

Lilianae

(monokotiledone)

Nekomelinide

Acorales

Alismatales

Petrosaviales

Dioscoreales

Pandanales

Liliales

Asparagales

Komelinide

Arecales

Poales

Commeliniales

Zingiberales

Nekomelinide

- Acorales (Acoraceae)
- Alismatales (Alismataceae, Butomaceae, Araceae, Hydrocharitaceae, Lemnaceae, Najadaceae, Posidoniaceae, Potamogetonaceae, Zosteraceae)
- Petrosaviales (Petrosaviaceae)
- Dioscoreales (Dioscoreaceae)
- Pandanales (Pandanaceae)
- Liliales (Asphodelaceae, Melanthiaceae, Colchicaceae, Liliaceae, Smilacaceae)
- Asparagales (Asparagaceae, Alliaceae, Amaryllidaceae, Iridaceae, Orchidaceae)

o. Acorales

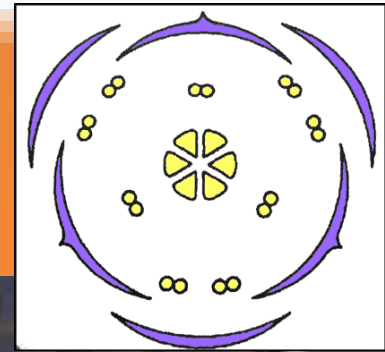
* P3+3 A3+3 G(3)



Acorus calamus, f. *Acoraceae*

o. Alismatales

* K3 C3 A6+3 G6-9



Butomus umbellatus, f. *Butomaceae*

o. Alismatales
f. Alismataceae



* K3 C3 A₃+3 G₃

Alisma plantago-aquatica

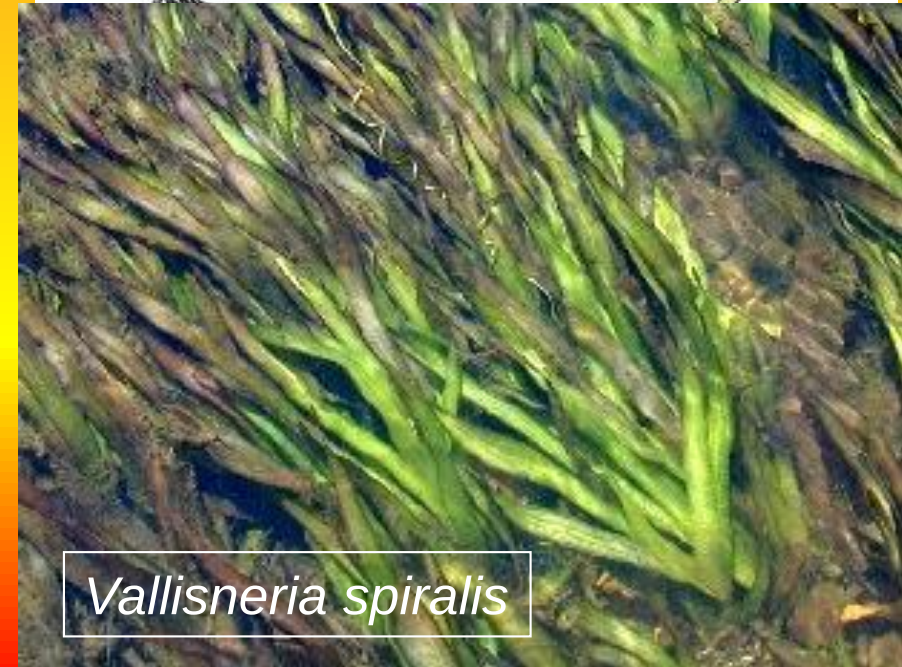
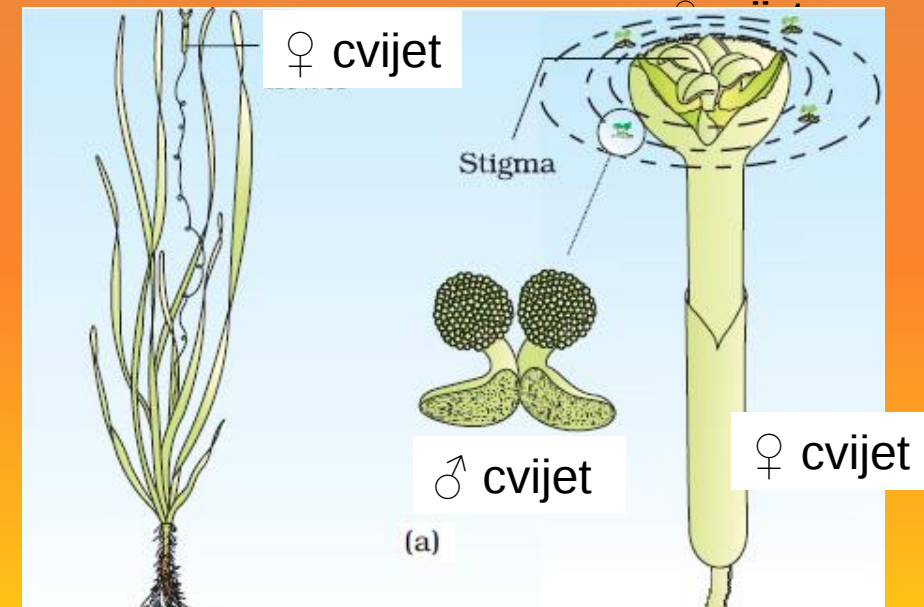


*K3 C3 A₃ G₃⁰+3⁰
*K3 C3 A₀ G₃



Sagittaria sagittifolia

f. *Hydrocharitaceae*



Najas marina, f. *Najadaceae*

♂ A1
♀ G1



Zoostera marina,
f. *Zosteraceae*

♂ A1
♀ G1



Posidonia oceanica,
Posidoniaceae

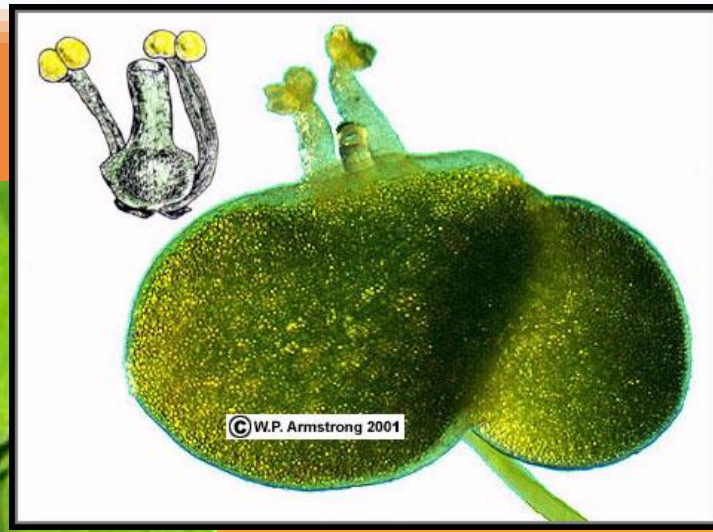
A3 G1

© Ramón Esteban (SUB San José) para <http://marenostrum.org>

f. *Lemnaceae*



Lemna minor



Wolfia arrhiza

f. *Potamogetonaceae*

* (P4 A4) G4



Potamogeton natans



Potamogeton perfoliatus

o. Dioscoreales



Dioscorea balcanica

*** P3+3 A3+3 G0**

***P3+3 A0 G(3)**



f. *Dioscoreaceae*



Tamus comunis

*** P3+3 A3+3 G(3)**

o. Pandanales
f. *Pandanaceae*



ص P0 A
ص P0 G

PANDANUS GRACILIS—BLANCO
Pandanus gracilis

o. Liliales

- f. Asphodelaceae (Asphodelus)
- f. Colchicaceae (Colchicum)
- f. Liliaceae (Lilium, Tulipa, Fritillaria)
- f. Melanthiaceae (Veratrum, Paris)
- f. Smilacaceae (Smilax)

f. *Asphodelaceae*, *Asphodelus albus* - čapljan

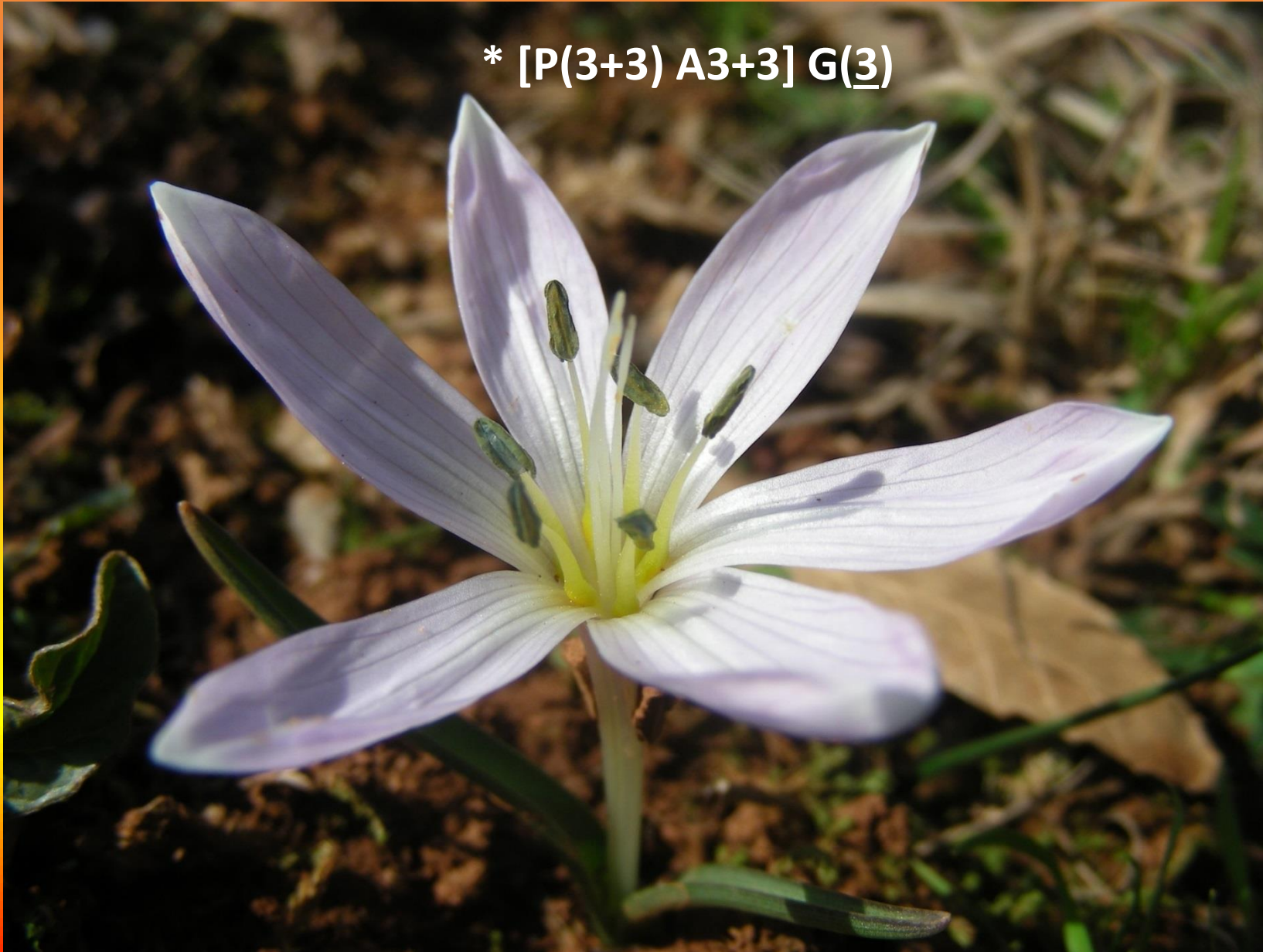


* P3+3 A3+3 G(3)



f. *Colchicaceae*, *Colchicum hungaricum*, mrazovac

* [P(3+3) A3+3] G(3)



f. *Liliaceae*

P_{3+3} A_{3+3} $G_{(3)}$

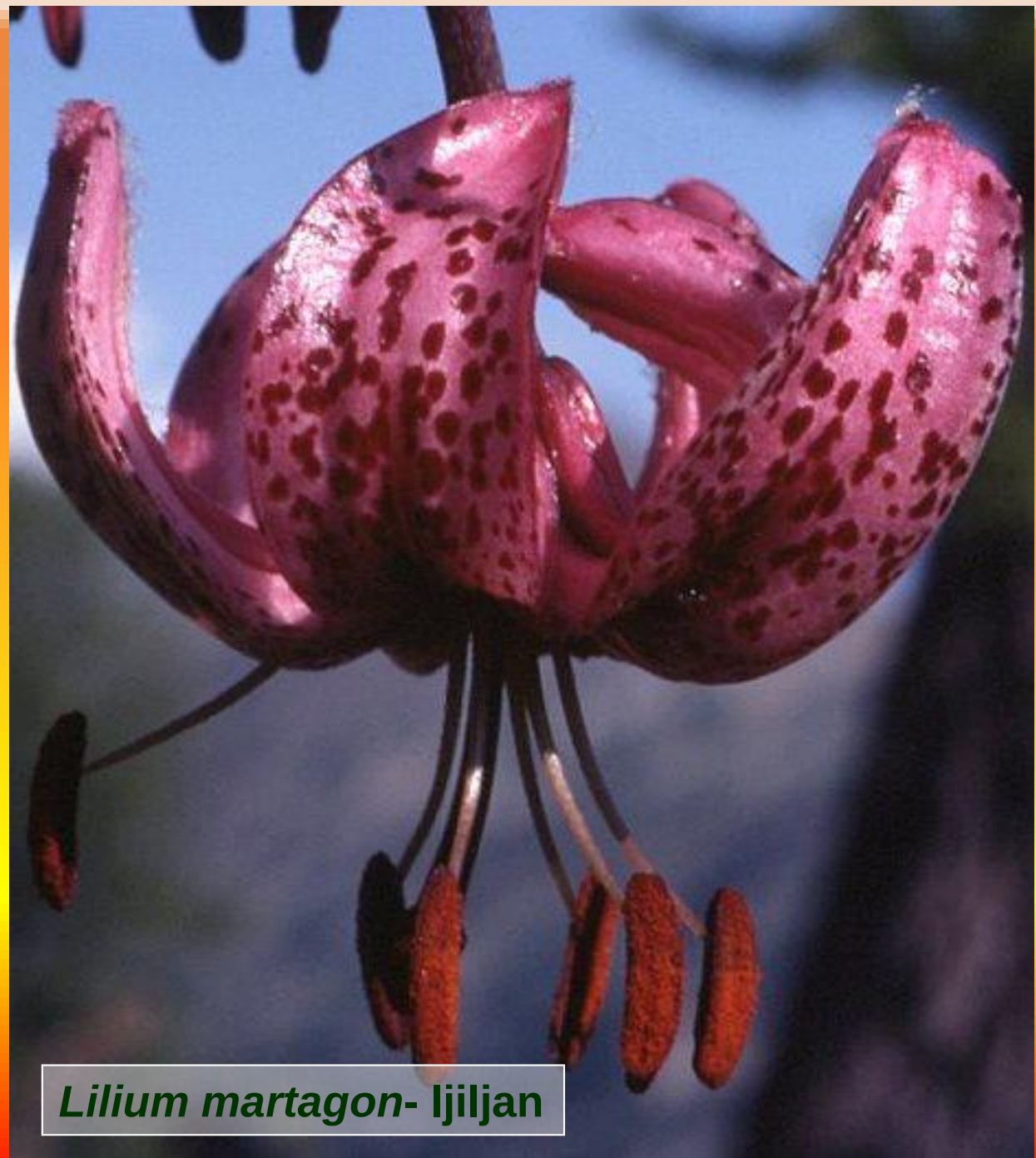
Tulipa sylvestris – lala, tulipan



Fritillaria gracilis- kockalica



Erythronium dens-canis- pasji zub



Lilium martagon- ljiljan

f. *Melanthiaceae*



Tetrameran perigon!!!

Paris quadrifolia- Petrov krst *K₄ C₄ A₄₊₄ G(4)



Veratrum album- čemerika
P₃₊₃ A₃₊₃ G(3)

f. *Smilacaceae*



o. Asparagales

f. Alliaceae (Allium)

f. Amaryllidaceae (Narcissus, Galanthus, Leucojum)

f. Asparagaceae (Convallaria, Polygonatum, Asparagus, Ruscus)

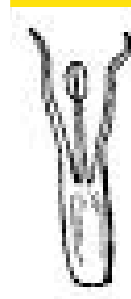
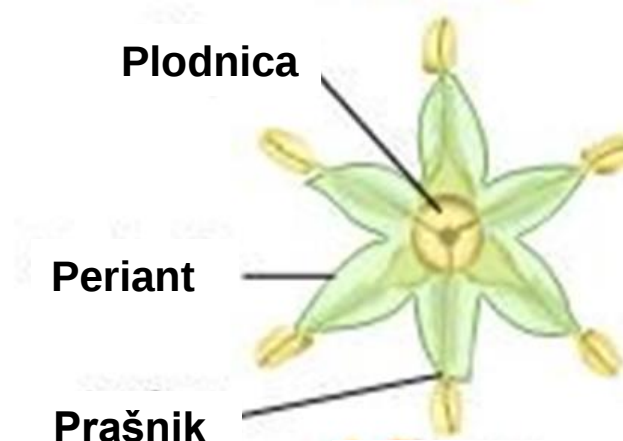
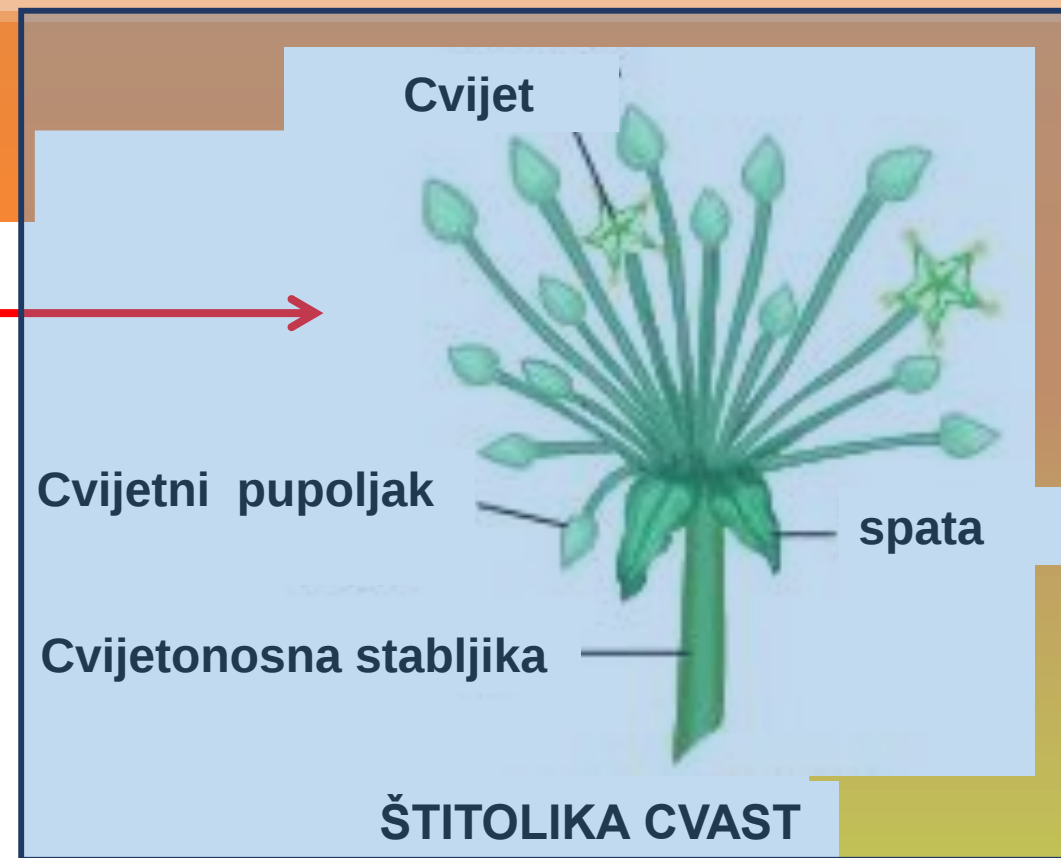
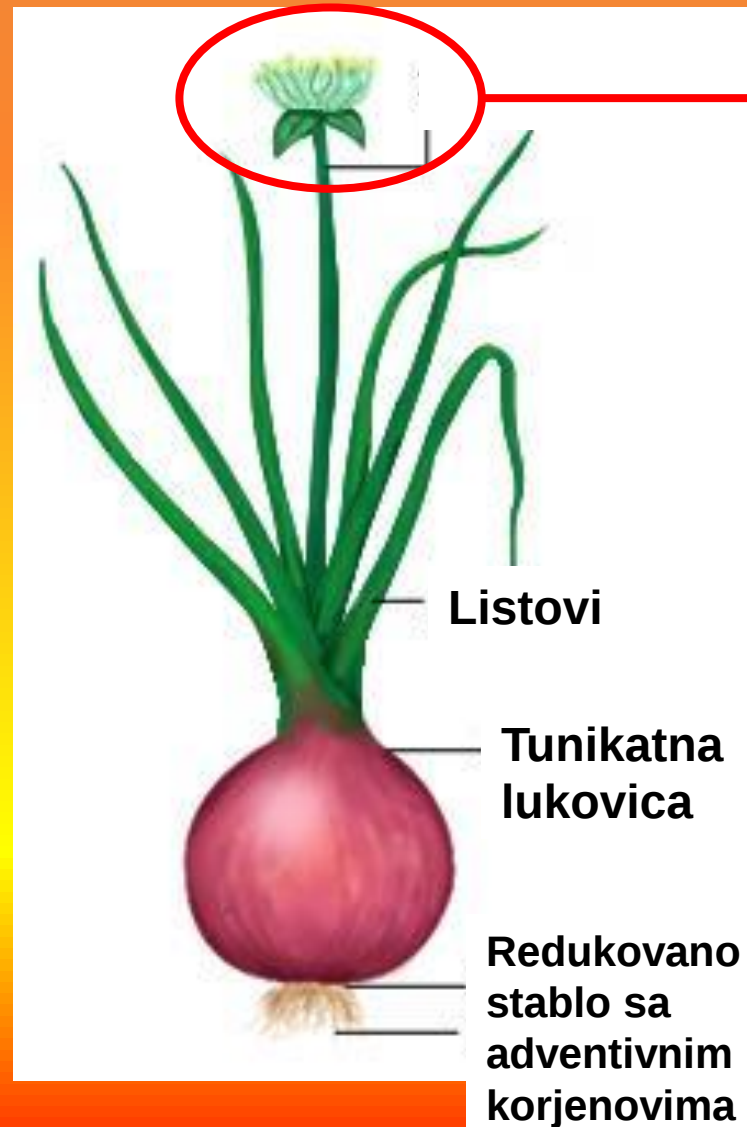
f. Araceae (Arum),

f. Iridaceae (Iris, Crocus, Gladiolus)

f. Orchidaceae (Ophrys, Orchis, Spiranthes, Gymnadenia...)

f. *Alliaceae*

* $[P_{3+3} A_{3+3}] G_{(3)}$



Prašnik
sa končastim
privjescima



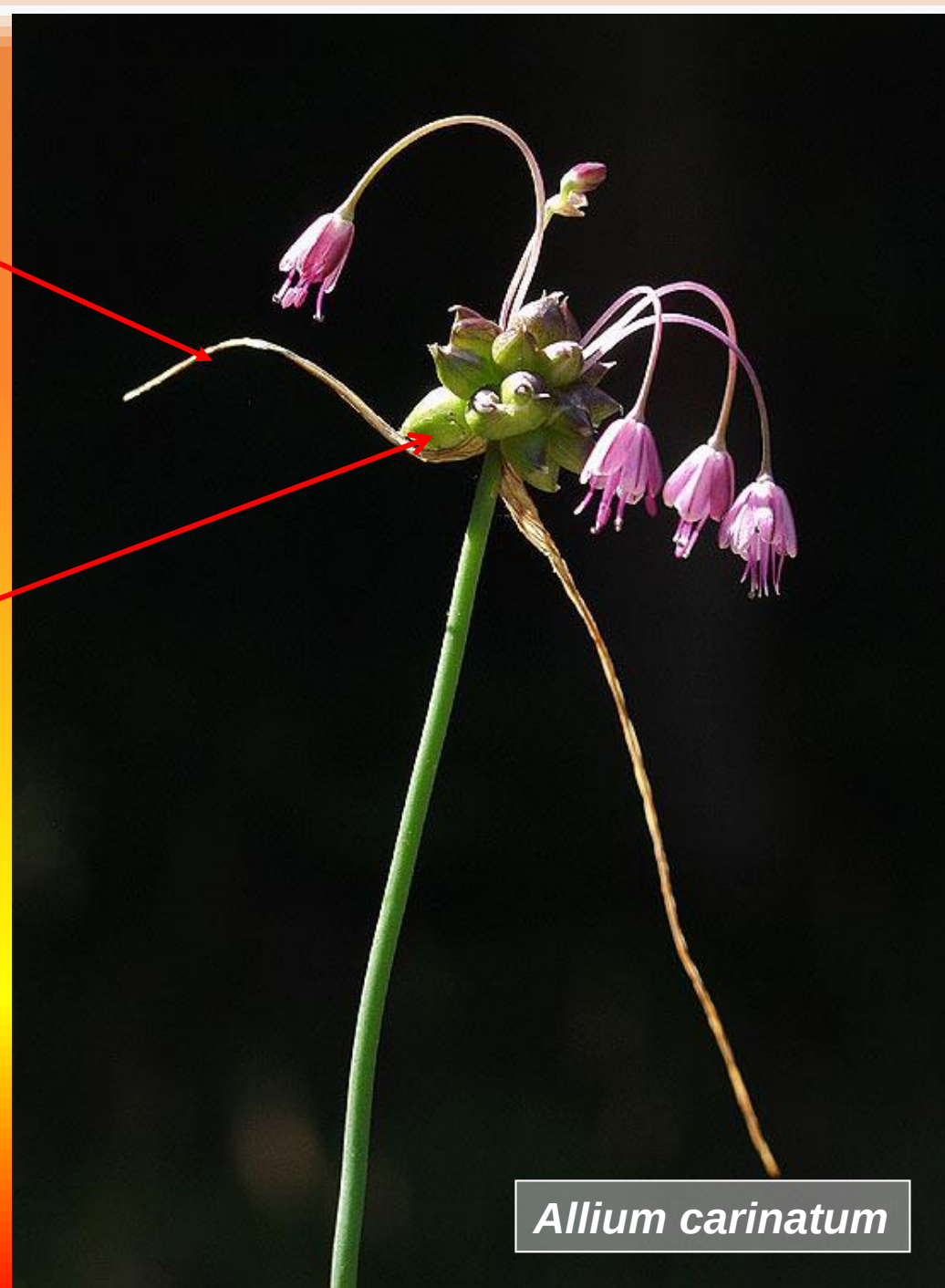
Allium cepa- crni luk



Allium ursinum- srijemuš

Ovojni list (spata)
nadvisuje cvast

Rasplodni bulbili u zoni cvasti

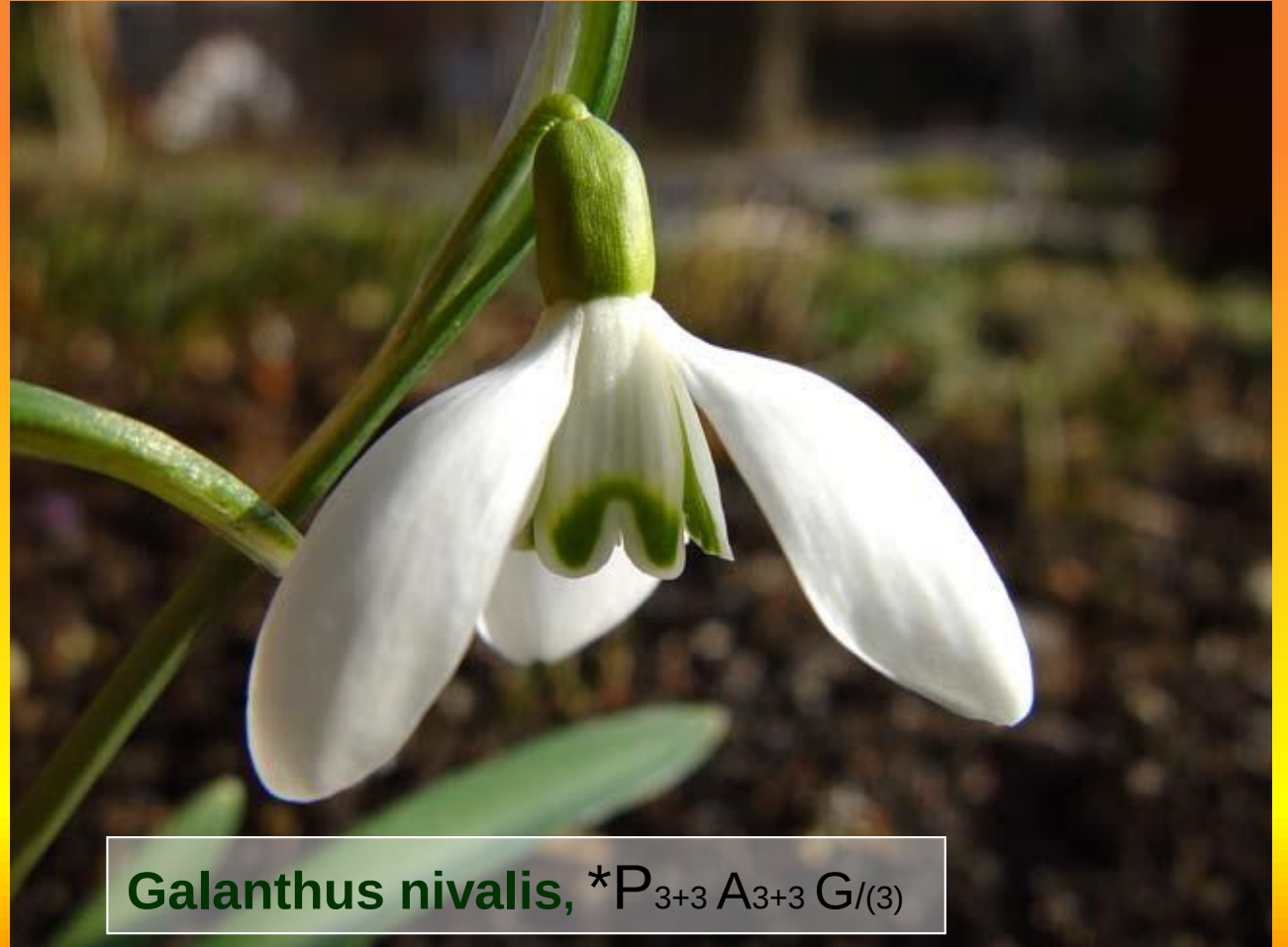


Allium carinatum

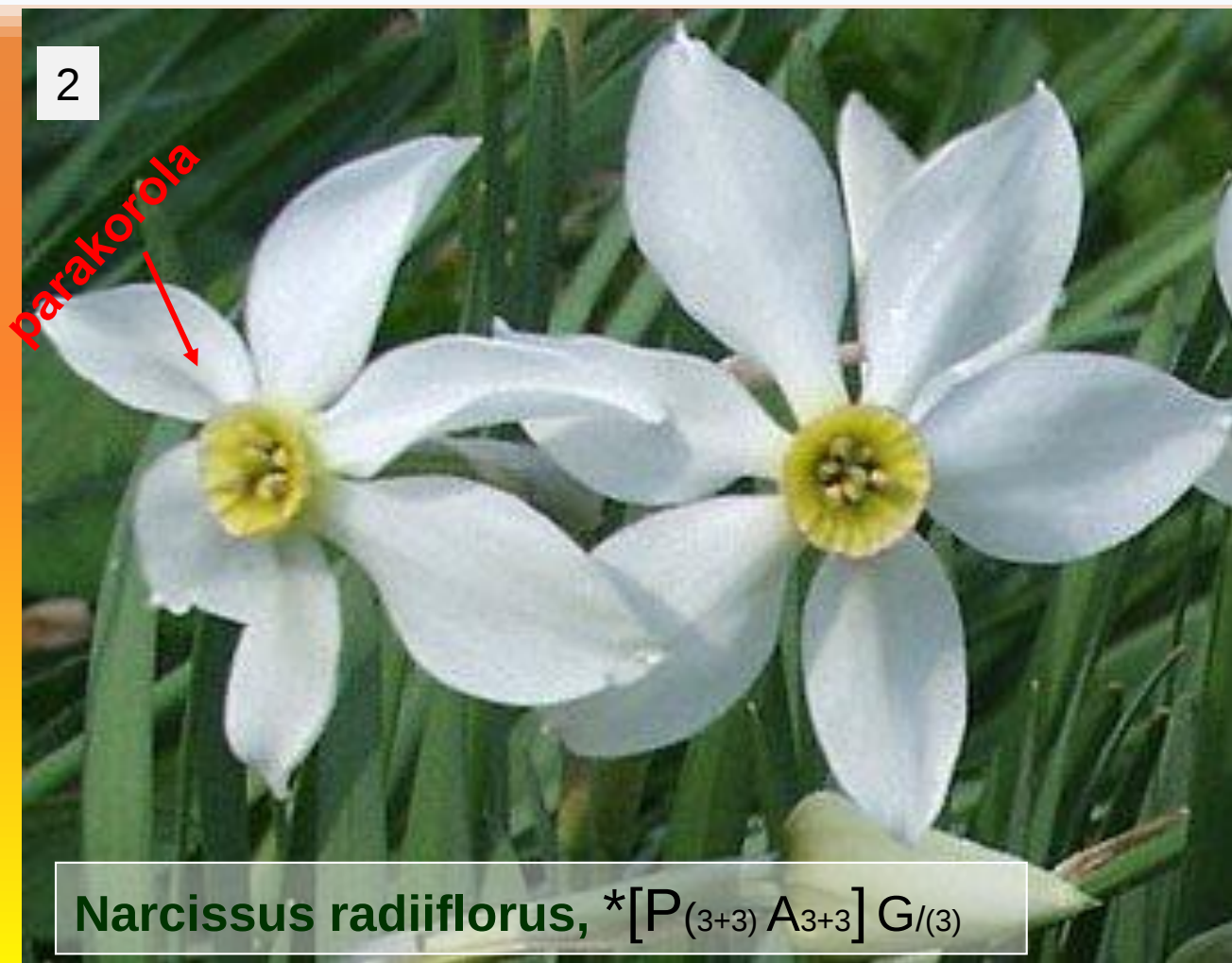
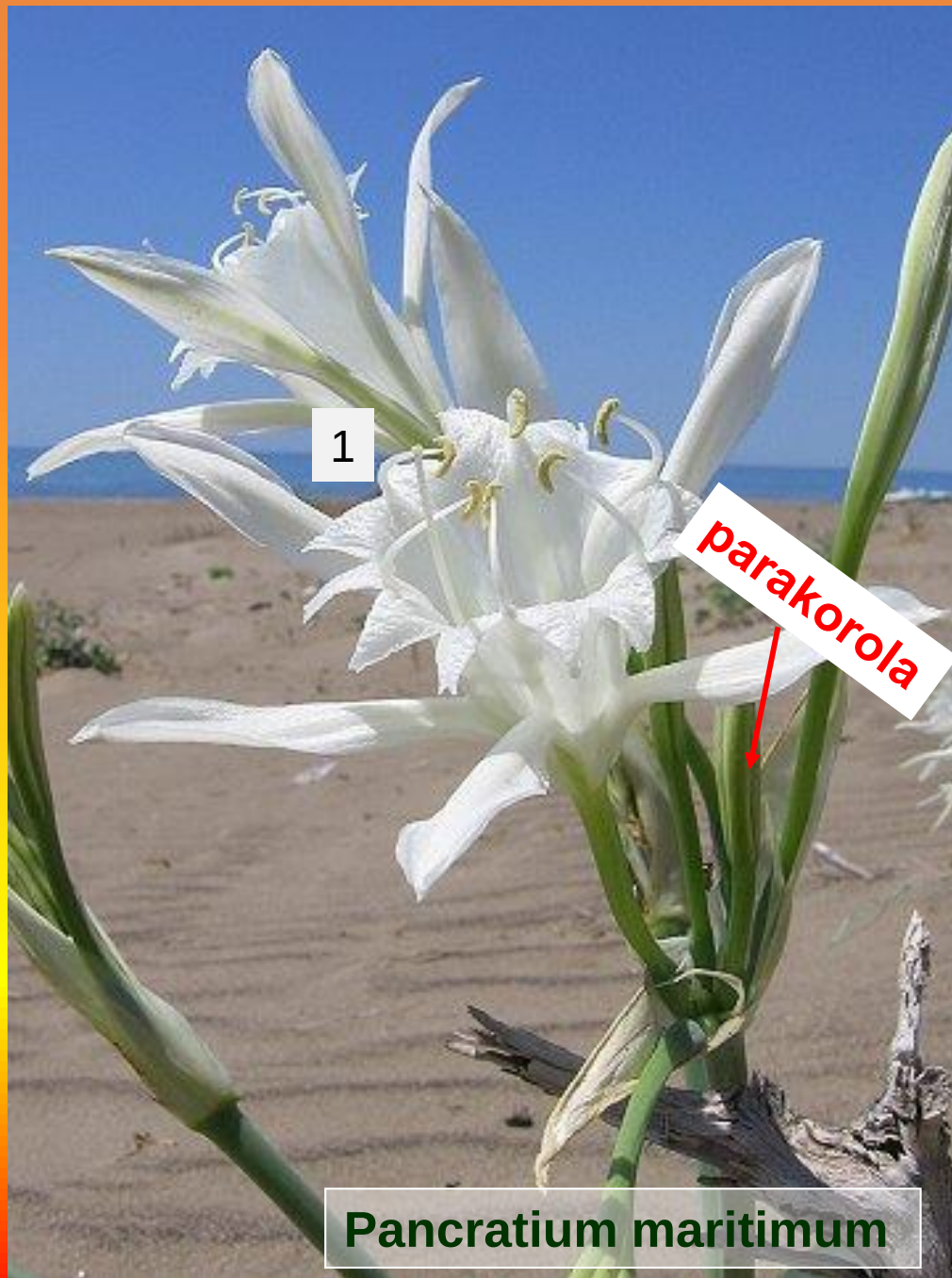
f. *Amaryllidaceae*



Leucojum aestivum, $*P_{3+3} A_{3+3} G_{/(3)}$

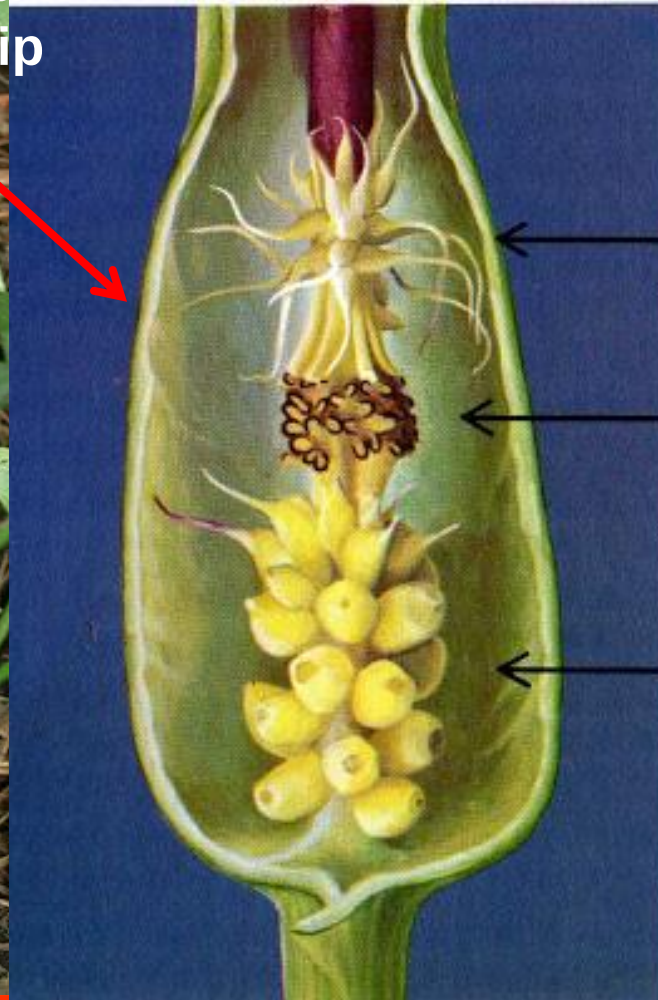


Galanthus nivalis, $*P_{3+3} A_{3+3} G_{/(3)}$



Parakorola izvodi porijeklo od prašničkih niti (1) ili cijevi vijenca (2)...

f. *Araceae*



Sterilni
muški cvijet

Muški cvijet

♂P₀ A(2-4)

Ženski cvijet

♀P₀ G₁



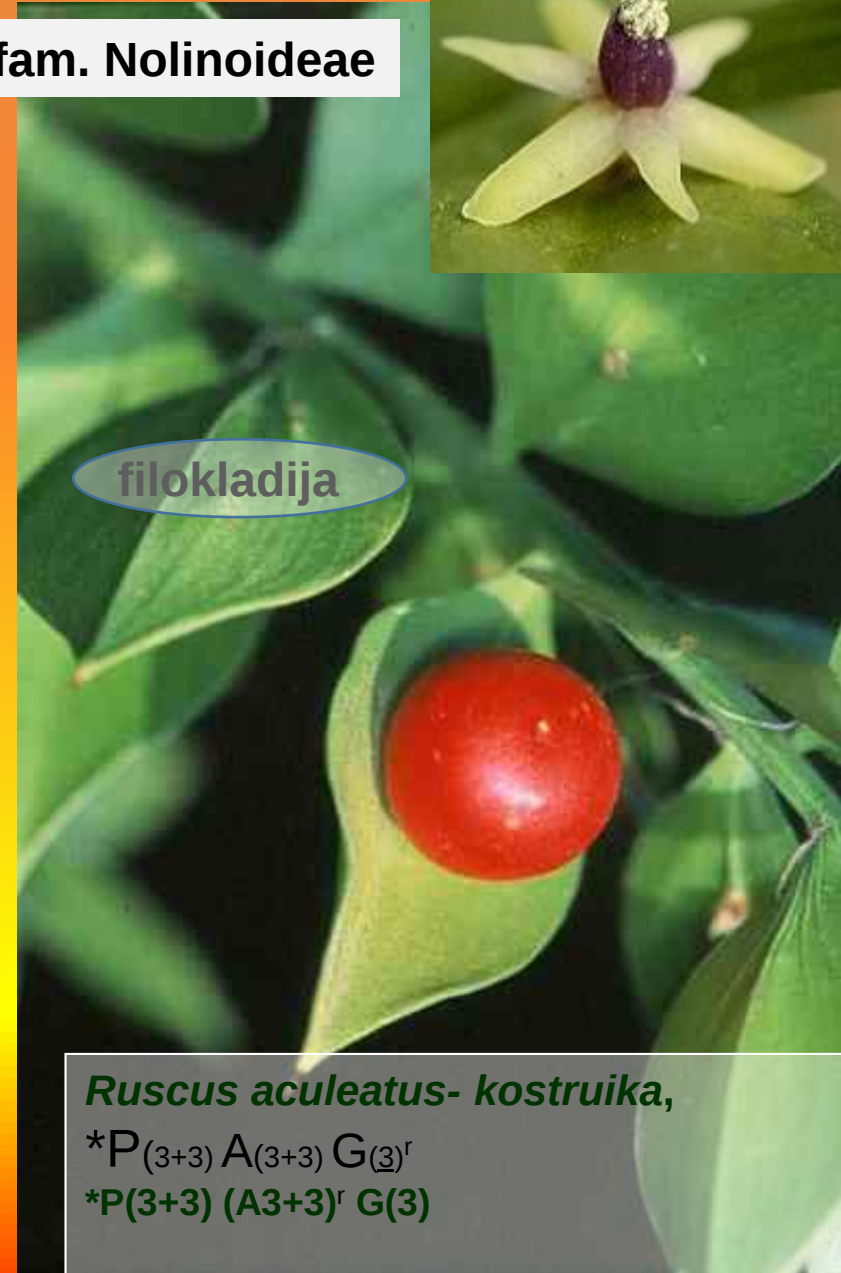
f. Asparagaceae

Subfam. Asparagoideae



Asparagus acutifolius- šparoga, $*[P_{(3+3)} A_{3+3}] G_{(3)}$

Subfam. Nolinoideae



Ruscus aculeatus- kostruika,

$*P_{(3+3)} A_{(3+3)} G_{(3)r}$

$*P_{(3+3)} (A_{3+3})^r G_{(3)}$

Subfam. Nolinoideae



$*[P_{(3+3)} A_{3+3}] G_{(3)}$

Subfam. Scilloideae





Scilla bifolia



Ornithogalum umbellatum – *ptičje mlijeko*

f. Agavaceae



Agave americana



Yucca sp.

f. *Iridaceae* $[P_{3+3} A_3] G_{/(3)}$

Gladiolus palustris- gladiola

Zigomorfni cvijet

Iris pseudoacorus- iris

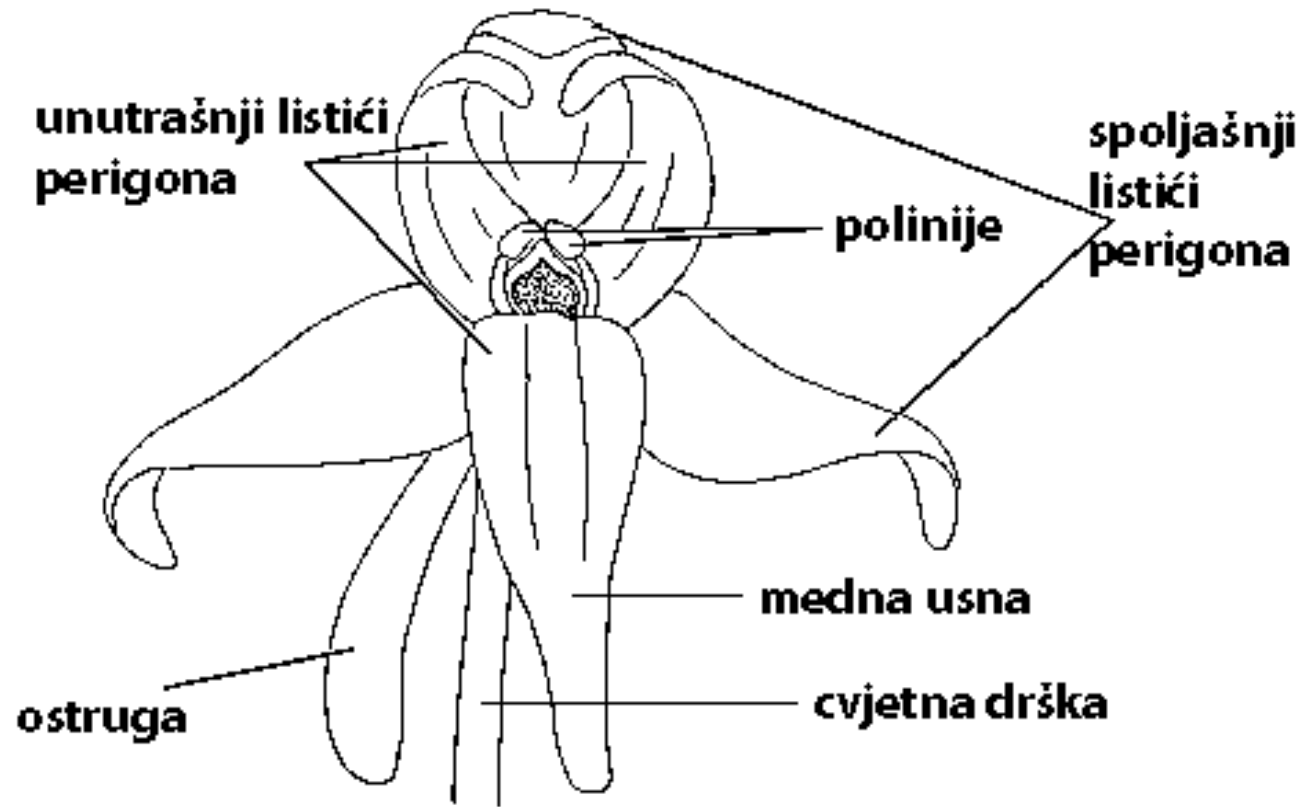
**3 spoljašnja lista perigona
prema nazad savijena**

Crocus dalmaticus- šafran



Romulea bulbocodium

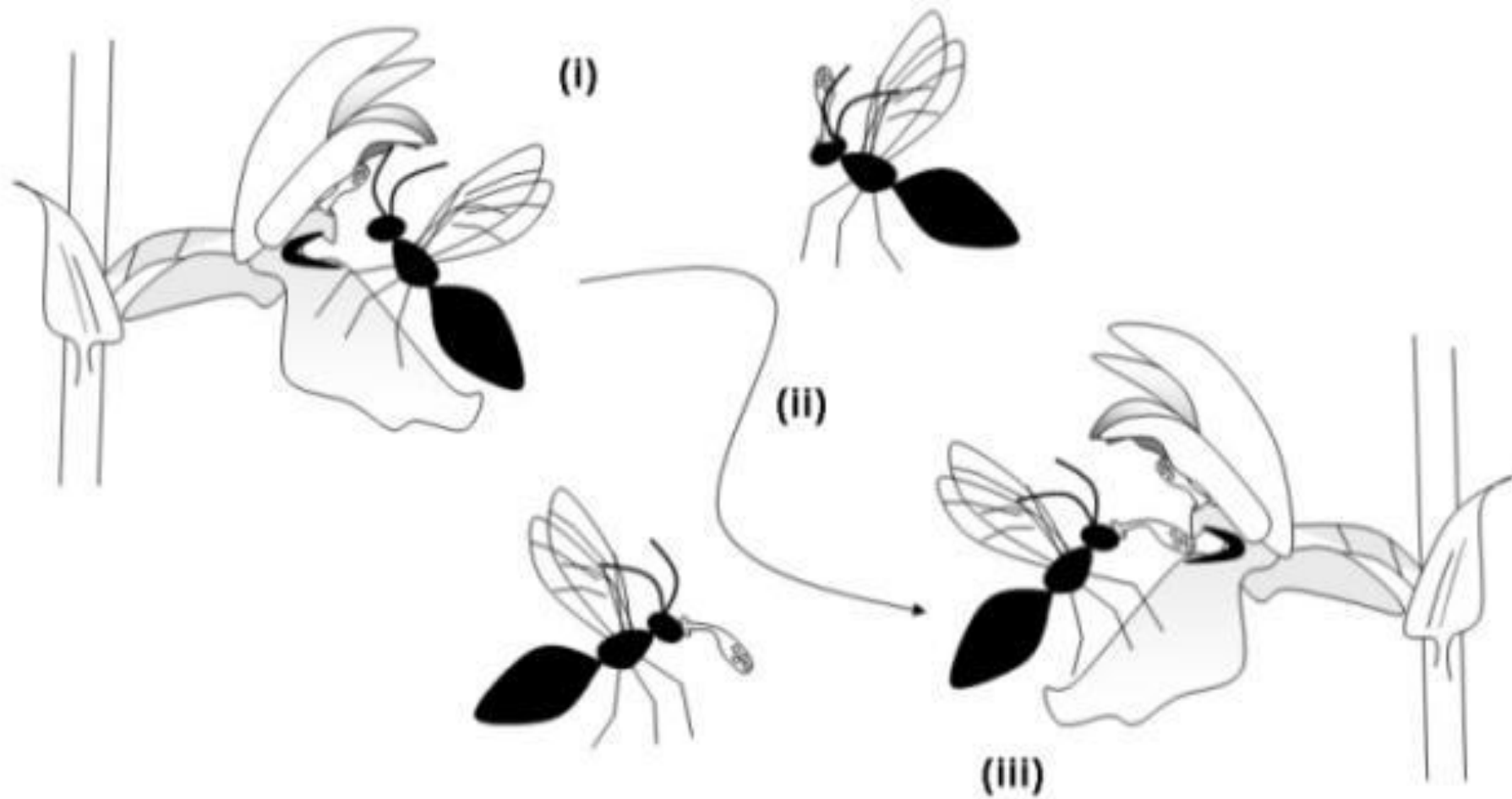
f. *Orchidaceae*



Subfam. Apostasioideae, $\uparrow/*P_{3+3} [A_{2-3} G_{/(3)}]$

Subfam. Cyripedioideae, $\uparrow P_{3+3} [A_{1^{st}+2} G_{/(3)}]$

Subfam. Orchideoideae, $\uparrow P_{3+3} [A_{1+2^{st}} G_{/(3)}]$



Mehanizam opašivanja



Himanthoglossum adriaticum

Medna usna sa
ostrugom!

Orchideoideae (Monoandre)

Anacamptis pyramidalis





Orchis papilionacea



Orchis morio

***Ophrys insectifera* - pčelica**

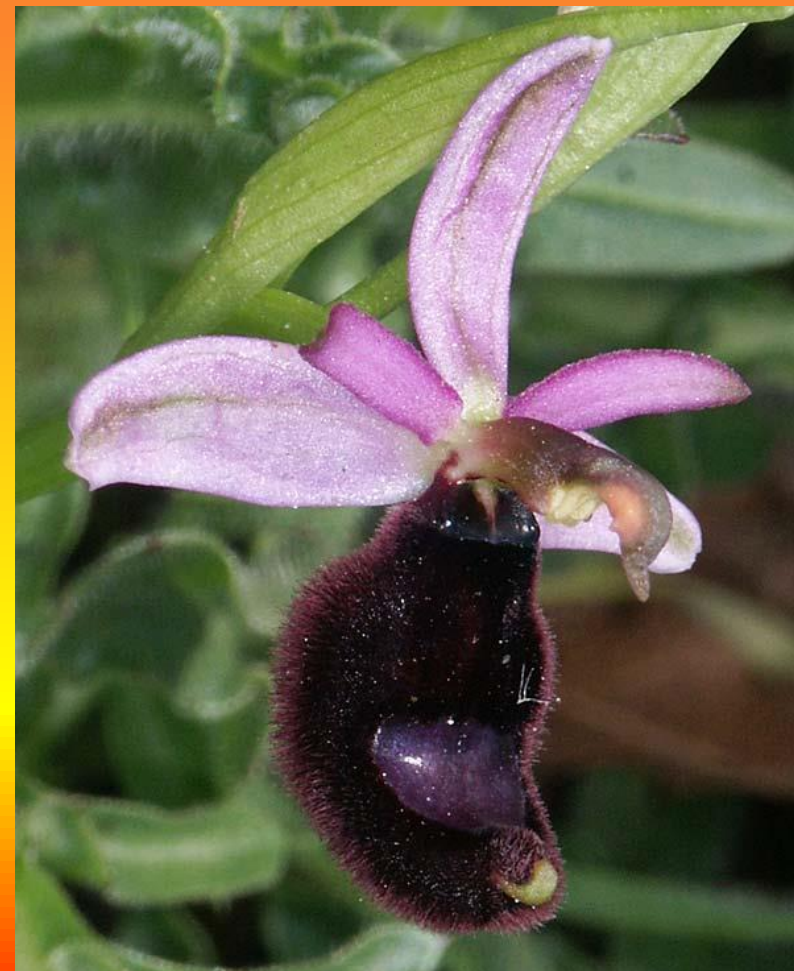
**Medna usna
bez ostruge!**



***Ophrys cornuta* - pčelica**



***Ophrys bertochonii* - pčelica**





Neottia nidus-avis- ptičje gnijezdo



Spiranthes spiralis



Serapias sp.

Cypripedioideae
(Diandre)



Cypripedium calceolum