D I R E C T O R Y
1992-1993

Faculty with Environmental Interests and Activities



U S B

The University at Stony Brook

UNIVERSITY AT STONY BROOK FACULTY WITH ENVIRONMENTAL INTERESTS AND ACTIVITIES

1992-1993 A.Y.

CENTER FOR REGIONAL POLICY STUDIES

KOPPELMAN, LEE. Professor and Director. Ph.D., 1970, Cornell University. Coastal zone management; planning and analysis; ground water; energy policy, policy studies; regional planning, urban planning; environmental planning; resource management; site planning.

COLLEGE OF ARTS AND SCIENCES

Department of Anthropology

STONE, ELIZABETH. Associate Professor. Ph.D., 1979, University of Chicago. Near East, Old World archeology.

WRIGHT, PATRICIA. Associate Professor. Ph.D., 1985, City University of N.Y. Conservation biology, primate behavior.

Division of Biological Sciences

Department of Ecology and Evolution

BATTLEY, EDWIN. Associate Professor. Ph.D., 1956, Stanford University. Ecological energetics, microbial ecology.

BELL, MICHAEL A. Associate Professor. Ph.D. 1976, University of California at Los Angeles. Ichthyology, evolutionary biology, functional morphology.

BENTLEY, BARBARA. Professor. Ph.D., 1974, University of Kansas. Nitrogen fixation; plant ecology; tropical ecology; relationship between nitrogen fixation and alkaloid levels in lupines.

DYKHUIZEN, DANIEL. Professor. Ph.D., 1970, University of Chicago. Microbial evolution and ecology.

EANES, WALTER. Associate Professor. Ph.D., 1976, SUNY Stony Brook. Population genetics and evolutionary biology.

GINZBURG, LEV. Professor. Ph.D., 1970, Agrophysical Institute, Leningrad, U.S.S.R. Theoretical and applied ecology and population genetics.

GUREVITCH, JESSICA. Associate Professor. Ph.D., 1982, University of Arizona. Evolutionary ecology of plant population and communities; plant physiological ecology.

HECHTEL, GEORGE. Associate Dean. Ph.D., 1962, Yale University. Director of Undergraduate Studies. Systematics and zoogeography of marine demospongiae.

JANSON, CHARLES. Associate Professor. Ph.D., 1985, University of Washington. Primate behavior and ecology; sociobiology; tropical ecology; social ecology of vertebrates.

LEVINTON, JEFFREY. Professor and Chair. Ph.D., 1971, Yale University. Evolution of resistance to toxicants; marine benthic ecology, paleoecology.

MEYER, AXEL. Assistant Professor. Ph.D., 1987, University of California, Berkeley. Molecular evolution, ichthyology, evolutionary biology.

ROHLF, F. JAMES. Professor. Ph.D., 1962, University of Kansas. Applied ecology; deforestation monitoring; multivariate data analysis applied to problems in taxonomy and ecology.

SLOBODKIN, LAWRENCE. Professor with joint appointment in MSRC. Ph.D., 1951, Yale University. Ecotoxicology; hydra as a toxicity test organism; marine ecology; theoretical ecology; toxicity of Hudson-River tributaries.

SOKAL, ROBERT. Leading Professor. Ph.D., 1952, University of Chicago. Spatial models in ecology and evolution.

THOMSON, JAMES. Professor. Ph.D., 1978, University of Wisconsin. Community ecology.

Department of Chemistry

BONNER, FRANCIS T. Professor and Dean for International Programs. Ph.D., 1945, Yale University. Inorganic nitrogen chemistry; isotope effects; isotope exchange kinetics; reaction studies in aqueous systems including natural waters.

GOLDFARB, THEODORE. Associate Professor with joint appointment in MSRC. Ph.D., 1959, University of California, Berkeley. Pollution problems resulting from waste disposal, energy production, and use of agricultural chemicals; science and public policy.

ISHIDA, TAKANOBU. Professor. Ph.D., 1964, Massachusetts Institute of Technology. Chemistry of stable isotopes.

JOHNSON, PHILIP M. Professor. Ph.D., 1967, Cornell University. Optical molecular spectroscopy and the electronic structure of very reactive molecules; mechanisms of unimolecular photochemical processes; electronic properties of excited molecules; multiphoton ionization spectroscopy.

KOCH, STEPHEN. Associate Professor. Ph.D., 1975, Massachusetts Institute of Technology. Synthesis and structure in transition metal coordination chemistry; metal ions in biological systems; early transition metal catalysts.

PRESTWICH, GLENN D. Professor. Ph.D., 1974, Stanford University. Isolation, elucidation and synthesis of insect and plant natural products; termite chemical communication; chemical ecology of plant-insect interactions.

Department of Earth and Space Sciences

ENGLEBRIGHT, STEVEN. Curator of Geology, Masters in Geology, 1974, University at Stony Brook. Environmental Geology; Long Island environmental issues, hydrogeology, coastal processes, sedimentology and glacial geology.

HANSON, GILBERT N. Professor and Chairman, Ph.D., 1964, University of Minnesota. Application of radiometric, isotopic and geochemical methods to water-rock interaction including ground water; Long Island geology; hydrology of Peconic River watershed.

MEYERS, WILLIAM J. Professor with joint appointment with MSRC, Ph.D., 1973, Rice University. Carbonate sedimentology; sedimentology; sedimentary petrology; especially related to the glacial geology of Long Island.

REEDER, RICHARD J. Professor. Ph.D., 1980, University of California, Berkeley. Low-temperature geochemistry; mineral-solution equilibria; sorbtion and precipitation in natural waters.

RICHARD, GLENN A. Acting Director of Museum of Long Island Natural Sciences, MS in Geology, 1976, University at Stony Brook, MA in Computer Science, 1985, Brooklyn College. Long Island geology; coastal wetlands, pine barrens plant communities, science education, computers as educational tools.

SCHOONEN, MARTIN. Assistant Professor. Ph.D., 1989, Pennsylvania State University. Geochemistry of natural waters, particularly ground water; hydrology of Peconic River watershed; kinetics and thermodynamics of low-temperature and hydrothermal water-rock interaction.

SOLOMON, PHILIP. Professor. Ph.D., 1964, University of Wisconsin. Radio astronomy, galaxies; ozone research; Antarctic ozone hole; remote sensing of Earth's stratosphere.

WONG, TENG-FONG. Professor. Ph.D., 1980, Massachusetts Institute of Technology. Effect of stress on hydrological properties, percolation modeling of fluid transport in porous media, earthquake mechanics.

Department of Economics

MONTGOMERY, MARK. Assistant Professor. Ph.D., 1982, University of Michigan. Economic demography; development economics.

MUENCH, THOMAS. Professor and Graduate Studies Director. Ph.D., 1965, Purdue University. Urban economics.

SANDERSON, WARREN. Professor. Ph.D., 1974, Stanford University. Economic demography.

ZSCHOCK, DIETER. Professor. Ph.D., 1967, Tufts University. Development economics.

Department of History

COWAN, RUTH. Professor. Ph.D., 1969, The Johns Hopkins University. History of biology and technology.

GARBER, ELIZABETH. Associate Professor. Ph.D., 1966, Case Western Reserve University. Social and intellectual history of science.

LAMPARD, ERIC. Professor. Ph.D., 1954, University of Wisconsin. Economic and urban history.

SCHAFER, WOLF. Professor. Dr. Phil., 1983, University of Bremen, Federal Republic of West Germany. History of science and technology; science policy; global history.

Department of Philosophy

SPECTOR, MARSHALL. Professor. Ph.D., 1963, The Johns Hopkins University. Philosophy of science, philosophy of technology, interrelations of culture, technology and environment.

WESTON, ANTHONY. Assistant Professor. Ph.D., 1982, University of Michigan. Environmental ethics, ethics and value theory; management in ethical and political context.

Department of Physics

DeZAFRA, ROBERT L. Professor. Ph.D., 1958, University of Maryland. Experimental atomic physics; optical pumping and double resonance; quantum electronics, ground-based remote sensing of the atmosphere.

KAHN, PETER B. Professor. Ph.D., 1960, Northwestern University: Theoretical physics; the many-body problem; statistical properties of spectra.

NATHANS, ROBERT. Professor and Director, Institute for Energy Research. Ph.D., 1954, University of Pennsylvania. Experimental solid-state physics.

Department of Political Science

TESKE, PAUL. Assistant Professor. Ph.D., 1988, Princeton University. Urban politics.

Department of Psychology

BRENER, JASPER. Professor. Ph.D., 1964, University of London, England. Optimal foraging behavior.

MENZEL, EMIL. Professor with joint appointment in the Department of Ecology and Evolution. Ph.D., 1958, Vanderbilt University. Adaptation of animals to their environment.

MORIN, LAWRENCE. Associate Professor. Ph.D., 1974, Rutgers University, Institute of Animal Behavior. Environment and reproduction.

WYERS, EVERETT. Professor with joint appointment in the Department of Ecology and Evolution. Ph.D., 1955, University of California, Berkeley. Adaptation of animals to their environment.

Department of Sociology

CHASE, IVAN. Associate Professor with joint appointment in Ecology and Evolution. Ph.D., 1972, Harvard University. Cross-species comparisons.

COLLVER, O. ANDREW. Associate Professor. Ph.D., 1964, University of California, Berkeley. Demography; ecology.

HALLE, DAVID. Associate Professor. Ph.D., 1978, Columbia University. Social change.

KIMMEL, MICHAEL. Assistant Professor. Ph.D., 1981, University of California, Berkeley. Social movements.

RULE, JAMES. Professor. Ph.D., 1969, Harvard University. Civil violence.

TYREE, ANDREA. Professor. Ph.D., 1968, University of Chicago. Demography; social stratification.

VOGEL, MARY. Assistant Professor. Ph.D., 1988, Harvard University. Law and politics.

COLLEGE OF ENGINEERING AND APPLIED SCIENCES

Department of Applied Mathematics and Statistics

BELTRAMI, EDWARD. Professor. Ph.D., 1962, Adelphi University. Mathematical modeling; biomathematics; models of marine biological phenomena.

GLIMM, JAMES. Professor and Chair. Ph.D., 1959, Columbia University. Biomathematical modeling.

LINDQUIST, BRENT. Associate Professor. Ph.D., 1981, Cornell University. Environmental fluid modeling.

Department of Electrical Engineering

CHANG, SHELDON. Professor. Ph.D., 1947, Purdue University. Economic theory; food systems; energy conservation; superconductivity.

ZEMANIAN, ARMEN H. Leading Professor. Eng. SC.D., 1953, New York University. Food system modeling.

Department of Materials Science and Engineering

CLAYTON, CLIVE R. Professor and Chair. Ph.D., 1976, University of Surrey. Applied Surface Science, Biocorrosion.

HERLEY, PATRICK. Professor. Ph.D.,1960, Rhodes University, South Africa. Thermal decomposition; catalysis. Invention: method of handling radioactive waste: S-182.

HERMAN, HERBERT. Professor. Ph.D., 1961, Northwestern University. Corrosion protective coatings for submarine external structures; plasma spraying; ceramic materials, marine materials; ocean engineering; undersea vehicles; submarines. Invention: method of handling radioactive waste: S-182.

WANG, FRANKLIN. Professor with joint appointment in MSRC. Ph.D., 1956, University of Illinois. Energy; magnetism; ocean engineering; ocean structures; solar energy technology; solid-waste management.

Department of Mechanical Engineering

HARRIS, STEWART. Dean. Ph.D., 1965, Northwestern University. Environmental engineering.

HOGAN, JOSEPH. Associate Professor. Ph.D., 1968, New York University. Planetary atmospheres.

WANG, LIN-SHU. Associate Professor. Ph.D., 1965, University of California, Berkeley. Energy technology.

Department of Technology and Society

PALDY, LESTER. Distinguished Service Professor. M.S., 1966, Hofstra University. Science policy and education.

REAVEN, SHELDON. Associate Professor with joint appointment in MSRC. Ph.D., 1975, University of California at Berkeley. Energy and environmental problems and issues, especially waste management.

W. AVERELL HARRIMAN SCHOOL FOR MANAGEMENT AND POLICY

CARROLL, T. OWEN. Associate Professor. Ph.D., 1968, Cornell University. Energy; information systems.

CASEY, JEFF. Assistant Professor. Risk Analysis; Decision making behavior.

FELDMAN, TAMMY. Assistant Professor. Ph.D., 1986, Harvard University. Public finance; privatization.

PIDOT, GEORGE J. Associate Dean. Ph.D., 1966, Harvard University. Public finance; computing.

PRESTON, ANNE. Assistant Professor with joint appointment in Economics. Ph.D., 1983, Harvard University. Nonprofit institutions; labor economics.

SEXTON, THOMAS. Associate Professor. Health care management; statistics.

SKORIN-KAPOV, DARKO. Assistant Professor. Ph.D., 1989, University of British Columbia, Canada. Operations research; hydrologic data analysis; database design.

SKORIN-KAPOV, JADRANKA. Assistant Professor. Ph.D., 1987, University of British Columbia, Canada. Operations research; management information systems; hazardous waste transportation.

SOBEL, MATTHEW. Dean and Professor with joint appointment in Applied Mathematics and Statistics. Ph.D., 1967, Stanford University. Environmental management operations and operations research.

WEINER, HARRY. Associate Professor. S.M., 1970, Massachusetts Institute of Technology. Policy analysis; public administration; training.

YAGO, GLENN. Associate Professor. Ph.D., 1980, University of Wisconsin. Regional development.

MARINE SCIENCES RESEARCH CENTER

ALLER, JOSEPHINE Y. Research Associate Professor. Ph.D., 1975, University of Southern California. Marine benthic ecology; invertebrate zoology; marine microbiology; biogeochemistry.

ALLER, ROBERT C. Professor. Ph.D., 1977, Yale University. Marine geochemistry, marine animal-sediment relations.

BIERWIRTH, JOHN. Stony Brook Professor. J.D., 1950, Columbia Law School. Conservation; energy policy; environmental policy and management.

BOKUNIEWICZ, HENRY J. Professor. Ph.D., 1976, Yale University. Nearshore transport processes; coastal sedimentation; marine geophysics.

BOWMAN, MALCOLM J. Professor. Ph.D., 1970, University of Saskatchewan. Coastal ocean and estuarine dynamics.

BRESLIN, VINCENT. Assistant Research Professor. Ph.D., 1986, Florida Institute of Technology. Chemical behavior of combustion wastes in seawater; rate and extent of degradation of biodegradable plastics.

BRICELJ, V. MONICA. Assistant Professor. Ph.D., 1984, State University of New York at Stony Brook. Molluscan physiological ecology; benthic ecology; aquaculture.

BROWNAWELL, BRUCE. Assistant Professor. Ph.D., 1986, Massachusetts Institute of Technology/Woods Hole Oceanographic Institution. Biogeochemistry of organic pollutants in sea water and ground water.

CARPENTER, EDWARD J. Professor. Ph.D., 1969, North Carolina State University. Nitrogen cycling among plankton and ambient seawater; phytoplankton and zooplankton ecology.

CERRATO, ROBERT M. Associate Professor. Ph.D., 1980, Yale University. Benthic ecology; population and community dynamics.

COCHRAN, J. KIRK. Professor and Associate Director of Research. Ph.D., 1979, Yale University. Marine geochemistry; use of radionuclides as geochemical tracers in the oceans and in ground water.

CONLEY, DANIEL C. Assistant Professor. Ph.D., 1992, University of California, San Diego/Scripps Institution of Oceanography. Beach and nearshore process.

CONOVER, DAVID O. Professor. Ph.D., 1981, University of Massachusetts. Ecology of fish; fisheries biology.

- **CONVERSI, ALESSANDRA.** Research Assistant Professor. Ph.D, 1992. University of California, San Diego/Scripps Institution of Oceanography. Biological oceanography; effects of contaminants on coastal marine ecosystems; analysis of long-term data sets; marine policy.
- **COSPER, ELIZABETH M.** Research Associate Professor. Ph.D., 1981, City University of New York, City College. Phytoplankton physiology and ecology; resistance of microalgae to pollutants.
- **COWEN, ROBERT K.** Associate Professor. Ph.D., 1985, University of California at San Diego/Scripps Institution of Oceanography. Fishery oceanography; nearshore fish population; fish ecology.
- **de ANGELIS, MARIE.** Research Assistant Professor. Ph.D., 1989, University of Washington. Reduced trace gases in marine and freshwater environments; methane oxidation; hydrothermal vents.
- **FISHER, NICHOLAS S.** Professor. Ph.D., 1974, State University of New York at Stony Brook. Marine phytoplankton physiology and ecology; biogeochemistry of metals; marine pollution.
- **FLOOD, ROGER D.** Associate Professor. Ph.D., 1978, Massachusetts Institute of Technology/ Woods Hole Oceanographic Institution. Marine geology; sediment dynamics; continental margin sedimentation.
- **GERARD, VALRIE A.** Associate Professor. Ph.D., 1976, University of California at Santa Cruz. Marine macrophyte ecology and physiology.
- **HASSETT, PATRICK.** Postdoctoral Associate. Ph.D., 1986, University of Washington. Zooplankton ecology; copepod feeding and physiology.
- **LEE, CINDY.** Professor. Ph.D., 1975, University of California at San Diego/Scripps Institute of Oceanography. Marine geochemistry of organic compounds; organic and inorganic nitrogen-cycle biochemistry.
- **LONSDALE, DARCY.** Assistant Professor. Ph.D., 1979, University of Maryland. Zooplankton ecology, with special interest in physiology; life history studies.

LOPEZ, GLENN R. Associate Professor. Ph.D., 1976, State University of New York at Stony Brook. Marine benthic ecology; animal-sediment interactions.

LWIZA, KAMAZIMA. Assistant Professor. Ph.D., 1991, University of Wales. Continental shelf dynamics and remote sensing oceanography.

MACKIN, JAMES E. Associate Professor. Ph.D., 1983, University of Chicago. Geochemistry of suspended sediment/solution interactions.

McHUGH, J. L. Professor Emeritus. Ph.D., 1950, University of California at Los Angeles. Fishery management; fishery oceanography; whales and whaling.

MORGAN, STEVEN. Assistant Professor. Ph.D., 1986, University of Maryland at College Park. Reproductive and larval ecology of benthic invertebrates and fishes.

NITTROUER, CHARLES. Professor. Ph.D., 1978, University of Washington, Seattle. Geological oceanography; continental margin sedimentation.

OKUBO, AKIRA. Professor. Ph.D., 1963, The Johns Hopkins University. Oceanic diffusion; animal dispersal; mathematical ecology.

PETERS, HARTMUT. Assistant Professor. Ph.D., 1981, University of Kiel, West Germany. Small-scale processes such as turbulent mixing; interaction of small- and larger-scale mixing.

ROETHEL, FRANK J. Lecturer. Ph.D., State University of New York at Stony Brook. Environmental chemistry; behavior of coal waste in the environment; solution chemistry.

SCHUBEL, J. R. Dean and Director. Ph.D., 1968, The Johns Hopkins University. Coastal sedimentation; suspended sediment transport; coastal zone management.

SCRANTON, MARY I. Professor. Ph.D., 1977, Massachusetts Institute of Technology/Woods Hole Oceanographic Institution. Marine biogeochemistry; biological-chemical interactions in sea water.

SWANSON, LAWRENCE R. Adjunct Professor. Ph.D., 1971, Oregon State University. Recycling and reuse of waste materials; waste management.

TAYLOR, GORDON T. Assistant Professor. Ph.D., 1983, University of Southern California. Marine microbial ecology; biogeochemistry; microbial biofouling; protozoan ecology.

WANG, DONG-PING. Professor. Ph.D., 1975, University of Miami. Coastal ocean dynamics.

WEYL, PETER K. Professor. Ph.D., 1957, Stanford University. Coastal oceanography; physical oceanography; climatic stability.

WILSON, ROBERT E. Associate Professor. Ph.D., 1973, The Johns Hopkins University. Estuarine and coastal ocean dynamics.

WOODHEAD, PETER M. J. Research Professor. B.S., 1953, Durham University, England. Behavior and physiology of fish; coral reef ecology; ocean energy conversion systems.

WURSTER, CHARLES F. Associate Professor. Ph.D., 1957, Stanford University. Effects of chlorinated hydrocarbons on phytoplankton communities; environmental problems and solutions; energy conservation.

YEN, JEANNETTE. Assistant Professor. Ph.D., 1982, University of Washington. Marine zooplankton; predator-prey interactions, sensory perception and lipid metabolism of copepods.

Institute For Terrestrial and Planetary Atmospheres

CESS, ROBERT D. Professor. Ph.D., 1959, University of Pittsburgh. Atmospheric sciences with specialties in radiative transfer and climate.

FOX, JANE L. Associate Professor. Ph.D., 1978, Harvard University. Atmospheric physics and chemistry.

GELLER, MARVIN A. Professor and Director. Ph.D., 1969, Massachusetts Institute of Technology. Middle atmosphere dynamics; climate.

HAMEED, SULTAN. Professor. Ph.D., 1968, University of Manchester, England. Atmospheric sciences with specialties in tropospheric chemistry and climate.

VARANASI, PRASAD. Professor. Ph.D., 1967, University of California, San Diego. Planetary spectroscopy; molecular physics.

ZHANG, MINGHUA. Assistant Professor. Ph.D.,1987, Institute of Atmospheric Sciences, Academia Sinica, China. Atmospheric dynamics; climate modeling.

HEALTH SCIENCES CENTER

School of Medicine

Department of Anatomical Sciences

EDMUNDS, LELAND. Professor. Ph.D., 1964, Princeton University. Biological rhythms in euglena; a new assay system for environmental carcinogens.

FLEAGLE, JOHN. Professor. Ph.D., 1976, Harvard University. Behavioral ecology; comparative anatomy.

MITTERMEIER, RUSSELL. Professor. Ph.D., 1977, Harvard University. Primate research; primate conservation.

SUSMAN, RANDALL. Professor. Ph.D., 1976, University of Chicago. Behavioral ecology of *Pan paniscus* in Zaire.

Department of Anesthesiology

LOPACHIN, RICHARD. Assistant Professor. Ph.D., 1984, University of Wisconsin. Role of calcium in acrylamide neurotoxicity.

Department of Biochemistry and Cell Biology

SETLOW, RICHARD. (Brookhaven National Laboratory). Adjunct Professor and Senior Biophysicist. Associate Director for Life Sciences. Ph.D., 1947, Yale University. Ultraviolet-electromagnetic radiation; radiobiology.

Department of Medicine

GREENE, WILLIAM. Clinical Associate Professor of Medicine with joint appointment in MSRC. M.D., 1968, State University of New York, Downstate. Medical and toxic wastes; solid-wastes personnel and communities surrounding landfills; waste handling by health-care workers.

HAMILTON, LEONARD. (Brookhaven National Laboratory). D.M., 1945, Oxford. Ph.D., 1952, Cambridge University. Environmental agents and public policy.

LANGENBACK, EDWARD. Ph.D., 1984, Stony Brook University. Effect of ozone on lung defense mechanisms.

OLSON, ROBERT. Professor. Ph.D., 1944, St. Louis University. M.D., 1951, Harvard University. Environmental medicine.

Department of Pathology

KANE, PHILIP. Associate Professor. M.D., 1967, New York University School of Medicine. Environmental pathology.

MILLER, FREDERICK. Professor and Chair. M.D., 1961, New York University. Distribution/incidence of paralytic shellfish poison in Long Island waters.

Department of Pharmacological Sciences

IDEN, CHARLES. Senior Research Associate. Ph.D., 1971, The Johns Hopkins University. Toxicology.

JOHNSON, FRANCIS. Professor. Ph.D., 1954, University of Glasgow, Scotland. Genetic toxicology.

GROLLMAN, ARTHUR. Professor and Chair. M.D., 1959, The Johns Hopkins University. Xenobiosis.

Department of Preventive Medicine

BARANCIK, JEROME. Principal Investigator. S.C.D., 1972, University of Pittsburg Graduate School of Public Health. Epidemiology; automobile-related problems.

HAILOO, WAJDY. Assistant Professor. M.D., 1969, Mosol University, Mosol Iraq. Environmental medicine; occupational medicine.

LESKE, CHRISTINA. Professor. M.D., 1964, University of Chile. Epidemiology.

PARKINSON, DAVID. Professor. M.D., 1964, Oxford University. Biological markers, of ethylene oxide and styrene exposure; diagnosis of repetitive strain injury (RSI) - wrist problems; environmental medicine.

VARMA, ANDRE. Professor and Chair. M.D., 1950, Surinam. Biostatistics.

WILLIAMS, PETER. Associate Professor. Ph.D., 1973, Harvard University. Ethics; philosophy and medicine; philosophy of law.

Department of Psychiatry and Behavioral Sciences

BROMET, EVELYN. Ph.D., 1971, Yale University. Psychiatric epidemiology of environmental encounters.