

# stony brook review

*"There are some residents of the Three Village area with serious misgivings about the growing presence of State University at Stony Brook. However, there are compensating factors. These include substantial contributions to cultural growth and in such areas as environmental control and scientific research.*

*"Stony Brook is a haven of comfort for conservationists and public officials worried about pollution of the Long Island environment. Biologists such as Dr. Charles F. Wurster Jr., an assistant professor, are playing leading roles in the struggle to preserve the Island's natural heritage."*

**Long Island Press**

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## Now that we've canned the earth...



## or can it still be salvaged?

That seems to be the concern of the 70's. Of course, the old battles haven't been won: race relations aren't much improved; poverty and hunger haven't been wiped out; the crisis of our cities hasn't been resolved; and the war in Vietnam isn't over.

Yet the country, particularly campus America, has moved on to a new, and perhaps the ultimate, noble cause: saving our planet.

Ecology. Two years ago, few people knew the meaning of the word. Now that science dealing with the inter-relationships between organisms and their environment has become the concern of millions, concern for man's wanton destruction of the earth; his careless poisoning of the water, land and air; his reckless rate of procreation; his awful slaughter of flora, fauna and himself. In positive terms, ecology has become the rallying cry for forces determined to improve the quality of life and to preserve things beautiful, natural and clean — before it's too late.

At Stony Brook the new campaign is being waged on many fronts:

—Of particular importance was the establishment at Stony Brook in 1965 of the State University's Marine Sciences Research Center with its host of scientists committed to investigating the effects of pollution on marine organisms.

—A graduate program offering a Ph.D. degree in ecology and evolution has been established in Stony Brook's Division of Biological Sciences.

—Interdepartmental programs leading to the M.S. degree in marine environmental studies and the Ph.D. in marine biology will begin in September 1970.

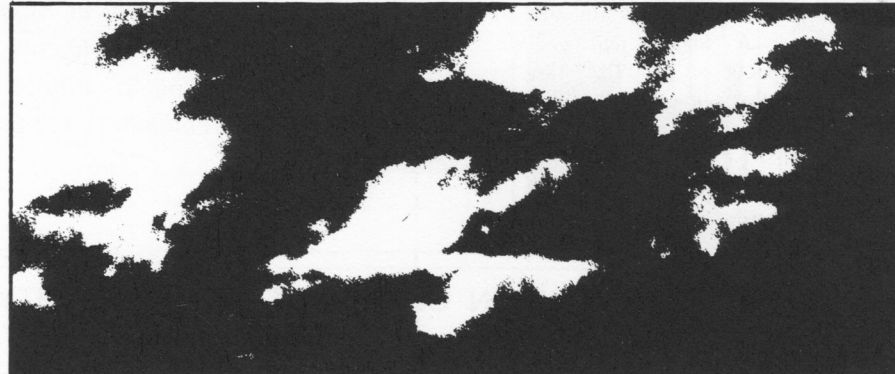
—The College of Engineering and the departments of economics and political science are expected to combine resources soon to create a new masters program in urban studies and engineering, designed to provide a combined focus of the three disciplines on current problems such as pollution and waste disposal.

—Within the past two years more than two dozen ecologists have joined various academic departments of the University, communicating their concern for the future of the environment to university students, faculty and administration.

—Three years ago Dr. Charles F. Wurster, Jr., assistant professor of biology and one of the country's most outspoken crusaders against the use of DDT, helped found the Environmental Defense Fund to take legal action in support of the public's right to an unspoiled environment.

—Dr. Robert R. Sokal, professor of biological sciences, is largely responsible for developing the new science of numerical taxonomy, which is of particular relevance to the solution of ecological problems.

—In memory of the late Dr. Ashley Schiff, professor and ardent conservationist who spurred many faculty and students to environmental action, an ecological preserve has been estab-



**“DDT is the most widespread pollutant we have; you and I are breathing it now, and tonight we'll have it with our dinner.”**

**Dr. Charles F. Wurster, Jr.**

lished as an on-campus training site where future geologists and biologists can develop an appreciation of nature.

—The Stony Brook Union and the International Club recently sponsored a Swedish exhibition called “So What!” which was set up in the Union to dramatize environmental problems.

—Environmental Action (ENACT), an organization of students and faculty promoting ecological awareness and action, has sponsored several ecology teach-ins in recent months, has prepared a series of articles for a local newspaper on threats to the environment, has distributed leaflets widely to students and the nearby community and has planned, in conjunction with the late-April national environmental teach-in, several panels on sewage treatment, insecticides, wildlife and the educational, political and industrial aspects of pollution.

—Ten students and eight faculty members of ENACT are offering a “Traveling Teach-in” on pollution and related dangers to Long Island organizations interested in environmental problems.

—Another campus group, the Action Committee, has set up a subcommittee to review the university's role in air and water pollution control.

To those who think that pollution is a unique concern of the 1970's, Dr. M. Grant Gross, professor of oceanography, enjoys quoting New York's Governor Edmund Andros who decreed in the 1670's that all citizens were forbidden “to cast any dung, dirt or refuse of ye city, or

anything to fill up ye harbor or among ye neighbors or neighboring shores under penalty of 40 shillings.” Dr. Gross, testifying before a U.S. Senate subcommittee hearing on air and water pollution, stated, “Nearly 300 years later we are still troubled with the disposal of the same types of wastes and have essentially the same type of control measures.”

Dr. Gross is currently studying that 300-year accumulation of “dung, dirt or refuse of ye city” at the mouth of New York harbor. He is also probing the effects of runoff from Kennedy Airport and nearby sewage plants into Jamaica Bay, mapping the near-bottom waters of the Sound, and analyzing sediments from a dredging project for the U.S. Army Corps of Engineers. In one of his recent studies he reported that preliminary evidence indicated that sewage wastes being dumped off the New Jersey coast contained cancer-producing materials.

Under the direction of Dr. Donald F. Squires, professor of biological sciences and director of the Marine Sciences Research Center, the Center has collaborated with many agencies of government and industry in an effort to understand the total nature of the marine environment and the natural and man-made forces which interact with it. He believes the Center should examine the alternatives open to society in limiting the harmful effects of industrial expansion on marine life in the ocean and inland waterways. “We are neither conservationists nor depletionists,” Dr. Squires



**“Between 1964 and 1968 the New York metropolitan region dumped about ten million tons of waste solids in the ocean, about 20% in western Long Island.”**

**Dr. M. Grant Gross**

says. "We try to outline the alternatives or trade offs which go with various aspects of growth." For example, the Suffolk County legislature has asked the Center to describe the implications of a proposed nuclear power plant planned by the Long Island Lighting Company (LILCO) along the Long Island Sound.

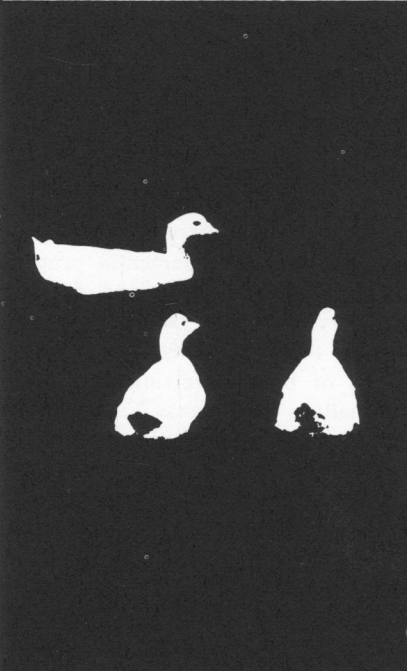
Dr. Peter K. Weyl, a research oceanographer, has been charting the thermal effluents near LILCO's conventional power plant in Northport. He found that in summer most of the organisms which passed through the plant's condenser tubes were killed. He has since initiated studies into the long-term effects of regional warming especially in the western portion of the Sound where there is a maximum impact from both thermal effluents and heavy sewage discharge.

"The ecological problems which now plague Long Island and the New York metropolitan area will soon plague the world," says Dr. Lawrence B. Slobodkin, who was chief investigator in the 1951 Red Tide Investigation for the U.S. Fish and Wildlife Service and is now director of Stony Brook's program in ecology and evolution. "At the same time, Long Island has a relatively rich society with a high level of technical competence. If Long Island with its wealth and talent can't find the answers, the world certainly will not be able to."

One member of the ecology and evolution program has voiced his conviction from coast to coast that pesticides, especially chlorinated hydrocarbons, are dangerous. As a spare time project in 1962, Dr. Wurster

**"The preservation and improvement of environmental conditions require the establishment of standards at the present time."**

**Dr. Peter K. Weyl**



discovered that hundreds of birds were dying because elm trees in Hanover, N.H. had been sprayed with DDT. However this local concentration or "hot spot" of DDT proved to be not as dangerous as the persistent but subtle effect of DDT in lower concentration. Dr. Wurster and other investigators discovered that DDT is an extremely long-lasting chemical which is harmful to fish, birds and larger animals—even man.

For the last six years, Dr. Wurster has testified frequently against DDT and his words have appeared in many periodicals from scientific journals to *Readers Digest*. He shares much of the credit for bringing about the gov-

ernment's recent ban of the chemical.

Other university ecologists work on a more theoretical level using such sophisticated tools as computer science, mathematical population biology and a new science — numerical taxonomy.

Dr. Robert R. Sokal, professor of biological sciences, launched the science of numerical taxonomy 13 years ago, asserting that the enormous amount of data available in conventional taxonomy (two million species of living organisms) must be quantified, programmed for the computer, and retrieved through computerization according to the grouping desired.

Necessarily, the language used by the theoretical ecologist is the language of the computer, but Dr. Slobodkin explains the purpose is to develop a general theory of how the natural environment works: "If we can learn how the natural ecosystems run themselves, we can consider and predict how man's actions will disturb them."

Dr. Slobodkin and Dr. Sokal are the co-managing editors of *The American Naturalist*, the oldest professional periodical devoted to theoretical ecology. Both are presidents of international theoretical organizations, Dr. Sokal of the International Council of the Classification Society, and Dr. Slobodkin of the General Systems Research Society. Recently, Dr. Slobodkin was chosen to chair the State University Advisory Committee on Biology's subcommittee on ecology which has been instructed to chart the availability of ecologically important lands within New York State.

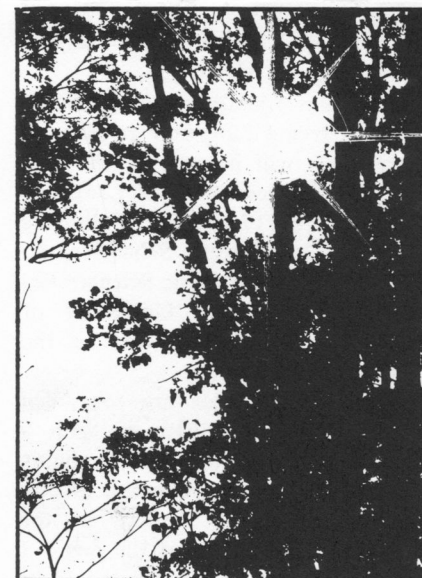
Dr. Slobodkin conducts a weekly seminar entitled "Applied Ecology" to demonstrate the complexity of any large change in the environment. The class is divided into groups with each group working on accumulating data for a hypothetical ecological situation called a scenario. As an example, Dr. Slobodkin notes that the construction of one or more bridges connecting eastern Suffolk County with Connecticut would have immense consequences for both areas. His students try to determine if as a result Suffolk County would become a bedroom community for Connecticut, if Connecticut's industry would expand or if an unbearable increase in traffic for Suffolk County would result.

"The students have to accumulate data on the possible effects," Dr. Slobodkin said. "Then they can appreciate the complexity of the problem."

Perhaps this is the generation which will rescue the earth. Or perhaps the enormity and complexity of the issues will turn initial enthusiasm to quick disillusionment. For the earth, it's a matter of salvage or garbage. □

**"The ecological problems which now plague Long Island and the New York metropolitan area will soon plague the world."**

**Dr. Lawrence B. Slobodkin**



**"As populations grow, environmental matters are destined to take up a significant portion of the intellectual and managerial functions of our society."**

**Dr. Donald F. Squires**

## Concerts, Dedications Welcome Spring

Dedication of three residential colleges and numerous concerts will highlight coming activities at Stony Brook.

The dedications will honor three famous deceased New Yorkers: author Henry James, scientist Irving Langmuir and musician George Gershwin. A fourth college was dedicated in March to the former slave, orator and abolitionist Frederick Douglass.

An address by Dr. Frederick Dupee, professor of English at Columbia University, on April 16 will be the feature of week-long dedication ceremonies for Henry James College. Dr. Dupee is a leading authority on the American novelist. One of America's outstanding authors, James is probably best known for his novella, *Turn of the Screw*.

Mrs. Virginia Erdman, chairman of the dedication committee, said that Henry James is in tune with our modern age: "He was a traditionalist but one with great relevance to modern times." In keeping with the relevance personified by James, the James College legislature, headed by Michael Steinhardt, will present a donation to the Migrant Farmworkers Service Kitchen during the week.

Rare film footage showing Nobel Laureate Irving Langmuir conducting experiments will be part of the program for the dedication of Langmuir College, April 17 and 18. Following the film, Dr. Vincent Schaeffer, director of the Atmospheric Sciences Research Center, State University of New York at Albany, will be the guest speaker.

Official ceremonies are scheduled for April 18 at 2:30 p.m. with a cocktail buffet in the faculty dining room from 4-7 p.m. Langmuir memorabilia will be on display in the college lobby throughout the day.

A symposium on Langmuir will be held at 8 p.m. that evening. Participants will be Alfred Rosenfield, Langmuir biographer; Dr. Bentley Glass,

academic vice president and Distinguished Professor of Biological Sciences; Dr. C. N. Yang, Einstein Professor of Physics and director of the Institute for Theoretical Physics at Stony Brook, and Dr. Schaeffer.

Langmuir, who won the 1932 Nobel Prize in Chemistry for his investigations of the fundamental properties of absorbed films and surface chemistry, is also famous for his work on the incandescent bulb. Photographs of him conferring with such personalities as Thomas Edison form part of the college display.

A musical tribute to one of America's great composers, George Gershwin, will highlight the dedication of Gershwin College, April 25-30. Tentative plans call for performances of "La Boheme," excerpts from other operas and professional performances of "Porgy and Bess" and "West Side Story."

Seven concerts, including two by artists in residence, have been scheduled for the coming weeks. Flutist Samuel Baron will perform on April 20 at 8:30 p.m. in Room 100 of the Lecture Center. Baron, an artist in residence, has been a member of the New York Woodwind Quintet and now performs with the Bach Aria group.

On April 22 a performance by the University Chorus under the direction of Gregg Smith will begin at 8:30 p.m. in the new Stony Brook Union.

Clarinetist Jack Kreiselman and oboist Ronald Roseman, both artists in residence, will perform on April 24 at 8:30 p.m. in Room 100 of the Lecture Center. Kreiselman is a member of the Group for Contemporary Music at Columbia University and director of instrumental music at New York College of Music. An active solo professional, Roseman is a member of the New York Woodwind Quintet.

On April 29 at 8:30 p.m. the University Band under the direction of Simon Karasick will be featured in the Women's Gymnasium. Adele Addison, soprano and artist in residence, is tentatively scheduled for a performance May 3.

Gregg Smith will make a second appearance on May 9 at 8:30 p.m. in Room 100 of the Lecture Center when he directs the Gregg Smith Singers in a program of choral music.

A composition by Timothy Imlay, a Stony Brook freshman from Sausalito, Calif., will highlight a performance by the University Orchestra, directed by David Lawton, on May 10, at 8:30 p.m. in the Women's Gymnasium. □



*IMPACT 1969, an aluminum sculpture 12 feet long by James Kleege, associate professor of art, was selected to be part of a university artists traveling exhibit, now on a two-year tour throughout New York State. In the same exhibit is a bright styrofoam-acrylic construction by another Stony Brook associate professor of art, Edward Countey.*

## Professors, Students Volunteer To Speak Out

Would you like to hear a professor talk about sex education, race, campus unrest, armament policy, brain research, Afro-American history or the Vietnam War?

Care to discuss the generation gap, marijuana, revolution or the draft with a Stony Brook student?

Religious, civic and social groups on Long Island may now take advantage of the services of two university organizations, the Faculty Speakers Bureau and the Student Speakers Bureau, to arrange speakers and panels for their meetings.

Two new brochures, available from the Office of University Relations,

describe the bureaus and list some of the topics which professors and students are willing to discuss, usually free of charge, with community groups.

The faculty brochure lists more than 60 professors who will speak on subjects as varied as Irish literature, psycholinguistics and urban sociology. They are able to describe the problems in America, India, Greece, Nigeria or Southeast Asia.

The student bureau is a volunteer organization conceived and maintained by the students as a means of facilitating university-community communication.

Further information about both speakers bureaus may be obtained from the Office of University Relations, (516) 246-5924. □

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