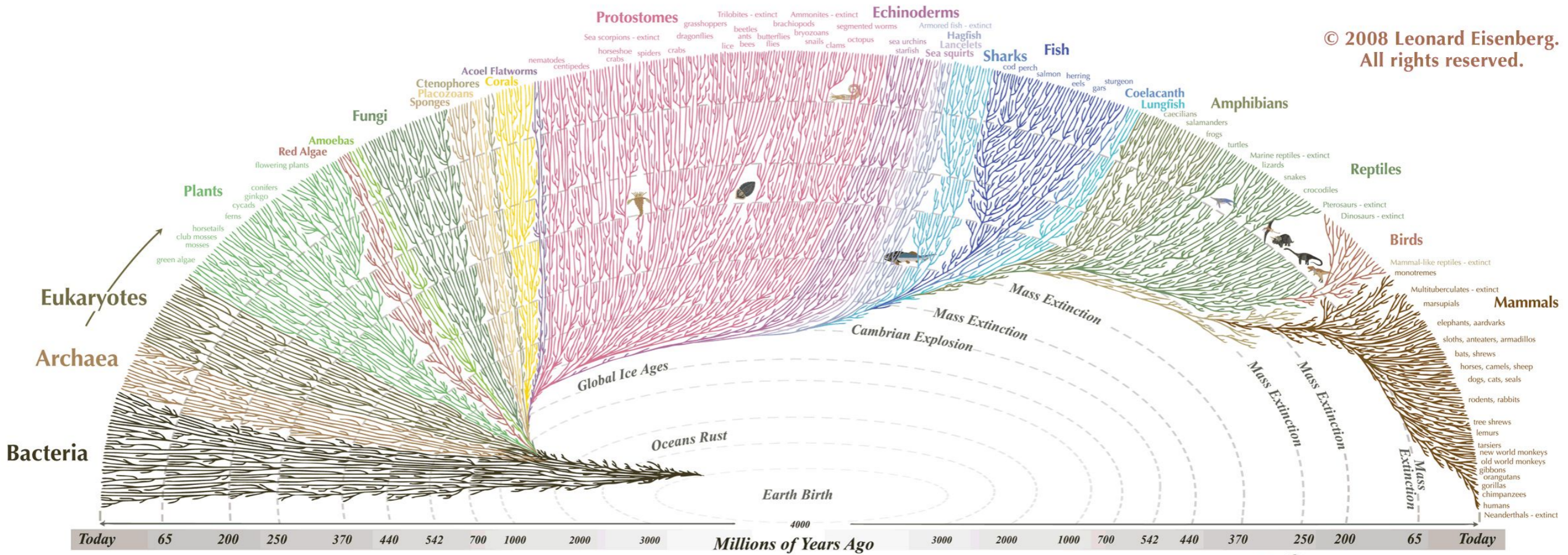



Evolution of microorganisms (and viruses)

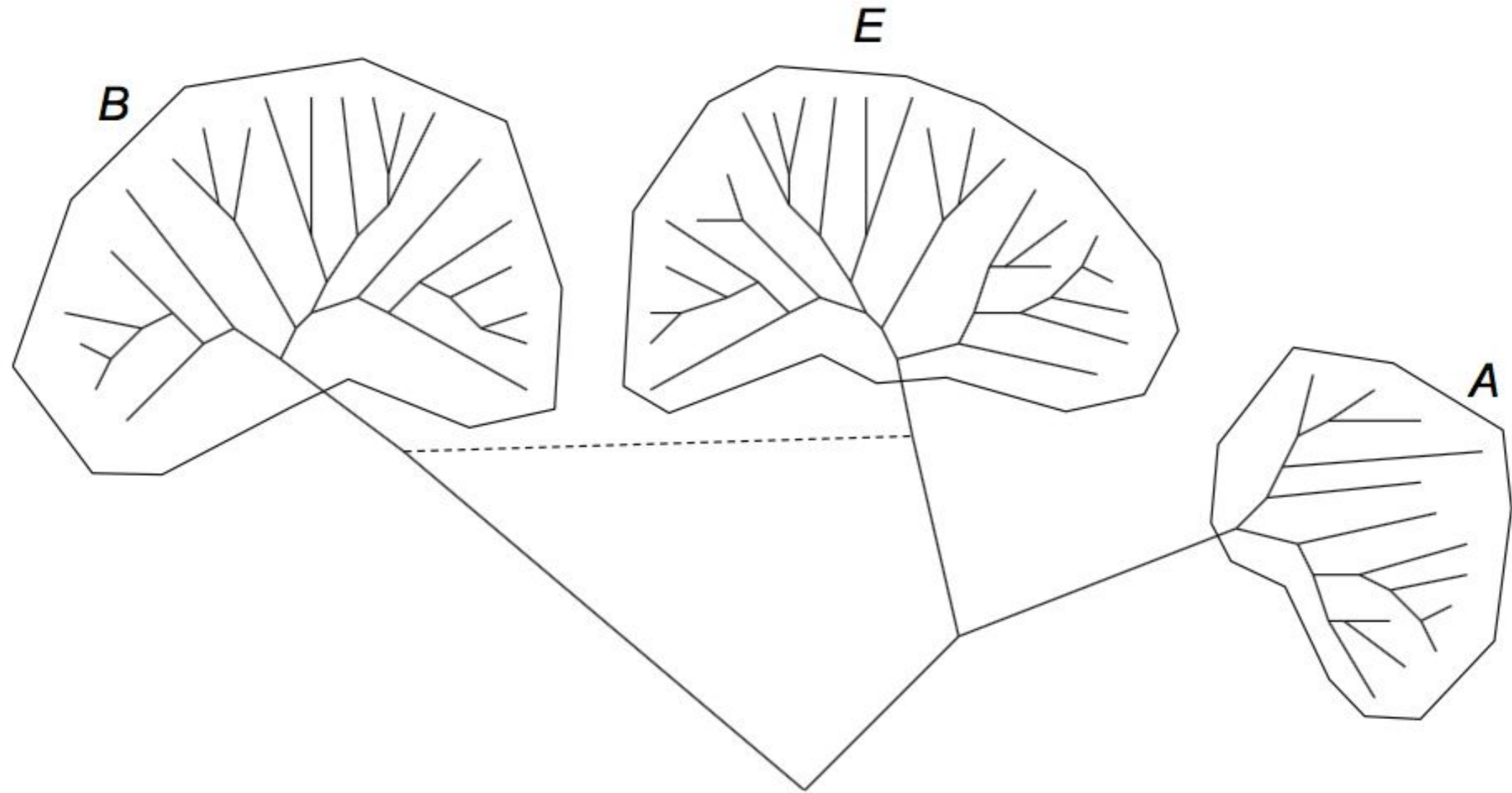
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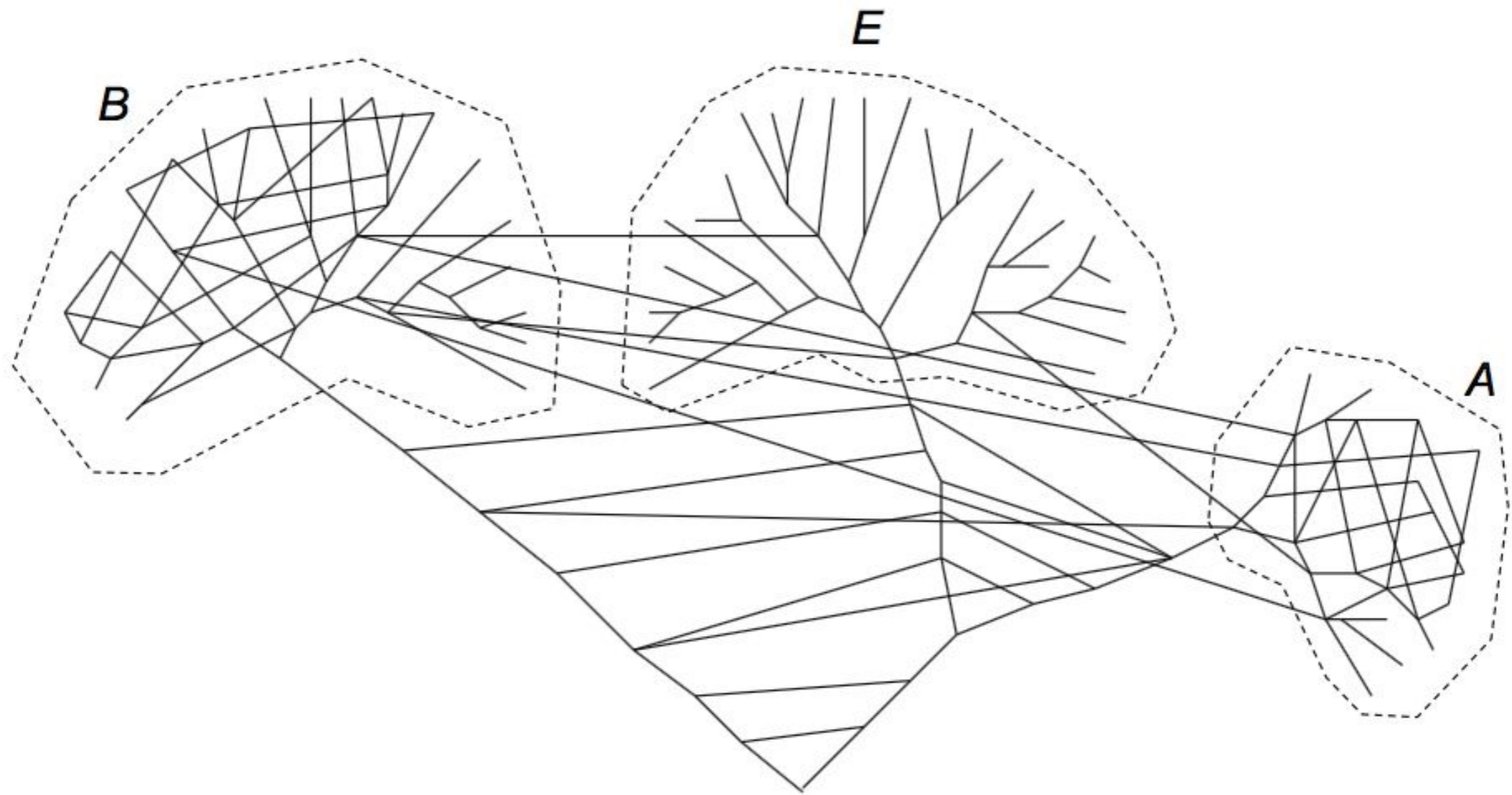
All the major and many of the minor living branches of life are shown on this diagram, but only a few of those that have gone extinct are shown. Example: Dinosaurs - extinct 

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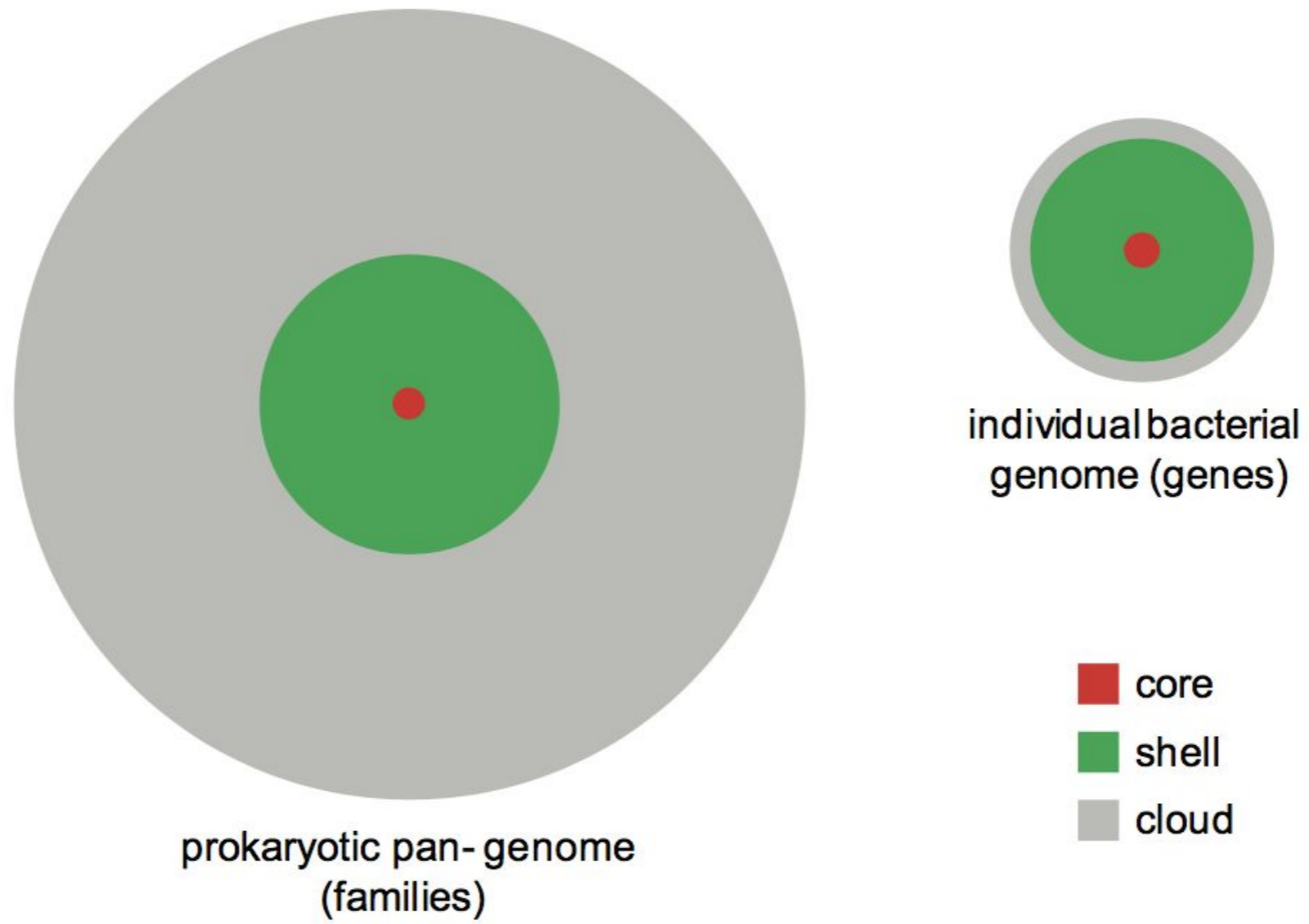
“On the Origin of Species”



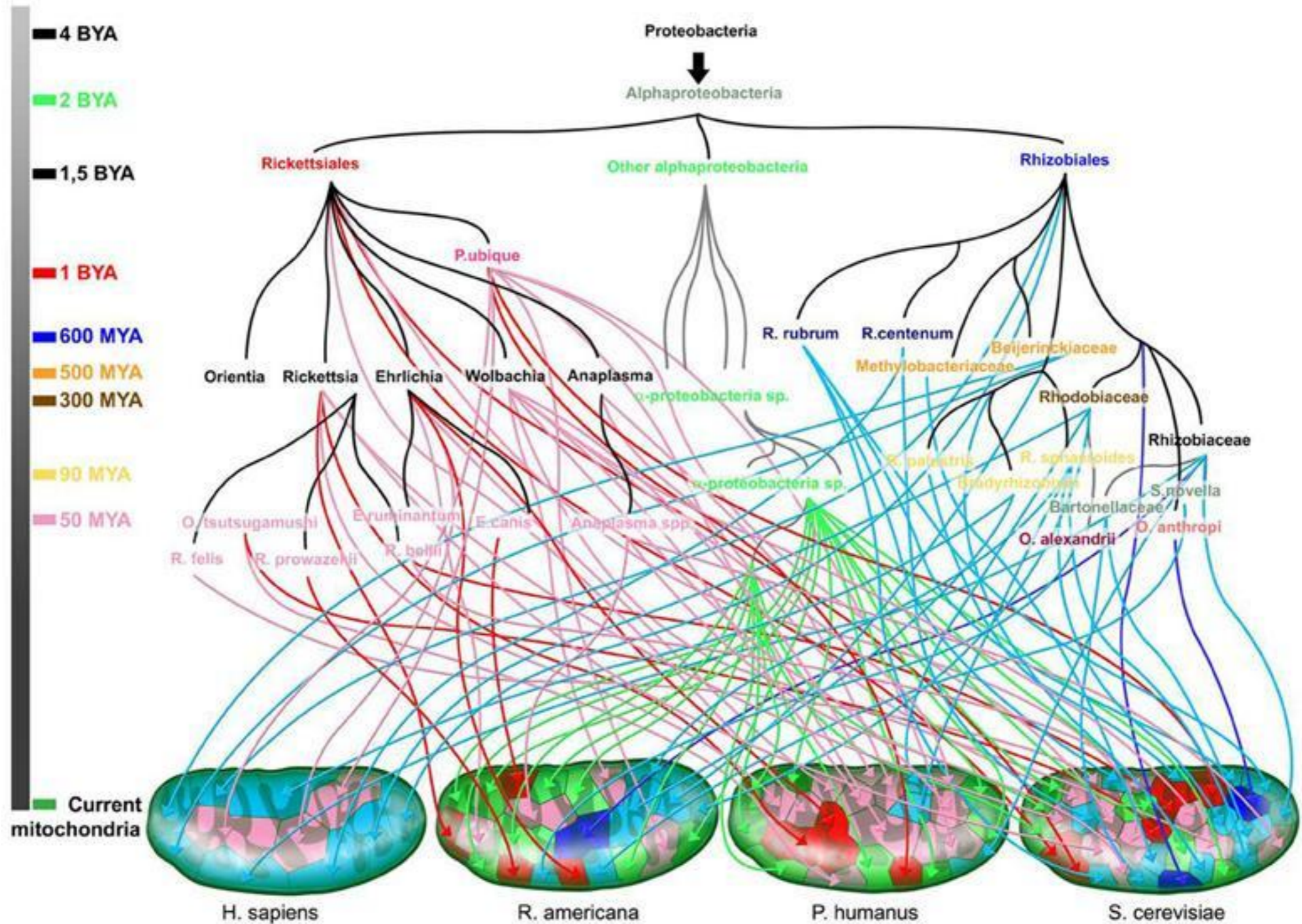
Flow of genetic material



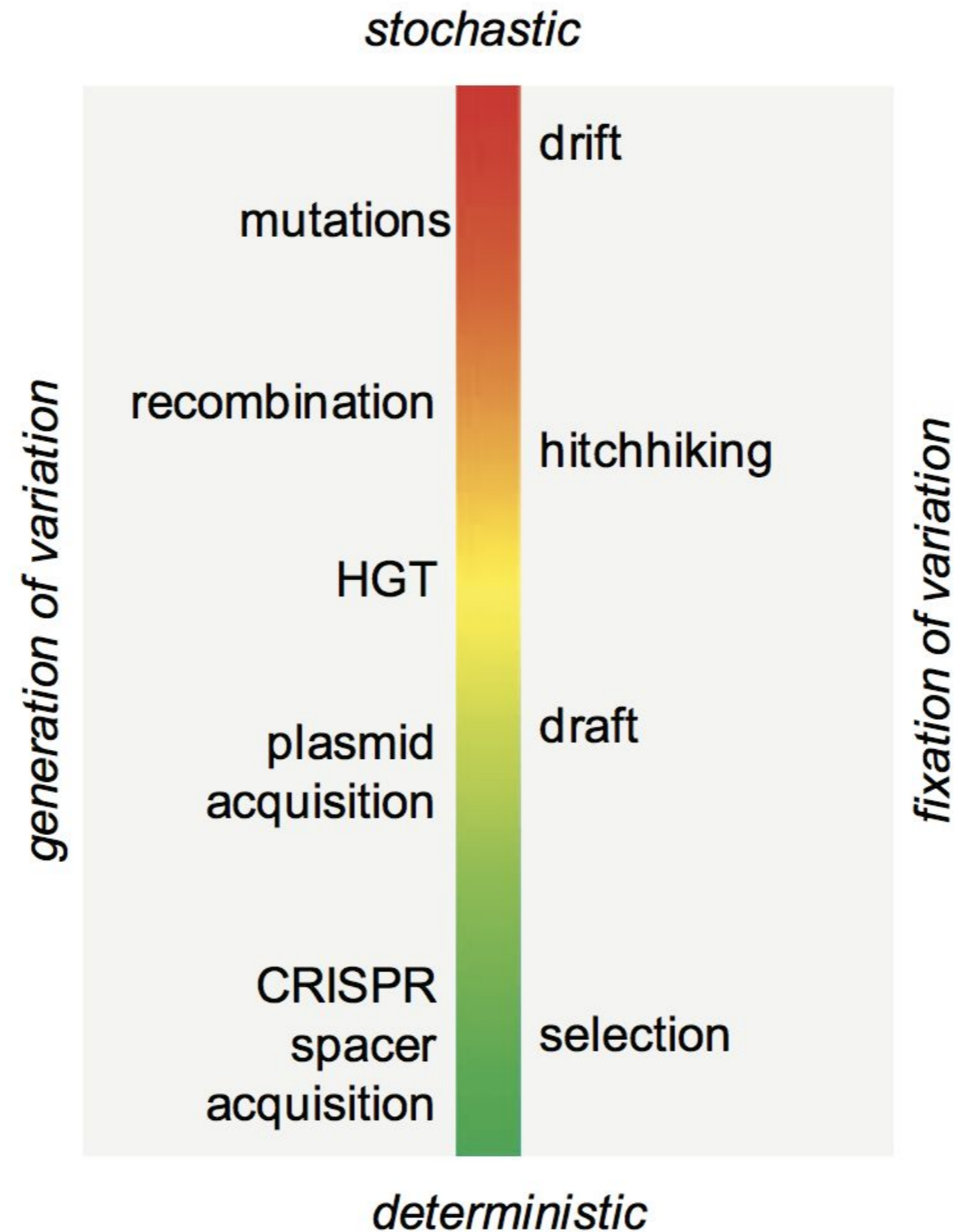
Prokaryotic species?



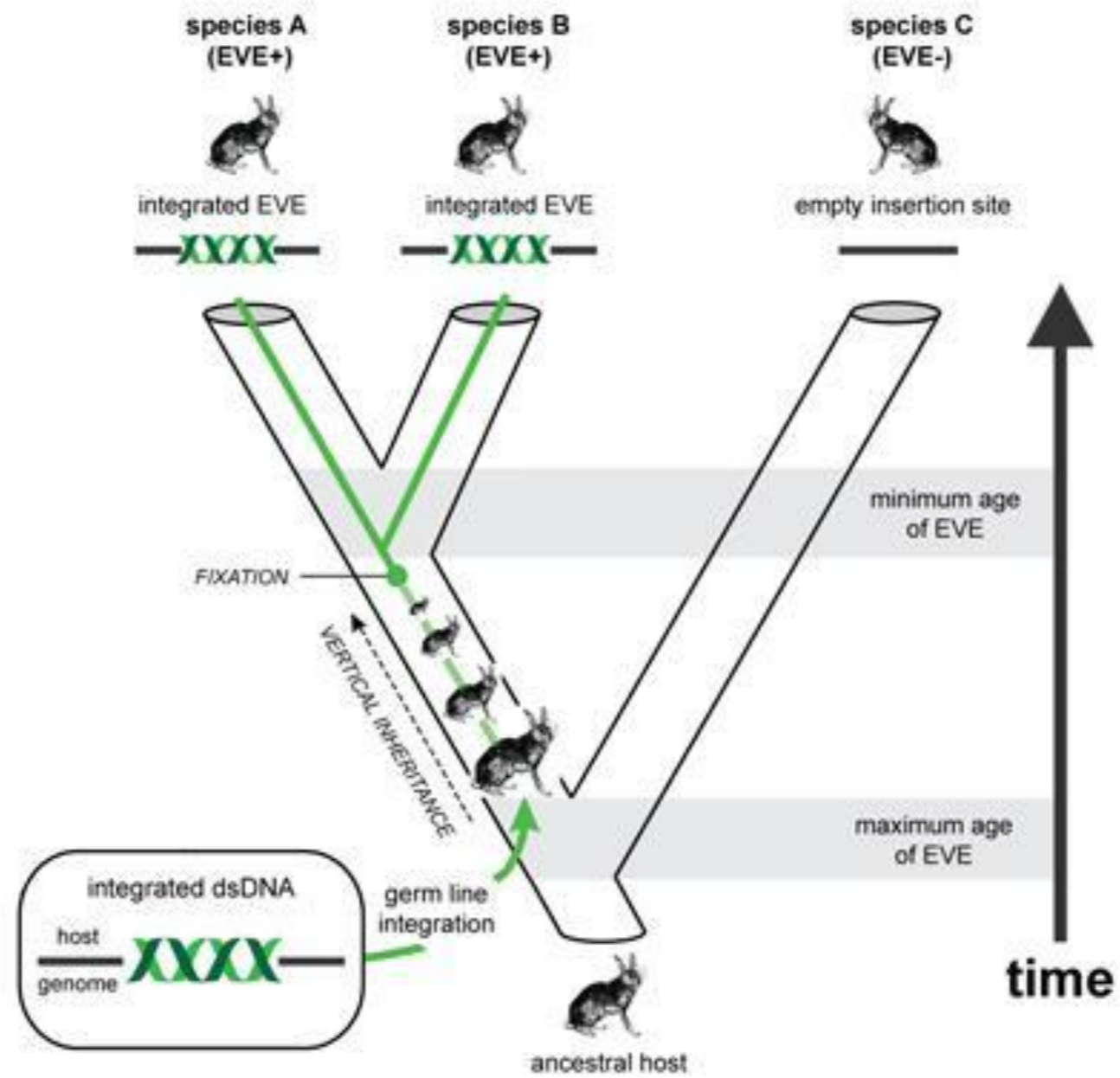
The Rhizome of Life



The continuum of evolutionary processes



Viruses



The origin of viruses

Progressive: mobile genetic elements become autonomous

Retrotransposons

Regressive: derived from a more complex progenitor

Complex viruses

Mitochondria

Virus First: predate cells

RNA World

Ribozymes

None of the above

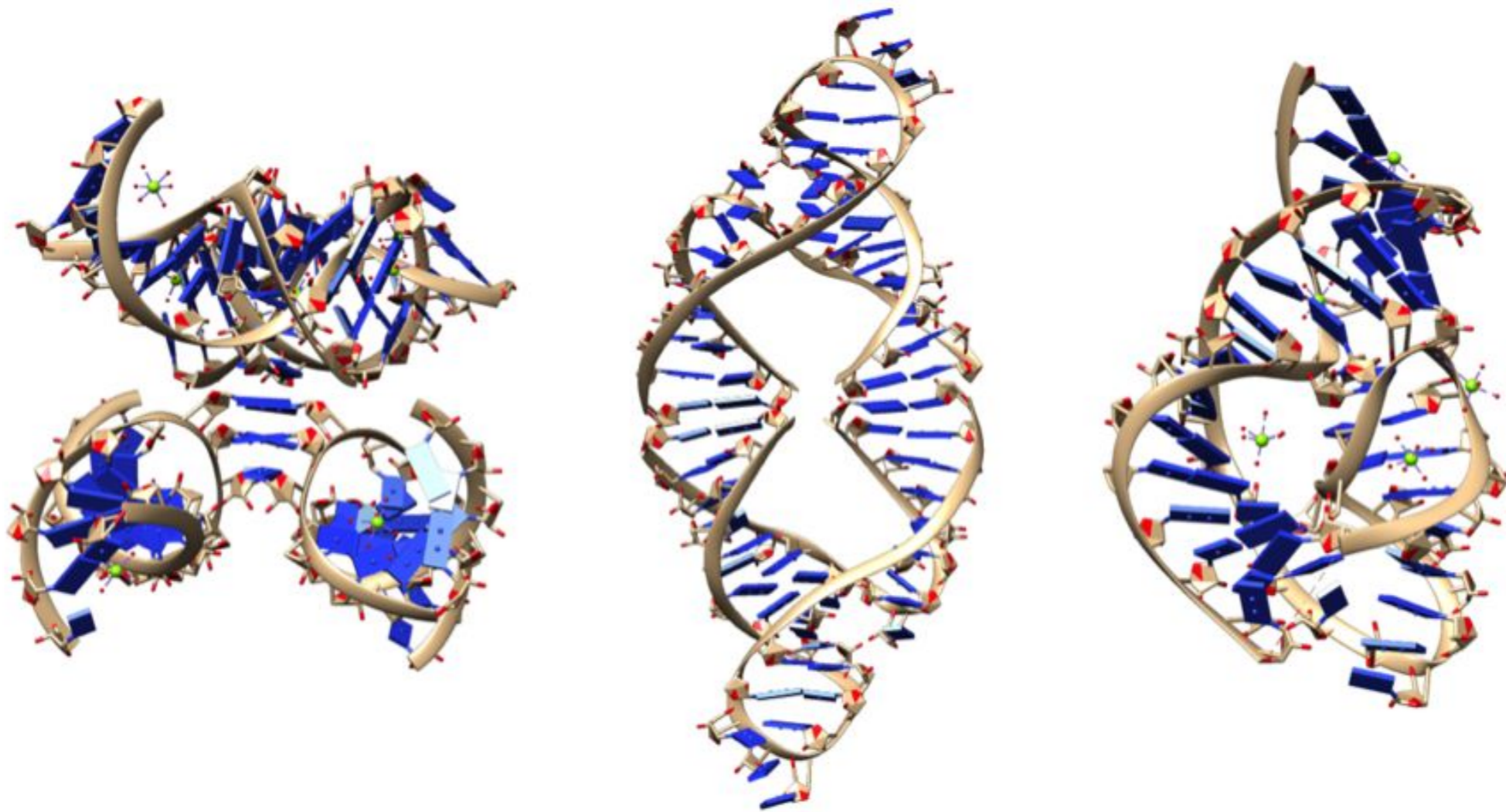
All of the above

Trilobite



<http://www.guardian.co.uk/books/2012/mar/09/mullan-ten-best-fossils-literature>

Ribozymes



Предки человека заимствовали полезные гены у вирусов

22.10.2008 • АЛЕКСАНДР МАРКОВ • ГЕНЕТИКА, ЭВОЛЮЦИЯ • 10 КОММЕНТАРИЕВ

syncytin 1, syncytin 2, EnvPb1

http://elementy.ru/novosti_nauki/430886/Predki_cheloveka_zaimstvovali_poleznye_geny_u_virusov