

Samčí gametofyt

Rostlinná embryologie 2021 – Hana Cempírková



Jak vznikají
tyčinky?

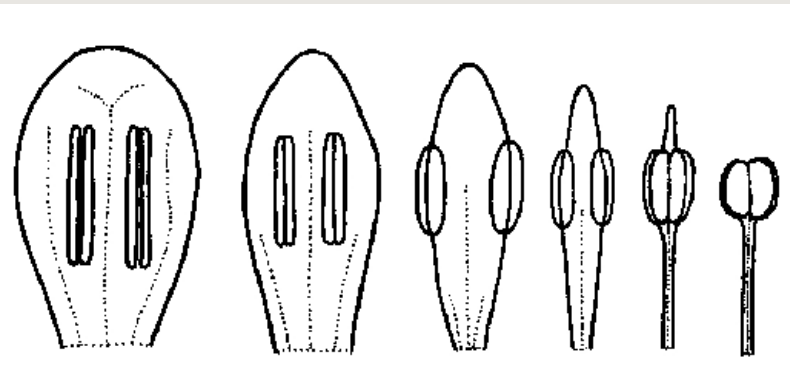
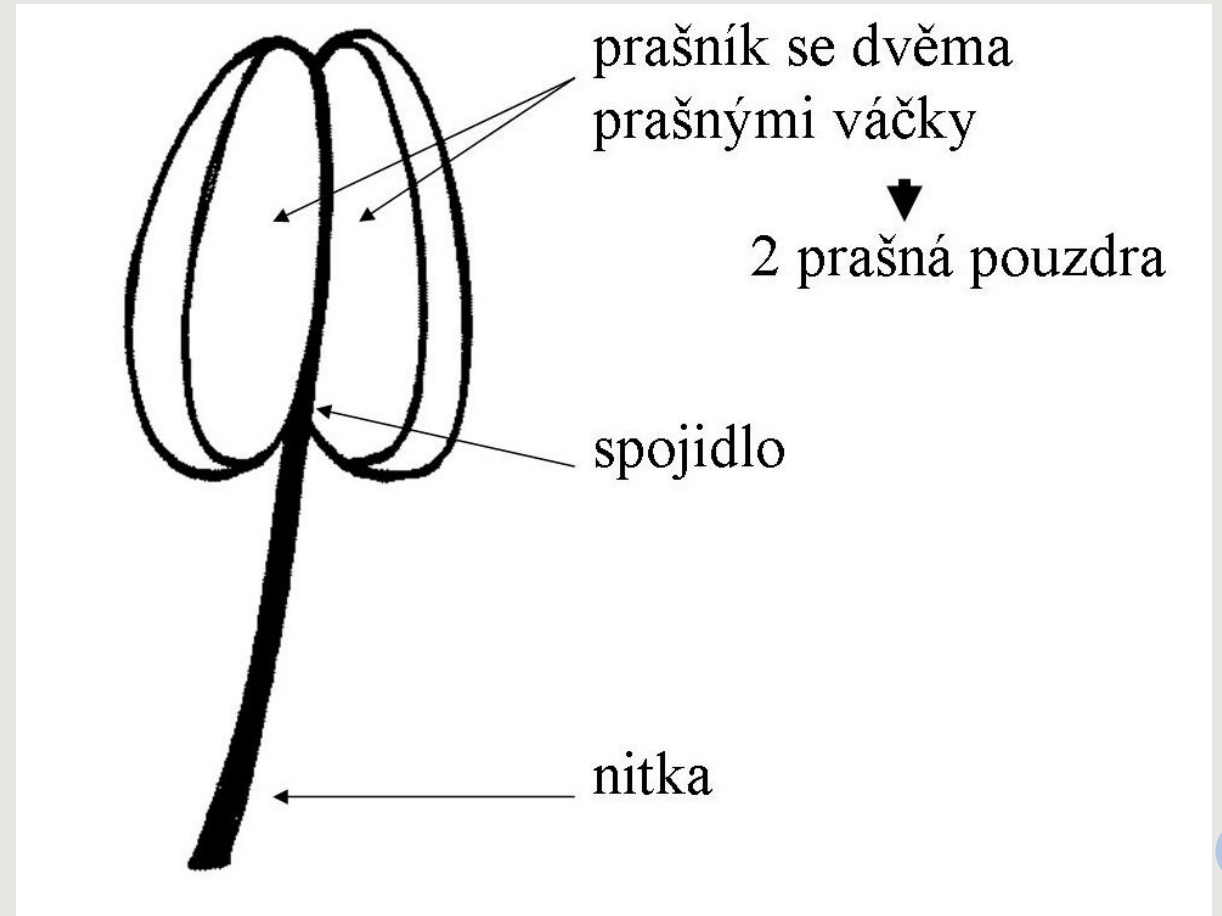
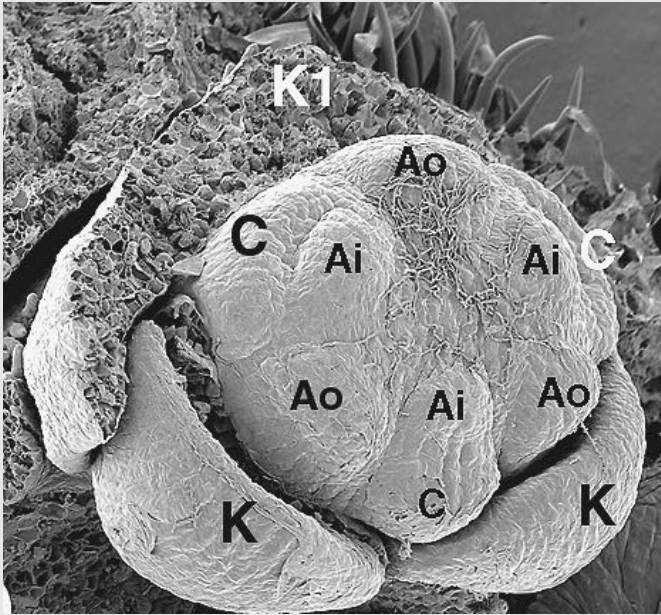
Jak vzniká pyl?

Jak vypadá
pylové zrno
zblízka?

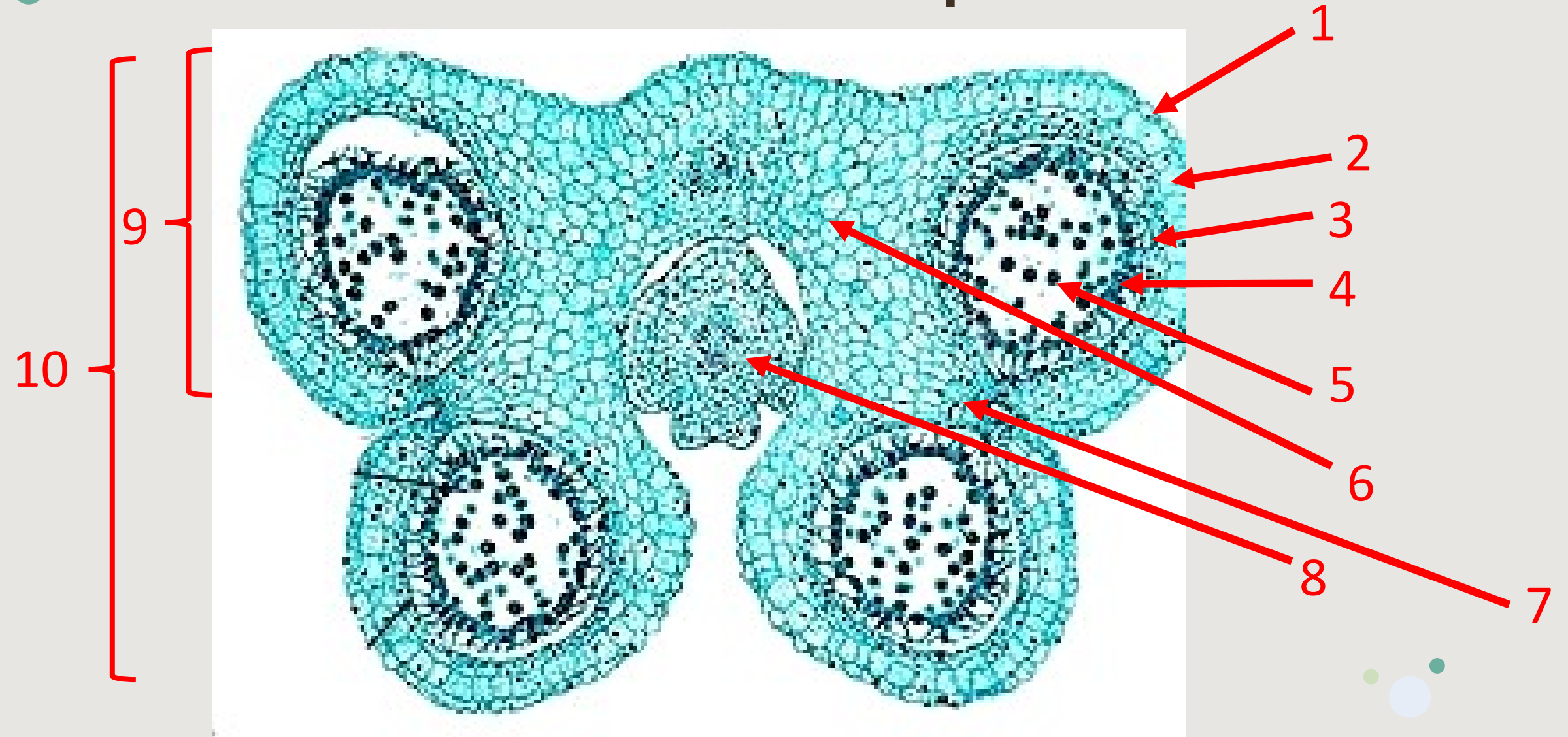


Tyčinka – samčí rozmnožovací orgán

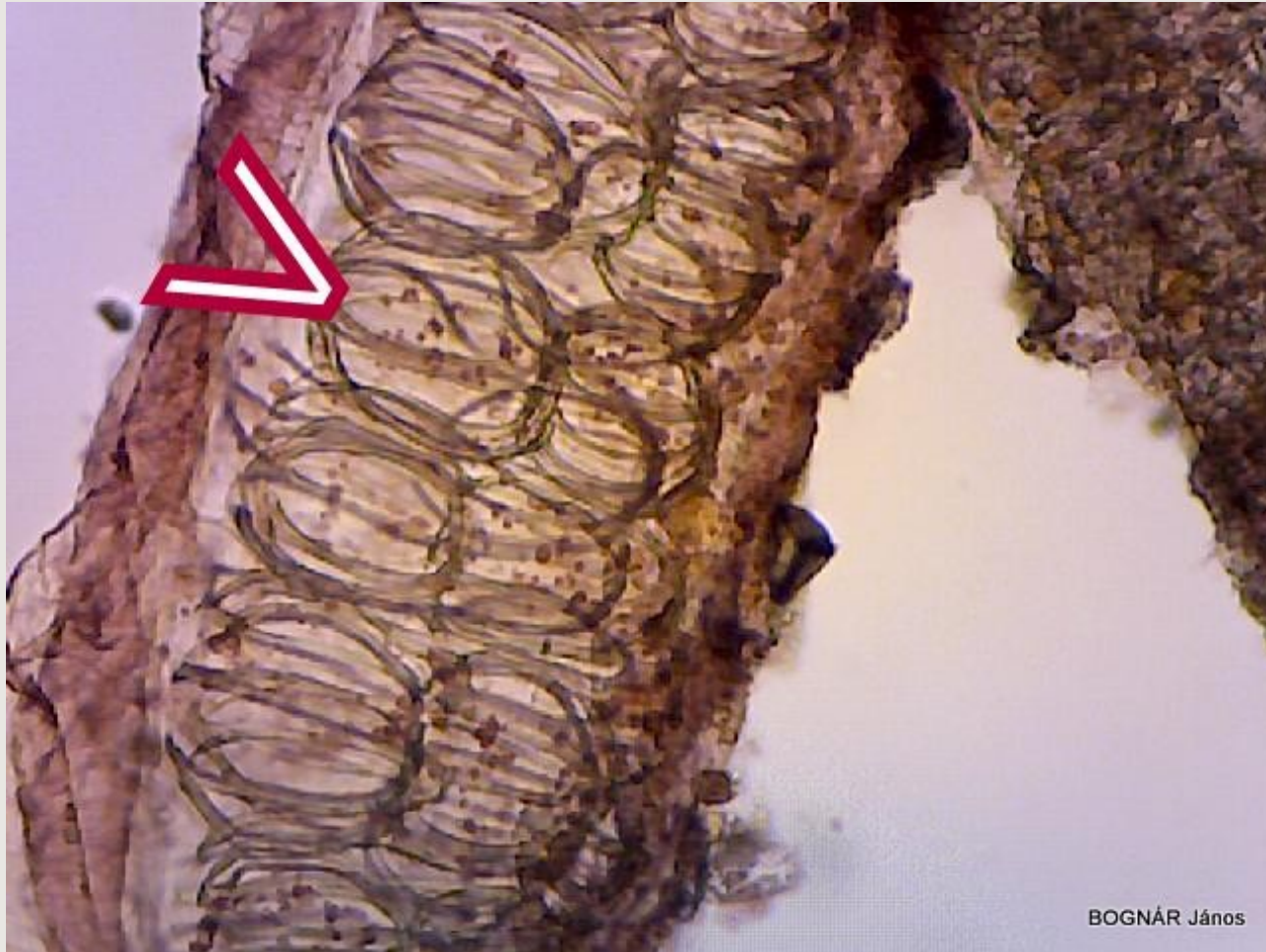
Androeceum – soubor tyčinek



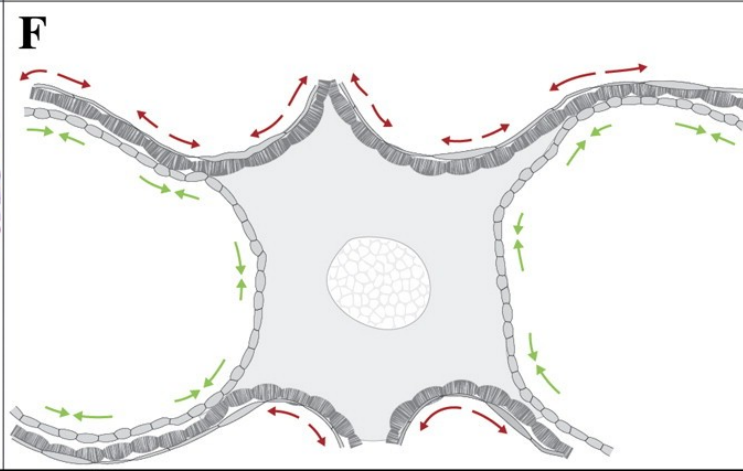
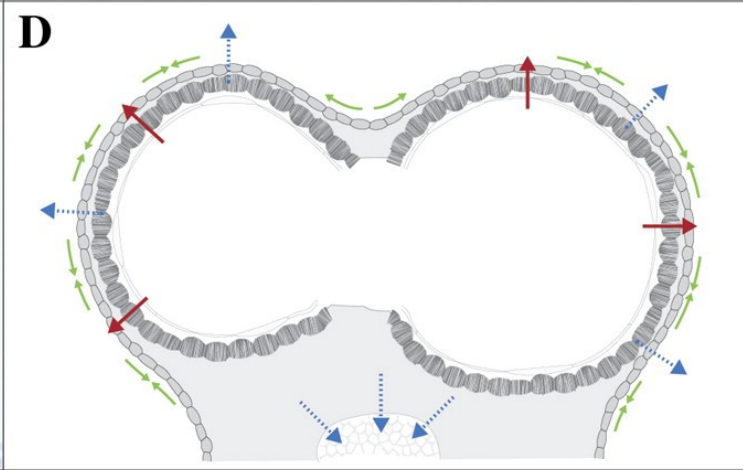
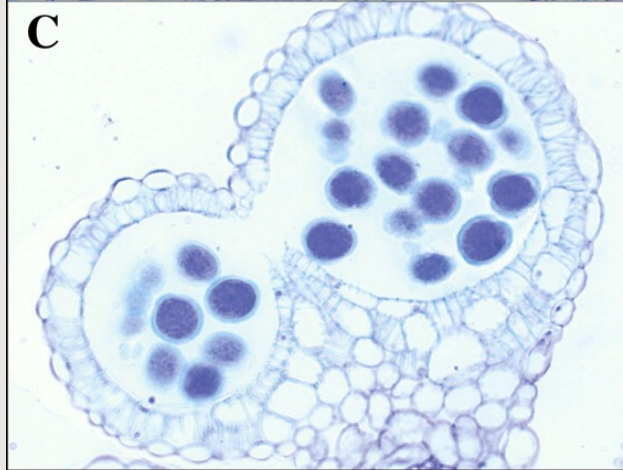
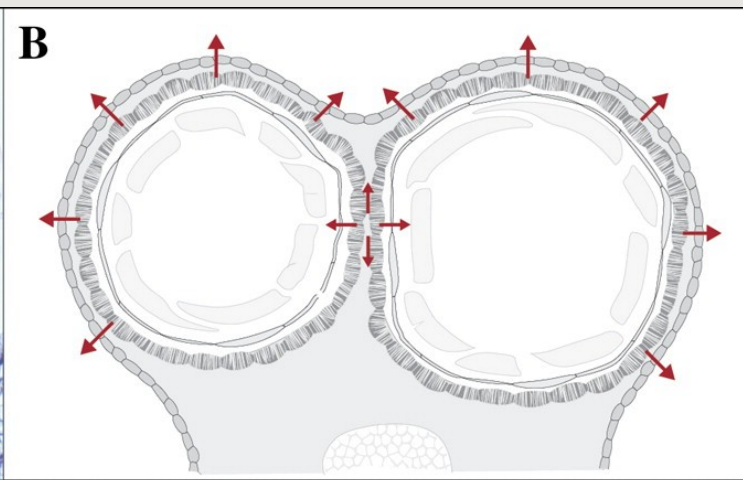
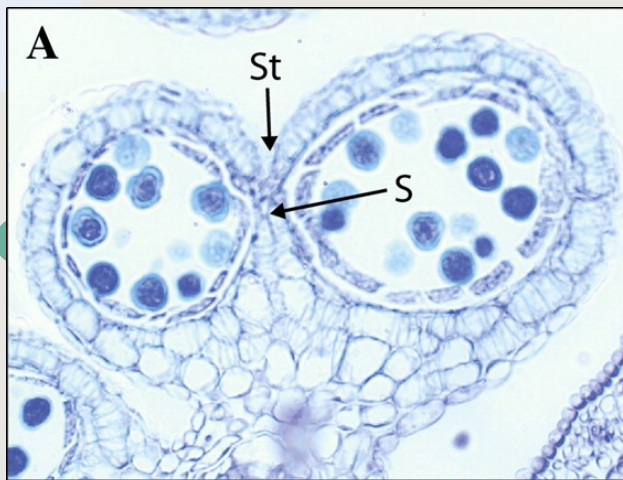
Anatomická stavba prašníku



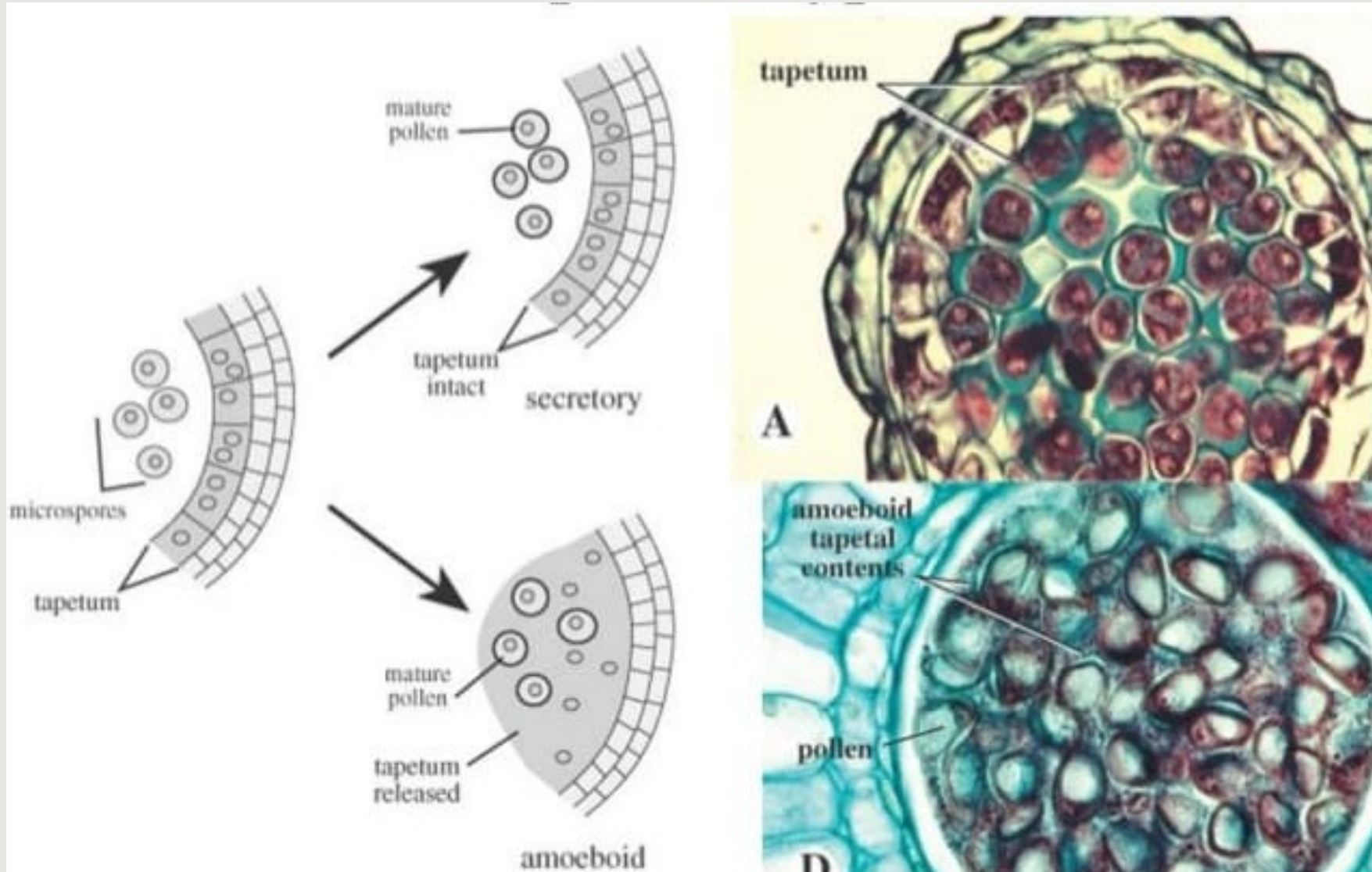
Endothecium



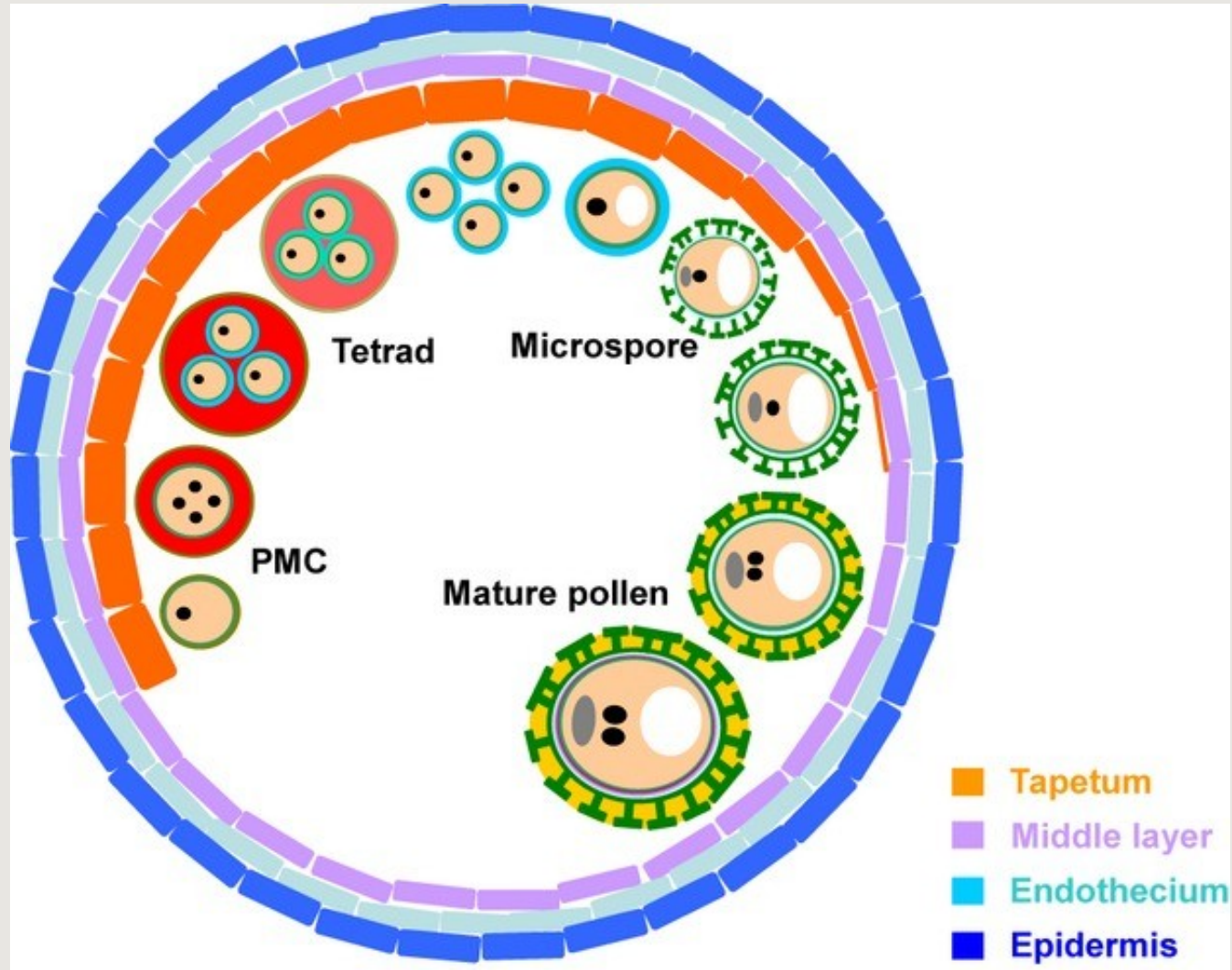
Dehiscence prašníku

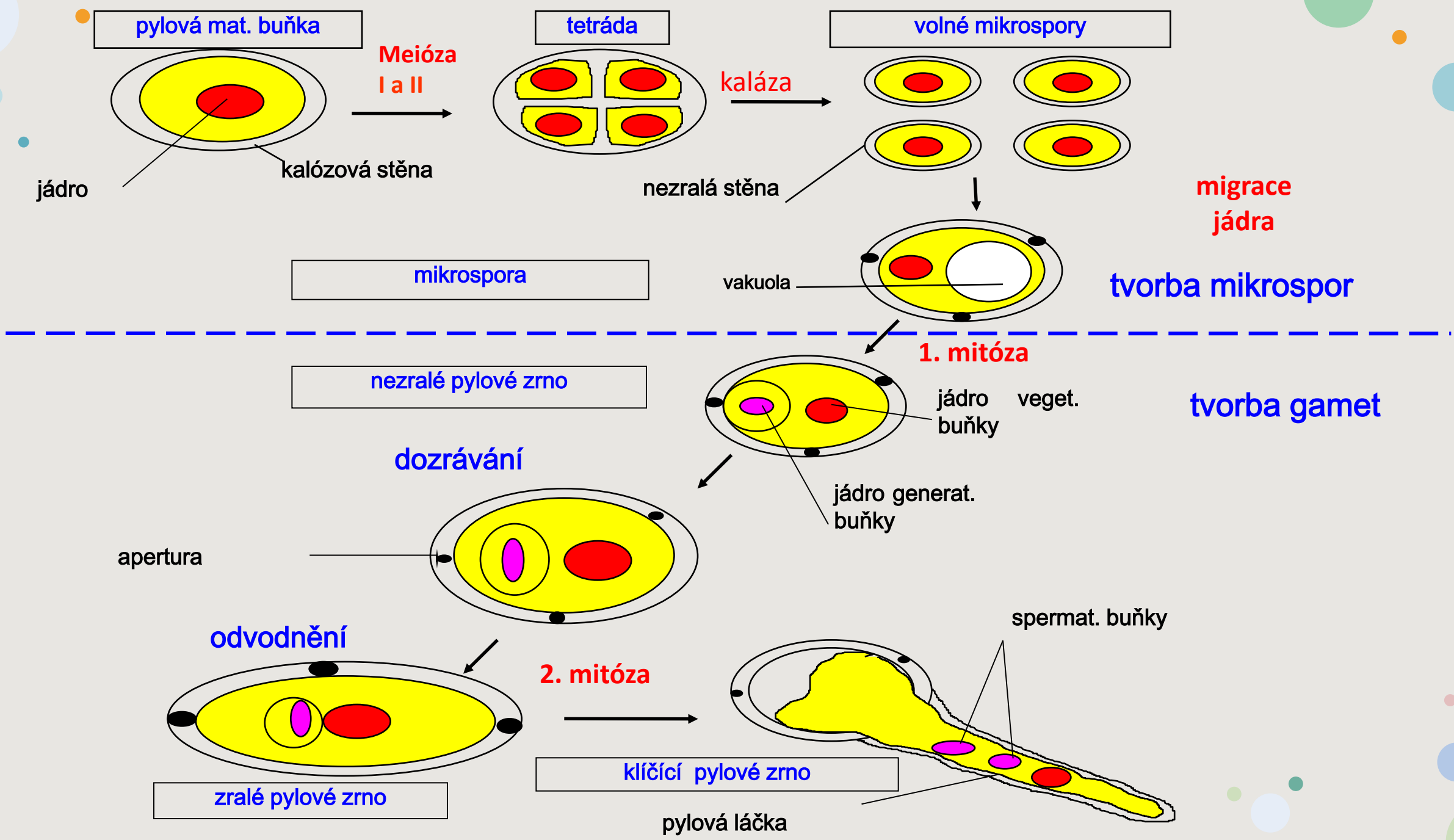


Tapetum – žlaznaté a améboidní



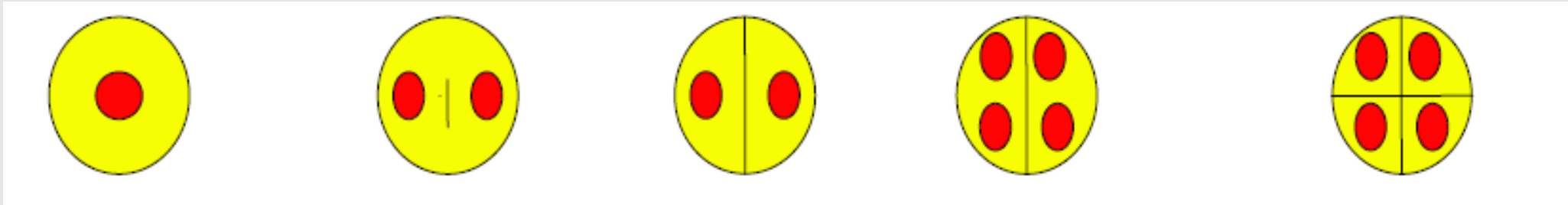
Vývoj tapeta je synchronizovaný z vývojem mikrospor



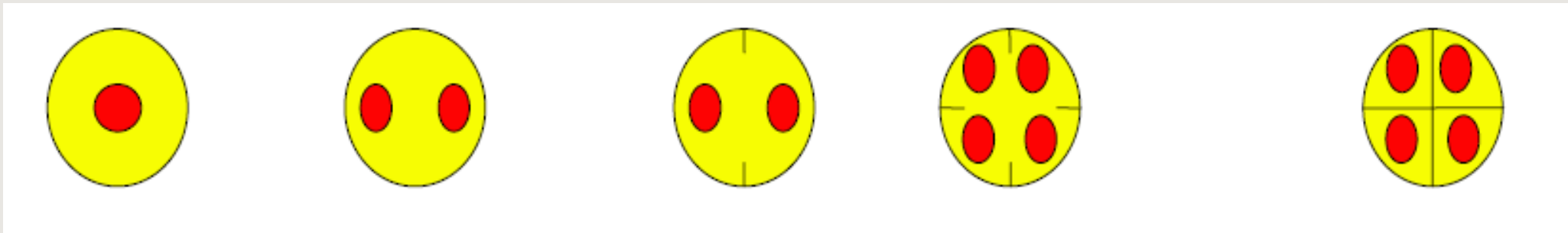


Typy tvorby tetrad

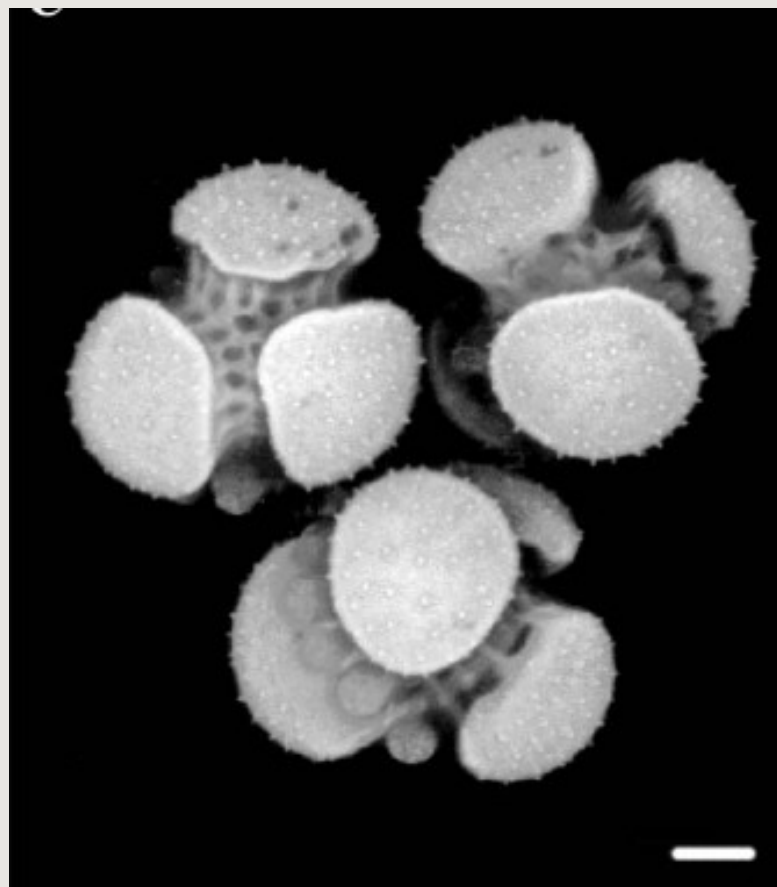
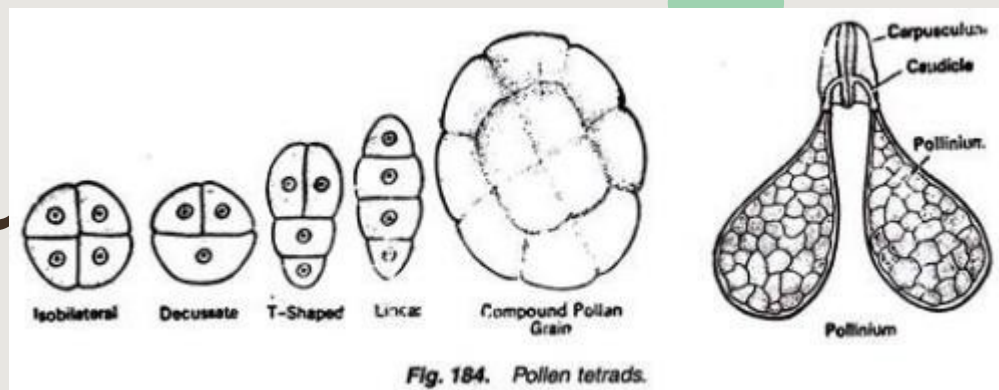
sukcesivní typ



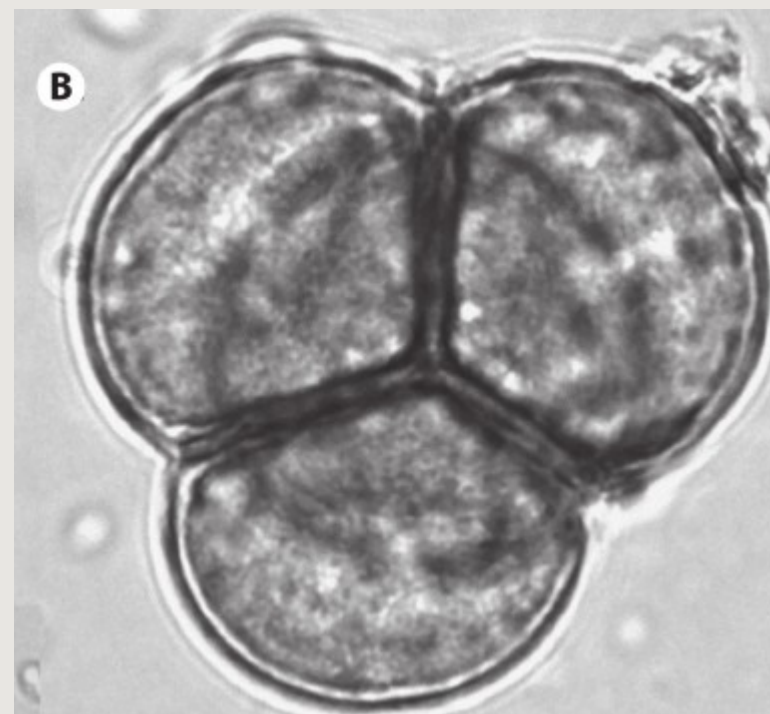
simultánní typ



Přirozené tetrády pylu

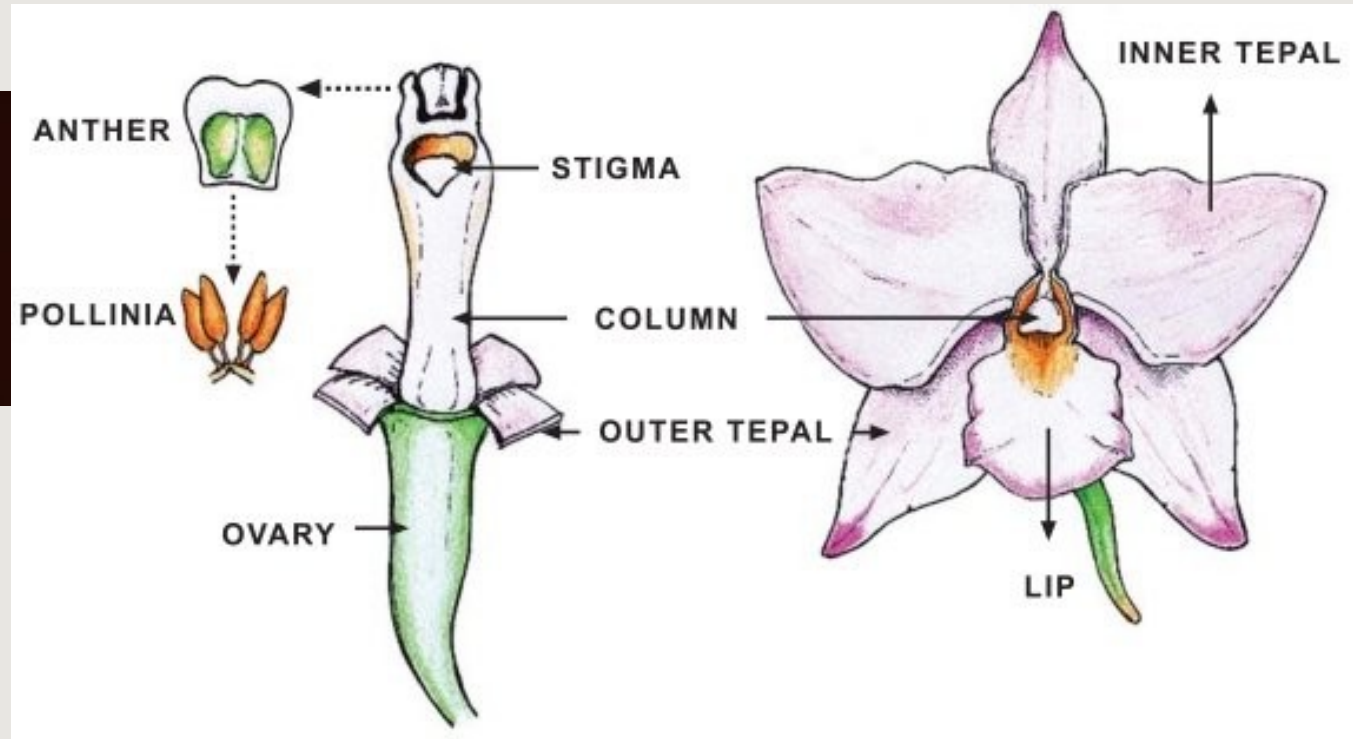


Drosera (rosnatka)

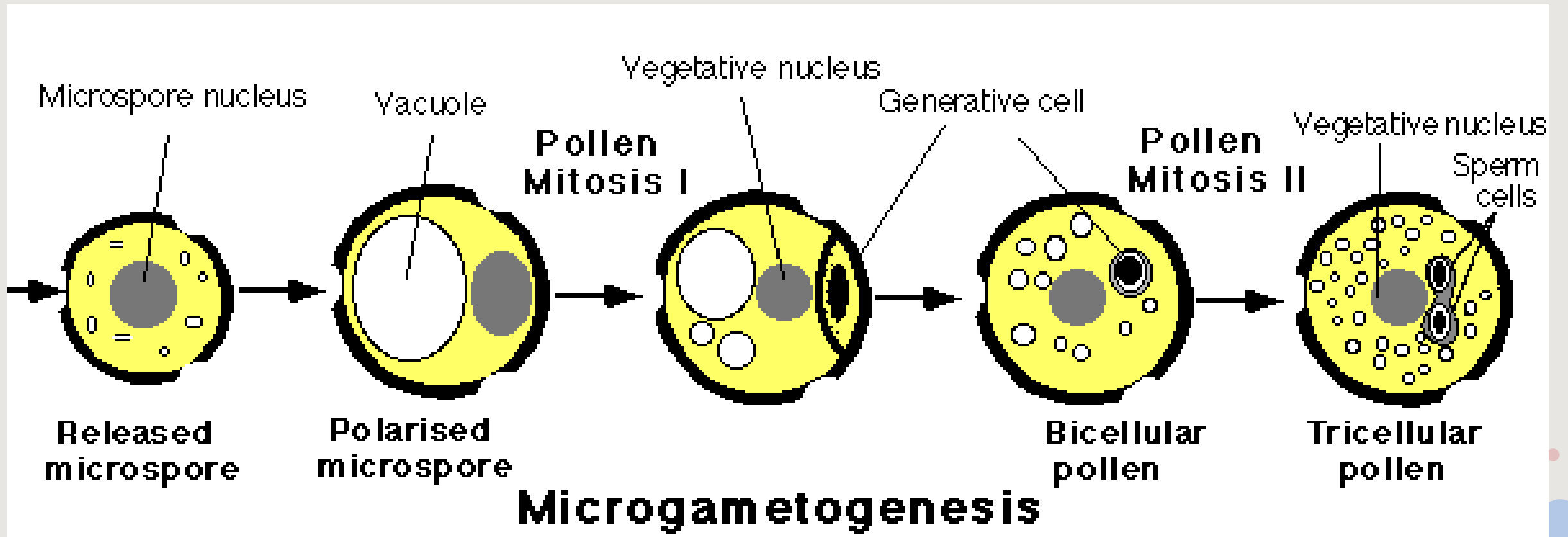


Ericaceae (vřesovité)

Polinárium (brylky) orchidejí



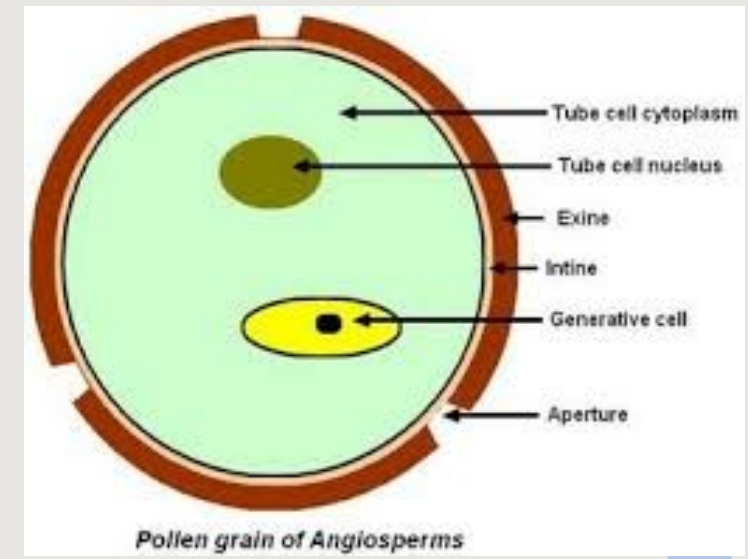
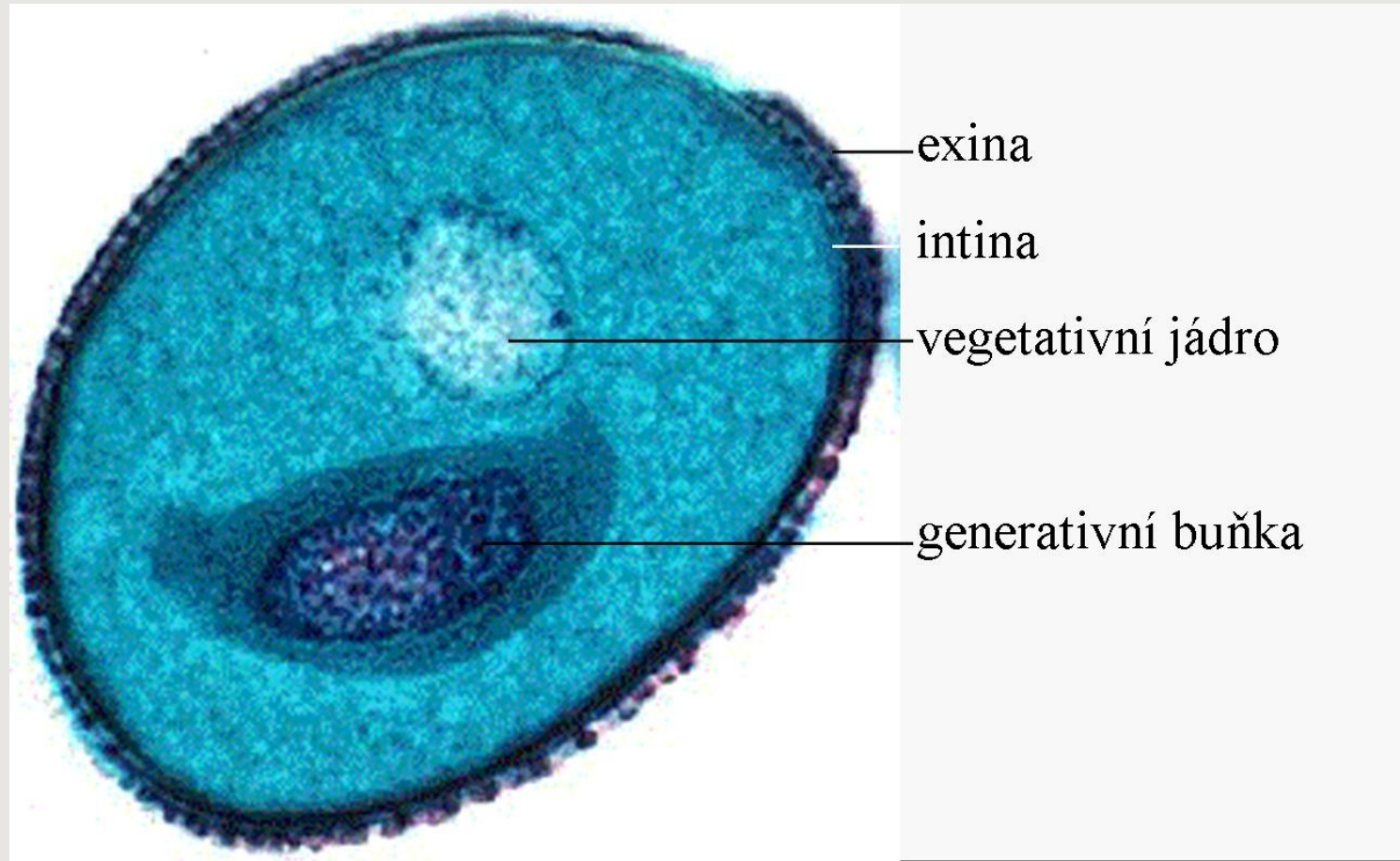
Dvojbuněčný a trojbuněčný pyl



Přestávka



Stavba pylového zrna



Klasifikace pylových zrn NPC

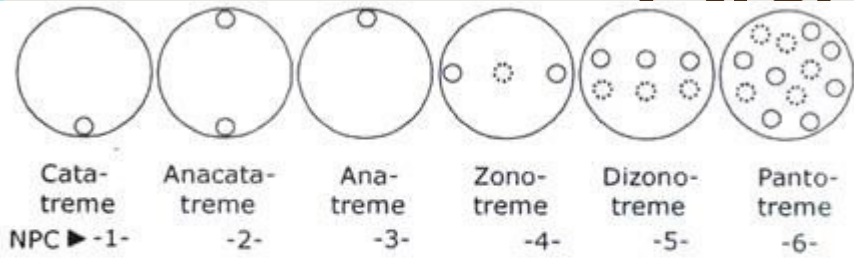


Figure 4.26

| Number of apertures (N)▶ | Ditrema 2 -- | Tritrema 3 -- | Tetatrema 4 -- |
|-----------------------------|--|--|---|
| Zonoporate NPC (-44)▶ | 244 Di-zonoporate Ex. <i>Colchicum</i> | 344 Tri-zonoporate Ex. <i>Betula</i> | 444 Tetra-zonoporate Ex. <i>Alnus</i> |
| Zonocolpate NPC (-43)▶ | 243 Di-zonocolpate Ex. <i>Tofieldia</i> | 343 Tri-zonocolpate Ex. <i>Acer</i> | 443 Tetra-zonocolpate Ex. <i>Hippuris</i> |
| Zonocolporate NPC (-45)▶ | 245 Di-zonocolporate Ex. <i>Justicia simplex</i> | 345 Tri-zonocolporate Ex. <i>Lippia alba</i> | 445 Tetra-zonocolporate Ex. <i>Rumex</i> |

Figure 4.28
 Diagrammatic representation of NPC of some pollen in polar view.

| Number of apertures (N)▶ | Pentatrema 5 -- | Hexatrema 6 -- | Polytrema 7 -- |
|-----------------------------|--|---|---|
| Zonoporate NPC (-44)▶ | 544 Penta-zonoporate Ex. <i>Alnus</i> | 644 Hexa-zonoporate Ex. <i>Ulmus</i> | 744 Poly-zonoporate |
| Zonocolpate NPC (-43)▶ | 543 Penta-Zonocolpate | 643 Hexa-Zonocolpate | 743 Poly-Zonocolpate |
| Ex. Labiatae, Rubiaceae | | | |
| Zonocolporate NPC (-45)▶ | 545 Penta-zonocolporate Ex. <i>Viola</i> | 645 Hexa-zonocolporate Ex. <i>Sanguisorba officinalis</i> | 745 Poly-zonocolporate Ex. <i>Utricularia</i> |

Figure 4.29
 Diagrammatic representation of NPC of some pollen in polar view.

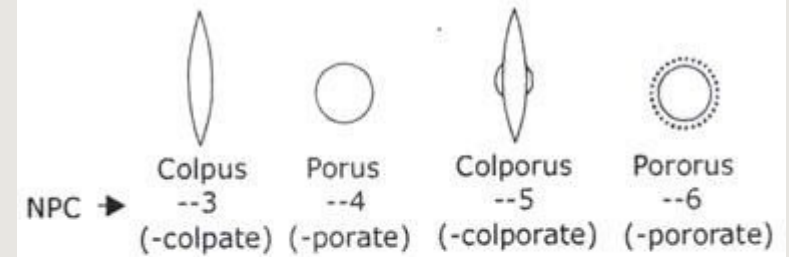


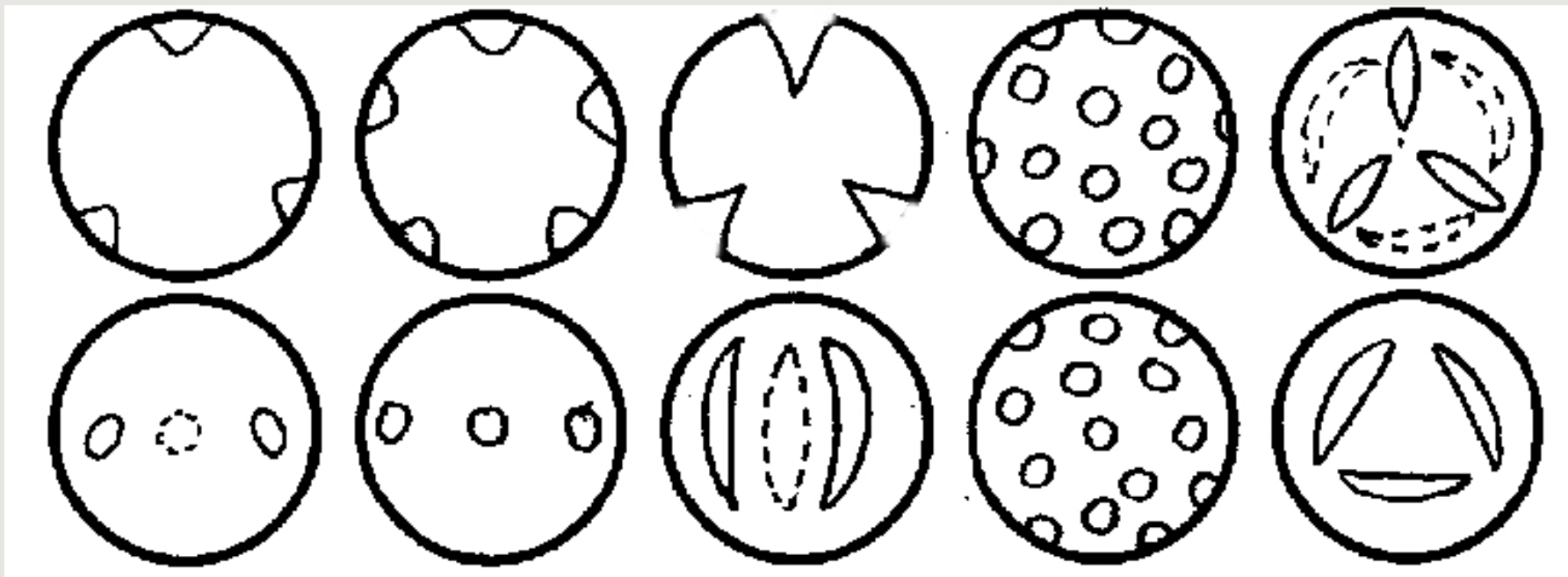
Figure 4.27

Schematic representation of character (C) of some apertures present in a pollen grain and its number in NPC. Dotted line indicates different plane of focus.

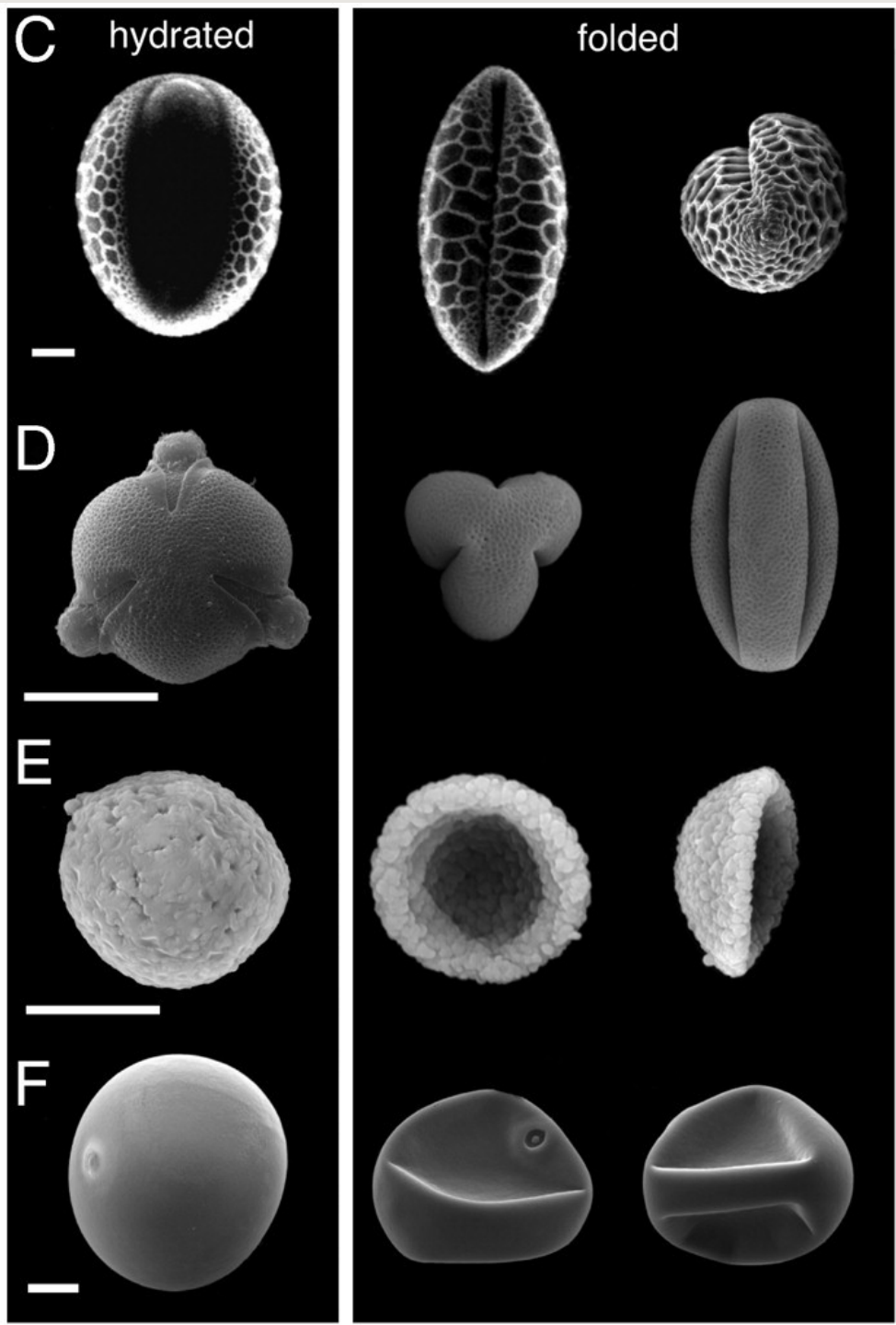
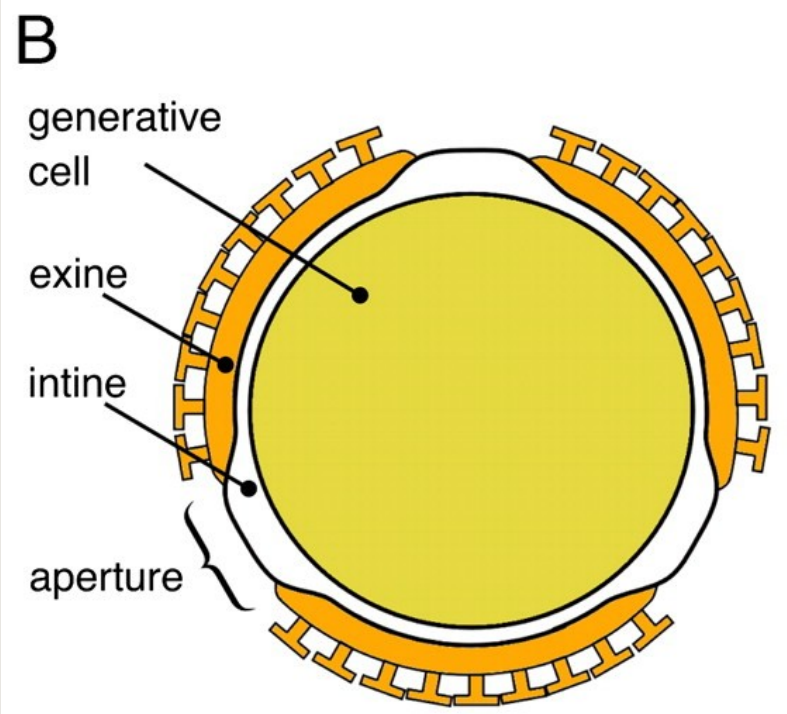
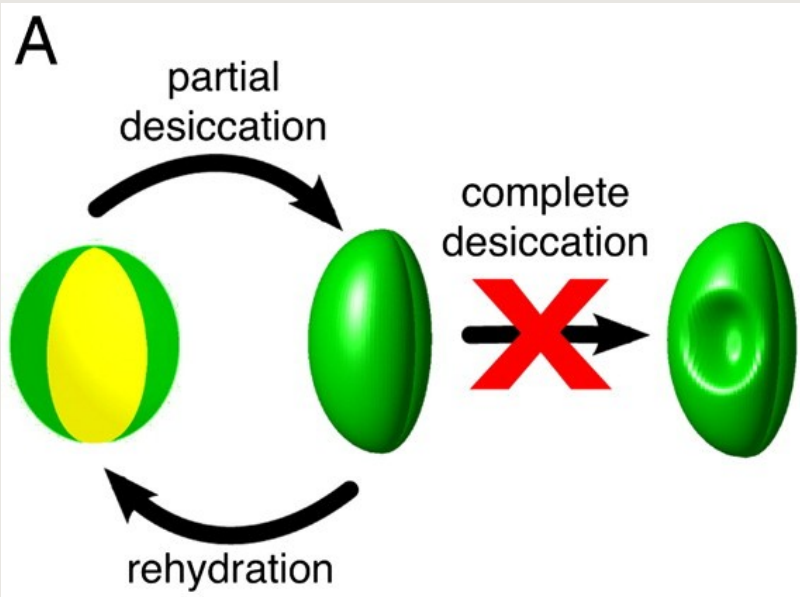
| Number of apertures (N)▶ | Pentatrema 5 -- | Hexatrema 6 -- | Polytrema 7 -- |
|------------------------------|---|---|--|
| Pantoporate NPC (-64)▶ | 564 Penta-pantoporate Ex. <i>Plantago</i> | 664 Hexa-pantoporate Ex. <i>Plantago</i> | 764 Poly-pantoporate Ex. <i>Chenopodium</i> |
| Pantocolpate NPC (-63)▶ | 563 Penta-pantocolpate | 663 Hexa-pantocolpate | 763 Poly-pantocolpate Ex. <i>Polygonum amphibium</i> |
| Pantocolporate NPC (-65)▶ | 565 Penta-pantocolporate | 665 Hexa-pantocolporate Ex. <i>Polygonum oxyspermum</i> | 765 Poly-pantocolporate |

Figure 4.30
 Diagrammatic representation of NPC of some pollen in equatorial view. Dotted lines indicate different plane of focus.

Příklady různých typů pylových zrn



- 1 - trizonoporátní (bříza)
- 2 - pentazonoporátní (olše)
- 3 - trizonokolpátní (javor, tabák)
- 4 - polyantoporátní (merlík, tykev)
- 5 - hexapantokolpátní (kuřinka)



Sporoderma – stěna pylového zrna

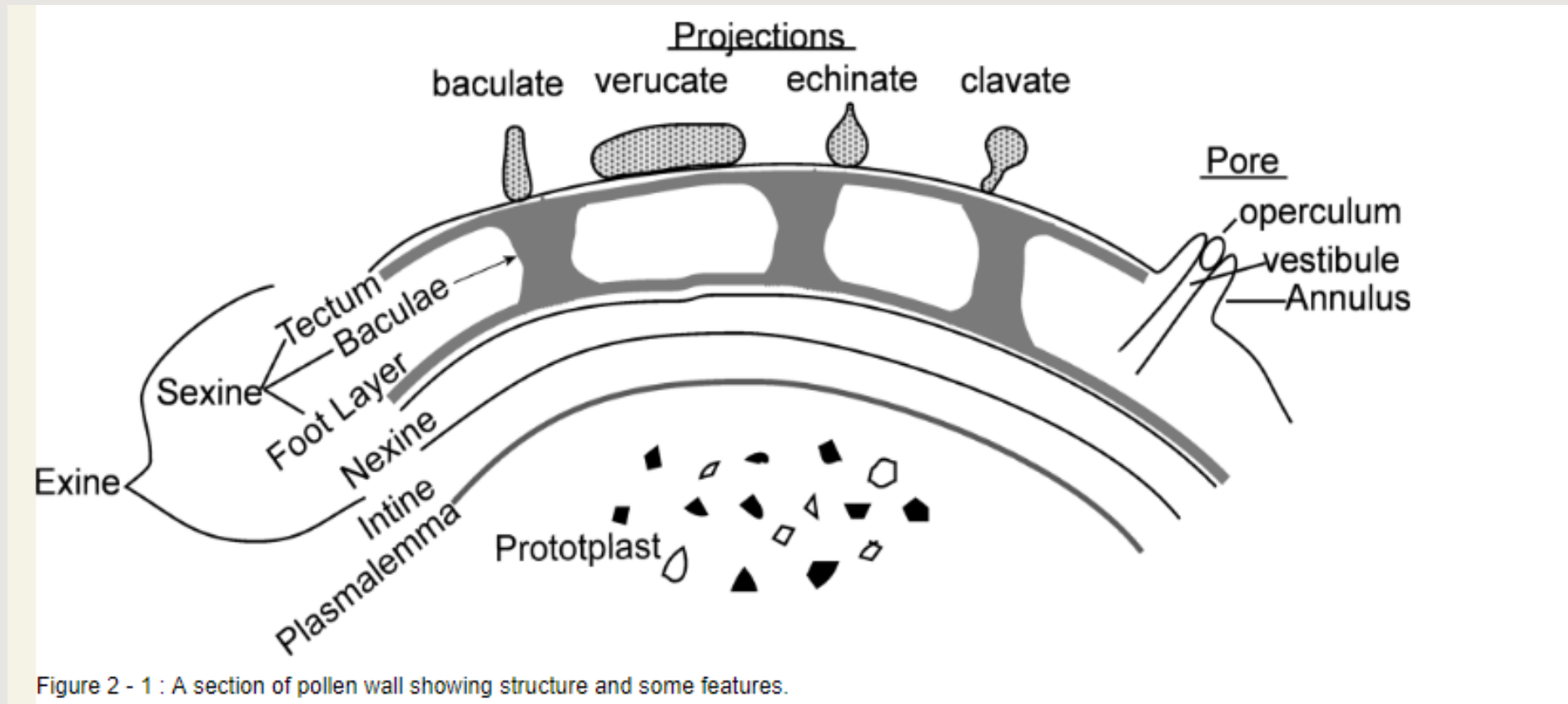


Figure 2 - 1 : A section of pollen wall showing structure and some features.

Stavba exiny pylového zrna pelyňku (*Artemisia*)

ektexina

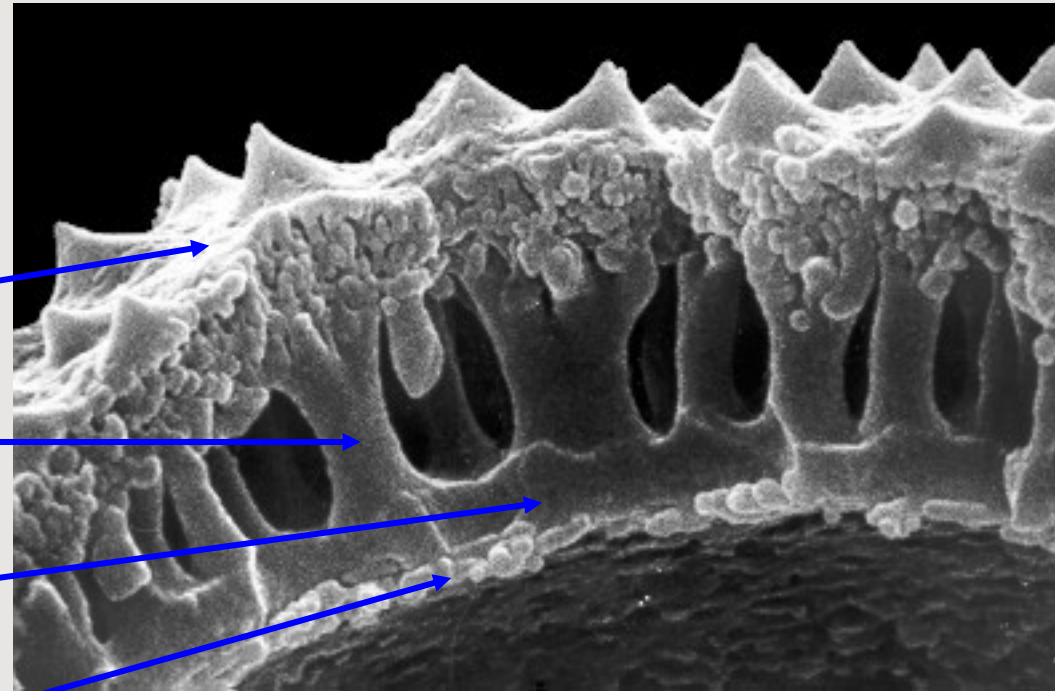
tektum

bakuly

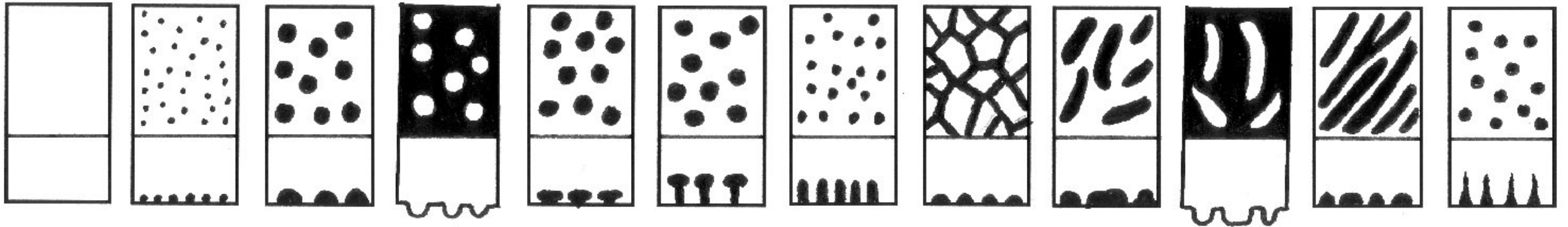
základní vrstva

endexina

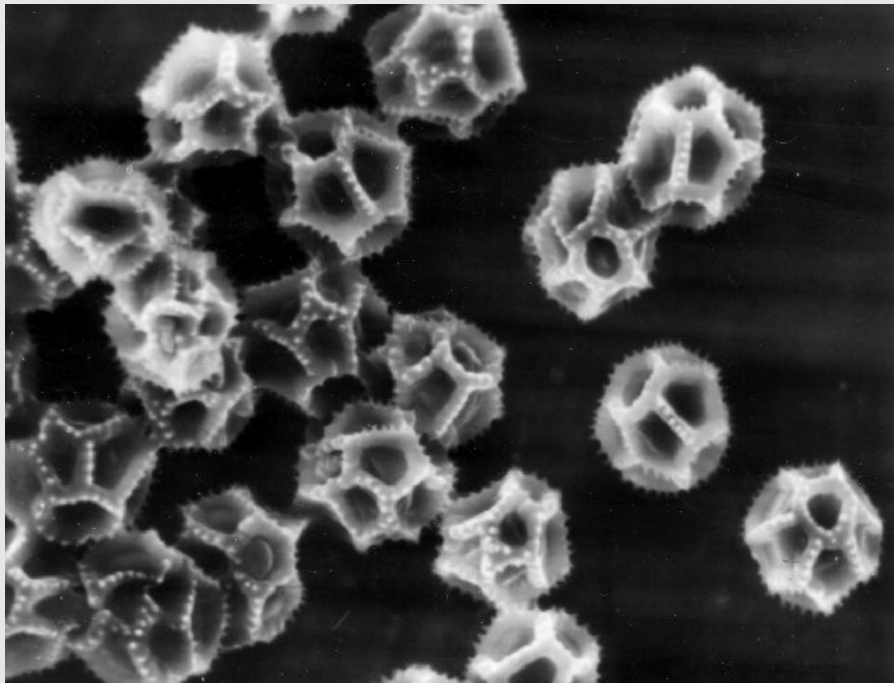
lamelární vrstva



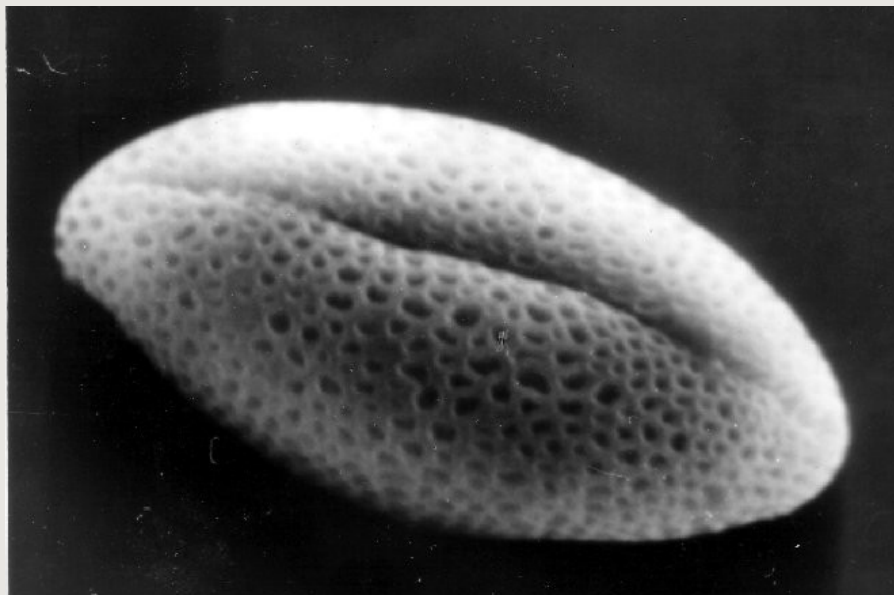
Příklady typů skulptur (ornamentace) exiny:



psilátní granulátní verukátní foveolátní gemátní klavátní bakulátní retikulátní rugulátní fosulátní striátní echinátní

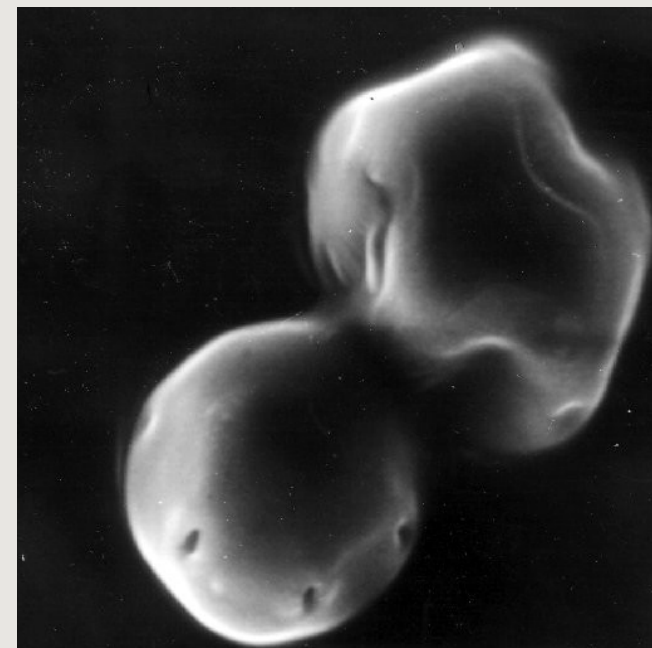


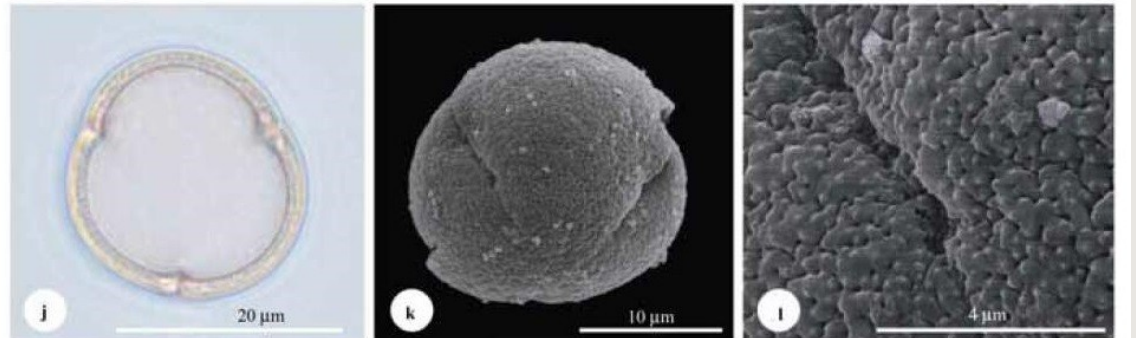
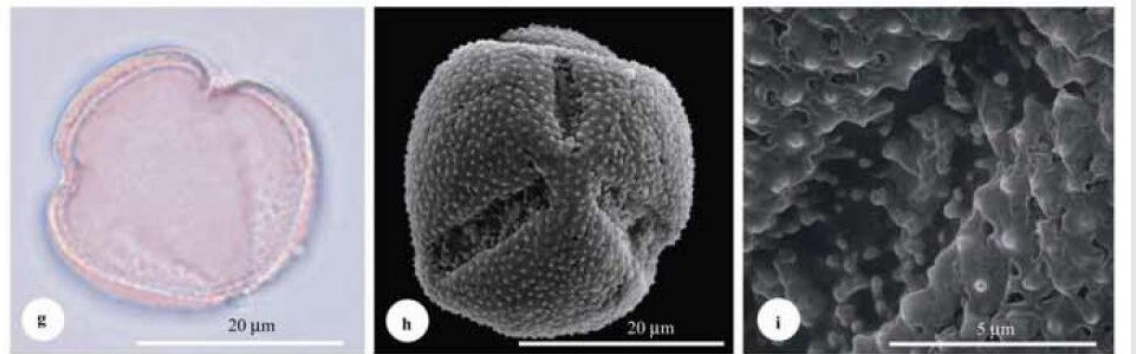
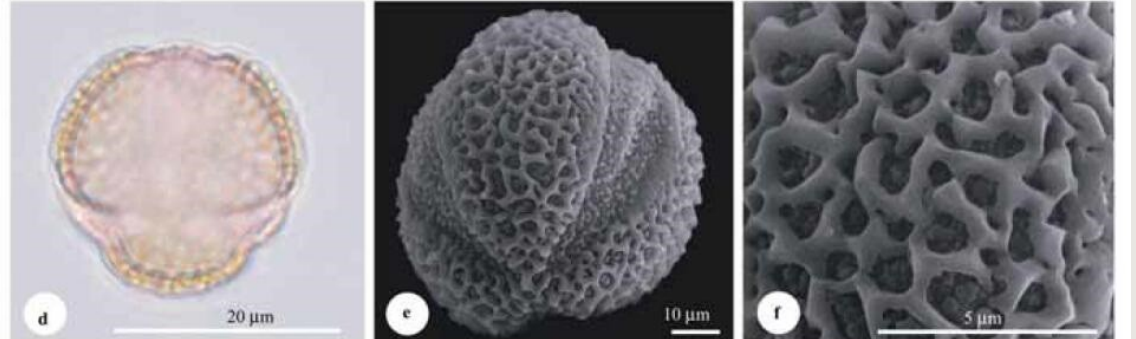
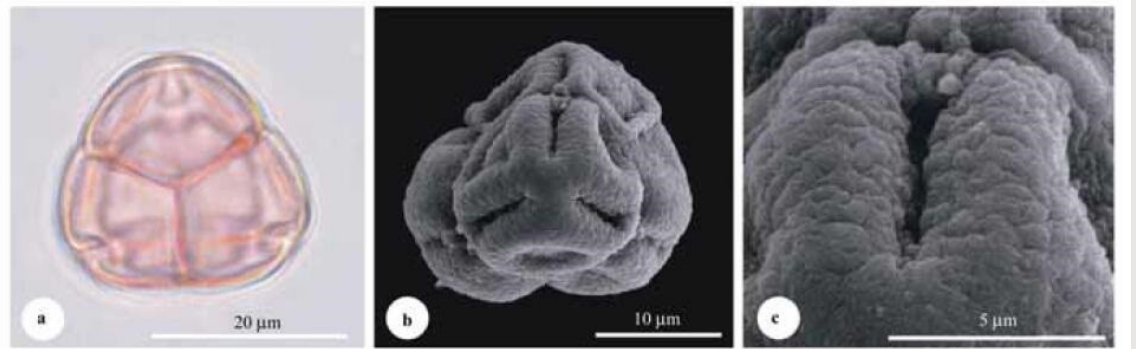
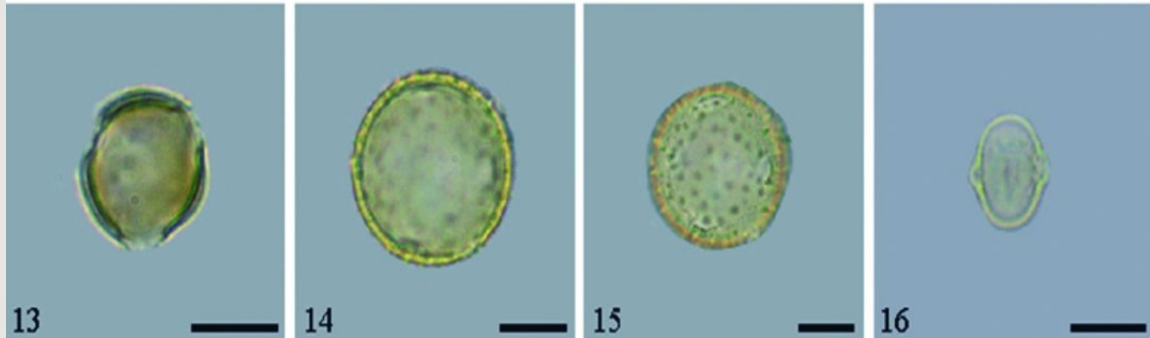
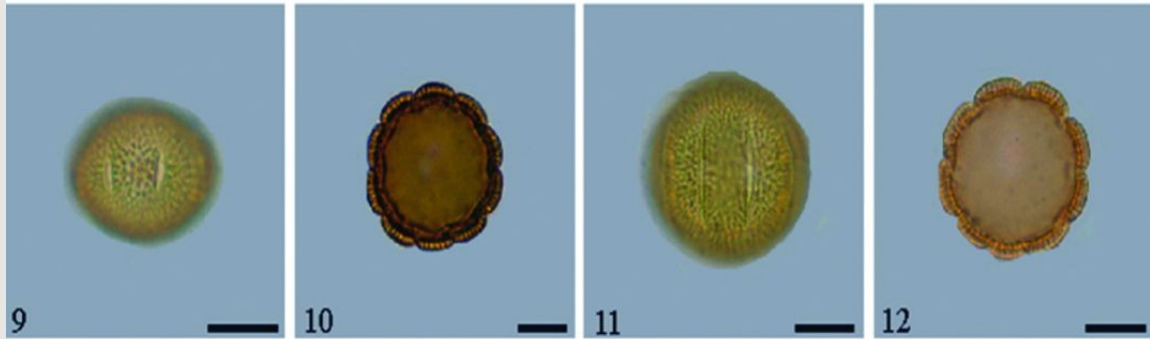
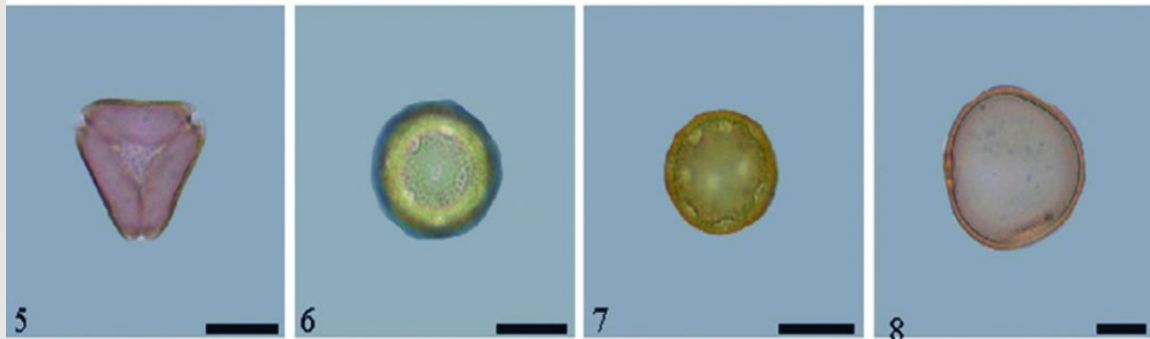
fenestrátní pylová zrna
locika kompasová
(*Lactuca serriola*).



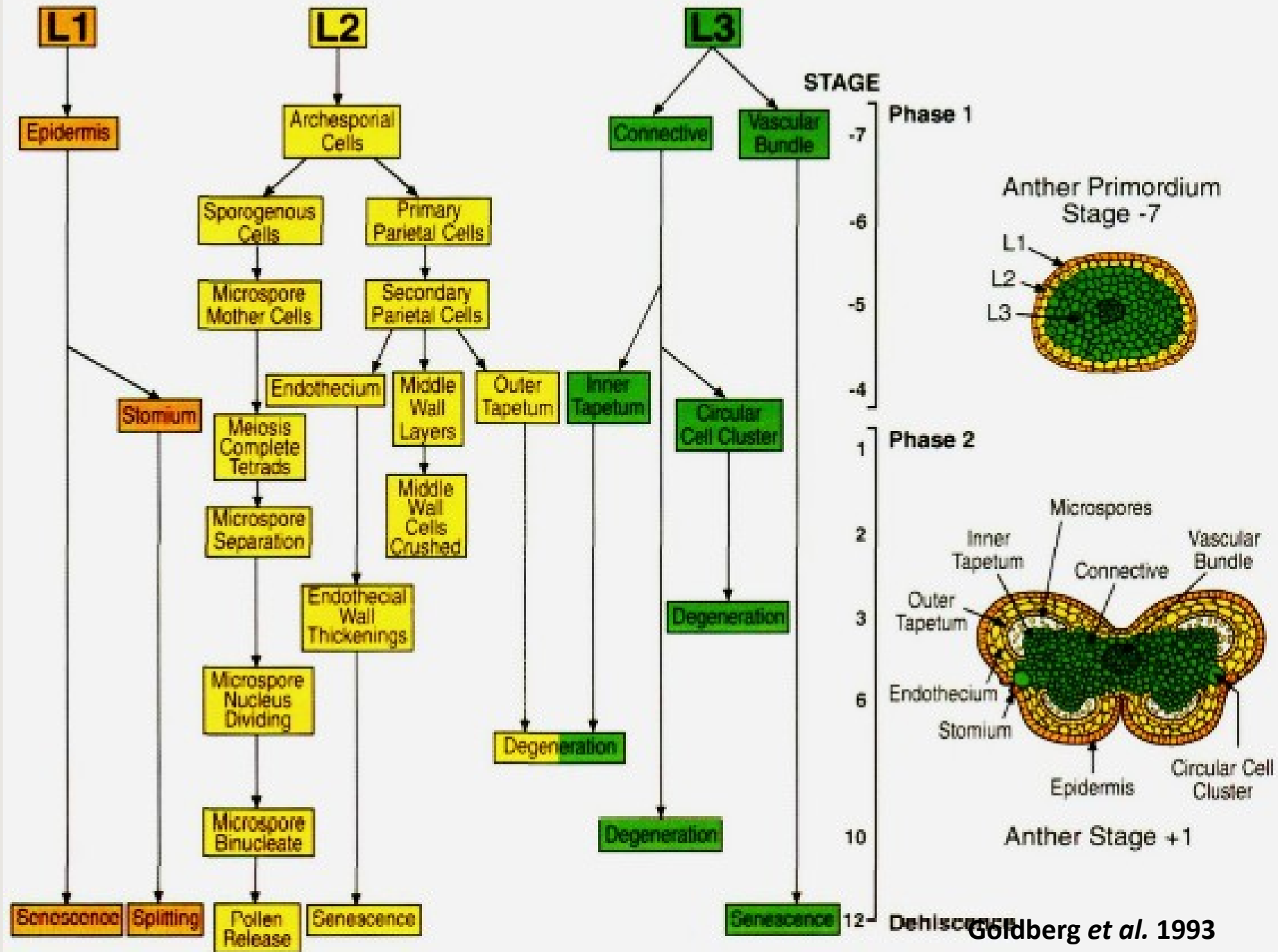
kolpátní pylové zrna
s povrchem retikulátním
brukev řepka olejka
(*Brassica oleracea*)

pentazonokolpátní pylové zrna
olše zelené (*Alnus viridis*)





Vývoj prašníku tabáku



Shrnutí

