



# SECRETORY TISSUES OF DISCS FLOWERS IN WILD *HELIANTHUS* L. SPECIES

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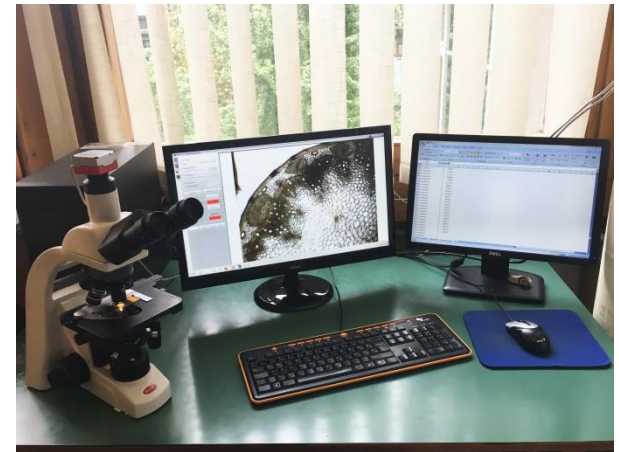
# INTRODUCTION

- Nectar has important role in attracting pollinators and improving the percentage of fertilization in sunflower.
- Capitate glandular trichomes in the area of anthers, are frequently associated with protection against herbivores.



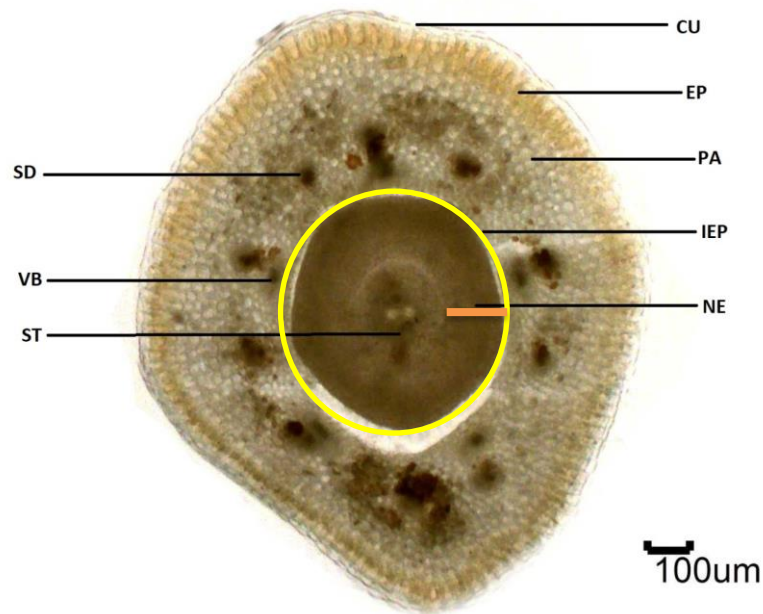
# MATERIAL AND METHODS

- Plant material was collected in the full flowering stage.
- For anatomical and micromorphological observation we used light and SE microscopy.



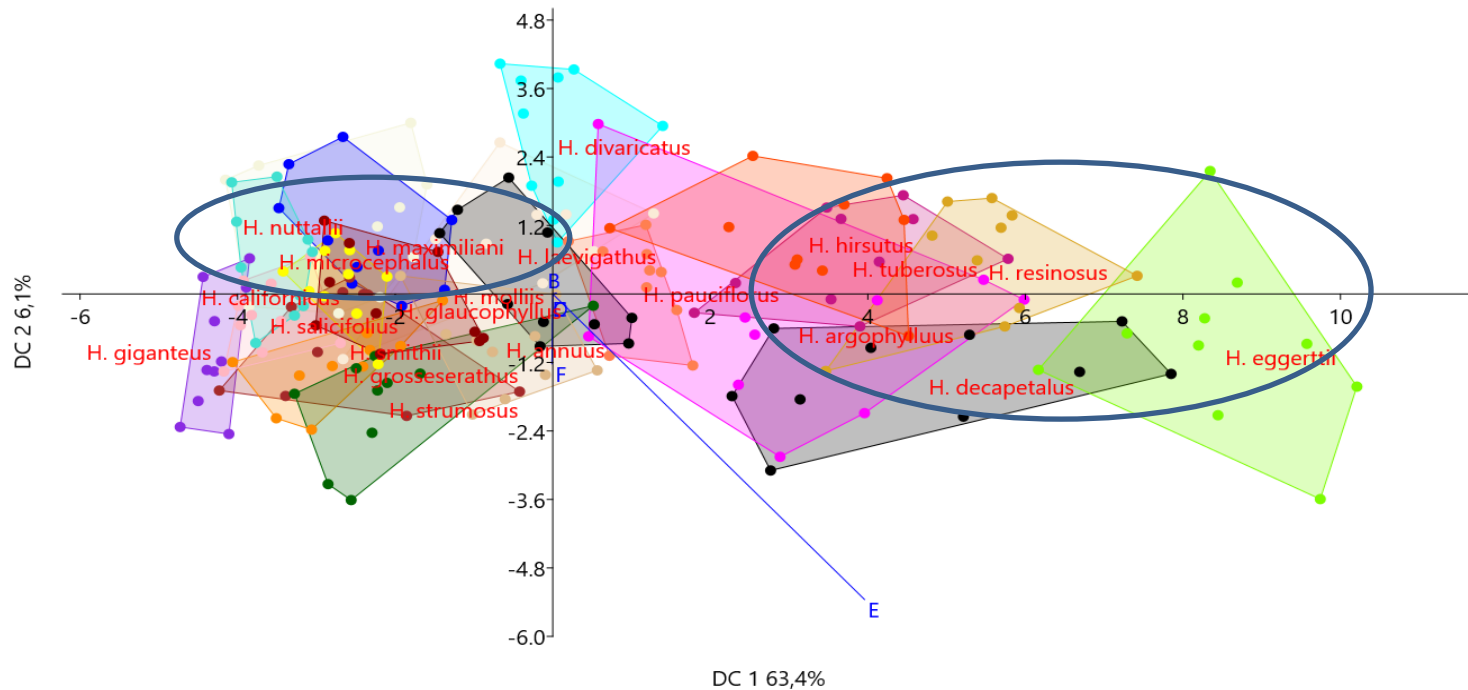
# RESULTS

- In all analyzed species general disc florets anatomy in nectary zone is uniform.



Transverse sections through the nectary zone of the disc florets: *H. eggertii*; CU- Cuticle, EP- Epidermis, PA- Parenchyma, IEP- Inner epidermis, NC- nectary, SD- secretory duct, VB- vascular bundles, ST- style.

# RESULTS

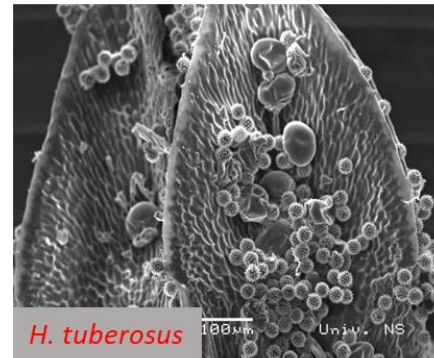
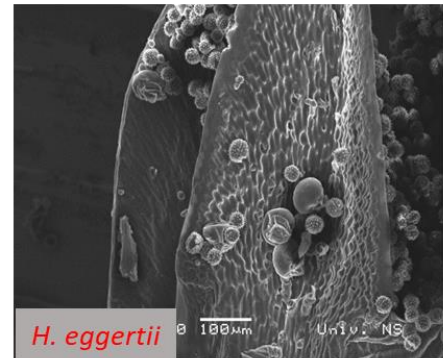
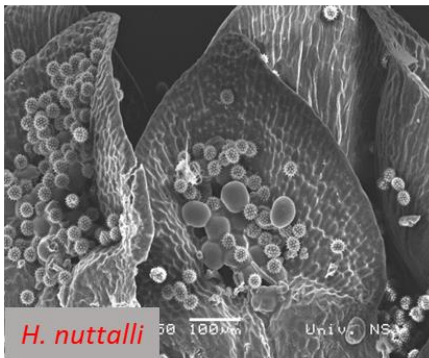
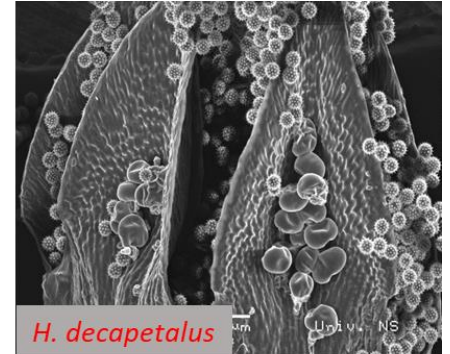
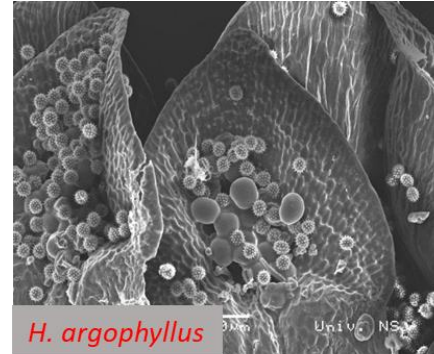
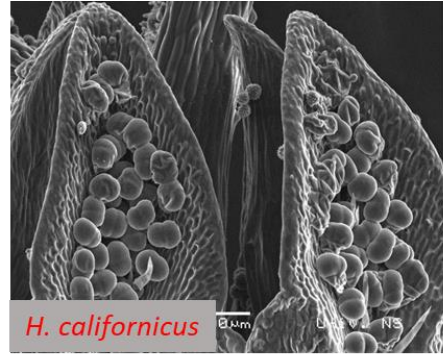
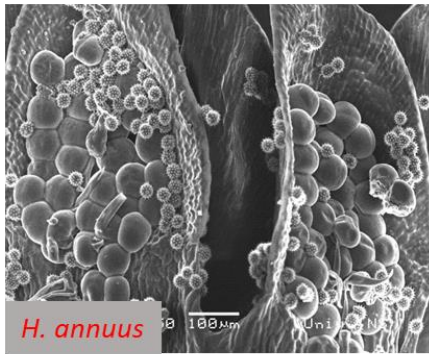


Scatter plot obtained by DCA and position of centroids in the space of two discriminant axis, based on disc florets anatomical characters of the studied *Helianthus* species.

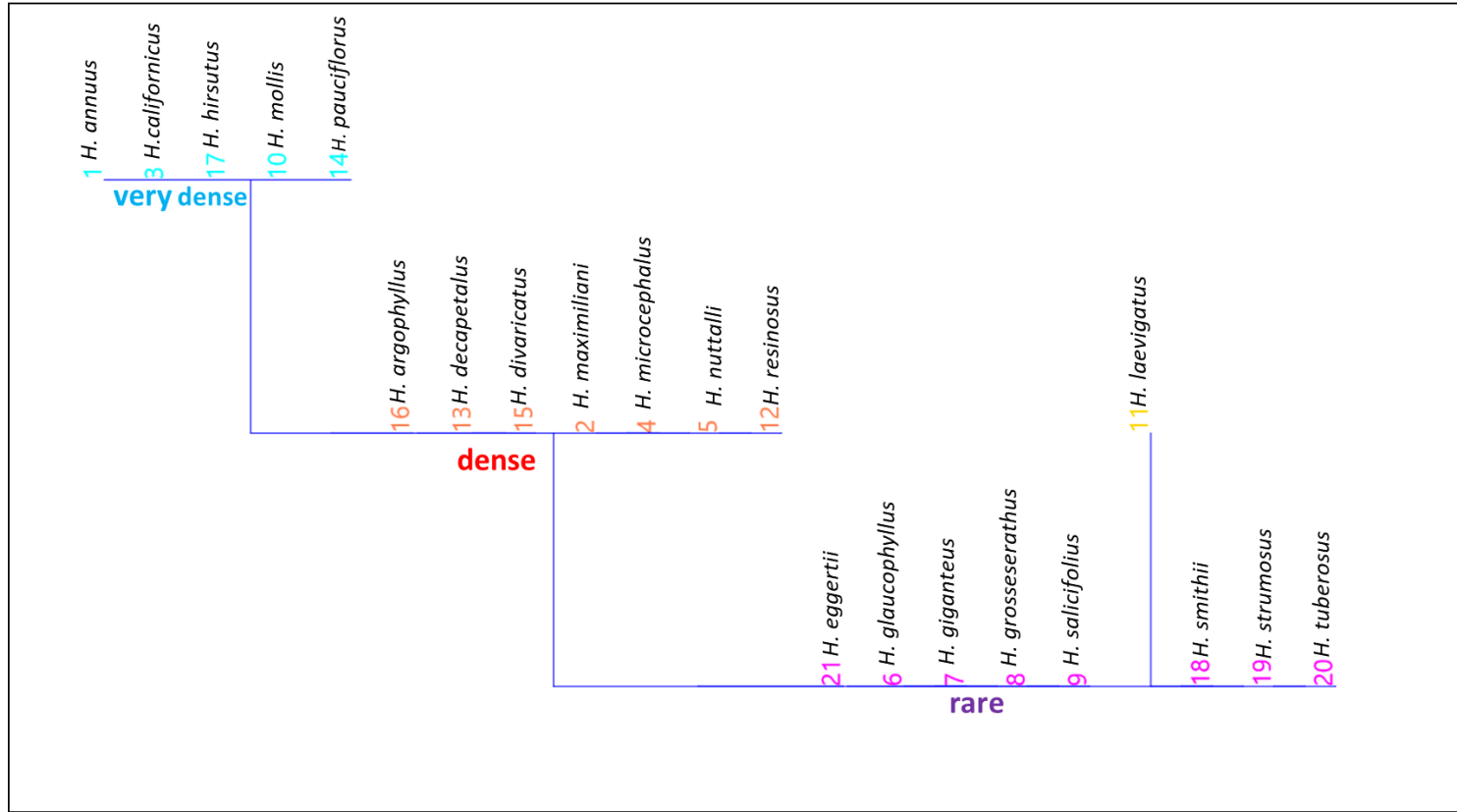


# RESULTS

- According to the trichome density, the species are separated into three main groups: very dense, dense and rare.
- Only *H. laevigatus* was without trichomes



# RESULTS



Dendrogram grouping of *Helianthus* species according to glandular trichome density.

# CONCLUSION

- Taking into account the importance of genetic variability of wild sunflower species information of secretory tissues in discs flowers can be useful for breeding cultivated sunflower for enhancing the attractiveness to pollinators.





**Thank you for your attention!**