

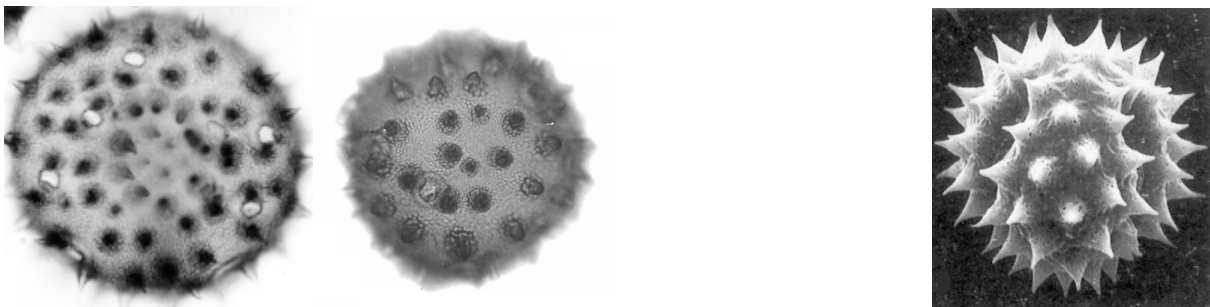
Pollen Identification Tips:

- 1) Pollen identification can be very challenging and requires a high degree of spatial thinking and interpretation. Student must consider:
 - a. how 3D objects will look in 2D
 - b. how to interpret viewing grains from different orientations.
 - c. how using the focusing knob changes the focal plane (clearest slice) of the 3D object in view

Example - pollen grains with spiky/echinate surface texture will appear to have 'spotted' texture when viewed under the 2D vision of the microscope)

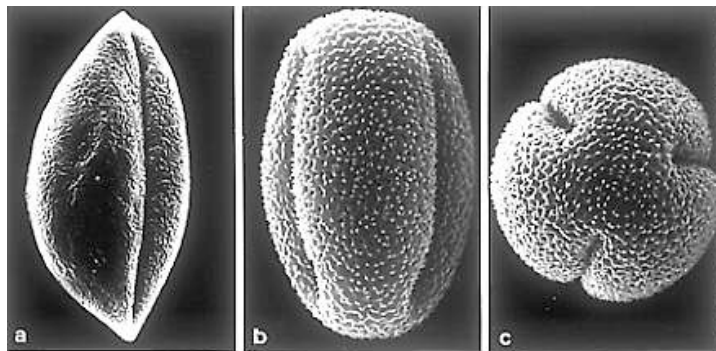
Example of Echinate texture under microscope

Students see this → but must interpret it → to be this

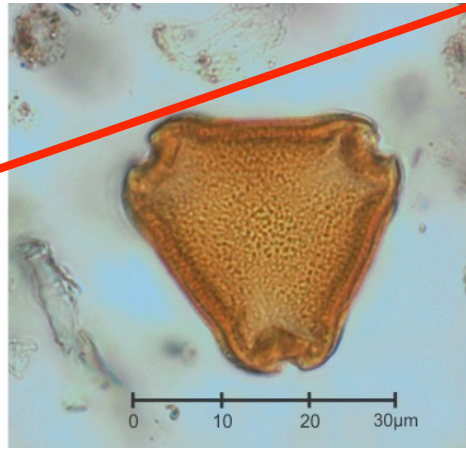
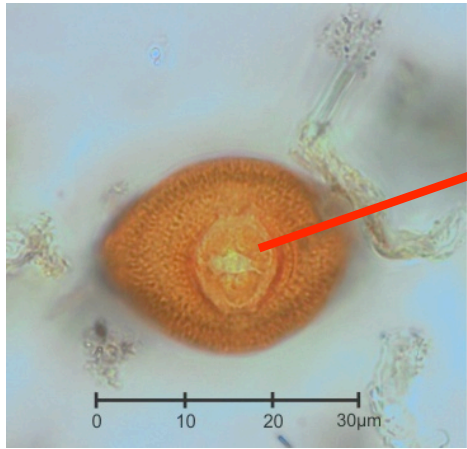


- 2) It is also important for students to understand the orientation of the pollen grains under examination. Pores can easily be misinterpreted as colpi/furrows if you do not realize the grain is in a polar view.

Example – Colpi (furrowed) Pollen grain from Equatorial views (a,b) and Polar view (c).

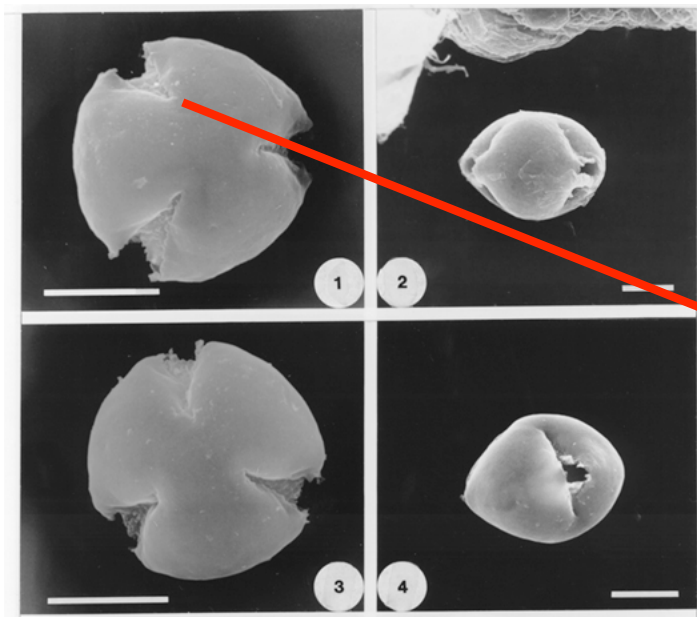


Example – Pori (with pores) Pollen grain from Equatorial view (left) and Polar view (right)



Notice that pores can sometime appear to be protruding from the grain rather than intruding. This is an optical illusion from microscopy.

Example – Colporate pollen grain (has both pores and furrows). Polar view (1,3) Equatorial view (2, 4).



Notice the rounded pore opening AND V-shaped furrow groove which is indicative of a pore within a furrow (COLPORATE)