After 10 years of observations Norsk Naturary collect a lot of information about the area covered by Ajuga reprans in Nordmarka. Over 20 stands of Ajuga reptans has been found. This stands concentrate in 3 main locations which can be call as: Nesseterdalen, Finntjern and Gørjehøgda. Nesseterdalen is the most abundant location of *Ajuga reptans* and their populations are rather pure, almost without cross-breed specimens with *A. pyramidalis*. The distance between this main locations is no bigger than 1 -2 km. Also distances between established stands are sometimes very shot (less than 50 m) and very often new plants are found between stands. That amount of information gives a possibility to draw on the map the range of *Ajuga reptans* distribution in Nordmarka. But to keep control of a quantity and quality of population it is necessary to establish stands which are permanently marked in the terrain. 5 of that stands have been established: 3 of them in Nesseterdalen,1 in Finntjern and 1 in Gørjehøgda.

2.1. Latinsk navn (Latin name)

Ajuga reptans L.

2.2 Rødlistestatus (redlist satus)

EN

2.3 Utbredelse (spreading/place)

2.4 Lokaliteter i Norge (locations in Norway)

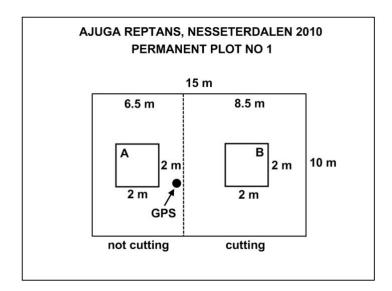
2.4.1. Lokaliteter i Oslo (locations in Oslo)

3 known (Nesseterdalen, Finntjern, Gørjehøgda)

Location: 1. Nesseterdalen - former (**Lokalitet 1. Dellokalitet 8.** Nesseterdalen, Oslo)

A permanent plot established in last year has been slightly adjusted and marked in the terrain. See Fig.1. and photos.

Fig.1.



A new stand with a size 10×15 m is a part of former "Dellokalitet 8". This stand can be used for dokumentation and detailed observation about *Ajuga reptans* number and condition and a changes of vegetation in this site. Western half of this stand $(10 \times 6.5 \text{ m})$ will be keep without any protection activity and eastern part $(10 \times 8.5 \text{ m})$ will be mowed. For a detailed observations 2 spots "A" and "B" with a size 2 x 2m has been marked in western and eastern halfs of a stand.

Individuals: 110 flowering (in established stand 10 x 15 m)

A $(2 \times 2 \text{ m}) - 1$ flowering (photo 3388; 1284)

B $(2 \times 2 \text{ m}) - 16 \text{ flowering (photo } 3389; 1285)$

Area: 10 x 15 m, with two spots 2 x 2 m

Environment (habitat): Transitional part between very wet, flat bank of a small stream and a humid, fertile hill slope. Some years ago big spruce trees has been cutted from this place. Tall herbs and Alnus incana dominate wet places. With other species: *Aconitum lycoctonum ssp. septentrionale cfr.*, *Caltha palustris*, *Carex flava*, *Carex rostrata*, *Dactylorhiza maculata*, *Equisetum silvaticum*, *Filipendula ulmaria*, *Fraxinus exelsior*, *Listera ovata*, *Paris quadrifolia*, *Phalaris arundinacea*, *Ranunculus repens*, *Valeriana officinalis* and the others.

Spesies quantity describe according to Braun-Blanquet phytosocjological method (r – up to 5 individuals, + - sparse, 1 – up to 5% covering, 2 – 5% -25%, 3 – 25% - 50%, 4 – 50% - 75%, 5 – 75% - 100%

A: Ajuga reptans 3, Alchemilla +, Cardamine amara +, Carex canescens 1, Carex viridula +, Carex sylvatica +, Crepis paludosa 2, Dactilorhiza maculata r, Equisetum sylvaticum 2, Filipendula ulmaria +, Oxalis acetosella +, Phegopteris connectilis 1, Picea abies r, Ranunculus repens 2, Rubus sp. +, Vaccinium myrtillus 1, Valeriana officinalis +

B: Ajuga reptans 2, Aconitum lycoctonum ssp. septentrionale cfr. +, Carex viridula 1, Cardamine amara +, Crepis paludosa 1, Epilobium sp.+, Equisetum sylvaticum 3, Euphorbia dulcis 1, Filipendula ulmaria 1, Geranium sylvaticum 1, Geum rivale +1, Gymnocarpium dryopteris +, Hepatica nobilis +, Listera ovata r, Majanthemum bifolium +, Melampyrum pratense +, Melica nutans +, Oxalis acetosella +, Paris quadrifolia +, Phegopteris connectilis 1, Poentilla erecta +, Polygonatum verticillatum +, Ranunculus repens 1, Rubus sp., Trientalis europaea +, Viola sp. +

Condition: Still one of the most abundant stand, but with much less flowering plants than last year. There was not visible difference with plants condition in mowed and not mowed part.

(has Arild been mowed this location?)

Care: Eastern half of the stand will be moved to compare how it affect *Ajuga reptans* growing.

GPS-koordinates: 0598856/6660530

Date of watch: 23.06.2010

Owner:

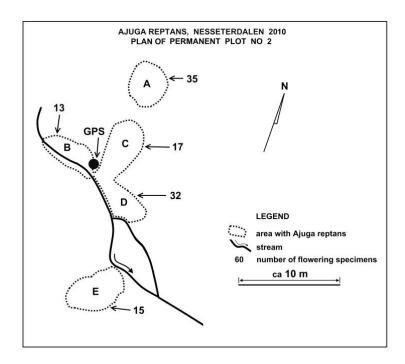
Photos: No 1283; 3388; 3389 (R. Gramsz),1284; 1285 (J. Potocka)

Observer: R. Gramsz, J. Potocka

Location: 2. Nesseterdalen - former (**Lokalitet 1. Dellokalitet 1. Nesseterdalen**, Oslo.)

A permanent plot was established and its situational plan has been drawn. Fig. 2.

Fig.2.



Individuals: 112 flowering in whole area. Number of flowering plants in concentrations:

- A 35; B 13; C 17; D 32; E 15. See on drawing – Fig.2.

Area: ca 20 x 25

Environment (habitat): Open area after forest cutting. Mostly wet places with tall herbs along small stream but also quite dry spot between stream and foot path. With: *Aconitum firmum, Alnus incana, Anemone nemorosa, Cicerbita alpina, Equisetum silvaticum*

Filipendula ulmaria, Geum rivale, Phegopteris connectilis, Ranunculus repens, Sorbus aucuparia, Valeriana officinalis and the others.

Condition: Much less, than last year flowering plants has been observed.

Care: I do not have information from Arild about his activity (?)

GPS-koordinates: 0598782/6660623

Date of watch: 23 and 24..06.2010

Owner:

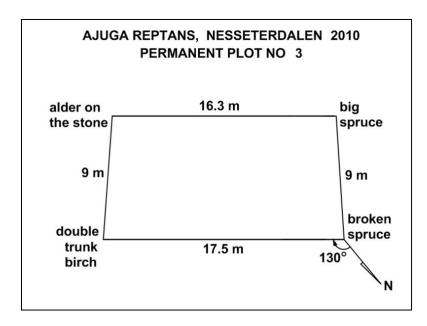
Photos: No 3393; 3394; 3395; 3396 (R. Gramsz)

Observer: R. Gramsz, J.Potocka

Location: 3. Nesseterdalen - former (**Lokalitet 1. Dellokalitet 6.** Nesseterdalen, Oslo.)

A few, small corrections were made on a permanent *plot* established last year and its situational plan has been drawn. Fig.3

Fig.3.



Individuals: ca 119 flowering

Area: ca 9 x17 m, see drawing

Environment (habitat): Rocky hill slope expose to S; SE with thin forest and abundant herbs. Quite fertile and humid soil. With: Aconitum firmum, Actea spicata, Alnus incana, Anemone nemorosa, Betula sp., Circaea alpina, Galium odoratum, Paris qudrifolia, Picea abies, Hepatica nobilis, Oxalis acetosella, Polygonatum verticillatum, Pteridium aquilinum, Ranunculus repens, Stachys silvatica, Dentaria bulbifera, Sorbus aucuparia, Stellaria media, Urtica dioica and the others.

Condition: Very rich stand with numerous flowering plants

Care: -

GPS-koordinates: 0598837/6660905

Date of watch: 24.06.2010

Owner:

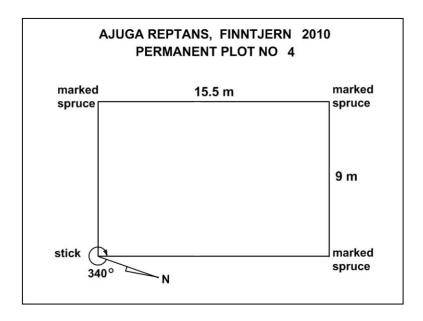
Photos: No 1289; 3389 (R. Gramsz)

Observer: R. Gramsz, J. Potocka

Location: 4. Finntjern – former (Lokalitet 1. Dellokalitet 17(19?) Oslo.

Some small corrections were made in last year established permanent plot – former "Dellokalitet 17(19?)". See fig.4.

Fig. 4.



Individuals: 68 flowering

Area: 9 x15.5 m

Environment (habitat): S facing slope, sometimes wet with small springs, covered by spruce forest. Forest is rather dense and dark, with a small clearings only. Ajuga is growing in some concentrations almost without other plant on dark places or together with other herbs in clearings. The stand is in the edge of small clearing. With: *Aconitum firmum, Anemone nemorosa, Fragaria vesca, Hepatica nobilis, Hypericum maculatum, Paris quadrifolia, Picea abies, Pteridium aquilinum, Pyrola rotundifolia, Ranunculus repens, Rubus sp., Sorbus aucuparia, Stachys sivatica, Vaccinium myrtillus and the others.*

Condition: There were more flowering plants than last year. But in this dark place there is a lot more vegetative plants.(ratio flowering/ vegetative is more than 1:10 photo 3392) *Ajuga* survive well, may be because of luck of competition. Quite a lot of *Ajuga* concentrations and single plants are growing between the stand and forest road (~100 m).

Care:

GPS-koordinates: 0598045/ 6659797

Date of watch: 24.06.2010

Owner:

Photos: No 1286; 3392 (R. Gramsz)

Observer: R. Gramsz, J. Potocka

Location: 5. Gørjehøgda – former (krp 031 – in Arild GPS)

All **Gørjehøgda** populations of *Ajuga reptans* consist of specimens cross-breed with *A. pyramidalis*. The new established permanent plot is covered by population which seams to be most pure in Gørjehøgda region. In this year the size of this location was decrease, measured again and marked. See fig. 5.

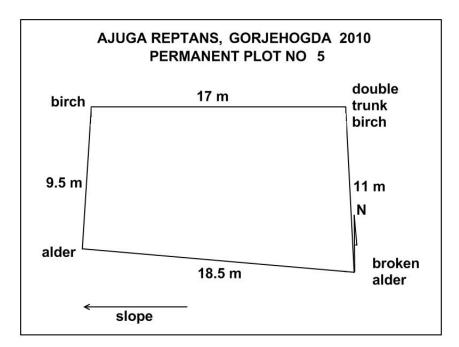
Individuals: 45 flowering

Area: ca10 x 18 m (see drawing)

Environment (habitat): W facing slope, close to the top of Gørjehøgda. Area is covered with a spruce forest but with a large clearings with meadow vegetation and sparsely growing ashes *Fraxinus excelsior*. This region could be a former pasture. The stand is on steep and rocky clearing with tall herbs. With: *Aconitum lycoctonum ssp. septentrionale cfr.*, *Actaea spicata*, *Alnus incana*, *Anemone nemorosa*, *Athyrium filix-femina*, *Betula pubescens*, *Calamagrostis arundinacea*, *Circaea sp.*, *Dentaria bulbifera*, *Dryopteris carthusiana*, *Dryopteris filix-mas*, *Epilobium sp.*, *Filipendula ulmaria*, *Fraxinus excelsior*, *Geranium sylvaticum*, *Geum rivale*,

Gymnocarpium dryopteris, Hepatica nobilis, Hypericum maculatum, Lathyrus vernus, Majanthemum bifolium, Melampyrum pratense, Melandrium rubrum, Melica nutans, Oxalis acetosella, Padus avium, Paris quadrifolia, Picea abies, Phegopteris connectilis, Polygonatum vertyicillatum, Prunus padus, Rubus sp., Solidago virgaurea, Sorbus aucuparia, Stachys sylvatica, Stellaria nemorum, Trientalis europaea, Vaccinium myrtillus, Veronica chamaedrys, Viola sp.

Fig. 5.



Condition: Plants are growing in two concentrations among tall grass and herbs. There were more flowering plans than last year.(could be that last year observation was made too late – 15.07)

Care: -

GPS-koordinates: 0596610/6660081

Date of watch: 25.06.2010

Owner:

Photos: No 3401; 3402 (R. Gramsz)

Observer: R. Gramsz, J. Potocka

A new location with specimens *Ajuga reptans* has been found:

- On a right (NE) side of a road Movatn Finntjern, about 100 m over connection with blue marked trail. (no GPS coordinates). Some individuals are cross-breed with *A. pyramidalis*. 30 flowering individuals
- Framstua close to buildings, on the edge of lawn. Individuals are pure *A. reptans* but most likely var. atropurpurea with leafs colored slightly red. About 10 flowering individuals.
- Blankvann (northern side of the lake) GPS-koordinates: 0592655/6655222 . (The same location as *Pyrola media*). *Ajuga reptans* is growing on a lawn close to cottage. Plants are very small, some flowering. Also individuals cross-breed with *A. pyramidalis*. About 10 flowering individuals