

23rd Junior Eco - Expert – Ecoproject

Our Country, Our Future, Our Responsibility

- Visegrad Fund

GROUP 3: PHYTOCENOLOGY AND BIODIVERSITY



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Phytocenology

- ▶ **Phytocenology- simply plant sociology**
- ▶ **Is the study of groups of species of plants that are usually found together**
- ▶ **It aims to empirically describe the vegetative environment of a given territory**
- ▶ **The term 'phytocenology' was formed in 1896 by Józef Paczoski**

Biodiversity

- ▶ Biodiversity is the variety and variability of life on the Earth
- ▶ Biodiversity is not distributed evenly on the Earth
- ▶ Tropical forest ecosystems cover less than 10% of earth's surface and contain about 90% of the world's species
- ▶ Biodiversity generally tends to cluster in hotspots, and has been increasing through time, but will be likely to slow in the future as a primary result of human activity

Aim of our group

- ▶ Our aim was to compare and contrast different locations
- ▶ We visited wet locations near water and dry locations with sand

Excursion to Institute of Botany AS CR

- ▶ We visited a botanical garden in Třeboň on Tuesday
- ▶ Their aim is to grow species of water plants and protect endangered plants
- ▶ They also have tropical and subtropical plants



Location number 1 - Flood area around the Lužnice river (GPS): 49.1893385N, 14.7033468E

- ▶ This site is located on a gentle western slope in a floodplain
- ▶ We recorded a total of 14 plant species at this location
- ▶ The highest height was 108 cm and the average height was 86 cm
- ▶ The most common type of plant was *Poa pratensis* - 45%
- ▶ The total coverage was around 100%

Location number 1



Location number 2 - Dry cut meadows

(GPS): 49.1908917N, 14.7057533E

- ▶ This place is located on a flat dry meadow where the sun shines directly on the plants
- ▶ We recorded a total of 14 plant species at this location, but unlike the first site, we found more arid-loving plants
- ▶ The highest height was 56 cm and the average height was 21 cm
- ▶ The most common type of plant was *Dactylis glomerata* - 55%
- ▶ The total coverage was around 100%

Location number 2



Location number 3 - hill in the forest

(GPS) 49.1921343N 14.7000702E

- ▶ This area is located on a dry hill with a flat top
- ▶ It contains an herb and a tree layer
- ▶ At this location we recorded a total of 5 different herbs and 2 different trees
- ▶ The highest height was 66 cm and the average height was 26 cm
- ▶ The most common type of plant was *Poa nemoralis* – 40%
- ▶ The total coverage was 75%

Location number 3



Location number 4 – wet meadow between two rivers (GPS) 49.1951400N 14.7036650E

- ▶ This area was located at wet meadow where two rivers confluence
- ▶ At this location we recorded a total of 6 different plants
- ▶ The highest plant was 108 cm and the average height was 64 cm
- ▶ The most common type of plant was *Alopecurus pratensis* – 75%
- ▶ The total coverage was around 90%

Location number 4



Location number 5 - Gentle slope at the Vlkovské sandpit (GPS): 49.1664572N, 14.7161286E

- ▶ The site is located on a gentle slope facing west at the Vlkovská sandpit on predominantly sandy soil
- ▶ We recorded a total of 12 plant species at this location
- ▶ The highest height was 61 cm and the average height was 38 cm
- ▶ The most common type of plant was *Deschampsia cespitosa* - 35%
- ▶ The total coverage was around 55%

Location number 5



Location number 6 - Borders of the Vlkovsky sand dune (GPS): 49.1591244N, 14.7150811E

- ▶ This site is located on the plain between the Vlkovský sand dune and the dry meadow, this site is located on the sandy subsoil, there are also some trees in the area, mainly pines and oaks.
- ▶ We recorded a total of 8 plant species at this site, which was a smaller representation of species, but they were more thermophilic, arid-loving and rare for the Czech Republic.
- ▶ The highest height was 59 cm and the average height was 15 cm
- ▶ The most common plant species in the area was *Corynephorus canescens* 45%
- ▶ The total coverage was around 50%

Location number 6



Location number 7 - Dry sand transition between two sandpits (GPS): 49.1605314N, 14.7056799E

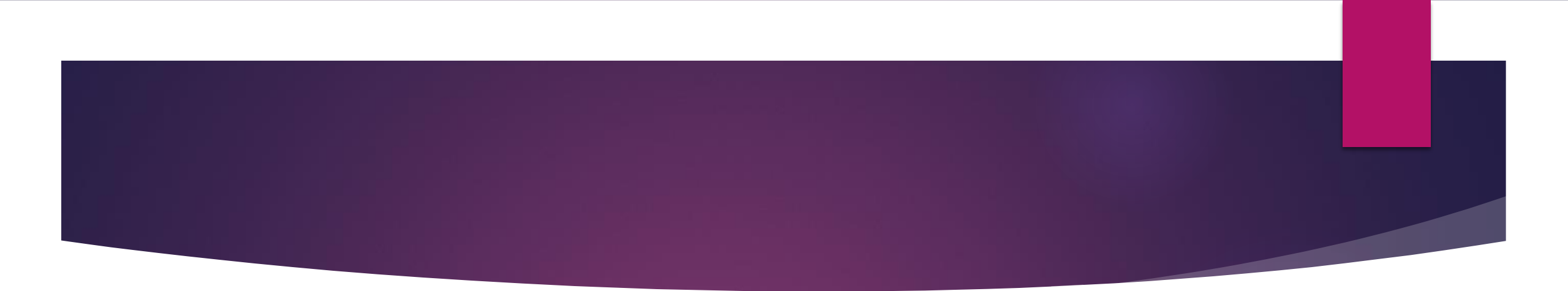
- ▶ This place is located on the plain exactly between two sand pits but since the soil is sandy it is dry and there are no trees around to shade the place
- ▶ We recorded a total of 10 plant species at this site, but compared to the previous site they were more common
- ▶ The highest height was 83 cm and the mean height was 21 cm
- ▶ The most common plant species in the area was *Trifolium hybridum* – 60%
- ▶ The total coverage was around 45%

Location number 7



Summary of observation

Location	Most common species :	Least abundant species :	Total count of species :
Number 1	<i>Poa pratensis</i> 45%	<i>Vicia hirsuta</i> 2%	14
Number 2	<i>Dactylis glomerata</i> 55%	<i>Carex hirta</i> 3%	14
Number 3	<i>Poa nemoralis</i> 40%	<i>Tilia cordata</i> 0,5%	7
Number 4	<i>Alopecurus pratensis</i> 75%	<i>Ranunculus acris</i> 2%	6
Number 5	<i>Deschampsia cespitosa</i> 35%	<i>Rhamnus frangula</i> 0,8%	12
Number 6	<i>Corynephorus canescens</i> 45%	<i>Echium vulgare</i> 1%	8
Number 7	<i>Trifolium hybridum</i> 60%	<i>Hypochaeris glabra</i> 2%	10



Location	Total coverage :
Number 1	100%
Number 2	100%
Number 3	75%
Number 4	90%
Number 5	55%
Number 6	50%
Number 7	45%



THANK YOU FOR YOUR ATTENTION

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