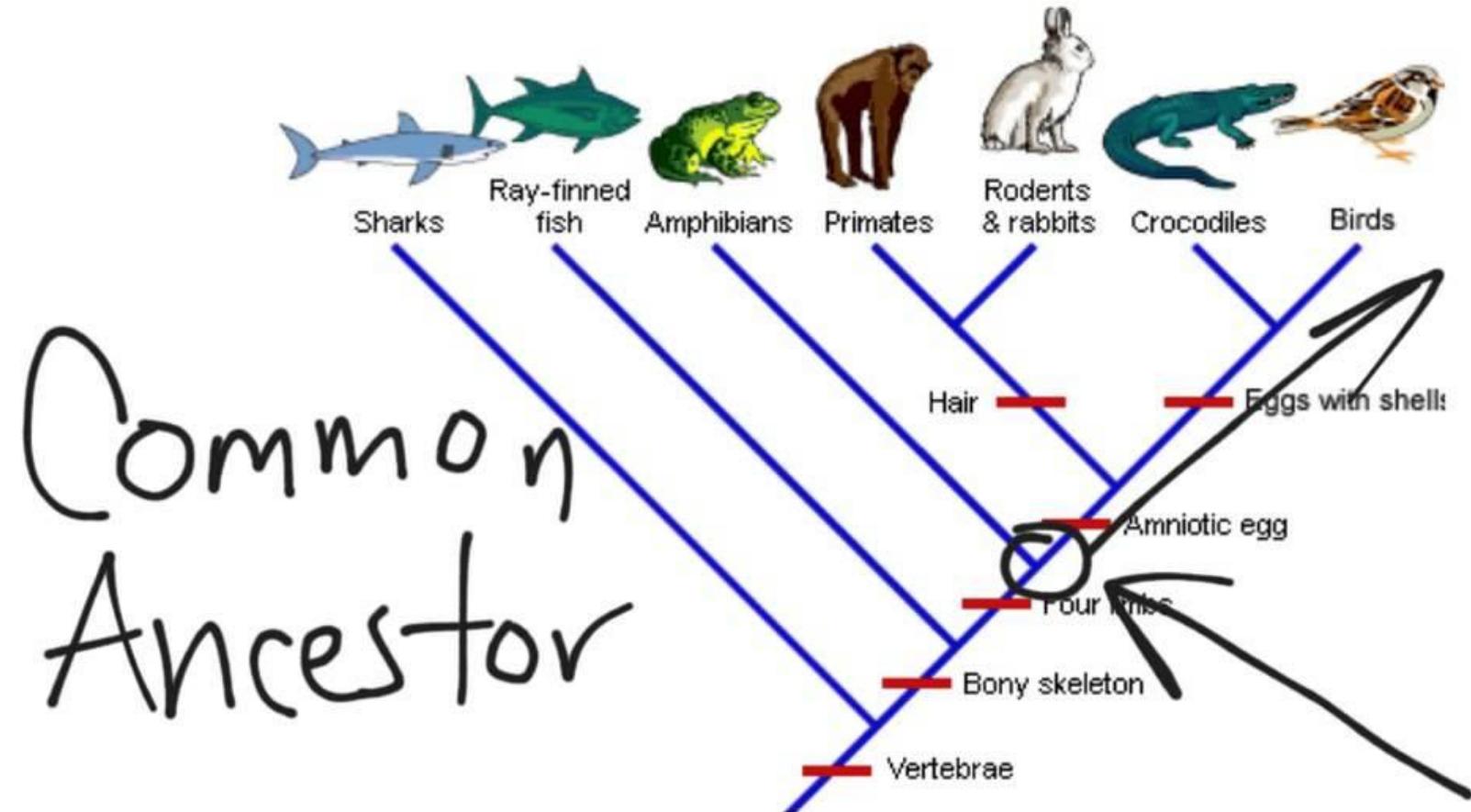


# OPĆA PALEONTOLOGIJA

3. Vježba  
Taksonomija

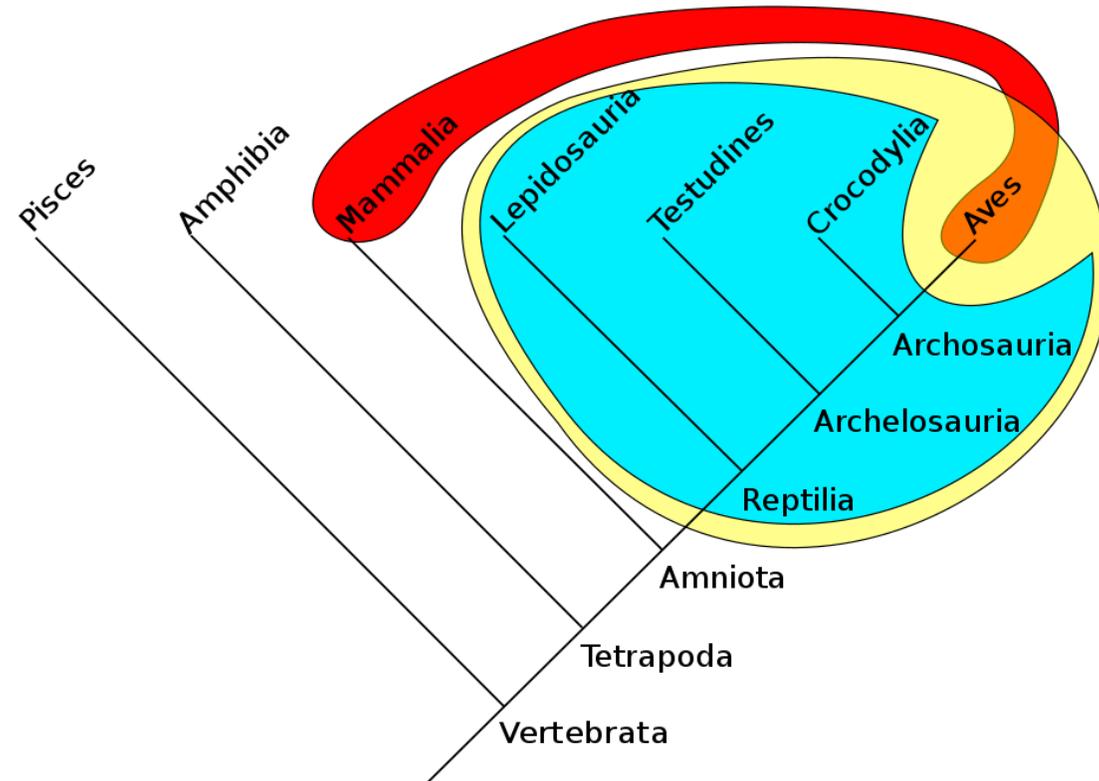
# KLADISTIKA



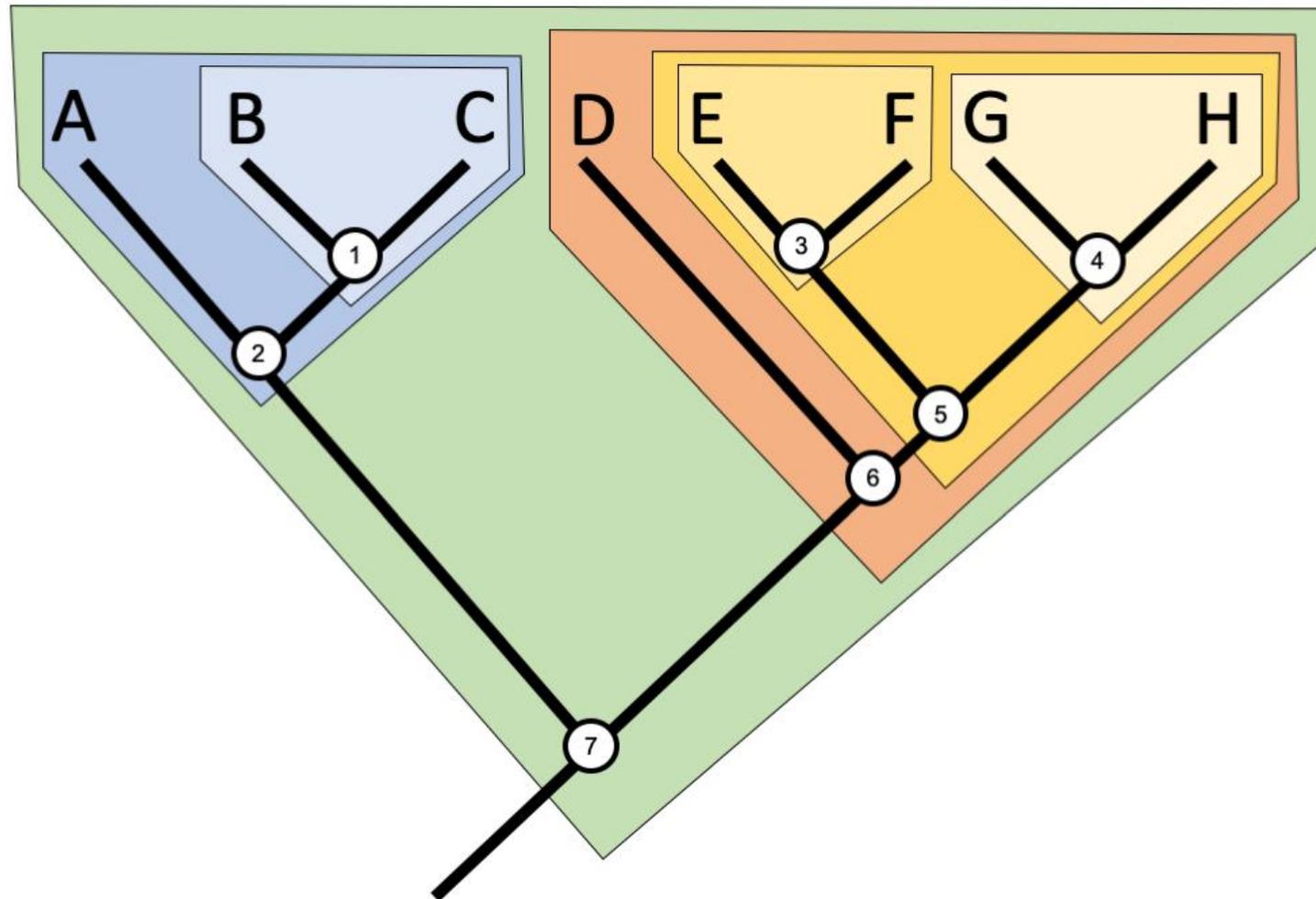
- Apomorfija
- Sinapomorfija
- Plesiomorfija
- Autapomorfija

# KLADISTIKA

- Monophyly
- Paraphyly
- Polyphyly



# KLADISTIKA



# SISTEMATIKA

Carstvo - *Animalia*

Koljeno - *Chordata*

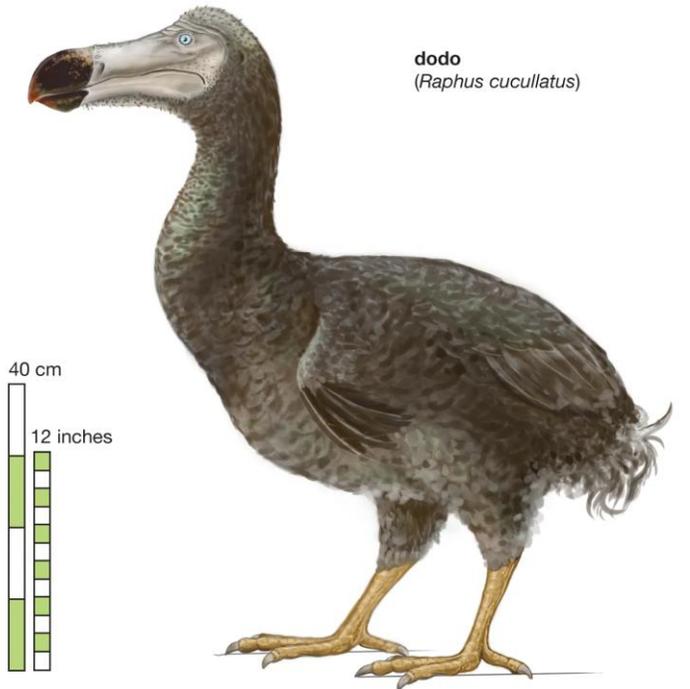
Razred - *Aves*

Red - *Columbiformes*

Porodica - *Columbidae*

Rod - *Raphus*

Vrsta – *Raphus cucullatus*



# SISTEMATIKA

Rank	Plants	Algae	Fungi	Animals	Bacteria <sup>[3]</sup>
<b>Division/Phylum</b>	-phyta		-mycota		
<b>Subdivision/Sub phylum</b>	-phytina		-mycotina		
<b>Class</b>	-opsida	-phyceae	-mycetes		-ia
<b>Subclass</b>	-idae	-phycidae	-mycetidae		-idae
<b>Superorder</b>	-anae				
<b>Order</b>	-ales				-ales
<b>Suborder</b>	-ineae				-ineae
<b>Infraorder</b>	-aria				
<b>Superfamily</b>	-acea			-oidea	
<b>Epifamily</b>				-oidae	
<b>Family</b>	-aceae			-idae	-aceae
<b>Subfamily</b>	-oideae			-inae	-oideae
<b>Infrafamily</b>				-odd	
<b>Tribe</b>	-eae			-ini	-eae
<b>Subtribe</b>	-inae			-ina	-inae
<b>Infratribe</b>				-ad	

Genus *Hinnites* DeFrance, 1821

Type species: *Ostrea crispa* Brocchi, 1814

*Hinnites crispus* (Brocchi, 1814)

(Fig. 4.6,7)

- 1867 *Hinnites defrancei* Micht. — Hörnes, p. 423 (pars), pl. 2, Figs. 1-2  
1928 *Hinnites leufroyi* Serr. — Kautsky, p. 264  
1947 *Hinnites leufroyi* Serr. — Sieber, p. 112  
1939 *Chlamys crispa* (Brocchi, 1829) — Roger, p. 172, pl. 23, Figs. 11, 12, pl. 24, Fig. 6, pl. 25, Figs. 1, 4, pl. 28, Fig. 2  
2001 *Hinnites brussoni leufroyi* (de Serres, 1829) — Schultz, p. 221 (pars), pl. 20, Figs. 2a-b, 4a-b

**Type:** Rossi-Ronchetti (1951-1957) referred to an articulated specimen illustrated by Brocchi (1814) and housed in the Natural History Museum in Milan (Brocchi collection; No. 460) for the holotype. It derived from Asti in NW Italy (cf. Roger 1939). The age of that occurrence originally regarded as Piacentino is Piacenzian (early Late Pliocene).

**Material:** Specimens from Windpassing (Coll. NHMIs) and Grund (Coll. NHMs).

**Dimensions:** Right valve — disc height = 46.2 mm, disc length = 42 mm, disc convexity = 4 mm, umbonal angle = 102°, ears length = 26.7 mm, ears height = 10.2 mm; left valve — disc height = 62.3 mm, disc length = 57 mm, disc convexity = 13 mm, umbonal angle = 106°, ears length = 34.6 mm, ears height = 15 mm.

**Remark:** The studied specimens were previously erroneously identified with *Hinnites brussoni* (compare Schultz 2001) yet also the most careful reinvestigation could not detect any traces of shagreen microsculpture which is its main distinctive feature toward *Hinnites crispus* (compare Roger 1939; Waller 1993). The apparent difference between former species is indeed only the absence of shagreen microsculpture in *Hinnites crispus* (cf. Roger 1939). Indeed both species are represented in the Middle Miocene of Paratethys. Hence the specimens from Grund identified by Schultz (2001) as *Hinnites leufroyi* and *Hinnites defrancei*, bear no shagreen microsculpture and consequently represent *Hinnites crispus* morphology. In contrast the specimen illustrated by Nicorici (1977, Pl. 44, Fig. 1a-1c) and identified as *Chlamys brussoni defrancei*, from the Badenian of SW Romania show shagreen microsculptural pattern and consequently represent typical *Hinnites brussoni*. With minor exceptions the present author principally follows revisions introduced by Waller (1991 and 1993). One such exception is the status of *Hinnites crispus* which is in the present study considered as a direct descendant of *Hinnites brussoni*. This interpretation supported by related shell morphologies as well as by their stratigraphic ranges, stays in discordance with the inference by Waller (1993) advocating the branching of *Hinnites crispus* off a *Laevichlamys* representative.

**Stratigr./Geogr. range:** Middle Miocene to Pliocene, ?Recent/Central Paratethys, Mediterranean. In the Central Paratethys it is restricted to the Badenian, in the Mediterranean and E Atlantic regions it is typically present from the Middle Miocene to Pliocene (Roger 1939). Waller (1993) refers the living *Hinnites* from the tropical West Africa offshore also to *Hinnites crispus*. It is possible that the latter region represents the current refugium of this termophylic taxon.

***incertae sedis*** – nesigurni sistematski pložaj

**cf.** = confer – označava sličnost s nekom vrstom; pr. *Corvus cf. splendens*

**aff.** = affinis – srodnost s nekom vrstom; pr. *Aequipecten aff. elegans*

**sp./spp.** = species – oznaka za neodređenu vrstu/vrste; pr.  
*Charchanodon sp.*, *Unio spp.*

**sp. nov.** = species nova – oznaka kod novoopisane vrste; pr. *Echinoderes beringiensis sp. nov.*