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**Glavne osobine monokotila
Odabrane porodice potklasa
Alismatidae, Liliidae,
Arecidae i Commelinidae**

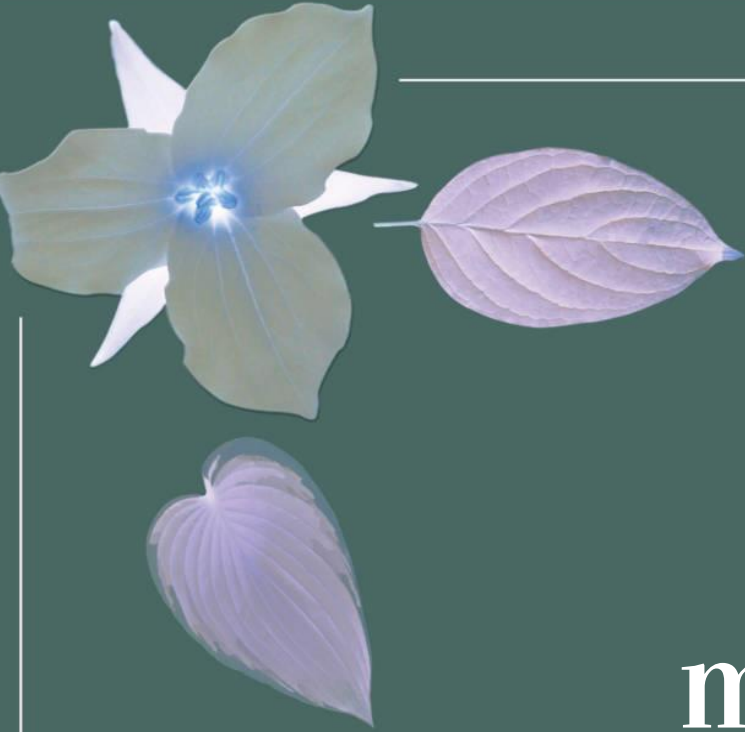
glavni korijen slabo razvijen,
umjesto njega adventivni

monokotile

većinom
trajnice

trimerni cvjetovi

listovi najčešće sjedeći,
nervatura često paralelna



Alismatidae

odabrane porodice:

Araceae

Acoraceae

Familia

ARACEAE



herba perenna (rhizoma v. tuber)



folia simplicia (rarius composita)

alterna v. rosulata
cum vagina



♂♀ v. ♀

* $P_{0 \text{ v. } 4 \text{ v. } 6 \text{ v. } (4) \text{ v. } (6)}$ $A_{1-4 \text{ v. } (6-12)}$ $G_{(1-8)}$
spadix (+ spathe)



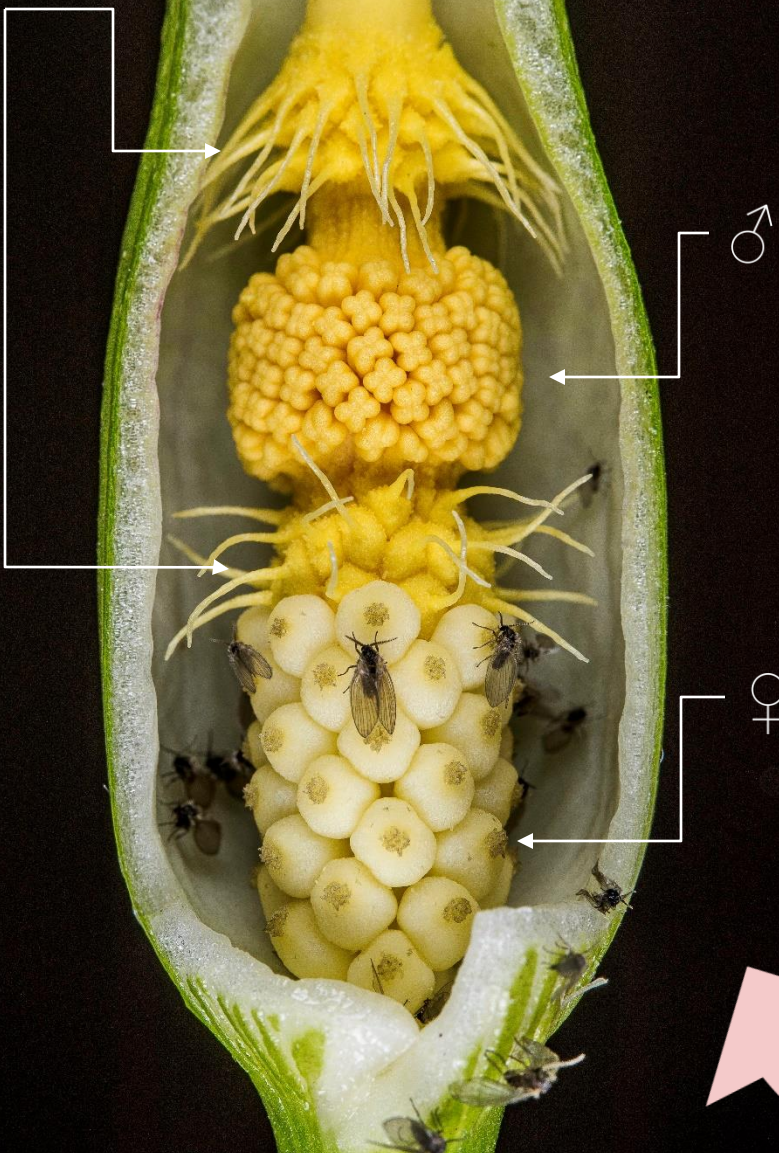
bacca



Arum italicum



sterilni
cvjetovi



spatha



ahlamidni
jednopolni
cvjetovi

appendix



crvena
bobica



Arum maculatum



jednolično zeleni listovi često
prošarani tamnim mrljama





ljubičasti
apendiks

bjeličasta do
crvenkasta spata
često sa pjegama
znutra

Familia

ACORACEAE



herba perenna (rhizoma)



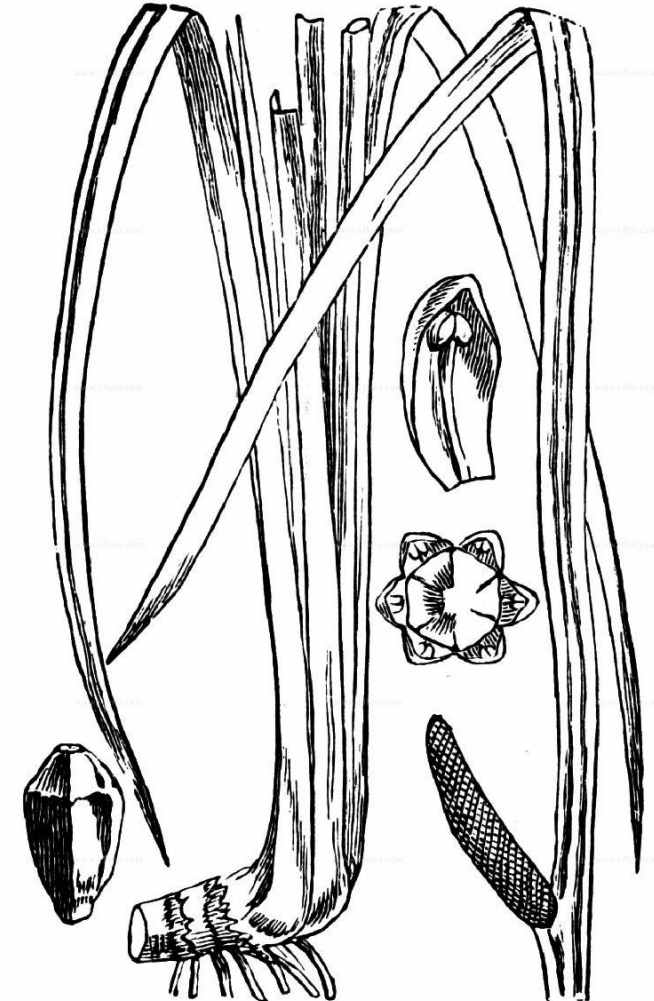
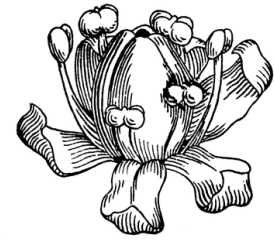
folia simplicia disticha
non petiolata



* $P_{3+3} A_{3+3} \underline{G}_{(3)}$
spadix



bacca



Acorus calamus



koso postavljen klip u osnovi
lista koji se distalno proširuje
pa podsjeća na spatu





i do 50 cm dugački rizomi
bogat i etarskim uljem



Liliidae

odabrane porodice:

Liliaceae

Asparagaceae

Alliaceae

Iridaceae

Orchidaceae

Familia

LILIACEAE



herba perenna
(rhizoma, tuber, bulbus)



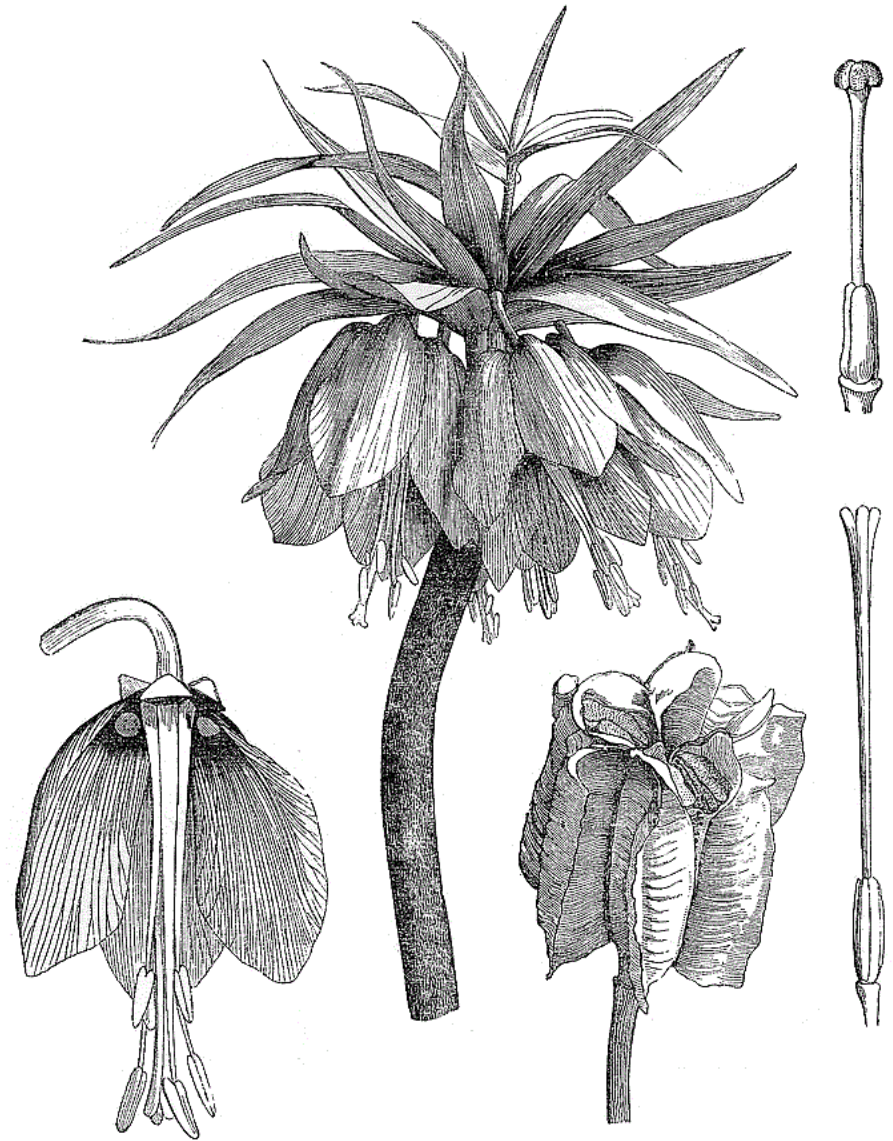
folia simplicia
alterna v. rosulata
non petiolata



* P_{3+3} v. $(3+3)$ A_{3+3} $G_{(3)}$
flos solitarius
racemus v. spica



capsula



Veratrum album





razgranata
vršna metlica



stubić
tučka

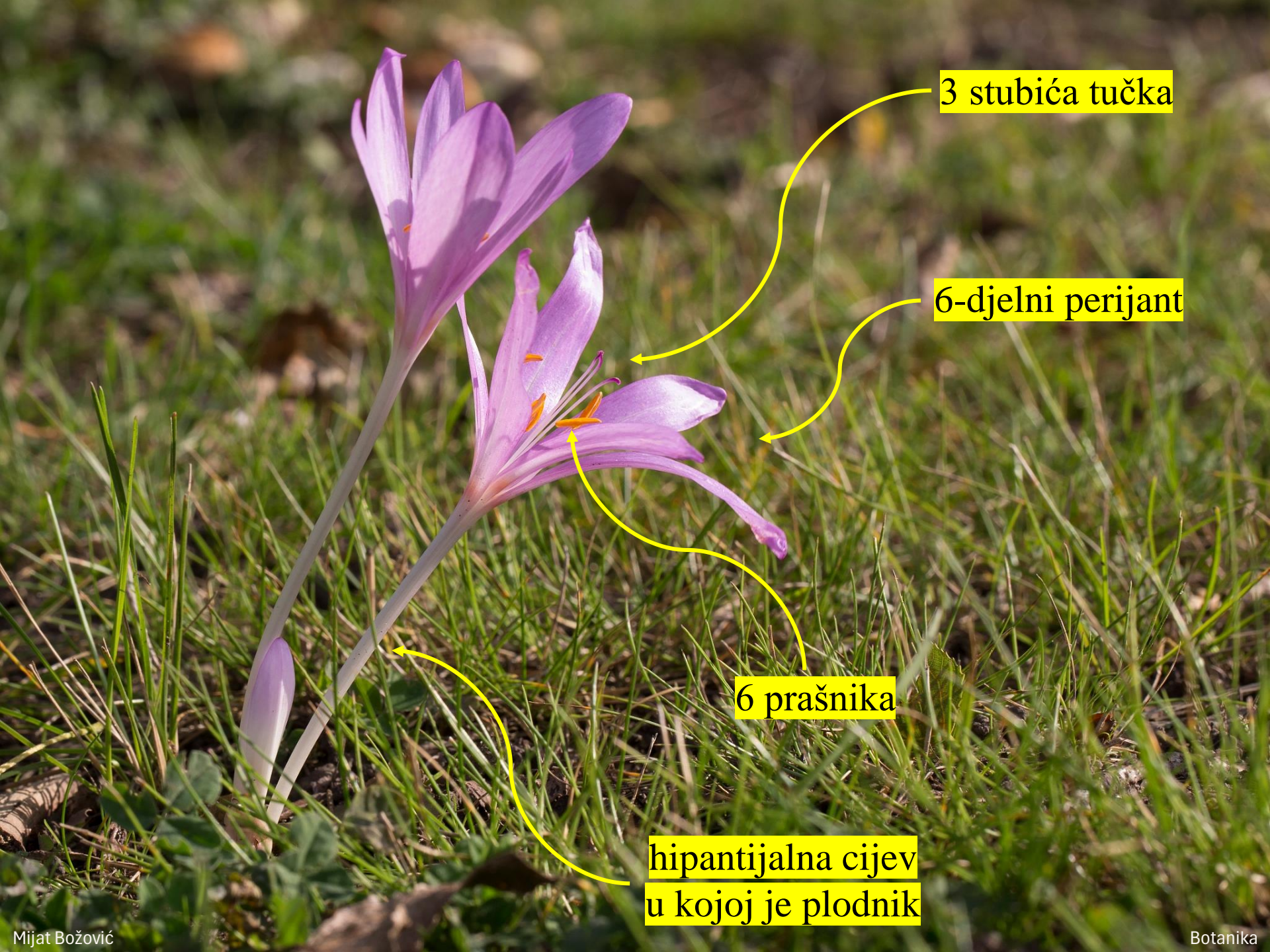
prašnik



čaura

Colchicum autumnale






3 stubića tučka

6-djelni perijant

6 prašnika

hipantijalna cijev
u kojoj je plodnik

A cluster of broad, green, lanceolate leaves, likely from a species of Iris, growing in a grassy field. The leaves are arranged in a dense, upright cluster, with some showing signs of being newly emerged or young. The surrounding grass is a mix of green and brown, suggesting a natural, slightly dry environment. The lighting is bright, casting soft shadows on the leaves.

listovi koji se
pojavljuju s proljećá

čaura u
rukavcu
listova



Aloe vera





cvjetovi u
vršnim
grozdovima



Aloe ferox



Lilium martagon



pršljenasto
raspoređeni
listovi





6 prašnika

6 listića
perijanta

3-režnjeviti žig

6-ugaona
jajasta čaura



Drimia maritima



krupne
lukovice



Mijat Božović

grozd



Botanika

Familia

ASPARAGACEAE



herba perenna (tuber v. bulbus)
rarius arborescens v. liana



folia simplicia alterna v. rosulata
rarius petiolata

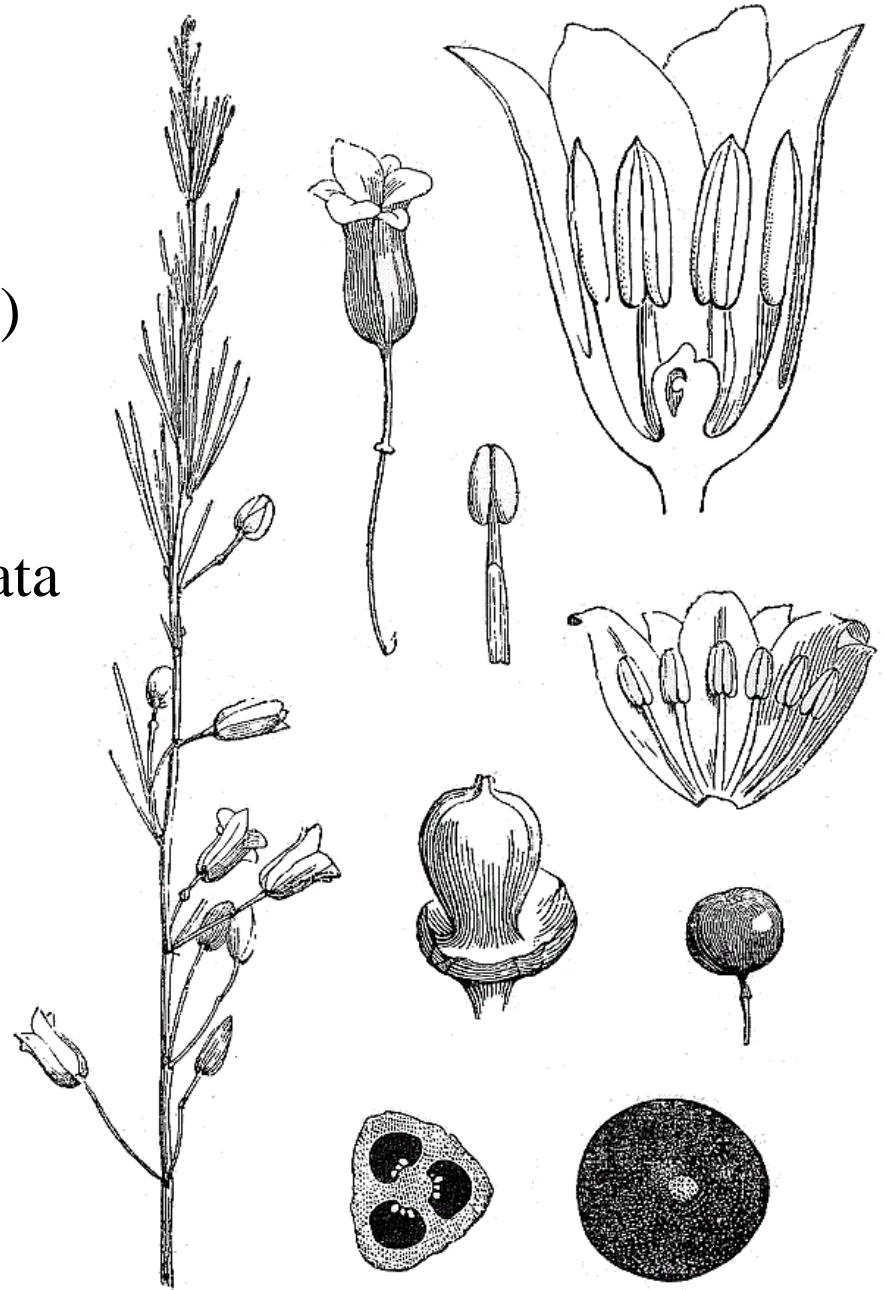
♂♀ v. ♀

* P_{3+3} v. $(3+3)$ A_{3+3} $G_{(3)}$

racemus, spica v. panicula
(rarius flos solitarius)



bacca



Convallaria majalis



grozd okrenut
na 1 stranu



bobica



Asparagus officinalis



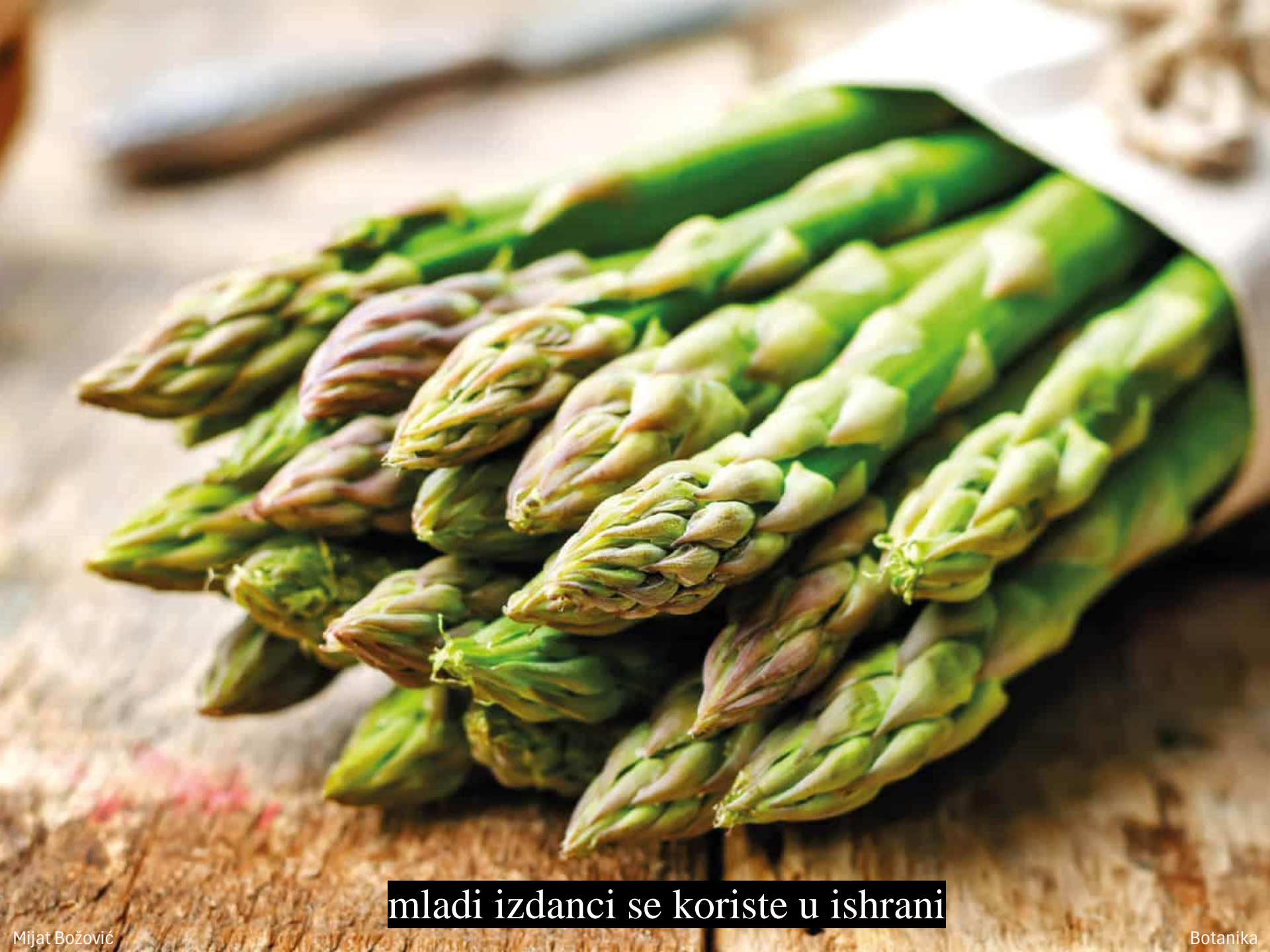
5-15 filokladija u čuperku

6 listića perijanta



crvena bobica





mladi izdanci se koriste u ishrani

Asparagus acutifolius



10-30 filokladija u čuperku

diecka vrsta





Ruscus aculeatus



ljuspasta
brakteja

ljuspasti
list

filokladija



diecka vrsta



Familia

IRIDACEAE



herba perenna
(rhizoma, tuber, bulbus)



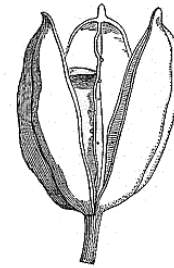
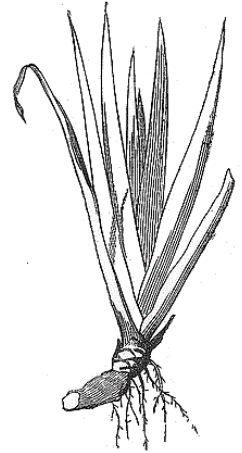
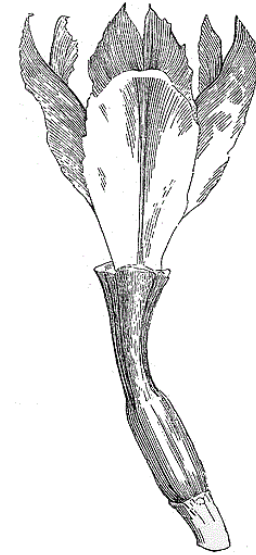
folia simplicia alterna
non petiolata



* v. $\uparrow P_{(3+3)} A_3 G_{(3)}$
flos solitarius
monochasium v. spica



capsula



Iris germanica

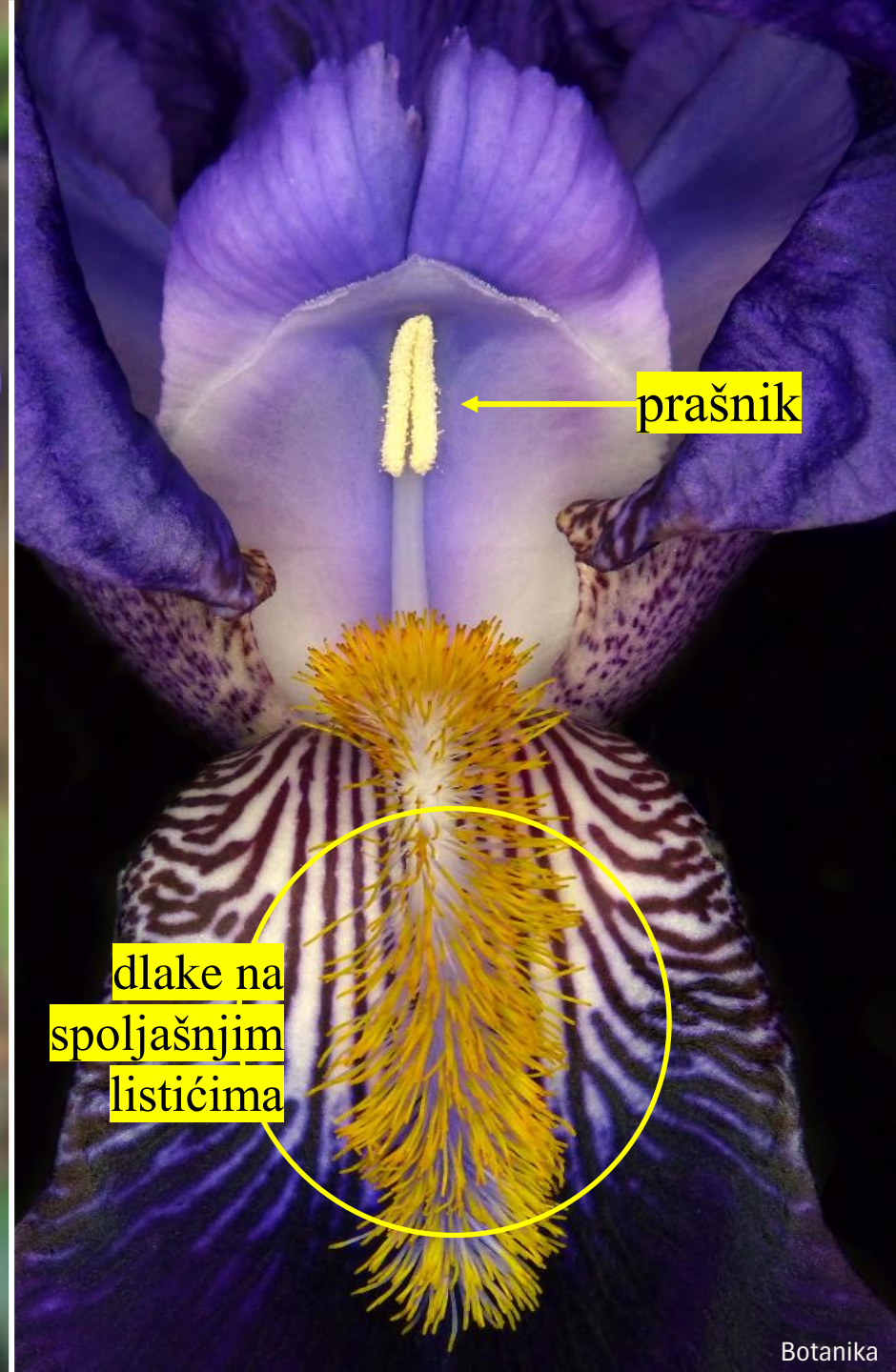




opnasta
brakteja



4-cvjetna
krivudarka





**kruniolika
proširenja
vrata tučka
ispod kojih se
nalaze prašnici**

valjkasta
čaura



Iris pseudacorus



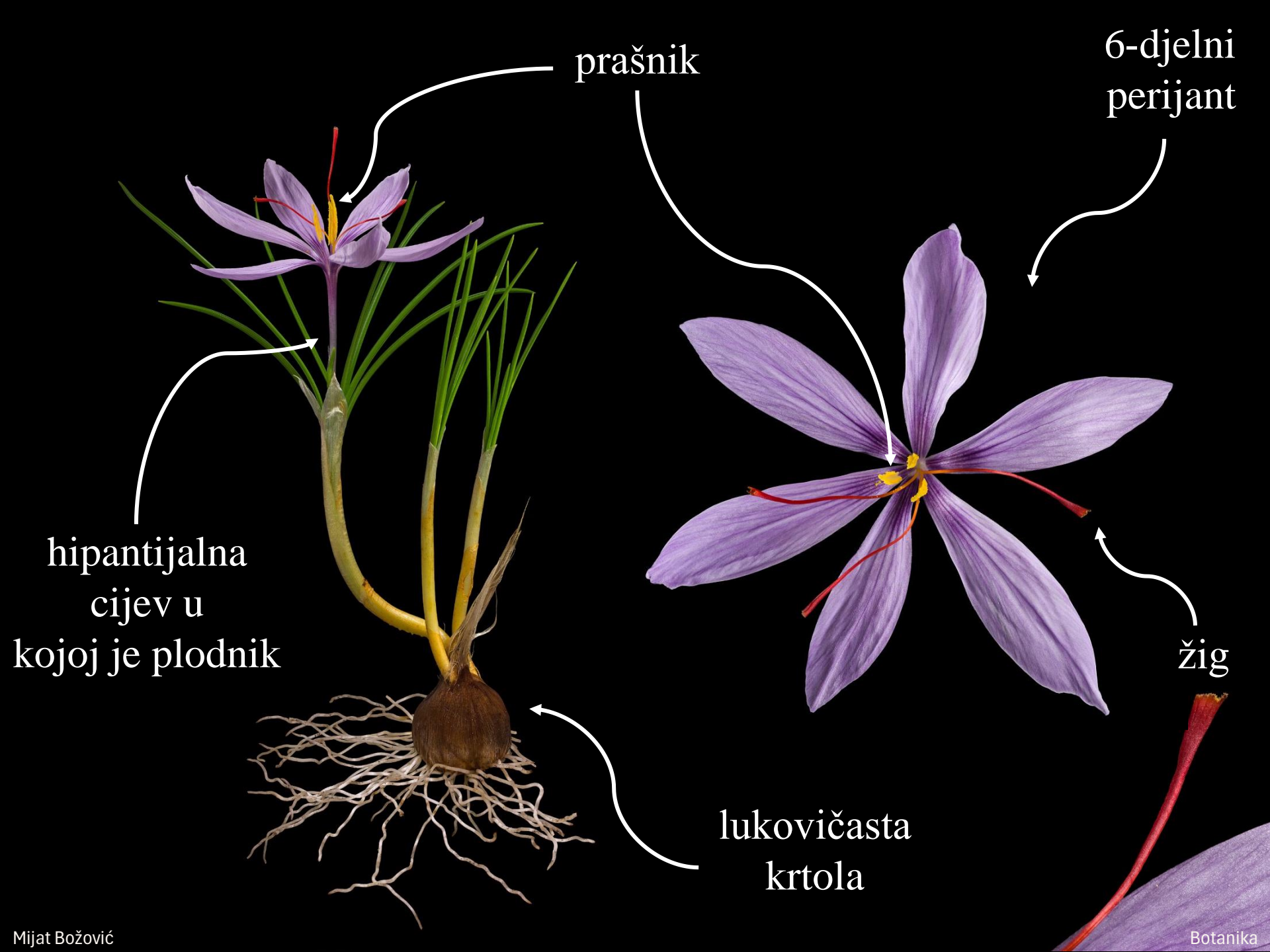
Iris orjenii





Crocus sativus





prašnik

6-djelni perijant

hipantijalna cijev u kojoj je plodnik

žig

lukovičasta krtola



šafan: najskuplji začin

Crocus tomassinianus



Crocus dalmaticus



Familia

ORCHIDACEAE



herba perenna (rhizoma, tuber)
epiphytica, rarius saprophytica



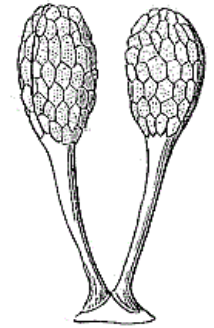
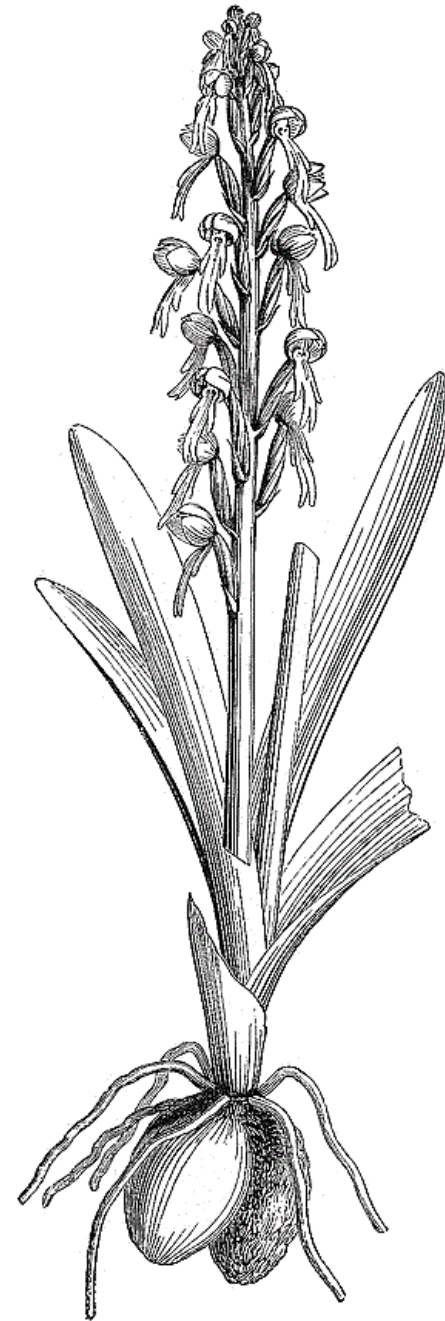
folia simplicia alterna
cum vagina



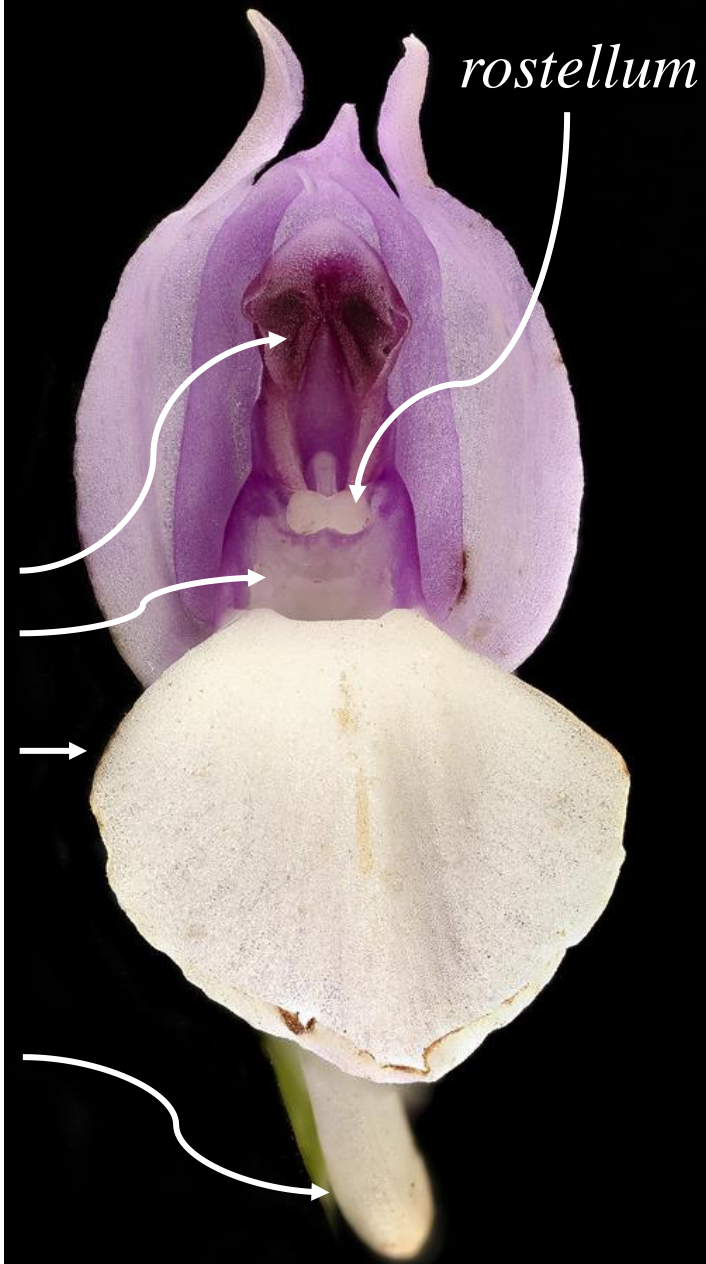
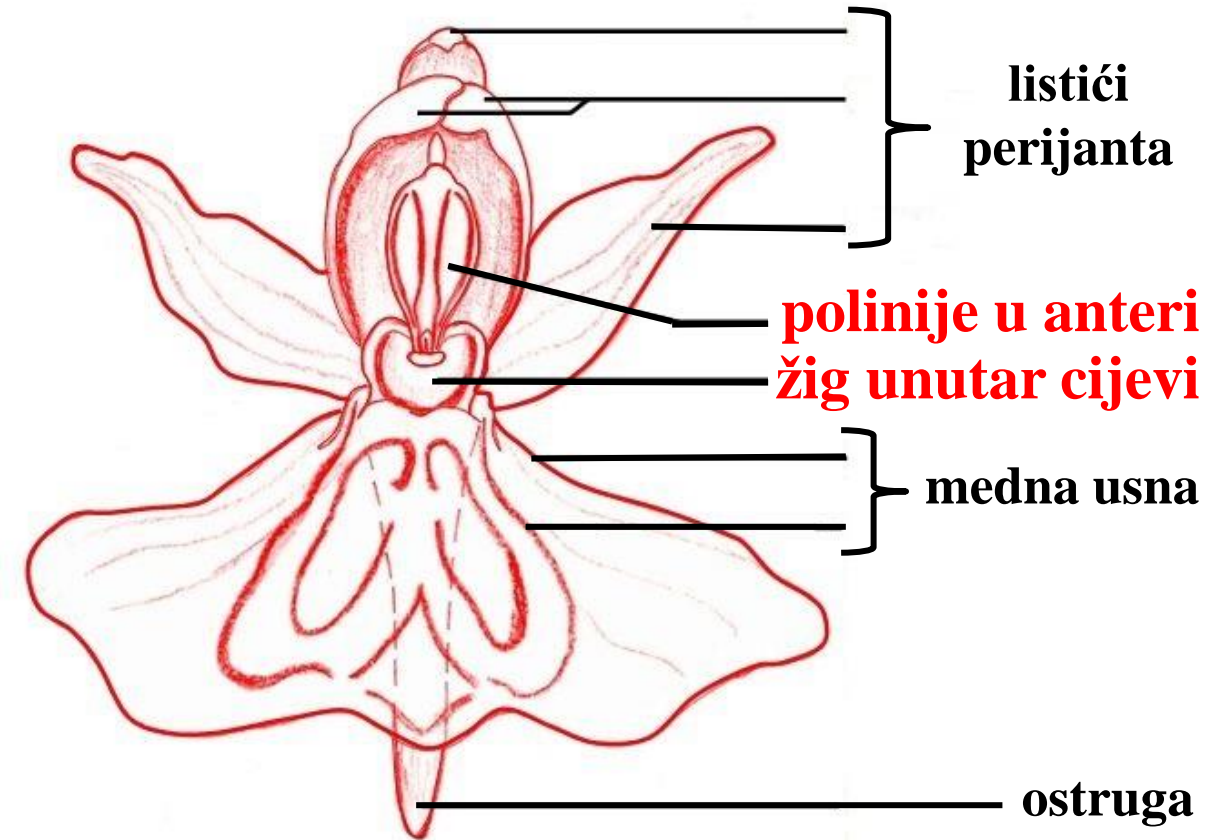
$\uparrow P_{3+3 \text{ v. } (3+3)} A_1 \text{ v. } 2 \overline{G}_{(3)}$
flos solitarius
racemus v. spica



capsula



Cvijet orhideje



Orchis morio







gomolj



medna
usna

brakteja

ostruga

5 perijantnih
listića koji
formiraju kacigu

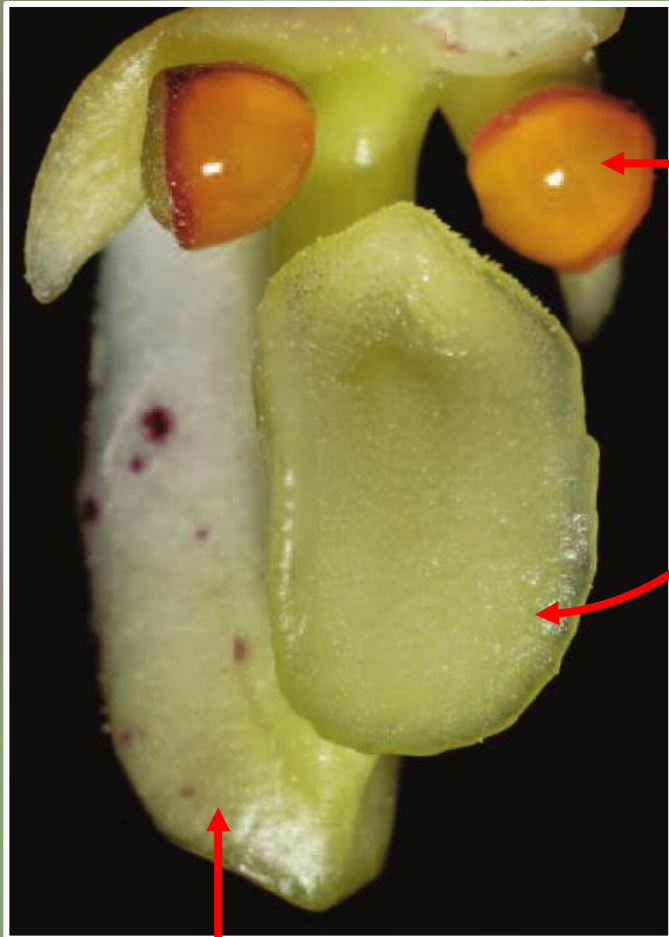
Cypripedium calceolus





staminodija

medna usna



staminodija

2 prašnika

žig

staminodija

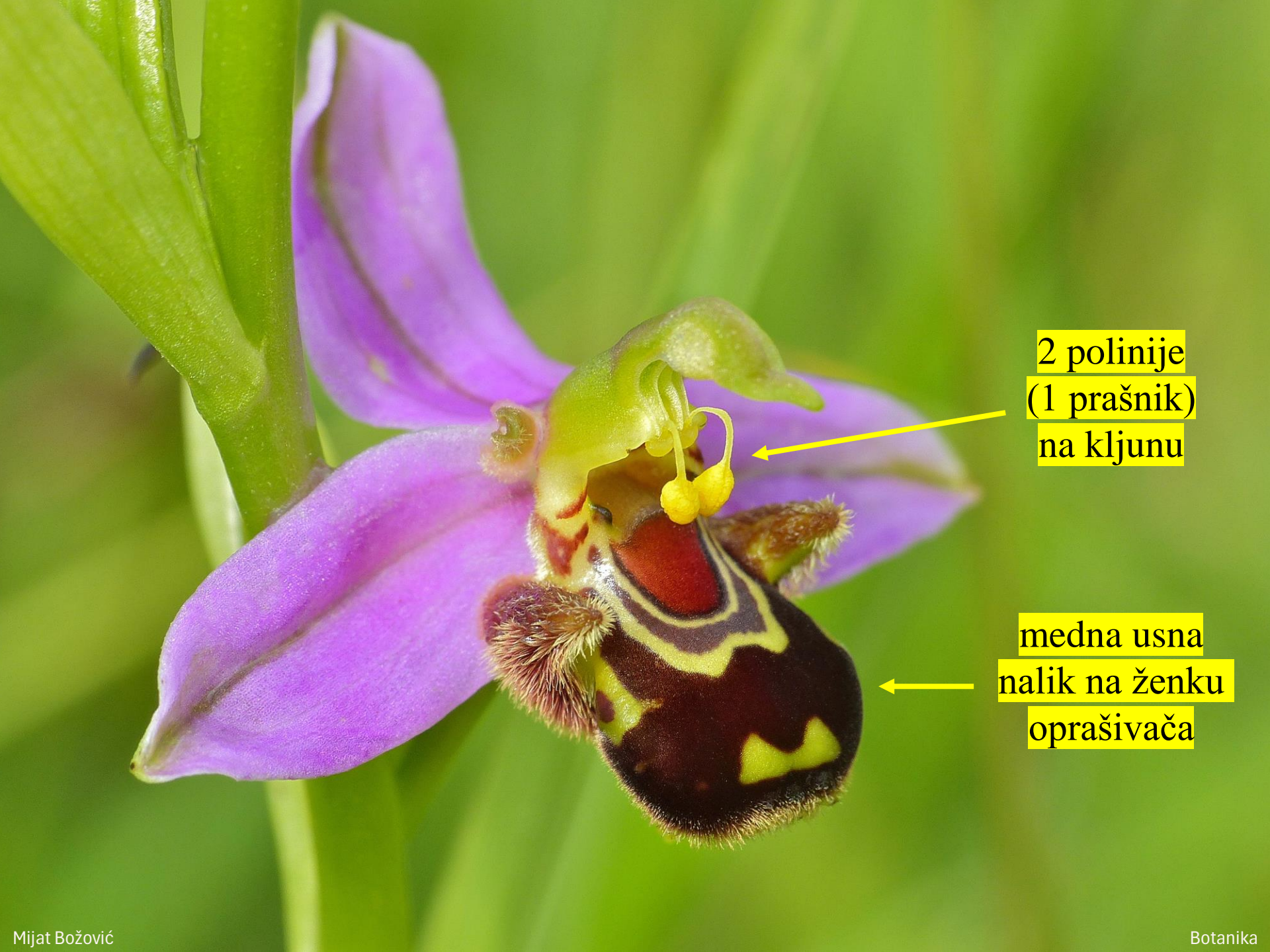


Ophrys sphegodes



Ophrys apifera





2 polinije
(1 prašnik)
na kljunu

medna usna
nalik na ženku
oprašivača



Vanilla planifolia







čaura koja
liči na mahunu



plod vanile tek nakon fermentacije dobija specifičan miris

Arecidae

odabrana porodica:

Arecaceae

Familia

ARECACEAE



arbor v. frutex
rarius liana



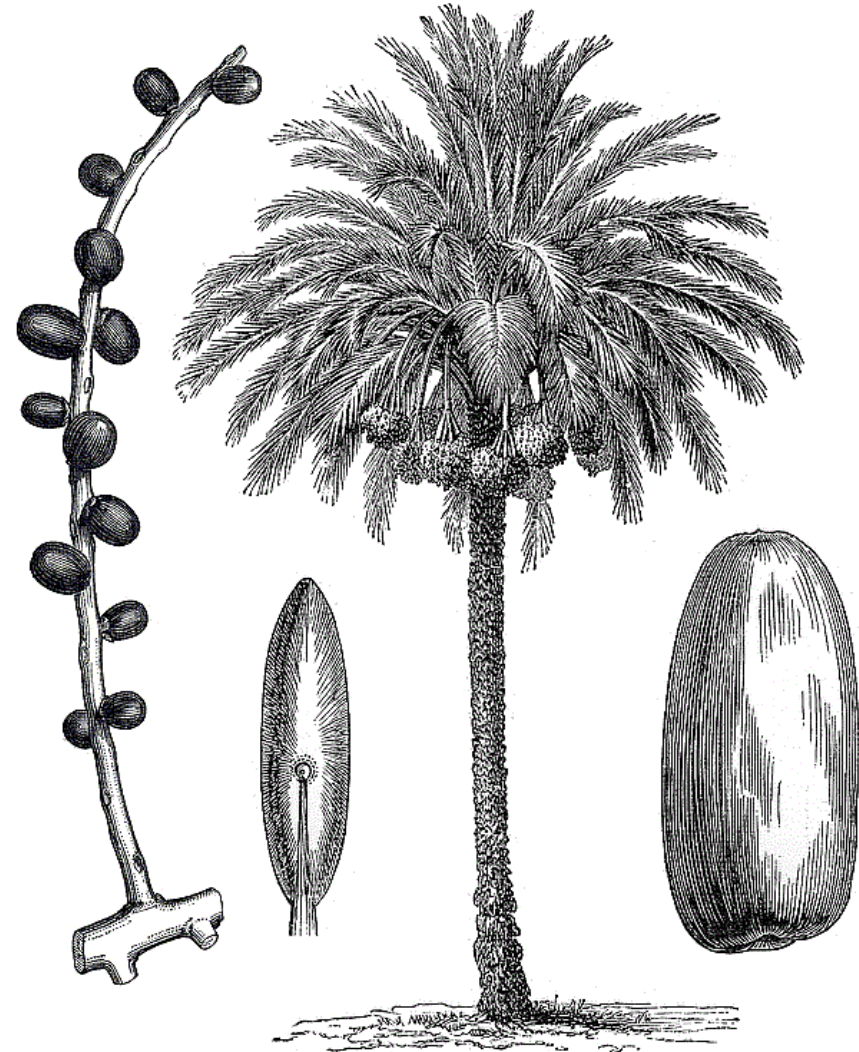
folia simplicia v. composita
alterna



♂♀ (rarius ♀)
* P_{3+3} v. $(3+3)$ A_{3+3} v. $(3+3)$ $G_{\underline{3}}$ v. $(\underline{3})$
spadix v. panicula (+ spathe)



bacca v. drupa





Phoenix dactylifera



perasto složen list







1-sjemene
bobice



sa preko 400 sorti urme su među najstarijim kultivisanim biljkama

Phoenix canariensis





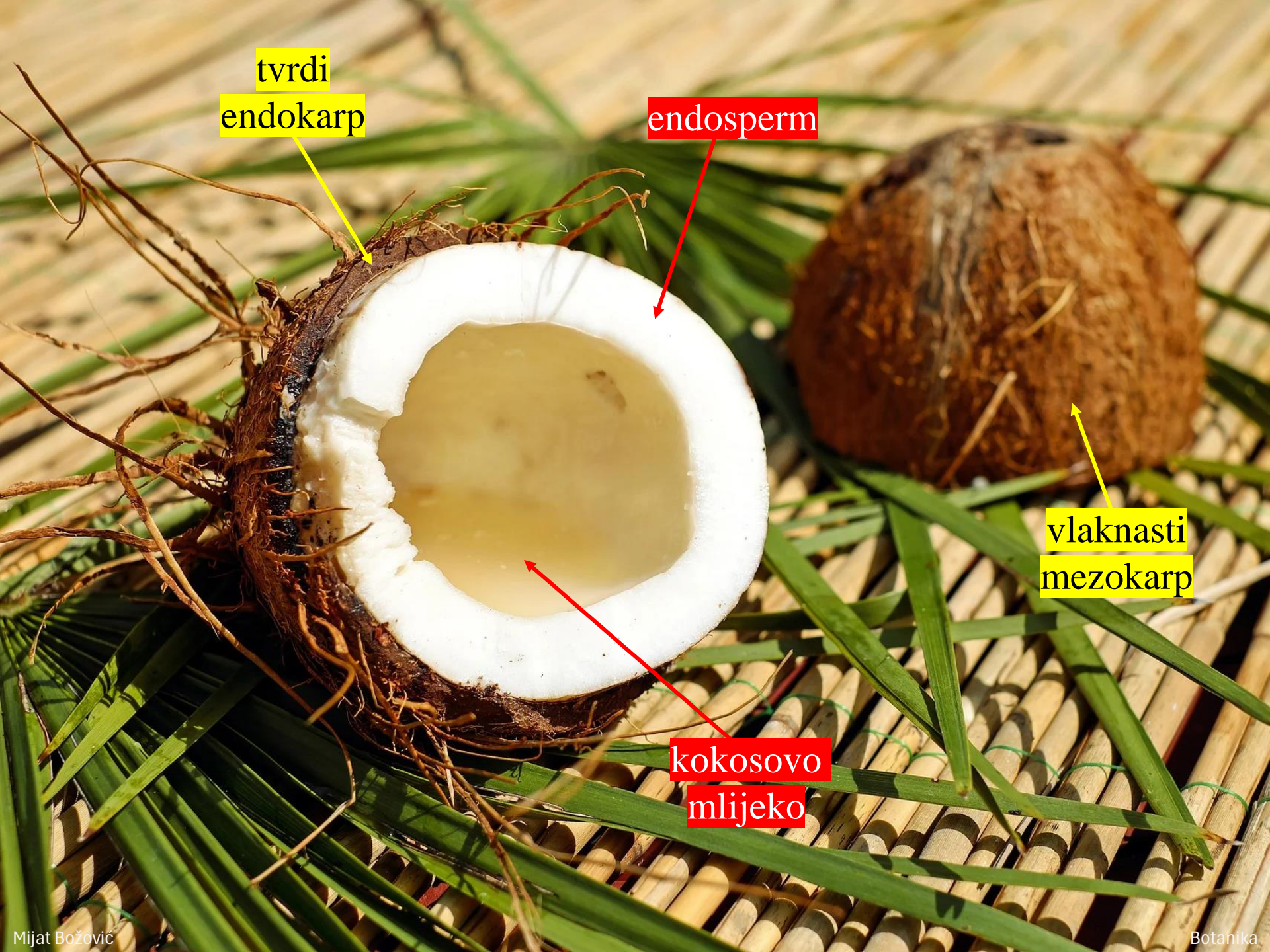
Cocos nucifera





3-strana
koštunica





tvrđi
endokarp

endosperm

vlaknasti
mezokarp

kokosovo
mlijeko



Areca catechu



jajolika
bobica





sjeme

tzv. areka orah

Calamus rotang



Chamaerops humilis



Commelinidae

odabrana porodica:

Poaceae

Familia

POACEAE



herba (annua v. perenna)
rarius lignescente



folia simplicia disticha
cum vagina (+ ligula)



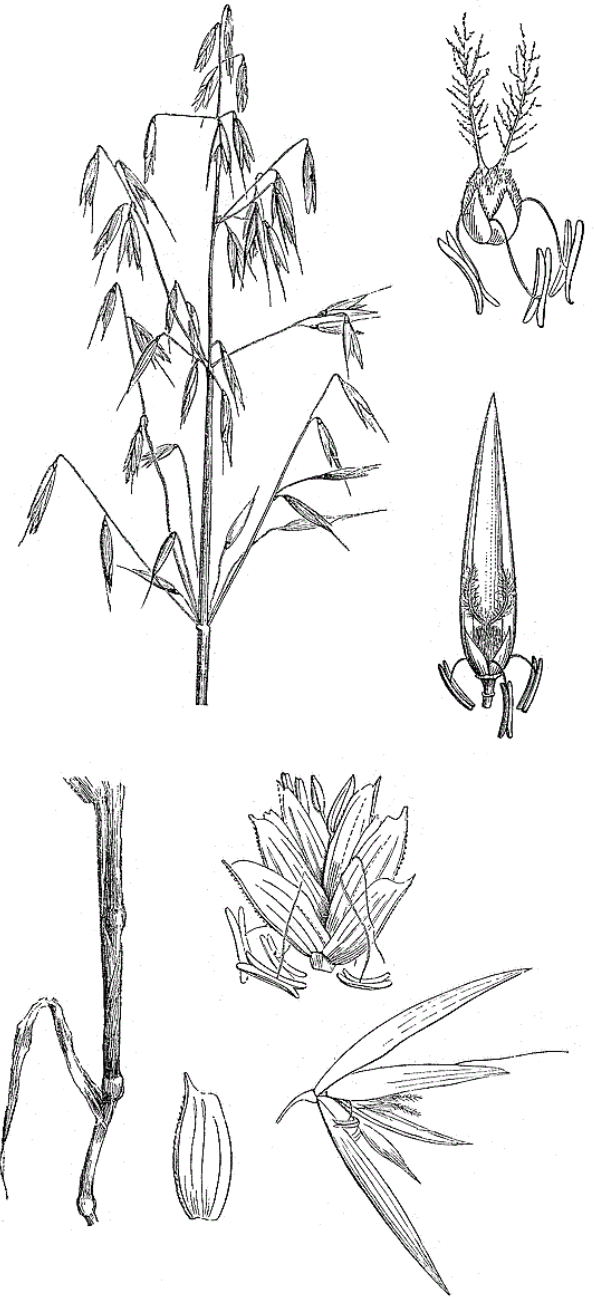
♀ v. ♂♀

↑ P_0 v. 2-3 A_3 v. 6 $G_{(2)}$

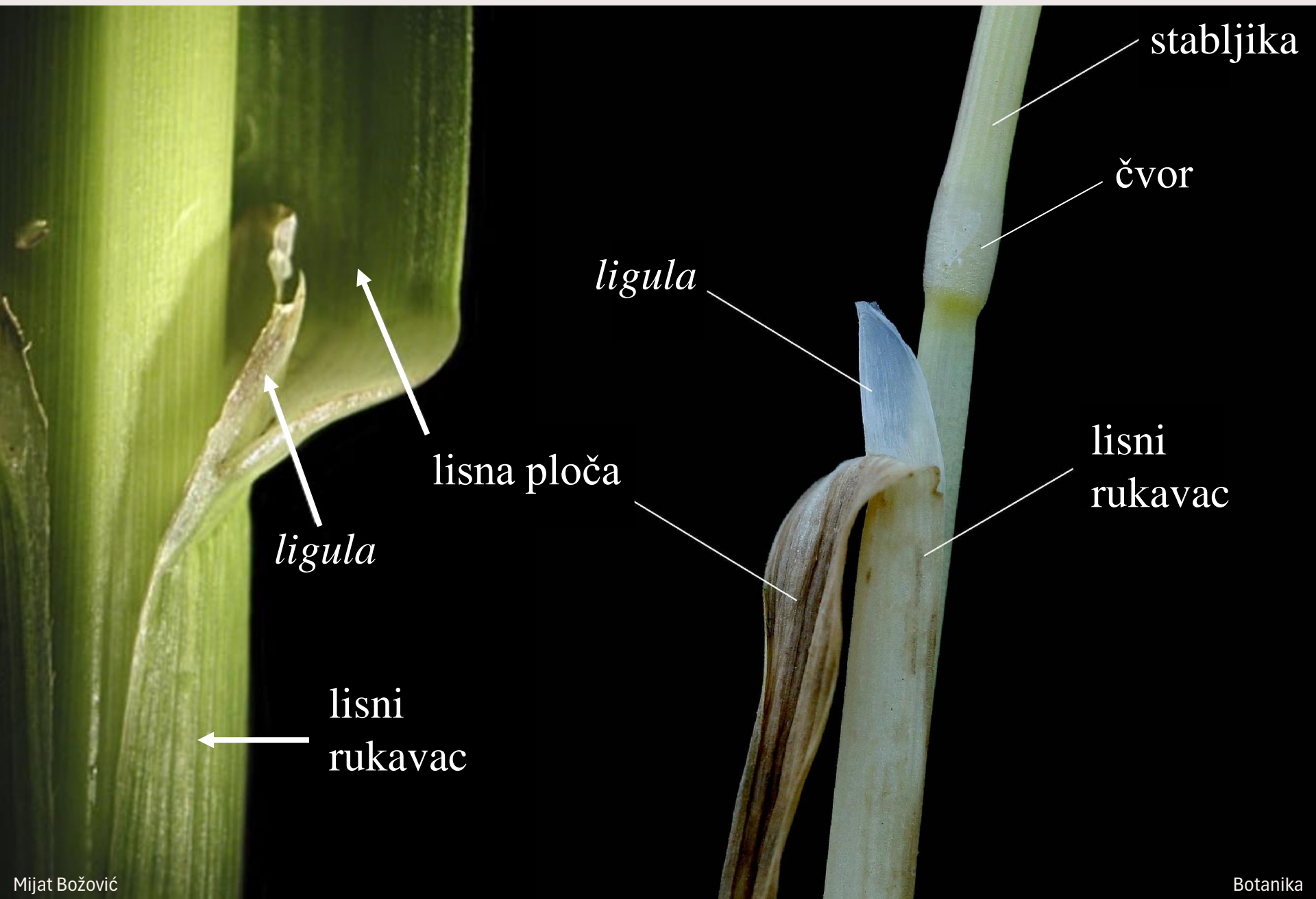
spica, spadix, racemus v. panicula



caryopsis



List trava



stabljika

čvor

ligula

lisna ploča

ligula

lisni
rukavac

lisni
rukavac

Klasić vs. cvijet trava

složeni
klas

višecvjetni
klasić

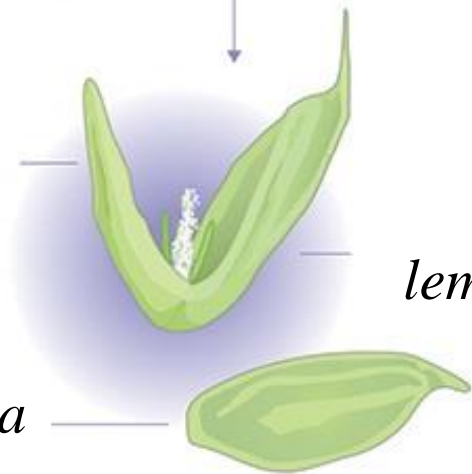


- cvijet 1
- cvijet 2
- cvijet 3
- cvijet 4

palea

lemma

gluma

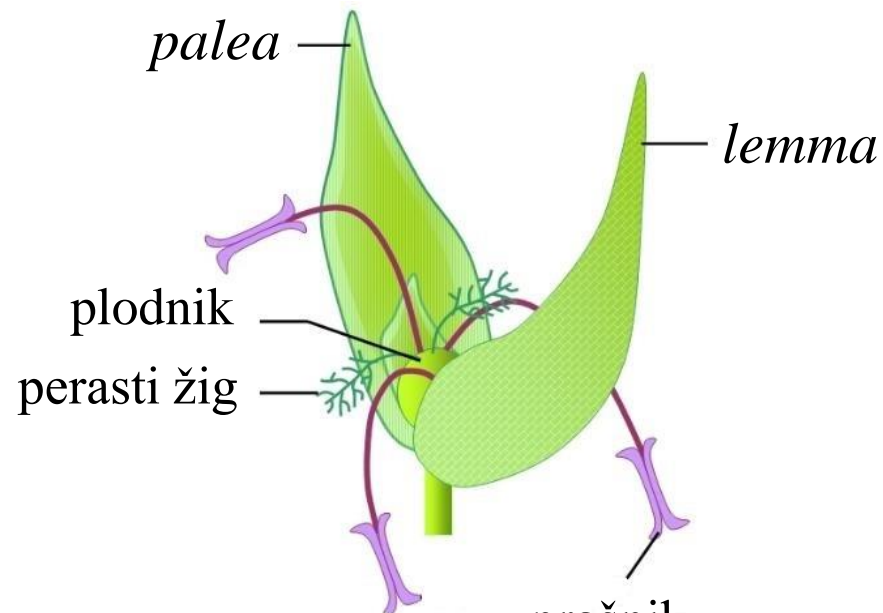


palea

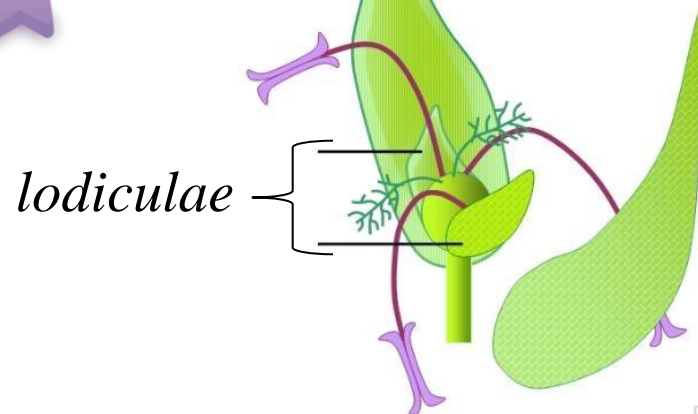
lemma

plodnik
perasti žig

prašnik



lodivulae



Cvast trava

složeni
klas



žigovi

cvijet

palea

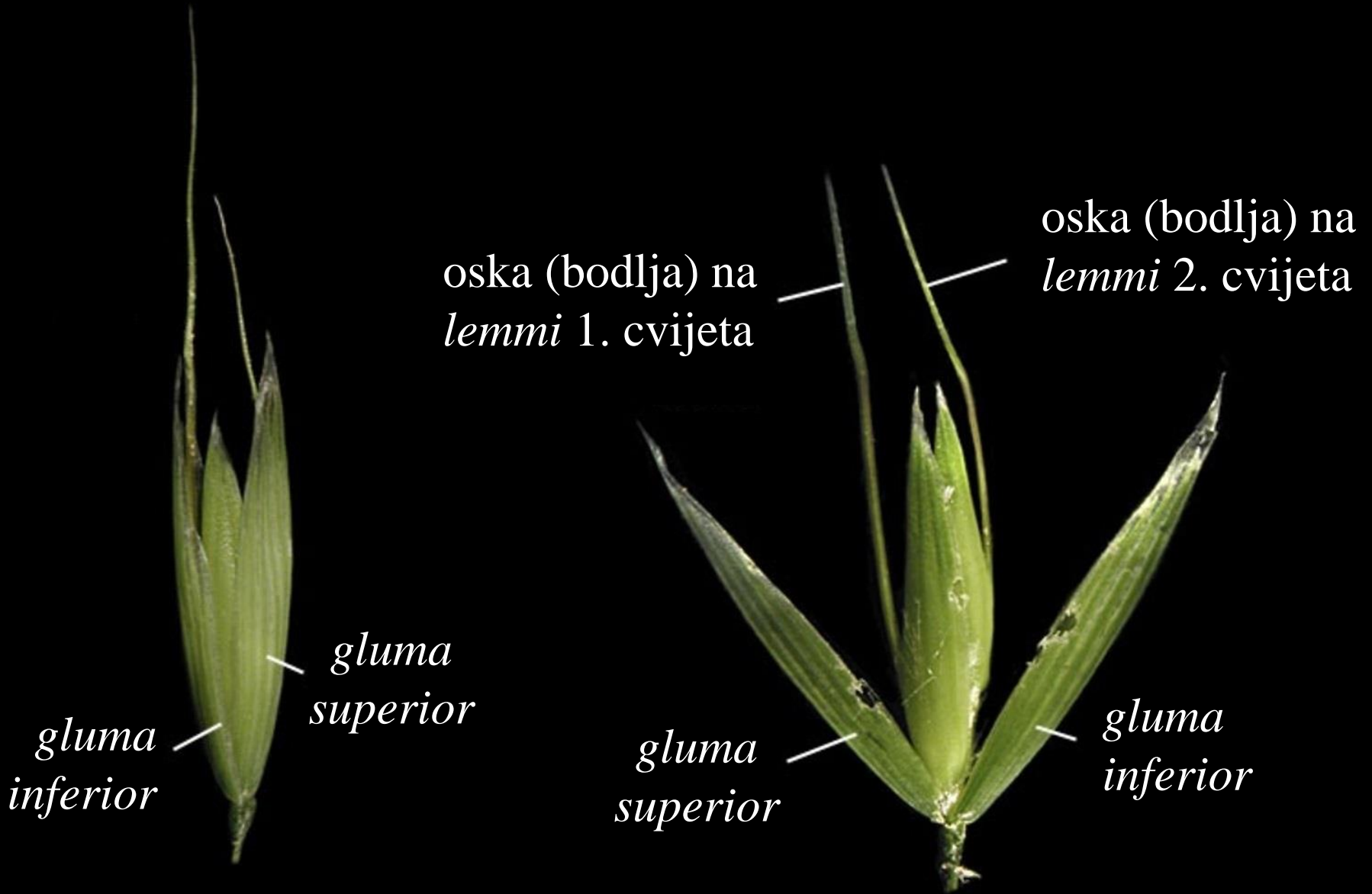
lemma

klasić

*gluma
superior*

*gluma
inferior*

Osje trava



Secale cereale



**2-cvjetni klasići u
složenom klasu**





krupa sa
dubokom
brazdom

*Secale
cornutum*



Triticum aestivum



**3-6-cvjetni klasići u
debelom 4-stranom klasu**





krupa sa
plitkom
brazdom

Hordeum vulgare





1-cvjetni klasići po
3 u svakom čvoru



vretenasta pljevičasta
krupa s brazdom

Avena sativa



2-3-cvjetni klasići u
rastresitim metlicama

oske





vretenasta krupa koja
srasta sa pljevicom

Zea mays



metlica

♂ cvjetova



klip

♀ cvjetova





kukuruzna
svila

klinasta
krupa

Oryza sativa



**1-cvjetni klasići
u metlicama**





krupa
zatvorena
pljevicama

krupa sa linearnim
hilumom po cijeloj dužini



Phragmites communis



Pitanja?

Mijat BOŽOVIĆ

Botanika

