

Anatomia Vegetal

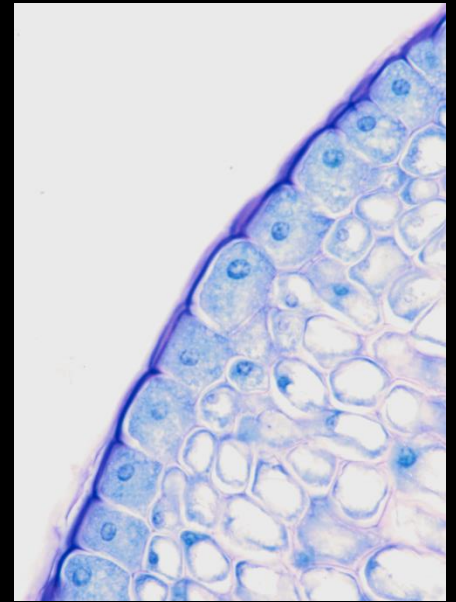
Estruturas secretoras



Estruturas secretoras

- **Órgãos vegetativos**
- **Estruturas reprodutivas**

Como reconhecer um tecido secretor?



Como reconhecer um tecido secretor?



Elementos de atração

Brácteas



Mussaenda 'Queen Sirikit'
Rubiaceae
© G. D. Carr

Brácteas



红掌 *Anthurium andraeanum*

赵文娅 摄 XTBS

Corola



Kalmiosis "fragrans"

Ericaceae

© M. A. Carr



Inflorescência

Inflorescência



Estames / Estigma

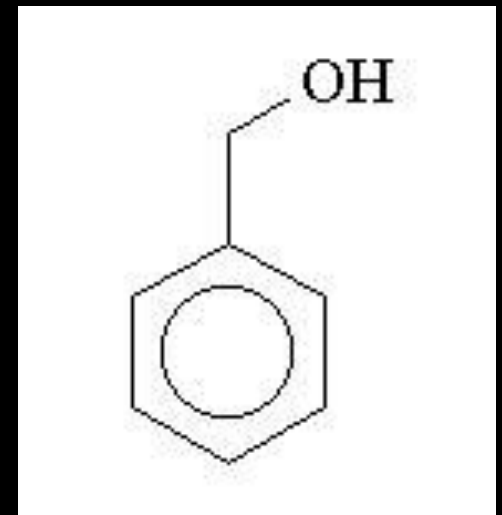
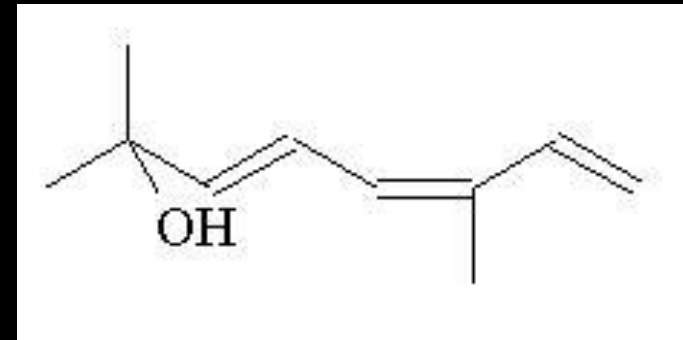
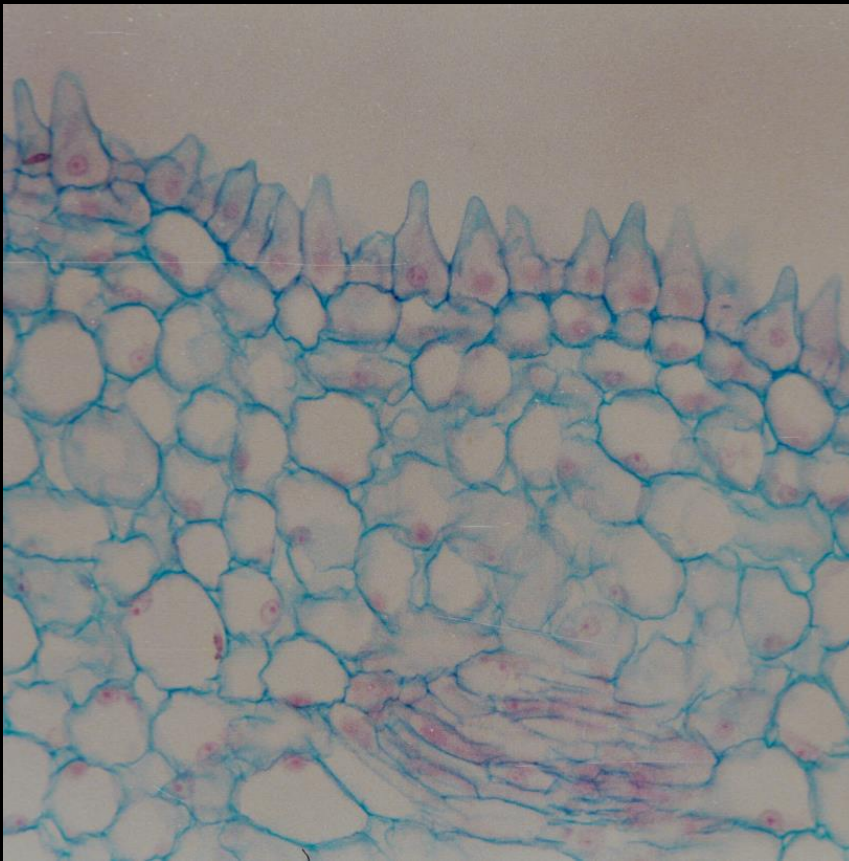
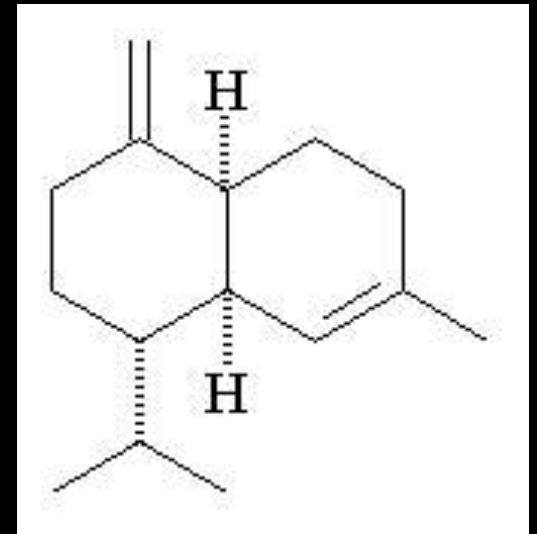


Fragrâncias

Monoterpenos

Sesquiterpenos

Substancias aromáticas



Recursos florais

- Produção e/ou secreção de substâncias
- “Recompensa”



Néctar



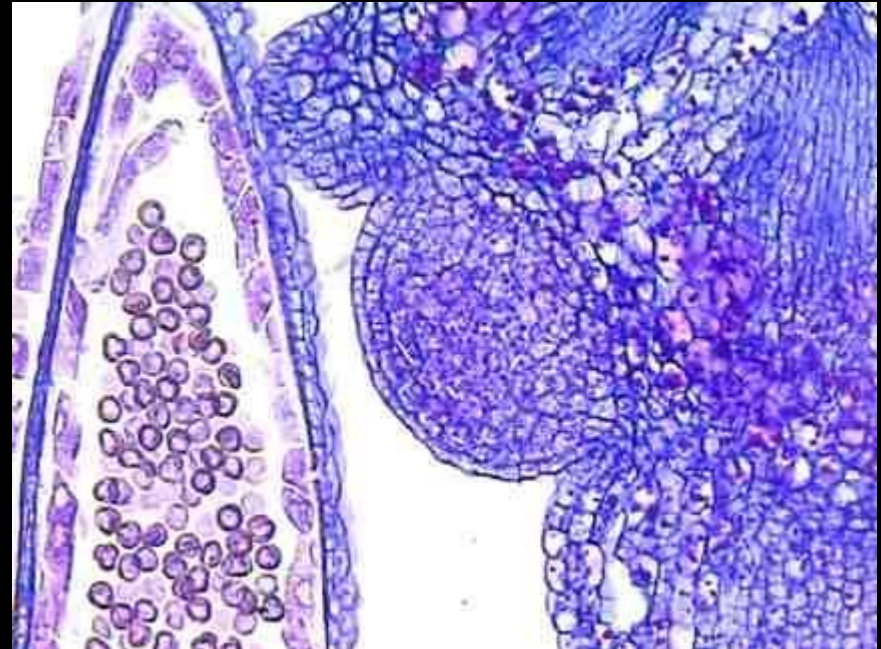
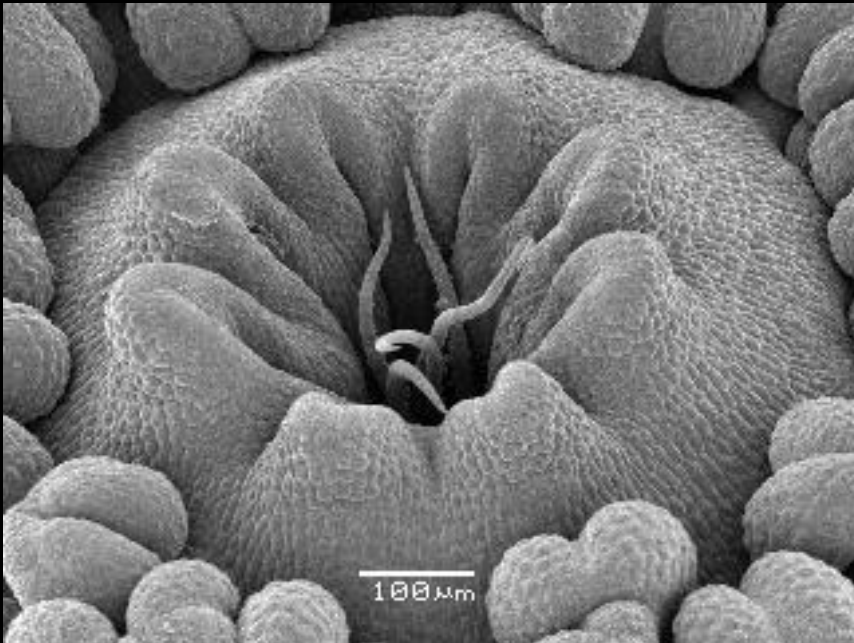
Cleistes exilis – Halictidae

Guías de Néctar



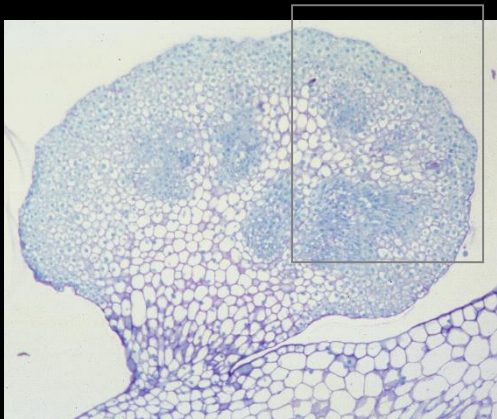
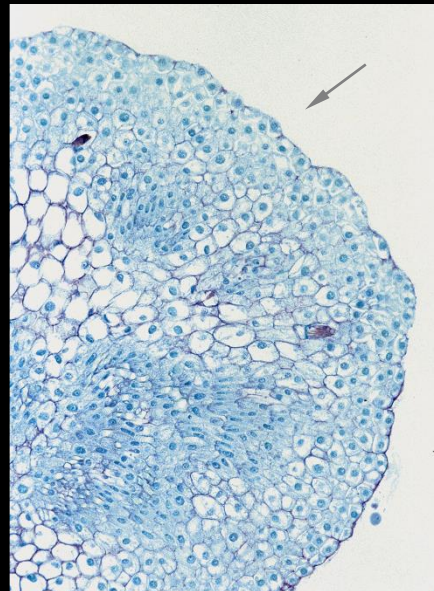
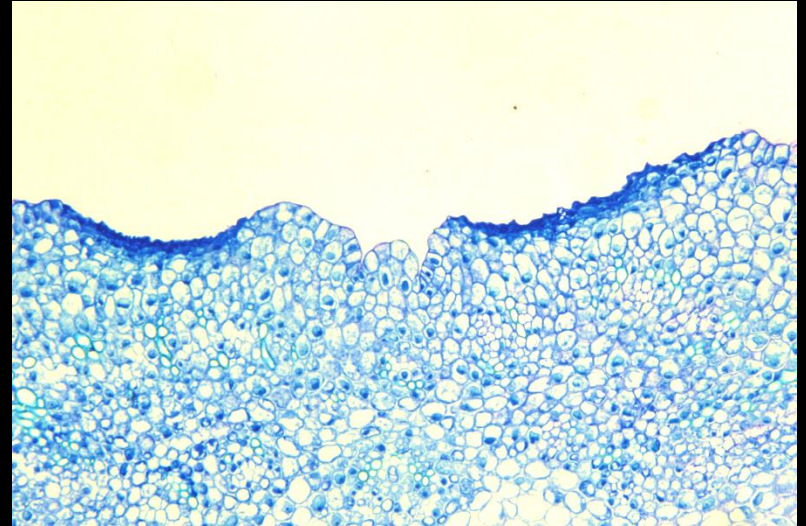
Néctar

- NECTÁRIO
- Estruturas glandulares ou difusas

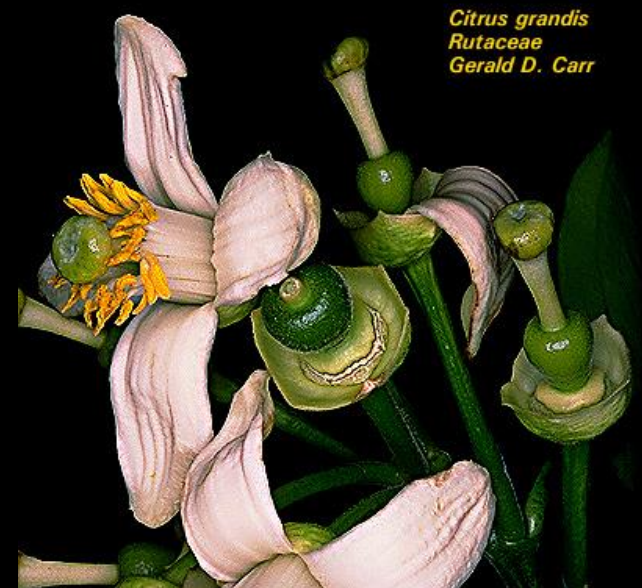
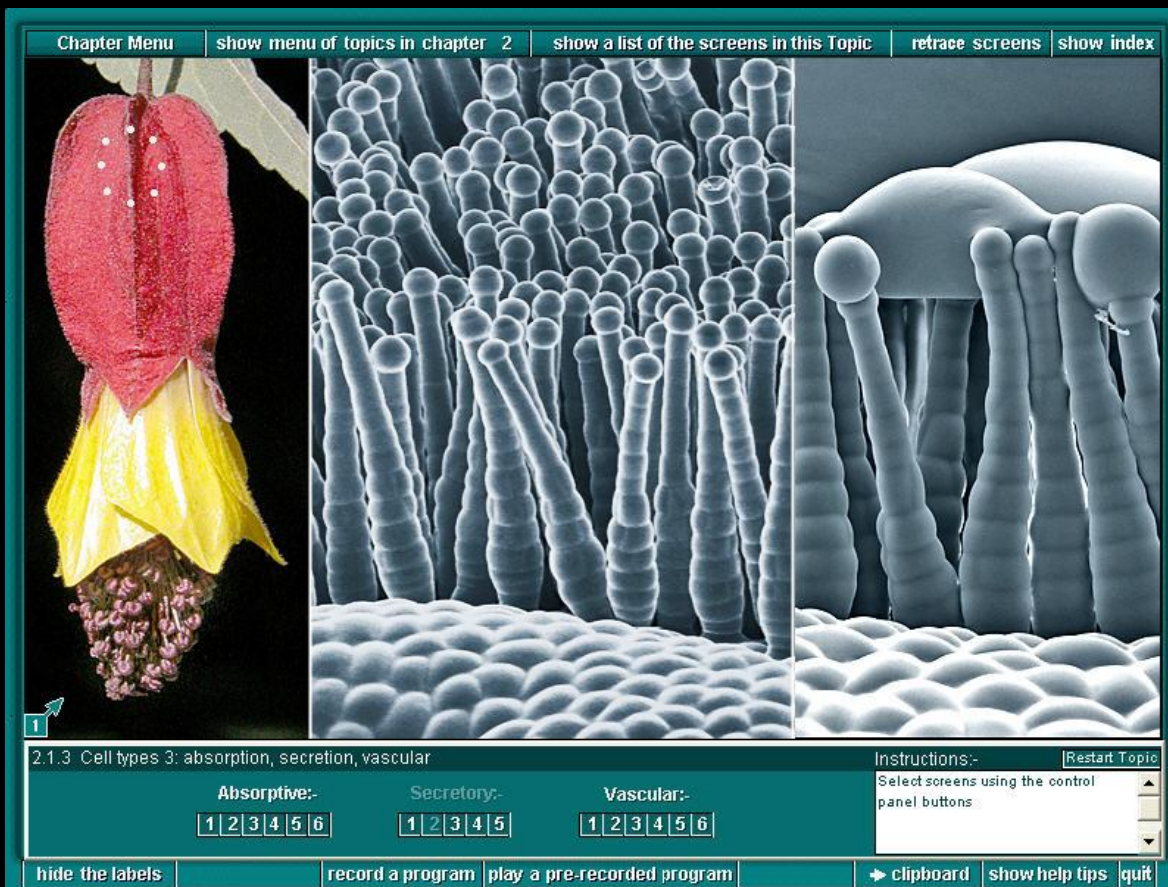


Nectários

Varias partes da planta
Substancias açucaradas
Indiferenciado (as vezes)
Xilema e floema
Epidermais
Glandulares

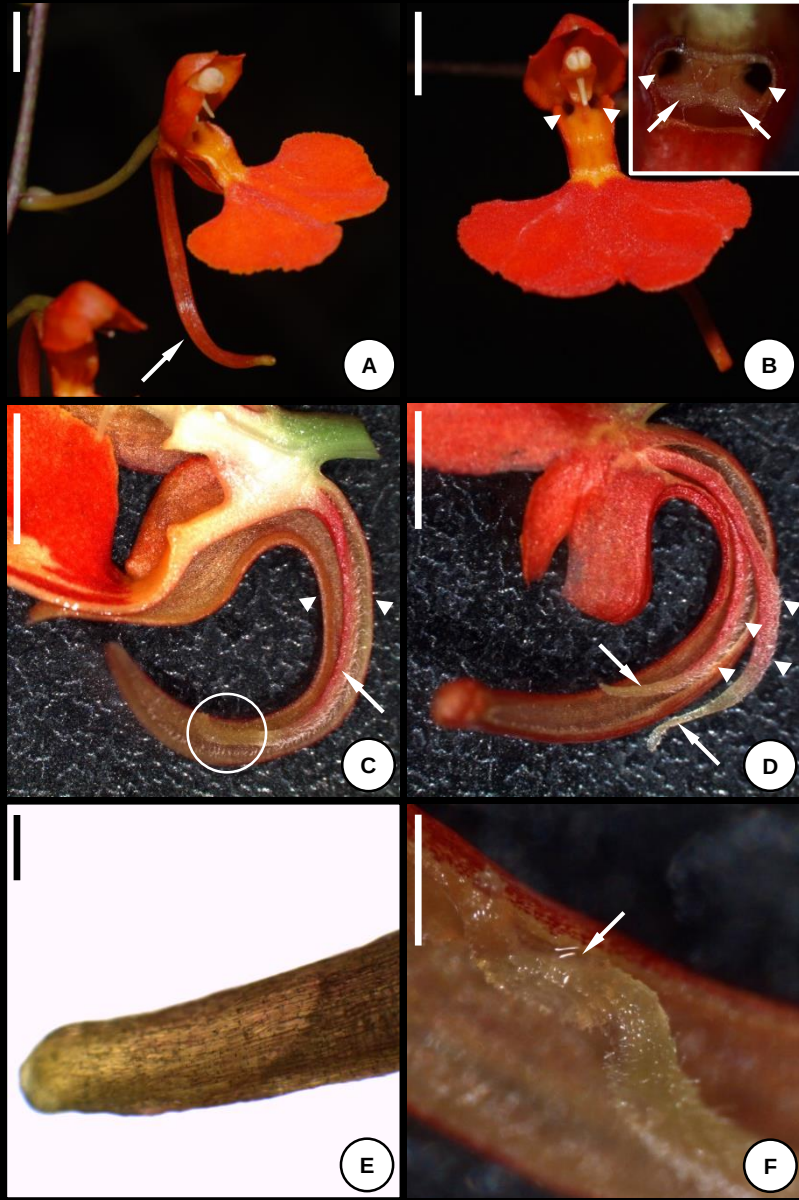


Nectários



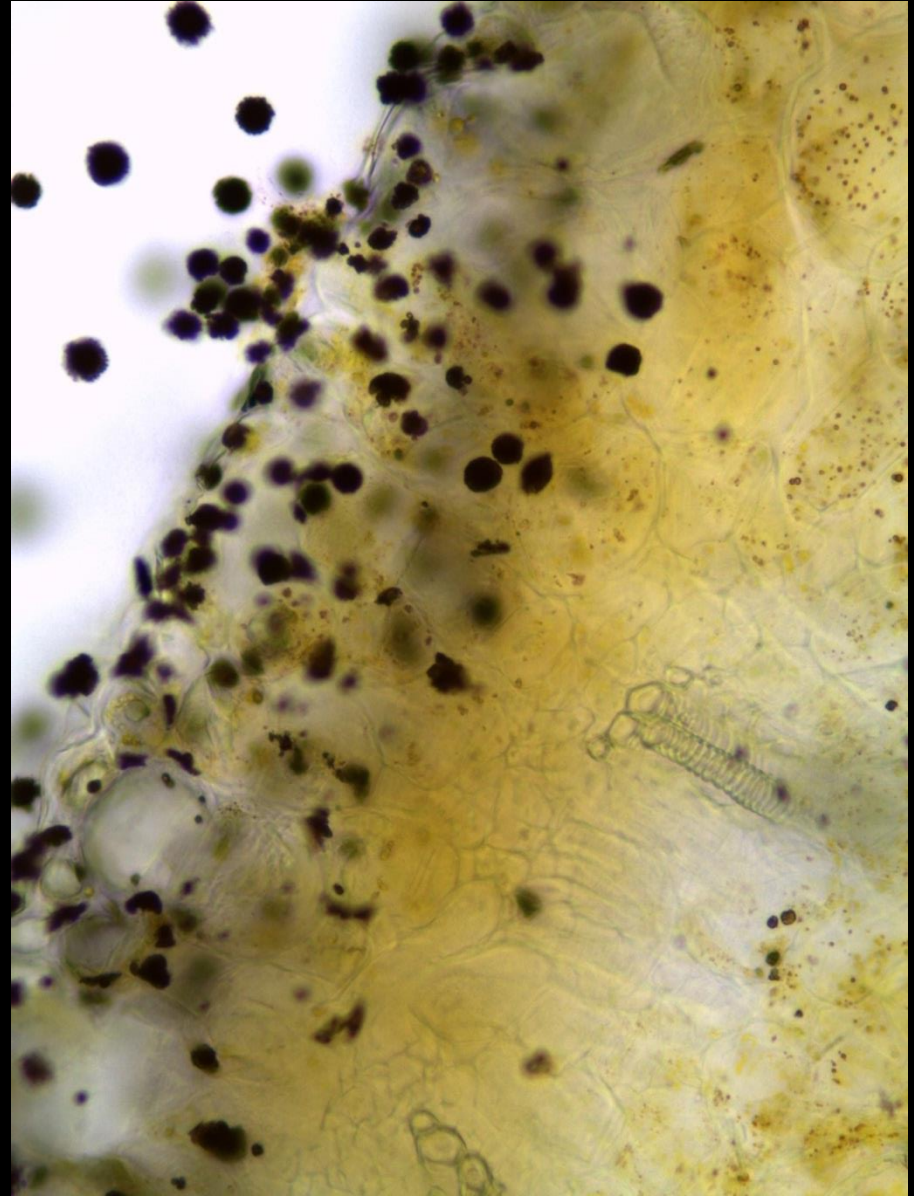
Comparettia coccinea



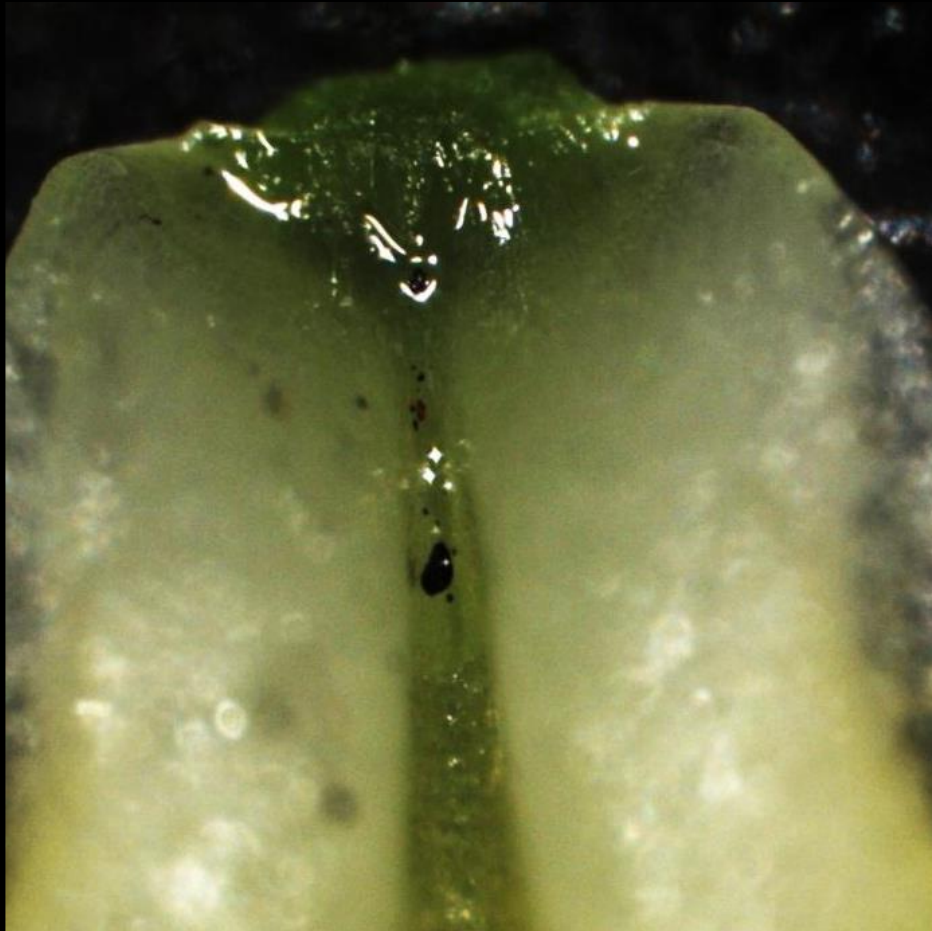


Comparettia coccinea

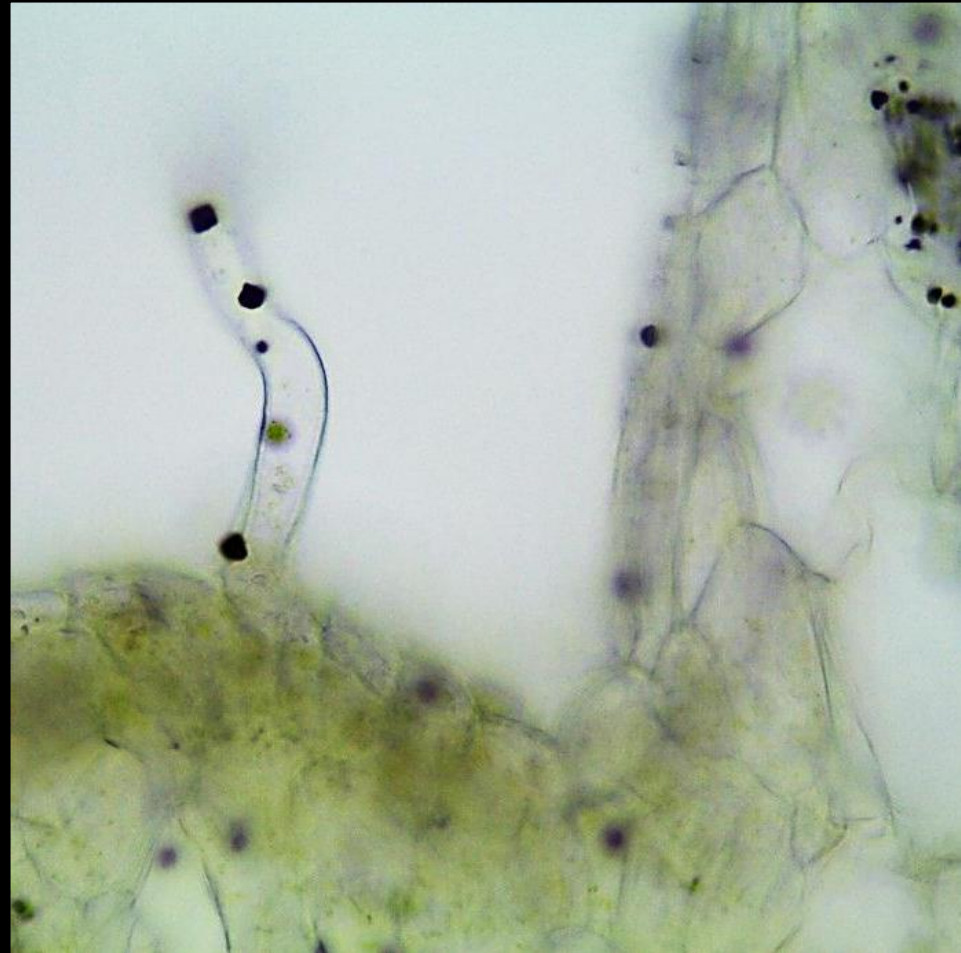
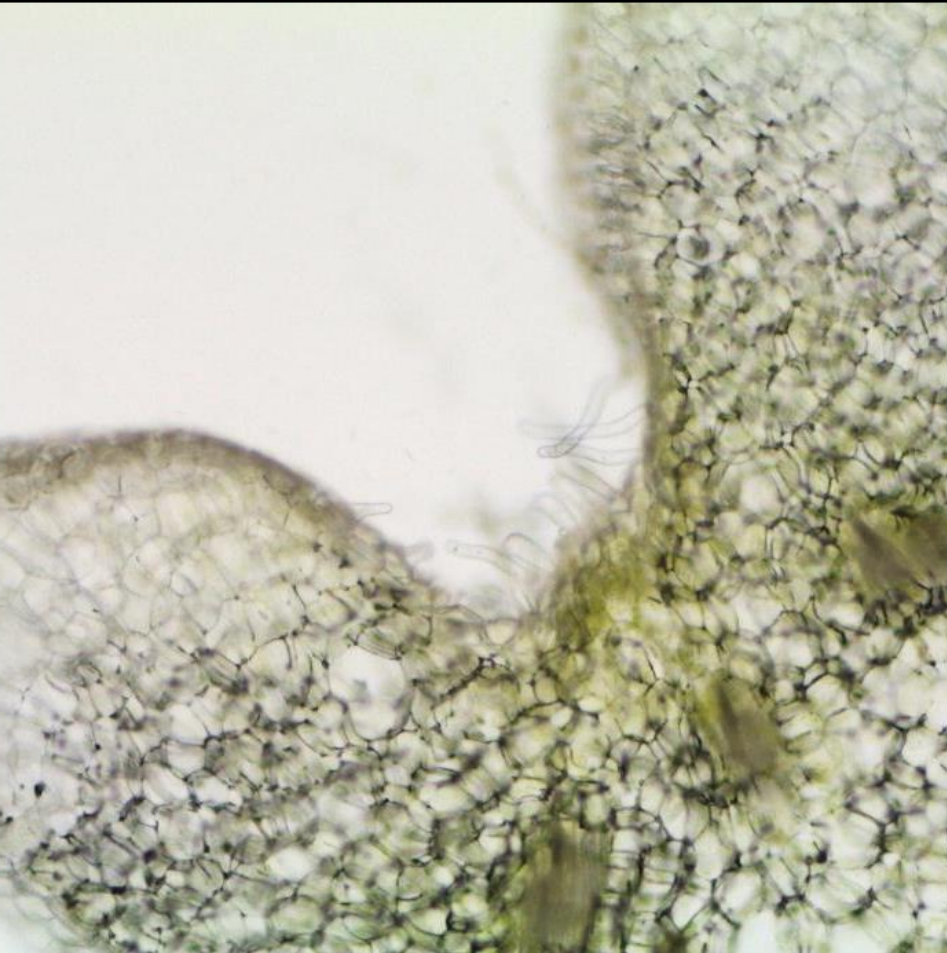
Reagente de Fehling - *C. coccinea*



Capanemia thereziae



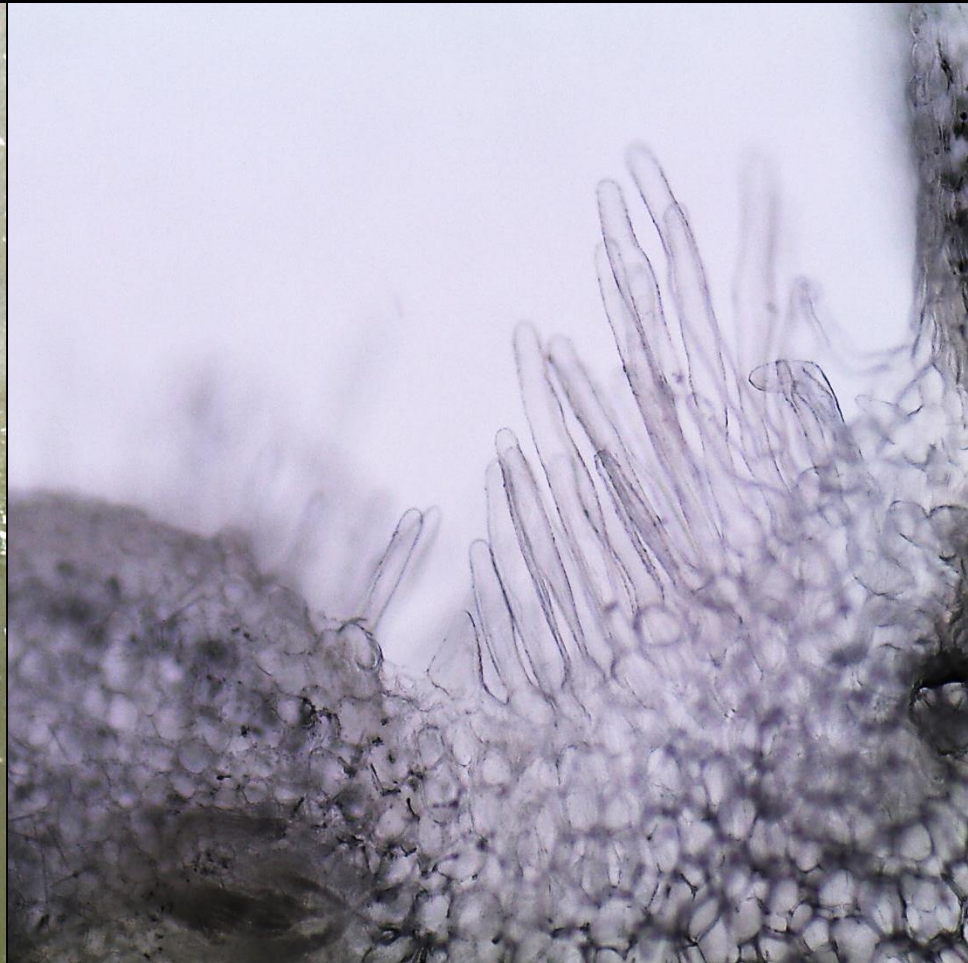
Capanemia thereziae



Rodriguezia venusta



Rodriguezia venusta



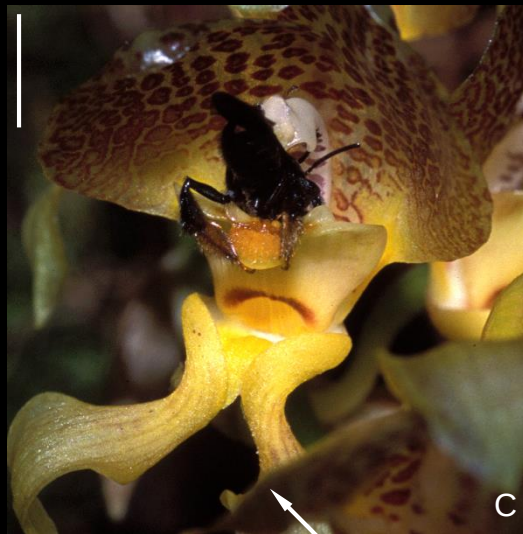
Óleo



Grobya amherstiae – *Paratetrapedia fervida*

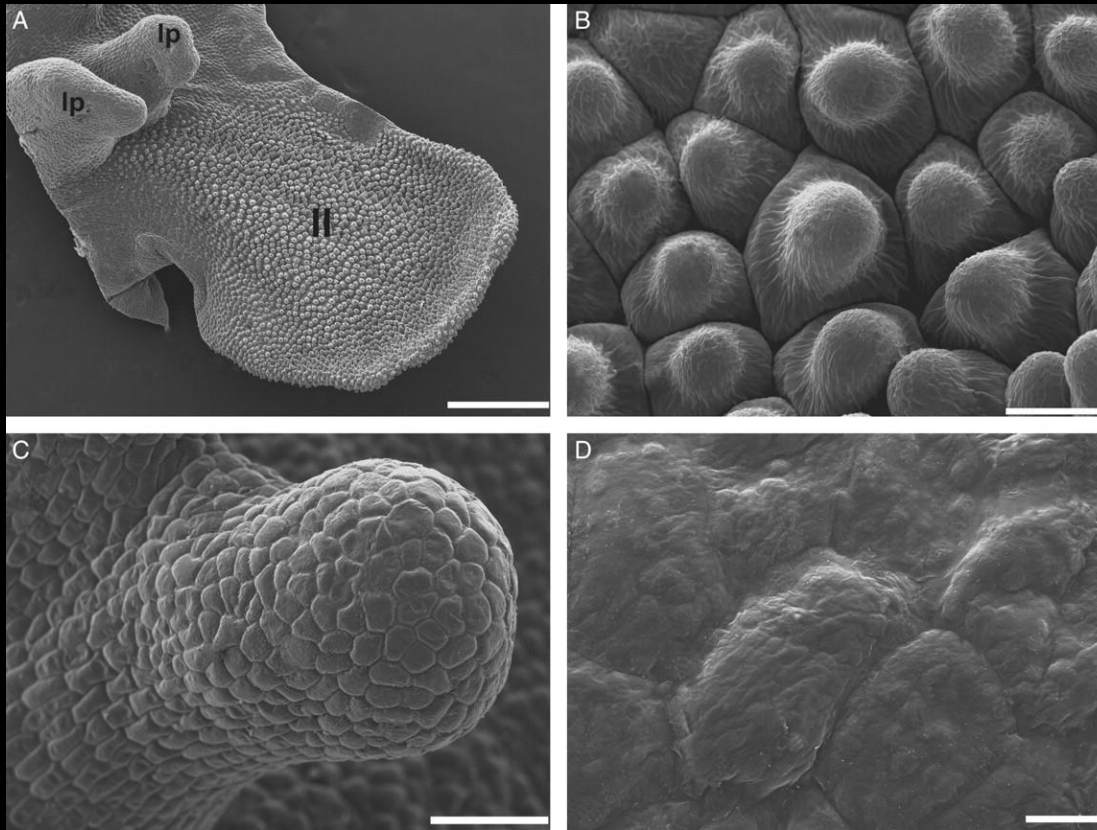
Elaioforos

Tricomáticos
Glandulares
Mistos
Lipídios
Ácidos graxos

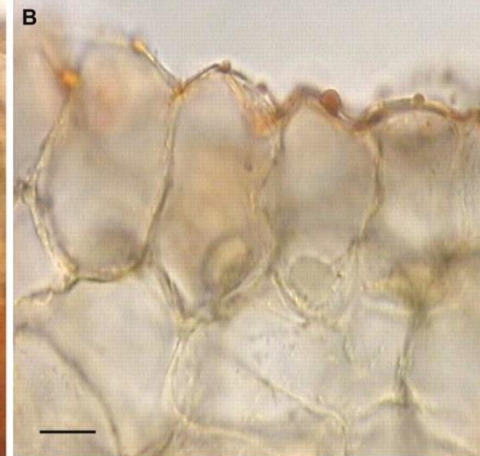


Óleo

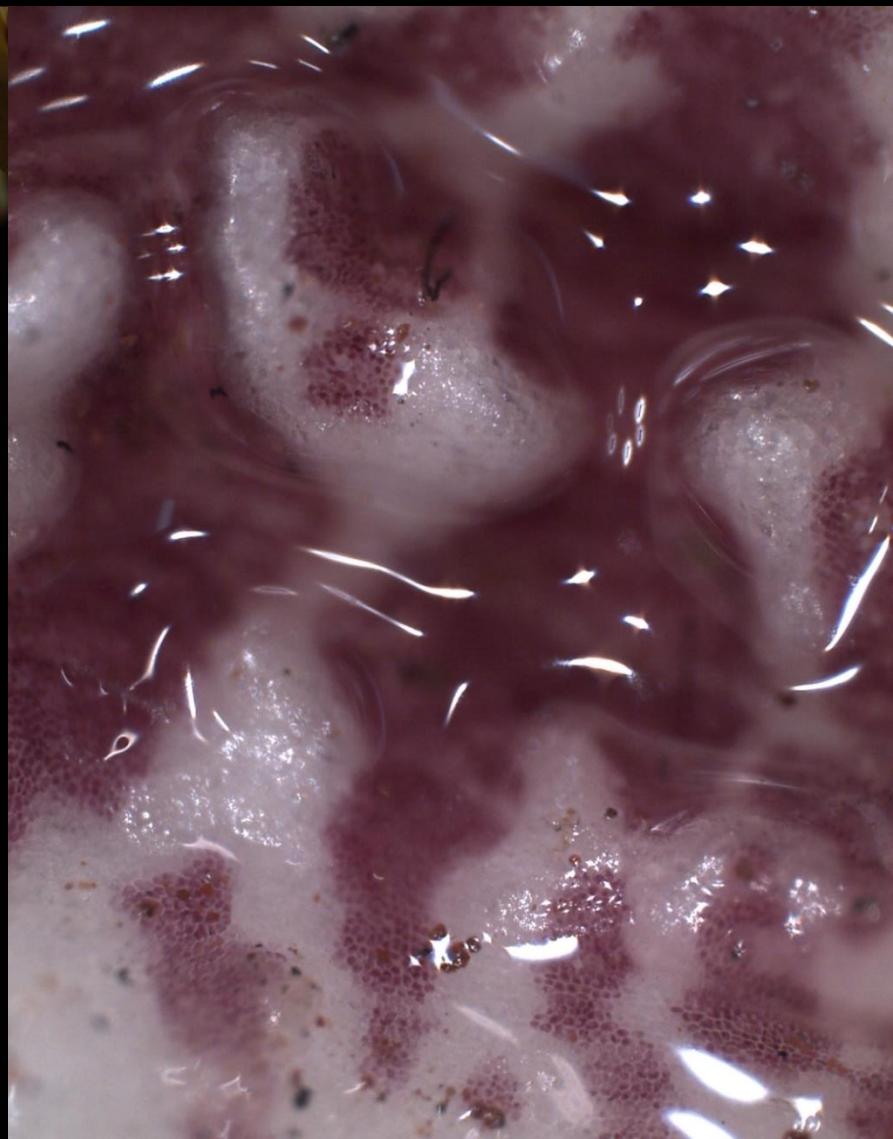
- ELAIÓFORO
- Epidérmicos, tricomáticos ou mistos



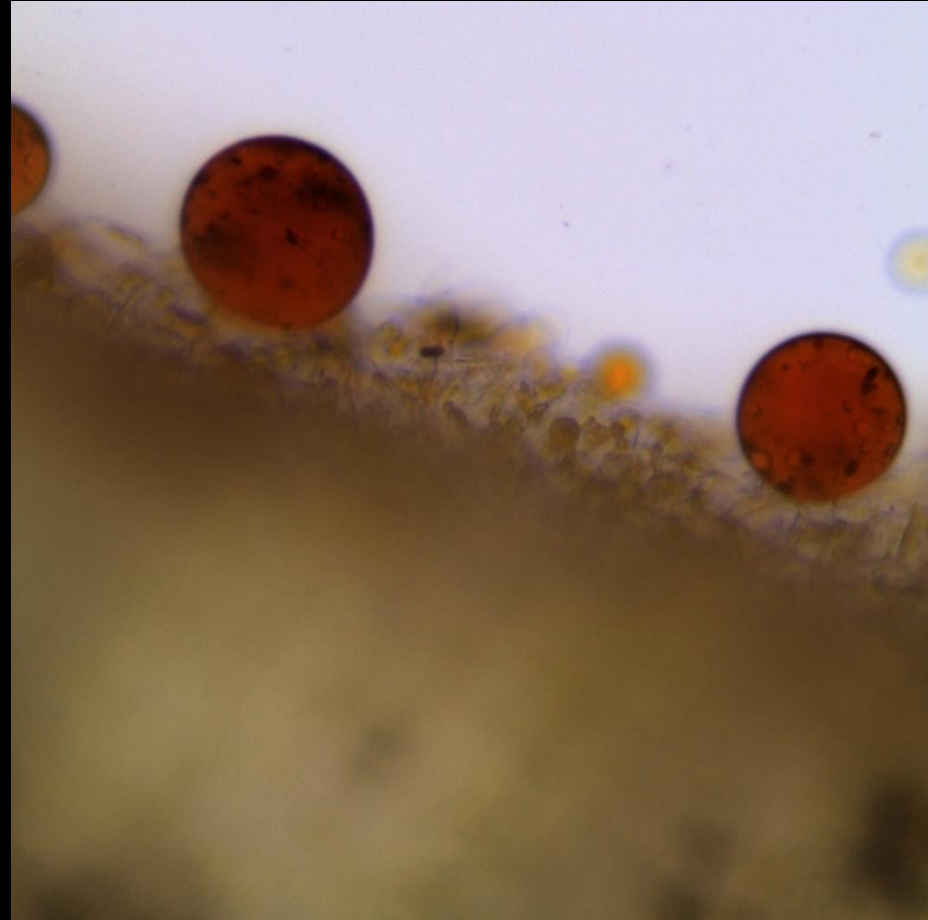
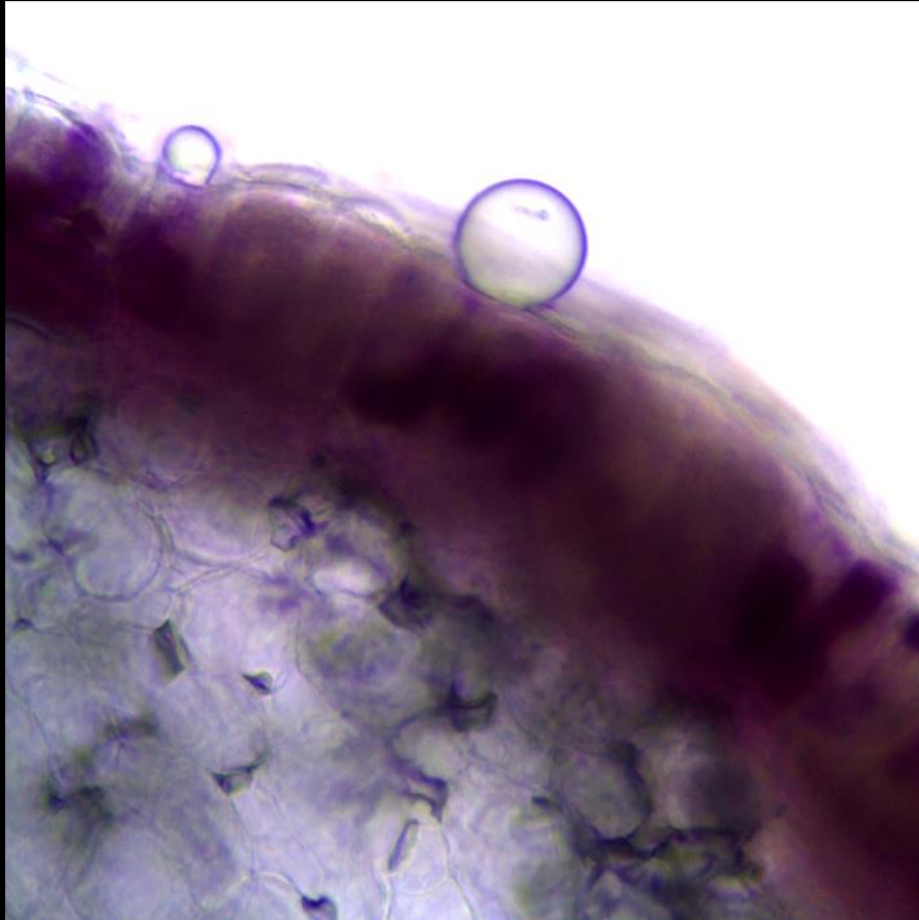
Rudolfiella picta



Baptistonia echinata



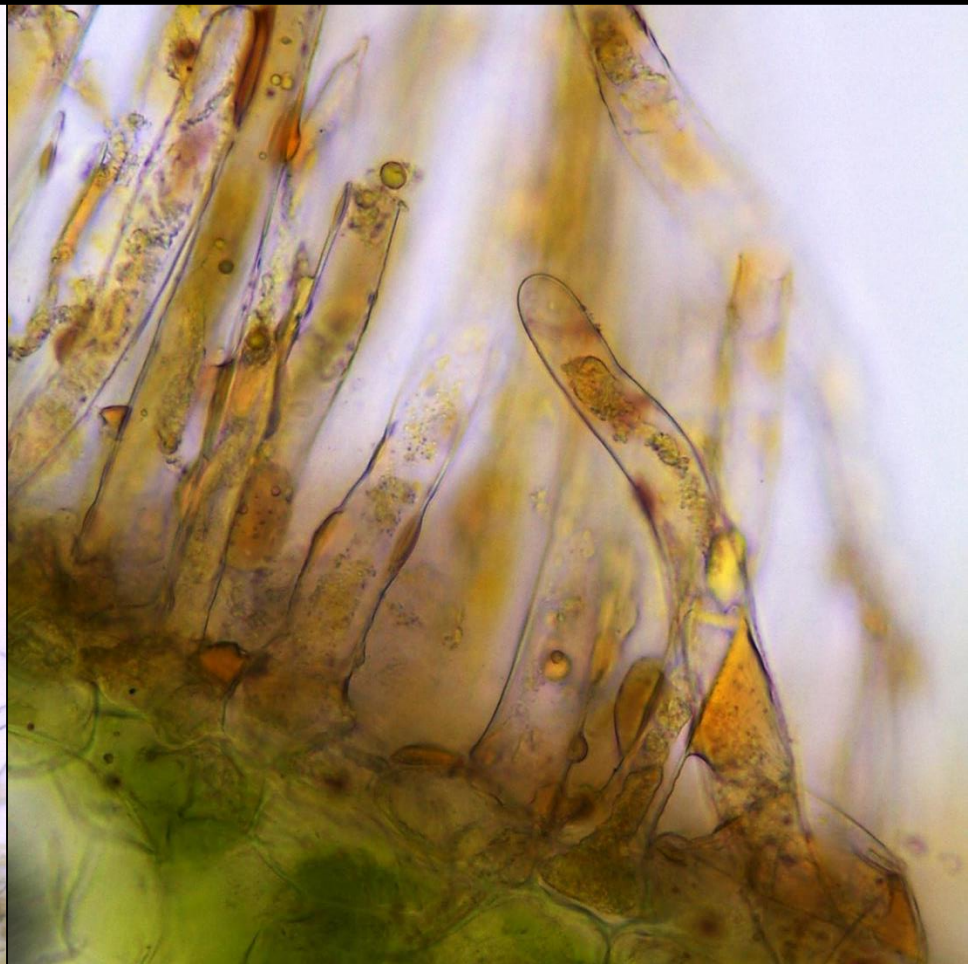
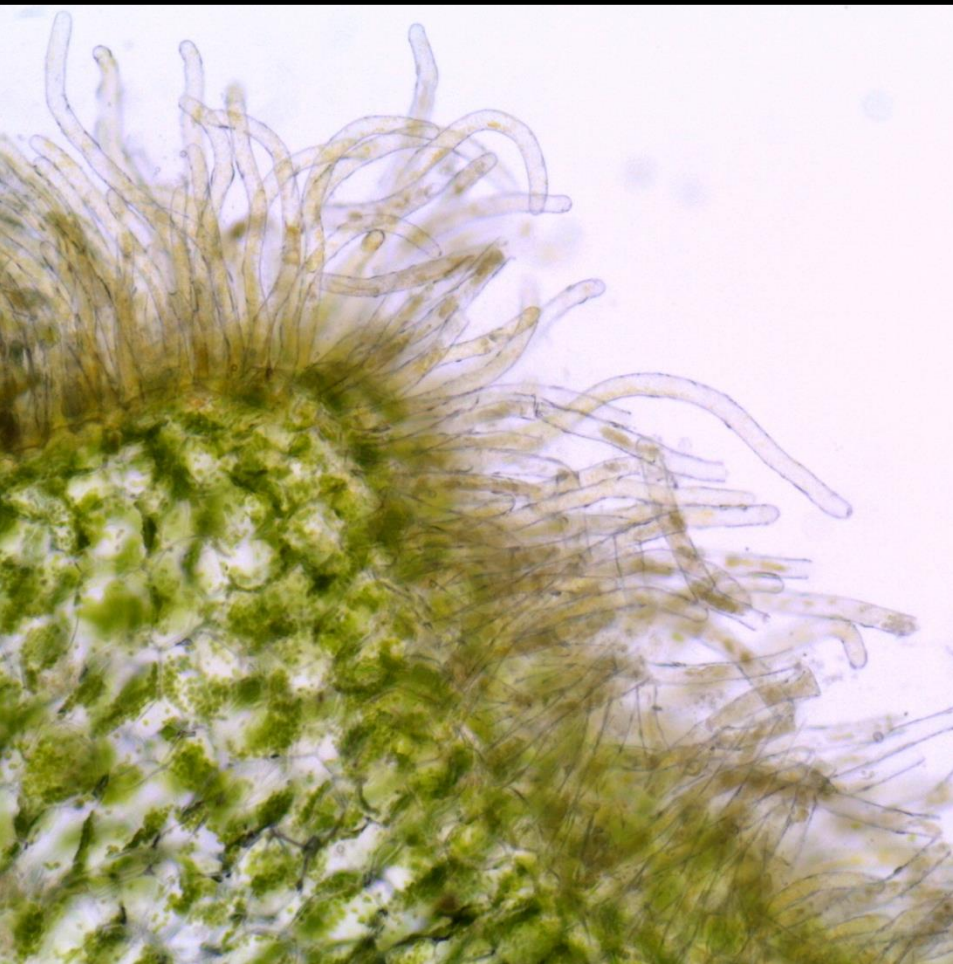
Baptistonia echinata



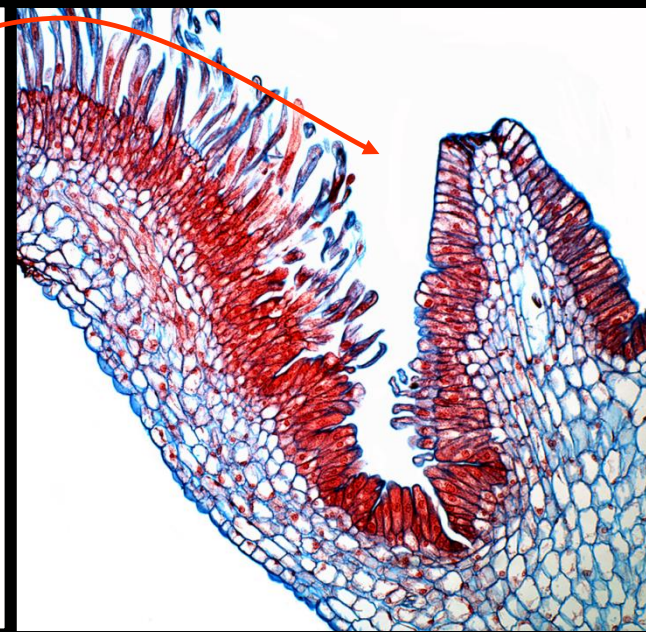
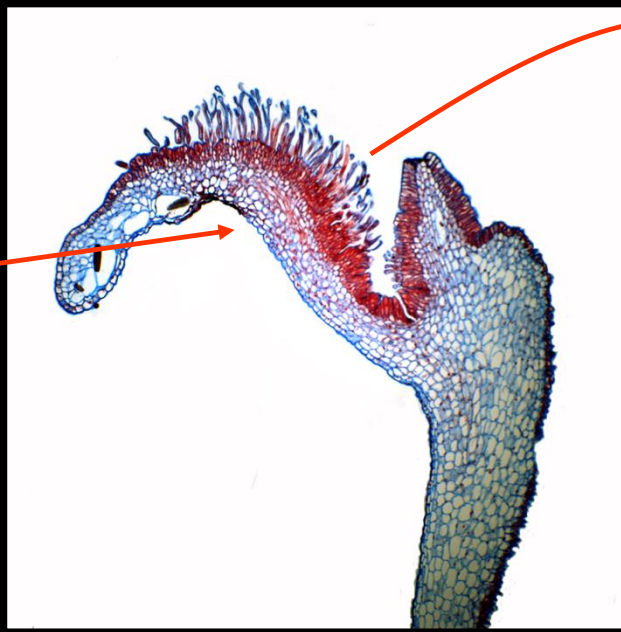
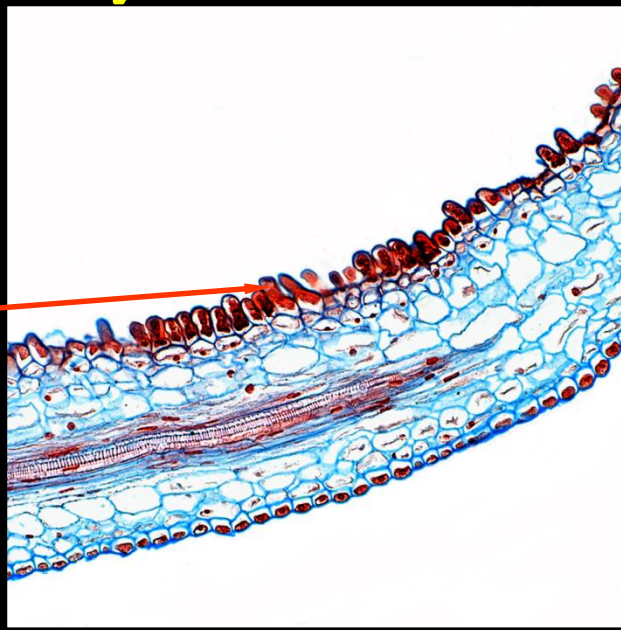
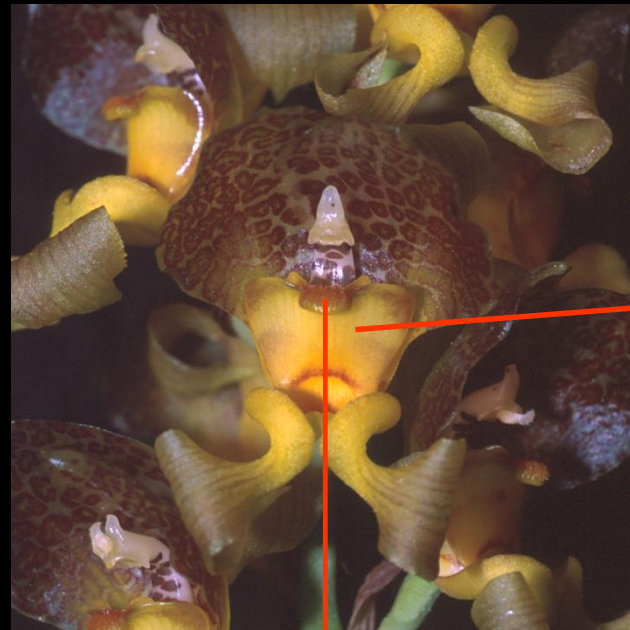
Zygostates alleniana



Zygostates alleniana



Grobya amherstiae

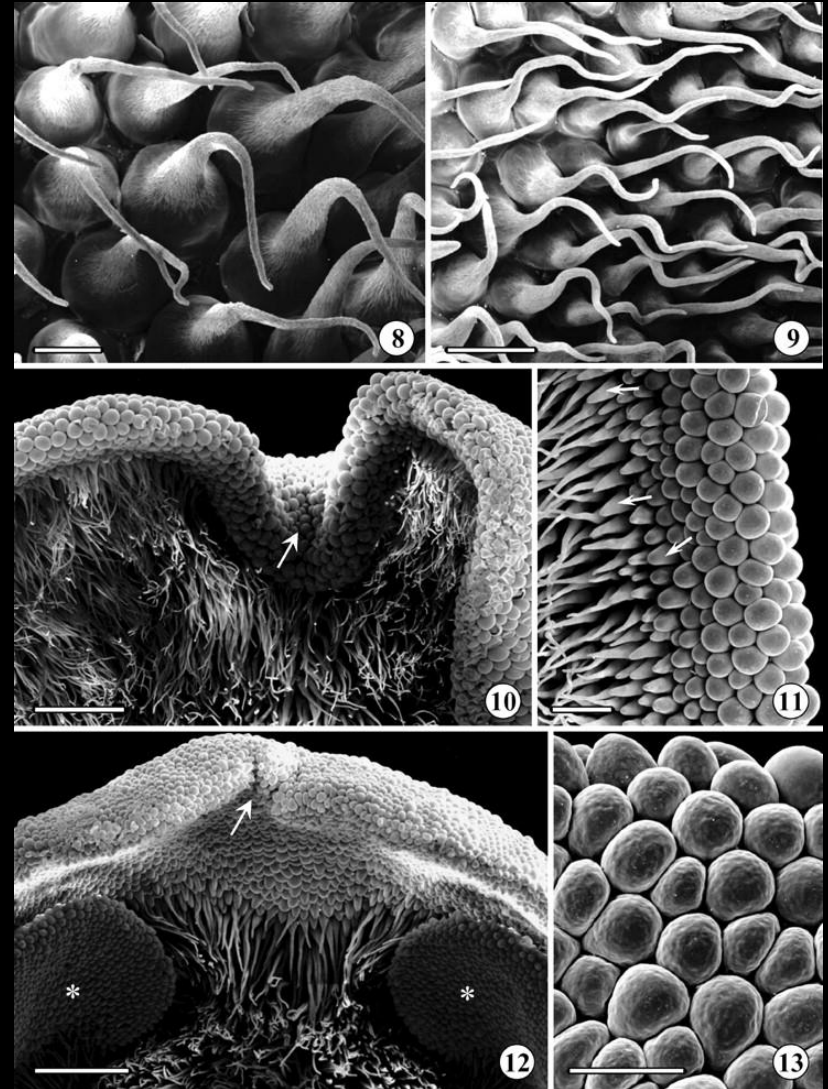


Fragrância



Fragrância

- OSMÓFORO
- Glandular
- Epidérmico
 - Tricomas
 - Lisos
 - Papilas



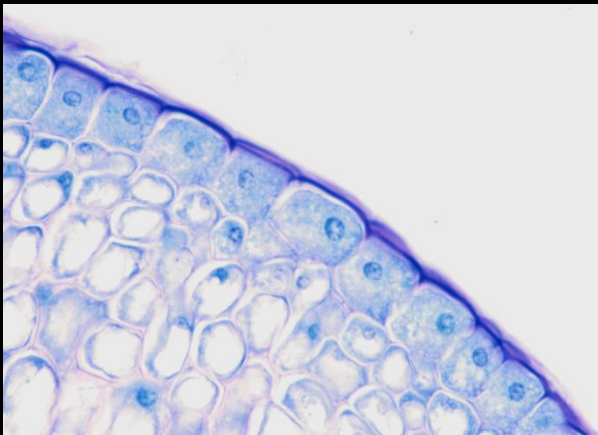
Osmoforos

Células

Conjunto de células

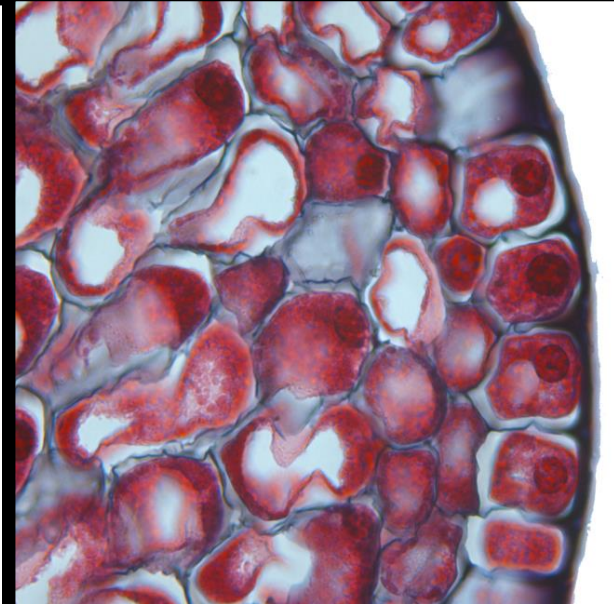
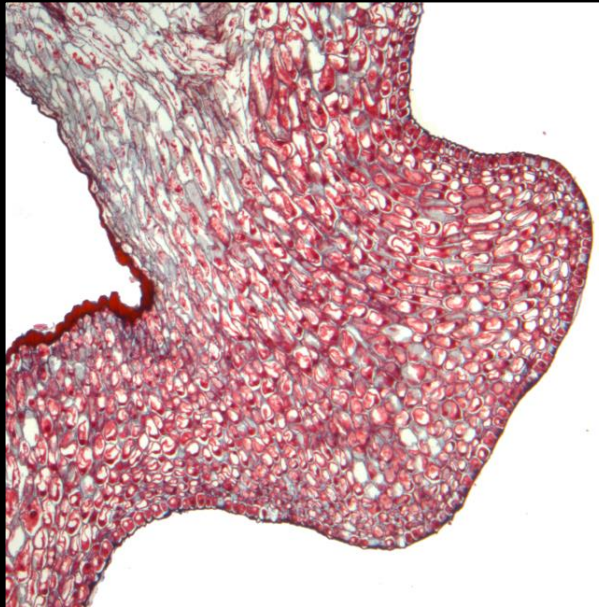
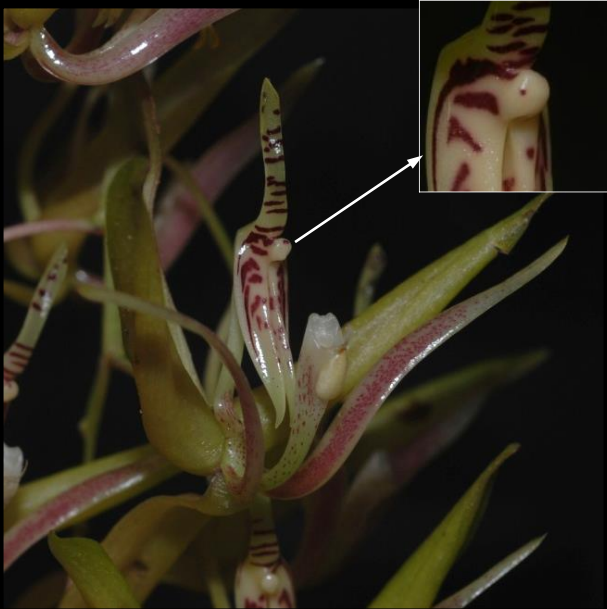
Atração

- Primaria
- Secundaria



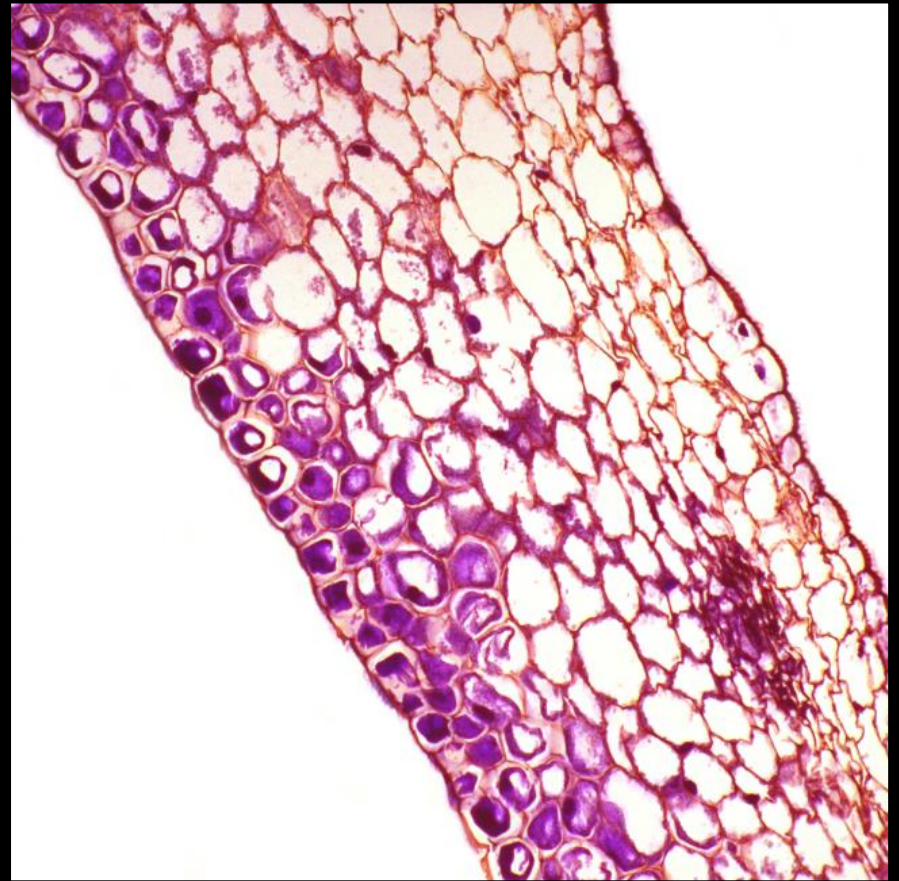
Cirrhaea dependens

- Glandular

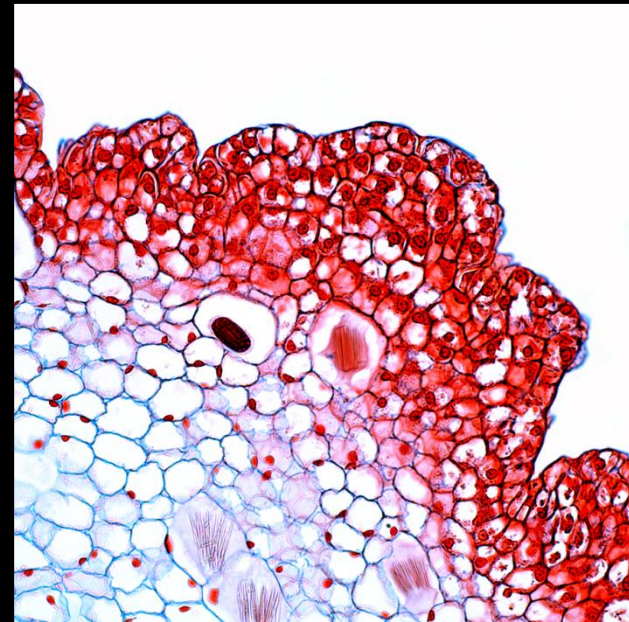


Cirrhaea loddigesii

- Difuso



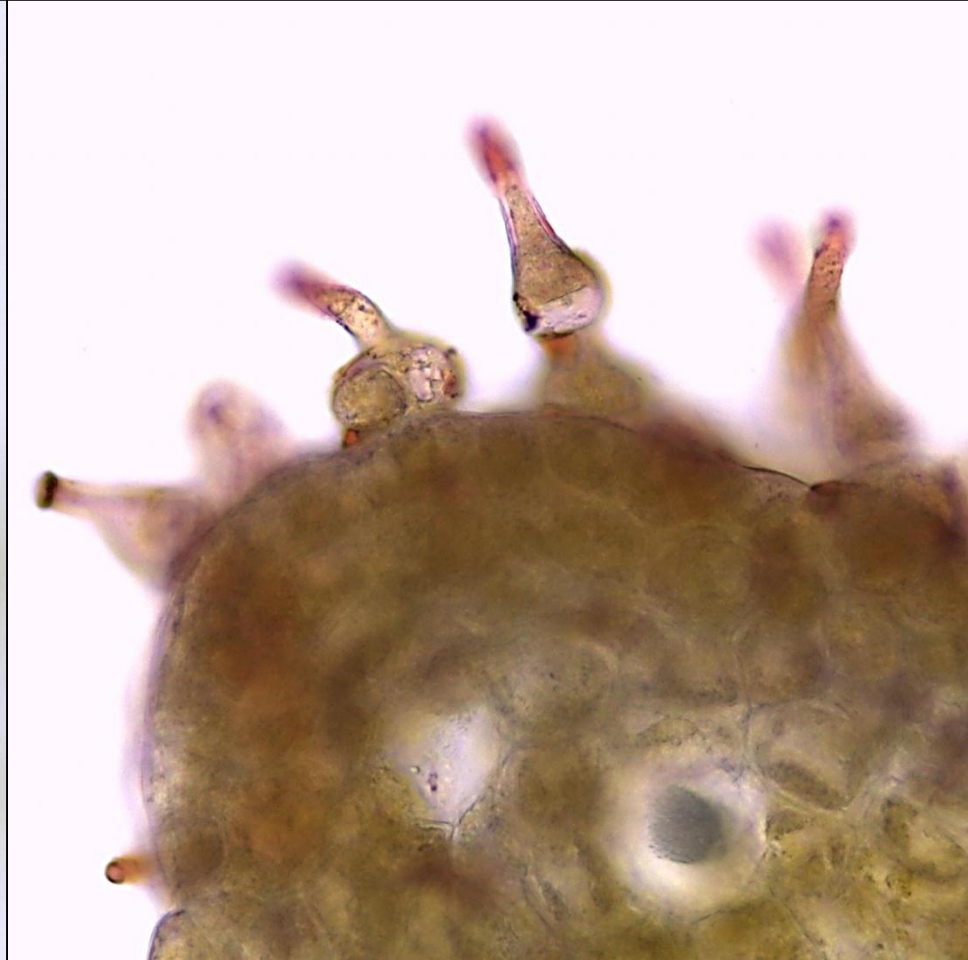
Cyrtopodium polyphyllum

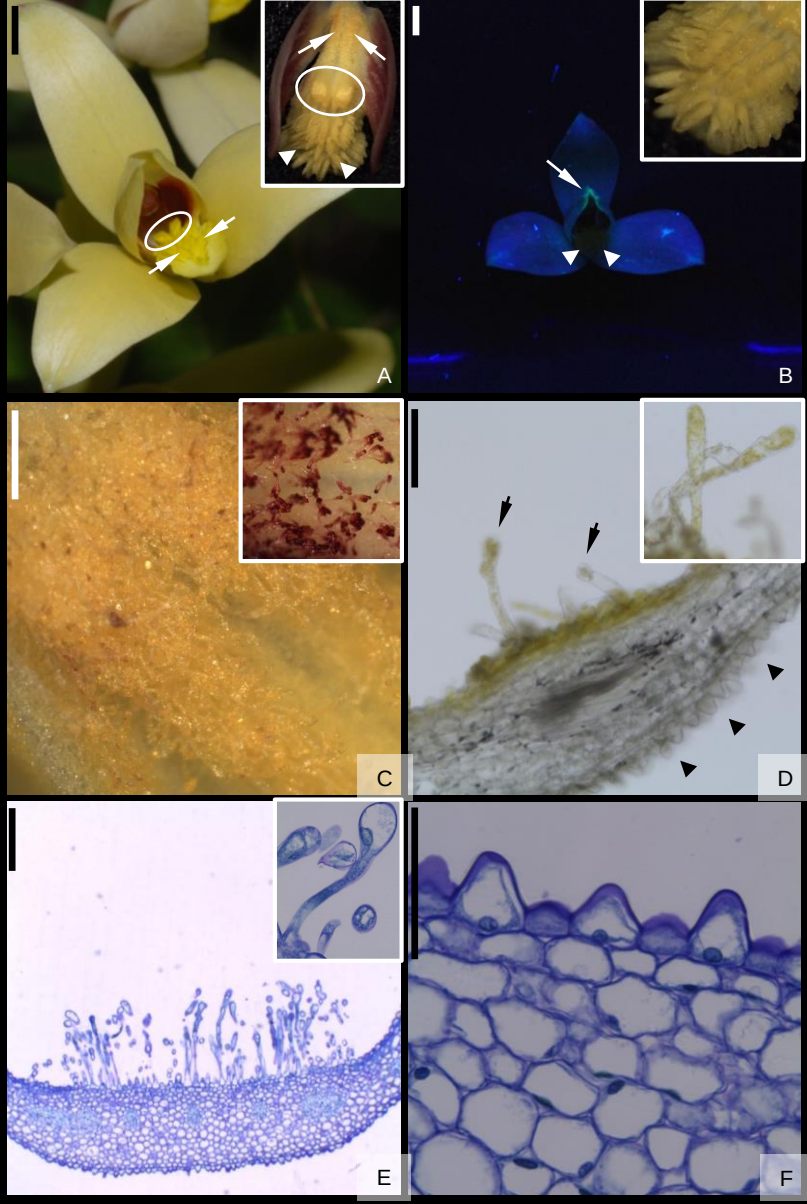


Notylia leucantha

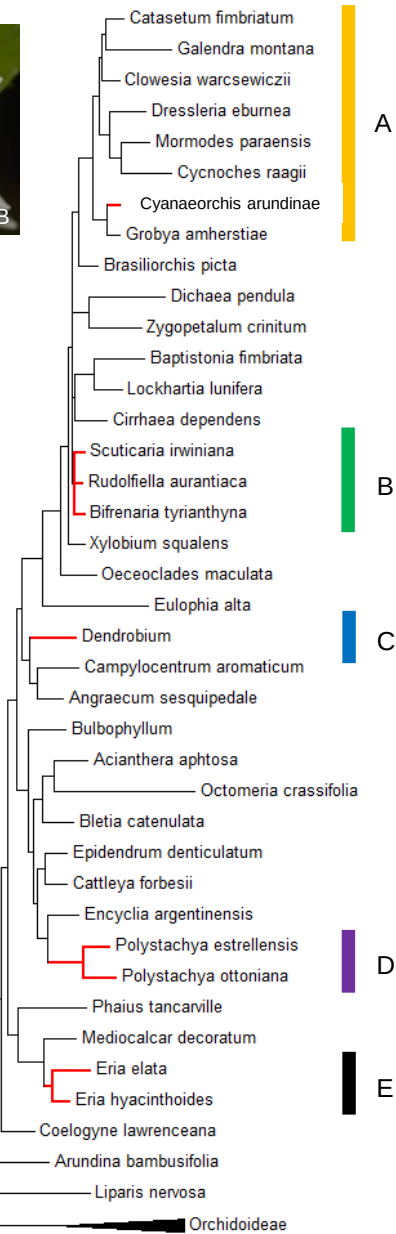


Notylia leucantha



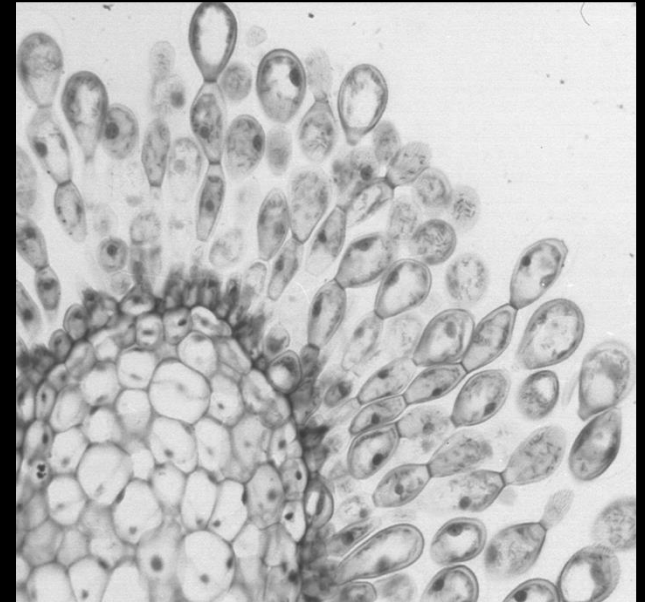


Tricomas comestiveis



0.02

Pseudópólen



Polystachya estrellensis – *Tetragonisca angustula*

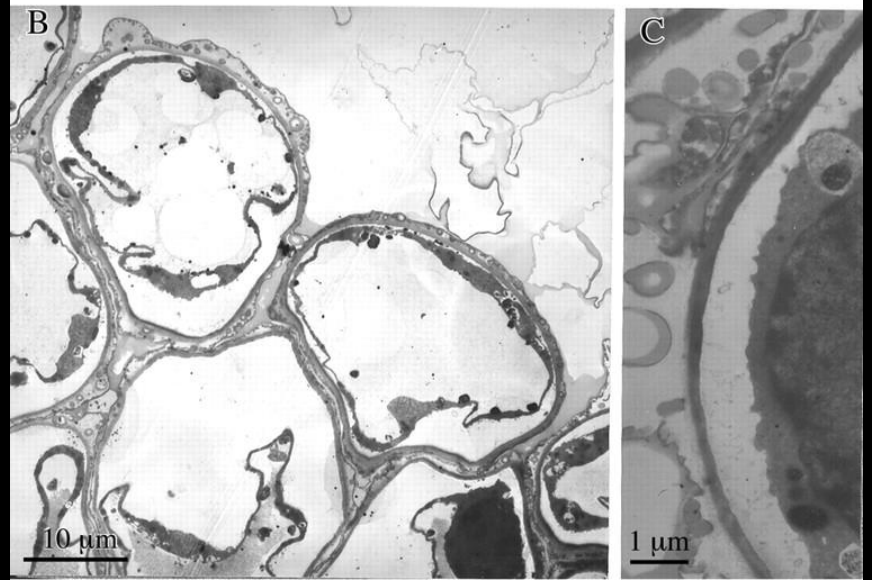
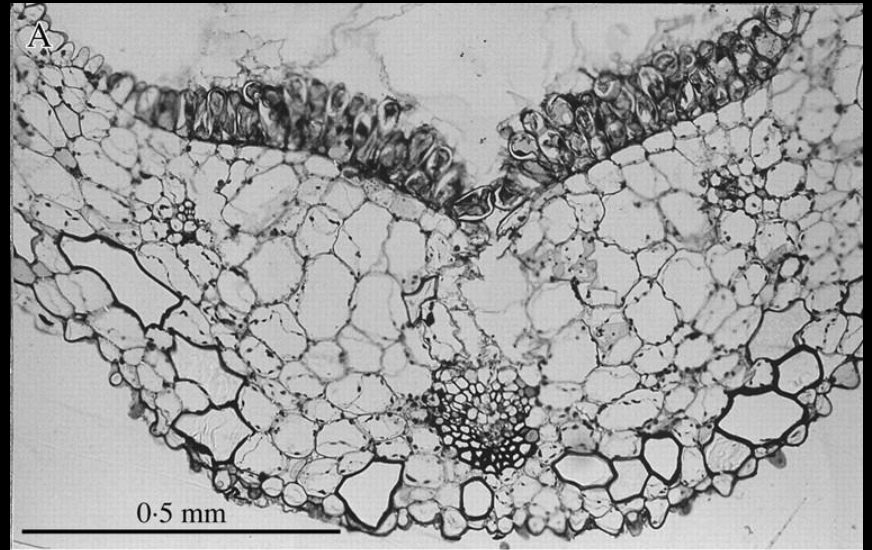
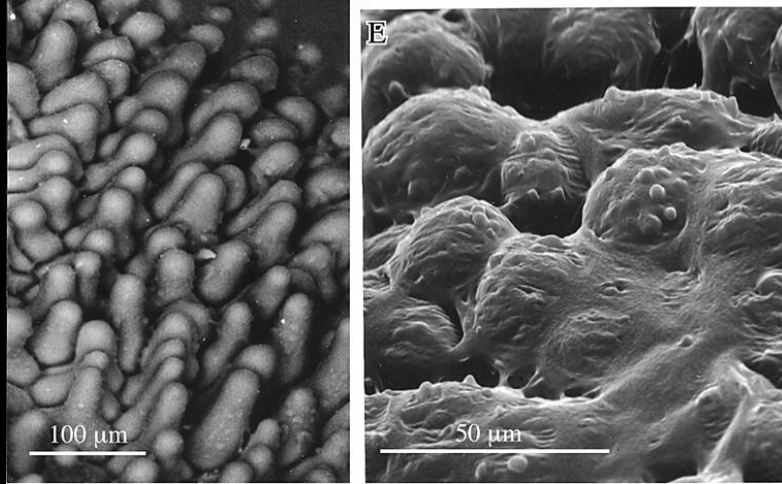
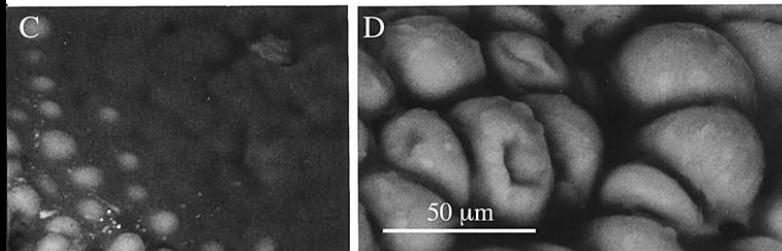
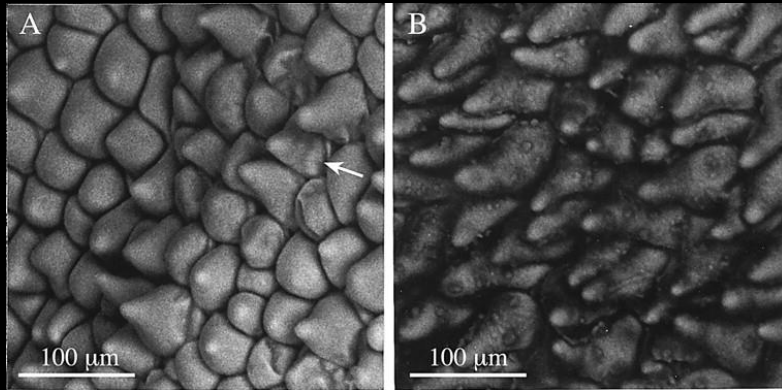
Resina



Resina

Maxillaria notylioglossa

Maxillaria notylioglossa



Engano - comida

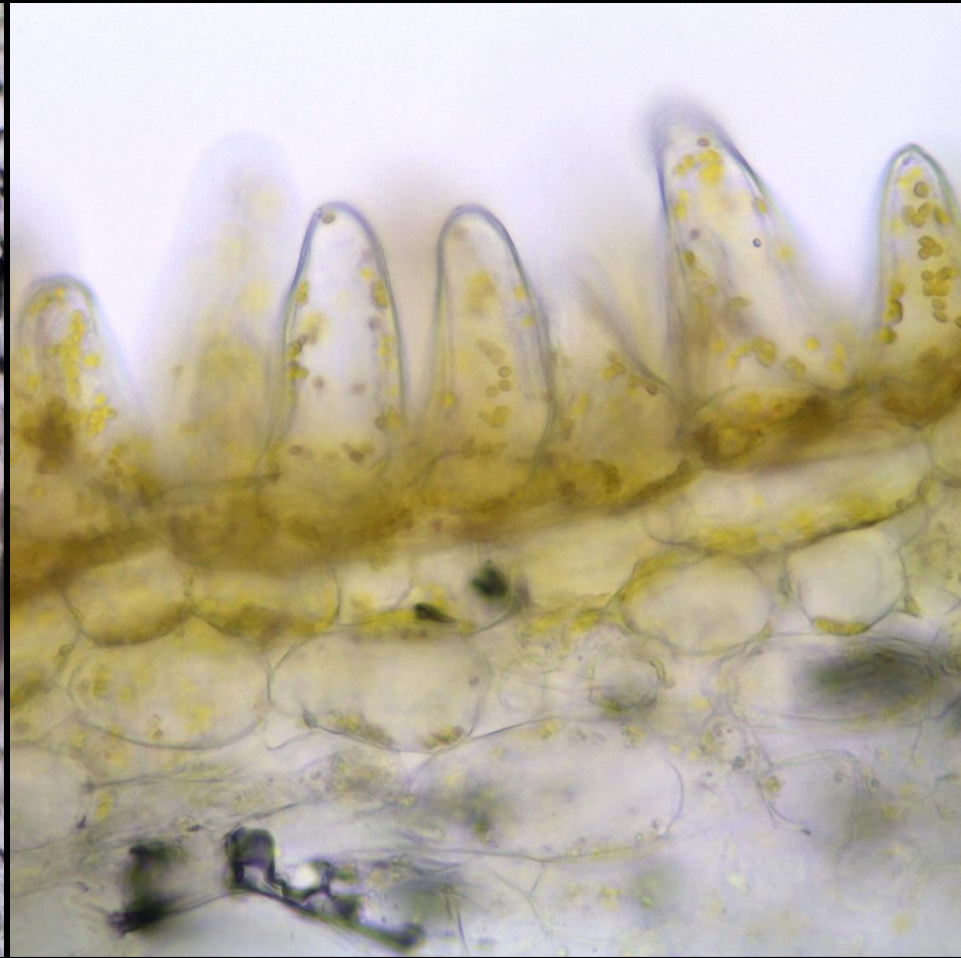
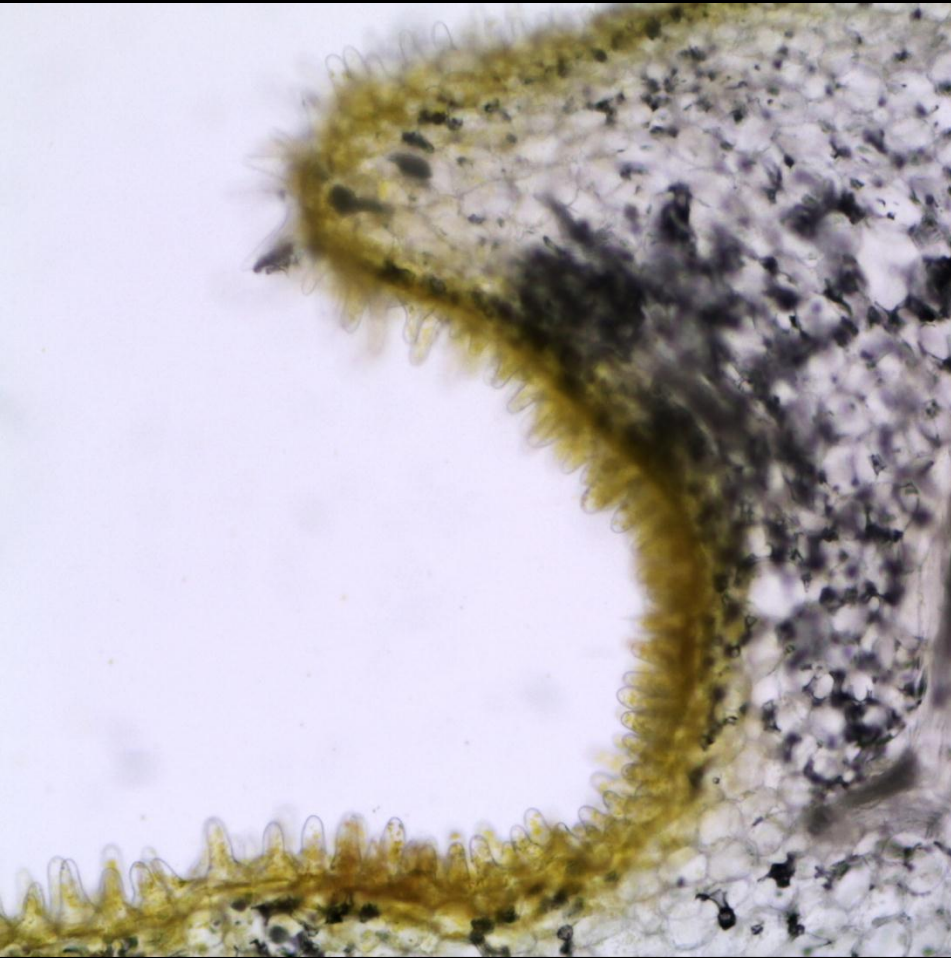


Cyrtopodium polyphyllum

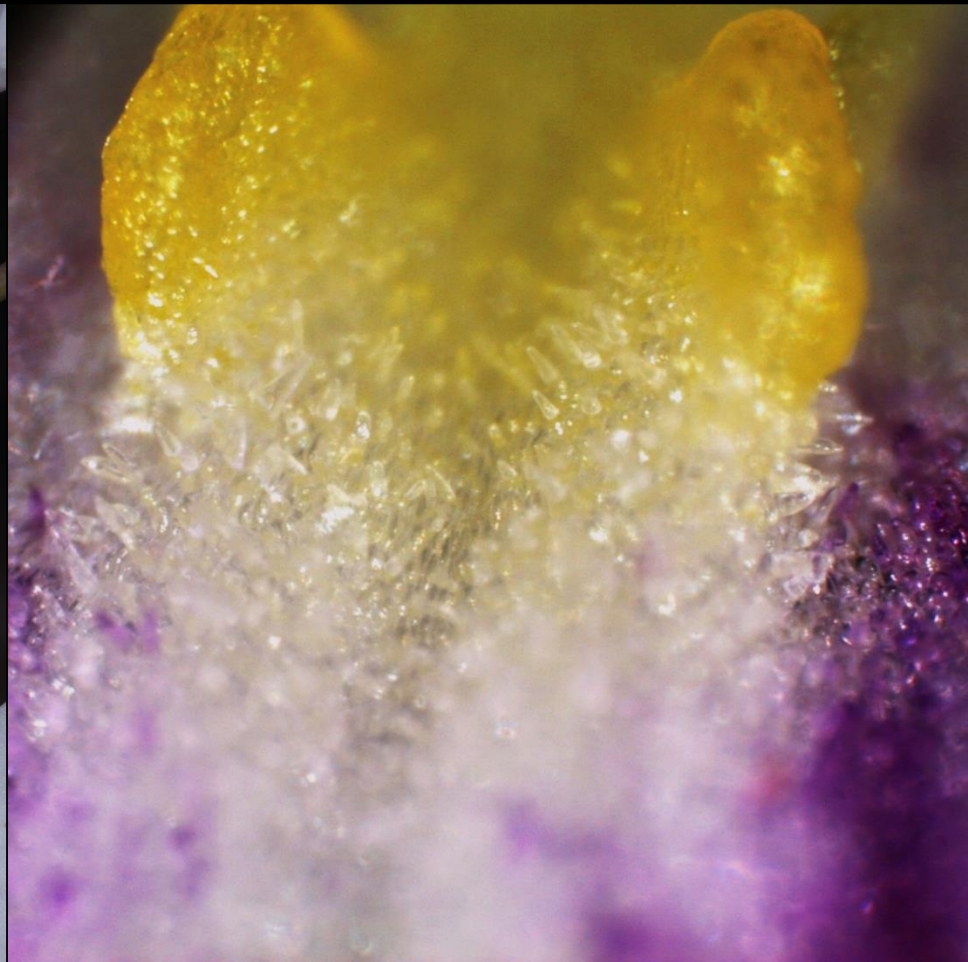
Alatiglossum barbatum



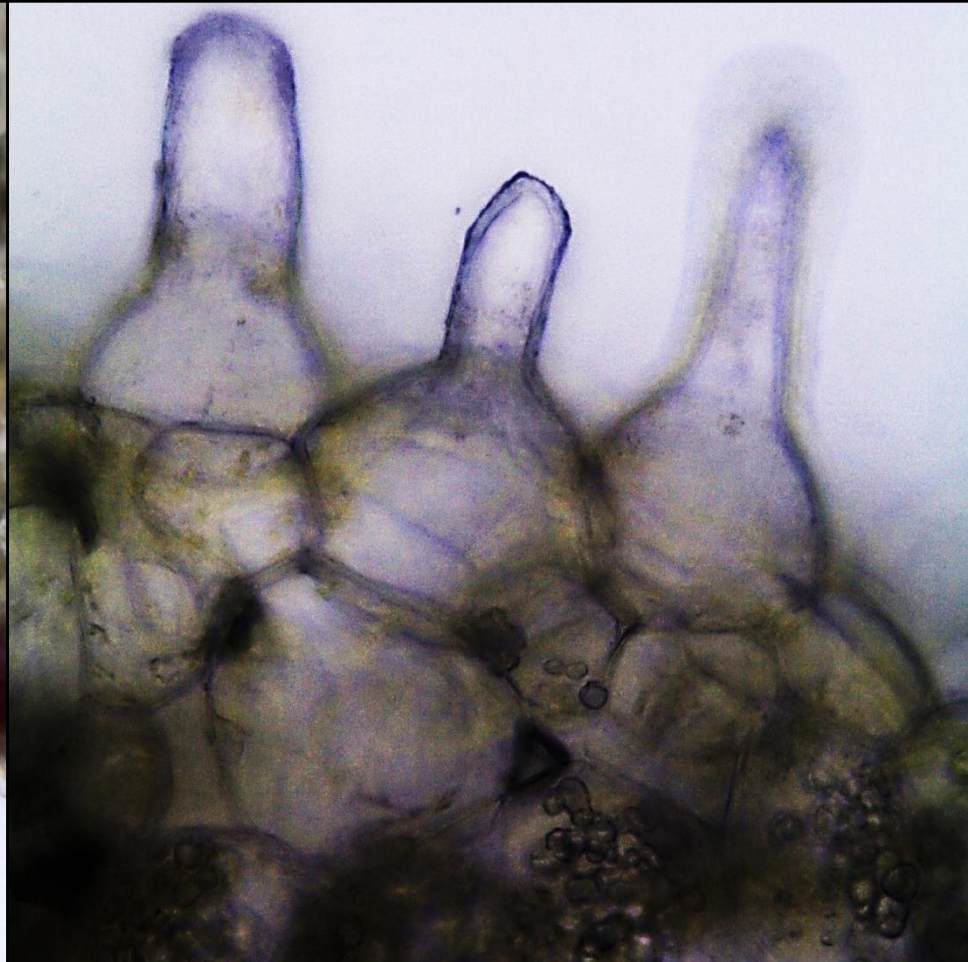
Alatiglossum barbatum



Ionopsis utriculariodes



Ionopsis utriculariodes



Engano sexual



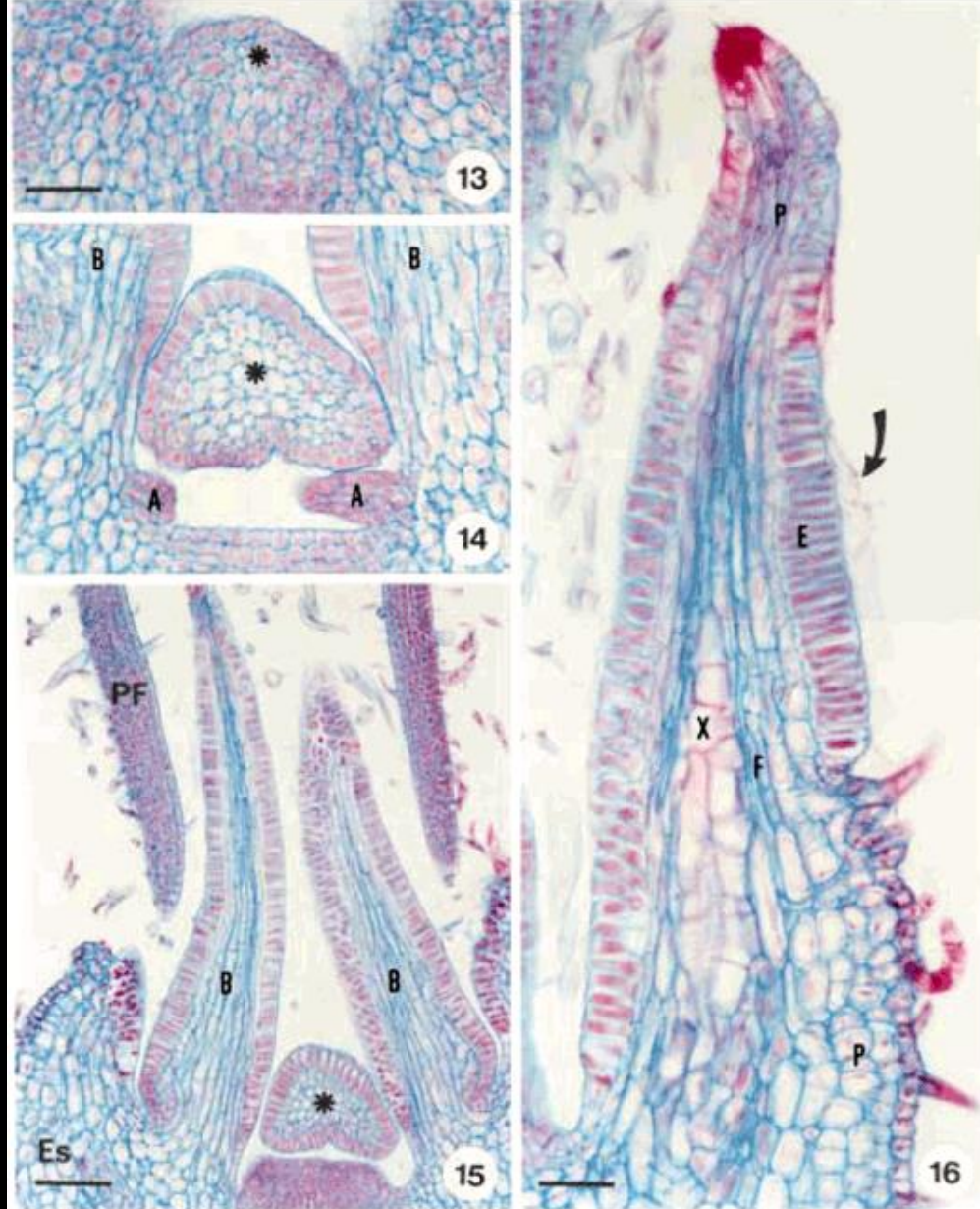
Ophrys catalaunica, *Chalicodoma pyrenaica*

Engano sexual

Vídeo – Polinização de *Ophrys*

Estruturas vegetativas

Coléteres



Figuras 13-16. Cortes longitudinais do segundo nó. 13. Coléter central (*) em diferenciação; 14. Pedúnculo do coléter central (*) e base dos primeiros (A) e segundos (B) coléteres. 15-16. Coléteres em seu maior comprimento; secreção acidófila nas células epidérmicas em paliçada e no meio extracelular (seta curva). 15. Segundos coléteres (B); 16. Quarto coléter(D) com tricomas multicelulares tectores e vascularização. E = epiderme; Es = estípula; F = floema; P = parênquima; PF = primórdio foliar; X = xilema. Barras = 50 µm (figuras 13,14,16), 100 µm (figura 15).

Coléteres

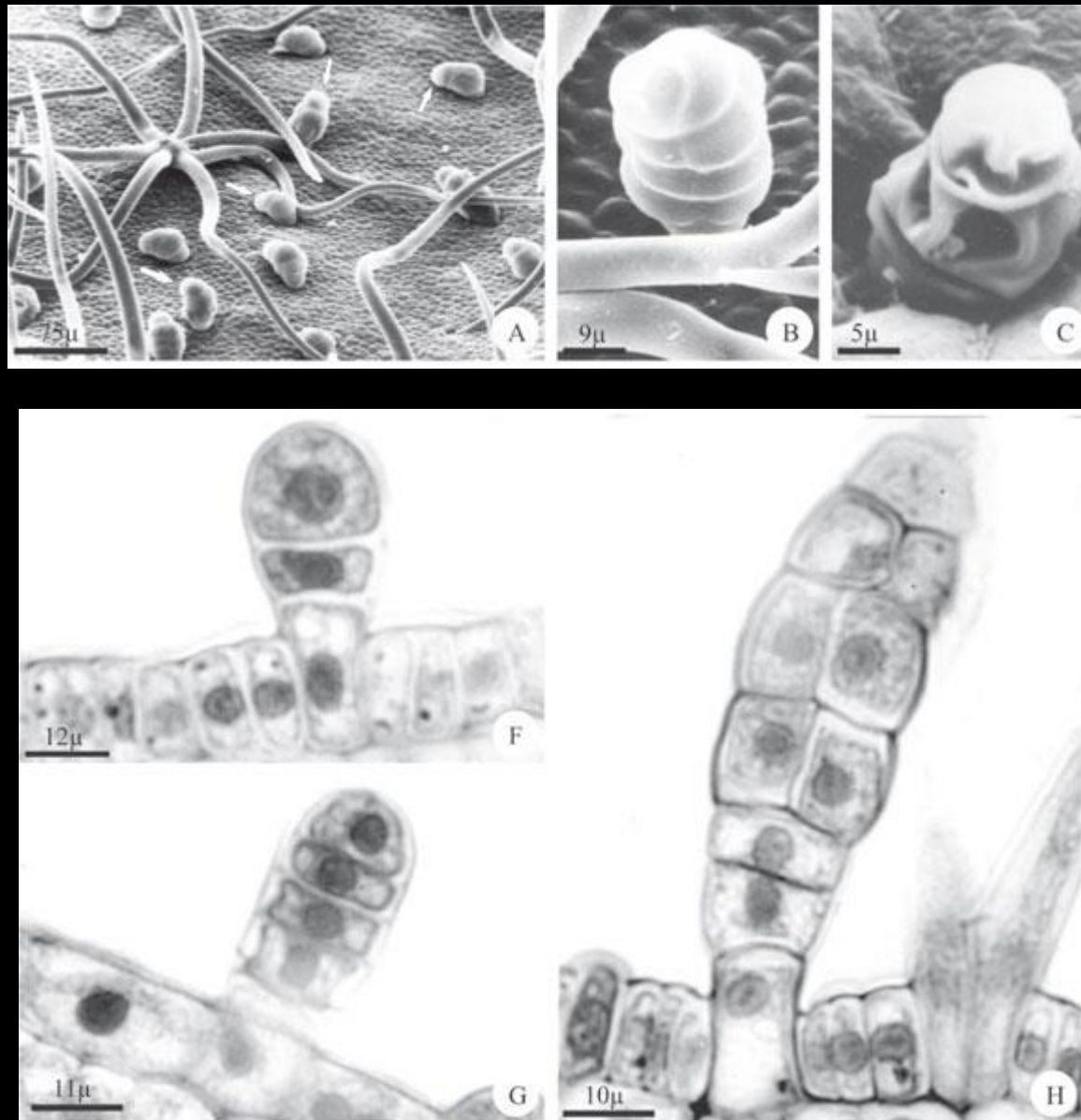


Figura 1. Coléteres. A-C. Elettromicrografia a (MEV). A. Vista frontal da face adaxial da folha jovem mostrando distribuição dos coléteres (setas). B. Detalhe de um coléter. C. Coléter em processo de senescência. D-G. Seções transversais do terço médio da folha em microscopia de luz mostrando ontogênese dos coléteres. D. Célula protodérmica precursora. E. Célula precursora em divisão periclinal inicial. F. Coléter jovem com três células. G. Coléter jovem com células em divisão unicamente no plano periclinal. H. Coléter adulto mostrando estrutura multicelular.

Glândulas digestivas

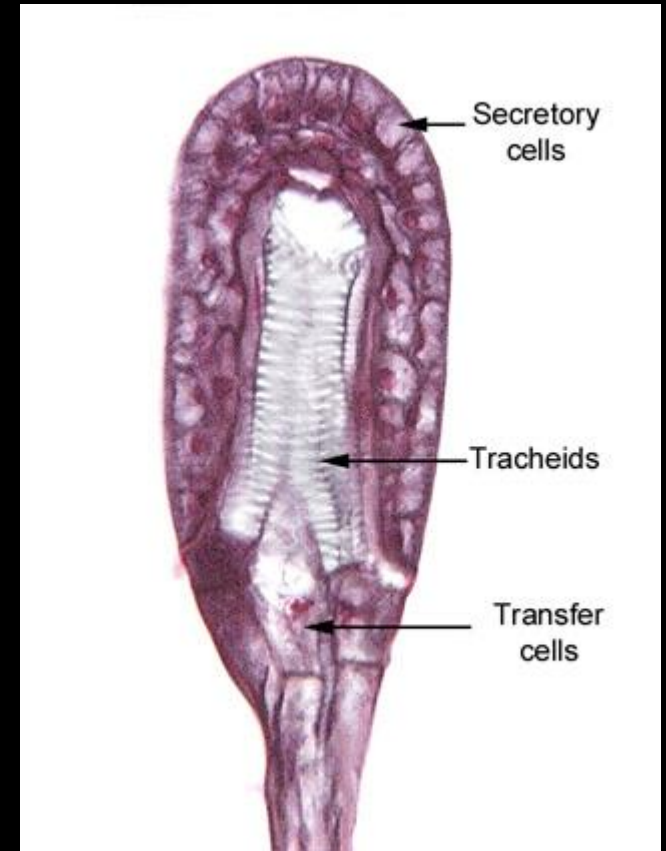
Plantas carnívoras

Dionaea, *Nepenthes*, *Drosera* ...

Secreção - Enzimas

Absorção

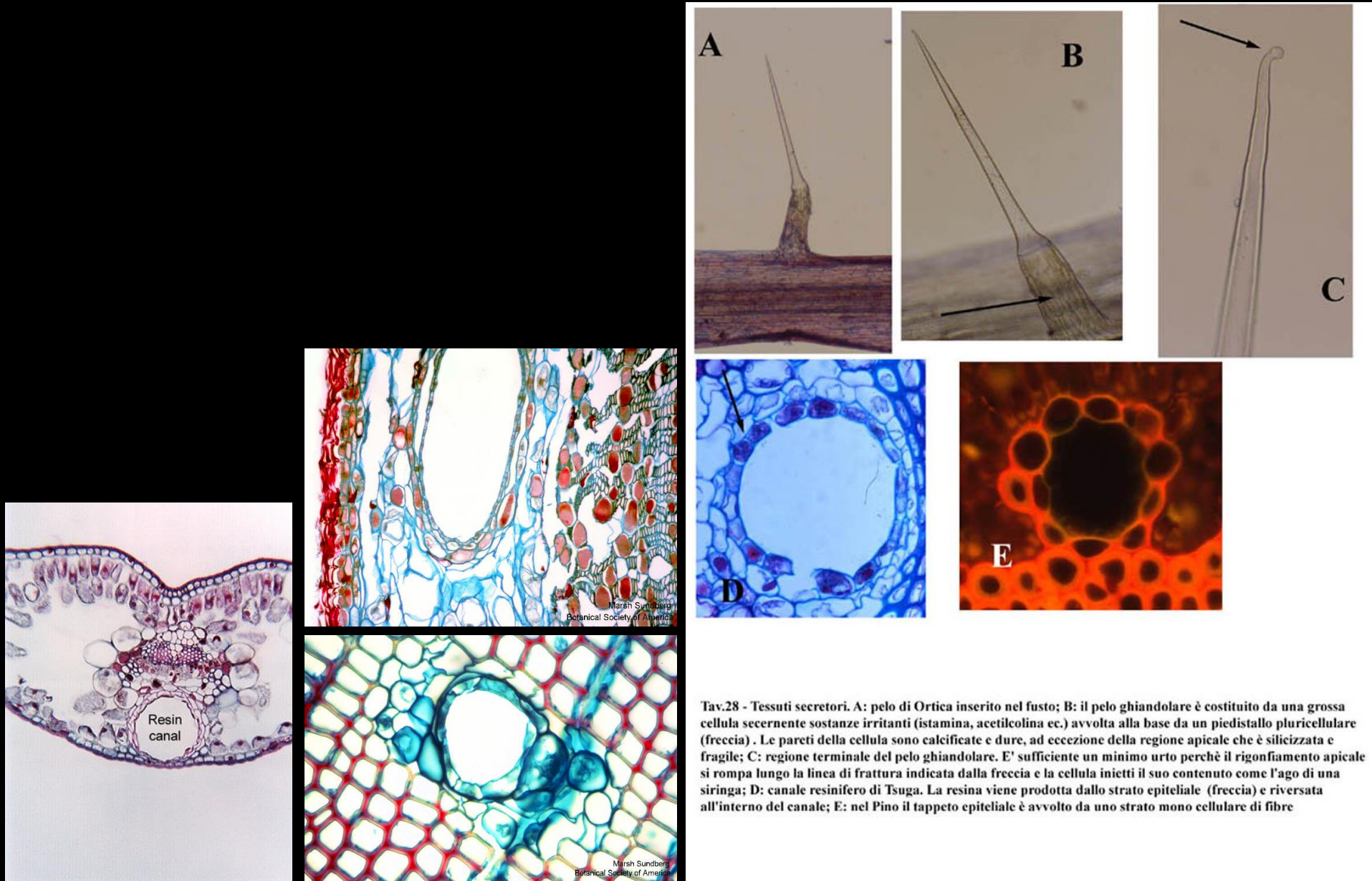
– Nitrogênio



Glandulas digestivas



Ductos resiniferos / substâncias urticantes



Tav.28 - Tessuti secretori. A: pelo di Ortica inserito nel fusto; B: il pelo ghiandolare è costituito da una grossa cellula secernente sostanze irritanti (istamina, acetilcolina ec.) avvolta alla base da un piedistallo pluricellulare (freccia). Le pareti della cellula sono calcificate e dure, ad eccezione della regione apicale che è silicizzata e fragile; C: regione terminale del pelo ghiandolare. E' sufficiente un minimo urto perché il rigonfiamento apicale si rompa lungo la linea di frattura indicata dalla freccia e la cellula inietti il suo contenuto come l'ago di una siringa; D: canale resinifero di Tsuga. La resina viene prodotta dallo strato epiteliale (freccia) e riversata all'interno del canale; E: nel Pino il tappeto epiteliale è avvolto da uno strato mono cellulare di fibre

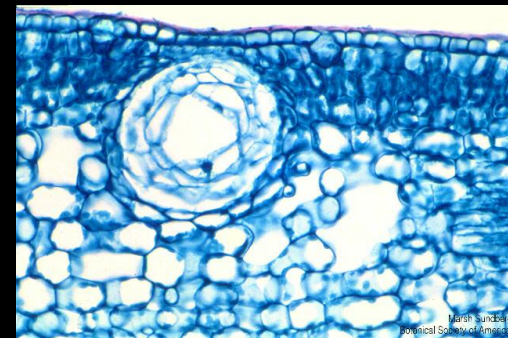
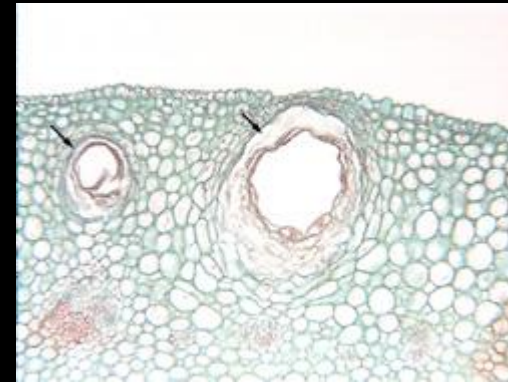
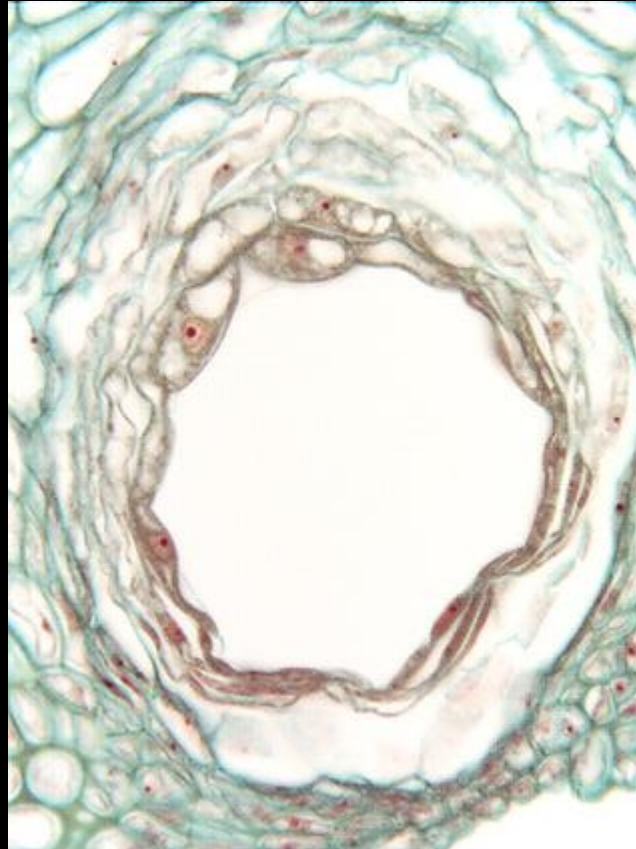
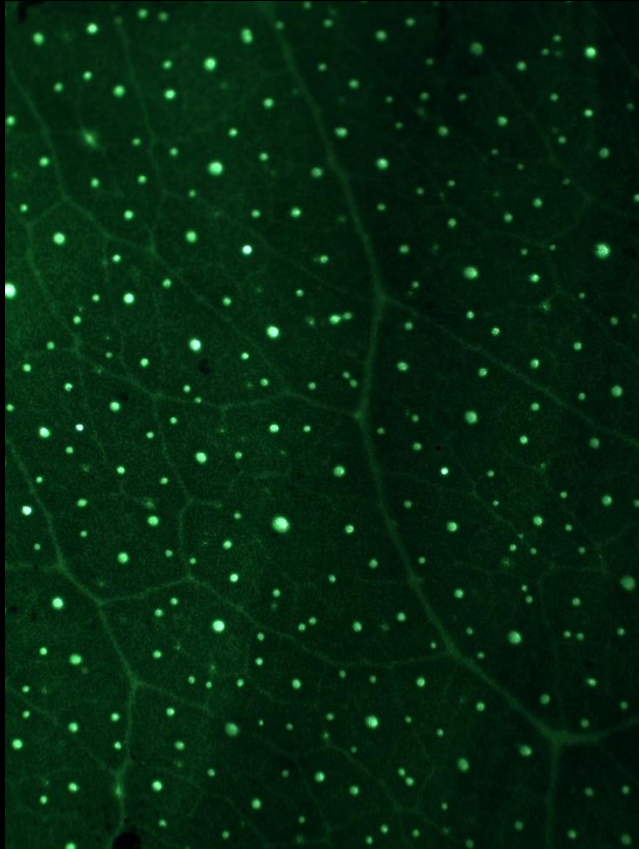
Glândula de óleo

Células

Conjunto de células

Funções:

- Herbivoria
- Garantir integridade dos tecidos



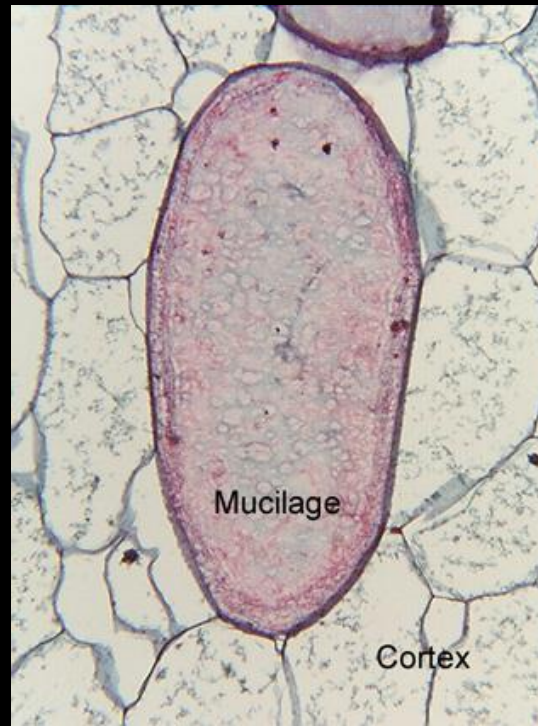
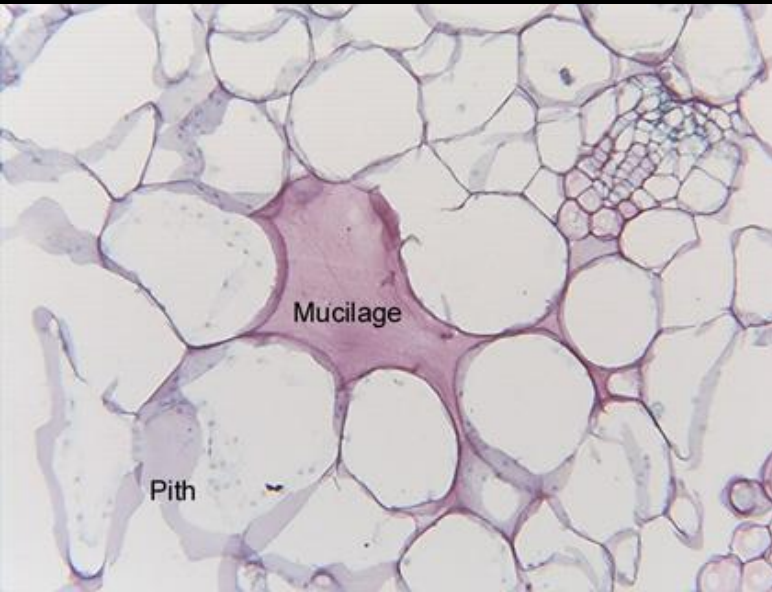
Células de mucilagem ou goma

Células do parênquima

Ductos

Células epidérmicas

Tricomas



Laticíferos

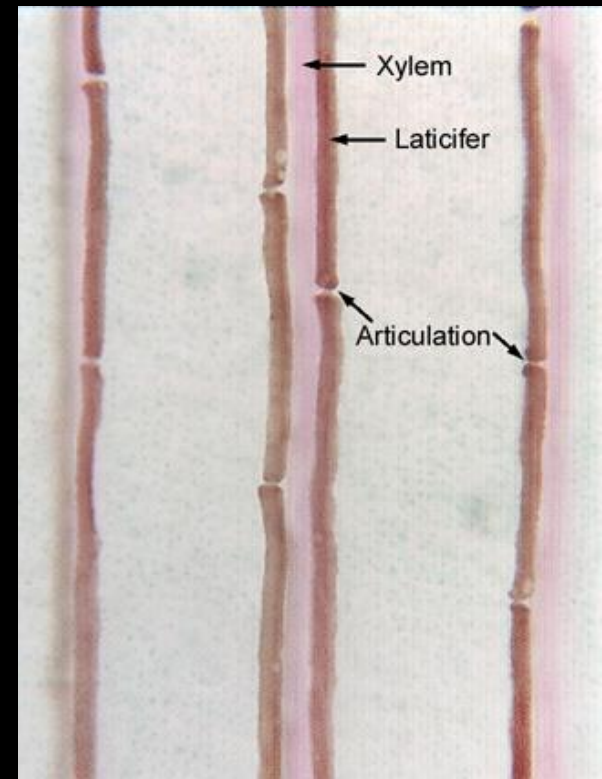
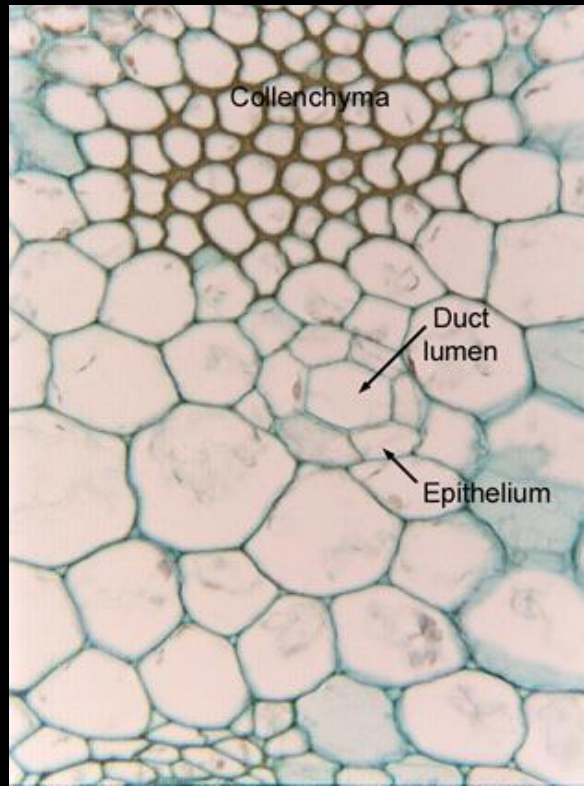
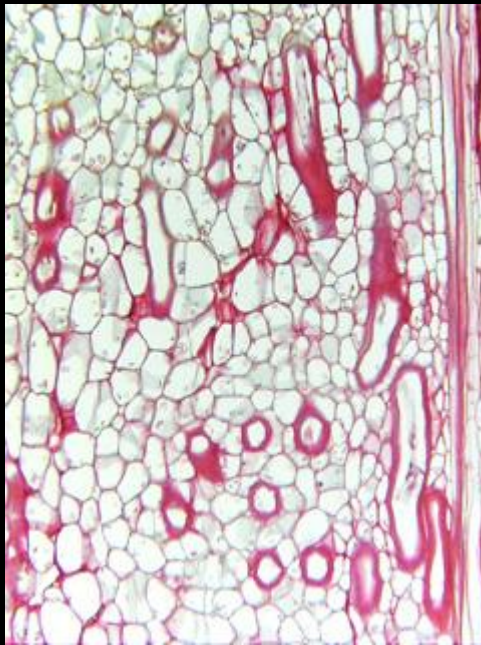
Látex – suspensão de partículas

– Precursores de borracha

Composição química variável

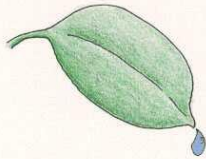
Células – Parede celulósica

Caracteriza algumas famílias



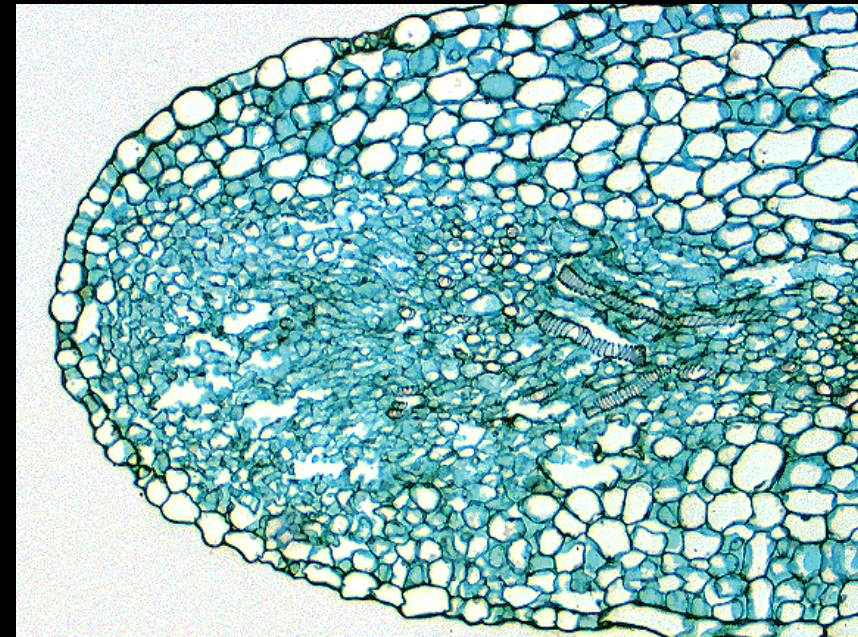
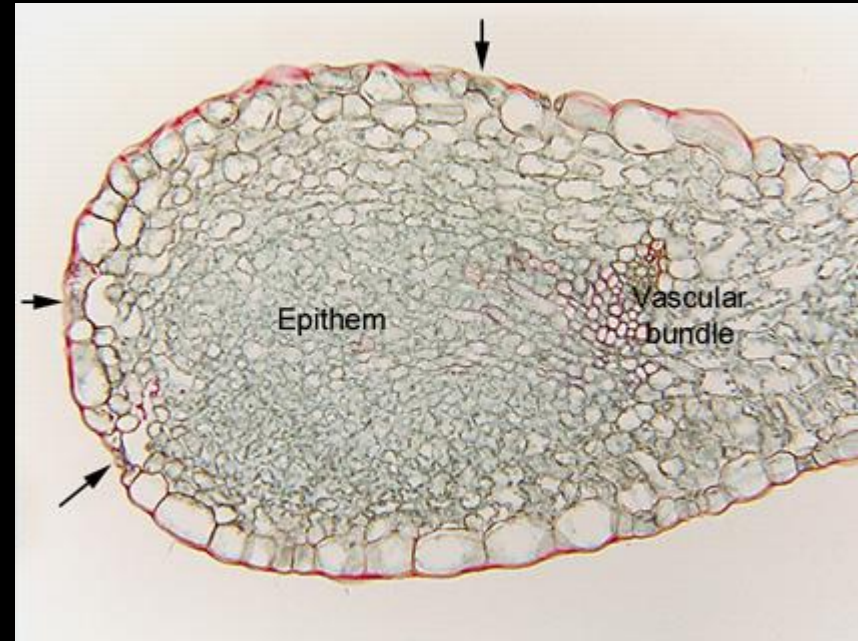
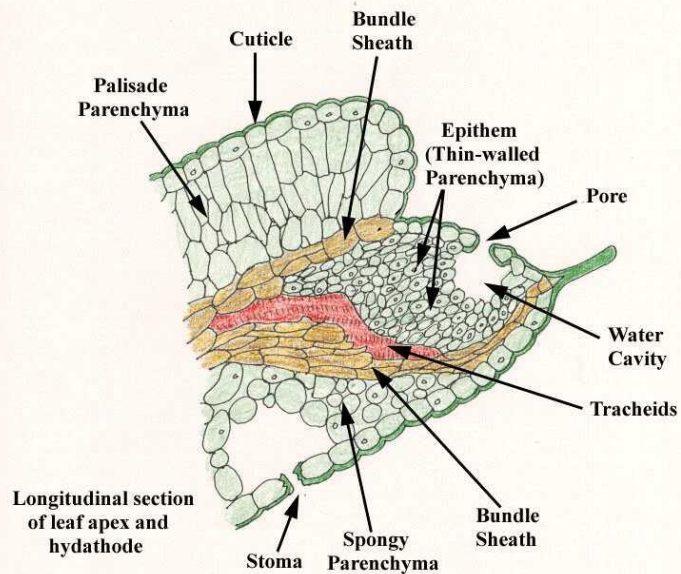
Hidatódios

Hydathode

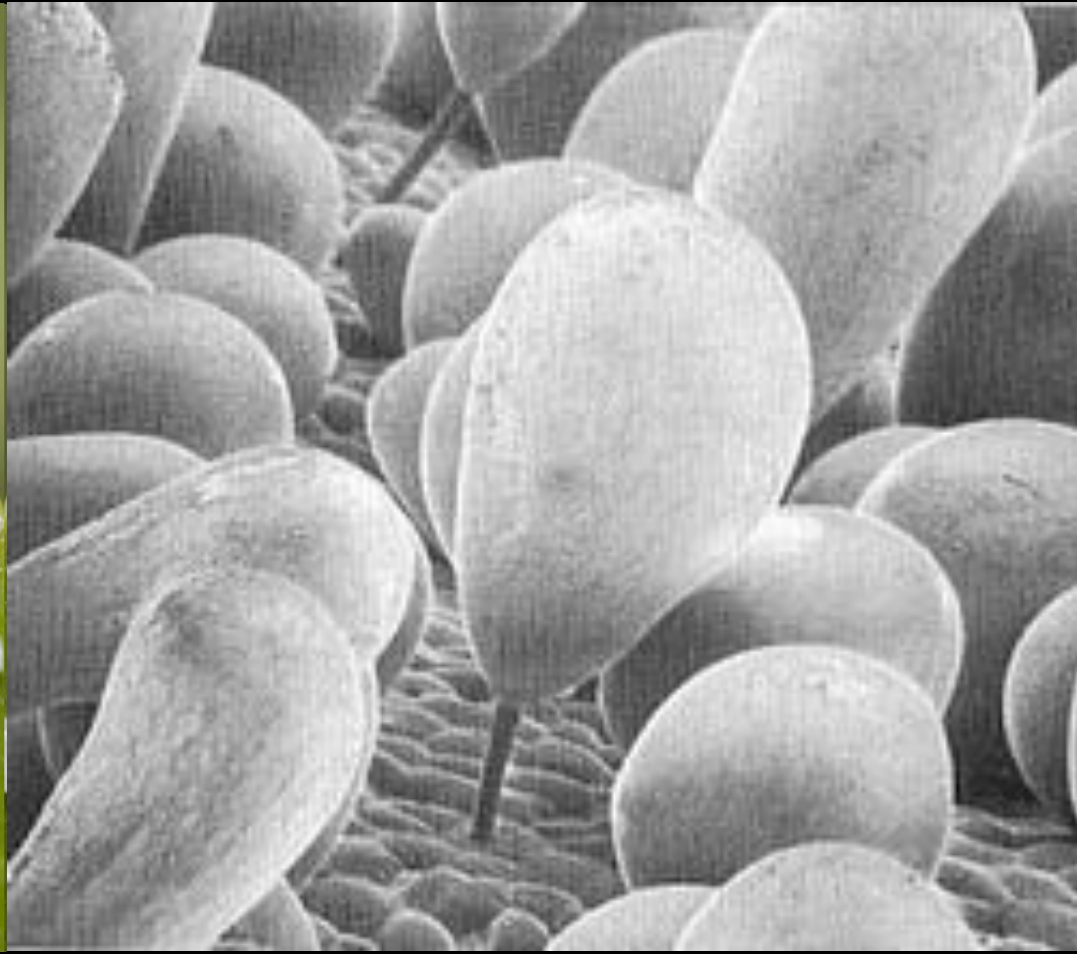


Leaf with guttation droplet from hydathode

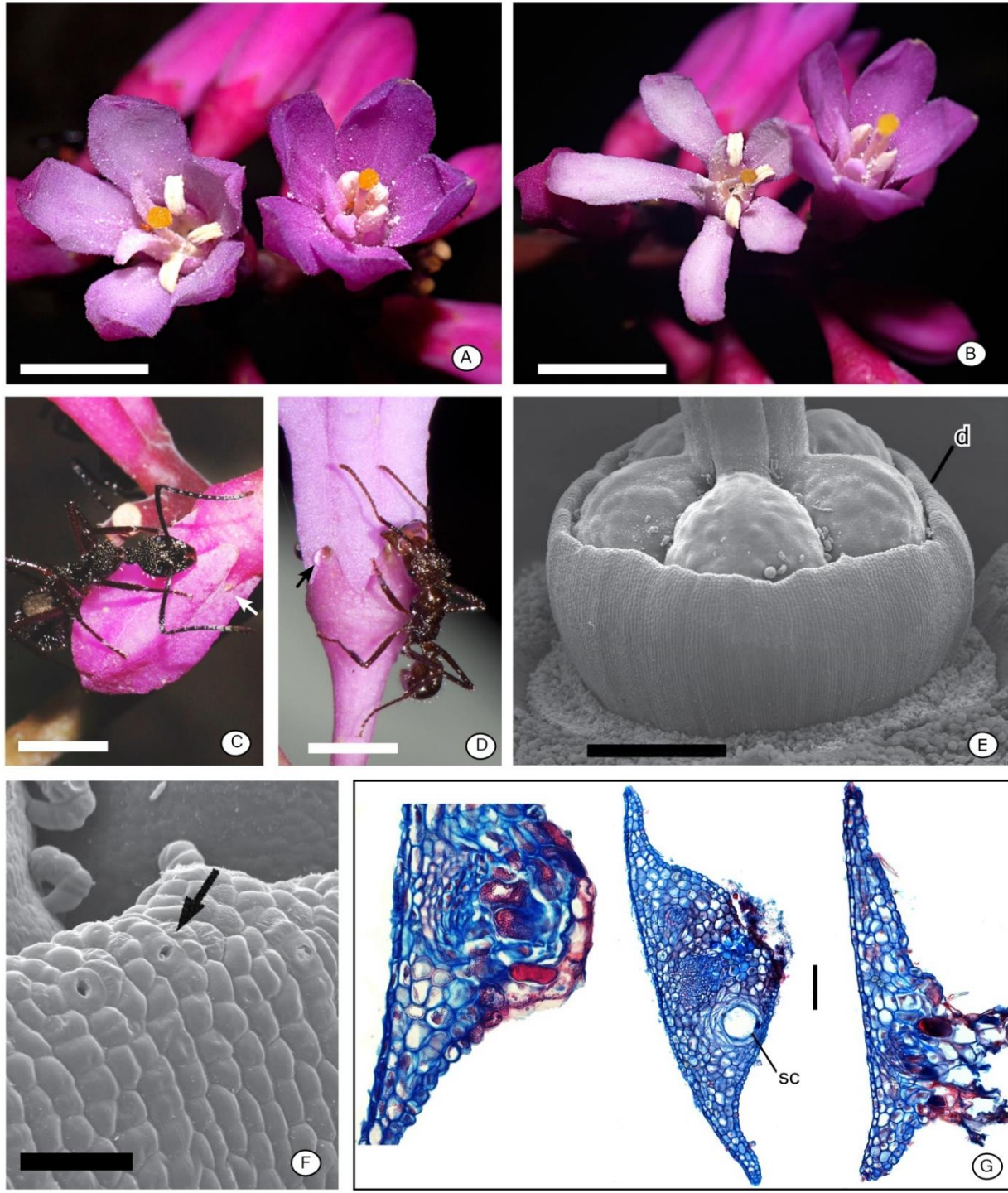
Guttation-exudation of water from hydathodes of leaf margins is caused by root pressure. It is often mistaken for dew in the morning because it occurs at night when water is not processed as quickly within the plant.



Glândulas de sal



Nectários extraflorais



Nectários extraflorais

