Evolutionary Thinking 2022 TA session week 1 – phylogeny tree

Jilong Ma
aujilongm@birc.au.dk

AARHUS
UNIVERSITY
BIOINFORMATICS RESEARCH CENTRE (BIRC)

Evolutionary Thinking 2022
31 AUG 2022

JILONG MA
PHD STUDENT

Outline

1. Short Intro (15 minutes)

Myself

Grouping!

2. Learning outcome of this week (20 minutes)

Tree/Phylogeny: Interpretation

Sequence to Phylogeny

3. Working on Tree Pretest (30 minutes)

Going through solutions (15 minutes)
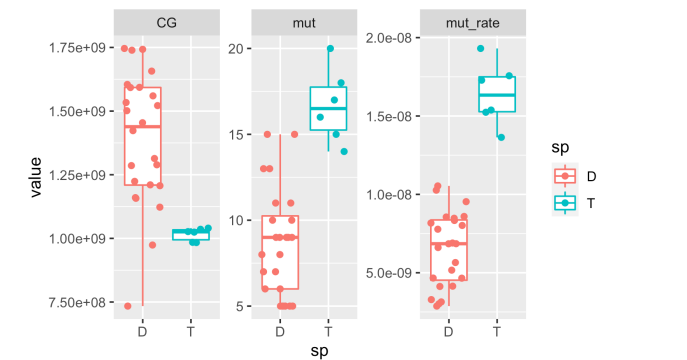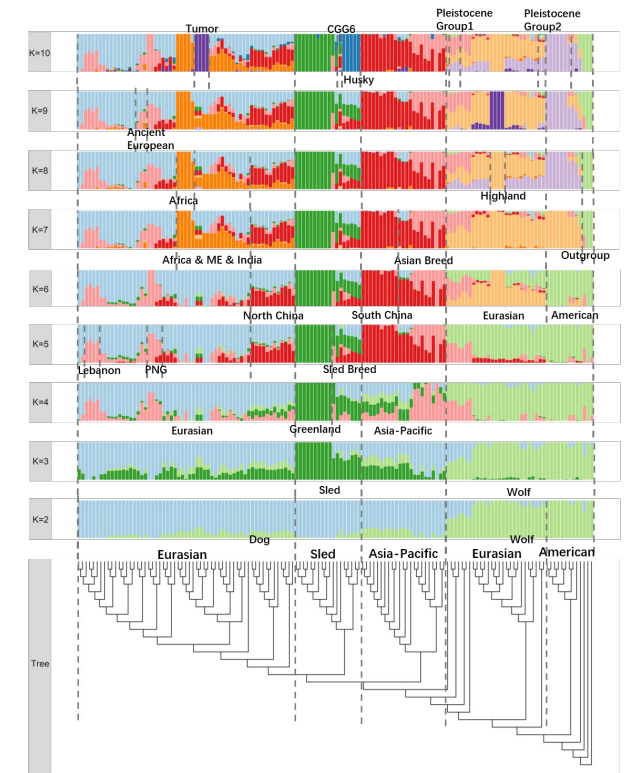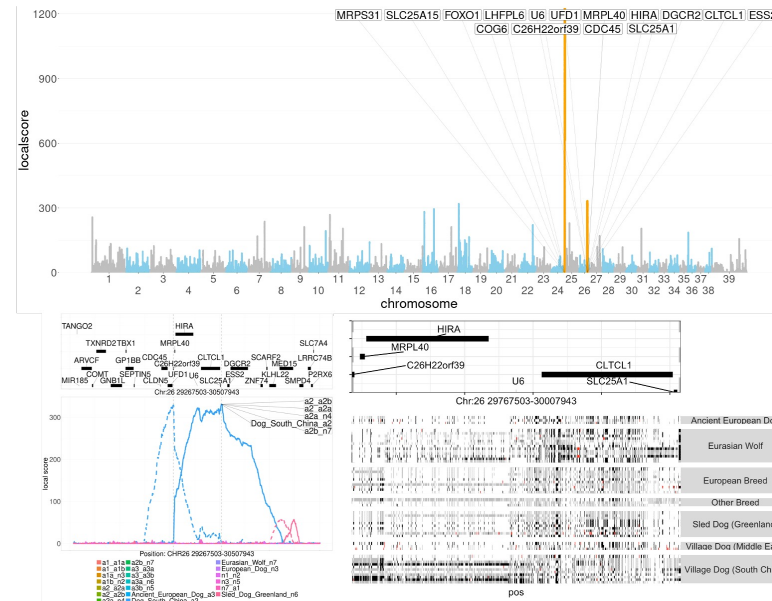
4. Install MEGA 11

Explore a bit ☺

About Myself

Jilong Ma
（ Chi lung ）

MSc in Bioinformatics , University of Copenhagen 18-20

Second year PhD student with Mikkel H Schierup.

My work experience with

Population Genetics
            Dogs and wolves
Comparative Genomics
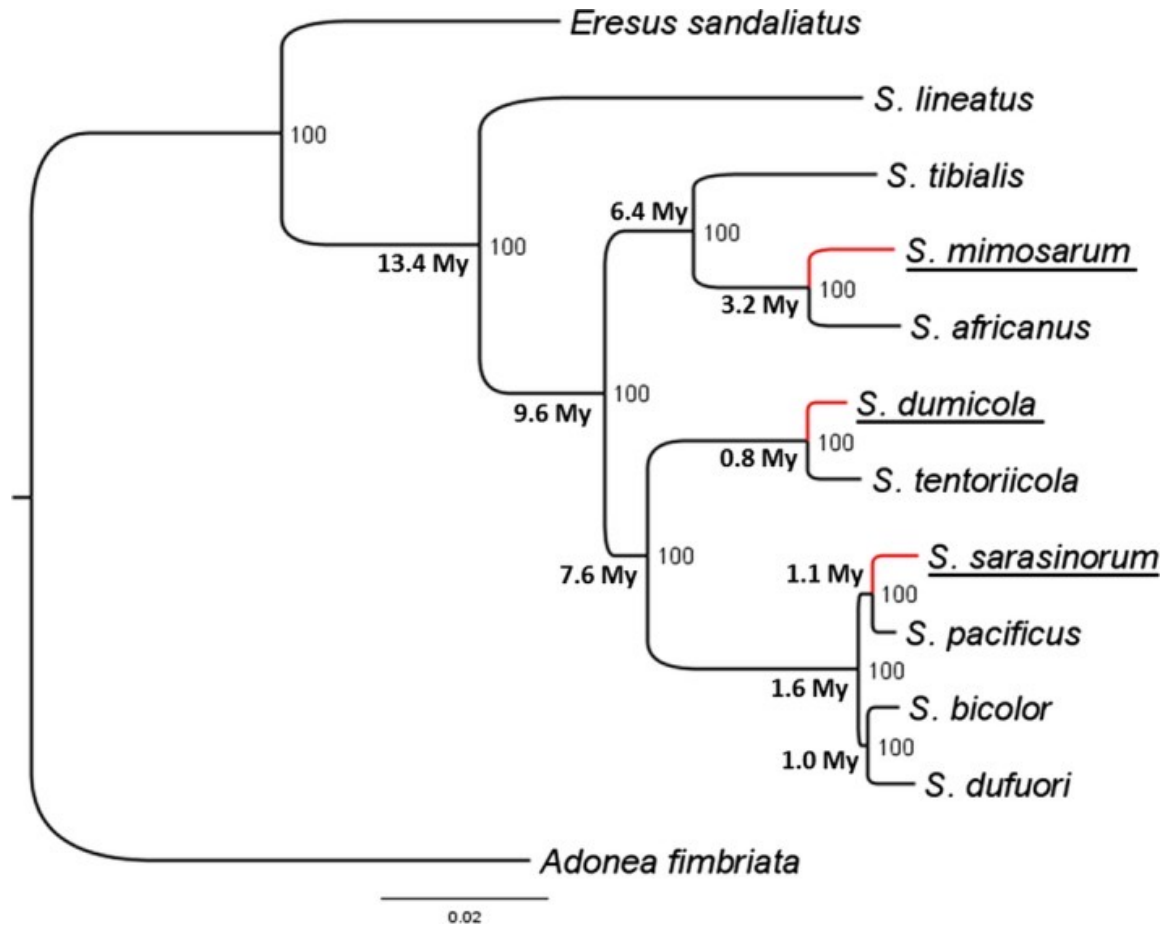   Social spiders

A unique model for social transition

A social spider species. *Stegodyphus dumicola*

A unique model for social transition

Stettepani et.al 2016

Assign Groups

We have 30 registered students
Assign 8 study groups (3-4 people each)
---General TA session exercises/paper discussion
---Hand-in report as a group

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Arrange yourself by birthday, like

Jan 1st, Feb 3rd , Feb 19th, ..., Dec 31st

Let's hope there is no strong correlation between birthday and study programme

Go to Brightspace – Course Tools – Group for signing in the group

Learning outcome of this week

1. Reading phylogeny trees (Wednesday)
      Terminology for phylogeny
      What is it describing ?
      Common mis-understanding ?

2. Building a phylogeny tree step by step (Friday)
      From sequence to phylogeny
          Sequence alignments (pairwise, multiple sequence alignment)
          Distance matrix and substitution models.
   Phylogeny building algorithms

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Terminology - Recap
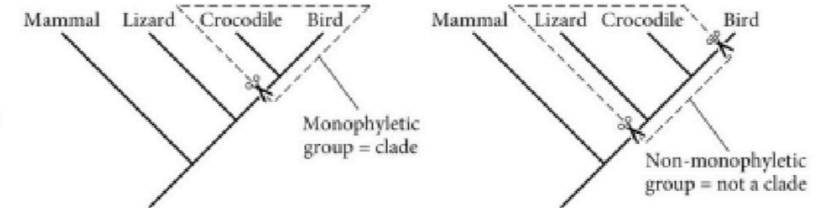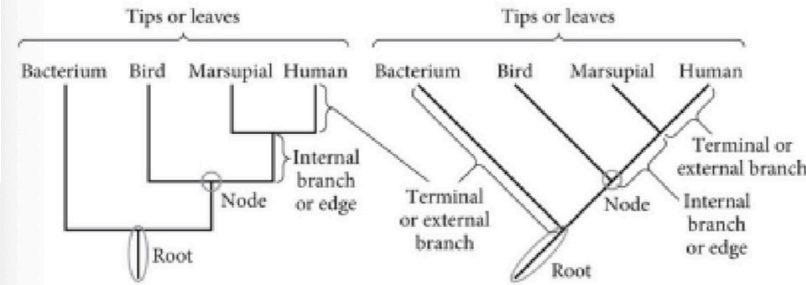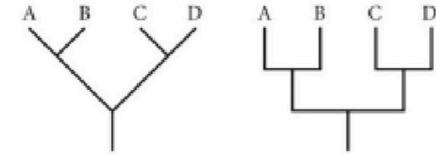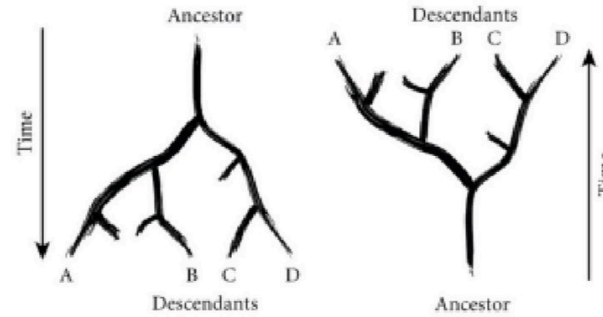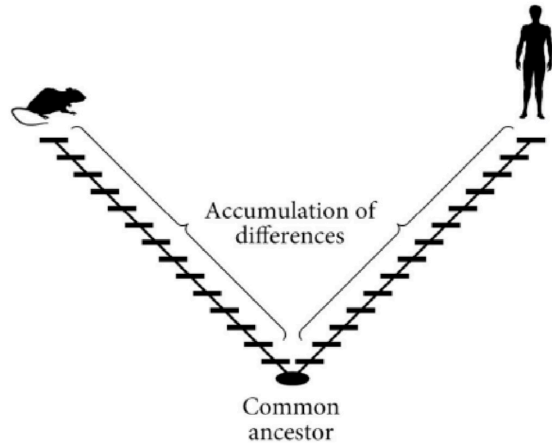
Discussion

1. Reading phylogeny trees (Wednesday)
    What is it describing ?
    Common mis-understanding/pitfalls?

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