

Evolution and Adaptation: Course Outline **Bamfield Marine Science Centre, April 2006**

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Lecture Outline (May 2-May 24)

Major evolutionary terms
Major figures in the Evolutionary synthesis
Major features of the Evolutionary synthesis
Measuring selection- stabilizing, directional, diversifying, endocyclic
Polymorphism and quantitative (continuous) variation
Studying adaptation
Basic population genetics
Maintenance of genetic variability in natural populations
Allopatric, sympatric and ecological speciation
Molecular evolution
Do microevolution and macroevolution differ in their origin?
New directions

Field/Laboratory Schedule

May 1 -5th Intertidal ecology surveys/ Project planning
May 5th- Project plan/draft
May 8th - Project outline completed/justifications/modification
May 9-June 3th - Data collection/analyses/ms preparation
May 15th - Intertidal identification quiz
May 29th – Lecture examination
June 1- The Great Tidepool
June 4th Hand in draft ms of research project
June 5th -7th – prepare ppt for class presentation, complete revisions
June -8th –afternoon class ppt presentations
June 9th (0800 hrs) Final revised research ms due (Late papers not accepted)

Text

J. Endler 1986: Natural selection in the wild.

Marking scheme

Lecture final examination - 45%
Class discussion/participation, 5%
Research project - 50%
 Research paper (originality, experimental design, scientific rigour) – 40%
 Seminar and defense - 10%