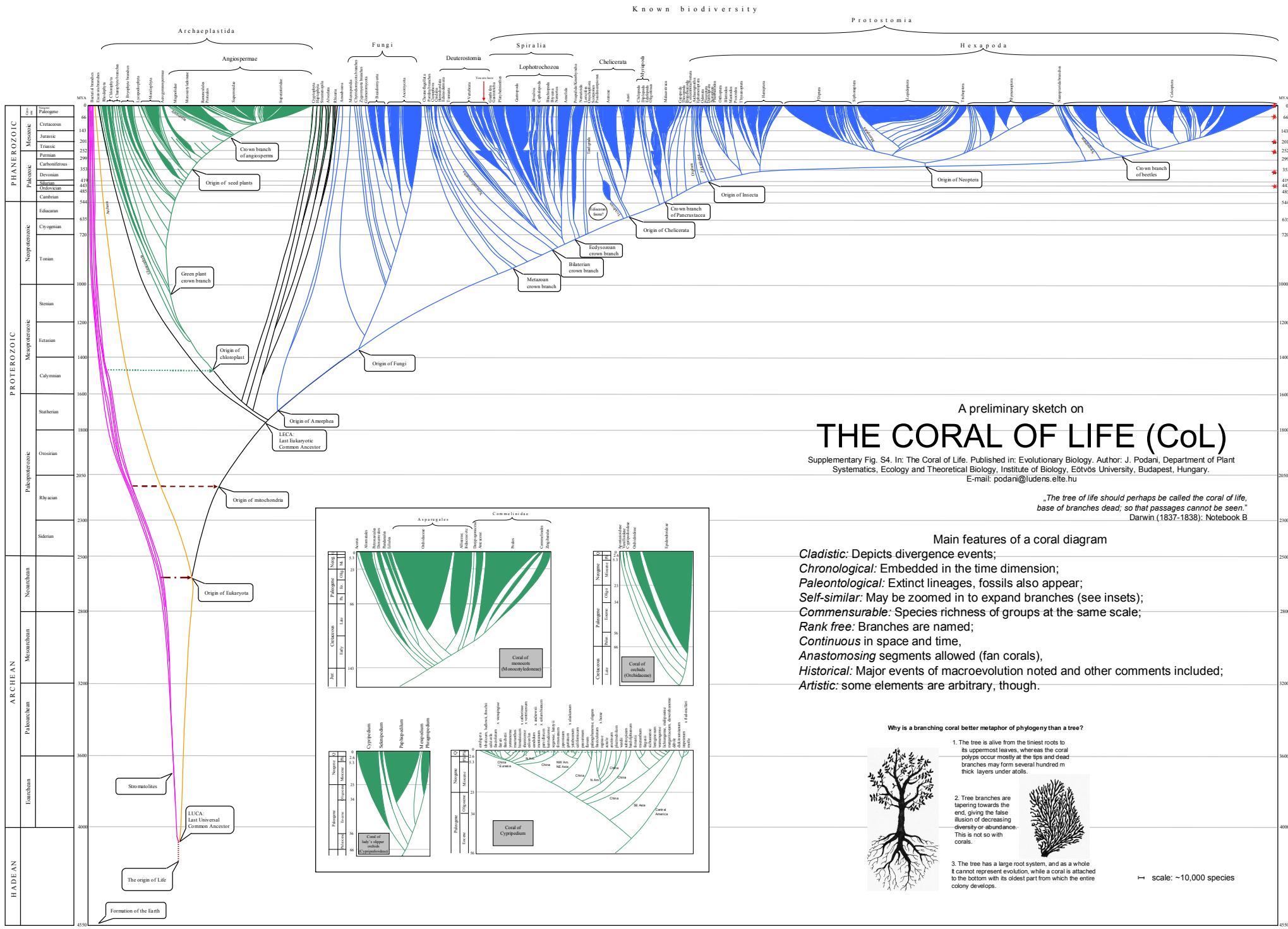


Geological time



A preliminary sketch on THE CORAL OF LIFE (CoL)

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"The tree of life should perhaps be called the coral of life, base of branches dead; so that passages cannot be seen." Darwin (1837-1838): Notebook B

Main features of a coral diagram

- Clastidic:** Depicts divergence events;
- Chronological:** Embedded in the time dimension;
- Paleontological:** Extinct lineages, fossils also appear;
- Self-similar:** May be zoomed in to expand branches (see insets);
- Commensurable:** Species richness of groups at the same scale;
- Rank free:** Branches are named;
- Continuous** in space and time,
- Anastomosing** segments allowed (fan corals),
- Historical:** Major events of macroevolution noted and other comments included;
- Artistic:** some elements are arbitrary, though.

Why is a branching coral better metaphor of phylogeny than a tree?



1. The tree is alive from the tiniest roots to its uppermost leaves, whereas the coral polyps occur mostly at the tips and dead branches may form several hundred m thick layers under atolls.



2. Tree branches are tapering towards the end, giving the false illusion of decreasing diversity or abundance. This is not so with corals.

3. The tree has a large root system, and as a whole it cannot represent evolution, while a coral is attached to the bottom with its oldest part from which the entire colony develops.

scale: ~10,000 species

