

Conservation Genetics workshop, 21st to 25th January 2019

Contents

Inauguration: Day 1

Day1: Post inauguration

- What is Conservation Genetics?
- The basics: genes, chromosomes, diversity, selection, speciation.
- Threats to genetic diversity.
- Next-Generation Sequencing - Introduction
- Applications

Day 2: Classroom session

- Alleles
- Hardy-Weinberg Equilibrium
- Interactive sessions: why is H-W Equilibrium important
- Genetic markers and Primer design
- Sequencing and Genotyping
- Case studies

Day 3: Classroom session

- Using NCBI
- Downloading sequences
- Cleaning sequences using CHROMAS
- Alignments using MEGA
- Concatenating data
- Introduction to Networks and trees
- Structure
- Using Arlequin for summary statistics and Genetic Distance estimates

Day 4 and 5: Laboratory session

- Demonstration of DNA extraction from tissue/blood
- Participants: extraction of DNA from tissue/blood
- Demonstration of setting up a PCR
- Participants setting up a PCR
- Demonstration of electrophoresis (from the PCR products of previous day)
- Participants: setting up an electrophoresis run

Valedictory: Day 5