

# Land Cover



*Juniperus communis* L.

**Käsmu 2022**



# OUR GROUP

Rosmarii

Imbi (teacher)

Eliška

Mattias

Kent Gregor  
(support)

Natálie

Lauri

Anette

Jelizaveta

Kätrin

Eliise



Our headquarter on the boulder

# Our research areas



# Hypothesis

- The trees are higher and thicker in the forest
- Canopy cover is more dense in the forest
- There are more evergreen trees and less deciduous plants near the sea
- There are more rare plants in the coastal area



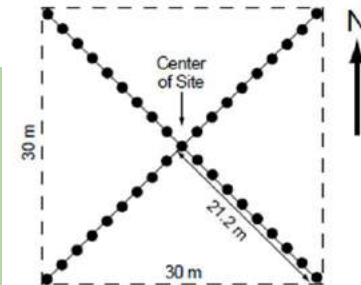
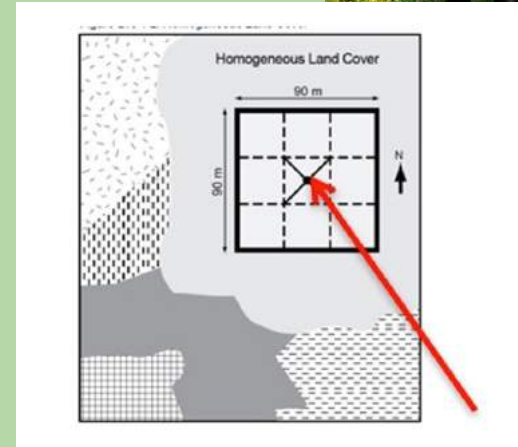
# Tools

- Compass
- GPS receiver
- Smartphone
- Measuring tape (50m), rope
- Flags for marking (5pcs)
- GLOBE Observer app
- GLOBE Data Entry app
- Plant identifier
- MUC Field Guide
- Tubular densiometer
- GLOBE land cover protocol



# Methods of investigation

1. **Canopy Cover measurements:** defining diagonals, looking up through densiometer at the canopy, recording a (+) or a (-).
2. **Describing Ground Cover:** if the vegetation was green (alive), we recorded a (G), if brown a (B)
3. **Identifying the plants** and dominant species
4. **Measuring height of the trees** with GLOBE Observer



# Research area 1, near the sea

N: 59° 36' 50"

E: 25° 54' 48"

H: 10,3m

MUC code: 0192

25 plant species





# Research area 2, boulder field

N: 59° 36' 40''

E: 25° 54' 23''

H: 20,6m

MUC code: 0192

15 plant species





# Plants we found in the first research area:

Mustikas / *Vaccinium myrtillus* / European blueberry

Piibeleht / *Convallaria majalis* / Lily of the valley

Palu-härghein / *melampyrum pratense* / common cow-wheat

Harilik jänesekapsas / *Oxalis acetosella* / common wood sorrel

Ahtalehine põdrakanep / *Epilobium angustifolium* / *Chamaenerion angustifolium*

Karutubakas / *Pilosella officinarum* / Pilosella Hill

Muulukas / *Fragaria viridis* / creamy strawberry

Sügisene seanupp / *Leontodon autumnalis* / *Scorzoneroides autumnalis*

Roomav madar / *Galium aparine* / **sticky willy**

Raudrohi / *Achillea* / yarrow

Harilik laanlill / *Trientalis europaea* / chickweed wintergreen

Võilill / *Taraxacum* / dandelion

Mets-tähthein / *Stellaria holostea* / greater stitchwort

Suur teeleht / *Plantago major* / *Plantago major*

Harilik pohl / *Vaccinium vitis-idaea* / mountain cranberry

Harilik teeleht / *Plantago major* /

Harilik Pihlakas / *Sorbus aucuparia* / rowan

Harilik Vaher / *Acer platanoides* / Norway maple

Kadakas / *Juniperus communis* / common juniper

Metsvaarikas / *Rubus idaeus* / raspberry

Harilik Mänd / *Pinus sylvestris* / Baltic pine

Everybody gangsta, til Kent starts spinning.

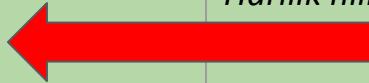
Valge Ristikhein / *Trifolium repens* / white clover

Hunditubakas / *Hieracium* / hawkweed

Mets-haruputk / *Anthriscus sylvestris* / mother-die

Harilik hiirehernes / *Vicia cracca* / tufted vetch

kahein / *Dactylis glomerata* / cock's-foot



# Plants we found in the second research area:

*Mustikas / Vaccinium myrtillus / European blueberry*

*Piibeleht / Convallaria majalis / Lily of the valley*

*Raudrohi / Achillea / yarrow*

*Põdrasamblik /Cladina/ quill lichen*

*Kanarbik / Calluna vulgaris / heather*

*Harilik kukemari / Empetrum nigrum / crowberry*

*Kuldvits / Solidago L. / goldenrods*

*Palusammal / Pleurozium schreberi / red-stemmed  
feathermoss*

*Kaksikhammas / Dicranum / wind-blown mosses*

*Laanik / Hylocomium splendens / glittering woodmoss*

*Põdrakanep / Chamaenerion / willowherbs*

*Mets-härghein / Melampyrum sylvaticum / small cow-wheat*

***Harilik harakkuljus / Linnaea borealis / twinflower***

*Kask / Betula / birch*

*Kuusk (beebi) / Picea abies / spruce*

*Hunditubakas / Hieracium / hawkweed*

*Harilik pohl / Vaccinium vitis-idaea / mountain cranberry*

*Kadakas / Juniperus communis / common juniper*

*Harilik Mänd / Pinus sylvestris / Baltic pine*

*Everybody gangsta / til Kent starts / spinning*

**Polypodium vulgare**

**Common polypody**



# Results 1

Research area 1, near  
the sea

Research area 2, boulder  
field

## Tree Canopy

<b>Trees</b>	<b>50%</b>		<b>90%</b>	
<b>Evergreen</b>	<b>84%</b>		<b>100%</b>	
<b>Deciduous</b>	<b>16%</b>			
<b><i>Pinus sylvestris</i></b>	<b>Tree height</b>	<b>Circumference</b>	<b>Tree height</b>	<b>Circumference</b>
<b>Tree 1</b>	<b>19m</b>	<b>196cm</b>	<b>18m</b>	<b>69cm</b>
<b>Tree 2</b>	<b>23m</b>	<b>164cm</b>	<b>19m</b>	<b>94cm</b>
<b>Tree 3</b>	<b>22m</b>	<b>125cm</b>	<b>18m</b>	<b>67cm</b>



## Results 2

Research area 1, near  
the sea

Research area 2,  
boulder field

### Ground Cover

<b>Green</b>	<b>84%</b>	<b>89%</b>
<b>Brown</b>	<b>16%</b>	<b>10%</b>
<b>No vegetation</b>	<b>0%</b>	<b>1%</b>
<b>Graminoid</b>	<b>5%</b>	<b>1%</b>
<b>Forbs</b>	<b>20%</b>	<b>19%</b>
<b>Other green</b>	<b>5%</b>	<b>20%</b>
<b>Shrubs</b>	<b>15%</b>	<b>10%</b>
<b>Dwarf shrubs</b>	<b>55%</b>	<b>50%</b>

# Conclusion

- The tallest and thickest trees grew near the sea.
- The canopy cover is denser in the forest.
- In our research areas was more evergreen trees in the forest
- We found one rare plant in the forest, on our trail.

3 hypotheses were not confirmed.

# Kent`s hat

Before



Progress



After





# Used literature

- [Maa-amet](#)
- [Globe BIOMETRY - Canopy Cover and Ground Cover](#)
- [Expedition photos: I. Henno](#)



THANK YOU  
FOR YOUR ATTENTION