Plague Phylodynamics and Phylogeography Outline

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Concepts

- [[Plague]]
- [[Yersinia pestis]]
- [Phylodynamics]
- [Phylogeography]
- [[Clade]]

Introduction

- Introduce [[Plague]] the disease and it's impact on [[Human]] populations.
- Introduce the pathogen, [[Yersinia pestis]], ecotypes, subspecies, ecology, distribution. Evolutionary history and mechanisms.
- Introduce the topics [phylodynamics] and [phylogeography] and what is known so far.
- Introduce the problem.

Materials and Methods

Data Collection

Data Quality Criteria

Subsampled Datasets

Phylogenetic Reconstruction

Phylodynamics

Phylogeography

Results

Curated Dataset

- Composition: Clades, Hosts, Locations, Time Periods

[[Phylogeny]]

[Phylodynamics]

[[Yersinia pestis|Y. pestis]] has extreme [[rate variation]] as visualized with a [[Root to Tip Regression]]. The R2 value of 0.09 indicates a poor fit to the [[Clock Model|strict clock]].
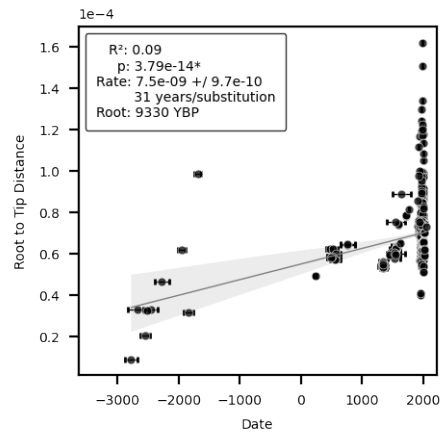

Figure 1: Root-To-Regression for All Samples.

Discussion

Conclusion