*, *Hesperis matronalis*

**Condition:** Location was dry *Dracocephalum* plants were small 10– 20 cm high, very poorly blooming and notice only in 2 concentrations.

**Care**

**GPS-coordinates:** 59°53'13.8"N 10°41'44.7"E [Dracocephalum-Nakkholmen6](#)

**Date of watch:** 26.06. 2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo 1. Area of the location Nakkholmen 6. 26.06.2018.

**Location: Nakkholmen 7**



**Individuals: 2**

**Area:** 2 x 5 m, 0.001 ha (potential area ca. 10 x 15 m)

**Environment (habitat):** Small area among summer houses which is kept “wild” – with thermophilous vegetation on shallow soil.

**Condition:** One small and one bigger individual with flowers (but already dry at a date of observation).

**GPS-coordinates:** 59°53'19.9"N 10°41'49.3"E [Dracocephalum-Nakkholmen7](#)

**Date of watch:** 26.06.2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo 1. *Dracocephalum* location 7. 26.06.2018.

**Location: Nakkholmen 8**



**Individuals: 2**

**Area: 2 x 4 m, 0.002 ha**

**Environment (habitat):** Small area of not mowed lawn among summerhouses.

**Condition:** Only 2 poorly blooming plants. In the middle of lawn and close to house 109.

**Care**

**GPS-coordinates:** 59°53'24.6"N 10°41'45.1"E

[Draco.-Nakkholmen8](#)

**Date of watch:** 25.06. 2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo 1. *Dracocephalum* plants on location 8. 20.06.2017.

**Location: Nakkholmen 9**



**Individuals:** 16

**Area:** 8 x 10m, 0.009 ha (potential area ca. 20 x 40 m)

**Environment (habitat):** small ridge with thermophilous vegetation on the middle of island surrounded by summerhouses. With: *Syringa vulgaris* (as hedge), *Cotoneaster sp.*, *Fraxinus excelsior*, *Rosa sp.* and *Geranium sanguineum*, *Filipendula vulgaris*, *Leucanthemum vulgare*, *Sedum acre*, *S. spurium* (*Phedimus spurium*), *Hylotelephium telephium ssp. maximum*, *Thymus sp.*, *Origanum vulgare*, *Plantago media*, *Polygonatum odoratum*, *Lotus corniculatus*, *Silene nutans*...

**Condition:** *Dracocephalum* plants were in relatively (as for drought) good condition, 15 - 20(25) cm ca. 50% were poorly blooming.

**Care**

**GPS-coordinates:** 59°53'24.8"N 10°41'40.4"E

[Draco.-Nakkholmen9](#)

**Date of watch:** 26.06.2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo 1. Site with *Dracocephalum* plants on Location 9. 26.06.2018.



**NORDMARKA** – 2018

Map. . *Dracocephalum ruyschiana* – Nordmarka.



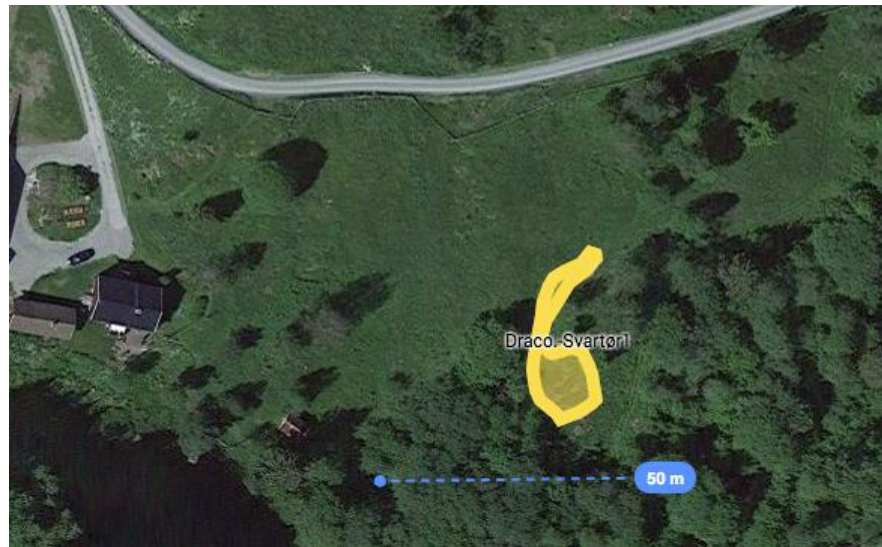
< 10 specimens (white)

**11 – 100 specimens** (yellow)

**101 – 300 specimens** (red)

**> 300 specimens** (violet)

**Location: Svartor 1**



**Individuals:** ca. 60

**Area:** ca. 50 x 20 m, 0.029 ha

**Environment (habitat):** On a small dry rocky hill, surrounded by bushes and young trees (main concentration), and spread in the neighboring part of the meadow. With: *Achillea millefolium*, *Agrostis capillaris*, *Agrostis vulgaris*, *Alchemilla* sp., *Briza media*, *Campanula rotundifolia*, *Carex pallescens*, *Convallaria majalis*, *Dactylis glomerata*, *Filipendula vulgaris*, *Filipendula ulmaria*, *Fragaria vesca*, *Fraxinus excelsior*, *Galium boreale*, *Galium verum*, *Geranium sylvaticum*, *Holcus lanatus*, *Hypericum perforatum*, *Hypochoeris maculata*, *Juniperus communis*, *Knautia arvensis*, *Lathyrus vernus*, *Leucanthemum vulgare*, *Phleum pratense*, *Pimpinella saxifraga*, *Plantago media*, *Primula veris*, *Prunus padus*, *Ranunculus acris*, *Rosa* sp., *Rubus* sp., *Solidago virgaurea*, *Sorbus aucuparia*, *Thymus pulegioides*, *Trifolium alpestre*, *Trifolium pratense*, *Vicia cracca*

**Condition:** Location was very dry. There was a mosaic of yellowish completely dried vegetation on very shallow soil and relatively well growing, green on deeper soil. *Dracocephalum* plants were small 5 – 15(20) cm but were very poorly blooming at the time of observation – ca. 30%. Much fewer plants were noticed.

**Care:**

**GPS-coordinates:** 60° 1'31.32"N 10°38'51.99"E [Dracocephalum-Svartor1](#)

The main site is situated ca. 150 m E from Svartor farm on a former footpath to E side of Setertj.

**Date of watch:** 12.06.2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo 1. Top of rocky hill - main area on location Svartør 1. 12.06.2018.



Photo 2. Blooming sprouts of *Dracocephalum* were maximum to 15 -20 cm high. 12.06.2018.

**Location: Svartør 2**



**Individuals:** ca. 15

**Area:** 2 x 3 m, 0.001 ha

**Environment (habitat):** On a very small, dry, rocky hill on a side of a meadow. With: *Picea excelsa*, *Populus tremula*, *Rosa sp.*, *Sorbus aucuparia*, *Salix caprea*, *Prunus padus*, *Convallaria majalis*, *Polygala sp.*, *Geranium sanguineum*, *Thymus pulegioides*, *Fragaria vesca*, *Melampyrum sylvaticum*, *Galium boreale*, *Hypericum maculatum*

**Condition:** Location very dry. *Dracocephalum* plants were very small 5 -10cm and none of them flourished.

**Care:** There was a lot of *Convallaria majalis* on this surface. Probably it should be reduced.

**GPS-coordinates:** 60° 1'34.85"N 10°38'59.56"E [Dracocephalum-Svartør2](#)

Site is situated just opposite Framstua, on NW side of the road.

**Date of watch:** 12.06.2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo 1. Location Svartør 2. 12.06.2018.



Photo 2. Quite a lot of *Convallaria majalis* on this location. Maybe it should be reduced. 12.06.2018.

**NORDMARKA, Blankvann** - 2017

**Location: Blankvann 1**



**Individuals: 3**

**Area: 2 x 3 m, 0.001 ha**

**Environment (habitat):** On a south facing, open hill slope over a Blankvan lake. With a reach calciphilous vegetation. Among other: *Acer platanoides*, *Achillea millefolium*, *Agrostis capillaris*, *Alchemilla sp.*, *Anemone nemorosa*, *Antennaria dioica*, *Anthericum liliago*, *Anthoxanthum odoratum*, *Aruncus dioicus*, *Betula pubescens*, *Briza media*, *Calamagrostis arundinacea*, *Campanula rotundifolia*, *Campanula persicifolia*, *Convallaria majalis*, *Dryopteris filix-mas*, *Epilobium angustifolium*, *Epipactis atrorubens*, *Fragaria vesca*, *Filipendula vulgaris*, *Galium boreale*, *Galium verum*, *Geranium sylvaticum*, *Gymnadenia conopsea*, *Hepatica nobilis*, *Hieracium sect. hieracium*, *Hylotelephium telephium*, *Iris sibirica*, *Lapsana communis*, *Leucantemum vulgare*, *Lilium martagon*, *Listera ovata*, *Melampyrum pratense*, *Orthilia secunda*, *Pinus sylvestris*, *Platanthera chlorantha*, *Polygala vulgaris*, *Potentilla erecta*, *Pyrola minor*, *P. rotundifolia*, *Rubus saxatilis*, *Solidago virgaurea*, *Sorbus aucuparia*, *Stachys sylvatica*, *Trifolium pratense*, *Vaccinium myrtillus*, *Vaccinium vitis-idaea*, *Vicia sp.*, *Viola sp.*, *Viscaria vulgaris*

**Condition:** Three blooming individuals have been found.

**Care:**

**GPS-coordinates:** 60° 1'40.10"N 10°39'58.30"E

[Dracocephalum-Blankvann1](#)

About 50 m below a cottage in the direction to Tryvannshogda.

**Date of watch:** 12.06.2018.

**Owner:**

**Photos:** R. Gramsz

**Observer:** R. Gramsz



Photo 1. Location Blankvann 1. 12.06.2018.

## **2. B. Overvåking og registrering av insekter**

Ansvar: Lars Ove Hansen (hovedansvar) og George Japoshvili



Norsk Naturarv har i 2018 fortsatt sitt samarbeid med Naturhistorisk museum, Universitetet i Oslo og med undersøkelser på dårlig kjente insektgrupper i Norge. Naturhistorisk museum har et bredt internasjonalt nettverk som inkluderer forskere fra en rekke land. Av internasjonale forskere involvert i dette prosjektet kan nevnes spesielt Dr. Janko Kolarov, Universitetet i Plovdiv, Bulgaria og Dr. George Japoshvili, Agricultural University of Georgia, Tbilisi, Georgia.

## OSLOPROSJEKTET

Siden 2005 har Norsk Naturarv samarbeidet med insektavdelingen ved Naturhistorisk museum, Universitetet i Oslo, og det er utført kartlegging av entomologiske verdier i Oslo kommune og det har vært fokusert på dårlig kjente grupper av insekter. Ressurspersoner fra Naturhistorisk museum har i 2018 vært Hallvard Elven og Lars Ove Hansen. Årets rapport (Elven & Hansen 2018) er den sjettede i serien, og oppsummerer resultatene av kartleggingen i perioden 2015–2017. Undersøkelsen har siden oppstarten hatt to formål, der første del er kartlegging og overvåking av et utvalgte rødlistede insektarter, og andre del er generell insektkartlegging i kommunen. Atten primære lokaliteter ble undersøkt i 2015–2017. Fem av disse ligger på øyene eller langs kysten, seks ligger i Nordmarka, fire ligger i Østmarka og tre ligger i mer urbant miljø i Oslo øst. Malaisefeller ble benyttet på to av lokalitetene: Svartdalen i Groruddalen i 2015 (2 feller) og Gressholmen / Heggholmen–Rambergøya i 2017 (2 feller). Mye av materialet fra disse fellene er dog foreløpig ubestemt, og flere funn vil bli publisert etter hvert. I tillegg inneholder funnoversikten funn fra flere andre lokaliteter i kommunen, inkludert materiale fra to malaisefeller som var plassert på Prinsdalen skytebane på Hauketo i 2016, samt to malaisefeller plassert på henholdsvis Blankvannsbråten og Slakteren i Nordmarka i 2017. Det ble gjort funn av fem overvåkingsarter i perioden 2015–2017: dragehodeglansbille *Meligethes norvegicus* (EN), liten lakrismjeltsekkemøll *Coleophora colutella* (VU), markmalurtøyelokkmøll *Bucculatrix ratisbonensis* (VU), alantfjærmøll *Oidaematophorus lithodactyla* (EN) og solblomengmøll *Digitivalva arnicella* (EN). Nye lokaliteter ble oppdaget for markmalurtøyelokkmøll og solblomengmøll. Videre ble rødlisteartene *Bucculatrix maritima* (EN), *Depressaria depressana* (EN) og engglansblomsterflue *Orthonevra stackelbergi* (VU) påvist på nye lokaliteter i kommunen. Det ble funnet tentative spor av en femte overvåkingsart, lindepraktbille *Lamprodila rutilans*, på Bygdøy. Det gjenstår dog å finne levende individer av arten, som ikke er dokumentert i Oslo kommune etter 1990-tallet. Kartleggingen hadde i perioden 2015–2017 ekstra fokus på bynære miljøer i Oslo øst, og da særlig områdene langs Alnaelva i Groruddalen. Undersøkelsen har foreløpig gitt få interessante funn fra dette området, men området er potensielt spennende og fortjener videre undersøkelser.

Flere arter av parasittveps er påvist for første gang i Norge under disse undersøkelsene. Tre arter av praktveps (Ichneumonidae) ble påvist for første gang i Norge fra Gressholmen.

## Referanse

Elven, H. & Hansen, L. O. 2018. Registrering og overvåking av utvalgte insektarter i Oslo kommune VI. Naturhistorisk museum, Universitetet i Oslo. Rapport nr. 70, 124 s.

<https://www.nhm.uio.no/forskning/publikasjoner/nhm-rapporter/nhm-rapport-070-2018.pdf>

## INSEKTUNDERSØKELSER PÅ SLÅTTEMYRA NITTEDAL

I Nittedal ligger en av de ytterst få slåttemyrene i Norge. Slåttemyr representerer en av de mest truede naturtypene vi har i Norge, og blir betraktet som en såkalt utvalgt naturtype. Slåttemyra i Nittedal har blitt holdt i hevd i nyere tid av Maridalens Venner. Myra ble benyttet til slått og husdyrbeite fram til rundt 1950. Da det ble satt fokus på Slåttemyra igjen i 1994 var den sterkt preget av gjengroing med kratt og trær, spesielt gjaldt dette i kantene og på de tørreste partiene.

Plantelivet på Slåttemyra, som på mange andre rikmyrer, er preget av tidligere slått. Her vokser flere sjeldne arter, inkludert 13 forskjellige sorter orkidéer, og det var fare for at noen av disse ville forsvinne ved gjengroing. For å opprettholde verneverdiene, arter, plantesamfunn og slåttelandskapet, er det nødvendig med skjøtsel. I 1981 ble 120 dekar av Slåttemyra fredet som naturreservat. Reservatet domineres av rik og intermedier myrvegetasjon.

I 2016 ble det igangsatt insektundersøkelser på Slåttemyra. Dette er de første studier av insekter på ei hevdet historisk slåttemyr i Norge. Ressurspersoner fra Naturhistorisk museum har vært Jon Peder Lindemann og Lars Ove Hansen.

Det ble benyttet forskjellig metodikk. To malaisetelt ble satt opp på to forskjellige steder på myra. Disse sto hele sesongen. Det ble også benyttet serier med fargede tallerkener. Slike feller er effektive for undersøkelser av pollinerende insekter. Det ble også benyttet fallfeller for undersøkelser av bakkelevende insekter. Materialet er fortsatt under bearbeiding, men en del resultater er allerede klare. Fem arter av praktveps (Ichneumonidae) som tidligere ikke er blitt påvist i Norge. Om dette er arter som kan relateres til naturtype slåttemyr er foreløpig for tidlig å si noe om.

Arter legges fortløpende ut på nettstedet «Artskart» via de naturhistoriske museenes database «MUSIT» og kan søkes fram på nettstedet: <https://artskart.artsdatabanken.no/>



Figur 1 *Exephanes rhenanus* Habermehl, 1918 (Hymenoptera, Ichneumonidae) er en av artene som ble påvist på Slåttemyra i 2016. Arten er kjent fra Finland og Tyskland, men ikke tidligere fra Norge.

## STUDIER AV PARASITTEPSFAMILIENE ICHNEUMONIDAE OG ENCYRTIDAE (HYMENOPTERA)

Det har i 2018 blitt fokusert spesielt på parasittvepsfamiliene Ichneumonidae og Encyrtidae. For familien Ichneumonidae er det bestemt opp et forholdsvis stort materiale, der nærmere 200 arter tidligere ikke er påvist i Norge. De aller fleste av disse har kommet fram i samarbeidet mellom Norsk Naturarv og Naturhistorisk museum i Oslo. Av internasjonale forskere involvert i dette prosjektet kan nevnes både Dr. Janko Kolarov og Dr. George Japoshvili.

Arter legges fortløpende ut på nettstedet «Artskart» via de naturhistoriske museenes database «MUSIT» og kan søkes fram på nettstedet: <https://artskart.artsdatabanken.no/>.

Studien av parasittvepsfamilien Encyrtidae fra samlingene ved Naturhistorisk museum i Oslo har fortsatt i 2018. Hansen & Japoshvili (2018) publiserer åtte arter for første gang fra Norge, og bringer det totale antallet norske encyrtider opp til 151 arter. *Bothriothorax koponeni* Khlopunov, 1984 rapporteres for første gang utenfor Finland, og *Syrphophagus subviridis* (Hoffer, 1970) for første gang utenfor Slovakia. Tidligere er *Isodromus limosus* Hoffer, 1969 kun rapportert fra Böhmen i Tsjekia og Kostroma Oblast i Russland, mens *Copidosoma aretas* (Walker, 1838), *Lamennaisia nobilis* Nees, 1834, *Leptomastix epona* (Walker, 1844), *Psyllaephagus abbreviatus* (Hoffer, 1963) og *Syrphophagus aphidivorus* (Mayr, 1876) er alle registrert fra Norge for første gang. Nye funn er angitt for *Anagyrus belibus* (Walker, 1837), *Bothriothorax clavicornis* (Dalman, 1820), *Encyrtus albitarsis* Zetterstedt, 1838 og *Tetracnemoidea piceae* (Erdös, 1946). *Pseudencyrtus idmon* (Walker, 1844) og *Sectiliclava cleone* (Walker, 1848) er registrert for første gang fra Norge siden Francis Walker (1809–1874) samlet typene til disse artene under sitt besøk til Finnmark i 1836. Målet med dette studiet er å fremheve utbredelsen til familien i Norge og etter hvert gi en sjekklister over de norske artene.

### Referanse

Hansen, L.O. & Japoshvili, G. 2018. New records of Encyrtidae (Hymenoptera, Chalcidoidea) from Norway VII. *Norwegian Journal of Entomology* 65, 101–107.

<http://www.entomologi.no/journals/nje/2018-2/pdf/nje-vol65-no2-101-107-hansen.pdf>

### 3. Styremøter

I løpet av 2018 ble det avholdt fire styremøter.

### 4. Samarbeidspartnere

Norsk Naturarv fortsetter samarbeidet med Naturhistorisk museum (NHM) og George Japoshvili ved Entomologisk institutt, Agronomisk universitet i Georgia, om overvåking og registrering av insekter.

### 5. Norsk Naturarv inn i statsbudsjettet 2018. 750 000 under tilskuddsordningen for «Støtte til nasjonale og internasjonale miljøtiltak», kap. 1400, post 76

Stiftelsen Norsk Naturarv ble tatt ut av budsjettet for Oslo kommune (oslobudsjettet) fra og med 2018.

Under behandlingen av statsbudsjettet i møtet i energi- og miljøkomiteen (Stortinget) 7. desember 2017, ble det fattet følgende vedtak:

Utdrag fra [innstillingen fra energi- og miljøkomiteen, 7. desember 2017](#):

"Komiteen viser videre til det viktige arbeidet Stiftelsen Norsk Naturarv gjør for skjøtsel, bevaring og formidling av landets naturarv. Komiteen har merket seg at Stiftelsen Norsk Naturarv over flere år har hatt et samarbeid med Naturhistorisk museum i Oslo.

Komiteen har merket seg at dette samarbeidet i stor grad har fokusert på studier av insekter og har bidratt til funn av flere nye arter.

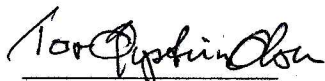
Komiteens medlemmer fra Høyre, Fremskrittspartiet, Venstre og Kristelig Folkeparti foreslår at [kap. 1400 post 70](#) økes med 750 000 kroner sammenlignet med regjeringens forslag til statsbudsjett i Prop. 1 S (2017–2018), slik at Stiftelsen Norsk Naturarvs arbeid med bevaring av norsk natur kan opprettholdes."

Oslo, i energi- og miljøkomiteen, den 7. desember 2017

Ola Elvestuen  
leder

Det viste seg i ettertid at Stortinget ikke bevilget midlene under kap. 1400, post 70 («Frivillige miljøorganisasjoner og allmenntilgode miljøstiftelser»), men under kap. 1400, post 76; «Støtte til nasjonale og internasjonale miljøtiltak». Posten skal medvirke til at Norge oppfyller sine nasjonale og internasjonale plikter innen naturmangfold og friluftsområdet. Målsettingen med tilskuddsordningen er å medvirke til måloppnåelse på naturmangfoldområdet.

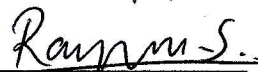
Oslø 26/2-2019



Tor Øystein Olsen  
Styrets leder



Lars Ove Hansen  
Nestleder



Ranjeni Sivasubramaniam  
Styremedlem/sekretær



Petter Lilleengen  
Styremedlem