

Kritosemenke - Angiospermae

enokaličnice – Monocotyledones,
Liliidae s. lat.

Angiospermae, Liliatae 1

Alismatidae

- Acorales
- Acoraceae
- Alismatales (~Alismatanae)
- Alismataceae
- Araceae
- Butomaceae
- Cymodoceaceae
- Hydrocharitaceae
- Juncaginaceae
- Posidoniaceae
- Potamogetonaceae
- Ruppiaceae
- Scheuchzeriaceae
- Tofieldiaceae
- Zosteraceae

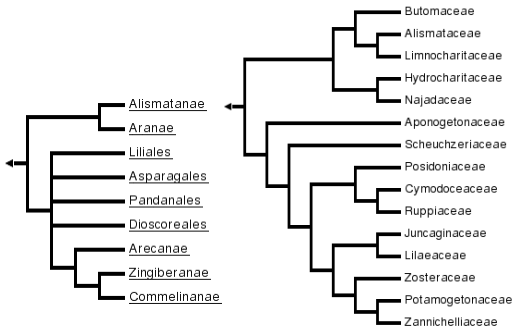
Liliidae

- Asparagales
- Agavaceae
- Alliaceae
- Amaryllidaceae
- Asparagaceae
- Asphodelaceae
- Convallariaceae
- Hyacinthaceae
- Iridaceae
- Orchidaceae ...
- Liliales
- Colchicaceae
- Liliaceae
- Smilacaceae

Angiospermae, Liliatae 2

- Pandanales
- Pandanaceae ...
- **Commelinidae**
- Bromeliaceae ...
- **Arecanae**
- Arecales
- Arecaceae
- **Commelinanae**
- Commelinales
- Commelinaceae
- Pontederiaceae ...
- Poales
- Cyperaceae
- Eriocaulaceae
- Joinvilleaceae
- Juncaceae
- Poaceae
- Restionaceae
- Sparganiaceae
- Typhaceae
- **Zingiberanae**
- Zingiberales
- Cannaceae
- Marantaceae
- Musaceae
- Strelitziaceae
- Zingiberaceae

Angiospermae, Liliatae



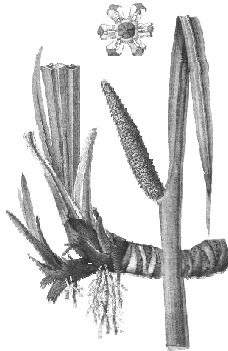
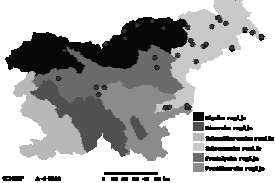
Liliatae, Alismatidae

Acorales

- Acoraceae – kolmeževke

* $P_{3+3}A_{3+3}\underline{G}_{(2-3)}$

Acorales ostajajo le najpošnejši taksoni



Liliatae, Alismatidae

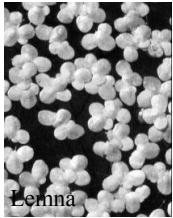
Alismatales

- rbcL
- stebila z žleznimi laski ali luskami pri dnu internodijev (skritimi v listnih nožnicah)
- endosperm manjka
- celice koreninskih laskov manjše od drugih epidermalnih celic
- vodne ali močvirske rastline

Liliatae, Alismatidae

Alismatales

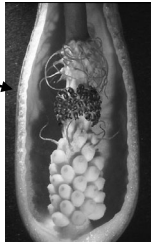
- Araceae – kačnikovke



Lemna



Arum



* $P_{3+3} \rightarrow 0$ $A_{3+3} \rightarrow 1$ $\underline{G}_{(1-3)}$

Liliatae, Alismatidae

Alismatales

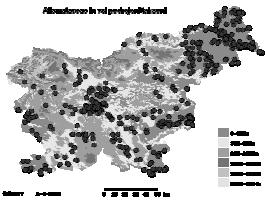
- Alismataceae – porečnikovke

* $K_3 C_3 A_{6-\infty} \underline{G}_{6-\infty}$

Sagitt



Alisma



Liliatae, Alismatidae

Alismatales

“MORSKE TRAVE”

- Cymodoceaceae – cimodocejevke
- Posidoniaceae – pozidonijevke
- Zosteraceae – zosterovke

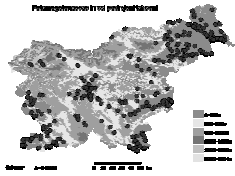


Liliatae, Alismatidae

Alismatales

- Potamogetonaceae – dristavčevke

* $A_4 \underline{G}_4$

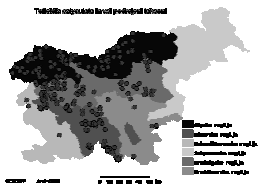


Liliatae, Alismatidae

Alismatales

- Tofieldiaceae – žiljkovke

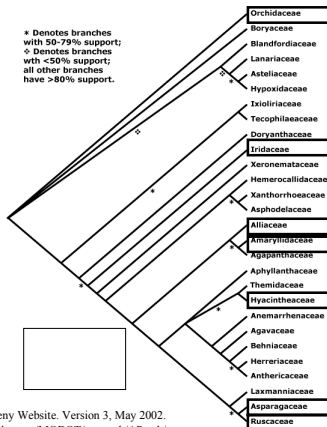
* $P_{3+3} A_{3+3} \underline{G}_{(3)}$



Asparagales

- rbcL, atpB
- testa s črno ali reducirano povrhnjico
- notranja plast teste razkrojena
- P niso pikčasti
- septalni nektariji
- nenavadna sekundarna debelitev

* Denotes branches with 50-79% support;
 ◊ Denotes branches with <30% support;
 all other branches have >80% support.



Liliatae, Liliidae

Asparagales

- Alliaceae – lukovke



*-↓P₃₊₃A₃₊₃G₍₃₎



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uporabne lukovke

- *Allium cepa*: čebula
- *A. porrum*: por
- *A. sativum*: česen
- *A. schoenoprasum*: drobnjak
- *A. ursinum*: čemaž



Liliatae, Liliidae

Asparagales

- Amaryllidaceae – narcisovke

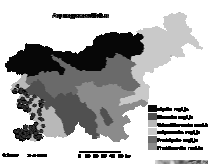
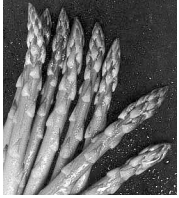


*P₃₊₃A₃₊₃G⁻₍₃₎

Liliatae, Liliidae

Asparagales

- Asparagaceae – beluševke



*P₃₊₃A₃₊₃G₍₃₎

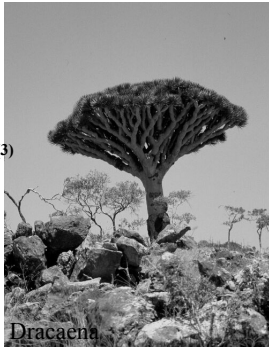
Liliatae, Liliidae

Asparagales

- Convallariaceae – šmarničevke



*P₃₊₃A₃₊₃G₍₃₎



Dracaena

Liliatae, Liliidae

Asparagales

- Hyacinthaceae – hijacintovke

*P₍₃₊₃₎A₃₊₃G₍₃₎



scari



Eric Steins © 2001

Ornithogalum

Liliatae, Liliidae

Asparagales

- Iridaceae – perunikovke

*-↓P₍₃₊₃₎A₃G⁻₍₃₎



Crocus



Iris

Liliatae, Liliidae

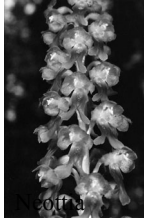
Asparagales

- Orchidaceae – kukavičevke, orhideje

↓P₃₊₃[A₁₋₂G⁻₍₃₎]



Ophrys



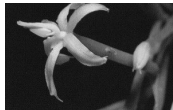
Cypripedium



Cypripedium

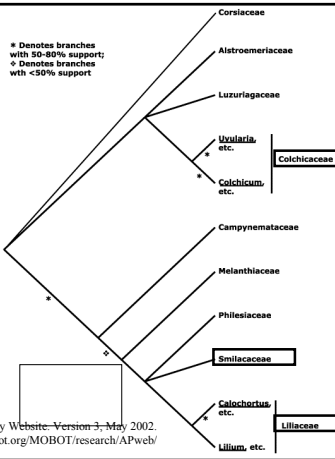
Orchidaceae: poddružine

- Apostasioideae
- Vanilloideae
- Cypripedioideae
- Orchidoideae
- Epidendroideae



Liliales

- rbcL, atpB
- testa dobro razvita, povrhnjica ni črna
- P pogosto pikčasti
- nektariji na P ali A
- nenavadna sekundarna debelitev

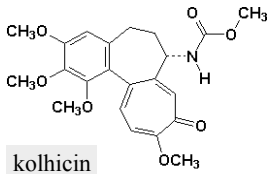
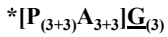


Stevens, P.F. (2001 onwards). Angiosperm Phylogeny Website: Version 3, May 2002. <http://www.mobot.org/MOBOT/research/APweb/>

Liliatae, Liliidae

Liliales

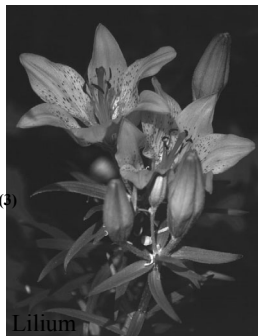
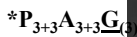
- Colchicaceae – podleskovke



Liliatae, Liliidae

Liliales

- Liliaceae – lilijevke



Liliatae, Commelinidae

Bromeliales

- Bromeliaceae – ananasovke



$K_x C_x A_x G$

Tillandsia



uporabne ananasovke

- Ananas comosus: ananas
- Tillandsia: okrasna, "lesna volna"
- Vriesia: okrasna
- Aechmea: okrasna