

LANDSCAPES AND BIOGEOGRAPHY  
Group Contract, 16 units, Winter 1990

The subjects of this program were geomorphology, biogeography, geological methods, and ecological methods.

Geomorphology and Biogeography

Comprehensive coverage of the subjects was accomplished by assigned reading in the texts Geomorphology (B.W. Sparks 1986, 3rd edition) and Biogeography (J.H. Brown & A.C. Gibson 1983). The Fragmented Forest: Island Biogeography Theory and the Preservation of Biotic Diversity (L.D. Harris 1984) was also read as an example of applied biogeography. Weekly reading assignments were guided by study questions, group discussions, and exams. Lectures were presented weekly by the faculty on selected topics including: structure in geomorphology, Pacific Northwest glaciation, the geomorphology of North American deserts, the biogeography of Pacific Plate shorefishes, the evolution and biogeography of pinniped mammals (sea lions, walruses, & seals), the evolution and biogeography of Pacific salmon and trouts, and introduced marine organisms. Weekly showings of slides and television-videos provided visual examples for geomorphology and biogeography. The Land of Little Rain (Mary Austin 1903) and The Immense Journey (Loren Eiseley 1957) were also read and discussed for special seminars. A special lecture was presented about conservation biology, with reference to the protection of the grizzly bear in the North Cascades, by Ed Grumbine, The Sierra Institute, University of California Extension.

Literature-survey Project

Each student chose and researched, using library resources, a topic of geomorphology and/or biogeography, for presentation as a written report and as a brief talk for the group.

Geological and Ecological Methods

The geological methods included laboratory and/or field exercises about the characteristics and identification of minerals and rocks, field-mapping, stream-basin topography, and stream discharge-load measurements. The ecological methods included exercises on the qualitative and quantitative aspects of field surveys of birds, vegetation, and marine intertidal organisms. Special sessions also introduced the equipment, techniques, and applications of scanning-electron microscopy. Written reports were required for several of the exercises.

Faculty: James M. Stroh (geology) and Peter B. Taylor (ecology)