



Citrus lemon

Red: Rutales
Fam. Rutaceae



*K5 C5 A∞ G(-20)/



Citrus aurantium



Citrus nobilis

Red: Geraniales
Fam: Linaceae



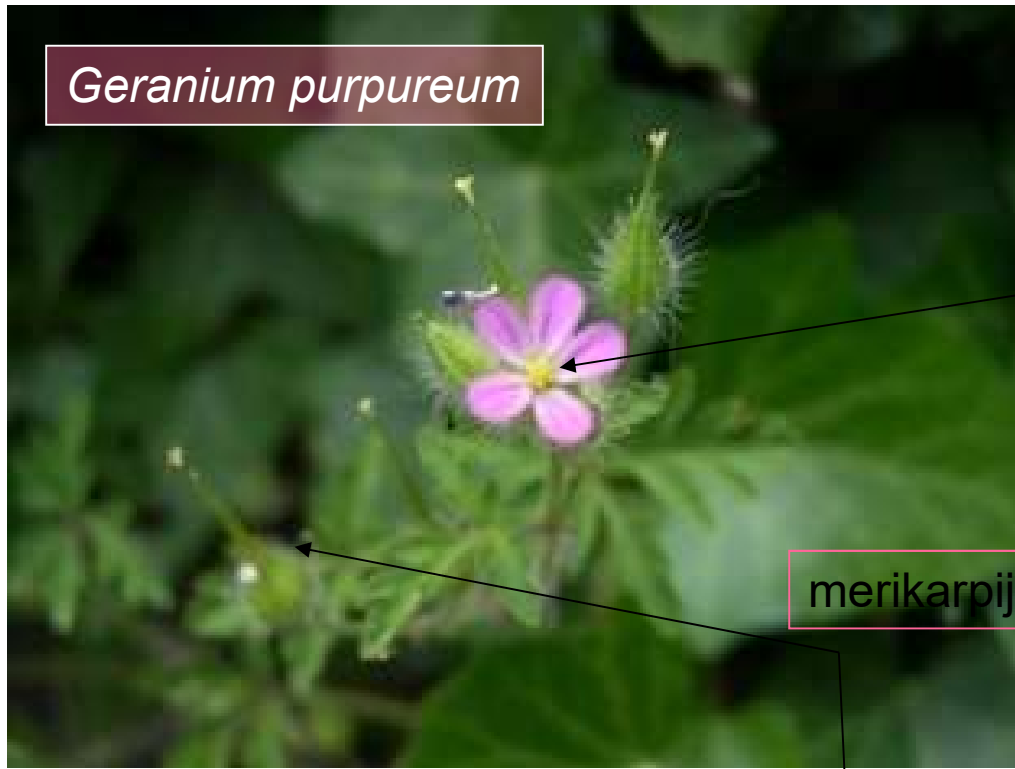
Linum usitatissimum- lan



5 prašnika, pri dnu srasli,
5 vratova

Fam. Geraniaceae

Geranium purpureum



Svih 10 prašnika su fertilni

merikarpijum

*K₅ C₅ A₅₊₅ G(5)

*K₅ C₅ A₀₊₅ G(3)

Erodium cicutarium



5 prašnika su fertilni

Red: Rhamnales
fam. Vitaceae



Vitis vinifera – vinova loza

Red: Cornales Fam. Cornaceae



Cornus mas

Ovojni listići oko
štitaste cvasti



Plodnica
podcvjetna,
plod koštunica

Listovi se javljaju
postfloralno

Tetramerni cvjetovi

Red: Araliales

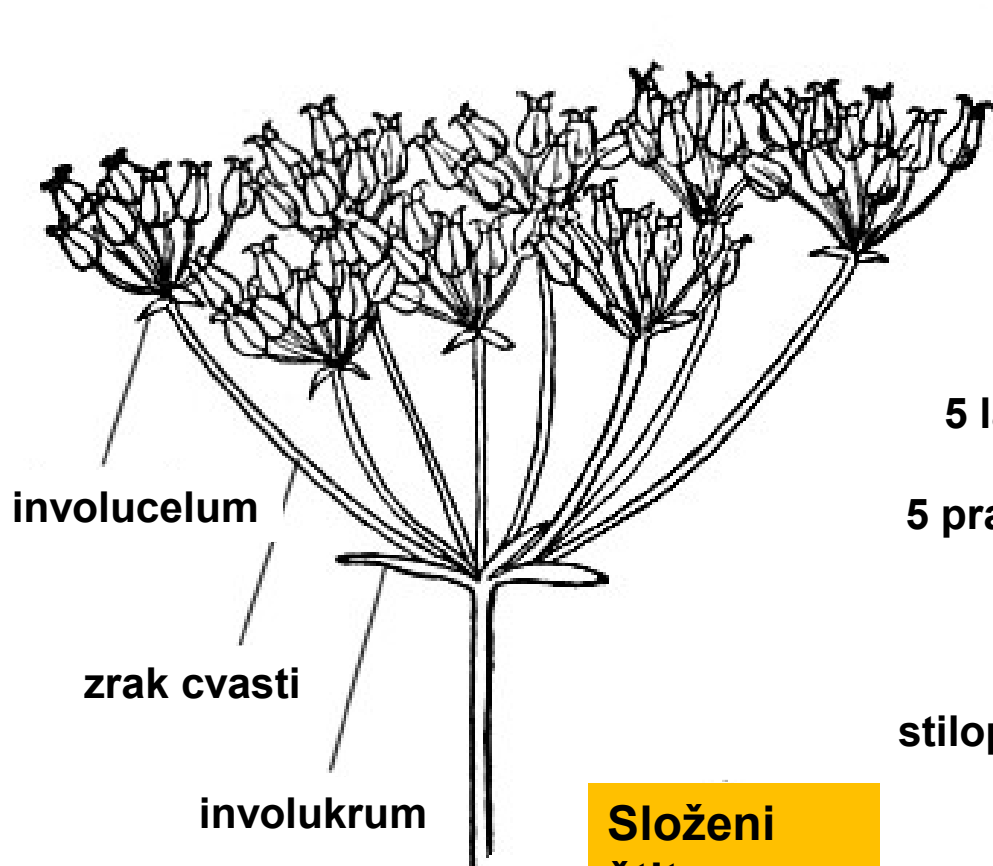
Fam: Araliaceae



Hedera helix - bršljan

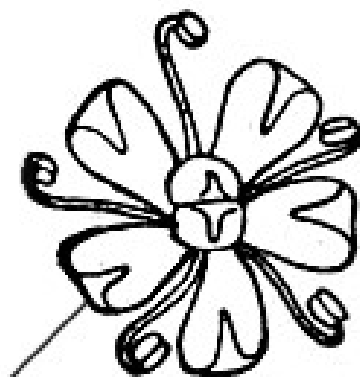
Red: Araliales
Fam: Apiaceae

↑/*K₅ C₅ A₅ G₁₍₂₎

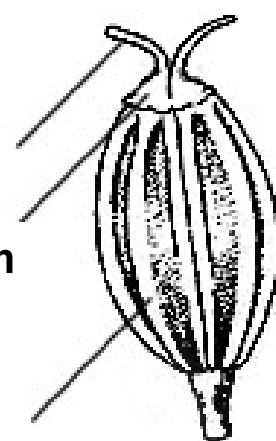


involucelum
zrak cvasti
involukrum

**Složeni
štit**



5 latica
5 prašnika



vrat
stilopodijum

Plod (šizokarpijum)

Daucus carota- mrkva



Korijen repast.
Listovi 2-4 perasto dijeljeni na izdužene i nazubljene ili urezane segmente.
Listići involukruma perasto isječeni i sa končastim segmentima. Za vrijeme plodonošenja i obuhvataju štiti. Plodići bodljasti.

Coriandrum sativum- korijander



Izražen dimorfizam listova.
Donji listovi perasti, liske široke i režnjevite.
Listovi stabla dijeljeni u končaste odsječke.
Plod loptast.

Petroselinum crispum (Mill.) Nym.-
peršun



Apium graveolens L. - celer





Carum carvi- kim

Pimpinella anisum- anis



Levisticum officinale- selen



Pastinaca sativa- paškanat





Levisticum officinale- selen



Pastinaca sativa- paškanat

Saxifragales

Fam: Saxifragaceae



*K5 C5 A5 G/(2)

Ribes sp.- ribizla

Red: Oleales

Fam: Oleaceae

*K4 (C4 A2) G (2)

Olea europaea - maslina



Red: Myrtales

Fam: Puniceae



*K5-8 C5-8 A ∞ G / (7-15)



Punica granatum- šipak

Mnogosjemena bobica



Red: Theales

“perforirani” listovi

fam: Hypericaceae



*K5 C5 A3 ∞ G(3)

Hypericum perforatum- kantarion



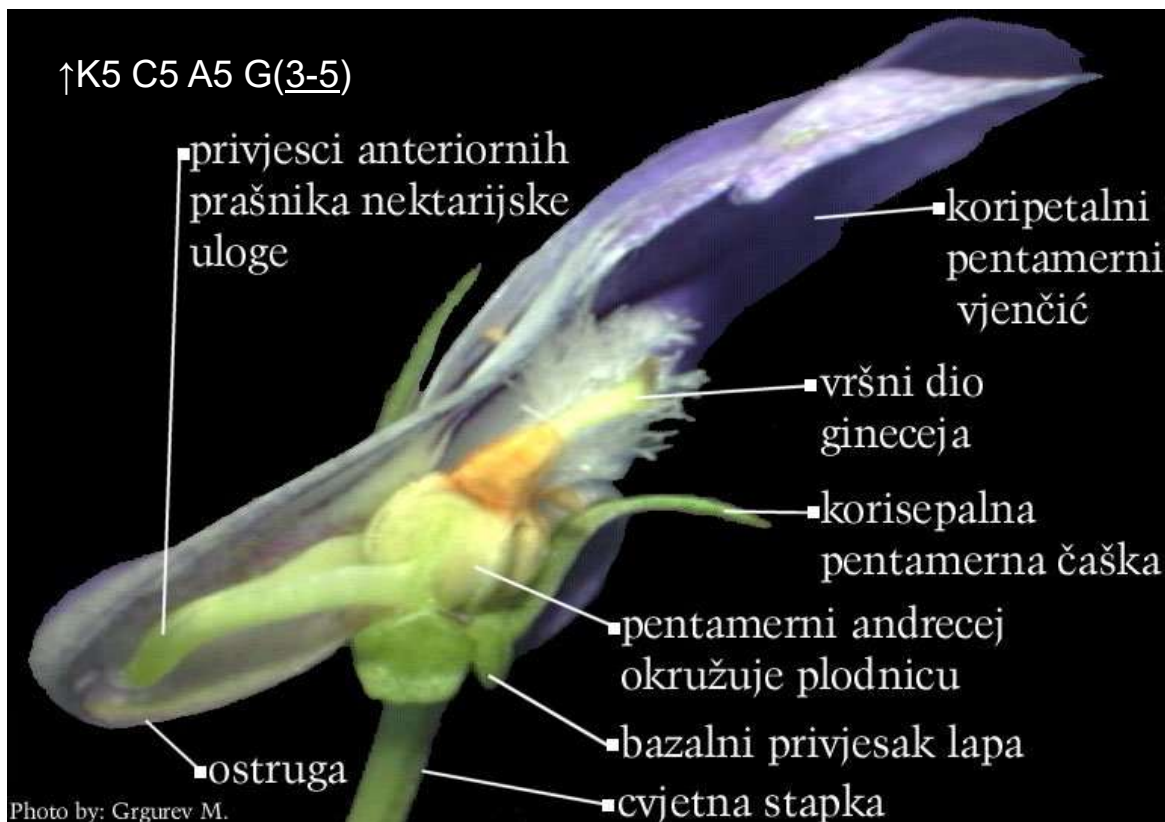
Niz crnih žlijezda
uz rub latice

Red: Violales

Fam: Violaceae

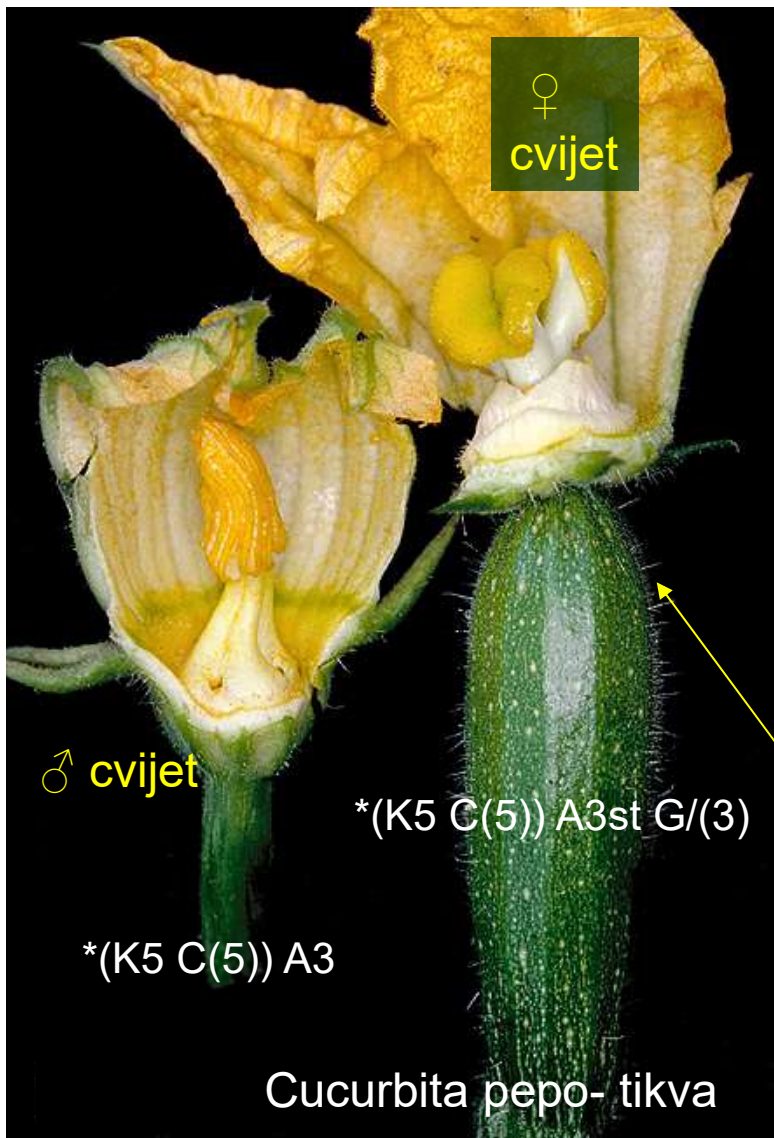


Viola odorata - ljubičica

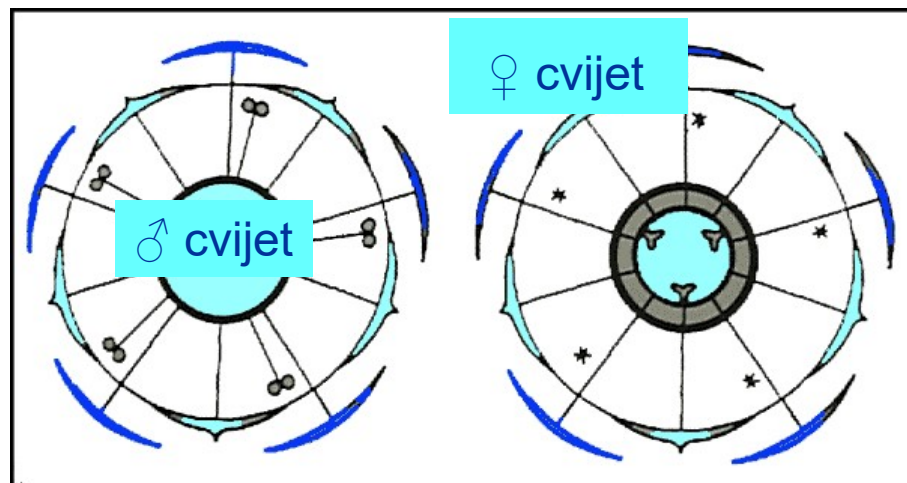


V. tricolor- dan-noć

Red: Cucurbitales → Fam: Cucurbitaceae = tikve



Opšti cvjetni dijagram



Podcvjetna plodnica



Cucurbita pepo= tikva



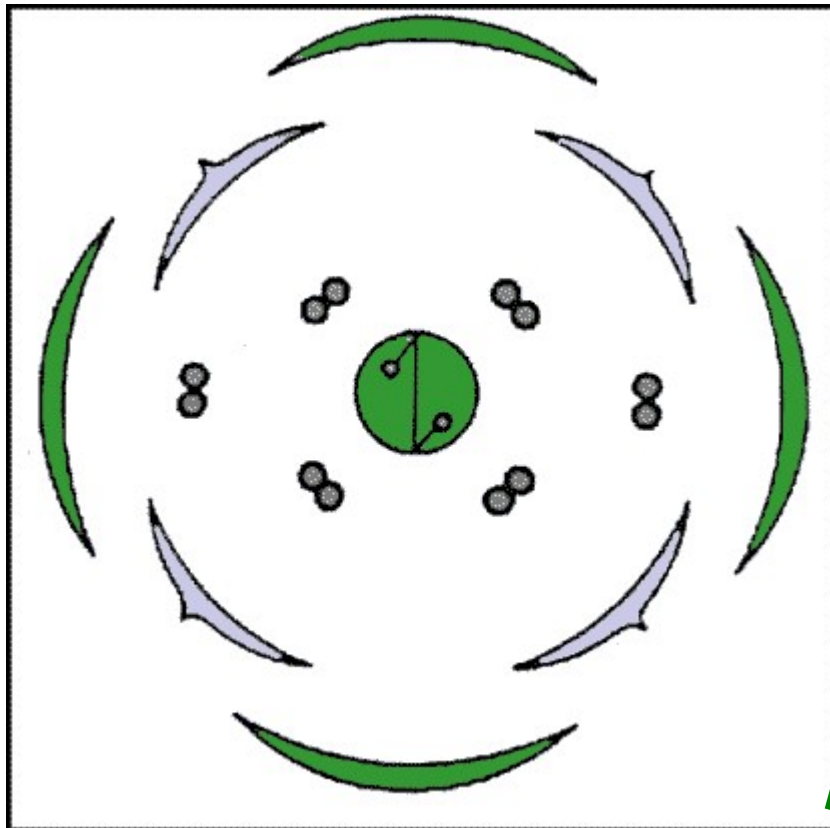
Cucumis sativus= krastavac



Red: Capparales



Fam: Brassicaceae



4 čaična listića

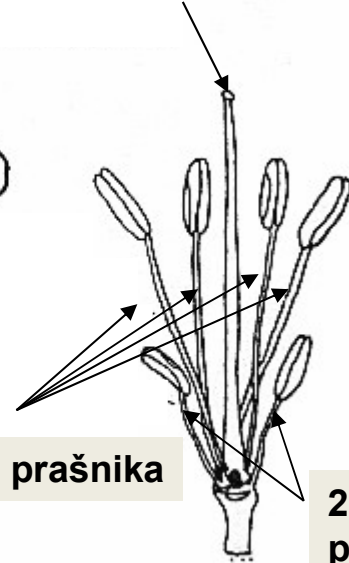
4 krunična listića



4 duža prašnika

2 kraća prašnika

Plod tipa ljuska



*K4 C4 A2+4 G(2)

Plod tipa komuške/ljuske

Brassica oleracea- kupus.



Raphanus sativus- rotkvica





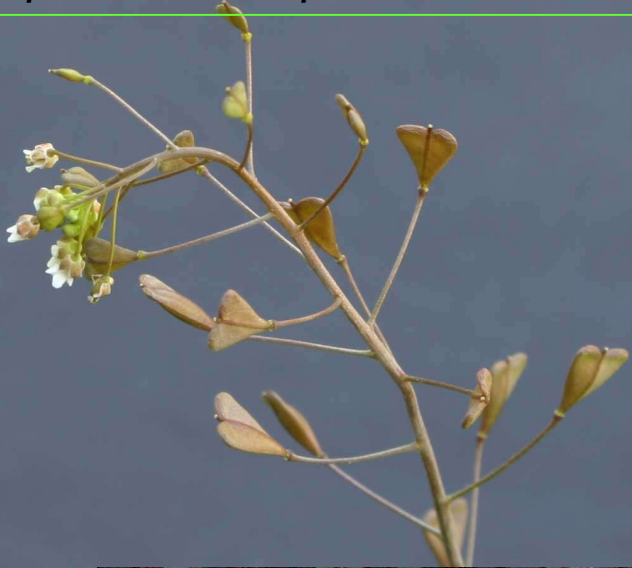
Sinapis alba- slačica (senf)



Cochlearia armoracia- ren



Capsella bursa-pastoris- hoću-neću



Sisymbrium officinale- oranj

Red: Ericales

Fam: Ericaceae



Vaccinium myrtilus
borovnica



Vaccinium vitis-idea- brusnica



Red: Primulales

→ Fam: Primulaceae

*K(5) (C(5) A5) G(5)

Primula vulgaris- jagorčevina



***Anagalis arvensis* - vidovčica**



Red: Malvales

Fam: Tiliaceae - lipe



Priperak = listić srastao za dršku cvasti



Čuperak kafenkastih
dlačica pri bazi lista

*K5 C5 A ∞ G(5)

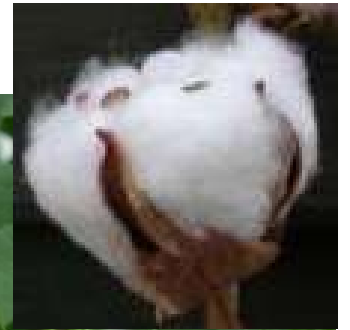
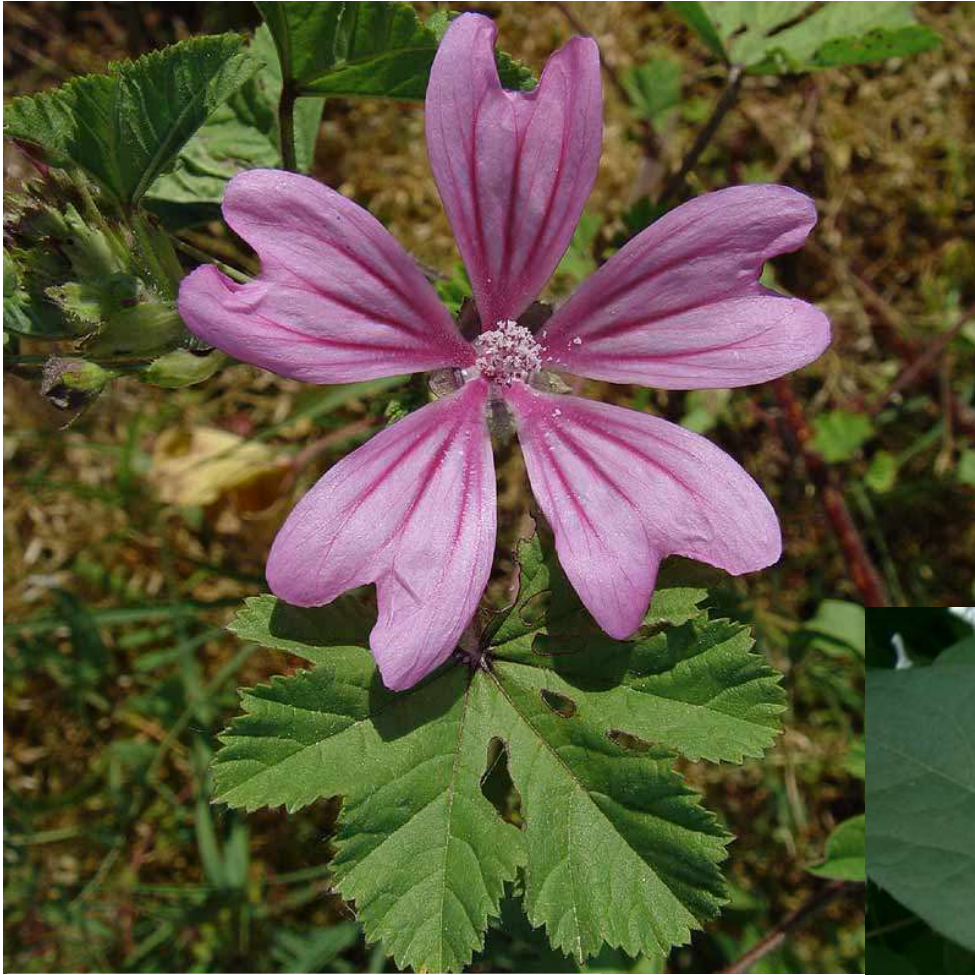


Red: Malvales

Fam: Malvaceae

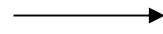
*K(5) (C(5) A(∞)) G(5- ∞)



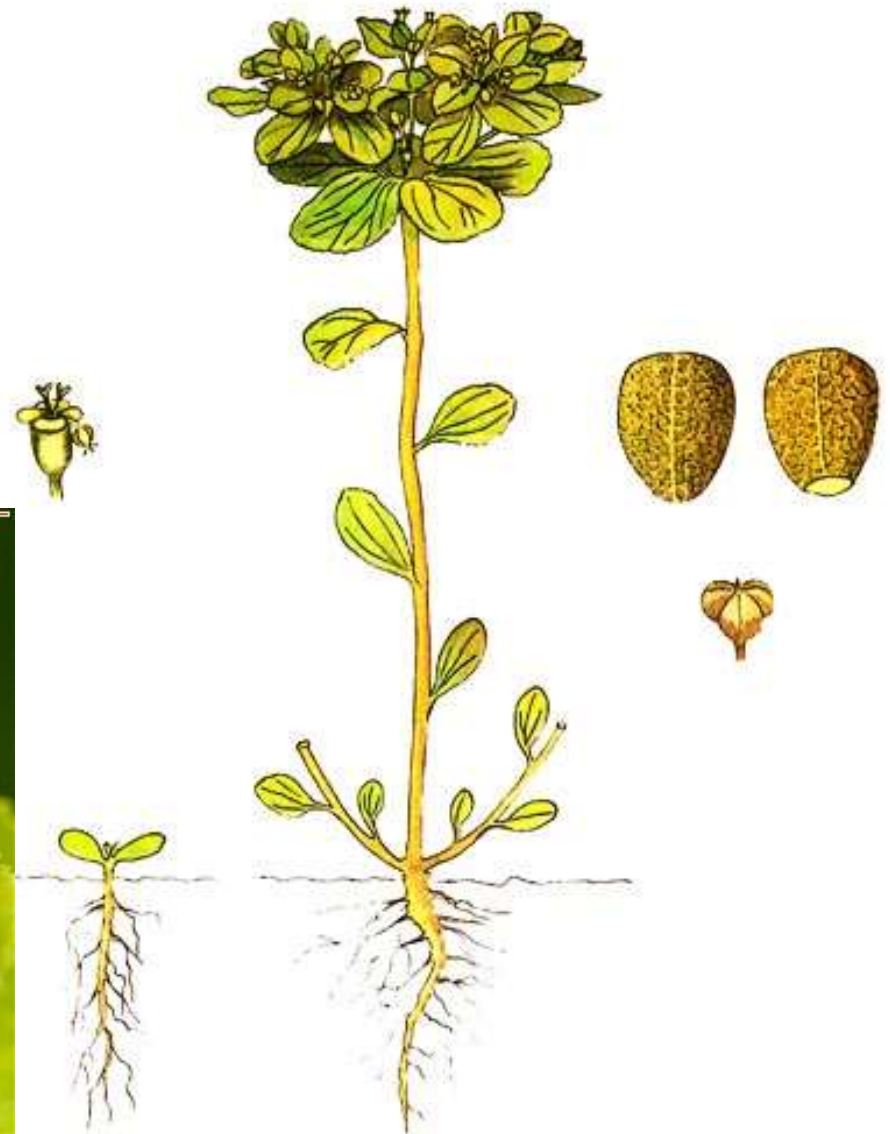
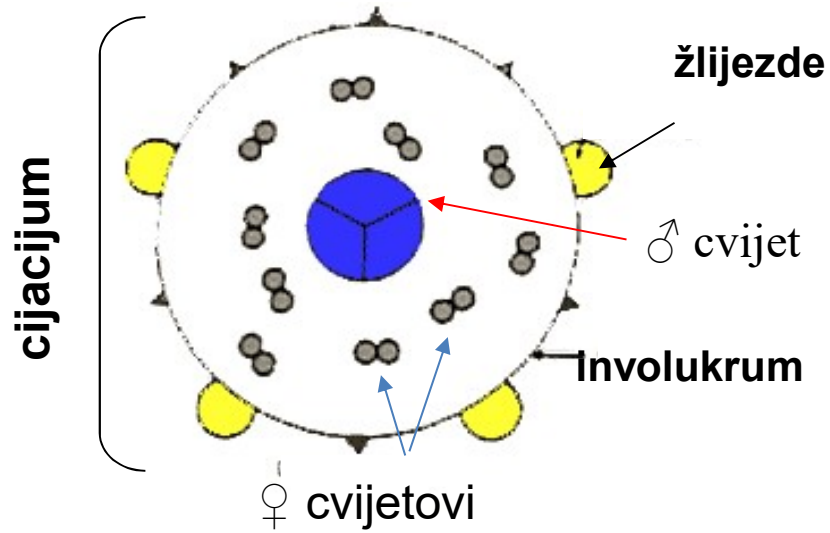


Gossypium sp.-
pamuk

Red: Euphorbiales



Fam: Euphorbiaceae



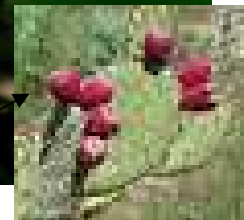
Red. Caryophyllales

fam. Cactaceae

Opuntia spp.



*P ∞ A ∞ G/(3-∞)



Podcvjetna plodnica

fam. Portulacaceae

*K2 C5 A8-15 G(3-5)



fam. Caryophyllaceae

*K5 C5 A5+5 G(5)



Stellaria media- mišjakinja



Silene vulgaris- pucavac

fam. Amaranthaceae

Amaranthus retroflexus- štir



perigon

*P5 A5 G(2-3)

fam. Chenopodiaceae

*P5 A (5) G(3)

Beta vulgaris- cvekla



*P(2-5) A (5) G(2-3)
*P3 G(2)



Chenopodium album
loboda

Beta vulgaris ssp. *cicla*- blitva



*P(4) A4, *P(2-4) G(4)



Spinacia oleracea- spanač

Red. Polygonales

fam. Polygonaceae



ohreja



Polygonum aviculare

*P5 A8 G(3)

5 listića perigona +
8 prašnika + nadcvj. G



*P5 A8 G(3)

Fagopyrum esculentum - heljda



Rumex spp.
štavelj



6 lističa perigona
+ 6 prašnika +
nadcvetna plodnica

*P6 A6 G(3)



plodići



Listovi zaobljeni pri
bazi i u obliku gitarice



Kopljasti list



Ordo. Dipsacales

Fam: Caprifoliaceae



Sambucus nigra- zova



***K₍₅₎ C₍₅₎ A₅ G₍₂₎**

Listovi napramni, neparno perasti.
Cvjetovi pentamerni!

Ordo. Gentianales

Fam: Gentianaceae

*K⁽⁵⁾ (C⁽⁵⁾ A₅) G⁽²⁾



Gentiana lutea- lincura



Fam: Rubiaceae



Galium mollugo, obični broć

Cijev vijenca
kratka



Galium aparine, broćika

Ordo. Polemoniales

Fam: Convolvulaceae



*K(5) C(5) A5 G(2)



Convolvulus arvensis- obični slak

Fam. Boraginaceae
(oštroolisti)

↑*K(5) (C(5) A5) G (2)



Echium vulgare- lisičji rep

Ordo. Scrophulariales

*K(5) (C(5) A5) G(2-5)

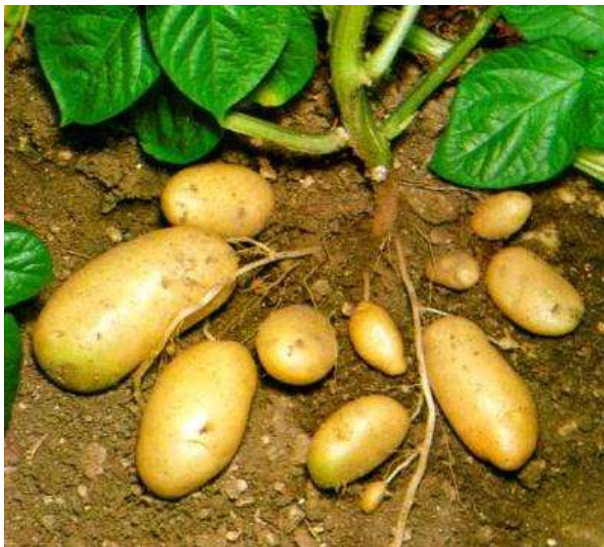
Fam: Solanaceae (pomočnice)



Plod sočna boba



Solanum tuberosum- krompir



Verbascum blattaria
divizma



Scrophulariaceae

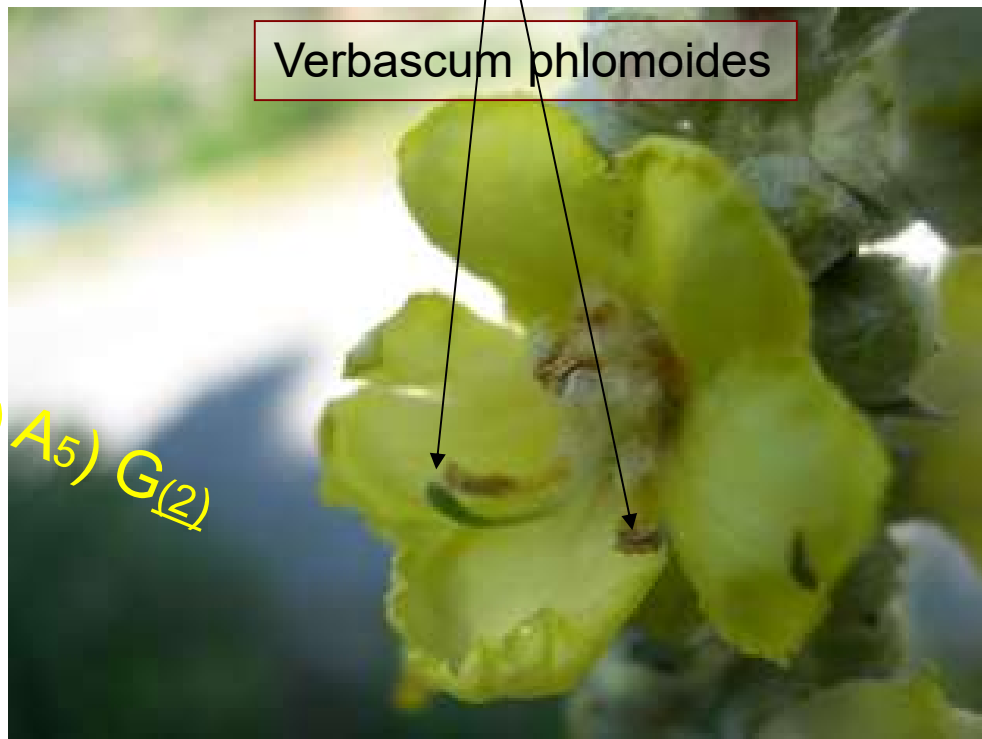
$\uparrow^* K_{(4-5)} (C_{(4-5)} A_{2-5}) \underline{G}_{(2)}$

Prašnici sa upravnim anterama.
Filamenti bijelo dlakavi.



* $K_{(5)} (C_{(5)} A_5) \underline{G}_{(2)}$

Verbascum phlomoides



$\underline{G}_{(2)}$

Veronica persica, čestoslavica

$\uparrow K_{(4)} (C_{(4)} A_2) \underline{G}_{(2)}$



Fam: Plantaginaceae

*K(4) (C(4) A4) G(2)



Plantago lanceolata



Cvst tipa klasa

Vjenčić suhokožičast



Plantago major

Ordo. Lamiales

Fam. Lamiaceae
(usnatice)

$\uparrow K(5) (C5 A4) G(\underline{2})$



Vjenčić gotovo pravilan,
rascijepan na 4 dijela

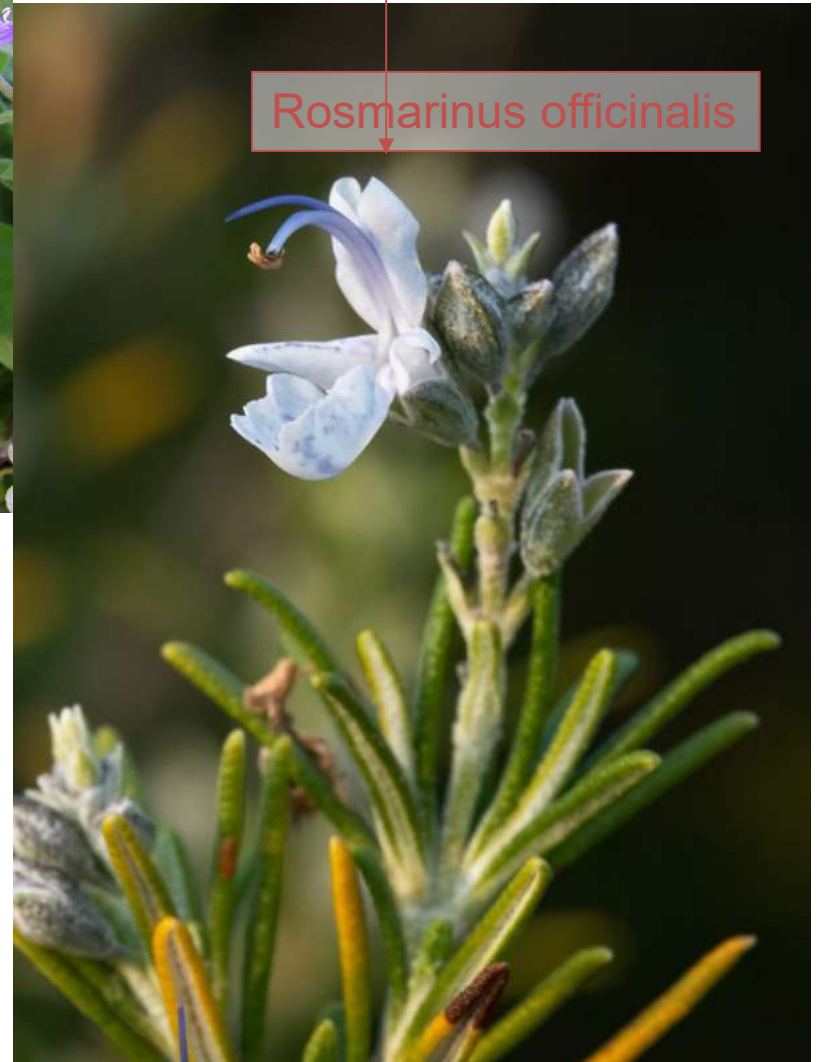
Mentha aquatica- menta



Salvia officinalis- pelim

Dva prašnika

Rosmarinus officinalis



Galeopsis speciosa
Smrdljiva kopriiva



Donja usna sa dva šuplja zubića

Prašnici ispod gornje
usne paralelni



Cijev vjenčića
trbušasto
proširena

Lamium maculatum- mrtva kopriiva

Prašnici ispod gornje usne
raskrečeni

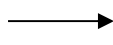


Thymus pulegioides- majkina dušica



Origanum vulgare-
vranilova trava, planinski čaj

Ordo. Campanulales



fam: Campanulaceae *K(5) C(5) A5 G/(2-5)



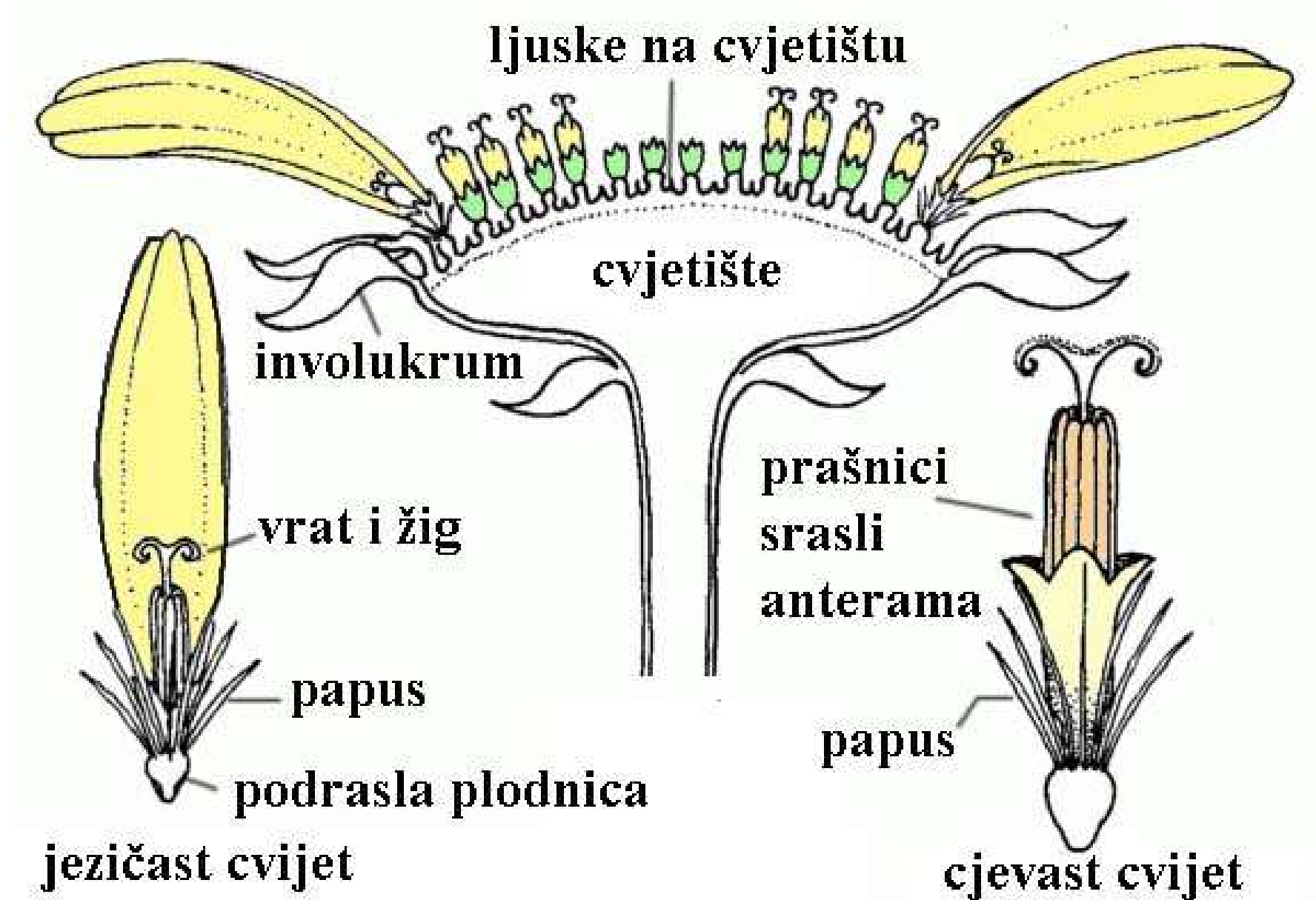
Podcvjetna plodnica

Campanula rapunculus- zvončič

Ordo. Asterales



fam. Asteraceae



Jezičasti cvijet

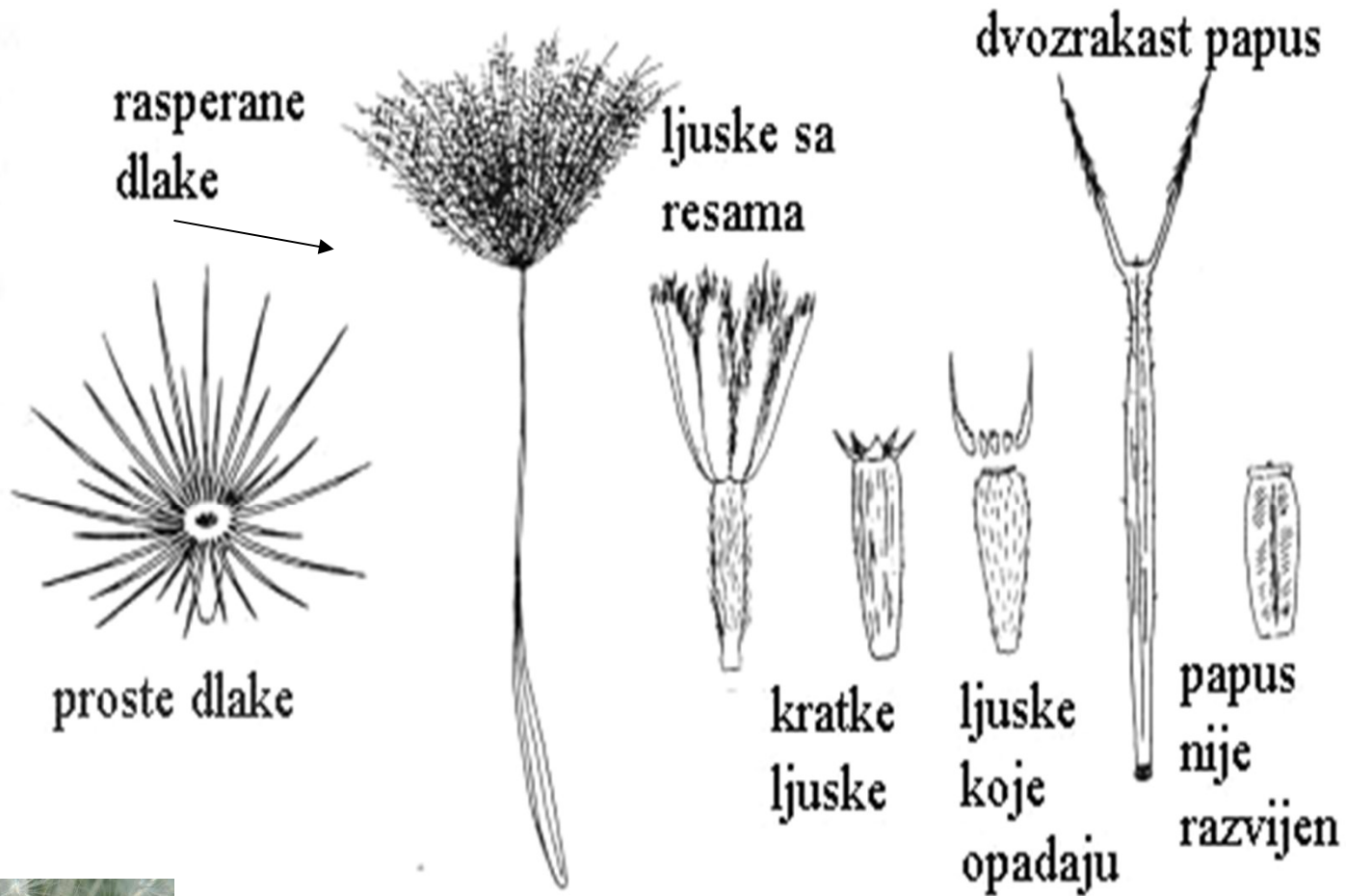
Ljuske na cvjetištu

Cjevasti cvijet



Listić involukruma

Receptakulum



TIPOVI PAPUSA



Tipovi glavica



Jezičast cvijet



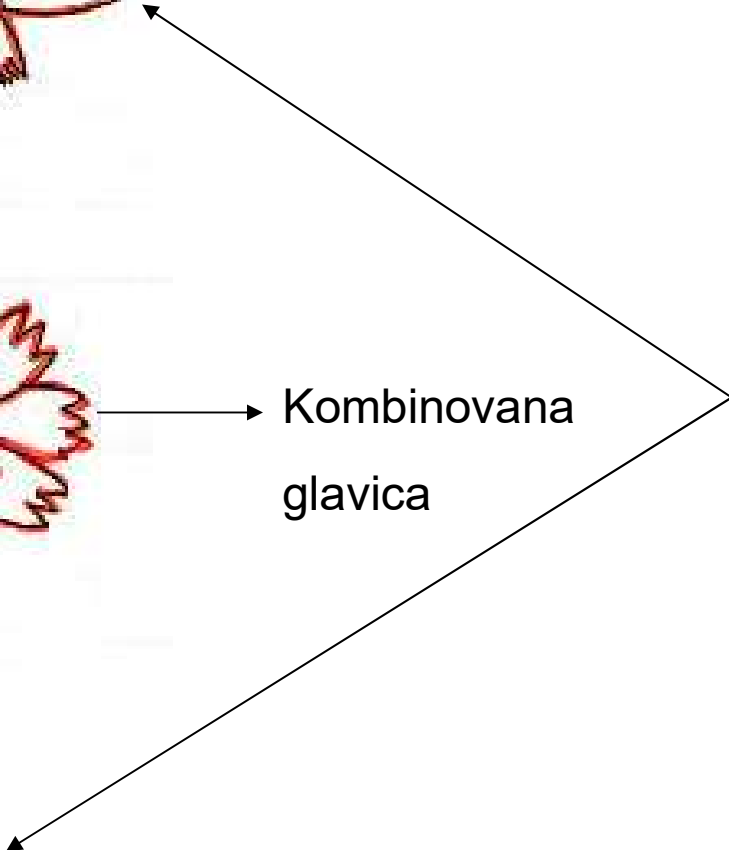
Kombinovana glavica



Cjevast cvijet



Monotipska glavica



Podjela na osnovu tipa cvasti:

- Tubuliflorae= Asteroidea (sadrže cvjevaste cvjetove i nemaju mliječni sok)
- Liguliflorae= Cichorioidea (sadrže samo jezičaste cvjetove i posjeduju mliječni sok)

Tubuliflorae

```
graph TD; A[Tubuliflorae] --> B[Svi cvj. u glavici cjevasti]; A --> C[Unutrašnji cvj. u glavici cjevasti];
```

Svi cvj. u glavici cjevasti

Unutrašnji cvj. u glavici cjevasti

Tubuliflorae

Cvjetovi jednopolni



Xanthium italicum- čičak



Ambrosia artemisiifolia- ambrozija

Cvjetovi dvopolni

Listovi trnovito
nazubljeni

Papus jednostavno dlakav



Carduus nutans- čkalj

Papus rasperano dlakav



Cirsium vulgare- osjak

Listovi nisu trnovito nazubljeni

Centaurea jacea

Papus redukovan, čekinjast ili dlakav

Ovo je sa kožastim i cijelim privjeskom



Samo unutrašnji cjetovi cjevasti!!!

Helianthus annuus- sunkockret



Papus od uskih kratkotrajnih ljuščica

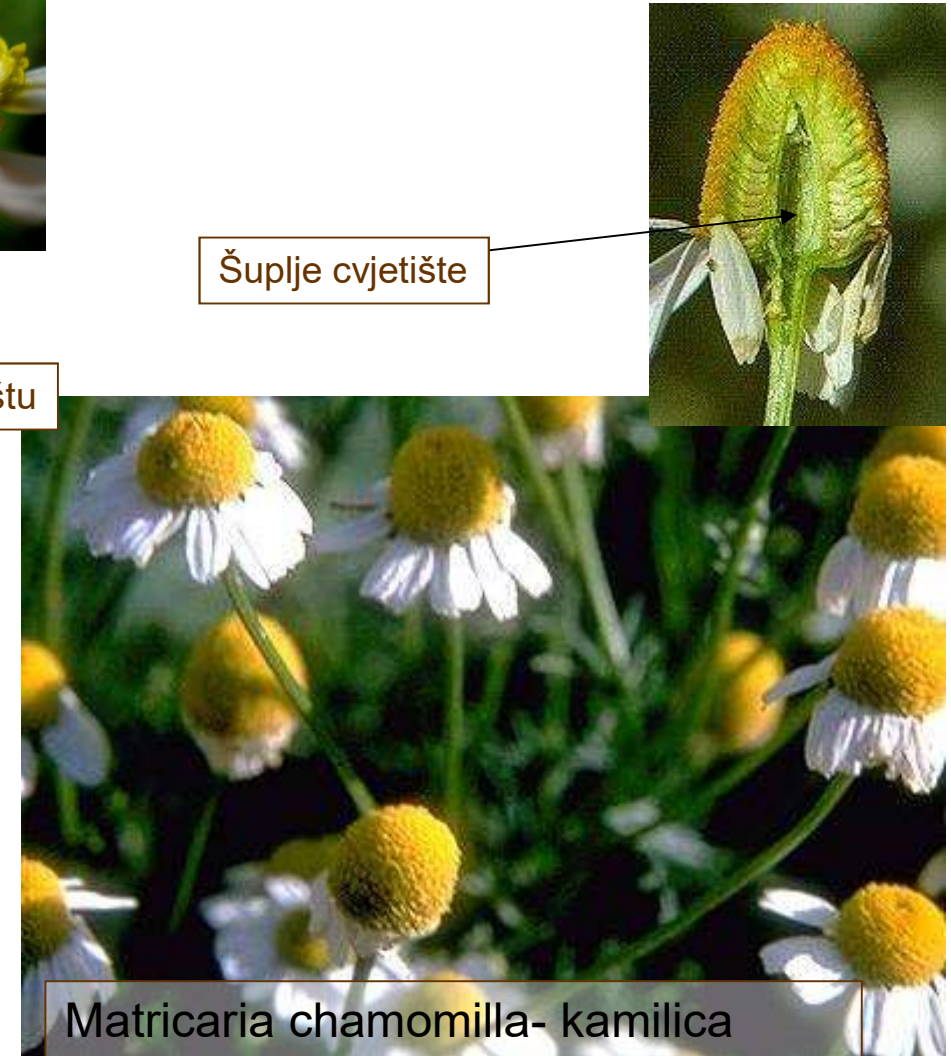
Samo unutrašnji cjetovi cjevasti!!!

Papus redukovan



Ljuske na cvjetištu

Anthemis arvensis- poljski raven



Šuplje cvjetište

Matricaria chamomilla- kamilica

Papus redukovan



Achillea millefolium-
hajdučka trava



Bellis perennis
Bijela rada

Cvjetovi jezičasti!!!





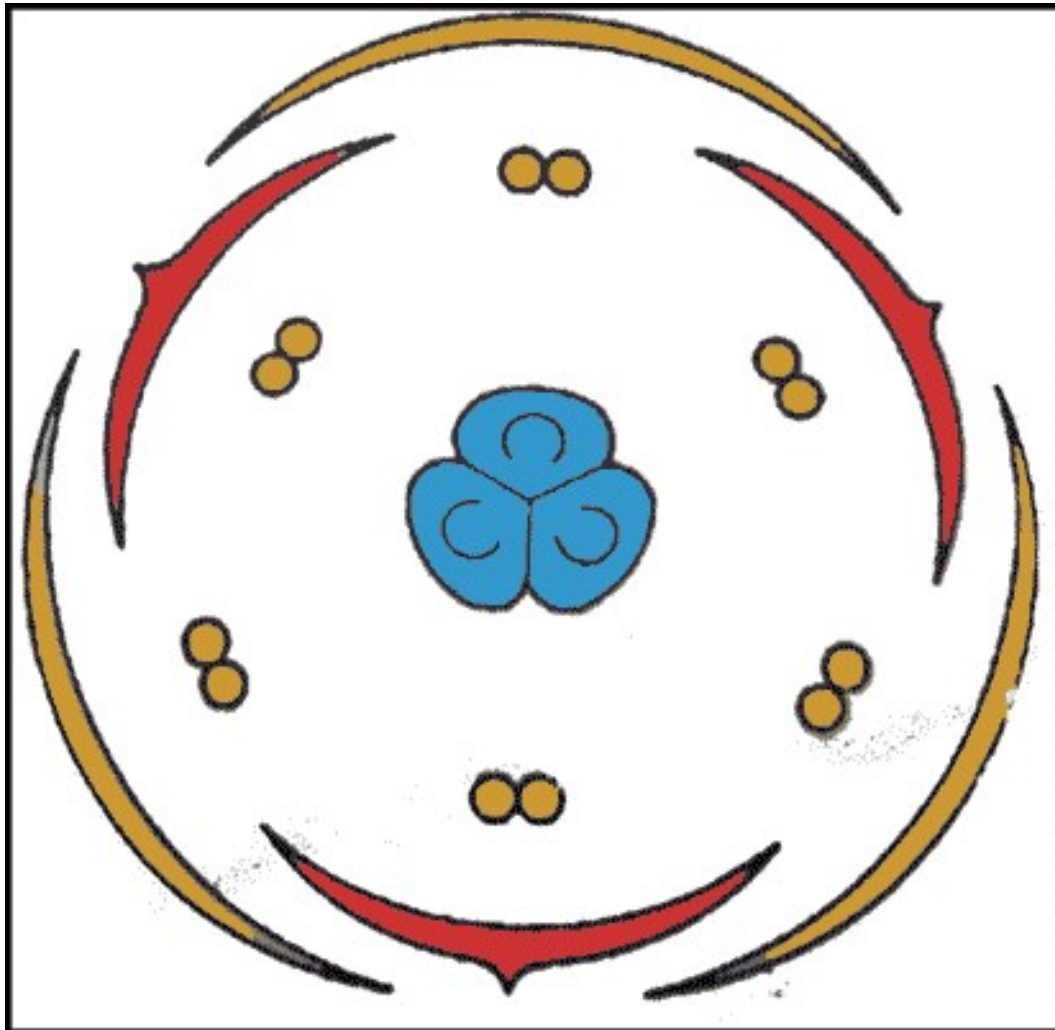
Papus od ljuŝaka

Cichorium intibus- vodopija, cikorija

Monokotile

Red. Liliales

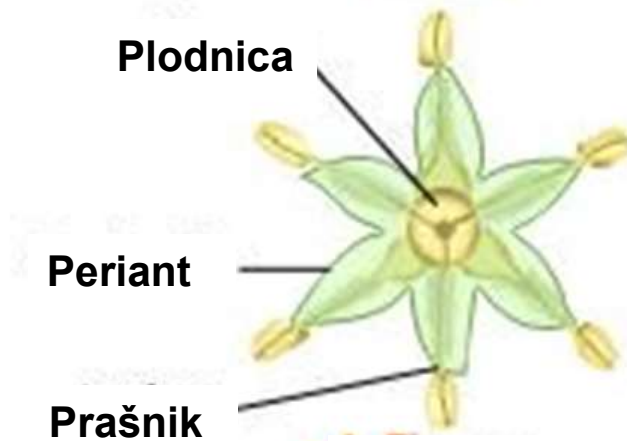
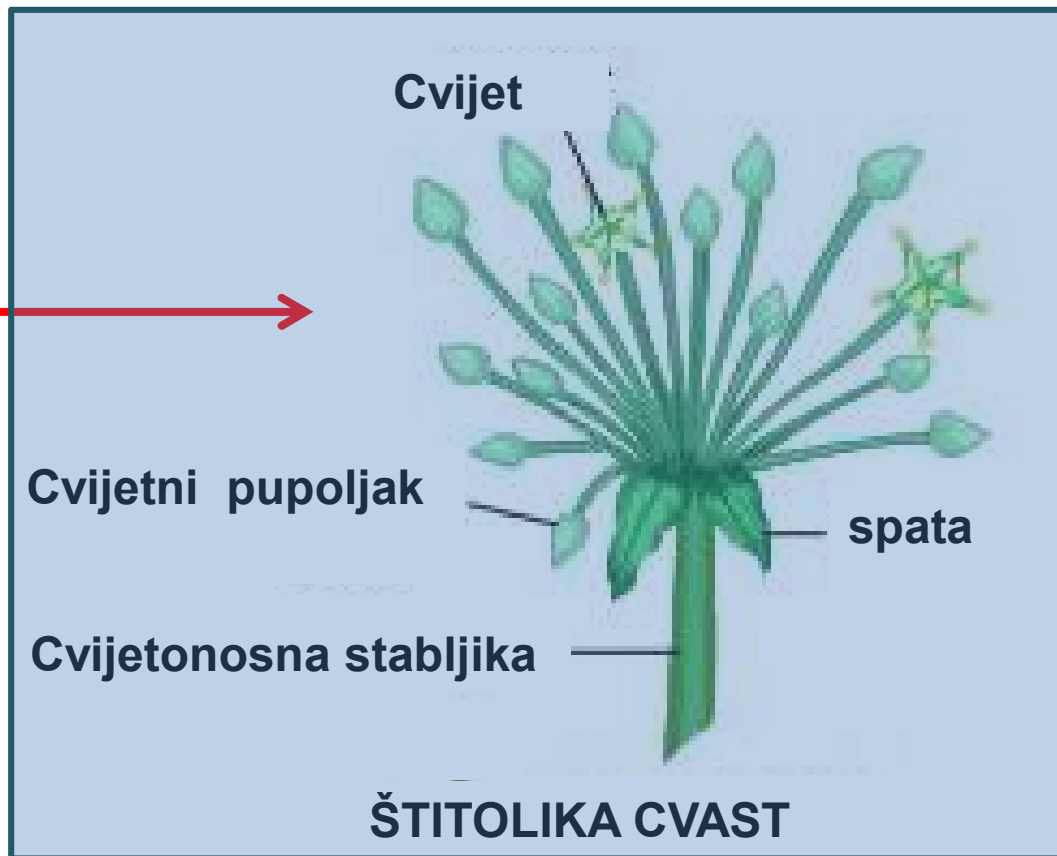
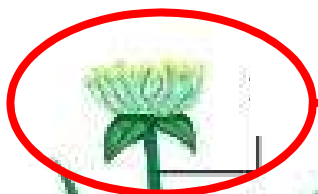
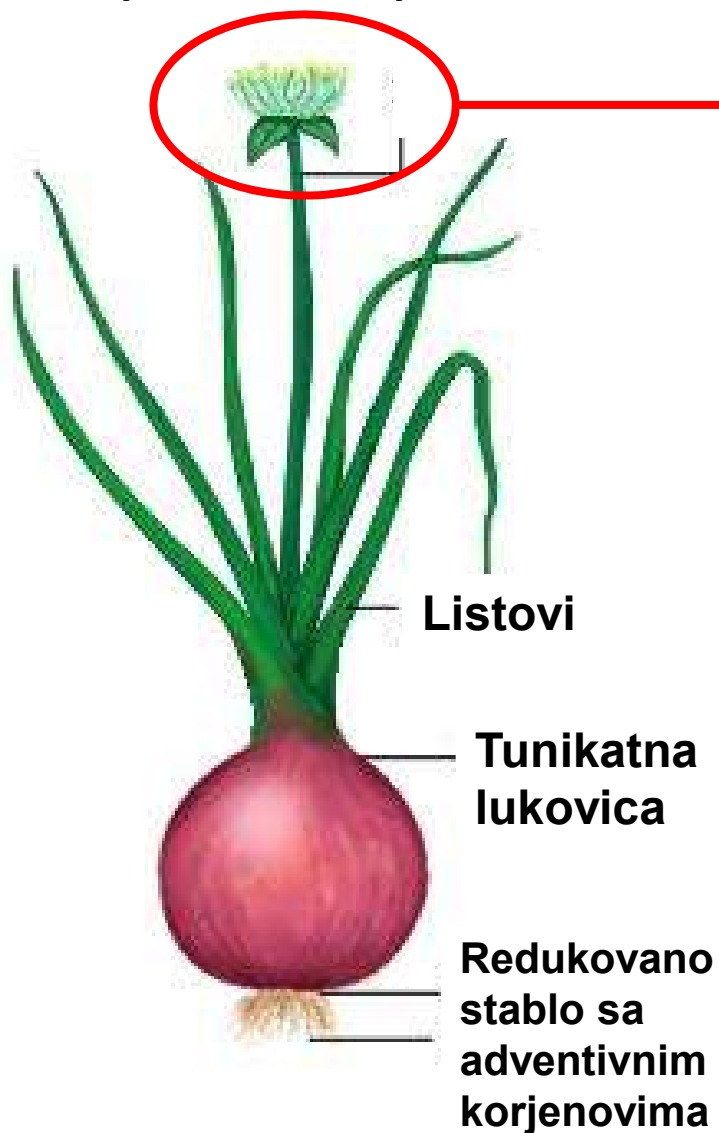
P3+3 A3+3 G(3)/



Porodice:
Alliaceae,
Liliaceae,
Amaryllidaceae

Alliaceae

* (P₃₊₃ A₃₊₃) G₍₃₎





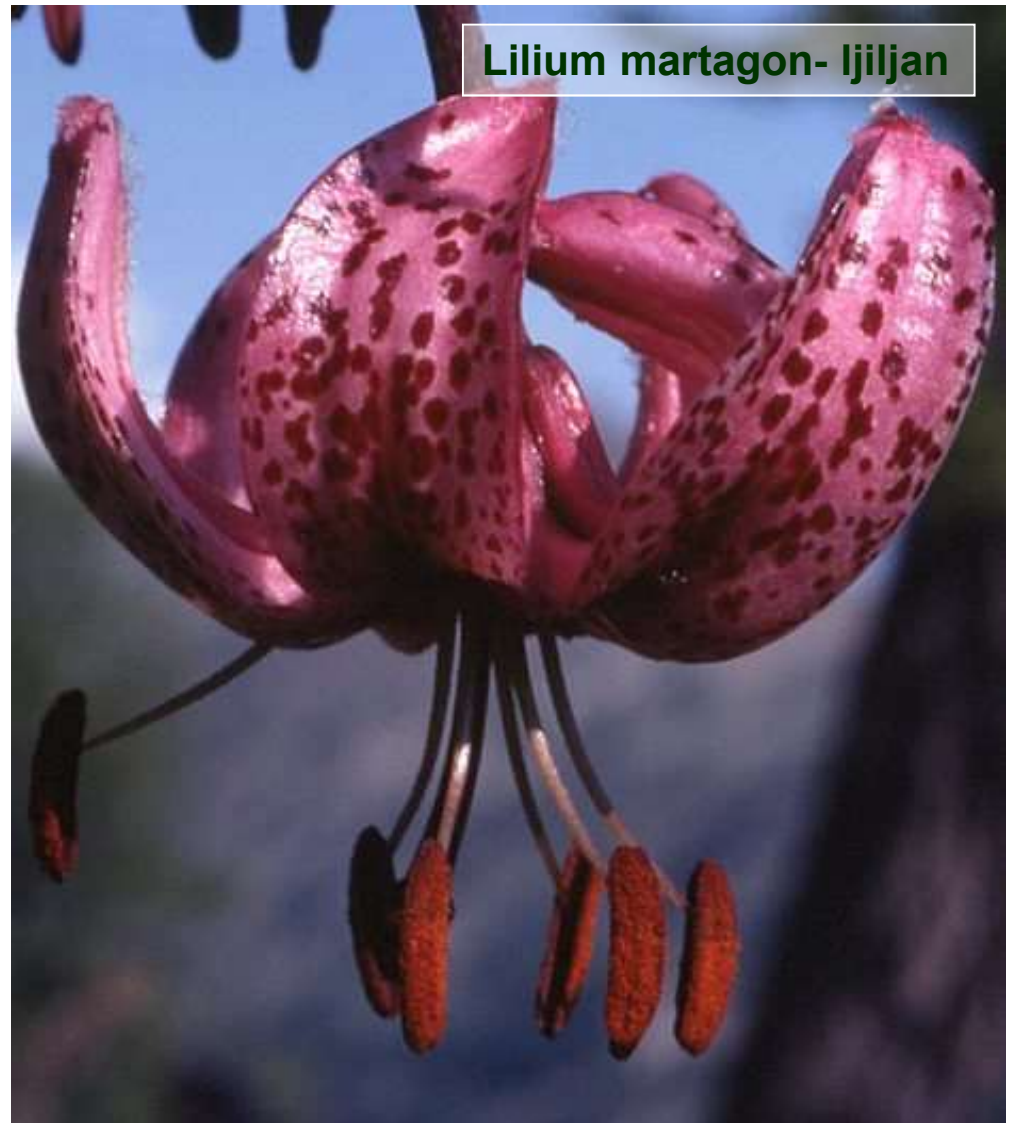
Allium cepa- crni luk



Allium sativum- bijeli luk



Fam. Liliaceae





Asparagus acutifolius- šparoga



Ruscus aculeatus- kostrika

filikladija



**Convallaria majalis
đurđevak**



Fam. Amaryllidaceae

Galanthus nivalis- visibaba

Red. Zingiberales

Musa x paradisiaca, Musaceae



spata
 Srasle
 latice
 Stigma
 Prašnici

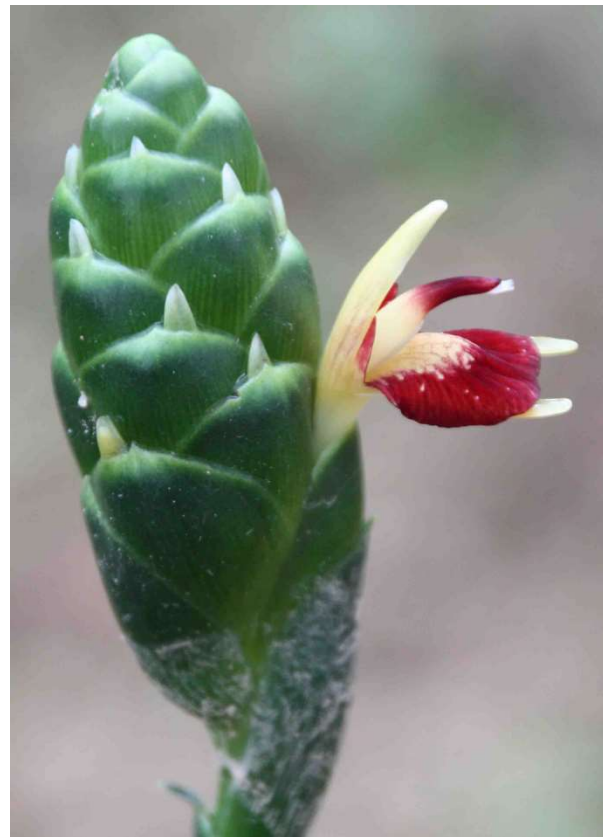


$P_{(3+2)+1}, A_{3+3}, G_{0^*}$
 $P_{(3+2)+1}, A_{0^*}, \overline{G}_{(3)^*}$
 $P_{(3+2)+1}, A_{3+3}, \overline{G}_{(3)^*}$

Fam. Zingiberaceae

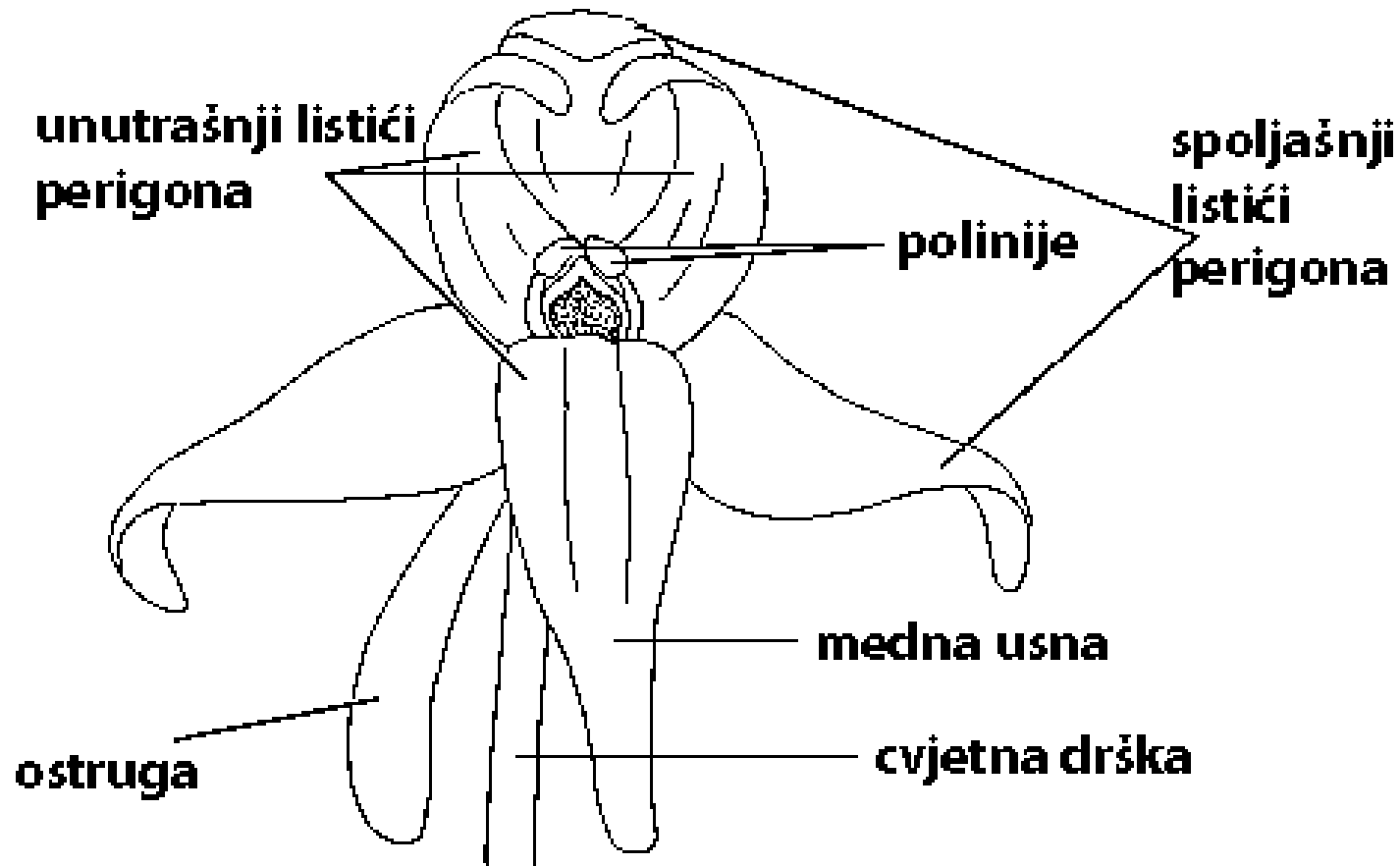


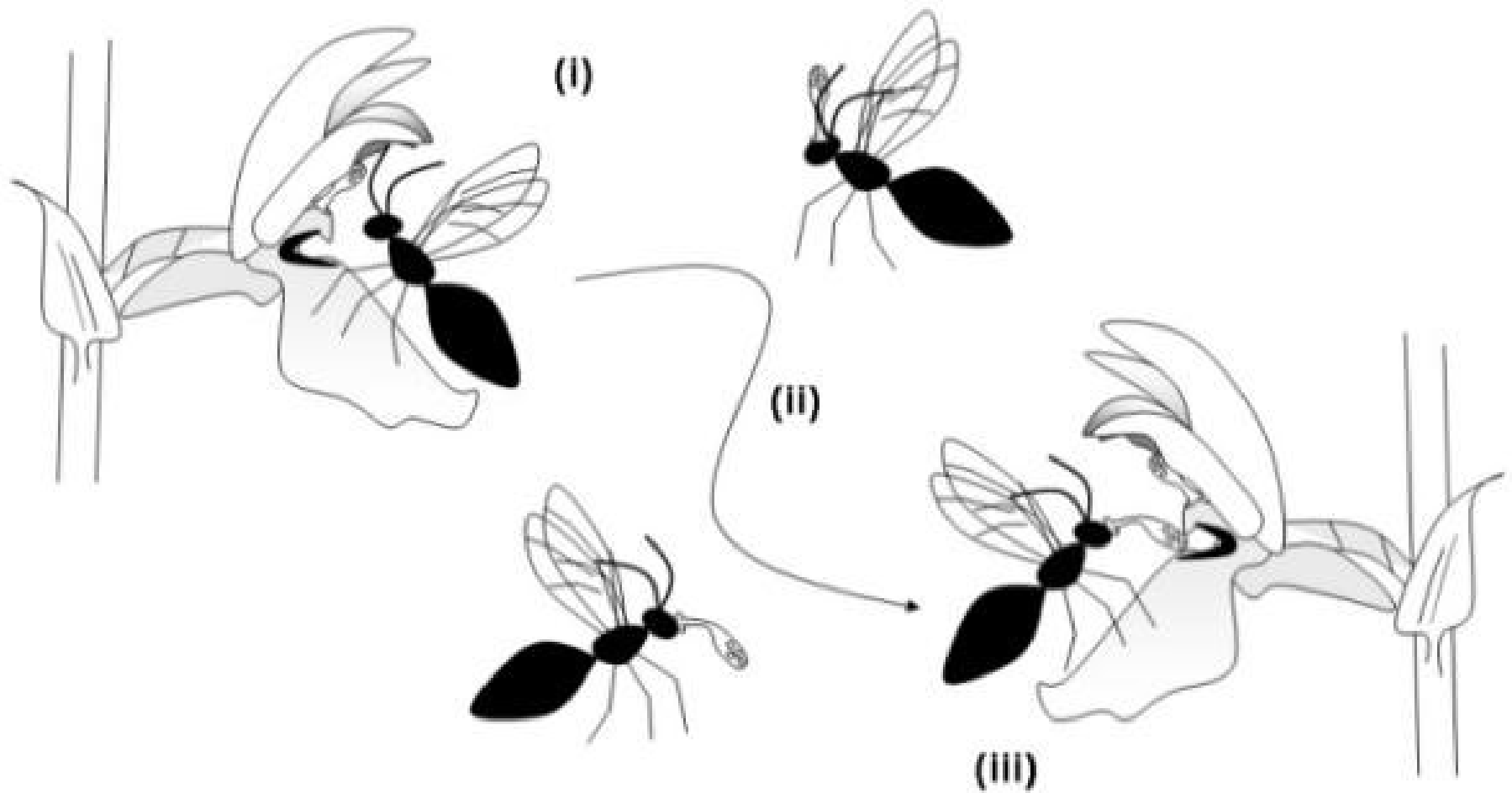
Zingiber officinale- đumbir



Red. Orchidales

Fam. Orchidaceae





Mehanizam opašivanja



Orchis morio

Medna usna sa ostrugom!



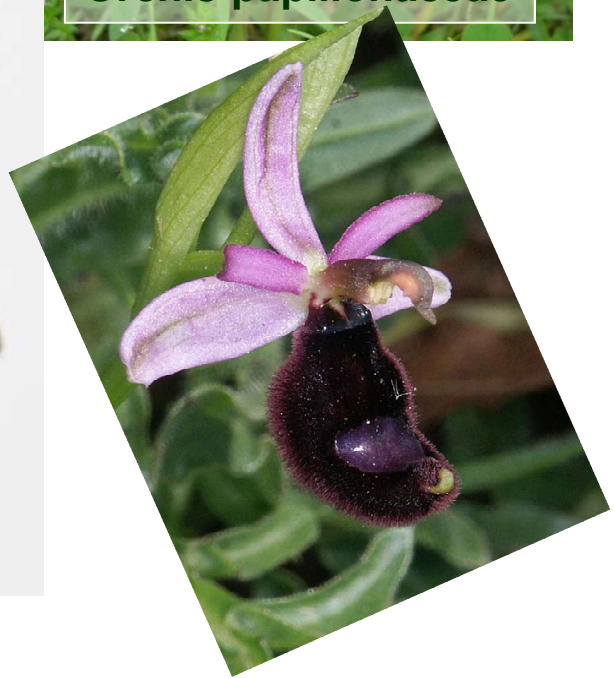
Orchis papilionaceae



Medna usna bez ostruge

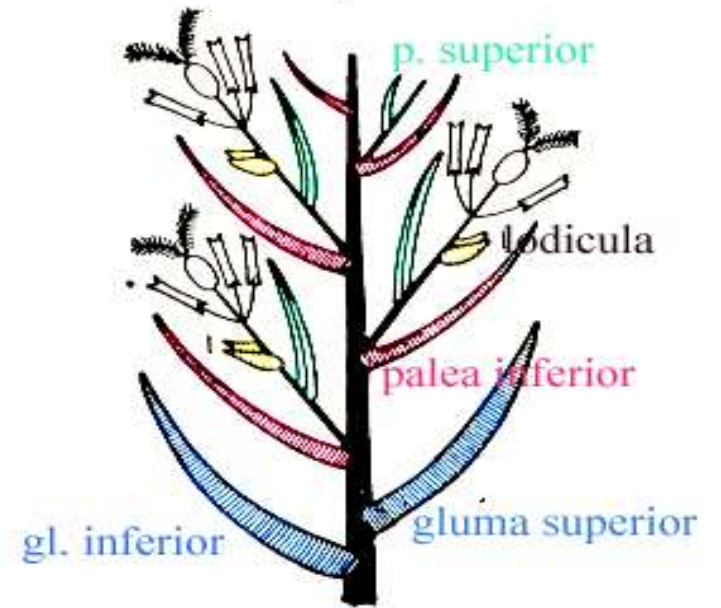
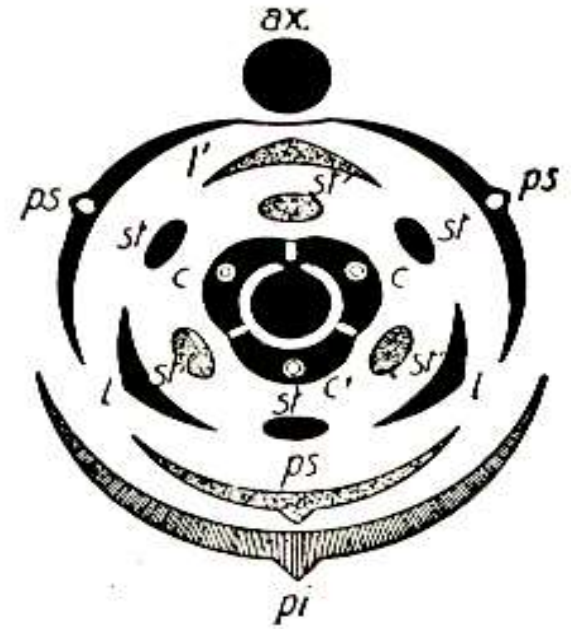
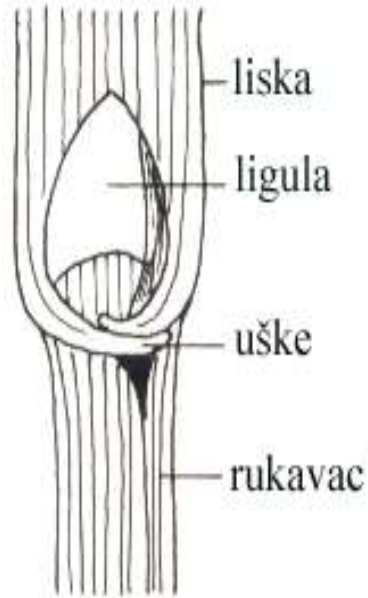
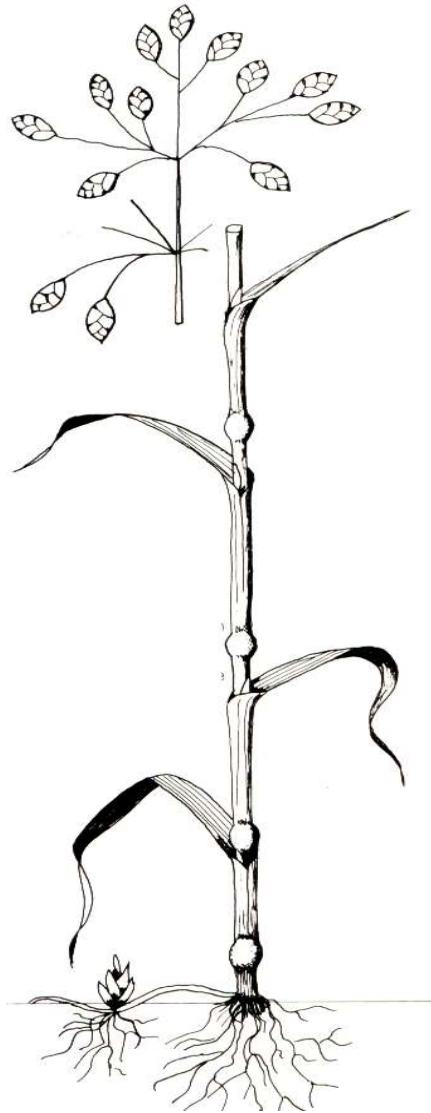


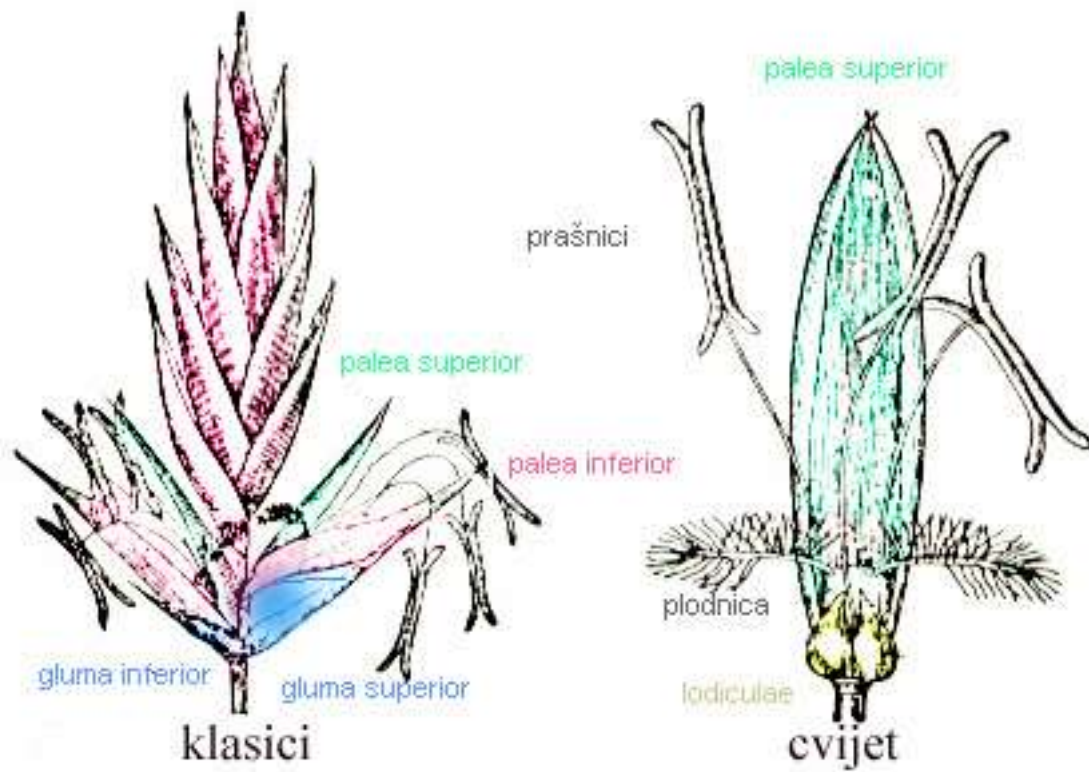
Ophrys spp.



Red. Poales

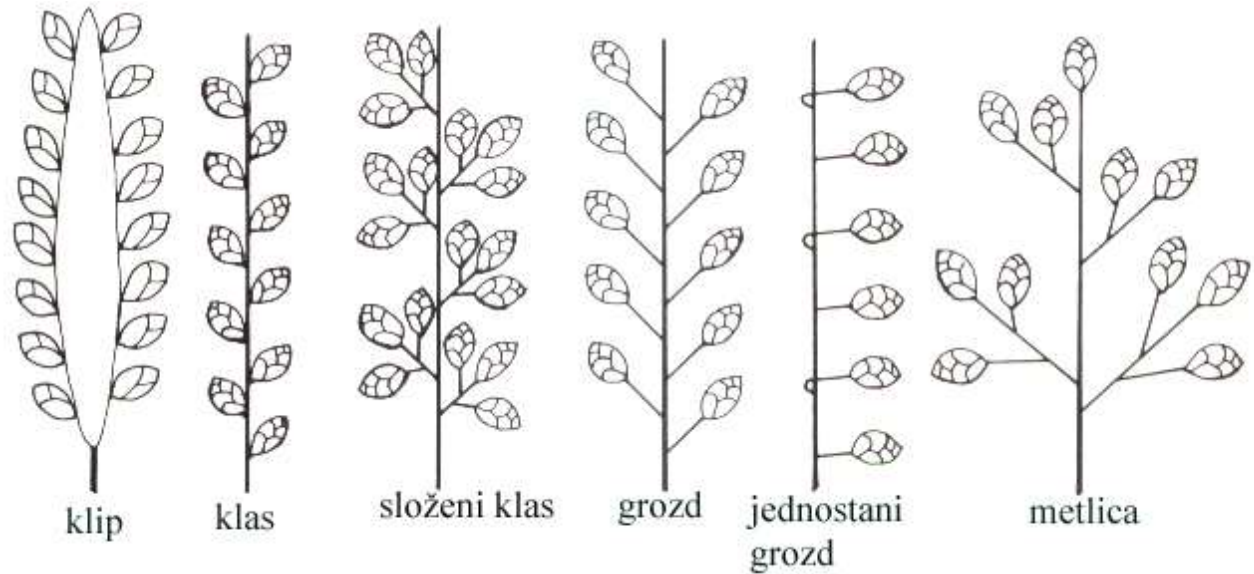
Fam. Poaceae



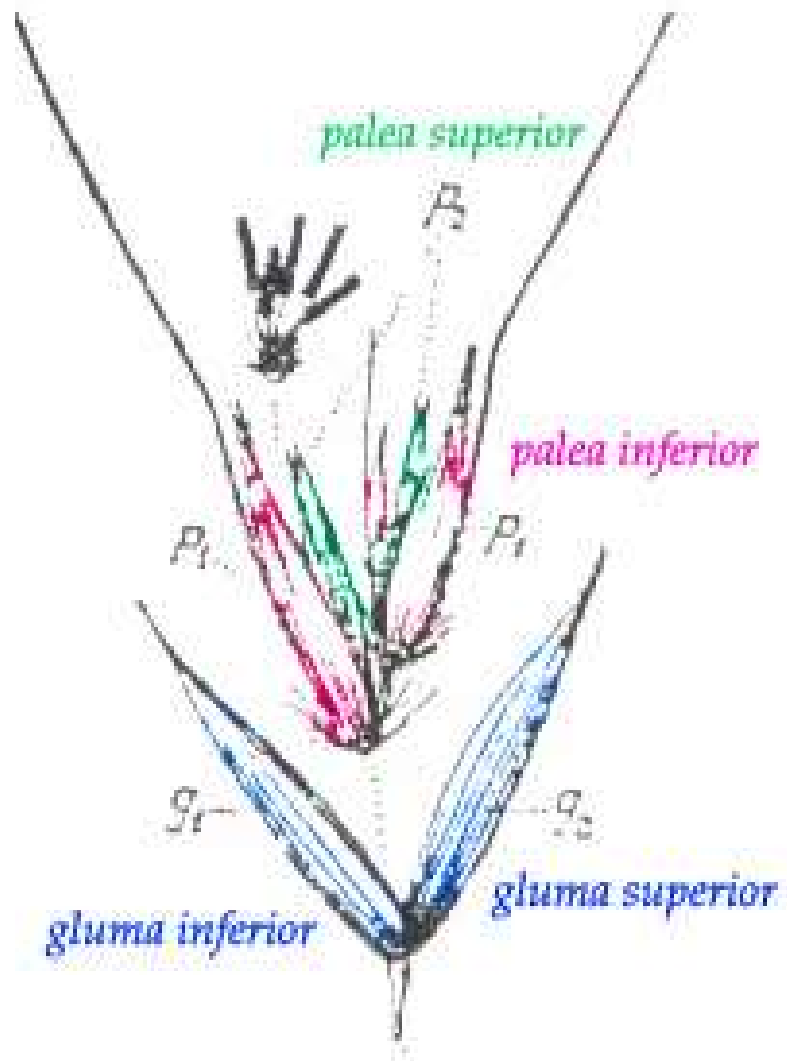


Klasić:
 gluma inferior + gluma superior +
 palea inferior + cvijet (palea
 superior, lodikule, 3 prašnika,
 plodnica)

Tipovi cvasti



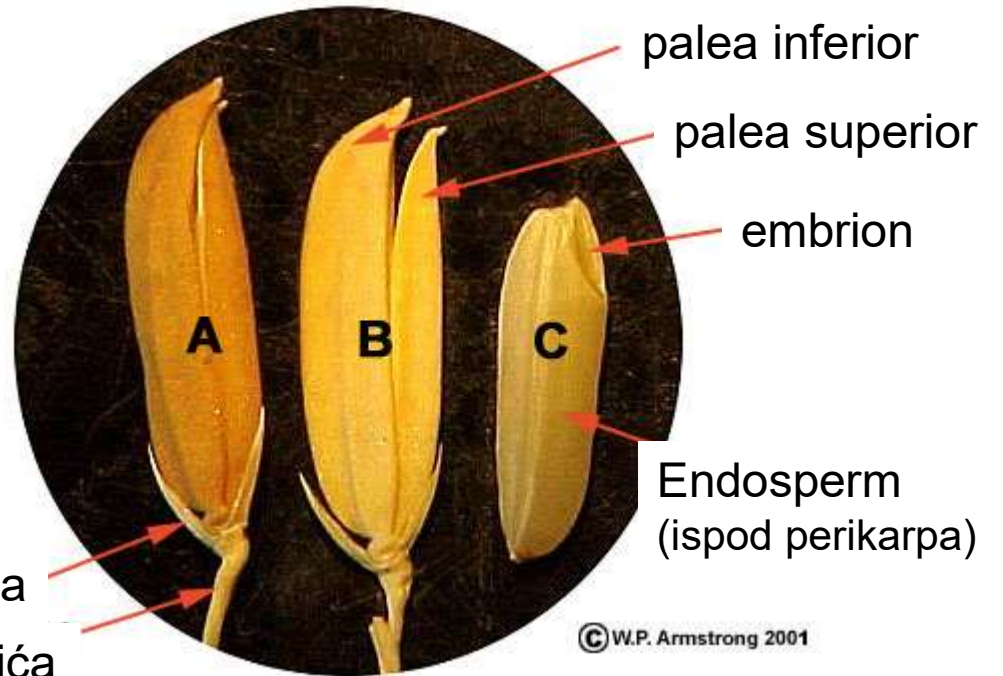
Avena sp.- ovas





gluma

drška klasića



Oryza sativa- oriz

Ženski cvast tipa klipa,
muška tipa metlice



Zea mays- kukuruz





Triticum vulgare- pšenica

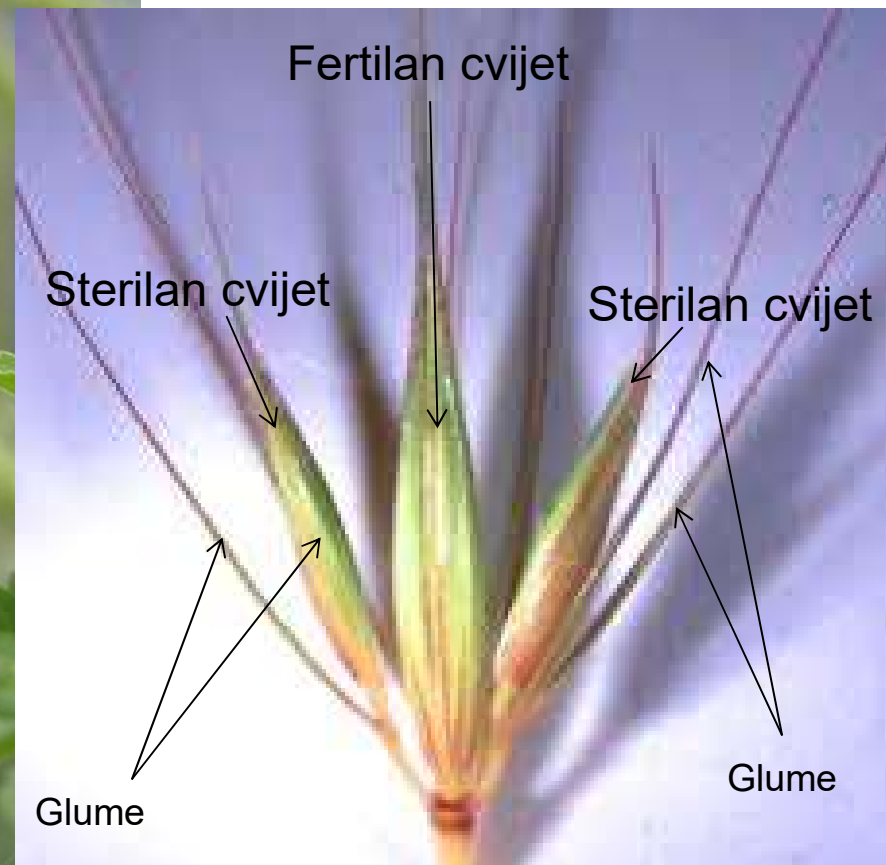


Secale cereale- raž

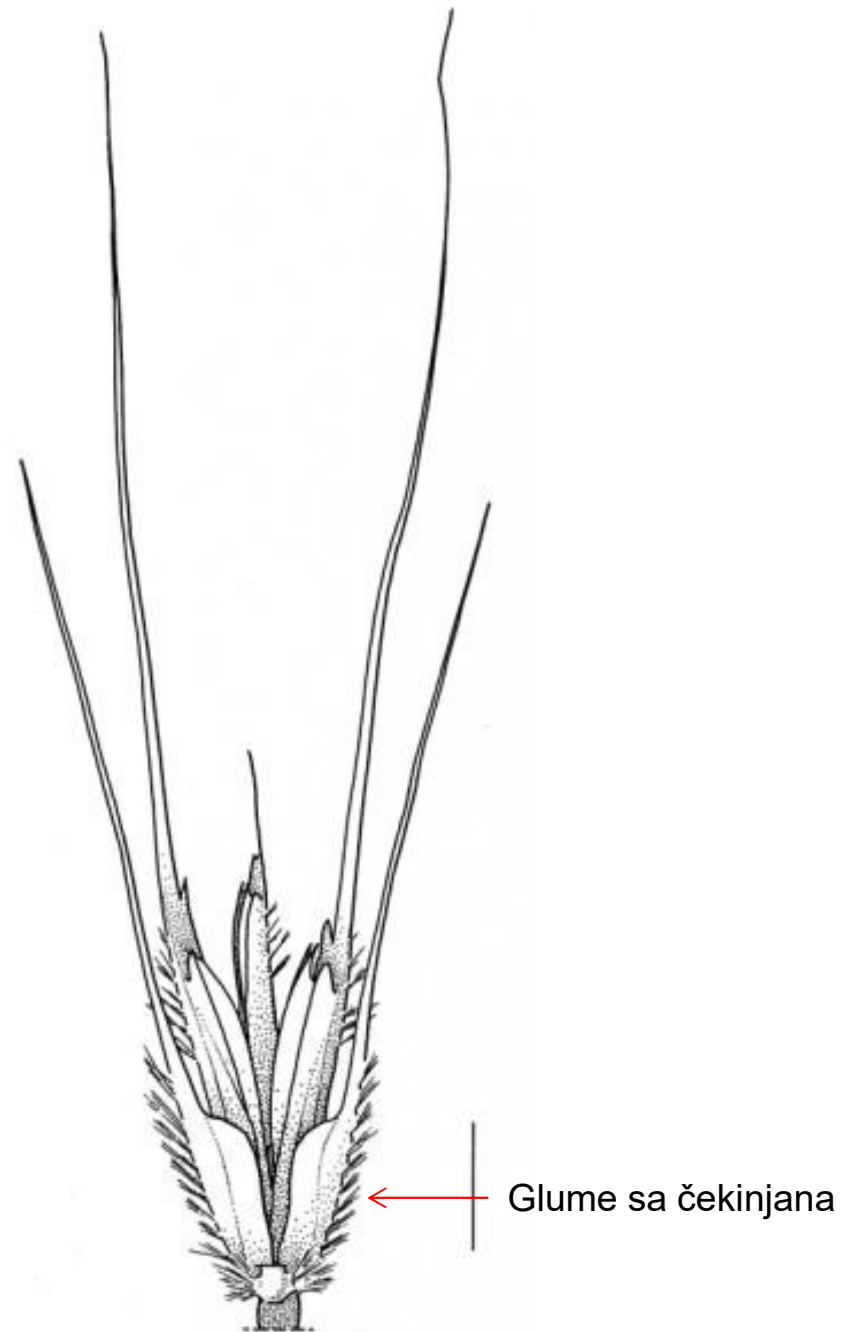


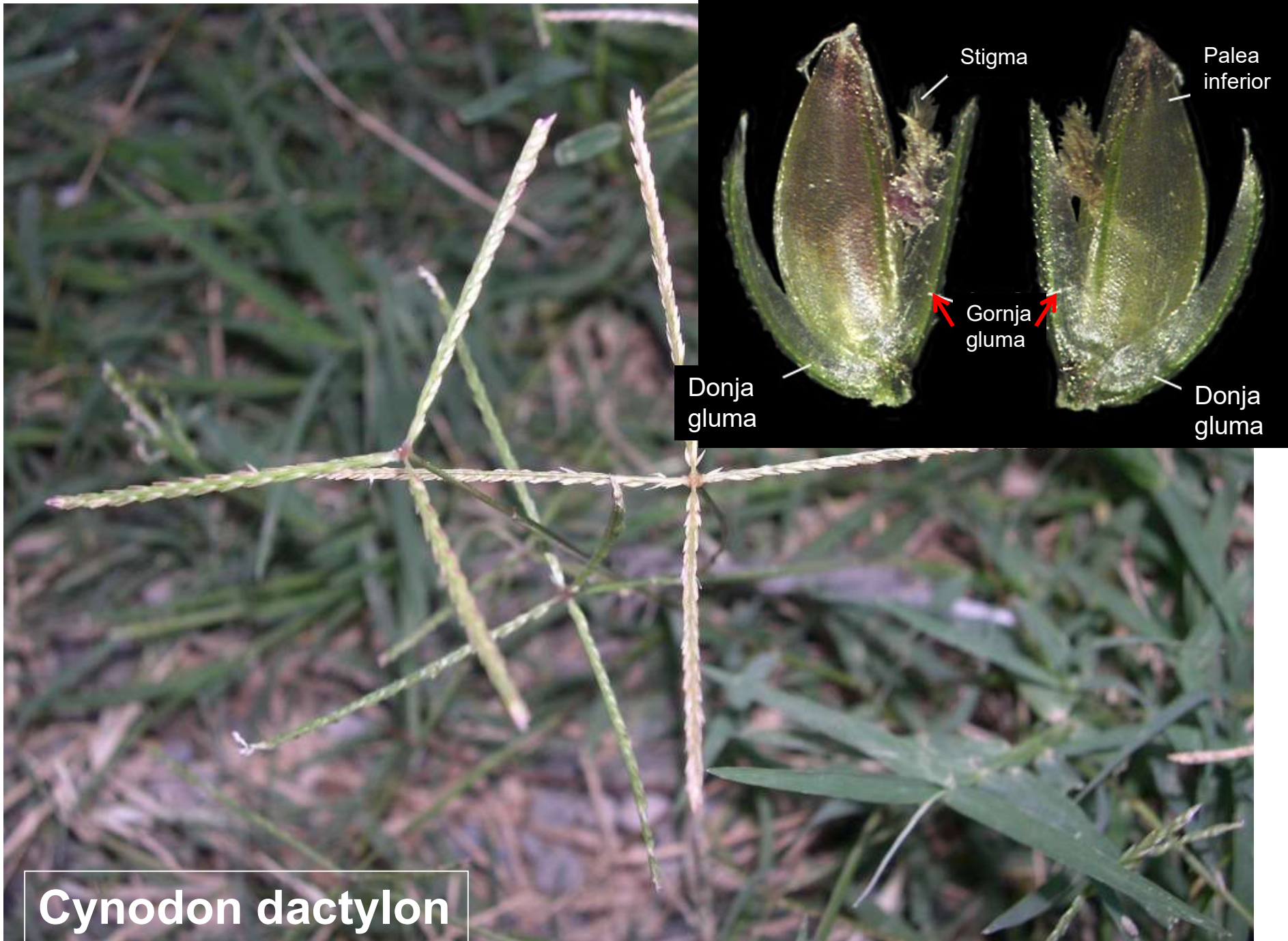
Hordeum sativum- ječam

Hordeum murinum- popino prase



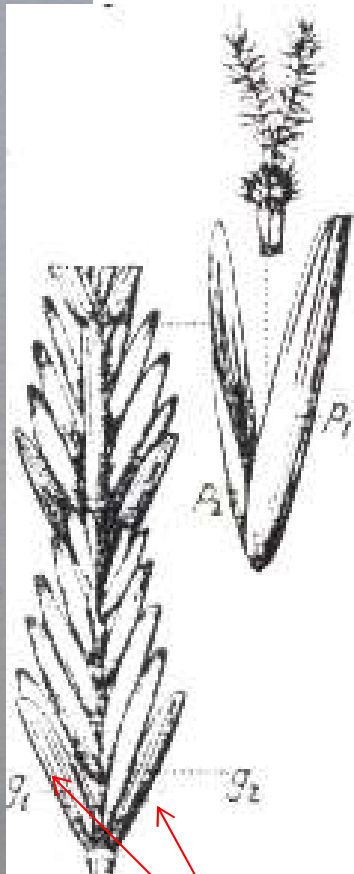
Haynaldia villosa





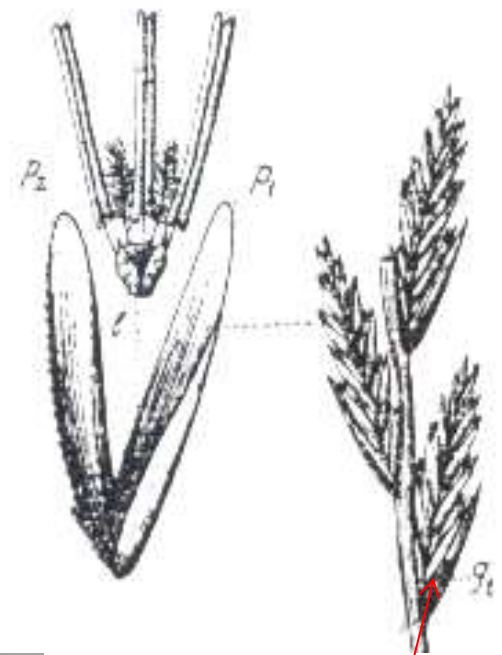
Cynodon dactylon

Agropyron repens- pir



Glume 2!

Lolium perenne- ljuļj

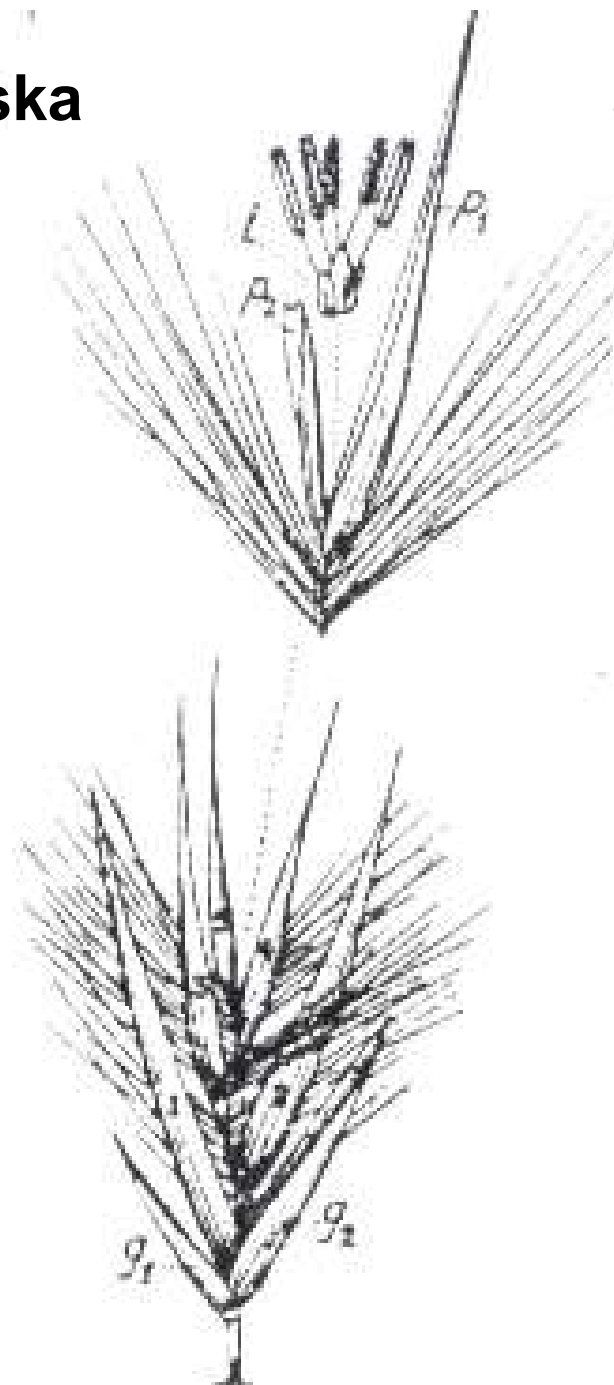


Gluma 1!

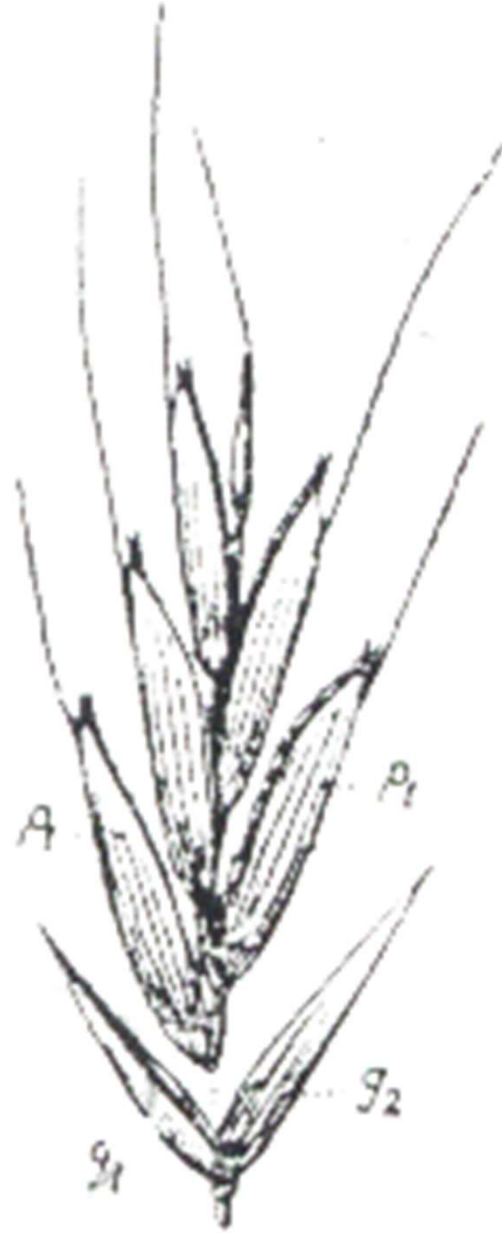
Phragmites australis- trska



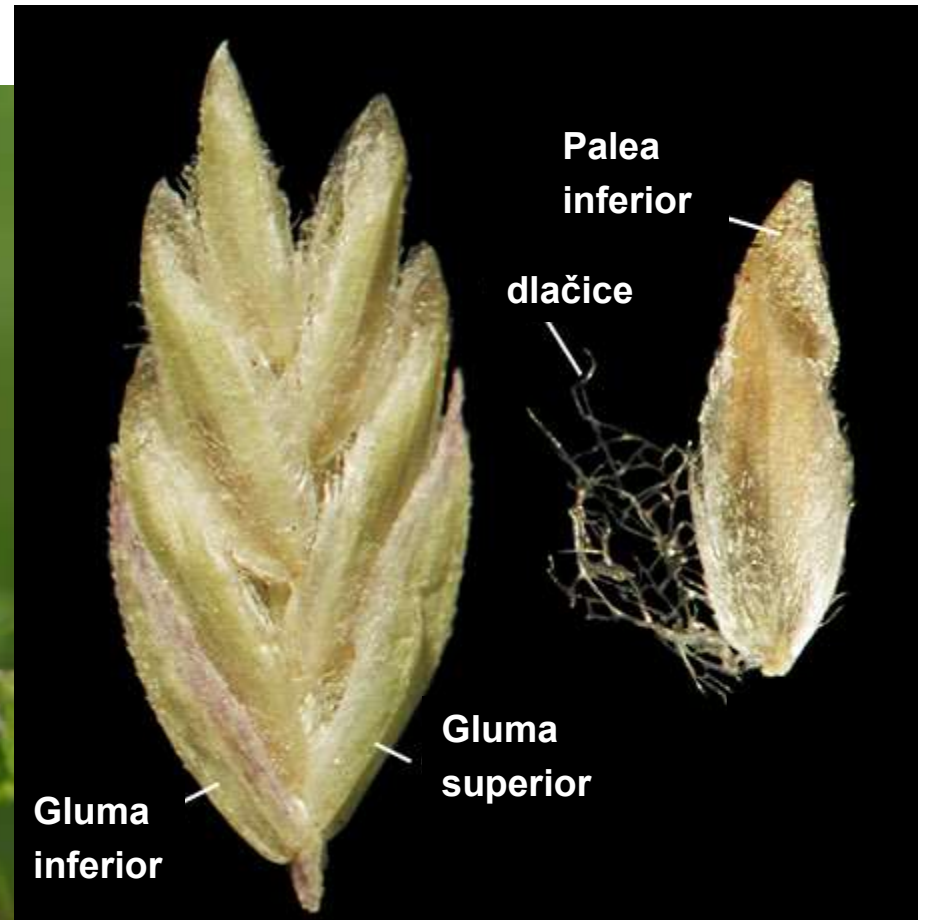
Os klasića sa dugim
dlakama!!!



Bromus sp.

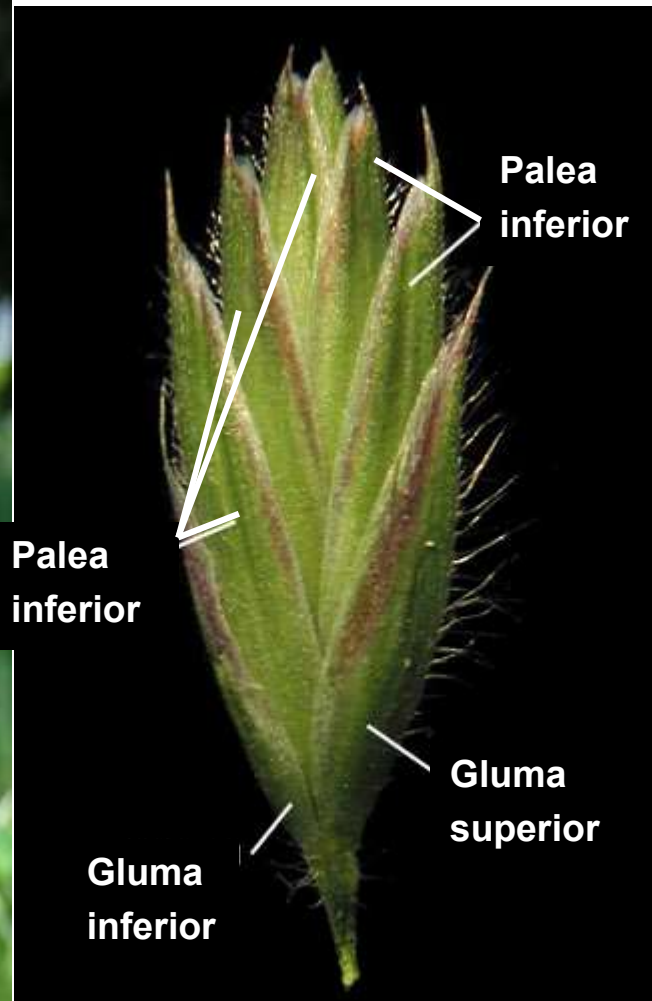


Poa sp.





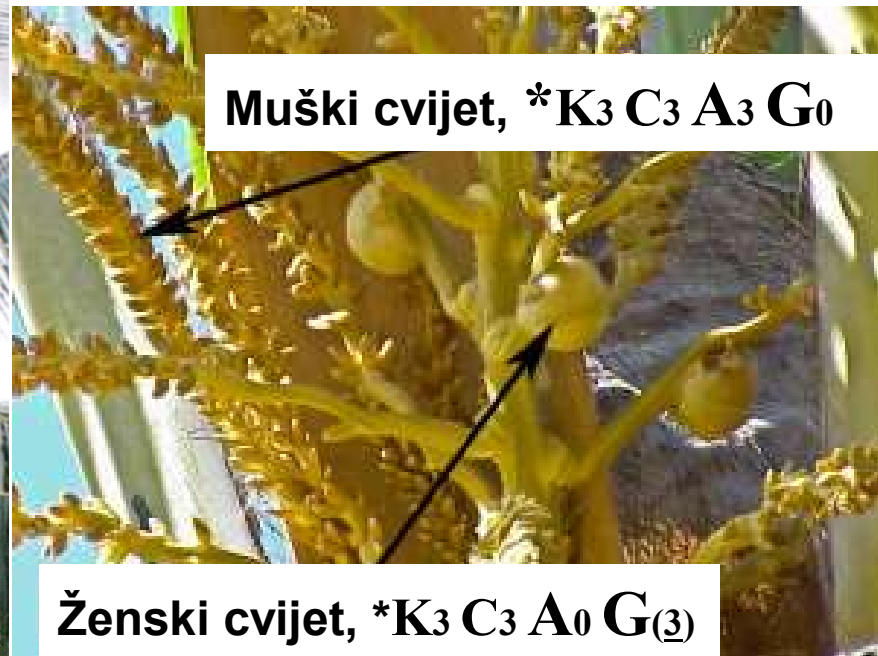
Dactylis glomerata- ježika



Red. Arecales
Fam. Arecaceae



Cocos nucifera- kokos



Muški cvijet, *K₃ C₃ A₃ G₀

Ženski cvijet, *K₃ C₃ A₀ G₍₃₎

