

Search for Selection Tutorial Schedule

June 3-7, 2019

Day 1: Tests of neutral trait divergence (WL Chapter 12)

8:00 Breakfast

8:45 Welcome and Introduction to NIMBioS, Suzanne Lenhart

9:00 Lecture 1: Introduction and Overview

10:30 Break

11:00 Lecture 2: Drift in the Mean of Quantitative Traits: Rate-based and Time-series Based

Tests

12:30 Lunch

1:30 Lecture 3: Q_{st} vs F_{st}

3:00 Break

3:30 Lecture 4: Orr QTL tests and their Extensions with Applications to Genome Data

5:00 Reception

Day 2: Tests based on Molecular Data I (WL Chapters 8, 9)

8:00 Breakfast

8:45 Lecture 5: Background: The Neutral Theory (WL Chapters 2, 4)

10:15 Break

10:45 Lecture 6: Sweep Theory

12:15 Group Photo

12:25 Lunch

1:30 Lecture 7: Detecting selection with Markers. I. Overview

3:00 Break

3:30 Lecture 8: Detecting Selection with Markers. 2. Polymorphism-based Tests I

Day 3: Tests based on Molecular Data II (WL Chapters 9, 10)

8:00 Breakfast

8:45 Lecture 9: Detecting Selection with Markers. 3. Polymorphism-based Tests II

10:15 Break

10:45 Lecture 10: Selection Scans in Humans and Domesticated Organisms

12:15 Lunch

1:30 Lecture 11: Divergence-based tests 1: HKA and MK tests

3:00 Break

3:30 Lecture 12: Divergence-based tests 2: Rate of Adaptive Substitutions, Poisson Random Field Models

Day 4: Estimating Individual fitness (WL Chapter 29)

8:00 Breakfast

8:45 Lecture 13: Episodes of Selection and the Assignment of Fitness

10:15 Break

10:45 Lecture 14: Variance in Individual Fitness, Sexual Selection

12:15 Lunch

1:30 Lecture 15: Descriptions of Phenotypic Selection 1: Basics

3:00 Break

3:30 Lecture 16: Descriptions of Phenotypic Selection 2: Fitness surfaces

Day 5: Trait-fitness associations II (WL Chapter 30)

8:00 Breakfast

8:45 Lecture 17: Multivariate Selection 1: Basics

10:15 Break

10:45 Lecture 18: Multivariate Selection 2: Fitness Surfaces

12:15 Lunch and Depart

WL = Walsh and Lynch, *Evolution and Selection of Quantitative Traits*, Oxford (2018)