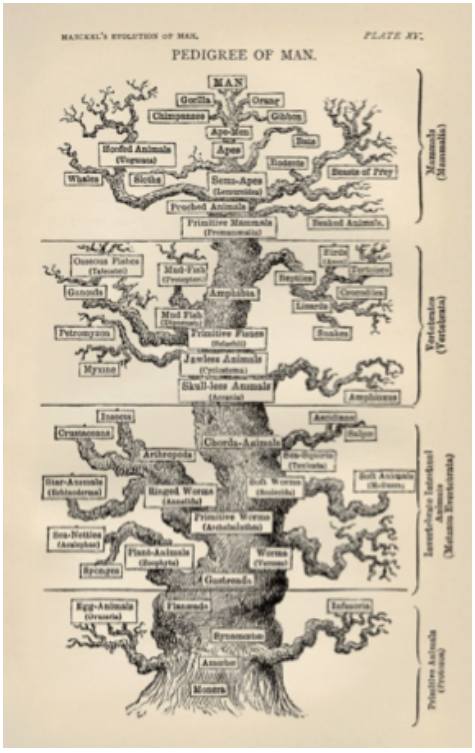
THE CRUCIBLE OF BIODIVERSITY: THE ECOLOGICAL THEATRE AND THE EVOLUTIONARY PLAY

Eörs Szathmáry
Centre for Ecological Research
Eötvös Loránd University
and
Parmenides Center for the Conceptual Foundations of Science
Parmenides Foundation, Munich (D)

9, 10, 11, 12 May 2022, 6:30pm
Sala Cappella ex Ospedale Militare, via Fabio Severo 40,



The unfolding of the biosphere happened during almost 4 billion years of biological evolution by natural selection. Evolutionary units need to be able to multiply, show heredity and variability (heredity is not exact). Replicator dynamics originated in the chemical world but it is pervasive in the living world. Evolvability (being able to respond to selection by a population) also evolves: mutation and recombination also evolve. All this dynamics leads to an increase in biological diversity. Ecological interactions (competition, parasitism/predation, mutualism) emergence by and influence the course of evolution. Ultimately, coevolution in communities is the default mode of biological evolution.

Eörs Szathmáry studied biology at the Eötvös Loránd University in Budapest. After finishing his PhD, he served as research fellow at Eötvös University (Budapest), later becoming professor and head of the Department of Plant Taxonomy and Ecology. Szathmáry was guest of the Wissenschafstkolleg zu Berlin, the University of Zürich and the College de France in Paris. He was serving as permanent fellow of the Collegium Budapest (Institute for Advanced Study, 1995-2011). Since 2011 he is the director of the Parmenides Center for the Conceptual Foundations of Science at the Parmenides Foundation in Munich, Germany. His research topics include: the major evolutionary transitions, origins of life and the genetic code, emergence of the human language faculty, levels and mechanisms of biological cooperation, Darwinian neurodynamics and astrobiology. Between 2019 and 2021 he served as Director General of the Centre for Ecological Research in Hungary.