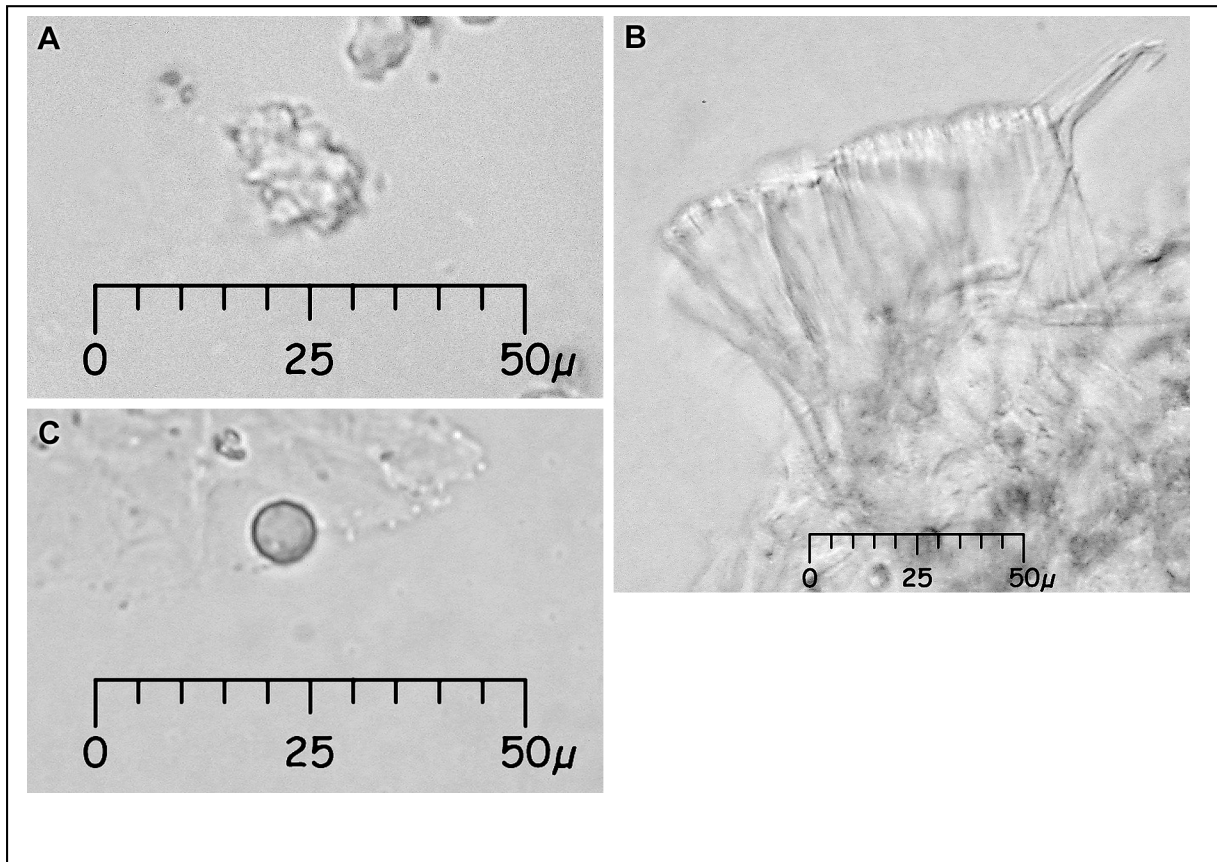


Plate 1 Bixaceae



a. 22IBd Epidermal non-quadrilateral, seed or fruit epidermis. Irregularly shaped, small rugulose projections on surface. Diagnostic level: under investigation; perhaps generalized fruit/seed.

b. 150I Fiber bundles. Groupings of long, small diameter fibers, packed closely in off-set ranks. Diagnostic level: fruit/seed

c. 80IAa1 Sphere, smooth, small. Well-silicified, opaque; usually 10 microns diameter or smaller; also produced in *Canna*, Chrysobalanaceae. Diagnostic level: under investigation

Plate 2 Bombacaceae

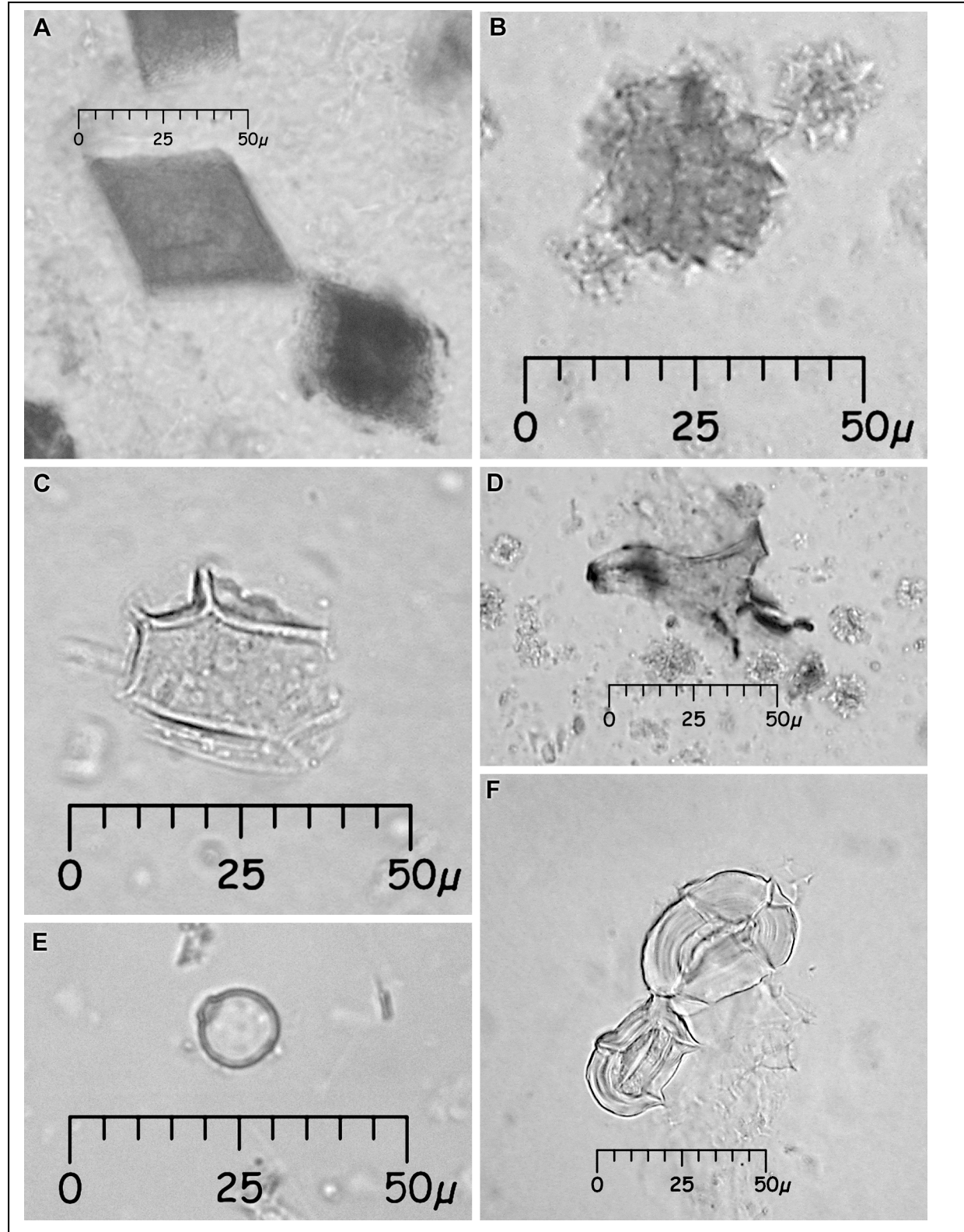


Plate 2 Bombacaceae captions:

- a. 100Va Crystalline body, tabular. Granular surfaces; acute and obtuse angles on edges. Diagnostic level: under investigation.
- b. 100IA Crystalline bodies, cystoliths. Spherical in shape; no visible surface; covered in angular projections; considerable size variation. Diagnostic level: generalized arboreal
- c. 40IVBa201c Hair base. Rounded cells; large central cell with smaller surrounding epidermal cells; one row attached cells. Diagnostic level: genus
- d. 110 Sclereid. Sclereids occur widely in woody plants. Note distinctive central ridge that identifies sclereids. Diagnostic level: generalized arboreal
- e. 80ICa1 Sphere, smooth nodular. Spheroidal body, highly variable shape; nodular projections; projections irregularly shaped and spaced. Size range very small to large (8 - 29 microns). Category currently overlaps with Marantaceae nodular spheres. Diagnostic level: Marantaceae/Bombacaceae. Families may be distinguishable.
- f. 120IIA Stomate with four very large, full (turgid) subsidiary cells outside the guard cells. A small band or spine wraps around guard cells. Diagnostic level: family

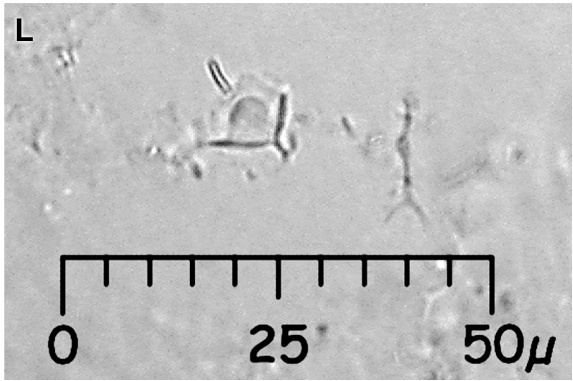
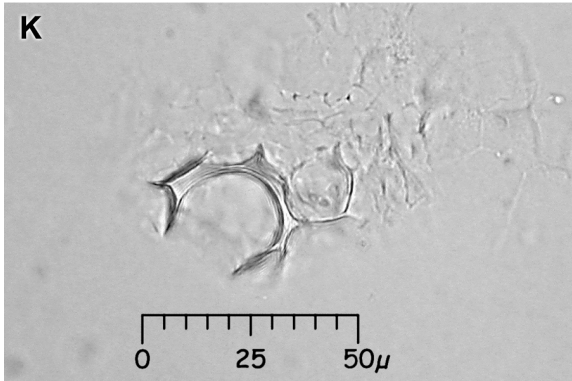
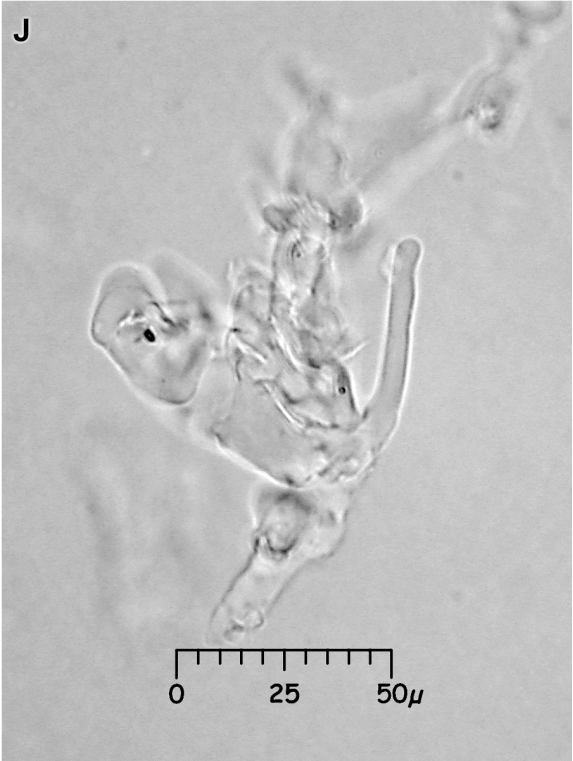
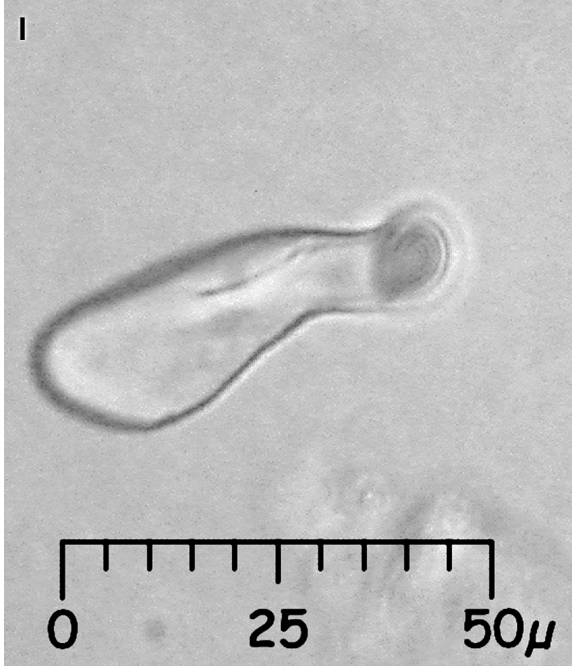
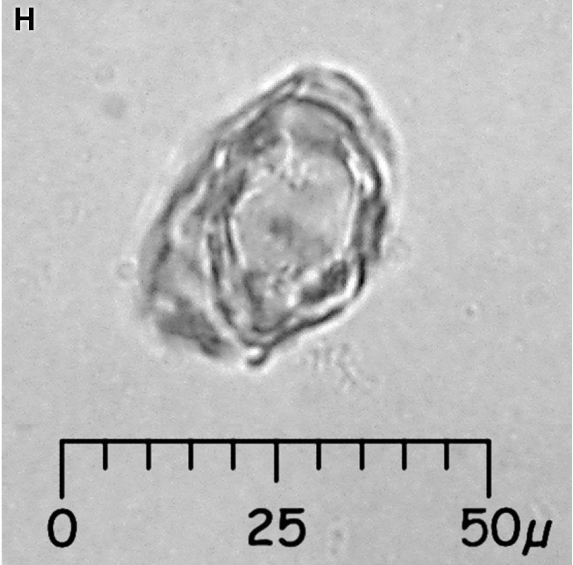
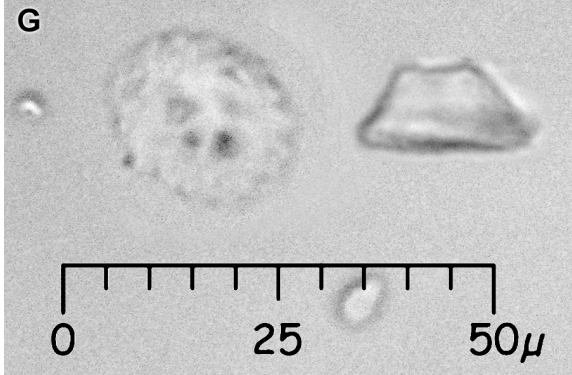


Plate 2 Bombacaceae, continued

Plate 2 Bombacaceae captions, continued

g. 80IIIB Conical (hat-shaped) body. Distinct dome on top is rugulose to nodular (convex side); rugulose on bottom (concave side); size range 3-14 microns. First identified in Marantaceae
Diagnostic level: mixed Marantaceae/Bombacaceae. Families may be distinguishable.

h. 80IFb202 Hemisphere with irregular concavities (facets), large. Hemisphere often has stipled surface. Diagnostic level: family

i. 40IIIAa202Ba2 Hair, unicellular. Short to medium length; curving; no interior space; blunt tip; smooth surface; simple base. Note flat tip of hair. Diagnostic level: species

j. 40IIIAb200Ab2 Hair, unicellular, sometimes connected to base. Simple base is a separate cell. Hair: long, curved; unarmed, smooth surface; no interior space; tip smooth and blunt. Diagnostic level: species

k. 40IVAA300 Hair cell base with radiating appendages. Discernable center is smoothly rounded on surface; polygonal rim/outline; short, regular appendages surround the angular rim.
Diagnostic level: genus

l. 20VD Triangular-cupped epidermal body, non-quadrilateral. Round or triangular, depending on view; round edges are faint, cuplike triangular edges more heavily silicified; originates as part of 120IIA stomata. Notice y-shaped triangular cup around interior rounded part of body.
Diagnostic level: family

Plate 2 Bombacaceae, continued

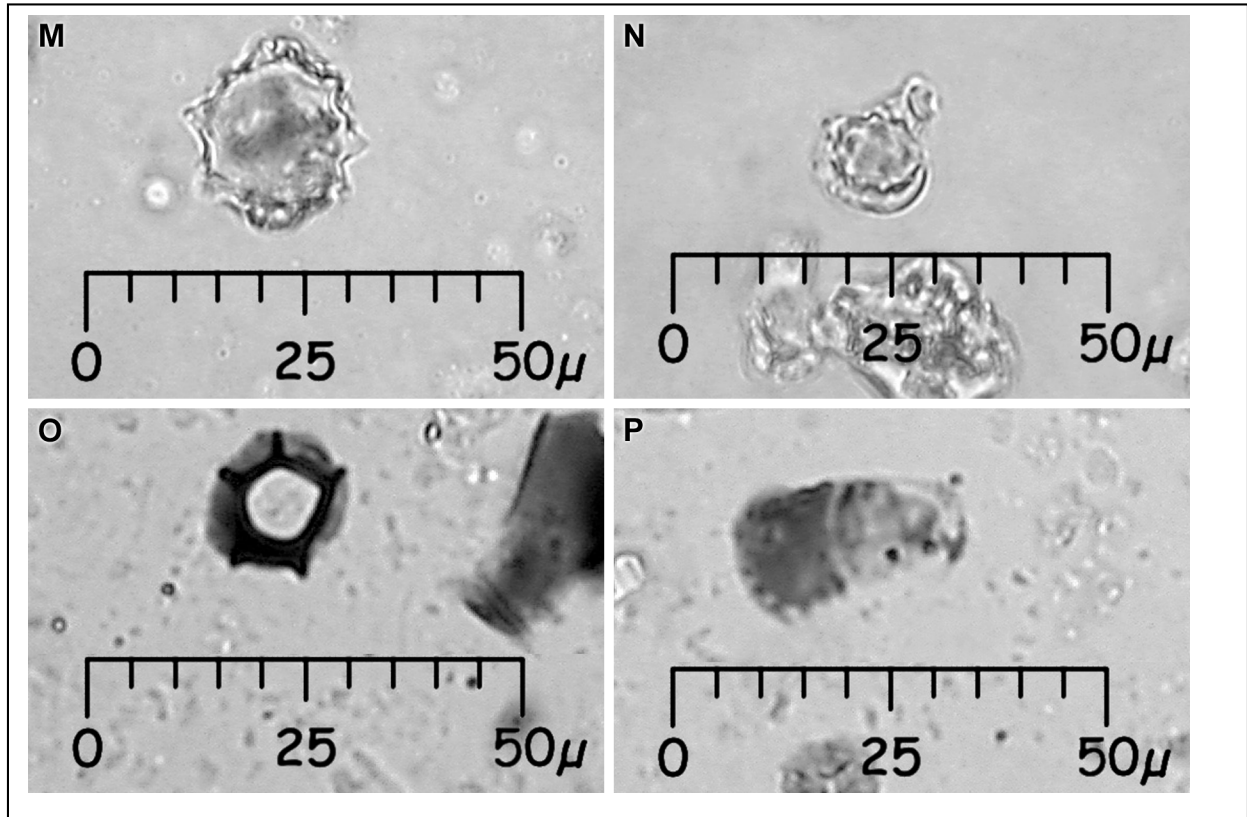


Plate 2 Bombacaceae captions, continued

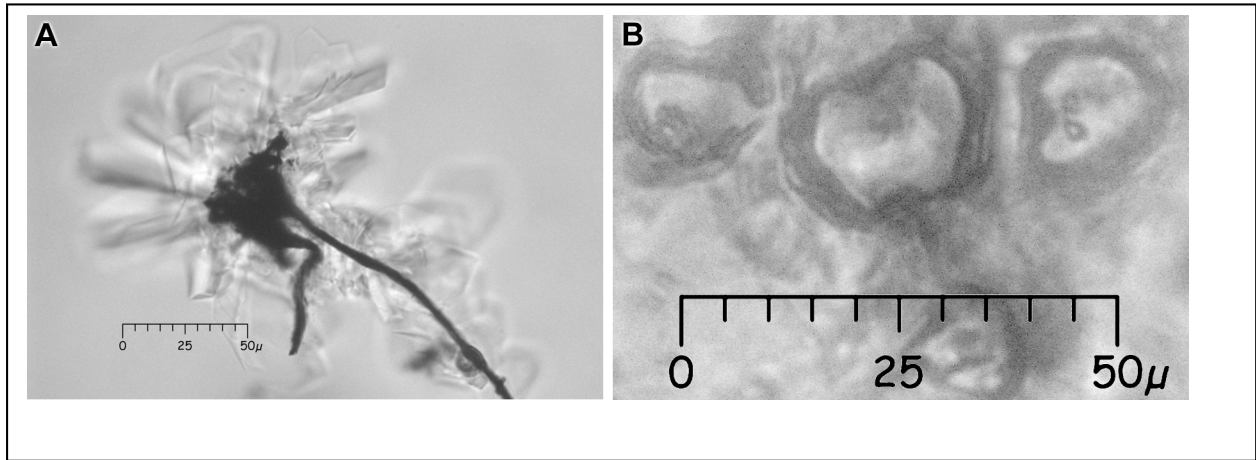
m. 80ICc Sphere, nodular, nodule surfaces are both smooth and ruminated (roughened, chewed). Nodule tip is obtuse, sides uneven; nodules regularly arranged, almost spirally ranked. Also occurs in the Zingiberaceae Diagnostic level: mixed, Zingiberaceae, Bombacaceae. There are subtle differences in the smoothness and abundance of nodules between the two families.

n. 40IIBc3 Short, small trichome. Single outline; non-armed; smooth surface; uneven conical shape with small, rounded base; interior space with spherical, verrucose cystolith inside. Diagnostic level: genus

o. 40IVAA201Aa Hair cell base. Radiating appendages (5-6); appendages are long, regular, acute; appendages plus rim of base are very dark, set upon a slightly lighter circular base of tissue. Diagnostic level: genus

p. 40IIIBa203 Multicellular hairs, segmented. Tip blunt and broad, rarely pointed; overall hair shortened and broad; very broad obtuse tip and overall broad, short nature of hair distinguishes type. Diagnostic level: genus

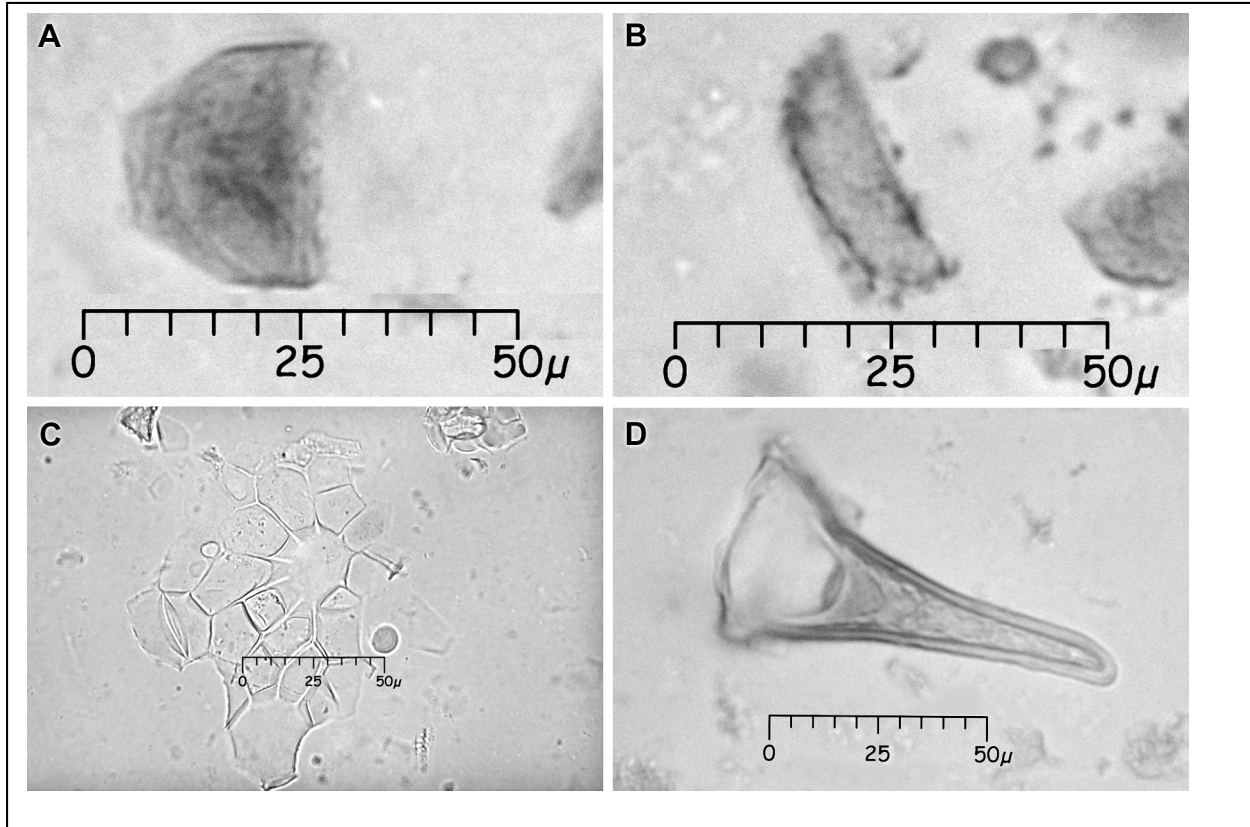
Plate 3 Malvaceae



a. 40IIIb Hair, multicellular, radiating (stellate). May have cystolith base. Diagnostic level: under investigation; possibly Malvaceae family-level.

b. 160II Secretory cell. Center is variable in shape. Diagnostic level: under investigation; possible *Gossypium* diagnostic.

Plate 4 Sterculiaceae



a. 100VI Crystalline body, blocky. Granular surfaces; not tabular when rolled. Diagnostic level: under investigation.

b. 100Vb Crystalline body, tabular. Granular surfaces; edges curved or right-angled. Diagnostic level: under investigation.

c. 40IVAA202 Hair base, long radiating appendages. Lightly silicified surrounding cells; large open circular center. First described by C. Veintimilla, 1991. Diagnostic level: family

d. 40IIIAb200Bd Hair, unicellular, long. Non-armed; base occurs as part of same cell; attachment of base to hair is rounded. Diagnostic level: genus.