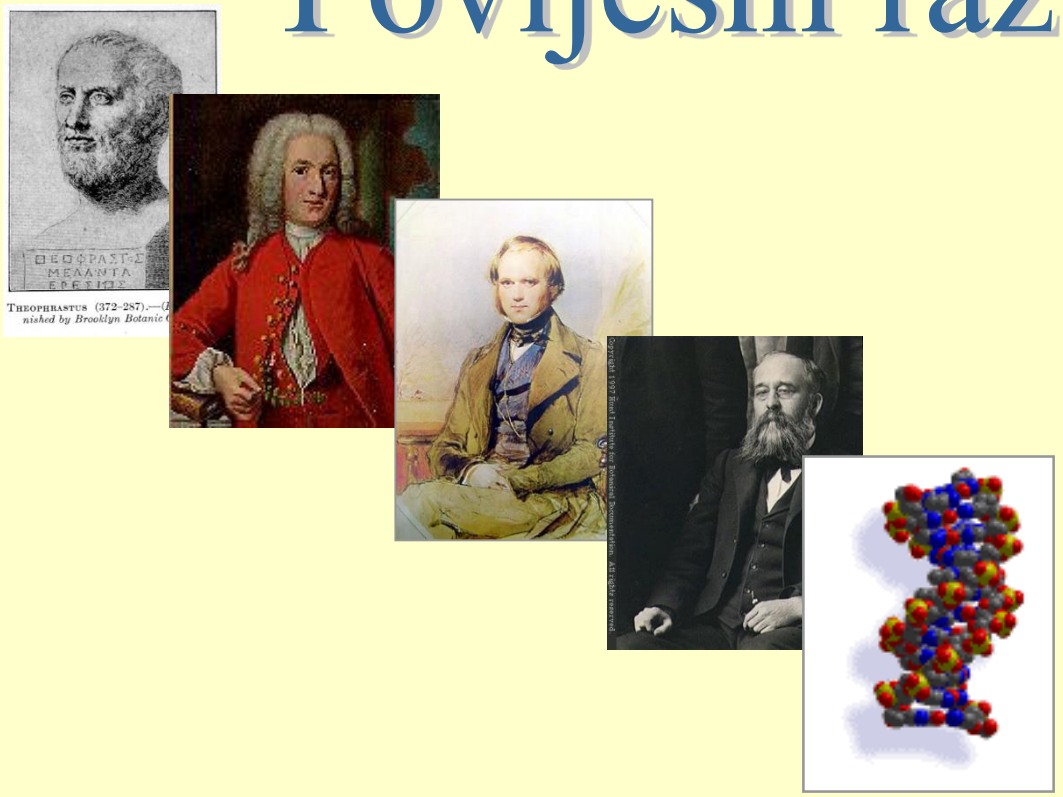
Povijesni razvoj



POVIJEST RAZVOJA SISTEMATIKE

Umjetni sistemi - na temelju jedne do nekoliko osobina, izabranih *a priori,* dakle unaprijed (>3.000 g. p.n.e. < 17. st. n.e.)

Prirodni sistemi - na temelju nekoliko do mnogo osobina, izabranih *a posteriori,* zbog korelacije s drugim osobinama (>17. st. <19. st.

Filogenetski sistemi - na temelju homologije osobina kao posljedice evolucije od zajedničkog pretka (>20. st. ...)

SISTEMATSKA BOTANIKA

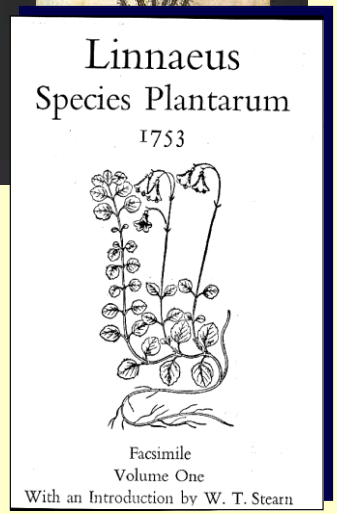
Umjetni sistemi - na temelju jedne do nekoliko osobina, izabranih *a priori,* dakle unaprijed (uobičajeni i spontani mentalni pristup čovjeka)

SISTEMATSKA BOTANIKA

Umjetni sistemi:
Emedoklo (5. st., duša), Aristotel (4. st., odlike živog), Theofrast (3-4 st., otac botanike, His. Plant)
Plinije Stariji (1. st.n.e.,Hist. Nat. 37 sv.), Dioscorid (1. st., Mat. Med.)

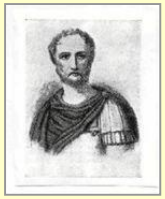
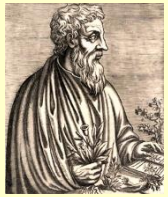
Islam, Alber Magnus (12. st. De Veg.) i dr.

Umjetni sistemi:
Renesansa i **herbalizam**
Brunfels, Bock, Cordus, Fuchs, Turner, Gerard, Mattihiolus, Ghini, Cesalpino, Clusius, Tournefort (rodovi), Linne

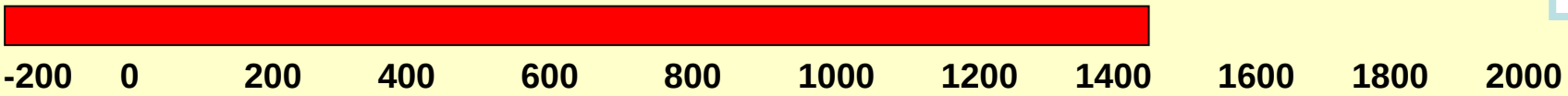


http://www.botanicus.org/
http://bibdigital.rjb.csic.es



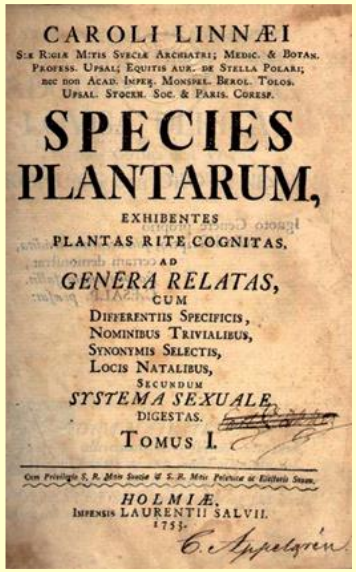





Marco Polo 1271, Novi Svijet 1492, tiskarski stroj 1446, Magellan 1519, sveučilišta >1540, herbalisti, Cook > 1750, kartiranje svijeta, vrtovi, zbirke, razdvajanje prirodoslovlja, latinski jezik, druge kulture, Badanius, Kina, ..., Hook >1650 mikro., ...,
Fuchs 1542-500, Bauhini 1623-6000, Ray 1682-18000, ...



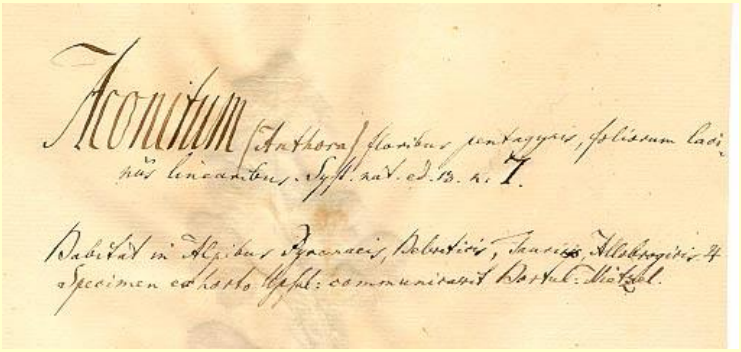
UMJETNI SISTEMI

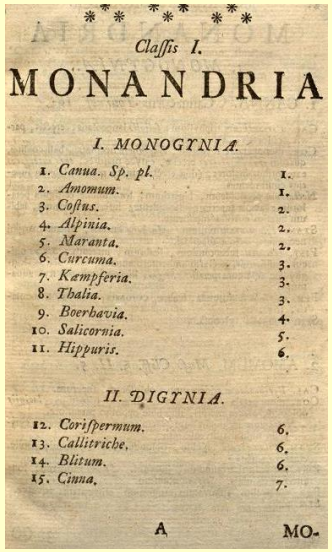
Carl Linneaus (1707. – 1778.) i Linneausov period
otac taksonomije, binomna nomenklatura, Systema Naturae, Genera Plantarum, Species Plantarum
24 razreda - spolni sustav (**2**)


CAROLI LINNÆI
SPECIES PLANTARUM,
EXHIBENTES
PLANTAS RITE COGNITAS,
AD
GENERA RELATAS,
CUM
DIFFERENTIIS SPECIFICIS,
NOMINIBUS TRIVIALIBUS,
SYNONYMIS SELECTIS,
LOCIS NATALIBUS,
SECUNDUM
SYSTEMA SEXUALE
DIGESTAS.
TOMUS I.
HOLMIÆ,
IMPENSIS LAURENTII SALVII.
1753.

glauca 8. SERRATULA foliis ovato-oblongis accuminatis serratis, floribus corymbosis calycibus subrotundis.

Sivo-zelena 8. PILASTA
listovi ovalno-okrugli, prilegnuto pilasti, cvat je gronja, čaška poluokrugla



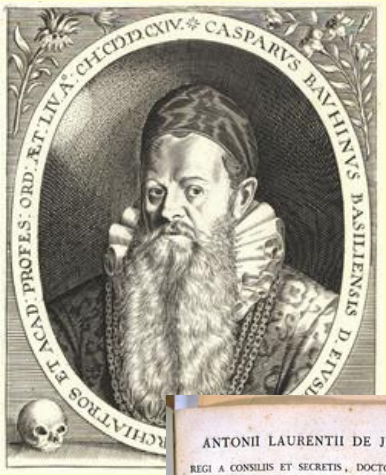

Classis I.
MONANDRIA
I. MONOGYNIA.
1. Canna. Sp. pl. 1.
2. Amomum. 1.
3. Costus. 2.
4. Alpinia. 2.
5. Maranta. 2.
6. Curcuma. 3.
7. Kæmpferia. 3.
8. Thalia. 3.
9. Boerhavia. 4.
10. Salicornia. 5.
11. Hippuris. 6.
II. DIGYNIA.
12. Coriſpermum. 6.
13. Callitriche. 6.
14. Blitum. 6.
15. Cinna. 7.
A MO-

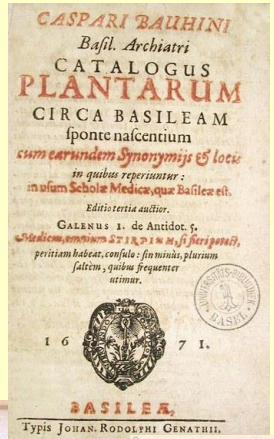
(http://linnaeus.nrm.se/botany/fbo/welcome.html.en)

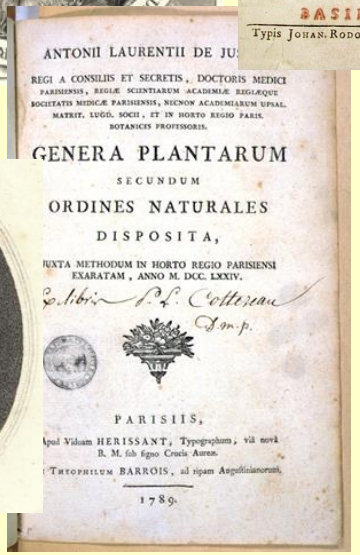
SISTEMATSKA BOTANIKA

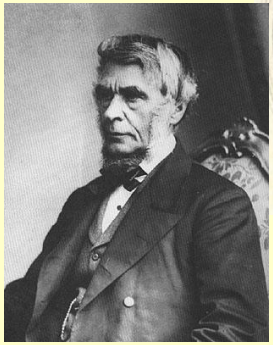
Prirodni sistemi - Prirodni sistemi - na temelju nekoliko do mnogo osobina, izabranih *a posteriori*, zbog korelacije s drugim osobinama

Bauhin, Ray, Adanson, Lamarc, de Jussieu, de Candolle (Prodr. syst. nat. reg. veg.), Endlicher, Brogniart (paleobot.), Bentham, Hooker, Eichler, Engler, Prantl



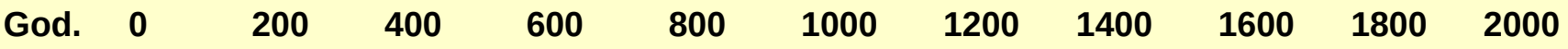






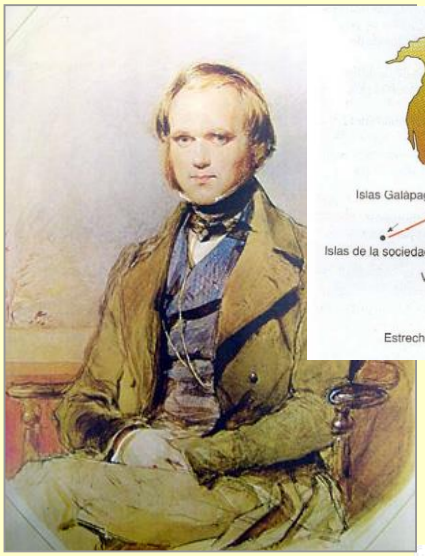
19. st. mnoga otkrića: optjecajni sustav, stanična građa, jezgra, izmjena generacija (Hofmeister), citologija, histologija, dvostruka oplodnja (Navašin), osnove genetike G. Mendell, i dr.

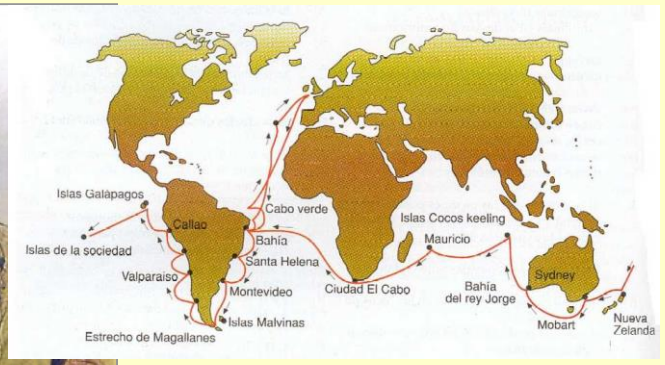
I dalje dominira koncept nepromjenjivosti vrsta, ...



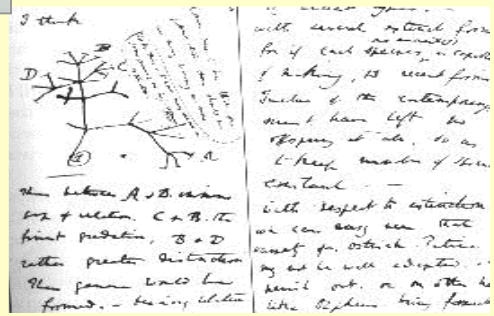
FILOGENETSKI SISTEMI

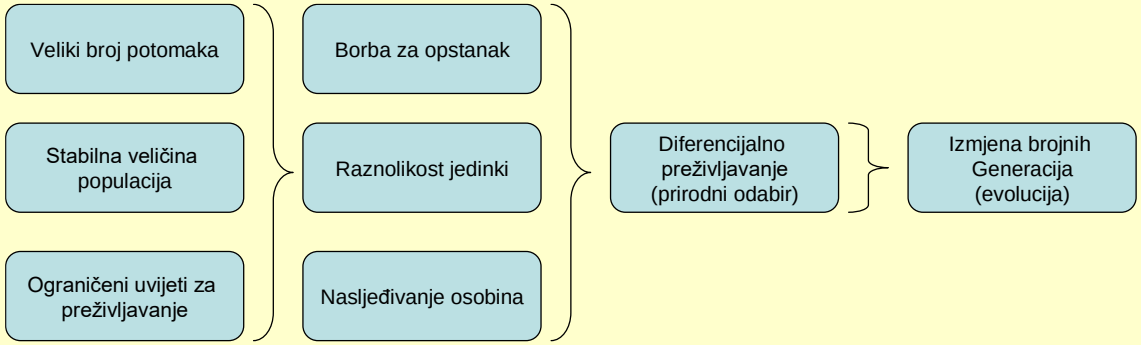
- Botanika 19. stoljeća
- Utjecaj **Darwinove** teorije evolucije na sistematiku (1809-1882)
- "Tendencija vrsta da stvaraju varijetete i druge vrste putem prirodnog odabira" 1858. god. u Linneaovom udruženju u Londonu. Rad potom objavljuju u časopisu
- Slijedi Porijeklo vrsta – 1859, Varijabilnost životinja i biljaka tijekom domestifikacije – 1868, Porijeklo čovjeka – 1871
- \+ Mendellova otkrića (1866, 1906)
- http://darwin-online.org.uk/





Beagle 1831 – 1836

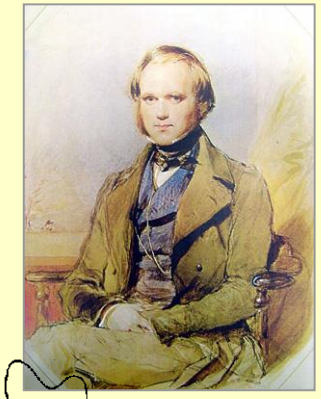


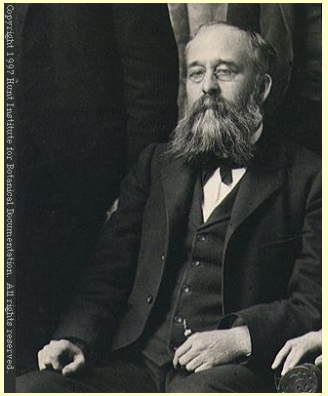


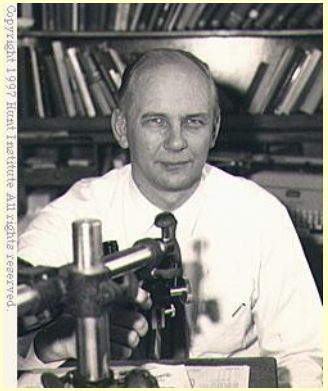
- **Period prijelaznih filogenetski sistemi**

SISTEMATSKA BOTANIKA

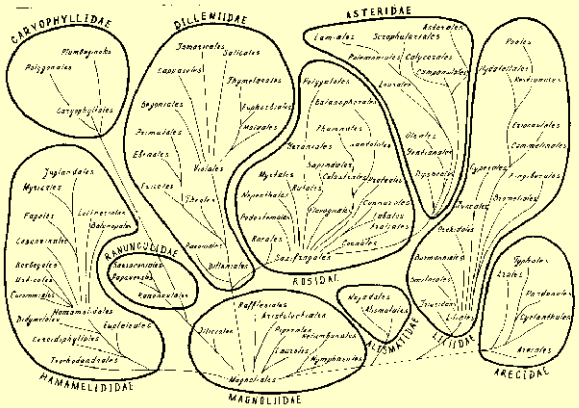
Filogenetski sistemi - na temelju homologije osobina kao posljedice evolucije od zajedničkog pretka

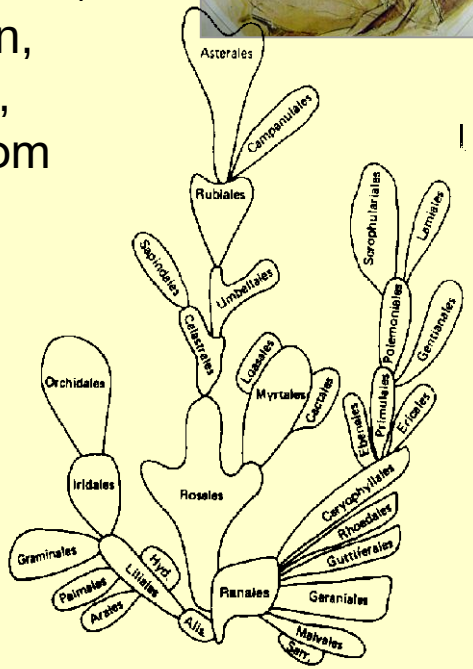


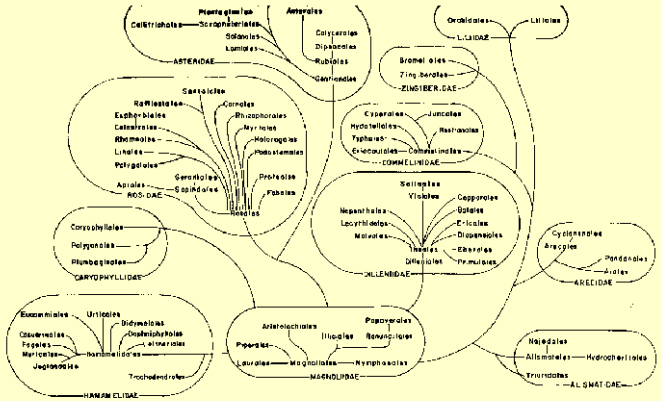


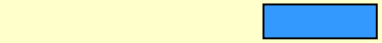


Darwin, >1900 - Bessey, Hallier, Hutchinson, Thorn, Takhtajan, Cronquist, Sporne, Stebbins, Dahlgren, ... do 1970. većinom filogenetski sustavi









God. 0 200 400 600 800 1000 1200 1400 1600 1800 2000

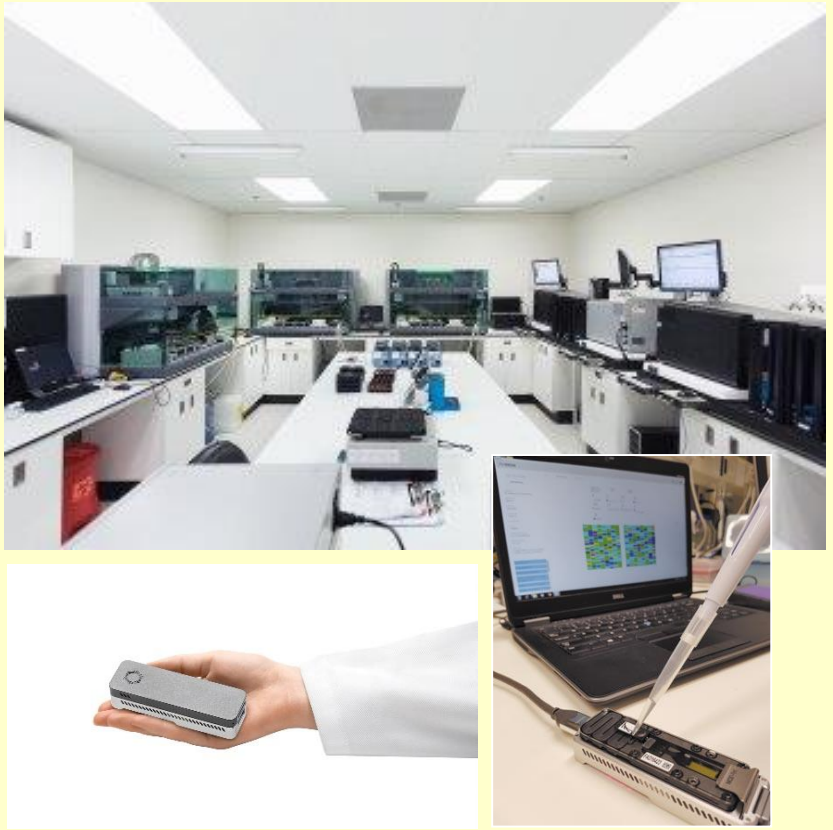
SISTEMATSKA BOTANIKA

Filogenetski sistemi - na temelju homologije i molekularnih pokazatelja (J. Watson & F. Crick struktura DNA 1953)

Angiosperm Phylogeny Group (**APG I**, 1998. An ordinal Classification for the Families of Flowering Plants. Ann. Missouri Bot. Gard. 85: 531-553 – serija modifikacija i poboljšanja nakon 1998., sve do danas (osobito **2003**. An update of the Angiosperm Phylogeny Group classification for the orders and families of flowering plants: **APG II**. Bot. J. Linnean Soc. 141: 399-436.), **APG III iz 2009** i **APG IV iz 2016.**

stotine autora, izuzetna dinamika

Angiosperm Phylogeny Website
(http://www.mobot.org/mobot/research/apweb/)



https://nanoporetech.com/