Stony Brook People

news

New degrees, minors, courses introduced

With two new master's degree programs starting in theatre arts, there will be a total of 45 different graduate degree programs available for the approximately 4,500 graduate students at Stony Brook this fall. Included are 24 master's degree and 21 doctoral degree programs. The new theatre arts graduate degrees are a one-year master of arts program and a three-year master of fine arts program in dramaturgy.

Stony Brook's approximately 11,700 undergraduates this fall will be enrolled in 59 degree programs leading to the bachelor of arts, bachelor of science and bachelor of engineering. New undergraduate minor fields of study are being offered for the first time this fall in Middle Eastern studies, Judaic studies and socio-legal studies.

Linguistics and foreign language undergraduate majors interested in teaching will be eligible for a new teaching English to speakers of other languages teacher preparation program.

There are dozens of new undergraduate courses this fall with titles such as "The Media and Black America," "Chemical Ecology," "History of Medicine," "Analysis of Algorithms" and both basic and advanced "Athletic Training."

HSC Photography Service

Yogesh Ghandi meets SB student.

Ghandi kin leaves message at SB

Yogesh Ghandi, great grandnephew of the famed Indian political and spiritual leader, Mohandas Ghandi, spoke at Stony Brook in September after having walked from Los Angeles on the first leg of a walk around the world.

He is making the walk to make people aware of world hunger and the need for world peace. He believes hunger, disease and war will end when millions are personally dedicated to ending them.

"I believe," he said, "not that I will lead the world, but that I can plant a seed for the future. Everyone can do that...I am a messenger and the message is that massive change is entirely dependent on individual action."

Ghandi, 33, was educated and raised in Europe, and was a wealthy businessman when, in 1982, he decided to dedicate his life to his ancestor's ideals.

His walk, fashioned after the 1930 Ghandi salt march of civil disobedience in colonial India, is a project of the Ghandi Memorial International Foundation, which the young Ghandi has founded.

'84 enrollment holds steady

Enrollment at Stony Brook continues this year to remain stable, apparently unaffected by the demographics of a shrinking national college-age population.

About 16,200 students were on campus for the early, Monday, Aug. 27, start of fall classes for the 1984-85 academic year. Final fall enrollment last year was 16,171.

The demographic college-age population decline apparently has not affected Stony Brook, campus officials say, thanks to the increasing visibility and reputation of the University. Also, the qualifications of students applying for admission are rising.

"As a result, the initial pool of applicants being attracted by Stony Brook seems to be getting better and is including a higher percentage of students well-suited for Stony Brook and likely to enroll here," says Dr. Graham B. Spanier, Stony Brook's vice provost for undergraduate studies.

Prospective students in general appear increasingly aware of "the scope and nature of Stony Brook's programs," says Raymond Maniuszko, Director of Institutional Studies. "Every study we've been doing of why students choose Stony Brook shows a keen awareness of the University's growing national reputation." This reputation has been enhanced by developments such as the publication of high ratings for Stony Brook programs by the National Research Council and *Family Circle* Magazine's survey of college deans last fall which listed Stony Brook as one of the nation's top 11 public colleges and universities."

Athletic fields to be improved

Recreational athletic fields will be converted into a variety of regulation intercollegiate facilities in a $1.35 million project expected to begin at the end of the fall intercollegiate athletic season at Stony Brook. A contract has been awarded for the project which will provide new track and field, soccer and lacrosse facilities, a half dozen new tennis courts, five regulation softball diamonds, outdoor paddleball courts and general recreational spaces.

The project is expected to be finished in about a year, in time for the spring, 1986 intercollegiate sports season.

Two major construction projects—for new dental school facilities and a campus field house—await availability of planning funds which campus officials hope will come in the near future.

Dr. Teed named VP for univ. affairs

Dr. Patricia J. Teed, assistant chancellor of the University of Houston-University Park,TX, has been appointed vice president for university affairs and began work here Oct. 1.

Appointment of Dr. Teed, a former Fulbright Scholar, followed an extensive national search. The Office of the Vice President for University Affairs includes responsibility for alumni affairs, Annual Fund, conferences and special events, development, news services, public affairs, community relations and publications.

"Dr. Teed will be the guiding force for Stony Brook's rapidly developing public service involvement with local, state and national constituencies," President John H. Marburger said. "She has been a leader in the University of Houston's outstanding success at building a solid, rewarding public service and support base during a decade of service there. Her experience and qualifications will serve Stony Brook as well as our campus moves toward similar achievement."

An important mission of the office in the years ahead, President Marburger said, will involve increasing the effectiveness of Stony Brook's efforts to develop non-state financial support.

Dr. Teed has been assistant chancellor at the University of Houston since 1982. Between 1975 and 1982, she served consecutively as a research associate in the university's Solar Energy Laboratory, coordinator of its Half-Century Programs Office, director of the Office of Campus and Community Relations and executive director for Campus and Community Relations.

From 1970 to 1975, she was assistant to the president and chair of the Board of the Crispin Company, a Houston-based international iron and steel importing firm.

Dr. Teed received a B.A. degree cum laude in French literature, from Rice University in 1962, an M.A. in the same field from Emory University in 1963 and a Ph.D. degree, also in French literature, from Rice in 1971. She was a Fulbright Scholar at the Universite de Grenoble, France in 1963-64.

Term starts with jog, bar-B-Q, films, theatre—and classes

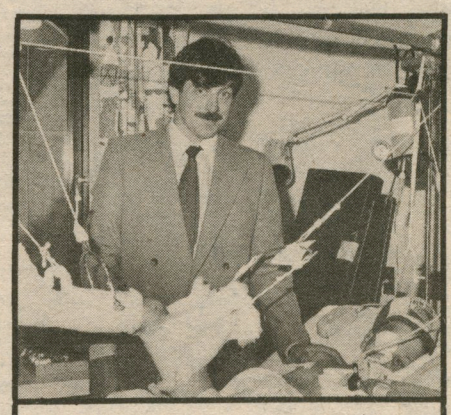
A group of students, staff and faculty worked this summer to make school days happy days for arriving students at Stony Brook.

Opening week activities, coordinated by Stony Brook's Office of Student Activities, got under way August 22, when most people were still doing beaches and other summer scenes, with a family luncheon, orientation for parents and a pool party, films and carbaret, all for new students checking into residence halls.

During the next few days, more than a dozen special events were conducted for education and entertainment of the new and returning students. These events included such old-fashioned fun activities as a treasure hunt and ice-cream social, as well as informational Residence Life workshops on such subjects as "Fitting In at Stony Brook" and "Studying: It Isn't Like High School." Upperclass students conducted these workshops on two days also given over to free bus tours of the neighboring communities with guides from the Three Village Chamber of Commerce.

During the final weekend before classes, special activities included a morning jog and breakfast with Rory Aylward, president of Polity; dinner theatre; "Wacky Olympics"; dancing; open house at the gym facilities; and an International Festival in the Stony Brook Union.

The festivities continued into the opening day of classes on August 27, with a campus-wide barbecue that included a parade of banners made by the residential and commuter colleges.



HSC Photography Service

Hockey Star *Steve Vickers, formerly with the New York Rangers, visits a fan, Derek Hawkins of Holbrook, in the Pediatric Intensive Care Unit at University Hospital. Derek, 9, suffered injuries when a car collided with his bicycle. Steve brought Derek a hockey stick inscribed with a message from Edmonton all-star Wayne Gretsky, another stick signed by the Ranger team, a Ranger jacket, hat and pucks, and best wishes for a speedy recovery.*

Univ. Hospital to open new burn center

Following October 23 dedication ceremonies, the new six-bed burn center is scheduled to go into service at University Hospital, providing a major boost in the New York Metropolitan area's burn treatment capacity.

The center will be directed by Dr. Harry Soroff who chairs the School of Medicine's Department of Surgery in the Health Sciences Center.

Dr. Soroff, who had extensive experience in burn treatment programs at institutions including the U.S. Army Burn Center at Fort Sam Houston in Texas before coming to Stony Brook in 1974, called the new burn center "the fruition of a lifetime dream." It will, he said, "combine excellent patient care facilities with opportunities to learn more about the very complex medical challenges involved in treating burn and smoke inhalation injuries."

Dr. Soroff noted that the Stony Brook medical school's Department of Pulmonary Medicine will be extensively involved in the burn center, "providing expertise for dealing with smoke inhalation injuries which are a major problem for firefighters and which probably result in as many fire-related deaths as actual burn injuries." He added that many other specialized health services personnel from the University's Health Sciences Center will take part in the burn center's work "including, for example, surgeons from the Department of Surgery's Transplantation Division at the University Hospital who will be available for skin transplantation and other problems frequently associated with burn injuries."

University Hospital's Executive Director William T. Newell said the new burn center "will be well-staffed and well-equipped to deal with the severe, traumatic injuries associated with burns and smoke inhalation." The new center, he said, "will fill a large gap in health care for our region as the first burn center serving the approximately 1.5 million people in Suffolk County."

Stony Brook People

UPS 715-480

Vol. 15, No. 4 Sept./Oct. 1984

Editor: Ralph Chamberlin
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Published six times a year in January/February, March/April, May/June, July/August, September/October and November/December by the State University of New York at Stony Brook, 335 Administration Building, State University of New York at Stony Brook, Stony Brook, NY 11794-0604. Distributed by the Alumni Association. Second class postage paid at Stony Brook, NY.

Evelyn B. Fellowship. *Evelyn Bonner, here flanked by Dr. Masayori Inouye, chairperson, Department of Biochemistry, and Dr. Richard Koehn, Dean of Biological Sciences, is retiring after 10 years as administrative assistant in Biochemistry. The Department has decided to honor her with the establishment of the Evelyn Bonner Summer Graduate Fellowship in Molecular Biology. Personal contributions, supplemented with corporate and other funds, will be used to provide a summer stipend to incoming students during the summer prior to their formal entry into the Program. Checks payable to the Stony Brook Foundation may be sent to the Department of Biochemistry for this purpose.*

Balloon process helps child heart patients

For the first time on Long Island, doctors have performed an advanced cardiac catheterization procedure known as balloon arterioplasty. A team of pediatric cardiologists at University Hospital have twice in the last semester performed the new procedure in lieu of heart surgery, to relieve vascular obstructions in children with congenital heart disease.

The team, headed by Dr. Thomas Biancaniello, assistant professor of pediatrics and director of the division of pediatric cardiology, used special cardiac catheters equipped with balloons at the tips to relieve an obstruction in a 13-year-old boy with pulmonary stenosis (narrowing of the valve which carries the blood to the lungs), and to clear complex coarctation (a complicated two-part narrowing of the aorta) in an infant who had a recurrence of narrowing, following an operation seven months ago.

Dr. Biancaniello noted that open heart surgery previously was required for the one in every ten children with congenital cardiac defects who are diagnosed with pulmonary stenosis. In such cases, open heart surgery was performed to relieve existing obstructions in a patient's pulmonary valve. Similarly, he said, one out of four infants operated upon for coarctation have had recurrent narrowing of the aorta and until now required surgery.

Dr. Biancaniello said the balloon arterioplasty procedure is a modification of routine cardiac catherization procedures normally accomplished prior to cardiac surgery in children. He described the new procedure as a significant advance in the diagnosis and treatment of heart disease in infants and children because it alleviates a long hospital stay and the discomfort normally experienced by patients who must undergo heart surgery.

The procedure requires no anesthesia, incisions, or the use of a heart-lung machine. Generally, patients are allowed to return home after one day. To perform the procedure on children, Dr. Biancaniello and his colleague, Dr. Lloyd Marks, assistant professor of pediatrics, introduce a deflated balloon catheter into blood vessels in the leg, advancing the special catheter to the narrowed blood vessel in the heart and inflating the balloon with fluid with the obstruction being relieved instantly by the fluid-filled balloon attached to the catheter.

Fall alumni events

Home football games

Oct. 13—*Homecoming*, with Stony Brook's first Homecoming King and Queen.

Oct. 20—*Faculty Day* (members of the faculty will scrimmage with football alumni during half-time; a reception will follow the game.)

Nov. 10—*Parents Day* (Parents are invited to campus for a seminar with Fred Preston, Vice President of Student Affairs, a luncheon, the football game and reception following the game.)

Reunions

Volleyball, Sept. 14
Soccer, Sept. 15
Basketball, Nov. 10
Squash, Dec. 15
Swimming, TBA
Albany Reunion, Sept. 7
New Jersey, Boston and Washington Reunions, TBA

Fine Arts Nights

"Our Town," Oct. 20, $4/ticket
Symphony Orchestra, Nov. 18, $3/ticket
Ballet Hispanica, Dec. 1, $6.50/ticket
"Heroes," Dec. 13, $7/ticket

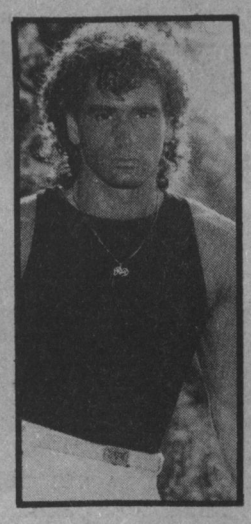
College Day—Oct. 20

Cuomo appoints Girsky

Gov. Mario Cuomo has appointed Joel H. Girsky, an international leader in the electronics industry, to serve on the Stony Brook Council, the local governing body for the University under the State Education Law.

Girsky, who is president/treasurer of Jaco Electronics, Inc., of Hauppauge, will serve through 1992. He has been active in Long Island civic, political and charitable organizations.

Eva Leone '87



Ronnie Di Dio '84

Alumnus publishes student calendars

What a pair! They're the talk of the campus this fall.

"They" are "The Men of Stony Brook" and "The Women of Stony Brook," two new full-color calendars in the style of those long available at Ivy League and West Coast campuses, using students and recent alumni as photographic subjects.

X-rated they're not. No nudes, no sex acts, no bedroom poses. Just 12 good-looking coeds—a cheerleader, a cowgirl, bathers at the beach—and a dozen handsome guys—football players, a sports car driver, a woodcutter.

The young entrepreneur behind it all: David Jasse '84, liberal arts major, former *Statesman* photography director and aspiring professional photographer. Since graduating in the spring, he has enrolled in a photo course at Fashion Institute of Technology, and set about marketing his calendars, which are now sold at the Barnes and Noble bookstores on campus and at the two bookstores and card store at the Smithhaven Mall.

Following in the footsteps of three undergraduate students who published black-and-white Stony Brook mens and womens calendars a year ago, Jasse last spring began looking for his photographic subjects. He held auditions for students who wanted to be in the calendar. About 100 students showed up and were photographed. From the group, 24 were selected to appear. Jasse combined Stony Brook's academic calendar with the photos as a showcase for his photographic talent. "It's a good start to a career," he said.

Meanwhile Jasse has planned a big fall party at the End of the Bridge for Stony Brook students to meet their calendar girls and guys in person.

Jasse is already working on improving his calendars for '85-'86. The current ones are available for $3.50 each from David Jasse, 66 Peter Lane, New Hyde Park, NY 11040.

FACULTY NOTES

Louis J. Boucher, professor of dental medicine, has received the 1983 Henry Spendel Award of the First District Dental Society of New York, the highest award the society can bestow. Dr. Boucher was honored for his "outstanding contributions to dentistry"...***Sung-bae Park*** of the Program in Religious Studies, is the author of a new book, *Buddhist Faith and Sudden Enlightenment,* published this spring...***Garman Harbottle,*** adjunct professor of anthropology, was co-recipient of the George Hevesy Medal for 1983 from the *Journal of Radioanalytical and Nuclear Chemistry*...***Ann Welbourne-Moglia,*** associate professor of nursing (family and community health), has been elected chairperson-elect of the board of directors of the Sex Information and Education Council of the United States (SIECUS)...***Clarence Dennis,*** professor of surgery, has been awarded the $10,000 1984 Laufman-Greatbatch Prize of the Association for the Advancement of Medical Instrumentation...***David Gilmore,*** associate professor of anthropology, and ***Georgina Sabat-Rivers,*** associate professor of Hispanic languages, have been awarded fellowships for independent study and research by the National Endowment for the Humanities...***Eckard Wimmer,*** professor of microbiology, has been named chairperson of the department of microbiology...***Frederick R. Preston,*** vice president for student affairs, has been appointed to the Monograph Board of the National Association of Student Personnel Administrators... ***Seymour Cohen,*** Distinguished Professor of pharmacological sciences has been named a 1984-85 fellow at the National Humanities Center, Research Triangle Park, NC...***Santo Albano*** of the University Counseling Center will be presenting a paper on predictable and unavoidable stresses of step-parenting at the American Bar Association—Family Law Section meeting in Chicago in August...***Paul N. Baer,*** professor and chairperson of periodontics, was named the 1984 recipient of the Distinguished Alumnus Award by the Columbia University Periodontal Alumni Association...***Lorraine Hammerslag,*** assistant director of student activities, appeared on Brookhaven Cable TV discussing the conference, "Against Our Will," sponsored by the Women's Safety Committee at Stony Brook...***Norm Prusslin,*** general manager of WUSB, presented a workshop on survival skills at the 1984 Intercollegiate Broadcasting System National Convention...Three public safety officers won medals in the "Police Olympics" for New York State officers held in June at SUNY/Albany: ***Craig McGarry, Frank Rastelli*** and ***Paul Kayser***...Provost ***Homer A. Neal*** has been appointed to the board of directors of the SUNY Research Foundation...***Hanan Selvin,*** professor of sociology, and ***George Williams,*** professor of ecology and evolution, were elected fellows of the American Association for the Advancement of Science...***Joseph A. Tursi,*** chairperson of the Department of French and Italian, was an invited guest of the Ministries of Foreign Affairs and Public Education of the Government of Italy for the first conference on the Study of Italians in the United States, held in June at Fordham University. With ***Gisele Kapuscinski*** of French and Italian, he helped establish guidelines for the new Regents plan for the study of foreign languages in New York State as participants in a recent curriculum symposium sponsored by the New York State Education Department...***William F. Kraft,*** assistant professor of clinical anesthesiology in the School of Medicine, has been appointed director of the Department of Anesthesiology at Southside Hospital...***Jay Schleichkorn,*** assistant professor of health sciences and chairperson of the Department of Physical Therapy, School of Allied Health Professions, has received the Lucy Blair Service Award from the American Physical Therapy Association. The award recognizes Dr. Schleichkorn's 34 years' service to physical therapy and to the Association.

Maureen Negus, a University Hospital nurse, was attacked and killed in her Port Jefferson Station home in June. Police have arrested a suspect.

Making a Change

By Barbara Kreisler

One of Lloyd Sargeant's colleagues said he couldn't understand why his colleague was doing what he was doing. After all, he said, at age 62, shouldn't he be looking for a less hectic schedule, looking forward to retirement?

Lloyd Sargeant sat behind his desk at the Economic Opportunity Council of Suffolk, Inc., a community action agency homebased in Patchogue that seems to have very little going for it. There's the bookkeeping system—or lack of it—that put the 16-year-old agency into perpetual red, a non-existent relationship with the County of Suffolk, a likely funding source, paper boards of directors that are expected to run its myriad of programs, a history of management personnel that's left a lot to be desired.

He threw his hands up in the air, chuckled and said he was there—not to save the world—but just a small piece of it. A widower with no young children tied to him, Lloyd Sargeant says he took a year's leave of absence from his comfortable job as SUNY at Stony Brook's assistant director of admissions to change what he termed the tarnished image of the agency.

And so, newcomer Lloyd Sargeant joined another newcomer of seven months, executive director Lorenzo Merritt, D.S.W., heading the local poverty agency.

The agency's mission is a basic one—it is to help poor people help themselves. In Suffolk County, there are between 60,000 and 80,000 people living below the poverty line, ranking the county sixth among all 62 counties statewide in terms of the number of low income residents.

The E.O.C., a result of President Lyndon Johnson's 1964 establishment of the Office of Economic Opportunity which funnels federal funds into local communities so that the poor could advocate for themselves, has, amidst its labyrinth of problems, a number of clearcut goals. Its aim is to root out poverty, help provide services to the poor such as employment, education, transportation and recreation, make public officials sensitive to the needs of the needy, develop job programs and avoid duplication of services already provided by governmental or other private agencies. But the Patchogue E.O.C. has been beset with a wealth of problems that have taken the focus of the agency away from its goals. Just a few months ago, its former comptroller was sentenced to a three-year maximum jail term in connection with the sale of four of the agency's vans and trucks to a Patchogue car dealer and its former executive director was also sentenced to a maximum three-year jail term for stealing $20,000 from the agency.

And now Lloyd Sargeant is trying to pull up the agency by its bootstraps serving in the precarious position of public relations coordinator for an agency that runs the Head Start pre-school programs at a dozen sites in the county, a weatherization program that provides energy conservation services to 350 Town of Brookhaven residents, a tutoring program for 30 underachieving students in the Town of Southold, health and nutrition outreach programs in Coram and Amityville and five local action centers located in Bellport, North Amityville, Wyandanch, Riverhead and Greenport, and doing it all with skeleton crews because a $5 million budget, he says, can only be stretched so far.

"We've got to get people to advocate for themselves and we've got to get legislators to hear these people," says Mr. Sargeant as he talked this week of what he wants to do in the year he'll hold one of the agency's key positions. "We've also got to get a dialogue started between us and the county," he says, charging that the County of Suffolk has failed to become an active participant in the E.O.C., both by a lack of funding and lack of manpower.

Key to helping the needy, says Mr. Sargeant, is getting those who need help to advocate for themselves and that means having the five local action boards represented equally by community people, private organizations and public officials, equal representation that is now non-existent.

"Every day," says Mr. Sargeant, "there's a woman who decries her situation. If she had the right arena, the moral support, the physical support, then she could articulate her concerns. This system is not built for poor people and they have to advocate for themselves."

Key, too, to the agency is overcoming what Mr. Sargeant says is "benign neglect" by county officials. "The county sponsored the program 16 years ago and turned it over to the E.O.C. and it was supposed to match it with funds but it never did," he says, adding that one of the problems the E.O.C. faces is charges by county officials that it is duplicating services already provided by county government, a charge which Mr. Sargeant denies. While the county took operation of the nutrition program away from the E.O.C., Mr. Sargeant defends his organization by claiming that the E.O.C. never got the technical assistance it needed to run it. Right now, he describes the relationship between the E.O.C. and the county as "a speaking relationship," mentioning, too, restoration projects in black communities like Brooklyn's Bedford Stuyvesant area where federal funds were used successfully and where community people and public officials worked together well.

"While I'm here, I want to look at other programs around the country. There have been some tremendous success stories. I want to know how much government help they got. What is driving me is knowing that there's a lot that can be done," says the coordinator, who has already demonstrated his commitment to the black community by serving on the board of Suffolk Housing Services, as a former president of the Black Faculty and Staff Association at SUNY at Stony Brook, member of the Long Island Minority Educator's Association and the N.A.A.C.P. as well.

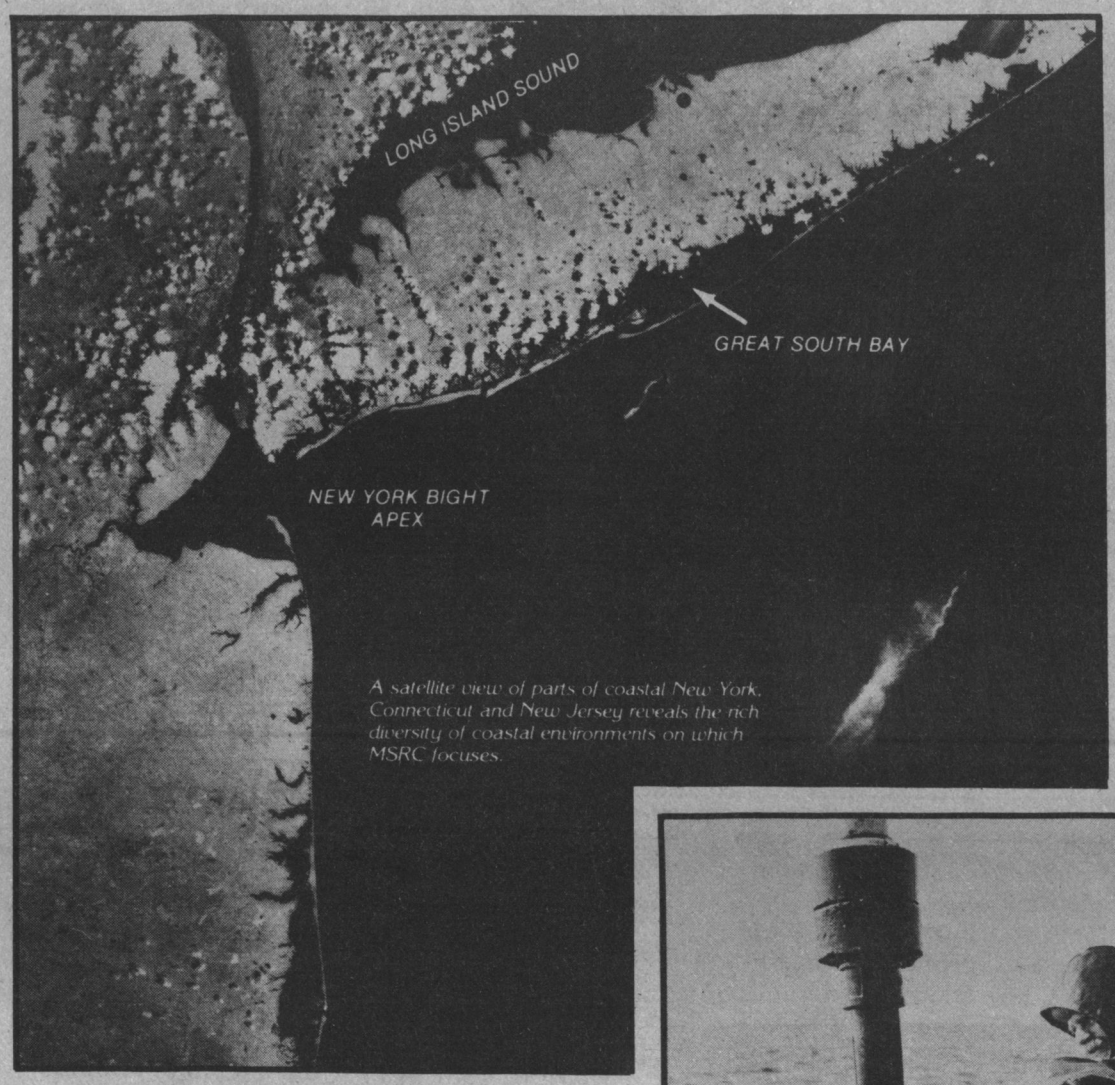
"I want to do something worthwhile before I retire. I need activity to keep my adrenalin going."

"What I'm doing is a blitz public relations campaign. I want people to look at the E.O.C. from a neutral point of view now and not a negative one. If we can do that, then perhaps we can get people to see our side. It's a longterm effort, certainly longer than the year I'll be spending here, but if we can generate the seeds.... This is a monumental task but I will settle for small victories."

Reprinted courtesy of the Long Island Advance

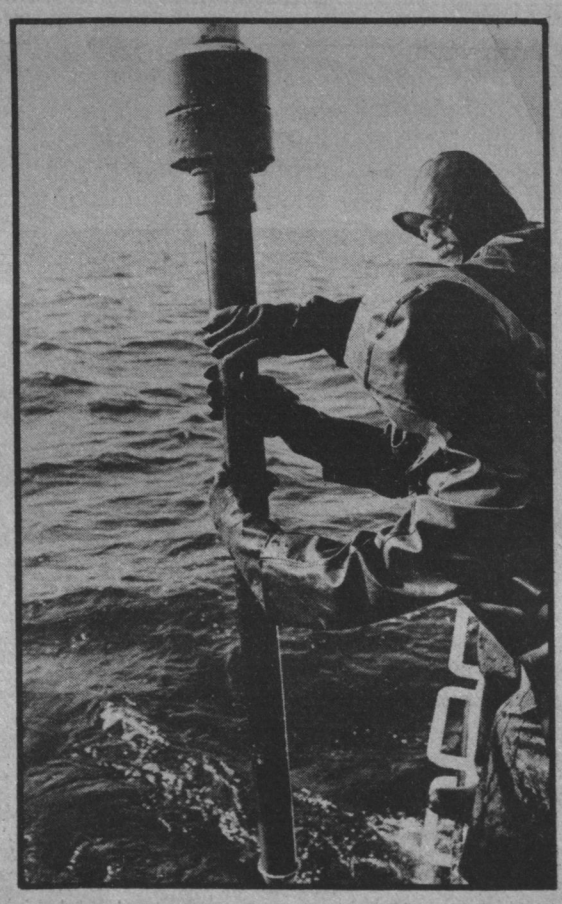
MSRC:
Making Scientific Research Count

by Dr. J.R. Schubel
Director, Marine Sciences Research Center



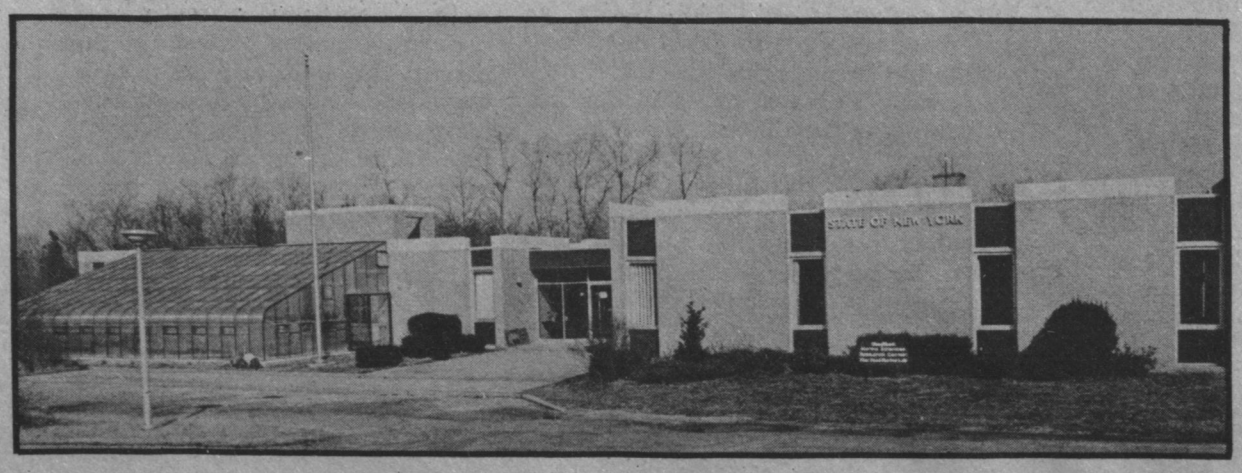
A satellite view of parts of coastal New York, Connecticut and New Jersey reveals the rich diversity of coastal environments on which MSRC focuses.

PHOTOS BY MSRC GRAPHICS



MSRC scientists use a gravity corer to recover a sample of sediment from the seafloor.

The MSRC's Flax Pond Laboratory is equipped to provide a continuous supply of sea water for the culture of marine plants and animals.



Draw a circle with a radius of 50 miles around the Empire State Building and you account for approximately one in every ten residents of the United States. Nearly seven million people live on Long Island alone, approximately three million in Nassau and Suffolk counties.

If Long Island were a state, it would be the tenth most populous state in the United States. If it were a nation, it would be more populous than 50% of all the nations in the world today.

Not one of those seven million people lives as many as 10 miles from a coastal marine environment. One cannot live so far away and live on Long Island. Add Manhattan, the Bronx and Staten Island too and the population jumps to more than nine million—every one of whom lives within 10 miles of the coast.

For each of these people the coastal ocean has a particular significance. New York's coastal ocean is a source of food; a source of recreation and aesthetic enjoyment; a livelihood; and a place to dispose of wastes. New York is a leader in each of these categories. To quickly broaden the picture of the uses we make of our coastal ocean, consider these few facts:

Uses of Our Coastal Ocean

- An estimated 40 to 50 million people visit New York's ocean beaches every year. More than 500,000 people enjoy our beaches on an average "beach day."
- Gateway National Park is the nation's busiest national park. Last year it received 10.1 million *more* visitors than Yellowstone and Yosemite National Parks combined.
- New York has more than 3,000,000 recreational fisherpersons; about half are marine. They spend about $250,000,000 every year in pursuit of their avocation, not counting what they spend on boats and fuel. New York ranks second only to Florida in the value of its recreational fisheries.
- New York has more than 400,000 registered pleasure boats and an estimated 150,000 unregistered boats; many of these are used primarily in marine waters.
- Long Island's recreational industry is valued at more than 2.5 billion dollars a year. Most is marine-related.
- New York State has between 13,000 and 14,000 commercial fishing people nearly all of whom fish in marine waters. The aggregate value of the fish at the dock is estimated at more than $45 million a year.
- Long Island is the birthplace of aquaculture in the United States with activities dating back to the early 1700s.
- One small, shallow estuary along the south shore of Long Island—Great South Bay—during the 1970s produced more than 50% of the nation's total harvest of hard clams, employing more than 6,000 people at its peak. Even today the industry has an aggregate value of more than $100 million per year when all the multipliers are applied. Although now in serious trouble, the hard clam fishery remains a major industry.
- The Port of New York and New Jersey is one of the world's most important ports. In terms of total value of cargo handled, it ranks first among all United States ports. In terms of tonnage of cargo handled, it ranks second behind New Orleans.
- To maintain the port's channels, some 8 to 10 million cubic yards of material must be dredged each year. Most of this has been dumped in the sea off New York. About 10% of the total volume of material dredged is "polluted" and fails to pass the criteria for ocean disposal. Alternative disposal sites and strategies must be found if the operation of the port is not to be affected adversely.
- The only economic source of sand for the New York metropolitan area for fill and construction aggregate is submerged beneath the sea—below the sea floor of the Lower Bay of New York Harbor and the adjacent continental shelf. Historically, the Lower Bay of New York Harbor has been the world's largest open-pit sand mine.

• Long Island only has about 0.6% of the nation's total shoreline, but more than 10% of that part of the total which has been designated by the U.S. Army Corps of Engineers as having "critical erosion problems."

• Power plants located on New York's coastal marine waters withdraw more than 9 million gallons of water every minute, pass them and the small organisms they contain through condensers, and return them to the environment at elevated temperatures.

• 100% of all sewage sludge *barged* to the ocean by the entire United States is dumped in the New York Bight Apex. The amount of sewage sludge dumped into the ocean off New York and New Jersey probably will increase, although it may be dumped farther seaward.

The list goes on and on, but the point is clear: We New Yorkers make extremely varied and intense uses of our coastal marine environments. It is also clear that these multiple uses make conflicting demands on our coastal ocean and that those demands cause problems. These problems become opportunities for marine scientists to serve science and society.

Nowhere in the United States, perhaps in the world, is there a location more ideal than Long Island for development of an international center of excellence in coastal oceanography. The range and variety of natural environments in a limited geographical area is greater than anywhere else in the United States; and the diversity and intensity of the uses that society makes of these environments rival those of any comparable area in the world. These uses and the resulting conflicting demands cause problems that become opportunities for scientists to serve science and society. The opportunities are so numerous and so large that at times they seem insurmountable.

MSRC, A SUNY-Wide Center

It was in response to these problems and opportunities that the Marine Sciences Research Center (MSRC) was created in 1965 by a resolution of the SUNY Board of Trustees as a SUNY-wide center. The first appointments to the MSRC were made in 1968. This year the MSRC celebrated its 16th birthday. By all accounts, the MSRC is an adolescent; an institution in its formative years. But over that brief span of 16 years the MSRC has achieved a remarkable degree of distinction among oceanographic institutions. Much of its success is attributable to its special character. The Center takes full advantage of Long Island's unique qualities. In fact, it was specifically planned and nurtured carefully to fill a niche of enormous importance to New York and the entire nation.

One feature that distinguishes the MSRC from most of the nation's other leading oceanographic institutions is its clear and persistent focus on the coastal ocean, from approximately the outer edge of the continental shelf inland to the last traces of sea salt. The coastal ocean is the part of the world ocean with which people have their most intimate contact and upon which they have their greatest impact. It also is the part of the world ocean that has been neglected by most oceanographers and by most oceanographic institutions. Problems are more complex than in the deep sea, solutions less tidy. And for many the romance of the deep sea, the so-called "blue ocean," is missing. Not so for those who work and study at the MSRC. It is in the coastal ocean that they have elected to make their contributions to science and to society. The MSRC is the only comprehensive coastal oceanographic center in New York, and indeed the only one in the entire northeast United States. It is one of only a handful of such institutions in the country.

A second feature that distinguishes the MSRC from other oceanographic institutions, coastal and deep sea, is its commitment to the timely translation of advances in science and technology into forms that can be applied readily by decision makers to resolve complex environmental problems.

The MSRC has grown over the past 16 years from a small organized research unit into a comprehensive coastal oceanographic research center with a staff of approximately 100 and an annual budget of nearly $4 million. It has developed from an organized research unit with no educational mandate into a Center with programs leading to the degrees of Master of Science and Doctor of Philosophy which enroll more than 100 students. Students come from around the world to study at the MSRC. Over the past five years they have come from every continent except Antarctica. More than 95% of the Center's graduate students are supported, and more than 80% of their support comes form non-State sources, primarily grants and contracts. Most of these graduate students work on problems of direct importance to New York.

Sponsored Research Support

Over the past decade the Center's sponsored research budget has increased by nearly ten-fold: from less than $300,000 in 1972 to more than $2.5 million in 1983. The Center has a broad funding base with sponsored research support from international bodies, private foundations, regional institutions, counties and municipalities, states, and from every federal agency that supports research in the marine sciences. The Center's faculty now numbers 23 on State-supported lines and an additional Research Foundation faculty of 11. Compared with the nation's other leading oceanographic institutions, the MSRC still is relatively small in terms of the size of its staff. Only by focusing its resources in a single unit—the Marine Sciences Research Center—and by that unit focusing its attention on the coastal ocean, has SUNY been able to achieve (with a modest investment of resources) a program of distinction in the marine sciences.

Research Programs

The research of the MSRC is of several kinds. Most is of the traditional mode. Individual scientists pursue their own interests by securing support for their research through conventional funding mechanisms. MSRC scientists have been enormously successful in these ventures bringing in more than $3.00 for every $1.00 they receive in faculty salaries from the State. This activity is at the heart of the MSRC's development as a center of excellence in coastal oceanography, but it is not enough. As an organized research unit of a public university—a public service institution—the Center has an obligation to maintain a good match between society's problems—real and perceived—and the programs it conducts. In the traditional mode where individual researchers pursue their own interests, the problem solvers select the problems. To maintain a good match between society's problems and the problem solvers, the problems must play a role in "selecting" the problem solvers. The Center has developed several mechanisms to ensure maintenance of an appropriate match.

In December 1980, the MSRC signed a cooperative agreement with the National Oceanic and Atmospheric Administration which calls for the MSRC to take a national leadership role in designing and conducting coastal oceanographic research programs and in translating research results into forms readily usable by decision makers. It also calls for developing strategies to ensure multiple-usage of the coastal ocean with predictable and acceptable impacts on the environment, on its living marine resources, and on the spectrum of uses society chooses to make of the coastal ocean.

The MSRC does not take advocacy positions on environmental questions. It sticks to what it does best—science. But it constantly searches for ways to use science to serve society by improving the effectiveness with which advances in science and technology can be factored into environmental decision making.

The nation's record in this regard has been poor. There are many reasons for this. It is partly the fault of the scientist for failing to cast the results of research into forms that can be used readily by decision makers. It is partly the fault of the decision maker for failing to insist upon an identification and analysis of the full range of management alternatives before setting policy. It is partly because the problems are so complex. And it is partly because the data and information are so numerous, so widely dispersed and often nearly impossible to utilize in any sensible way on time scales appropriate to the decision maker. MSRC is dedicated to improving the access of the decision maker to advances in science and technology. Several recent examples of MSRC's efforts to improve the situation are described briefly.

Environmental Management Programs

In 1982 the MSRC initiated with support from the William H. Donner Foundation a new program—the Coastal Ocean Science and Management Alternatives (COSMA) Progaram—to expand and institutionalize the Center's already extensive activities in using science to assist decision makers. The program concentrates on developing and evaluating new and more effective tools and techniques for using scientific data and information in environmental management. COSMA also undertakes projects with are important interdisciplinary problems of at least regional interest. Problems investigated through COSMA must be approved by its Advisory Board. Once a problem has been selected, a project director is appointed and a working group selected with representatives from each of the disciplines required for a rigorous, interdisciplinary analysis. Often this requires that COSMA draw upon the full force of the SUNY system—a role appropriate for a SUNY-wide center—and even beyond. The working group is charged with the responsibility for identifying the full range of plausible management alternatives and for assessing the public health, environmental, ecological, economic and socio-political impacts associated with each alternative. Finally, the results of the analysis are cast in forms that facilitate appropriate comparisons and in terms that are readily usable by decision makers.

MSRC scientists recently completed an assessment of dredging and dredged material disposal alternatives for the Port of New York and New Jersey through COSMA. Earlier this year, the Suffolk County Legislature appropriated funds for a COSMA study of the management alternatives to rehabilitate and sustain Long Island's declining hard clam fishery. The output of this technical analysis will provide the basis for development of a comprehensive management plan which will be developed under the leadership of the Long Island Regional Planning Board.

In 1982 the U.S. National Oceanographic Data Center (NODC) designated the MSRC as their coastal oceanographic Data Development Facility and charged it with leadership in developing and testing mechanisms to facilitate the use of oceanographic data and information in environmental decision making that affects the coastal ocean. Initial efforts carried out in collaboration with COSMA have concentrated on exploiting the power, simplicity, and availability of the personal computer as a tool to facilitate decision making. The MSRC has been developing a computer-assisted data and information system for the Port of New York and New Jersey using the personal computer. Within the past year it was asked by the Federal Maritime Administration to develop a similar system for the Port of New Orleans. COSMA is now extending the applications of interactive computer-assisted information

systems to the preparation of environmental impact statements at the request of the U.S. Army Corps of Engineers.

Averting Crises

One of the more important roles MSRC plays—one which perhaps only universities and a small number of private and national research laboratories can fulfill—is to identify potential problems, long before they become crises, while they are still at a stage that Herman Melville would have called "loomings"—indistinct images on the horizon. And having identified a "looming," the next steps are to design an appropriate research program, secure the necessary funding, carry out the research and cast the results of that research into forms readily usable by decision makers to prevent the "looming" from becoming a crisis. The role is that of a problem averter. It is akin to the practice of environmental preventive medicine, and it is a practice that receives considerable attention within the MSRC.

The 1983 National Academy of Sciences report on acid rain coupled with the likelihood of early and recurrent oil crises suggests strongly that the nation's air quality standards and criteria will be made more stringent and that our dependency on coal will increase substantially in the near future. A result will be the production of enormous volumes of coal wastes—fly ash and scrubber wastes—which we will have to discard in an environmentally acceptable manner. Because of research started seven years ago by MSRC scientists, a potential waste disposal crisis for Long Island and for many other coastal areas throughout the world can be averted.

Coal Waste Artificial Reef Project

In 1976 MSRC scientists anticipated that the country would run short of oil in the 1980s, that many oil-fire power plants would convert to coal and that coastal areas could have serious problems disposing of the resulting coal wastes—fly ash and scrubber wastes—as raw waste products. The Center proposed combining the fly ash (fine-grained powder) and the calcium sulfate scrubber waste (which has the consistency of toothpaste) with additives to produce stabilized blocks and testing their suitability as construction materials for artificial reefs. The first tasks were to determine whether stable blocks could be produced and whether contaminants would be leached from them. Technology was developed to produce stable blocks for a range of waste components and curing conditions. Extensive laboratory tests showed that water forced through the blocks under pressure did not purge contaminants from the blocks. The blocks locked up contaminants far better than we had expected. The next step was to determine whether organisms would settle and grow on and in the blocks in nature and whether these organisms would take up contaminants. In 1977 a small experimental reef of stabilized coal waste blocks was placed in an estuary near the University. Control reefs made of concrete blocks and natural rocks were constructed nearby. Three years of monitoring demonstrated that the coal waste blocks supported a lush growth of plants and animals as abundant and diverse as the flora and fauna on the concrete blocks and on the rocks. It also proved that these organisms were not enriched in contaminants.

The final test was to demonstrate the feasibility of transferring the block-making technology to the faculty floor and then to construct in the ocean a large reef composed of 500 tons of coal wastes as 18,000 blocks, each the size of a standard concrete block. The reef was constructed on September 12, 1980 in the Atlantic Ocean in 70 feet of water about four miles southeast of Fire Island Inlet on Long Island's south shore. Governor Hugh L. Carey, New York State Energy Research Development Authority Commissioner James LaRocca and Stony Brook President John H. Marburger threw over the first block.

An extensive research and monitoring program of this reef has demonstrated that blocks made of stabilized coal wastes not only are an environmentally acceptable method for disposal of coal wastes, but can enhance our uses of the environment for recreational fishing. Small experimental reefs have been constructed in Chesapeake Bay and Lake Ontario by MSRC's scientists working in collaboration with local institutions. The waste disposal strategy now has been tested in fresh water, brackish water and full sea water, and with support from appropriate State and federal regulatory and management agencies. A recent film—"To Build a Reef, the C-WARP Project"—describes the development and findings of the Center's Coal Waste Artificial Reef Project.

Because of the unusual ability of stabilized coal wastes to "lock-up" contaminants, MSRC scientists now are stabilizing sewage sludge and some industrial wastes with coal wastes and are conducting extensive tests in the laboratory to determine whether they could be disposed of safely in that form. There is another potential application. Recently, there has been pressure to close down landfills and to construct resource recovery plants to burn garbage and trash. While resource recovery facilities reduce the solid waste disposal problem, they do not eliminate it. Approximately 15% (by mass) of what is burned remains as ash. For Nassau and Suffolk counties alone this would amount to 200,000 tons per year.

Harvesting the Sun's Energy With Seaweed

Through the Center's Marine Biomass Program, MSRC researchers are investigating the feasibility of developing commercial seaweed "energy farms" in the coastal waters of New York. This project, which was initiated by the New York Sea Grant Institute, is an important part of the over-all plan to reduce U.S. dependency on foreign oil for our energy needs. On an energy farm, seaweeds are cultivated, harvested and then fermented to produce methane, alcohol or natural gas.

Growth rates of nine major species of local seaweed were determined in tank cultures at the Flax Pond Laboratory's greenhouse. Based on their seasonal growth patterns, chemical composition and digestibility, three or four species have been selected as the most attractive candidates for biomass farms. The biology of these species is being studied in greater detail and faster growing, hardier strains will be developed.

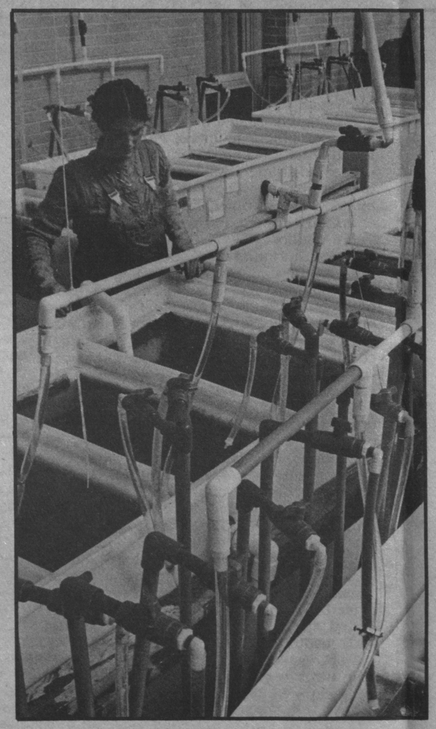
Preliminary work was conducted with cultivating these seaweeds offshore in small raft-like structures. Last fall MSRC biologists and SUSB engineers deployed an experimental test farm in Long Island Sound to investigate the economic feasibility of large-scale marine biomass farms.

Responding to Crises

The MSRC responds to crises when they occur. One example is the anoxia event in the New York Bight in the summer of 1976. Another is the breaching of the barrier island at Moriches by a winter storm in 1980.

On the day of the storm, MSRC received a call for help from Suffolk County Executive Peter Cohalan. The following day MSRC scientists began to install instruments in Moriches Bay to assess the effects of the breach on flooding of coastal areas, on salinity levels within Moriches Bay, and on how the increases in salinity would affect hard clams and other living marine resources in the back bay area.

The scientists also took a longer view of the problem. The 1980 breach at Moriches was not the first time Long Island's barrier island had been breached, and it will not be the last. There was a need for a predictive tool which decision makers could use to arrive quickly at a decision whether-or-not to repair a breach. Quick action could save enormous amounts of money.



Top: The final phases of MSRC's Coal Waste Artificial Reef Project involved dumping 500 tons of coal waste in the form of blocks from this bottom-dumping barge to form an artificial reef.

Above: The R/V Onrust on a SUNY-wide education cruise from Port Jefferson to Albany. The cruise is divided into a series of half-day legs, each dedicated to the special needs and interests of an individual campus.

Left: MSRC staff member checks cultures of seaweed at the Center's Flax Pond Laboratory as part of the Marine Biomass Program.

Below: MSRC researchers in the Biomass Program measure seaweeds to determine growth rates.

Such a predictive tool has been developed. It is a computer model which simulates the hydraulics of the Moriches Bay system. This model can be used to determine the probable environmental impact of any future breach of the barrier island, not only for Moriches Bay, but also for the other bays along Long Island's south shore. Concurrent biological studies demonstrated that subtle changes in the salinity of the Bay that might result from such a breach are reflected by a change in the patterns of diurnal, and longer period growth rings in clam shells. The MSRC's activities in coastal geology and coastal engineering are expanding.

Coastal Changes

MSRC scientists identified the shore and near-shore zones of Long Island's south coast as areas in which research was required to produce improved coastal management strategies. Two kinds of information were especially important: the seasonal changes in beach volume which result from changes in wave activity over the year, and the rate at which land is lost due to submergence by rising sea level. Both problems required an innovative approach because of the complexity and variability of the shore environment.

In order to calculate the seasonal gains and losses of beach volume, the scientists decided upon a long-term, intensive series of measurements covering the entire length of the shoreline of the concerned community. The scientists used volunteer observers, sometimes students from local high schools. The East Hampton, Long Island, study continued for four years and required monthly surveys of 20 profile lines. The average seasonal losses on the East Hampton beach (measured down to mean sea level) were found to be 48 cubic yards per foot during the first year. Similar results were obtained from a later study at Bay Shore, Long Island. In addition to producing the required data, the program proved to be a significant contribution to local environmental education and to increased public awareness of environmental processes.

The second problem—calculating the rate at which the land of a particular town is submerged by rising sea level—resisted solution because of the practical impossibility of determining the actual length of a town's shoreline and the changes along it. Instead, MSRC scientists calculated the distribution of the land area of Long Island towns with respect to the elevation of that land, or in technical terms, the towns' "hyposometry." Putting this information together with existing data on sea level changes in this century, the scientists determined that during a 60-year "lifetime," Westhampton Beach loses 2.4% of its land area due to submergence, while East Hampton loses 1.3%. This computational method is particularly useful in estimating the impacts on the towns of future rates of sea level change which would accompany projected climatic changes.

Dredging Management

One of the most crucial problems facing the nation's ports—large and small—concerns the management of dredging and disposal operations. The persistent shoaling of navigation channels makes dredging imperative in order to maintain navigable waterways for commerce and recreation, but the disposal of dredged sediment can be especially troublesome if the sediments are contaminated.

Subaqueous burial of dredged sediment beneath the sea floor may be one way to better isolate and contain contaminated sediments as well as to restore the disposal site to its original condition. Such a project has never been done, but MSRC biologists, geochemists and geologists have collaborated to show that the technology is available to construct a deposit of dredged sediment in a pit and to cover the deposit with sand to reclaim the sandy sea floor at the site. They have designed such a research project for New York Harbor. The first stage of the operation has been completed successfully.

Fisheries and Aquaculture

While harvesting food from the sea provides employment for tens of thousands of New Yorkers and New York's fishing and shellfishing industries have an aggregate value of well over $100 million per year, the management of our fishery and shellfishery resources has not been very successful and in recent years significant sections of these industries have declined. MSRC scientists have launched a two-pronged attack on the problem: first, to improve management of the natural stock through careful study of the organisms and the systems to which they belong, and second, to deveop methods of aquaculture which simplify the management requirements.

The fisheries research program at the Center, following the first approach, has focused on those species that are important as food for commercial fishes as well as the commercially important species themselves. The behavior of the Atlantic silverside, and the American sand lance, for example, have been studied in great detail. The sand lance, it was found, spawn in December and January, several months before the annual spring bloom of the plankton on which they feed. However, the sand lance larvae have low metabolic rates and are adapted to drifting passively until the bloom begins. This strategy permits the larvae to be in place, ready and waiting, when the bloom begins and, since the bloom lasts only two weeks, the sand lance is able to make optimum use of this food source.

MSRC's second approach to the resource management problem is through aquaculture research. Five faculty members, four technicians and 10 to 15 graduate students are directly involved in studies of shellfish aquaculture. However, the multidisciplinary nature of MSRC allows additional faculty and students to participate in and strengthen specific projects. For example, a major study is presently underway to determine the significance to shellfish aquaculture of resuspended bottom sediments in Long Island Sound. This study includes MSRC geologists as well as aquaculture scientists and will determine whether, as has been indicated, certain shellfish grow more rapidly when held in cages suspended just above the sea floor. The results of this and other MSRC aquaculture research projects can be expected to have far-reaching effects on the future development of New York's shellfish industry.

New York Sea Grant Partnership

MSRC scientists designed at the request of the New York Sea Grant Institute a comprehensive plan for an interdisciplinary study of the Great South Bay. When the study was designed in 1978 the object was to improve our understanding of the processes that made the Great South Bay the world's most productive hard clam factory and to make that knowledge available to decision makers in forms appropriate for development of strategies to conserve this important resource and industry. By the time the study had begun, the objective had shifted to acquiring this knowledge to rehabilitate a fishery that was in serious trouble. Over the past five years, more than $800,000 has been provided through the New York Sea Grant Institute, and more than $1 million in all, for this important study. Most of the research has been carried out by scientists at the MSRC.

The results of the numerous scientific projects, many of which have been published in scientific journals, are now being integrated into a book for a broader audience. Many of the findings already have been integrated into management strategies by the towns, the county and the State in order to rehabilitate the hard clam fishery.

The MSRC's close and effective partnership with the New York Sea Grant Institute has played a key role in the development of the MSRC as a comprehensive center of excellence in coastal oceanography and, as a result, in its

ability to respond effectively to New York's problems and opportunities. It was through Sea Grant's professorship program that the MSRC was able to initiate new programs in shellfish biology and seaweed mariculture. It was also through Sea Grant's ability to respond quickly and its willingness to invest in high-risk research with potentially high payoff, that the MSRC has been able to launch a number of its most important projects. These projects have developed into large, multi-year interdisciplinary studies with substantial support from several agencies. Among such studies are the Coal Waste Artificial Reef Project (C-WARP), Marine Biomass Project, Great South Bay Study, and a study to assess the feasibility of combining sand mining and waste disposal.

The MSRC is working with the New York Sea Grant Institute to establish within the Center a new Living Marine Resources Institute (LIMRI). It is expected that LIMRI will play enormously important roles in stimulating one of New York's most promising high technology, growth industries—aquaculture—and in revitalizing and stabilizing its important fisheries, and in developing new fisheries. LIMRI will have programs of research, education and public service, and will have a diagnostic facility which will be an activity of the Veterinary College of Cornell University.

Making Scientific Research Count

In its most recent five-year review mandated by the State Education Department, the two distinguished reviewers stated: "The Marine Sciences Research Center is rapidly acquiring international stature as one of the very best coastal oceanography centers in the world. Its location is excellent. The variety of adjacent coastal domains, proximity to a major urban influence, and economic importance of marine resources of the waters in the vicinity of Long Island are uniquely extreme for any comparable stretch of coastline in this country."

While the geographical focus of the Center's research activities is New York's coastal waters, the MSRC's faculty, students and staff work in coastal environments throughout the world. The MSRC has worked with developing countries to plan for the orderly development and conservation of their important coastal areas in ways that are consistent with their economic priorities. It has worked with developed countries to conserve, and when necessary, to rehabilitate important coastal areas. As a result of its activities here and abroad, the acronym MSRC has come to stand not only for the Marine Sciences Research Center, but also for the center that is Making Scientific Research Count.

Monica Bricelj '84 carries out experiments on the physiology of juvenile hard clams at the Blue Point Hatchery facility on the south shore of Long Island.

MSRC's Monica Bricelj '84 pries open the secrets of clams

At the end of the second World War, Ivo and Maida Bricelj left Europe to settle in Argentina, near a large estuary called the Rio de la Plata. A few years later their daughter Monica was born, and as she grew so did her fascination with the aquatic creatures of the estuary.

This lifelong interest inspired her to pursue formal studies in marine life, and so she attended the College of Exact and Natural Sciences at the University of Buenos Aires, Argentina, specializing in aquatic ecology. The opportunity to further her education in the United States came with the award of a Fulbright-Hays Fellowship in 1977-78.

From 1977 to 1979, Monica Bricelj worked on her M.S. in marine environmental science at SUNY's Marine Sciences Research Center (MSRC) at Stony Brook. Her adviser was Dr. Robert E. Malouf, and her thesis dealt with "Fecundity and related aspects of hard clam (*Mercenaria mercenaria*) reproduction in the Great South Bay." According to Dr. Bricelj, "The study was designed to test the belief that the larger chowders weren't fecund; they were supposedly not as successful at reproducing as the smaller clams." The study demonstrated that the number of eggs produced increases with the size of the clam and that eggs spawned by chowder clams are as viable as those of smaller clams. These findings are favorably viewed, since the larger clams are cheaper, and the results of this study have led to the concept of establishing spawning sanctuaries, wherein certain areas would be set aside to protect the larger clams. Dr. Bricelj pointed this out as "...an alternative management strategy for the protection of the clam population in the Great South Bay."

Upon successful completion of her masters degree, Monica Bricelj remained at the MSRC, this time to earn her doctorate in coastal oceanography. Her dissertation was titled "Effects of suspended sediments on the feeding physiology and growth of the hard clam, *Mercenaria mercenaria*." Interest in this area was generated by the report of Danish investigators that growth of surf clams and mussels is enhanced by the presence of low concentrations of suspended sediments. In contrast to this, Dr. Bricelj found that growth and feeding of hard clams was inhibited rather than stimulated by silt loads. "Different bivalve species thus vary considerably in their response to a given environmental parameter. An understanding of these differences is important in selecting suitable field sites and species for culture."

Dr. Bricelj obtained her Ph.D. in May of 1984, and is currently an adjunct assistant professor at the MSRC. Along with Dr. Malouf and Dr. Robert Cerrato she has received funding from the New York Sea Grant, Department of Commerce, for research on "growth, reproductive effort, and physiology of the bay scallop, *Argopecten irradians*" in the Peconics-Gardiners Bay System of eastern Long Island. Jennifer Epp, a graduate student at MSRC, is also participating.

In discussing this project, Dr. Bricelj noted, "The bay scallop supports an important commercial and recreational fishery on the east coast. This species has also been identified as a very promising candidate for mariculture efforts in New York State. Bay scallops have a very short lifespan, since they experience mass natural mortality in their second year. There is evidence that the timing (season) of mortality varies with latitude along the east coast of the U.S."

An example Dr. Bricelj cited is the southern bay scallop, found in Florida. This group experiences mass non-predatory mortality right after spawning. Their main growth occurs in the spring. The northern bay scallop, on the other hand, grows mostly in autumn, and manages to live through the winter for an average life of one-and-a-half years. "The causes for the difference in patterns of natural mortality are not yet known."

"As part of our project," Dr.Bricelj explained, "we are investigating the factors influencing the mass, post-spawning mortality of scallops on Long Island. We hypothesize that mortality is not attributable solely to post-spawning emaciation, such as occurs in salmon, since maximum growth of the adductor muscle, the only marketable part of the scallop, occurs in the fall, after spawning." She added that "...the bay scallop's short lifespan offers the unique opportunity to study the aging processes in a marine vertebrate."

In addition to her responsibilities at SUNY's MSRC, Monica Bricelj is also working as an assistant professor at Southampton College, Long Island University, where she teaches an undergraduate course in aquaculture. She resides in Miller Place with her husband, Dr. Eddie Duek, who works in the Chemistry Department at Stony Brook. She plans to continue her current work, and also expresses an interest in the future possibility of establishing cooperative research studies between her native Argentina and the United States.

SB's Center for Advanced Technology brings research and business together to develop and market new products

They're brewing something in a dental school lab on Stony Brook's South Campus that may change the world for companies making products like Listerine and Ban. It involves a new approach, identified during basic oral biology research by faculty at the dental school, to control the processes which cause oral and other body odors. This research work is now being transformed into what may become the super ingredient of tomorrow's mouthwashes, deodorants, feminine hygiene sprays and similar products.

C.A.T. is the catalyst for this and dozens of other practical commercial projects expected to be derived from research at Stony Brook through model business/faculty partnerships which may forever end the notion that a campus is an ivory tower.

C.A.T. stands for the pioneering New York State Centers for Advanced Technology program. It was announced in March, 1983 by Governor Cuomo, with centers established at four locations around the state, one of them Stony Brook.

Stony Brook was designated as the program's center for medical biotechnology. Simultaneously, Cornell University was named the center for agricultural biotechnology, the Polytechnic Institute of New York for communications and the University of Rochester for optics. Since then, three additional designations have been announced: SUNY Buffalo for medical instrumentation, Columbia for computer hardware and Syracuse for computer software.

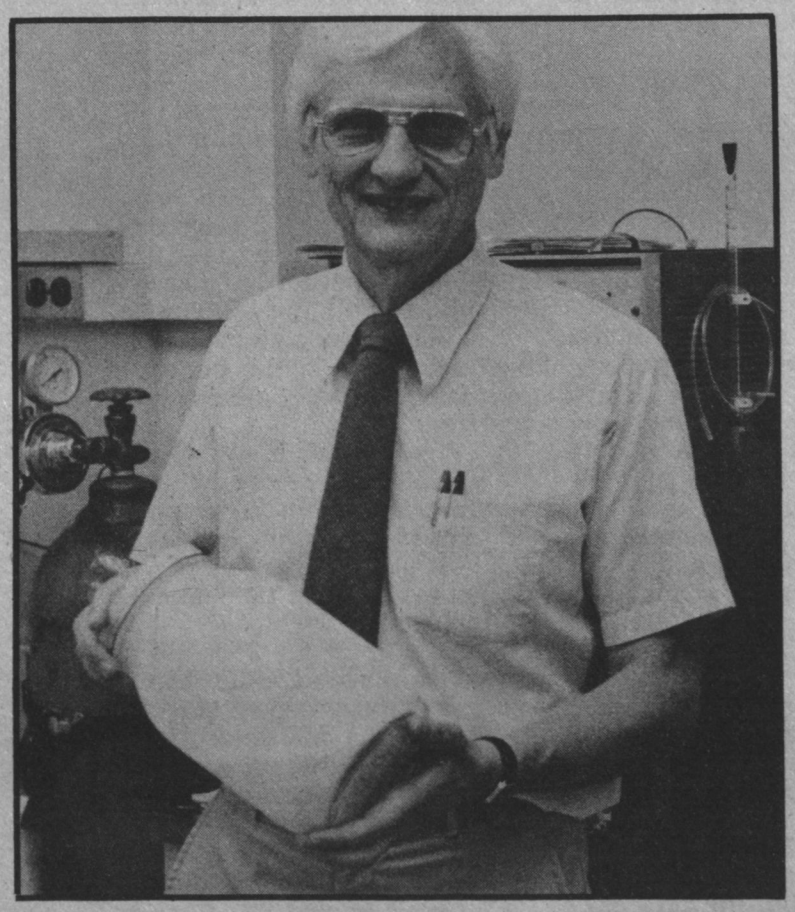
"This was one of those beautifully simple ideas whose time surely had come," says Dr. Richard K. Koehn, Stony Brook's Dean for Biological Sciences who also heads both Stony Brook's C.A.T. and its Center for Biotechnology which runs the C.A.T. program.

What C.A.T. does in its "beautifully simple" way is to provide ways for faculty and business people to get together, to look at basic research findings, examine them for potential practical commercial business product applications and then work together to bring something from the lab to the marketplace, in some cases, quite literally right to the supermarket.

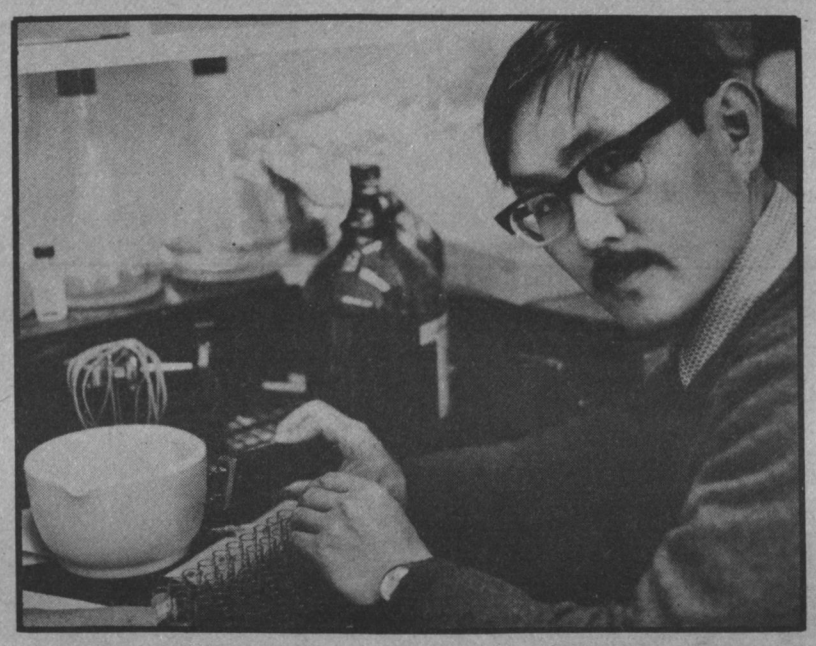
That's where the new super mouthwash/deodorant that's brewing on the South Campus appears to be headed. It may result from work being done by Drs. Israel Kleinberg, Thomas McNamara and colleagues in the School of Dental Medicine's Department of Oral Biology and Pathology, a fertile source of Stony Brook's strength in biotechnology.

Their work has involved developing tests to identify and relate to mouth and body diseases various chemical and bacterial components of the two principal fluids in the mouth: saliva and the gingival crevicular fluid found in the gingival crevices that encircle the necks of teeth.

Some of the bacteria cause what dentists refer to as malodor, the scientific name for one of Madison Avenue's favorite topics: halitosis—bad breath. Despite all the ballyhoo, today's commercial mouthwashes, breath sprays and the like "generally just mask malodor with peppermint or something similar, or just kill some of the malodor-causing bacteria for a short period of time," says Drs. Kleinberg and McNamara. So, they're working on substances specific to the malodor process and to the bacteria that are responsible. The resulting product, Dr. McNamara notes, could be applied to many other body malodor conditions in addition to bad breath because the same bacteria cause malodor in most of these conditions.



One of the research projects of Dr. Israel Kleinberg and his colleagues may someday lead to a new substance to kill bad breath; another has led to sialin, which may become as important to cavity prevention as fluoride.



Dr. Masayori Inouye and his colleagues are aiming to patent a novel way to regulate gene expression which could, in time, lead to disease-resistant plants and animals.

This malodor killer—a super new "wonder ingredient" for everything from breath mints to foot powders if you will—is still in preliminary developmental stages. But other potential products being investigated by the oral biologists already are quite close to being ready for the marketplace. One is a testing mechanism involving certain oral bacteria which dentists should be able to use to identify cavity susceptibility in their patients.

There also is under development a simple oral testing mechanism for determining alcohol levels in the blood. Individuals could purchase and use this mechanism, for example, to determine their capacity to drive home after drinking. And a similar type of test could be used by diabetics to monitor their blood sugar levels much more conveniently than is now possible. If all goes well, patents may be sought for these testing mechanisms within the coming year.

Perhaps the most exciting work in oral biology product develoment involves the substance Dr. Kleinberg identified and termed sialin a number of years ago. It's a combination of amino acids which provide natural decay-fighting power for saliva in the mouth. In the last few years, Dr. Kleinberg's Stony Brook group has come up with an improved sialin which is so inexpensive that it now appears to have definite commercial feasibility.

"Fluoride, in its different forms, despite its huge contributions, still can be effective against only 20 to 30% of all cavities," Dr. Kleinberg notes. "The new sialin could prevent the rest, so a toothpaste, for example, with both fluoride and the new sialin could legitimately be the way toward virtual elimination of tooth decay."

This sialin work is just one of the dramatic examples of the campus research strength which led to Stony Brook's designation as New York State's C.A.T. for medical biotechnology. Stony Brook researchers, as an article on the C.A.T.'s in the September/October issue of Albany's *New York Alive* magazine explains, "are pursuing projects ranging from the development and testing of new drugs to the development of artificial elbows. Corporate sponsors include Pfizer Pharmaceutical, Warner-Lambert, Enzo Biochemical, Eli-Lilly and others."

Stony Brook's C.A.T., in its simplest form, is a matching fund program. In its recently completed first full year of operation, C.A.T. matched private industry funds for many different campus research projects with $1 million. The result was a double jolt of university/industry funding for campus scientists, all sparked by C.A.T.'s presence.

It helped, for example, make possible the Department of Biochemistry's third annual Stony Brook Symposium on Molecular Biology which brought together some of the world's leading geneticists for a two-day session at the Health Sciences Center on "The Molecular Basis of the Diagnosis and Treatment of Human Disease." The symposium's participants included a number of industrial scientists, members of Biochemistry's similarly C.A.T.-aided year-round Program in Recombinant DNA, Genetic Engineering and Molecular Biology.

This year's symposium, held late in May, included key presentations by various Stony Brook researchers such as Dr. Herbert Hoover, Chief of the Health Sciences Center's Division of Oncological Surgery. In his presentation, Dr. Hoover discussed his current work developing a vaccine that may be useful against colo-rectal cancer, a

disease that is second only to lung cancer in mortality rates.

Perhaps the most exciting result of C.A.T. work in the last few months is another biochemistry project. Dr. Masayori Inouye, who chairs Biochemistry, and his colleagues have applied for a patent on "Regulation of gene expression by employing translational inhibition by a complementary RNA transcript." This, they believe, will become a novel way to regulate gene expression, making it possible to control or block the expression of that gene. As a result, it appears that genetic material can be engineered to inhibit viral gene expression or harmful genes such as oncogenes (cancer genes). This regulation procedure should, for example, make it possible to grow tobacco plants which are resistant to tobacco mosaic virus or to breed cattle that are resistant to foot-and-mouth disease.

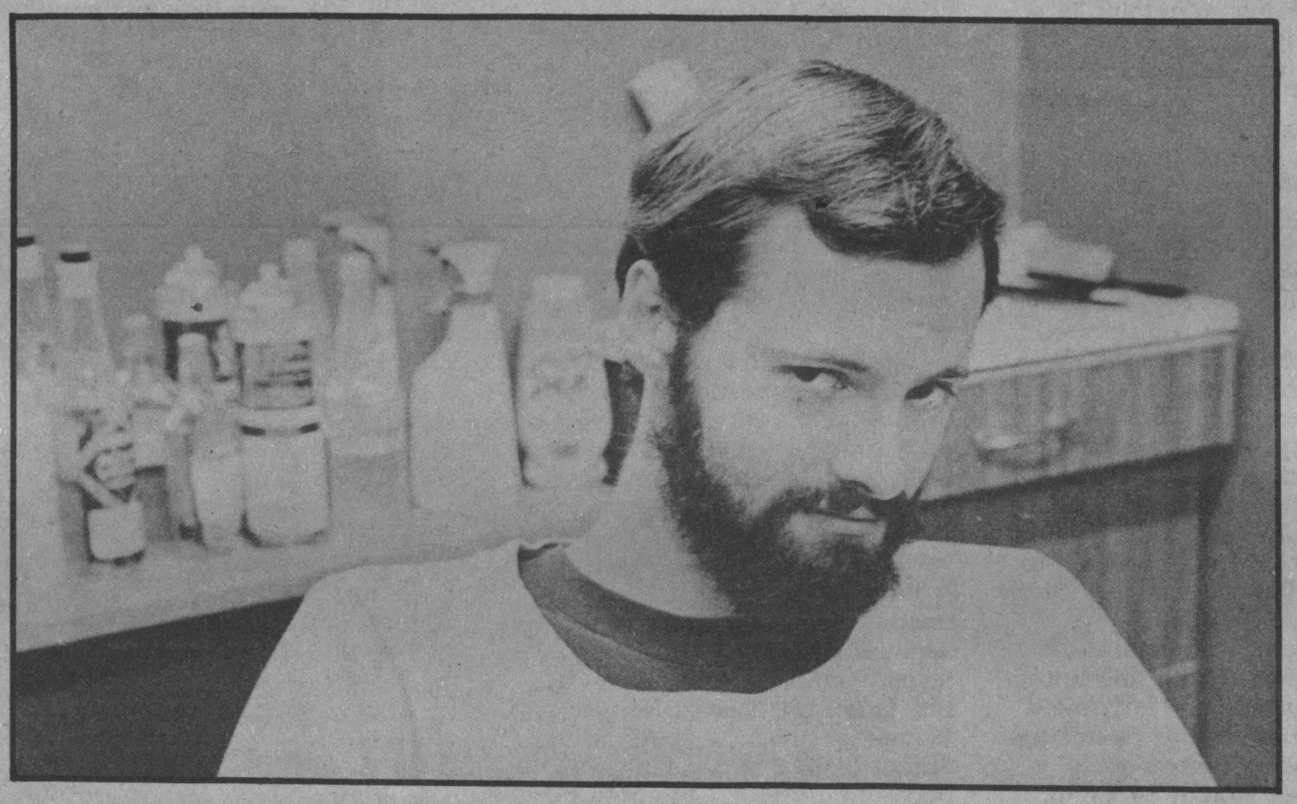
Other exciting C.A.T. projects abound in various departments of the Health Sciences Center's School of Medicine. There's work which was done by Dr. Arnold J. Levine, who until recently chaired the Department of Microbiology, on monoclonal antibodies which may be effective against two key strains of the herpes virus. (Dr. Levine was recruited by Stony Brook from his alma mater Princeton several years ago to head Microbiology and has now been recruited back by Princeton.) There's work well underway by Dr. Eckard Wimmer, who now chairs Microbiology, on cloning the hepatitis virus; work which may lead to new ways of treating the disease. In the Department of Psychiatry and Behavioral Sciences, Dr. Fritz A. Henn who chairs the Department, and colleagues, are working on a model for screening potential anti-depression and anti-dementia drugs. This screening has been used with both American and European pharmaceutical firms and has resulted in some promising new drugs for depression. Nearby, Dr. Francis Johnson and colleagues in the Department of Pharmacological Sciences are testing several dozen potential new drugs including substances which one day may be prescribed for anti-tumor/anti-viral and antibiotic purposes.

All of this work is being coordinated by an 11-member campus/industry Council on Biotechnology. Its members range from campus representatives like Pharmacology's Dr. Johnson to industrial executives like Dr. Davis Temple, vice president for pharmaceutical research and development at the Bristol-Myers Company.

"C.A.T. is entering its second year well-established, off and running with a whole string of potential projects of a quite remarkable character on the drawing boards of faculty/industry project partners," says its director Dr. Koehn. "We look forward to a day when collaboration with industry is as normal a part of our faculty activities as teaching and research."

Rory 'Hawkeye' Aylward:

Polity president aims to bring students, administration closer



The Student Polity Association has a history as long and interesting as the University itself. Each May, a new Council and Senate are elected to represent the students in matters ranging from parking policy to academic standards. The Polity president is in a position to appoint students to University committees, to be recognized as a student leader and to serve as a voice for more than 10,000 undergraduates.

Polity administers a budget of more than $1 million. It sponsors more than 100 student clubs and activities, including WUSB, *Statesman, Stony Brook Press* and Fall Fest.

Polity presidents have come into the office with varying degrees of experience, philosophical beliefs and identification with the average undergraduate.

On May 20, Rory 'Hawkeye' Aylward assumed the position of Polity president. It would not be fair to compare him to previous office holders as each year there are new priorities and certainly the years have brought many changes to student life. There are no causes to unite the student body as in the '60s and '70s; the construction is gone; the war is over. This does not mean that students have no concerns, take life any less seriously, or have no reason to be represented by Polity.

'Hawkeye' Aylward is a 22-year-old senior from Brewster. He is a double major in history and political science and is studying his options for the future. A skydiver, he recently had to give up his plans to join the Navy due to partial color blindness. Why did he come to Stony Brook? "Because it has an excellent academic reputation." Although he feels the size was scary at first, the experience has been worth it. "It's tough to rise above just being a number. You have to go out and make it for yourself."

Hawkeye walks tall, slim, self-confident and sure of the fact that he can make a difference for the current and future students of Stony Brook. Here's what 'Hawkeye' has to say:

Why did you decide to run for Polity president?

Personally, I was fed up with the way things were and saw that Polity was facing a serious credibility problem. I initiated a coalition that worked toward a common goal, which was primarily to improve the perception students have of their government. May people benefit from the student activity fee Polity administers, yet so few people actually get involved in the leadership of the clubs and make decisions. Basically, the ratio of students who potentially benefit is negatively out of proportion to those who control the budgets.

What are your goals for the coming year?

Unlike many candidates, I made only two promises. One is to make Polity more visible. I intend to do this by being a very visible president and letting the students know their concerns are our concerns.

Secondly, I intend to improve people's perception of Polity, not only students, but the administrators and campus community as well....We've got to get talking to each other. For instance, it would be great if we could get the administration to assist us on things we need help on and not always what they think we need help on.

What are the two most pressing issues at Stony Brook today?

The issues are are not as clearly defined as they may have been years ago. Today, it's more attitudinal.

1. Fractionalization of the campus is a major issue as I see it. It comes from the prejudices people bring from their homes and isn't limited to racial. For instance, not many students understand what the AIM (Advancement on Individual Merit) Program is. These students even go through a separate orientation and are not integrated into the regular student body. I'm an AIM student and at first no one believed me because I'm not black. My friend thought it was a major for stupid kids. We need to see ourselves as one campus, one student body.

2. This campus needs to get away from the students versus adminstration orientation. It's like a cold war, except this isn't 1970 and there's no need for it. If a problem does come up, there is an unwillingness to see the other side. Take dorm cooking for example: it's a headache for both sides, no one's happy and no one's listening to the other side.

We are working to open up the lines of communication and have had some luck. We met with Gary Barnes, the director of public safety, to discuss common concerns. The Council also had breakfast with the Residence Life staff and discussed how to improve the dorms. It seems the problem is money, not an unwillingness to work together. Now we can join in the effort to make the state understand our needs.

President Marburger seems like a good man. I hope to work closely with him in getting the University community talking to each other. He's given me no impression that he bears Polity any ill will.

This may sound revolutionary to former Polity people but the world is changing and students are facing different, but no less challenging, situations in the Stony Brook of the '80s. When asked what an alumni association should provide for students, Hawkeye replied very openly, "Career advice. Many of us think we know what we want and find out too late we went about it all wrong. Being able to communicate to alumni who've been there is valuable."

CLASSNOTES

65 ***Richard Gentile*** of the Foreign Language and English Departments, and Antoinette Gentile of the Foreign Language Department of Hicksville Junior High School, have been nominated by the nominating committee of the Long Island Language Teachers as president, and vice president for external affairs, respectively.

66 ***Adrienne (Rubin) Davidson*** has lived with her family in Smithtown for 12 years. She holds an M.L.S. degree from Queens College and has been director of internship placement and head librarian at Friends World College. She is the co-founder of National Career Internship Service in Huntington, a new business which provides career counseling and internship placement for recent graduates and people re-entering the work force, considering a career change, facing unemployment or seeking career advancement.

67 ***Daniel Hwang*** was named vice president of the board of directors of the Security Mutual Life Insurance Co. of New York.

71 ***Manuel Proto*** is doing a fellowship in high risk pregnancies and is a professor at the University of California, Irvine, Medical School. His wife, ***Elizabeth McGuire,*** is a registered nurse. Their daughter, Barbara, is one year old...***Jason Saffer*** is married to Linda Elizabeth Katz. Jason is scripting and hosting a new television program for cable TV called "The Community Health Connection."

72 ***Jeffrey A. Brustein,*** M.D., P.M. & R, has been named medical director of the Garden State Rehabilitation Hospital and Toms River Convalescent Center. He currently serves as assistant attending physician at Community Memorial Hospital...The Addison Central Supervisory Union has announced the appointment of ***Alan B. Myers*** of Newburyport, Mass., as associate superintendent of schools.

73 ***Marjorie F. Bendik*** is moving to California to pursue her career as college administrator in the San Diego area...Dr. ***Hanna Fischer*** is married to Dr. Craig Rice. They are living in San Bruno, Cal....***John Jacobs*** recently won the 1984 Health Writing Award from the Hospital Council of Northern California for his series titled, "Heal Thyself/Why Doctor Training is Sick." He has also been awarded a John S. Knight Fellowship at Stanford University for the coming academic year.

74 ***Helene Becker*** will be working in Italy next year as the recipient of a Fulbright Fellowship. Ms. Becker is a teacher of English as a Second Language at Conard High School and Charter Oak Elementary School...***Susan Francie Horowitz*** received the Juris Doctor degree from Northeastern University School of Law in Boston on May 27...Dr. ***George Ruggi*** has been added to the 1984 edition of *Outstanding Young Men of America* for the third year in a row. The chiropractor was also listed in *Who's Who Among Students in American Universities and Colleges* in 1981.

75 The MIT Press recently published a book by ***Ann Farmer*** titled, *Modularity in Syntax: A Study of Japanese and English*....***James Gannon*** is returning to graduate school for his M.S. degree in special education from Adelphi University.

77 ***Bonnie (Werber) Goldstein*** has been named an account executive for Blair Radio's New York office. The firm is a division of John Blair and Company...***Harvey L. Katz*** of North Woodmere has completed his internship in podiatry...***Raymond P. Kenny*** has completed graduate training in internal medicine at the Mayo Graduate School of Medicine. Dr. Kenny will do a gastroenterology subspecialization at the University of Pennsylvania...Lt. ***Perry N. Glickman*** is an oceanographer in the Coastal and Estuarine Assessment Branch of the National Oceanic & Atmospheric Administration (NOAA), located on the Stony Brook campus.

78 ***Tom Flaherty,*** a cellist, is a member of the Almont Ensemble, a five-member classical music group...***Richard T. Nasti,*** a Yonkers resident, is a top aide to Sen. Alfonse D'Amato. Richard has been named the new regional director of the federal Urban Mass Transportation Administration....***Joel A. Reines*** and his wife, Pnina, have celebrated their 15th wedding anniversary. Joel is hoping to return next year to Stony Brook for his master's degree...Composer-arranger ***Grant Sturiale*** devised the dramatic framework of the show, "Broadway Song Book II," and provided dialogue where needed.

79 ***Zon Eastes*** is the conductor of the junior high string program at Brattleboro Junior High School....***Jay Hochman*** is working on the Inectal-Nav system for the MX-Peacekeeper/Small Missile....***Sly Junger*** eamed his M.D. degree from the Medical College of Virginia in Richmond. After his first year's internship at Henry Ford Hospital in Detroit, Sly will continue into the three year neurology residency program...***Diane Taublieb,***a flutest, has performed in a joint classical recital at the Monmouth County (NJ) Library's Eastern Branch. She is also a member of the Pandean Players.

80 ***Tonia Denise Bandrowicz*** received the Juris Doctor degree from Northeastern University School of Law in Boston on May 27....***Steven Barkan,*** along with two other professors in the Department of Sociology and Social Work at the University of Maine at Orono, have been granted $5,000 by Bread For the World, a nationwide anti-hunger organization, for a major study of its membership....***Mark Demichele*** recently completed the requirements for an M.F.A. in acting/directing from the University of Arizona. This fall Mark will be teaching acting and directing "True West" for Actors Lab Arizona, in Phoenix...After a one-year leave of absence from Harvard Medical School, ***Kevin R. Devey*** will return to Harvard as a fourth-year student and will be graduating with the class of '85, pursuing a career in surgery...***Robert Digennaro*** has been appointed collection manager of the Goodyear Eastern Region, a subsidiary of Citicorp...***David B. Dornfeld*** received the Doctor of Osteopathy degree from the University of New England College of Osteopathic Medicine. He will begin his internship at Doctors Hospital of Stark County, Massillon, Ohio.

81 ***Michael Joseph Heinle*** has completed graduate training in internal medicine at the Mayo Graduate School of Medicine. Dr. Heinle will enter private practice in Alaska....***Dana Dimiti Richardson,*** composer of the piano composition, "Fantacycle," premiered at the Hicksville Library this past spring.

82 ***John K. Keigharn*** and Diane Dobbins were married on May 27...***Rita P. Sakitt,*** a graduate of Montgomery Blair High School and the University of Maryland, has received a full professorship at Suffolk County Community College, Selden, where she teaches sociology and anthropology.

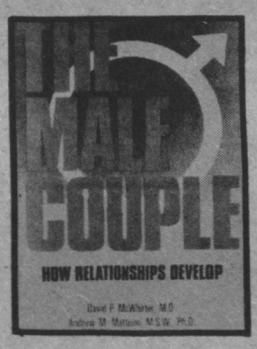
83 ***Jay Abrams*** plans on graduating with a master of science in mechanical engineering from Rensselaer Polytechnic Institute in December....***Michael Aquino*** is currently enrolled in Brooklyn Law School....***Robert Colonna*** is currently enrolled in the management program as an operations specialist for Manufacturers Hanover Trust Company. He married Jolynne Bruno in September. Robert is currently working on an M.B.A. in economics....***Michael Kornfield*** is running for a seat in the New York State Assembly. Politically active for more than a decade, Michael, currently serves on the Suffolk County Democratic Committee....***Claudia Krasner*** is now an assistant in the internal audit department of C. Itoh and Co., a worldwide, Tokyo-based, import-export company....***Jean L. Steinberg*** was recently married to John F. Riley.

Deceased

Edward Wetter '64 on December 10, 1980.

Births

Noah McCartney in April to ***Johnathan L. Segal*** '73 and Carole; Jessica Emma in June to ***Scott Schneider*** '73 and his wife, Miriam Struck; Grant Alexander on April 24 to ***Brenda McAuliffe*** '81 and ***Carl Kessler*** '81; Matthew Cory on December 29, 1983 to ***Allison Steinert*** '80 and Michael Schlein; Jordana Shannon on June 22 to ***Larry Starr*** '74 and ***Cindy Starr*** '75; Doria Gold, to ***Bill Gold*** '70 and Nili.



SB pair publishes study of gay couples

The Male Couple: How Relationships Develop is the title of a book recently published by Prentice-Hall and written by David P. McWhirter, M.D., former Stony Brook infirmary director, and Andrew M. Mattison, M.S.W. '73.

The authors are both with the Clinical Institute for Human Relationships in San Diego and hold clinical faculty appointments at the school of medicine at the University of California, San Diego.

The book is the result of a five-year study of 156 male couples in the San Diego area. It concludes, "Gay men can and do establish long-term committed relationships, which are characterized by stability, mutual caring, generosity, creativity, love, support and nurturing."

Another new book, *Homosexual Acts, Actors and Identities* by Lon G. Nungesser M.A. '83, reports the results of an academic study demonstrating that gays can be understood and defined within the context of the same social/psychological theories that apply to the general population.

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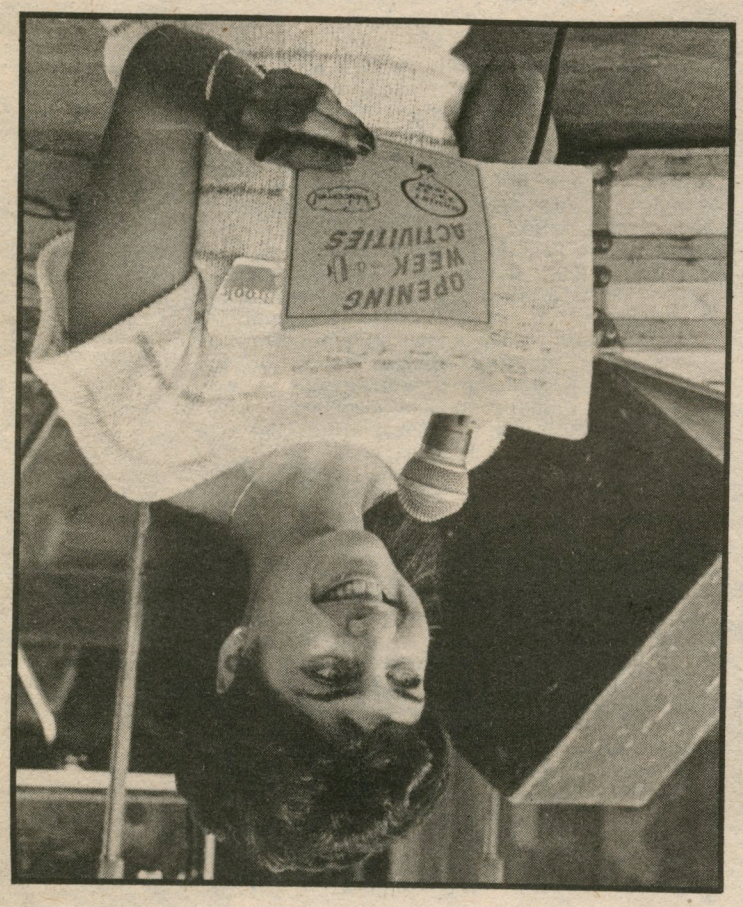

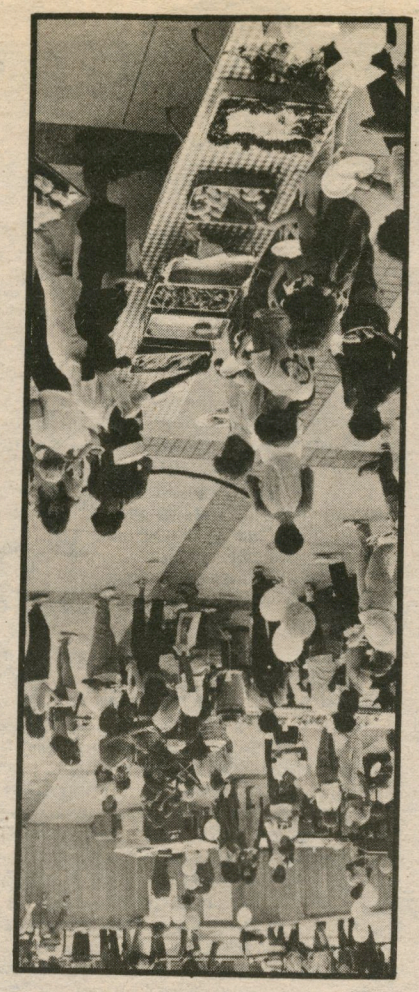

Another year begins
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StonyBrook People

State University
of New York
at Stony Brook

September/October 1984
Vol. 16 #4

Marine scientists: making research count
(pages 4-8)