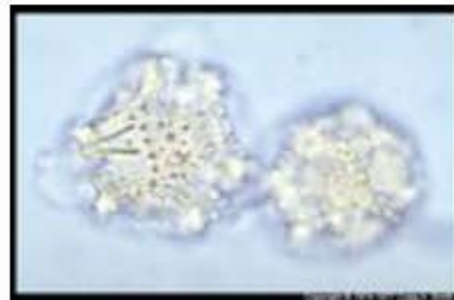
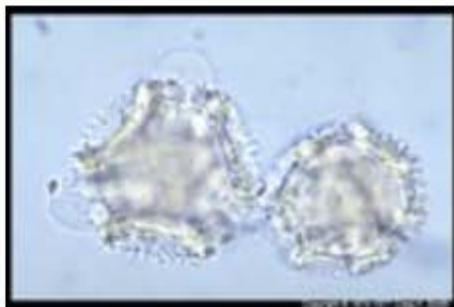
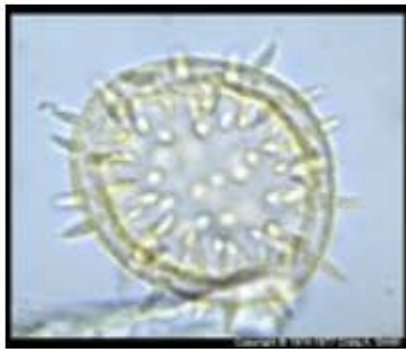
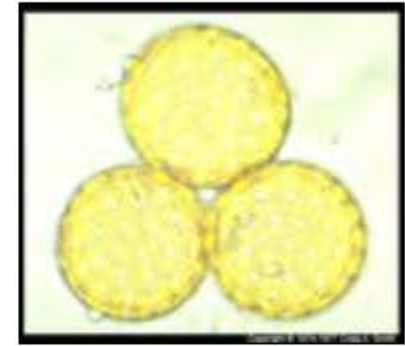
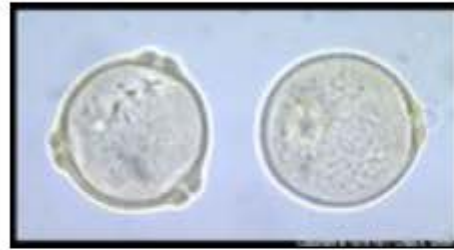
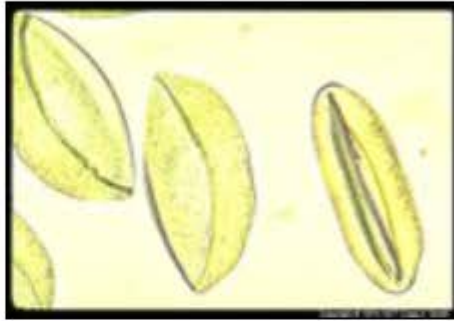


Palynology 400 micrographs

Palynology 400 micrographs

small | [medium](#)



Liquidambar styraciflua L. (from Nannandilaceae; Amer. "Sweet Gum")

PVA x2000 ($\delta \approx 35 \mu$)

- perisporate (porate)

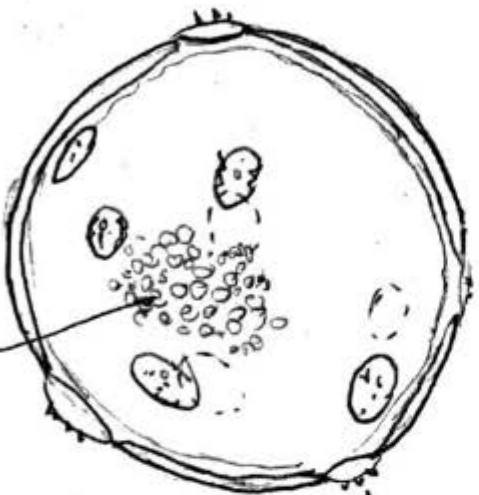
12-20 pores

pore membrane w/

exinose granules

- pore size 4.5 - 8.5 μ

- foveolate exine



foveolate

Order Gentianales
fam. Rubiaceae (Coffee, Madder, Bedstraw)

Galium verum (Golden Ladies Bedstraw)
Stockholm 66



PVA x 2000

6-lobed
exim: foreo late

± oblate



2) subfam Tubuliflorae tribe Anthemidae (Chrysanthem. tribe)

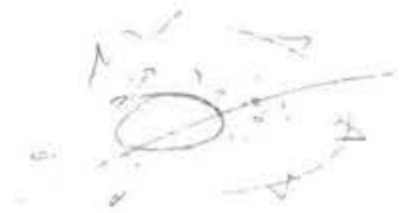
Chrysanthemum carinatum

Steckhalm no. 15



PVA x1000

colporate
± short colpus
thick becculate exine
3-4 μ spine 6-8 μ apart
granulate bottom spines



Artemisia vulgaris (Wormwood, Mugwort)

Steckhalm 7



PVA x1000

much reduced echinate oris (as w/ anemospity)

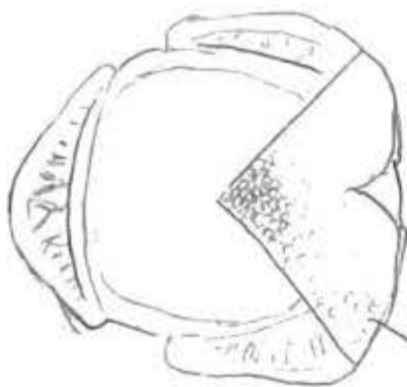
tricolporate
w/ well developed colpus
complex sporoderm
w/ becculate resine



3) subfamily Tubuliflorae tribe Cynareae (Thistle tribe)

Centaurea cyanus (Cornflower, Bachelor's Buttons)

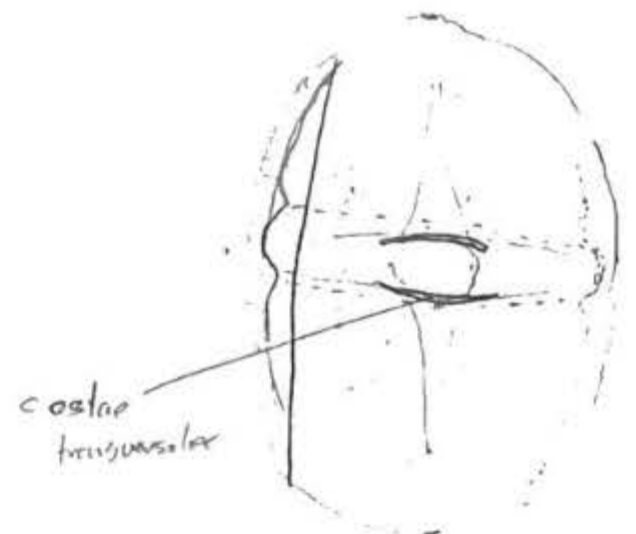
Steckhalm 14



PVA x1000

shape: planopentulate

"negative reticulum"
under exine w/
reduced spines
(n Artemisia)



costae
transversal

x1000

Order Asterales

fam. Asteraceae (Compositae)

1) subfamily Liguliflorae; tribe Cichorieae (Chicory)

Taraxacum vulgare (Dandelion)

Stockholm 45



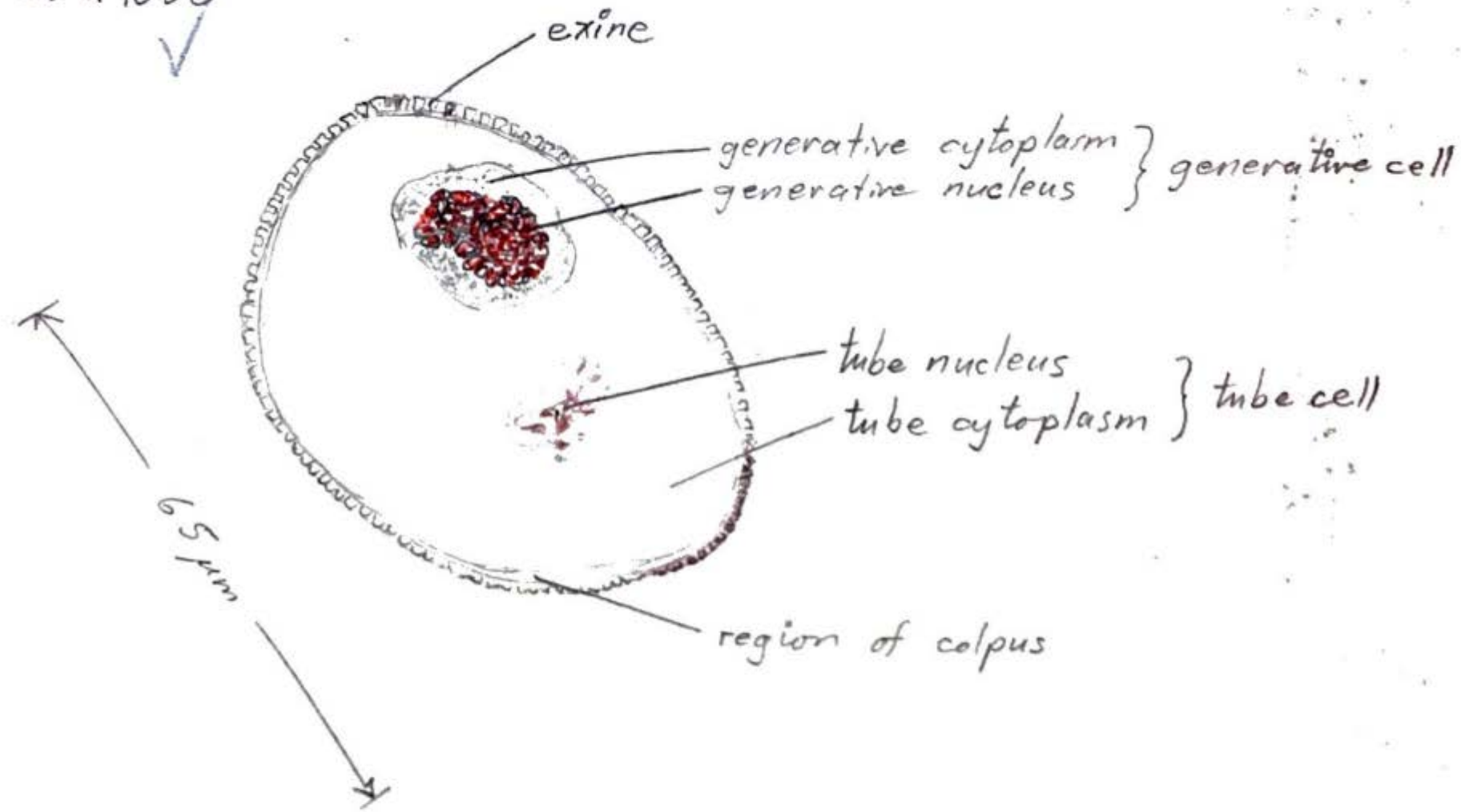
echinolate
ca 15 lacunae w/ 4-6 μ muri
numerous small (2-3 μ) spines


PVA x1000

Sept. 14

Lilium: mature anther's pollen grain fixed, sectioned, stained

ca x 1000
✓

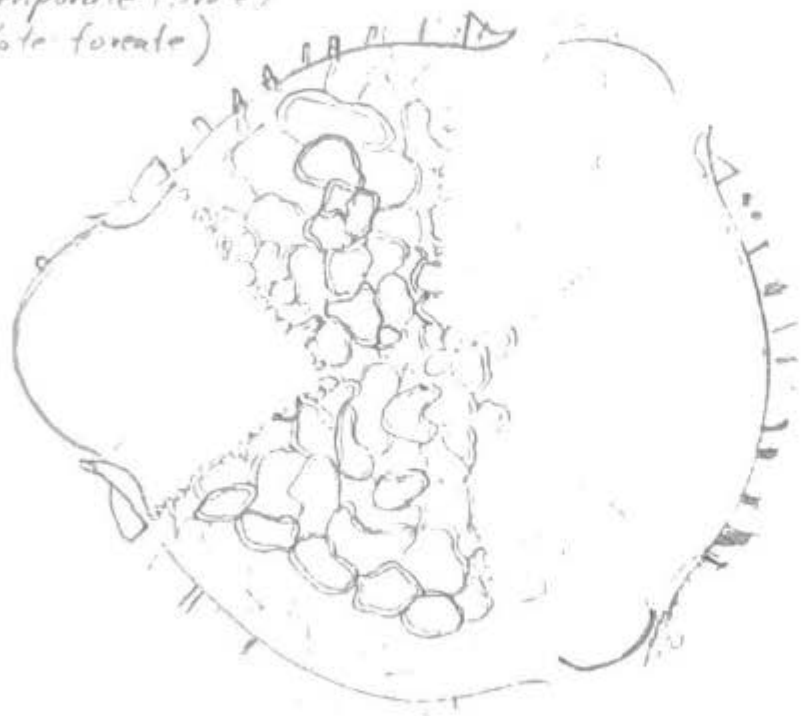


 detail of reticulate structure of exine

Bucklandia populnea (Himalayam, fam. Hamamelidaceae)

MA, Griffiths & Hawkinson # 4921

Called to Liquidambar, yet
differs markedly in apertures,
exine (Liq pollen: proporate (binate)
foveolate foveate)



polar view
ca x 2000

- oblate ($35 \mu D \times 31 \mu L$)
- coarse reticulate exine
(lumina ca 4.5μ)
some granules
- tricolporoid → tricolporate

ca equatorial

- w/ ± ellipsoid poroid → pore
- furrow w/ margin and
± granulate membranes

fam. Caesalpinaceae

Cercis canadensis (N. Amer. "Red bud")

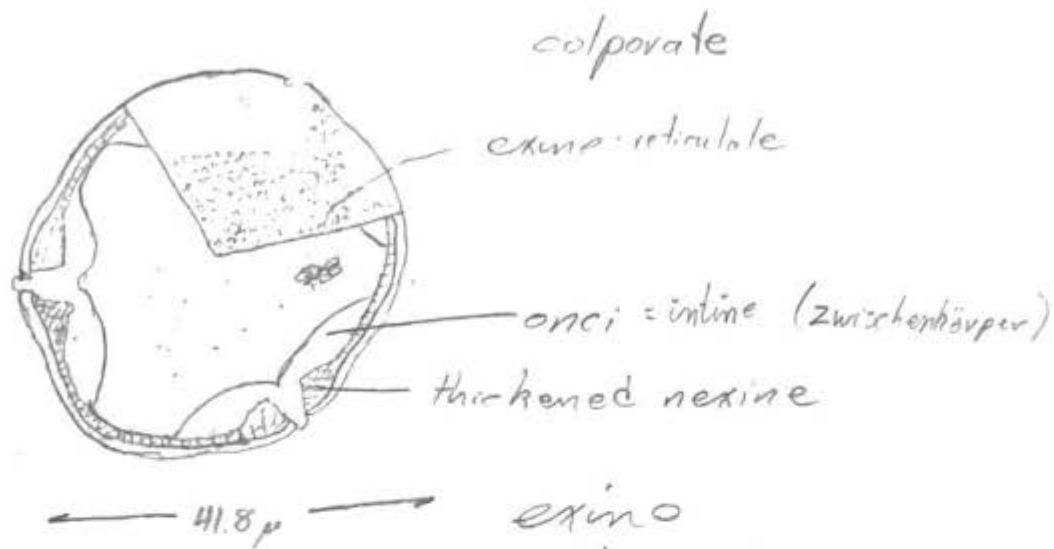


- tricolporate
- delicate foveation
- diam 20-27 μ
(ca 25 μ)

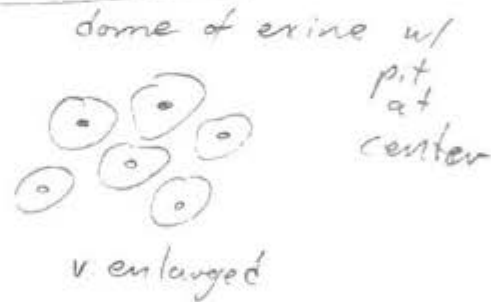
PVA 11000

Order Malvales
fam. Tiliaceae

Tilia cordata (European little-leaf Linden)
Stockholm 53



exine
Erdtman's
strobiculate



P/A x 1000
equatorial

Nov. 23 demonstration

Tilia heterophylla (American White Basswood; Linden)
MA 6/30/70

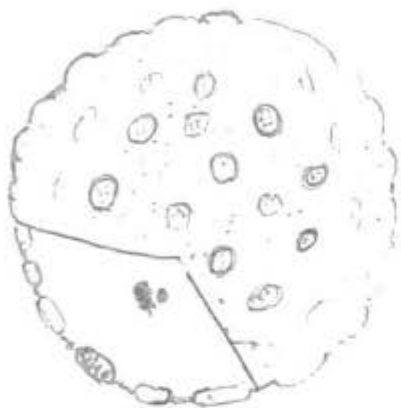


P/A

- oncate, tricolporate
- foveate (designated scrobiculate by Erdtman)
- ± sub-planaperturate (inter subangular amb)
- diam. ca 35-42 μm

Order Caryophyllales
fam Chenopodiaceae

Chenopodium album (Lamb's Quarters)
Stockholm 83



PIA x 1000

- periporate } w/ exine fragments upon
- operculate }
- exine scabrate
"dimpled" grain ball
- isospheroidal continues w/
struct. bacula
- size ca 33 μ

$$\bar{x} \left[\begin{array}{l} C = 5.87 \pm 2.02 \quad n=9 \\ D = 36.1 \end{array} \right]$$

$$C/D = .163$$

$$\# \text{ pores} = \text{ca } 135$$

another, smaller, grain

$$C = 5.51 \quad C/D = .177$$

$$D = 31.16$$

$$\# \text{ pore} = \text{ca } 120$$

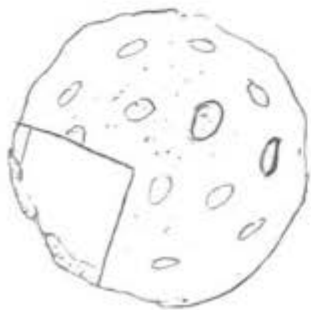
another, still smaller grain

$$C = 5.04 \quad C/D = .170$$

$$D = 29.64$$

$$\# \text{ pores ca } 125$$

Salsola kali var. tenuifolia ("Russian Thistle")



PIA x 1000

$$C = 7.35 \mu \quad C/D = .2613$$

$$D = 28.12 \mu \quad \# \text{ pores ca } 55$$

Order Sapindales
fam. Aceraceae (Maples)

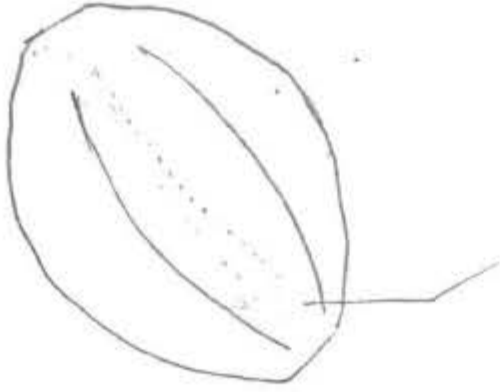
Nov 30
demonstration

Acer negundo (Box Elder; Manitoba Maple)

U. Minn 11/13/73

acetolyzed → PVA

⇒ povid not visible



tricolporate

much reduced rugulation "finger-printing"
associated w. crumophily



Humid, not acet'ed ⇒ spheroidal → oblate

fam. Hippocastanaceae (Horse Chestnut Gen.)

Aesculus hippocastanum (Horse Chestnut)

U. Stockholm No 1



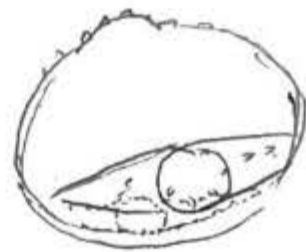
x 1000

tricolporate

exine minutely striate-reticulate (as in Acer)

granules on membrane

φ ca 27 μ



subprolate → prolate