NEWS The Evergreen State College
Olympia, Washington 98505

for immediate release
April 19, 1974

for further information
Judy Annis, 866-6128

Three student projects from The Evergreen State College are among eight from the State of Washington awarded National Science Foundation grants for studies aimed at exploring environmental problems of the Pacific Northwest.

The three project directors --- Robert Denison, Corvallis, Oregon; Morton Fabricant, Wilberham, Massachusetts, and Karen Oakley, Bellevue --- have initiated and planned their projects in cooperation with other Evergreen students and under the direction of Evergreen faculty members. They will complete their research efforts during the 1974 Summer Quarter.

Denison, a junior, was awarded $9,330 to measure the effects of acid rainfall on nitrogen-fixing organisms in Western Washington Coniferous forests. Fabricant, also a junior, is project director for a $9,740 grant to study "Flouride Levels in an Ecosystem and Related Ecosystem Changes," and Ms. Oakley, a sophomore, is project director for the $12,300 grant to study "Tussock Moth Damage as Related to Forest Management."

Denison, working under the supervision of Faculty Member Oscar Soule, a biologist, will collect soil, litter and lichens from normal and acid rainfall areas in Washington, and measure their acidic and buffering capacities. By so doing, he hopes to thoroughly investigate the potential for damage to coniferous forests as a result of acid rainfall.

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Dick Nichols, Director
Information Services

Denison believes that the shortage of petroleum "may well lead to increased use of high-sulfur coal for power generation," and that the Pacific Northwest will be the site of an increased number of power plants burning high-sulfur coal. Because of these factors, the Evergreen scholar feels the "capacity of the environment to absorb large amounts of acid is a critical and unresolved question" --- one for which he hopes to provide some answers in the coming months.

Fabricant, a member of the Ecology and Chemistry of Pollution study program, has been working with students David Scoboria of Corbett, Oregon and Susan Southwick of Seattle and Faculty Member Michael Beug, a chemist. Together they developed the grant which will enable seven students to spend the summer in the Columbia River gorge studying the effects of flouride contamination on the diversity and density of plant communities. The Evergreeners will conduct an inventory study of the area near an active aluminum plant at Troutdale, Oregon, sampling plants, insects and aquatic life. They will then examine the plant and estuarine communities on the site of the proposed AMAX aluminum plant at Warrenton, Oregon, near the mouth of the Columbia.

Ms. Oakley, also a member of the Ecology and Chemistry of Pollution program, is one of five students on the steering committee for the $12,300 grant. Working with her are Pauline Hessing of Los Alamos, New Mexico, Debbie Lev of Olympia, Judith Hadley of Seattle and Martin Rousch of San Jose, California, and Faculty Member Steve Herman, an ecologist. Their grant will allow a total of nine students to spend the summer conducting field research.

The steering committee is considering the possible relationship between forest management practices and Douglas Fir Tussock Moth outbreak intensity. They will select study plots in each damage class identified by the U.S. Forest Service as infested areas according to visible defoliation. Evaluation of the data may reveal if relationships exist between the intensity of Tussock Moth damage and the management of the area.

The three Evergreen study grants are part of the nearly $1.7 million the National Science Foundation awarded to 115 colleges and universities in 43 states, the District of Columbia and the Commonwealth of Puerto Rico. Other Washington student projects receiving NSF awards are from the University of Washington, Central and Western Washington State Colleges.

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