

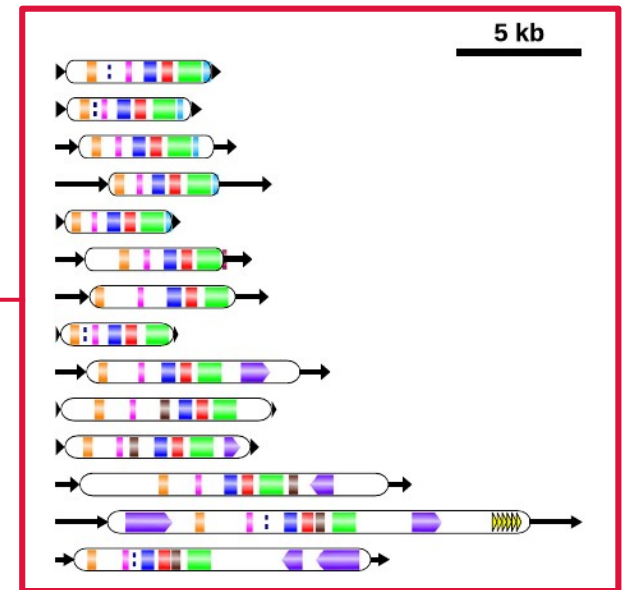
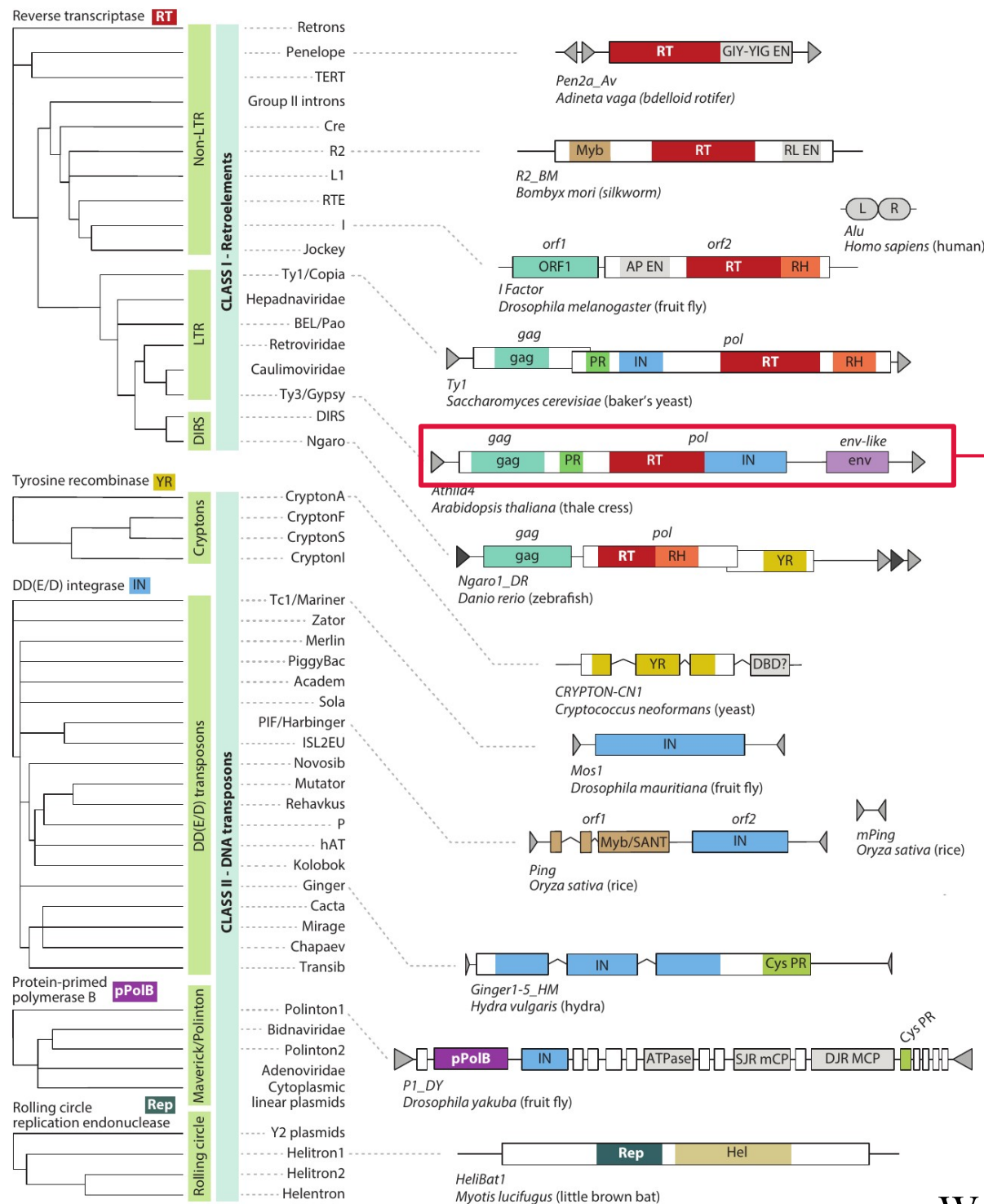
BIO294 project: hunting transposable elements in plant genomes



Rudolf Vejrnych, Auf der Schmetterlingsjagd



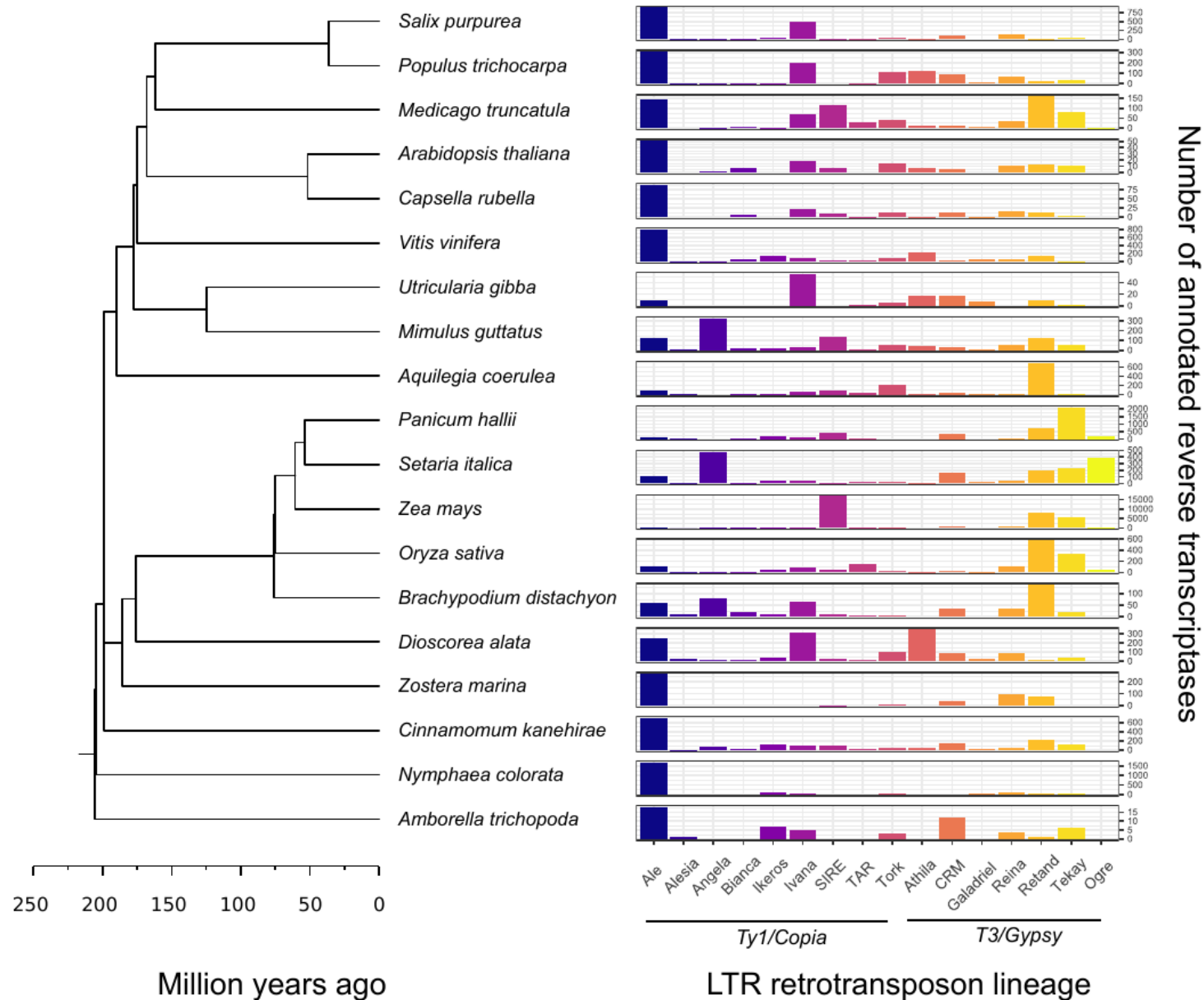
Eukaryote genomes: jungles of selfish genetic elements

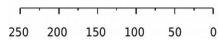
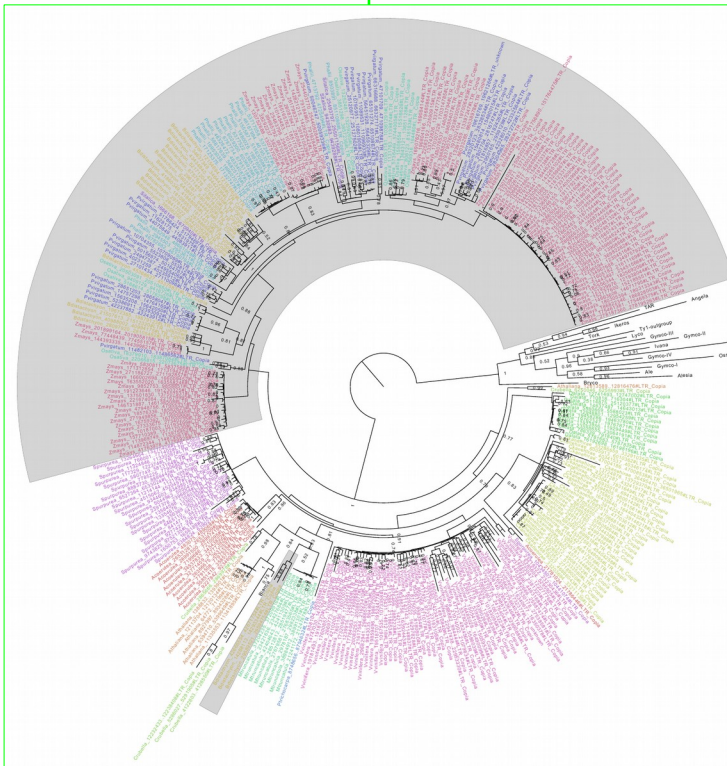


Neumann et al. 2019

Wells & Feschotte 2020

Diversity of LTR retrotransposons across 19 diverse angiosperm genomes



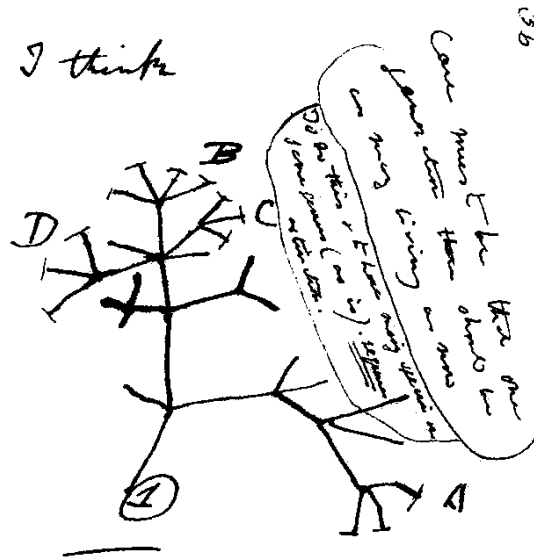
[illegible]

- transpositional bursts
- horizontal transfers
- arms races

The Bianca lineage, a Copia LTR retrotransposon

Project aims

- find sequences of interest in a plant genome
- **estimate, visualize and interpret gene trees**
- write simple Python/Bash scripts



Suggested reading

Koonin 2005:

Orthologs, paralog, and evolutionary genomics

Wells & Feschotte 2020:

A field guide to eukaryotic transposable elements

Neumann et al. 2019:

Systematic survey of plant LTR-retrotransposons elucidates phylogenetic relationships of their polyprotein domains and provides a reference for element classification