



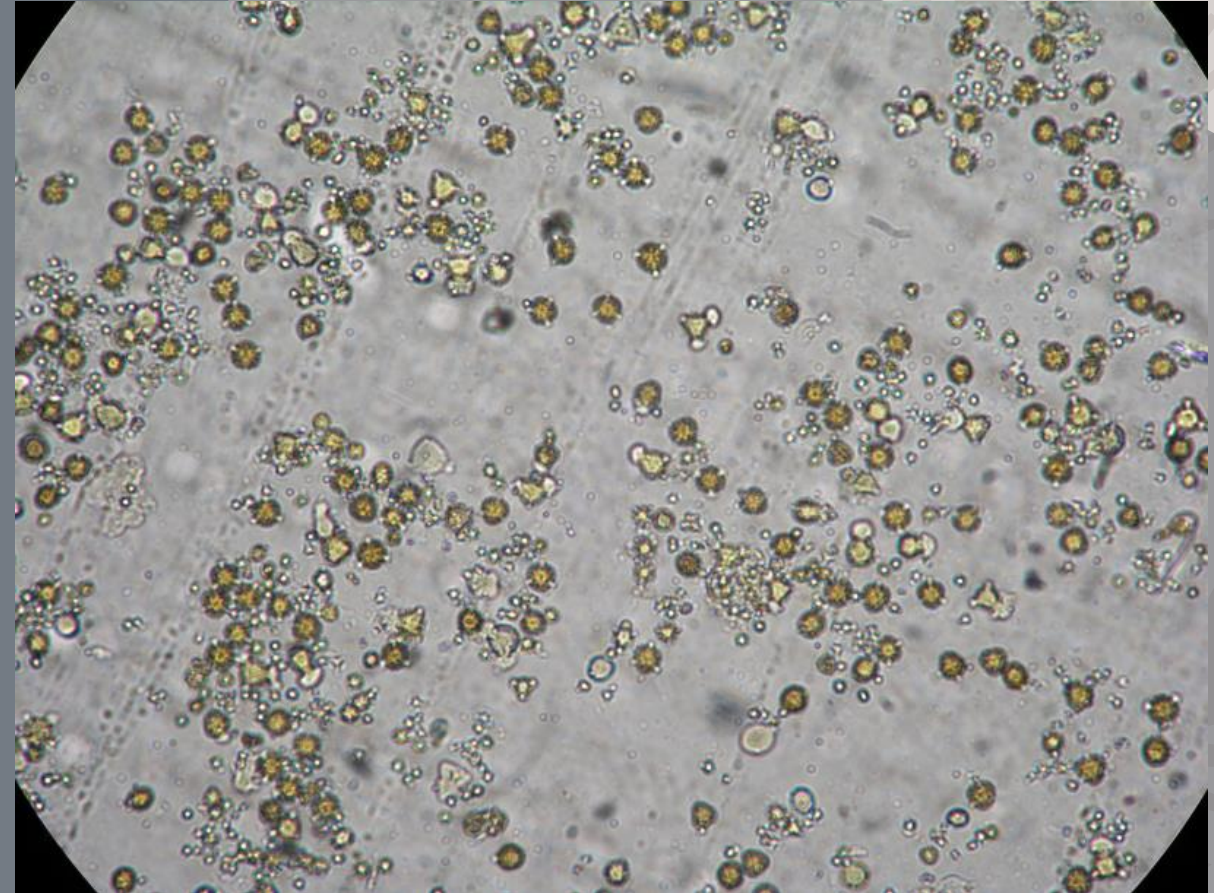
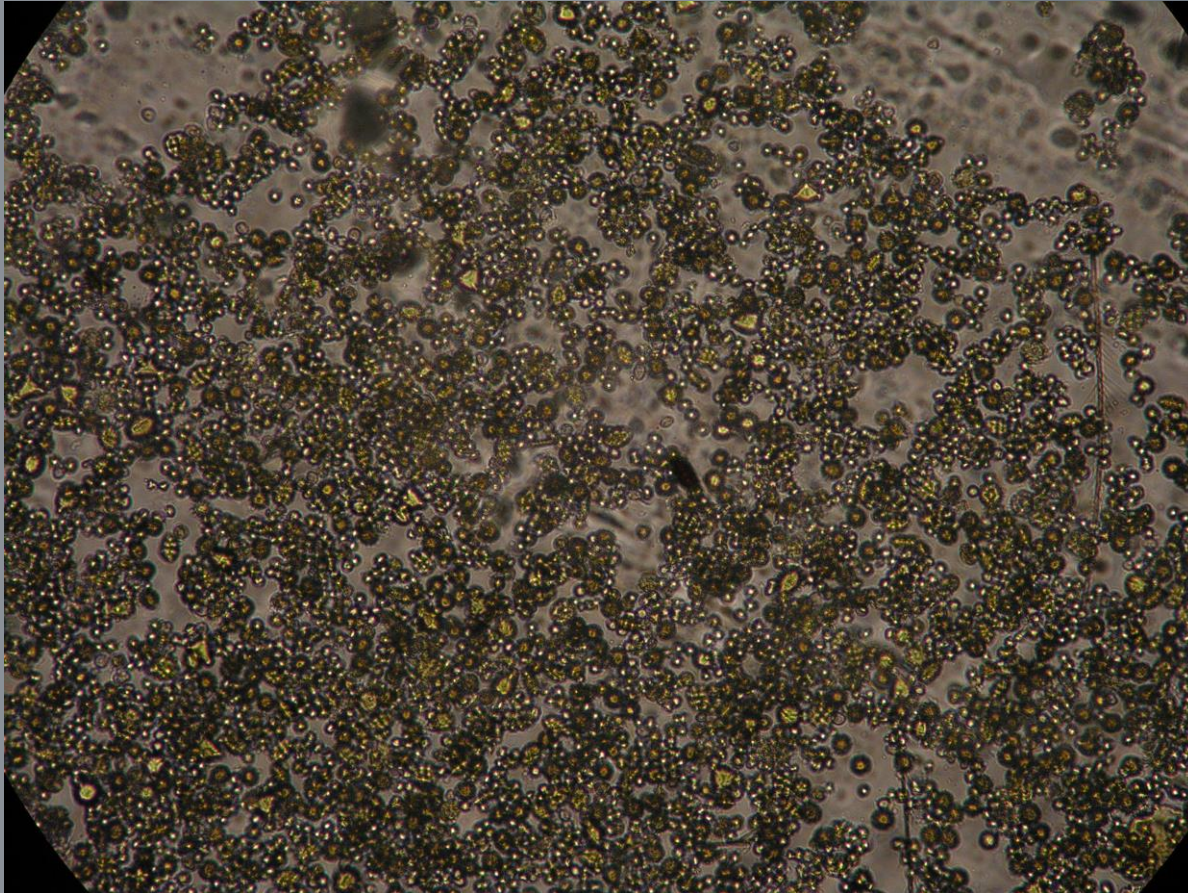
# Technology and Laboratory analysis

## Methods to analyze pollen in honey

8<sup>th</sup> November 2023

Madhu Dhuniya

# Looking under the microscope





# Pollen in honey

- Raw honey may contain small amounts of pollen grains.
- Honeybees consume processed nectar (honey) and pollen (bee bread), both of which are provided by flowers.
- Nectar, which bees convert to honey, serves as the primary source of carbohydrates for the bees.
- Pollen source of protein, and provides fats/lipids, minerals, and vitamins. The protein that pollen provides is vital to brood production and the development of young bees.



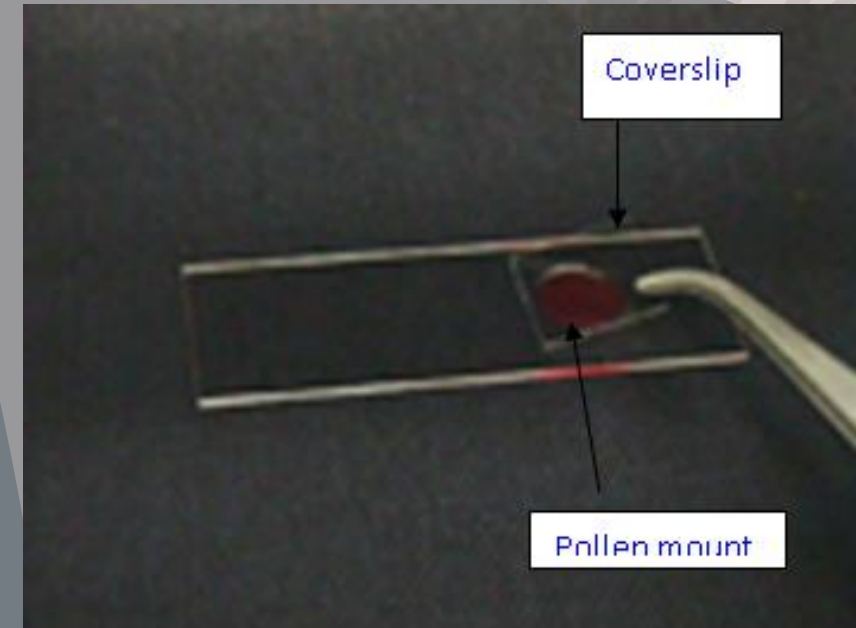
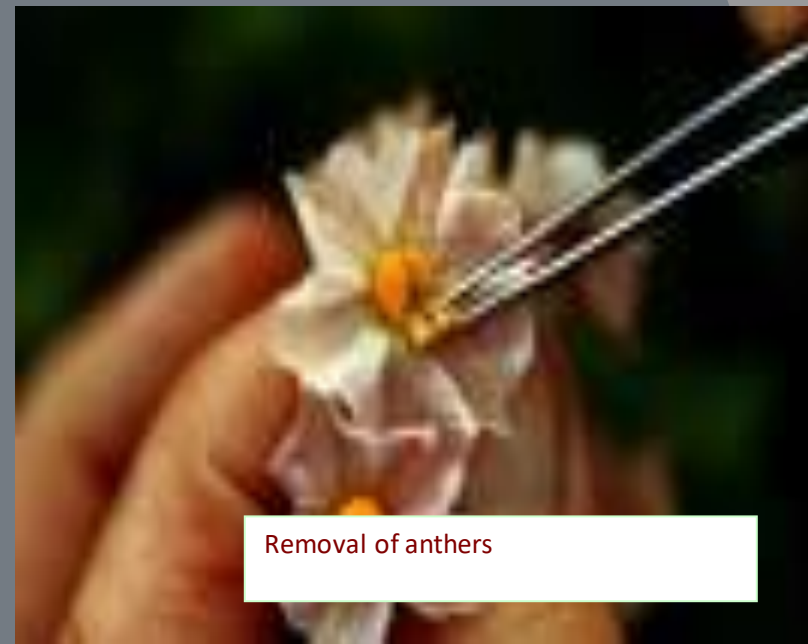






# How do we identify the pollen in honey?

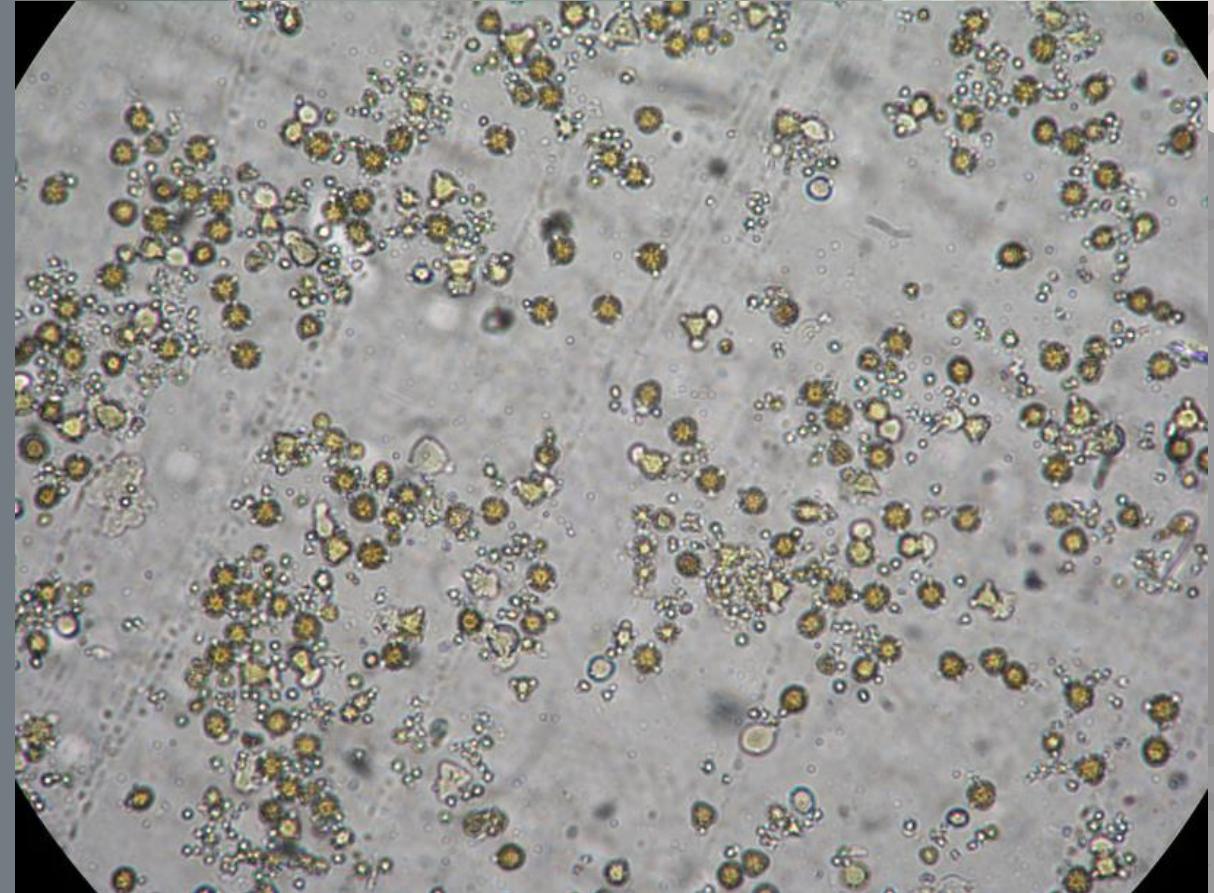
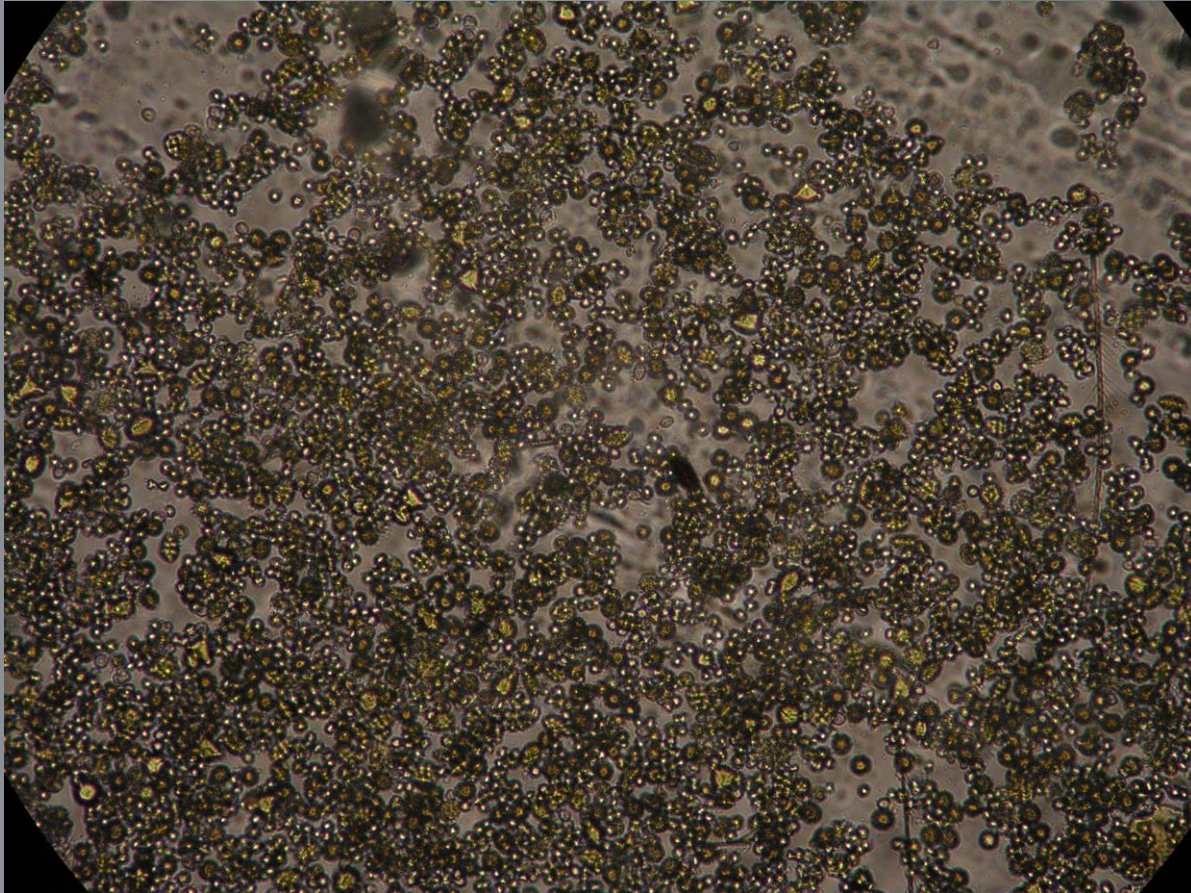
CREATING REFERENCE SLIDES FROM POLLEN FROM FLOWER



ACETOLYSIS METHOD



# Looking under the microscope

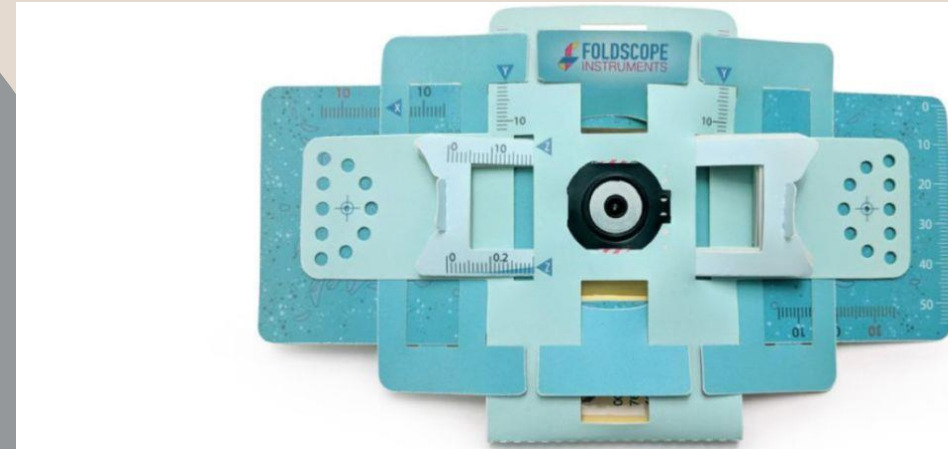








# How do we see them?





# Counting...



cover slip 22 x 22 mm  
(O = 1 field of vision)

- 1<sup>st</sup> line: count 100 pollen grains  
→ (6<sup>th</sup> line for additional counting to 600)
- 2<sup>nd</sup> line: for counting to 200  
→ (7<sup>th</sup> line for additional counting to 700)
- 3<sup>rd</sup> line: for counting to 300  
→ (8<sup>th</sup> line for additional counting to 800)
- 4<sup>th</sup> line: for counting to 400  
→ (9<sup>th</sup> line for additional counting to 900)
- 5<sup>th</sup> line: for counting to 500  
→ (10<sup>h</sup> line for additional counting to 1000)



# Pollen spectrum

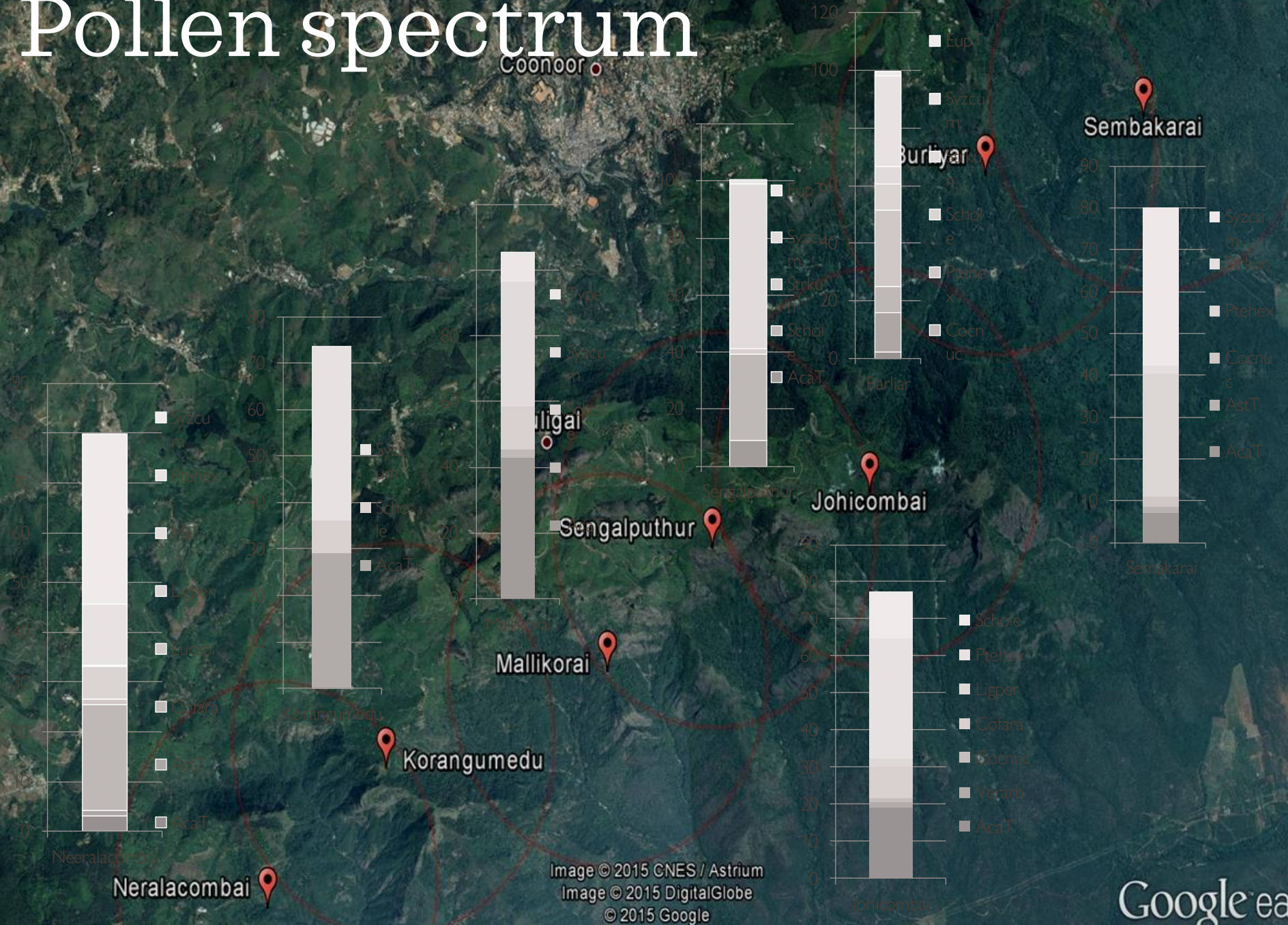


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# thank you

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