



# Topcon Aquila Compact SEM & Optical Microscope

Demo for  
Ed Haller  
August 2011

# Aquila Highlights



- Compact SEM integrated with optical microscope
- 30x optical microscope
- Optical mapping and imaging in color
- SEM magnification 50,000x
- Acceleration voltage 1kV to 20kV
- Fully motorized 5 axis stage
- Fast and easy to use
- Real analytical capability in a small footprint.



# Demo Sample Conditions

- The samples were freshly collected and mounted onto a stub just prior to the demo.
- No special preparation was used
- Mounting medium – carbon tape
- All samples were uncoated
- Samples on stub:
  - Bee
  - Flower
  - Leaf
  - Sand comprised of miniature sea shells



# Optical and SEM Mapping

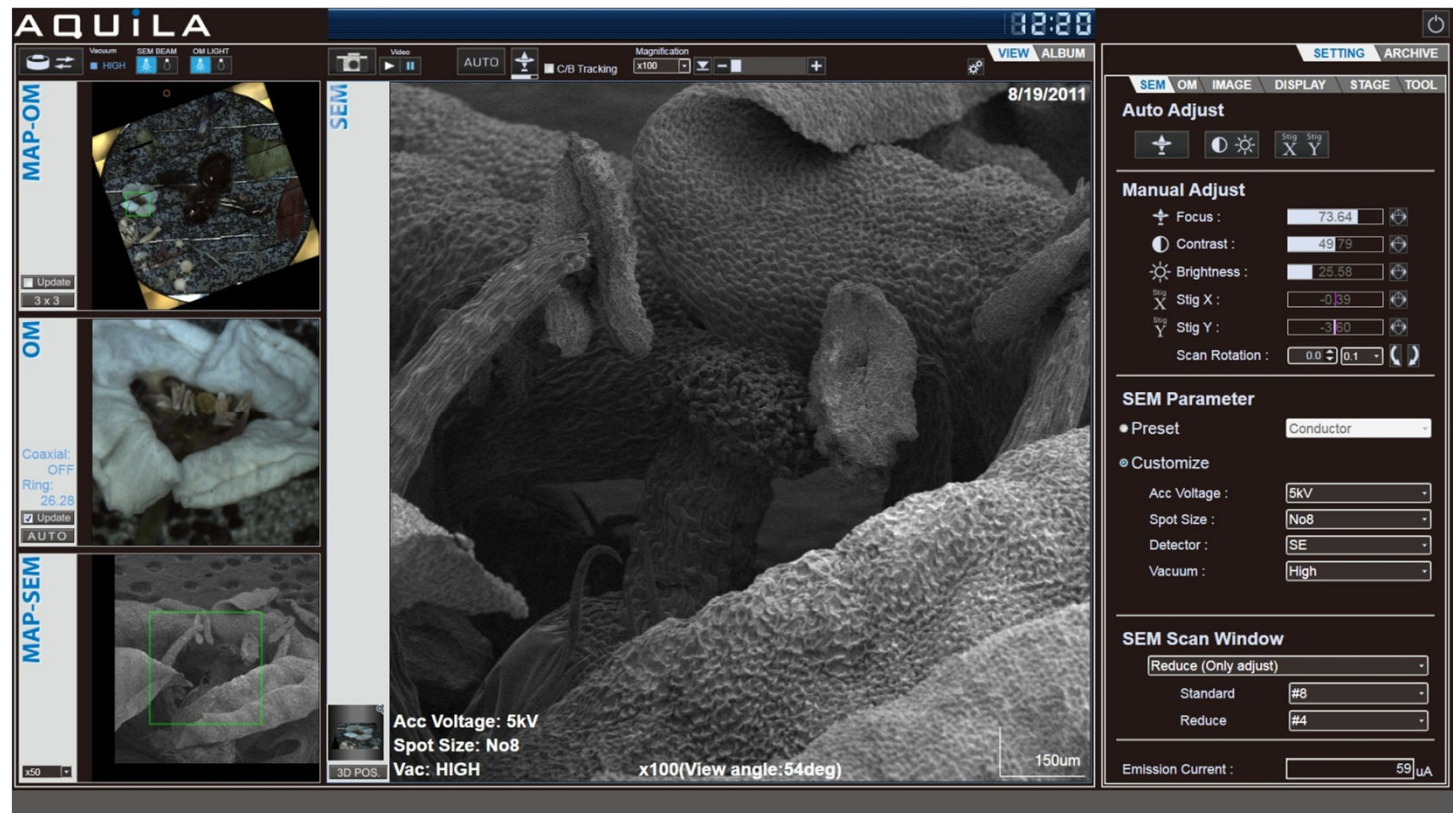
Navigation map



Optical image



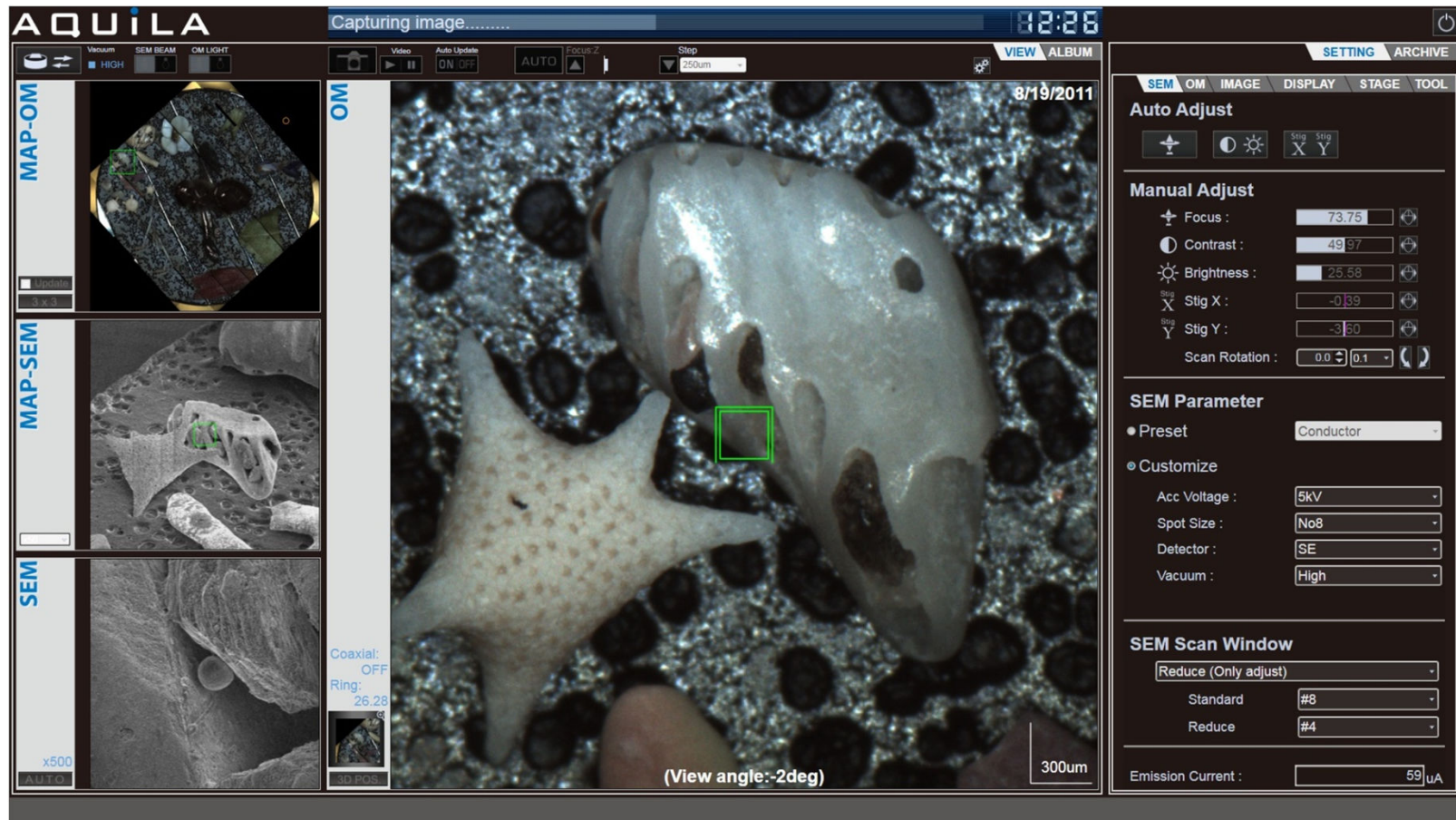
SEM map



The maps on the left help you navigate and know your location on the sample at all times



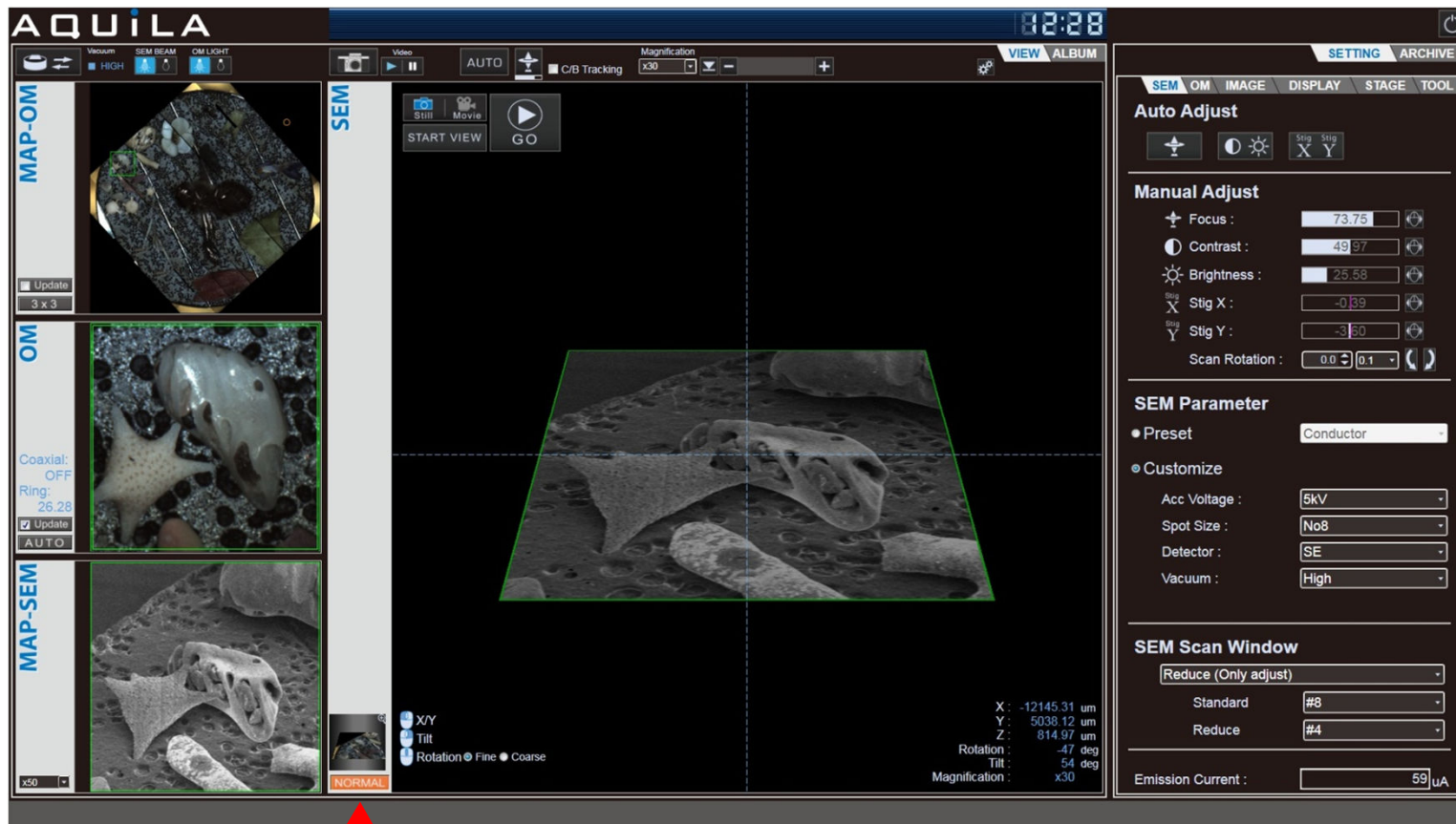
# Optical Microscope – Understand More



The 30x optical microscope gives you a better perspective of what you are looking at, providing a better understanding of your sample.



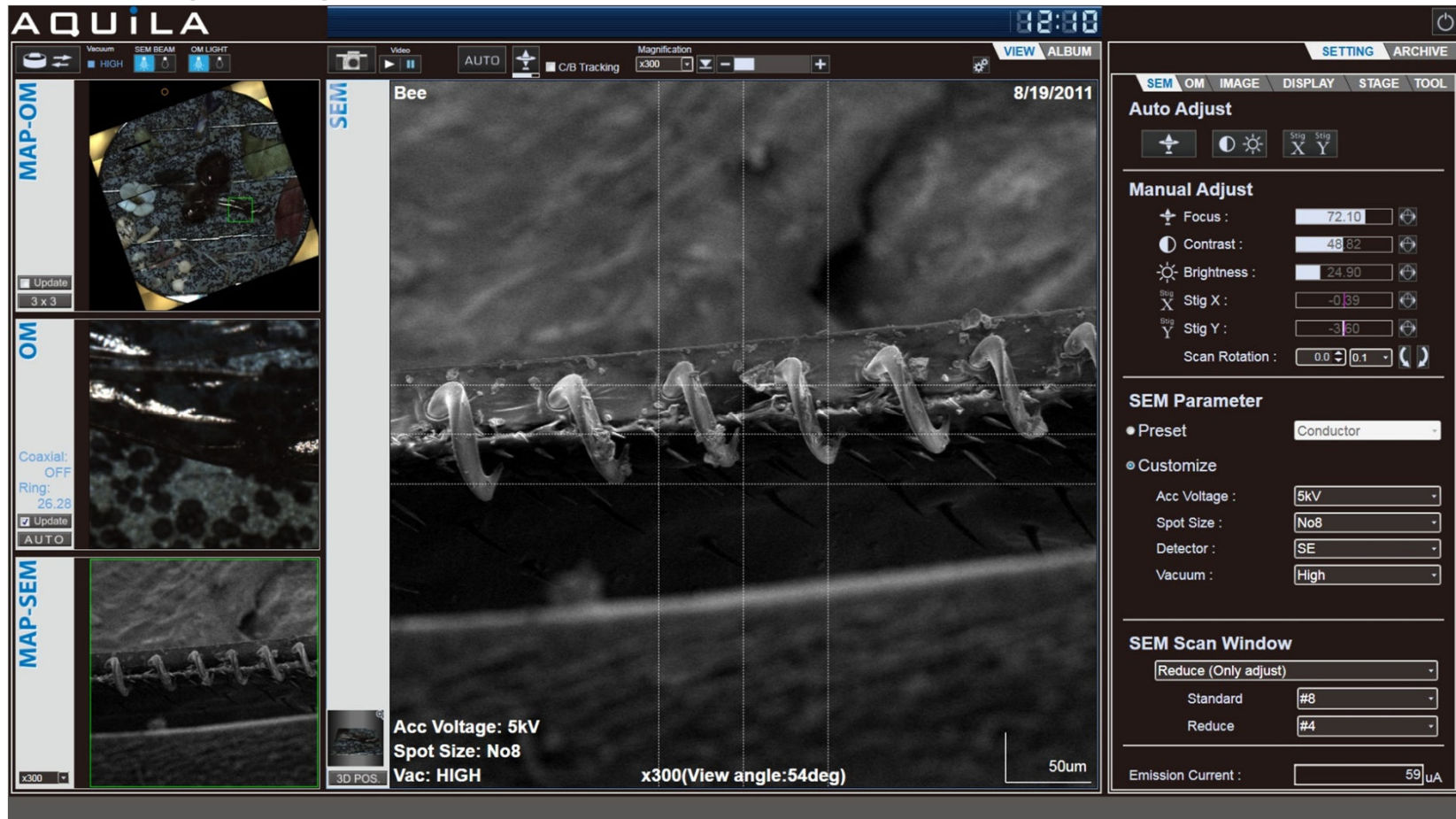
# Motorized Navigation and Positioning



Click the 3D position button, choose your rotation and tilt, then hit go to make the adjustment automatically. The stage is fully eucentric and keeps the area of interest in the center field of view after positioning.



# Display Controls – User Selected



Users can select from a variety of tools displayed on the active measurement screen; grids, micron marker, SEM parameters, etc. Grids and micron marker are automatically adjusted when tilt and rotation are used.



# Image Archive – Processing



In the image archive you can quantify and understand your images; measure sizes, check your image parameters, annotate, and export. Measurements are automatically compensated for tilt to ensure you are getting the correct results.

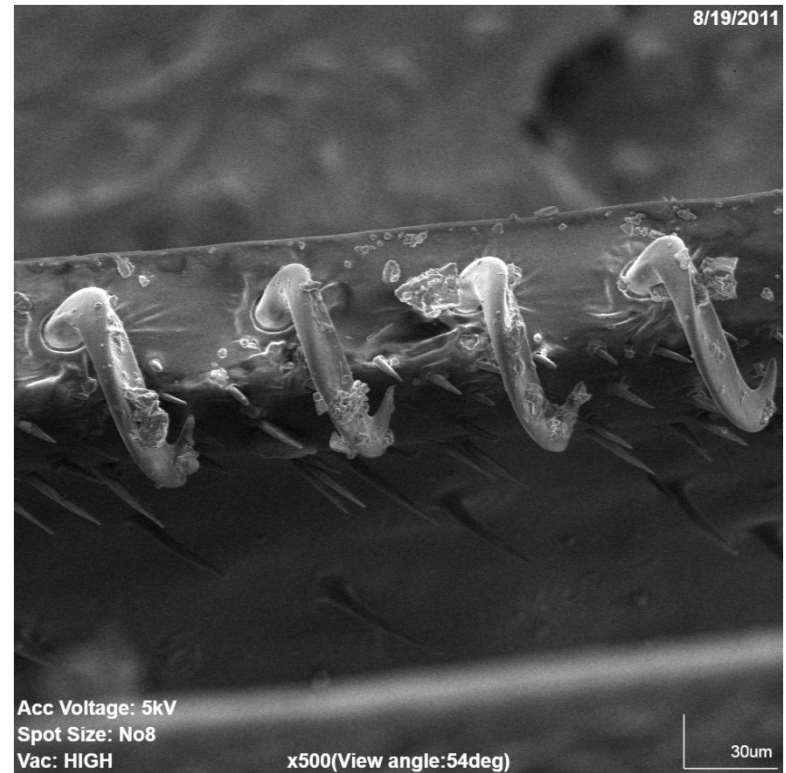
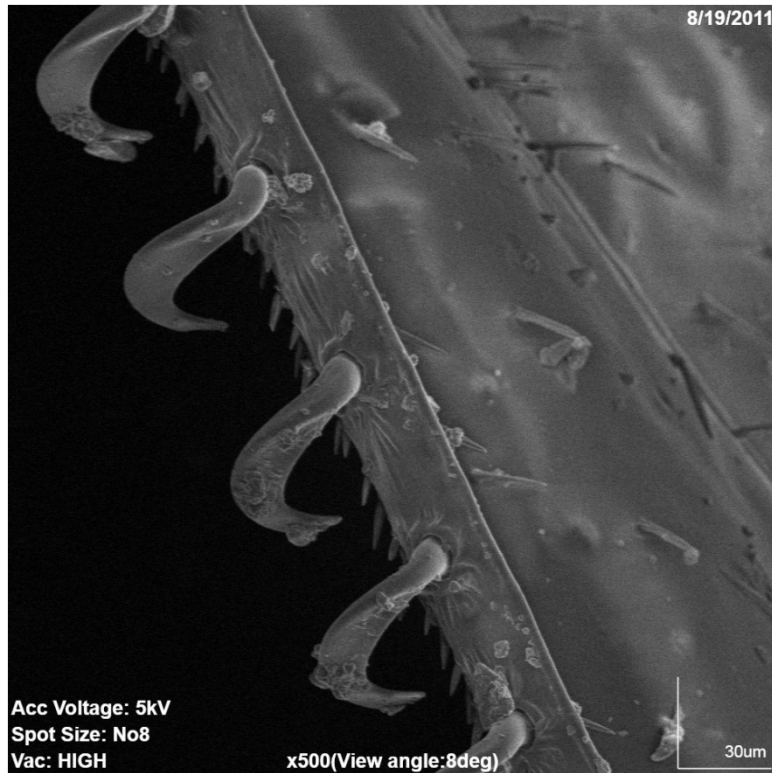




# Parasites on a Bee's Wing



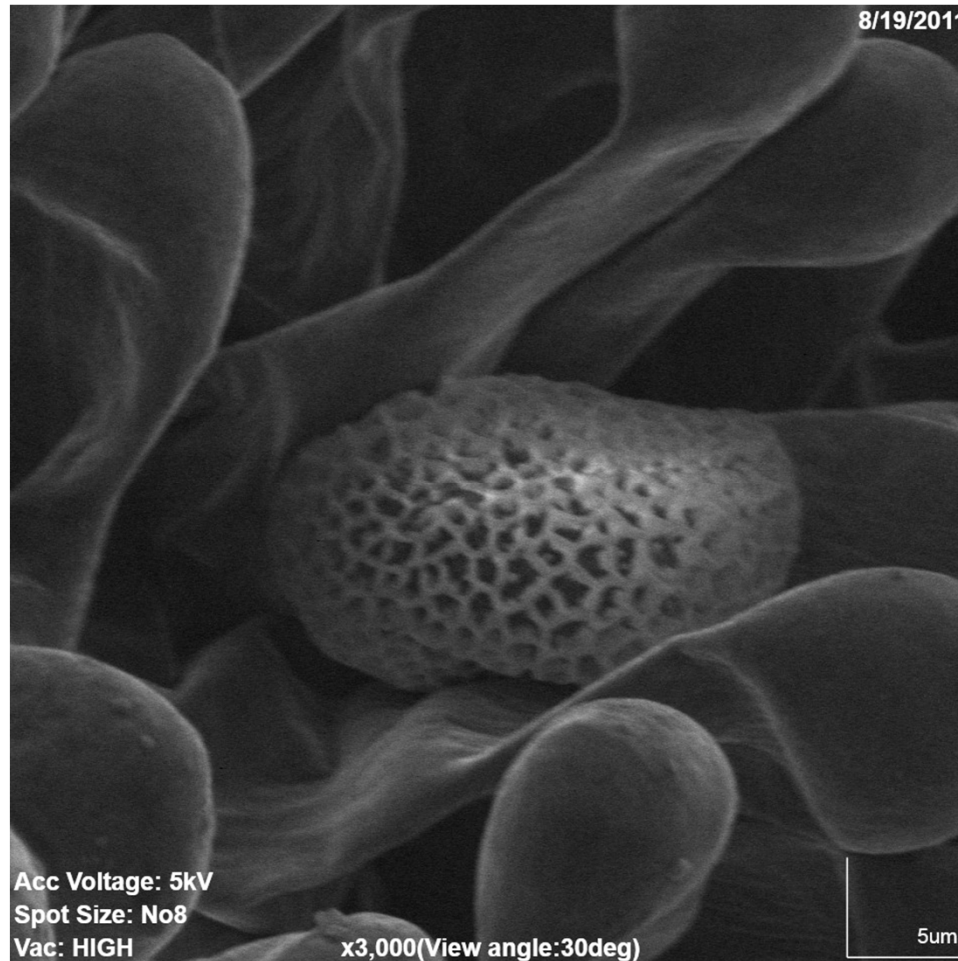
# Edge of a Bee's Wing



Viewed at different tilt and rotation parameters



# Pollen Grain on a Flower



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