BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

BNL Research Points to Whitehouse Effect Offsetting the Greenhouse Effect

While other atmospheric scientists worldwide are focusing their research on the increasing concentrations of so-called greenhouse gases that are thought to lead to global warming, Stephen Schwartz is directing his research towards the study of aerosol particles that he thinks are offsetting the greenhouse effect.

Schwartz is a senior chemist in the Environmental Chemistry Division of the Department of Applied Science. His work on a light-reflectivity phenomenon that he calls the "whitehouse effect" was described in an article that he co-authored in the January 24, 1992, issue of *Science*. Entitled "Climate Forcing by Anthropogenic Aerosols," this article is an outgrowth of Schwartz's long-term BNL research on cloud and aerosol chemistry.

Roger Stoutenburgh

Stephen Schwartz (right) discusses latitudinal and seasonal patterns of warming trends with his Department of Applied Science colleagues Richard Wagener and Carmen Benkovitz.

Anthropogenic Aerosols

While aerosol particles, such as dust, spores, etc, are naturally present in the atmosphere, anthropogenic aerosols — those introduced into the environment through human activities such as industrial emissions and energy production — exhibit much greater particle concentrations than natural aerosols. These anthropogenic aerosols are most prevalent near industrialized regions — in contrast to carbon dioxide and other greenhouse gases that are more or less uniformly distributed globally.

Greenhouse gases in the atmosphere trap infrared radiation that would otherwise escape into space, thereby causing the earth to be warmer than it would be otherwise. This is known as the greenhouse effect.

Aerosol particles, natural or anthropogenic, reflect part of the sunlight that is incident on earth back into space. Aerosol particles also serve as the nuclei on which water condenses during cloud formation.

"If we didn't have aerosol particles, we wouldn't have clouds and the weather system as we know it," says Schwartz.

The Changing Weather System

Today, however, the weather system may be changing for two reasons — an increase in the greenhouse effect due to the build up of infrared absorbing gases and an increase in the whitehouse effect due to the build up of aerosol particles — both resulting from human activities.

Schwartz thinks the greenhouse effect is "one of the most seminal issues of the 20th century," though he remains uncertain about the magnitude of global warming trends.

"The computer models used to test the greenhouse theory suggest that if you increase the CO_2 concentration in the earth's atmosphere, then you get an increase in temperature. In fact, they suggest that the increase in temperature should be greater than observed over the past 100 years or so," says Schwartz.

To account for this, Schwartz points to his research: His findings indicate that anthropogenic aerosols in the atmosphere appear to be offsetting global warming caused by anthropogenic greenhouse gases.

One reason for this, Schwartz has found, is that aerosol particles scatter sunlight away from the planet. A second reason is that the concentration of aerosol particles in the air determines the number of cloud drops in a cloud. If there are two clouds with the same amount of water, the one formed in air having more aerosol particles will have more drops. The greater the number of cloud droplets, the brighter the cloud. This means that more sunlight is reflected from the cloud back into space — and the earth is cooled.

(continued on page 2)

Coming Up

The first Aditya Sambamurti Memorial Lecture will be delivered by BNL Physicist John Haggerty on Thursday, July 30, at 11 a.m., in the Physics Seminar Room, Bldg. 510. His talk about rare kaon decays being studied at BNL's Alternating Gradient Synchrotron will honor Sambamurti, a BNL Assistant Physicist who died of cancer this March at the age of 31.

First Goldhaber Prize Awarded

Xiaodong Zhang, a BNL guest junior research associate who has just completed her third year as a physics graduate student at the State University of New York at Stony Brook, has been selected by Brookhaven Women in Science (BWIS) as the first winner of the new Gertrude S. Goldhaber Prize in physics.

Zhang was nominated for the $500 prize by Janos Kirz, a professor of physics at Stony Brook who conducts research at BNL's National Synchrotron Light Source (NSLS) on x-ray microscopy, a technique for producing images of biological specimens. Zhang began working with Kirz's NSLS group after completing her first year of graduate school. As Kirz wrote, "It took her very little time to learn enough to become an important contributor."

Among Zhang's accomplishments, Kirz cited the deconvolution of the point-spread function from the images of the scanning x-ray microscope, her involvement in issues of specimen preparation, and her work with a new form of x-ray microscopy, where chemical differences provide contrast.

"Overall," Kirz noted, "Xiaodong is among the very best graduate students I have had the pleasure to work with . . . I am convinced that she will have an outstanding career as a scientist . . . "

Zhang will receive the prize at an award ceremony in the fall, where she will present a seminar on her work.

Roger Stoutenburgh

Xiaodong Zhang at x-ray microscopy beam line X1A, at the NSLS.

The Goldhaber Prize was established this year to honor Gertrude Scharff-Goldhaber for her outstanding contributions in the field of nuclear physics and for her support of women in science. Now a collaborator in the Physics Department, in 1950, she was the first woman Ph.D. physicist appointed to the BNL staff. She was also a founding member of BWIS in 1979.

Van Slyke Distinguished Lecture

The Global Environment And Human Health

The growing hole in the ozone layer and the growing number of skin-cancer cases, and the increase in air pollution and the increase in the number of asthma patients — these are but two examples of how recent detrimental changes in the global environment may have a negative effect on human health.

"The Global Environment and Human Health" will be discussed in a Labwide lecture of general interest on Thursday, July 23, at 3 p.m. in Berkner Hall. The speaker will be physician Theodor Fliedner of the University of Ulm, Germany, who is the current Donald Van Slyke Distinguished Lecturer visiting BNL's Medical Department.

In light of the recent Earth Summit in Rio de Janeiro and his work for the United Nations and the World Health Organization, Fliedner will address the world's environmental pollution problem in terms of how it impairs global life-support systems and ultimately affects the health of individual human beings. Within this context, he will give examples of the homeostatic mechanisms that are crucial to human survival and health despite adverse environmental conditions.

Theodor Fliedner received his M.D. from the University of Heidelberg, Germany, after which he began pursuing his lifelong interest in hematology and radiation biology.

He first came to BNL's Medical Department in 1957, for a two-year study of radiation-induced hemorrhage. Following the first synthesis of trititated thymidine at BNL, Fliedner began using this compound to study the formation and proliferation of human blood cells. In 1961, Fliedner returned to BNL to continue his work on hematopoietic cell proliferation in health and disease.

Upon his return to Germany in 1964, he founded the Euratom Institute for Hematology at the University of Freiburg. There, his studies demonstrated that the formative blood cell, called the hematopoietic stem cell, is small and similar to a white blood cell.

Moving to Ulm in 1967, Fliedner founded the Department of Clinical Physiology at the then new university, and then served as the university's Rector, 1981-91.

Fliedner's return to BNL as a Van Slyke Distinguished Lecturer is appropriate for two reasons: First, during his tenure at the Lab, Fliedner learned much about the philosophy of research from Donald Van Slyke; and, second, following Van Slyke's death, Fliedner organized a symposium at the University of Ulm in memory of his late mentor.

Donald Van Slyke was a renowned biological chemist, who, after his retirement from the Rockefeller Institute of Medical Research, came to BNL. Here, he organized both the Biology and Medical Departments and served as Associate Director for Life Sciences until 1951. The annual lectureship in his memory was established in 1987, to be presented at the Lab by noted scientists in the biological or medical fields.

To contact Fliedner during his stay, call Eugene Cronkite, Ext. 7538.

Earth and Soil Scientists Attend Hands-On Workshop at NSLS

A hands-on workshop was held June 18-20 at the National Synchrotron Light Source (NSLS) to introduce 68 earth and soil scientists, and ten graduate students to the uses of synchrotron radiation.

During a day of lectures and two days of experimental work at six experimental stations on five different beam lines — X7A, X17B1, X17C, X23B, and X26A — the scientists learned of six synchrotron-radiation techniques: x-ray microprobe, x-ray absorption spectroscopy, diamond anvil cell, large volume press, powder diffraction and microtomography.

Following a tour of each beam line, participants discussed possible experiments and analyzed samples of earth materials, such as rocks, minerals and solids.

The workshop was conducted by the GeoSync Committee, a national synchrotron-radiation users group of earth scientists, and it was partially supported by a grant from the Earth Science Division of the National Science Foundation.

Shown at the superconducting wiggler beam line X17B1 are some of the experiment coordinators (front to back): Steve Sutton, University of Chicago (UC); Don Weidner, State University of New York (SUNY) at Stony Brook; Dave Cox, BNL; Per Spanne, BNL; Sasa Bajt, UC; Mark Rivers, UC; and Mike Vaughan, SUNY at Stony Brook.

— Photo by Roger Stoutenburgh

Whitehouse (cont'd)

"If you fly in an airplane over the eastern part of the United States, for example, and look out your window," says Schwartz, " you see haze, which is made up of aerosol particles. This haze obscures the surface of the earth. What that means is that some of the incident sunlight is being reflected back into space. In the absence of these particles, more sunlight would be hitting the earth's surface and heating up the earth-atmosphere system."

Schwartz adds, "If you lived in the tropics, you would paint your house white so that it wouldn't absorb so much sunlight. What we're doing is effectively painting the planet white with aerosols. Hence, the name 'whitehouse effect'."

In his research into the whitehouse effect, Schwartz and his colleagues have been using computer models to study the patterns and trends of aerosol concentrations. Additionally, they have been charting temperature trends in relation to these patterns. Supporting the whitehouse theory, their research has found that the northern hemisphere, which has many more industrial emissions than the southern hemisphere, exhibits different warming patterns from the southern hemisphere. In particular, the rate of warming in the summertime, when the light scattering is greatest, is much less than in the winter.

Although Schwartz's whitehouse theory is still being researched, his findings so far do not leave a comforting message. "If this theory is accurate, then the current greenhouse effect is a lot worse than indicated by the temperature record over the industrial era because greenhouse warming is being masked by the whitehouse effect."

According to Schwartz, his research is slowly being accepted by the climate modeling community.

"One reason this effect has received less attention than the greenhouse effect is that the aerosol findings are relatively recent. Another is that the whitehouse effect is more difficult to describe in climate models." So, Schwartz and his colleagues are working on improved methods to incorporate these phenomena in climate models.

Schwartz's research is supported by the U.S. Department of Energy's Office of Health and Environmental Research, which aims to understand the environmental consequences of energy-related activities.

— Lorraine Madigan

CDC Kindergarten a Go

A meeting to provide employees with information on the new on-site kindergarten for their up and coming five-year-old children will be held Thursday, July 23, from noon to 1 p.m. in Room A, Berkner Hall.

The meeting is open to the parents of the 12 children already signed up for BNL's kindergarten, as well as parents who are still considering this education option for their children. Spaces are available.

To be staffed by a certified elementary education teacher licensed by New York State, the kindergarten will be run by Child Care Management, Inc., the same organization that operates BNL's Child Development Center. The kindergarten will be held in Bldg. 370 on Yale Road in the apartment area. Formerly a research facility known as the Arkansas house, this building is being refurbished into a one-room, little red school house.

To begin on Wednesday, September 9, the full-day kindergarten will run from 8 a.m. to 5:30 p.m., Monday through Friday. While open year-round except for a vacation week between Christmas and New Year's Day, the kindergarten will follow the same schedule as public school, offering day care during school vacation and holidays.

During a school day, between the hours of 9 a.m. and 3 p.m., the children will work through a kindergarten curriculum designed following the guidelines of the National Association of Young Children. From 8-9 a.m. and from 3-5:30 p.m., the children will be provided with day care.

The cost will be $525 per month, which includes a morning and afternoon snack, and milk and juice at lunch. Children will bring their own lunch.

The aim of the kindergarten will be to prepare the children for first grade, intellectually, emotionally, socially and physically. This will be accomplished by learning involving developmentally appropriate activities and equipment, including play with blocks, sand and water; work with computers; and self-expression through art, dramatic play and music.

Other activities will involve the children in language and literacy, simple math problems and simple scientific inquiry.

In addition, the multicultural and nonsexist curriculum will encourage the children to appreciate the similarities and differences of people. Learning to cooperate and negotiate in large and small groups will also be stressed in developing interpersonal skills, as well as learning to work alone in developing a sense of self-esteem.

Parents will be kept up to date on their children's progress through a narrative report and two conferences.

For more information about the kindergarten before the July 23 meeting, contact Susan Foster, Ext. 2888.

In Memoriam

BNL's second oldest retiree **Ole A. Ingbretsen** died at the age of 96 on April 17. A carpenter by trade, he began his 14-year association with Brookhaven during its first year, on October 28, 1947. At the time of his retirement on December 29, 1961, he was a carpenter leadman in the then Plant Maintenance Division. A former resident of Center Moriches, Ingbretsen is survived by his son Harold, his daughter Sue Christopherson, six grandchildren, two great-grandchildren and two sisters.

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Former Senior Administrative Assistant **Irene G. Steele,** who had retired from the Department of Nuclear Energy after 36 years of service to the Lab, died on May 13 as a result of a lengthy illness. She was 72. In the Lab's first year, she had been hired as a secretary in the Biology Department, on July 14, 1947, and she retired on June 30, 1984. Her survivors include her stepdaughter, Patricia Steele Marx; her niece, Anne Zeiher; one grandnephew; and two grandnieces.

Inside Info

Sharon Smith, Head of the Oceanographic & Atmospheric Sciences Division in the Department of Applied Science, received a medallion from the National Science Foundation (NSF) recently, to thank her for the time and effort she put in as a member of the *Nathaniel B. Palmer* Oversight Committee.

The *Nathaniel B. Palmer* is a new research vessel that was dedicated in April. The committee on which Smith served met six times during the course of the ship's design and construction, and requested over 50 changes, both large and small. The committee also provided advice on staffing and outfitting the vessel, and on safety and operational strategies.

In presenting the medallion, Peter Wilkniss, Director of the NSF's Division of Polar Programs, said, "Your advice and experience has added immeasurably to the working capability of the *Nathaniel B. Palmer*. You were able to provide significant assistance in transforming a preliminary design into a finished product that is ideally suited to oceanographic work in the Antarctic and should serve as a model for future similar purpose vessels."

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Geoffrey Hendrey, a student intern with BNL's Center for Accelerator Physics (CAP), has been named the national winner of the Space Science Student Involvement Program Wind Tunnel Competition, sponsored by NASA and the National Science Teacher's Association.

The son of Ecologist George Hendrey, Department of Applied Science, Geoffrey is a junior at Shoreham-Wading River High School. He has interned with Harold Kirk at CAP's Accelerator Test Facility for the past two years.

"I spoke with many different people at the Lab, which helped me in my thought process and gave me ideas for a proposal to present for the competition," says Hendrey.

The purpose of the contest is to propose ideas for the Wind Tunnel Facility in Langley, Virginia. Hendrey won the contest with a proposal to test shapes for astronomical observatories "to determine which shape created the least turbulance when it was opened."

Hendrey's award was an invitation to tour NASA's wind tunnel facility in Langley for one week in early September.

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For developing microorganisms to detoxify geothermal wastes, **Eugene Premuzic**, Deputy Head of the Biosystems and Process Sciences Division in the Department of Applied Science, has been honored by Renew America, an environmental organization based in Washington, D.C.

Premuzic was awarded an achievement certificate endorsed by 28 leading national environmental groups, and his research project will be listed in the *1992 Environmental Success Index*, a directory that includes some 1,600 scientific projects so honored over the last three years.

Geothermal energy — heat derived from deep beneath the earth's surface — is used to heat homes and produce electricity in parts of the western U.S. and in several other nations.

Premuzic and his team have developed microorganisms that can remove toxic metals from solid geothermal wastes. The detoxified wastes can then be returned to the ground, or even used in construction materials. Separated from the wastes, the resulting concentrated metals, such as gold, silver, chromium and copper, can be processed for commercial use.

Note to Employees:

Attendance at lectures, meetings and other special progams held during normal working hours is subject to supervisory concurrence.

Free Ice Cream

Summer got off to a great start on June 20 and so did the Bulletin's fifth annual Scoop of the Week Contest — but where are the scoops?

If you want free ice cream, yogurt or another frozen dessert, the Bulletin is willing to trade you for your hot tips — leads on BNL news or features. If you scoop the Bulletin's informed sources and a story based on your idea is published, then you'll receive a certificate for a free frozen treat, redeemable at the Cafeteria or from the ice cream truck, courtesy of Service America Corporation.

So what are you waiting for? Rush your hot tips to the Brookhaven Bulletin, Bldg. 134, or call Ext. 5053.

AutoCAD Training

The CADCAM Group of the Computing and Communications Division will offer basic training in design and drafting using the AutoCAD design system. Class size is limited, and reservations are required. For more information, call Chris Neuberger, Ext. 4160.

Cafeteria Menu

Monday, July 20	
Soup: Chicken gumbo	.80/1.10
Entree: Western Mexican chicken	3.35
Entree: Baked fish w/herbs	3.45
Fitness: Chef's choice	3.20
Carvery: Hot pastrami sandwich	2.95
Grill: Sloppy Joe	2.95
Special: Hot dogs by the ounce	
Tuesday, July 21	
Soup: Navy bean	.80/1.10
Entree: Shepherd's pie	3.20
Entree: Seafood Newburg over rice	3.45
Fitness: Chef's choice	3.35
Carvery: Hot roast beef sandwich	2.95
Grill: Reuben	2.95
Special: Fruit by the ounce	
Wednesday, July 22	
Soup: Egg drop	.80/1.10
Entree: Rib eye steak	3.65
Entree: Chicken Parmesan	3.35
Fitness: Chef's choice	3.20
Carvery: Hot baked ham sandwich	2.95
Grill: Monte Cristo	2.95
Special: Tacos by the ounce	
Thursday, July 23	
Soup: Beef noodle	.80/1.10
Entree: Southern fried chicken	3.35
Entree: Sweet & sour pork	3.35
Fitness: Chef's choice	3.20
Carvery: Corned beef sandwich	2.95
Grill: Philly cheese steak	2.95
Special: Stuffed potatoes by the ounce	
Friday, July 24	
Soup: Seafood bisque	.80/1.10
Entree: Swedish meatballs w/noodles	3.20
Entree: Baked fish	3.45
Fitness: Chef's choice	3.20
Carvery: Turkey sandwich	2.95
Grill: Tuna melt	2.95
Special: Hot dogs by the ounce	

MOVIE . . . Parenthood
Wednesday, June 22 . . . 8 p.m
Center Club

Breakfast w/coffee & small juice 2.75

Mon.: 2 eggs, bacon, pancake, home fries
Tue.: Western omelet, home fries, toast
Wed.: Spanish omelet, home fries, toast
Thu.: 2 eggs, bacon, cheese on croissant, fries
Fri.: French toast, 2 eggs, bacon, home fries

Arrivals & Departures

Arrivals

Roger J. Bonati.....AGS
Joseph Greco Jr......Accel. Dev.
Robert M. Reynolds.....App. Science
Carissima M. Vitus.....App. Science

Departures

This list includes all employees who have terminated from the Lab, including retirees:

Walter Saunders.....Plant Eng.
Linda G. Siders.....Accel. Dev.
Zhengquan Tan.....Plant Eng.

BROOKHAVEN BULLETIN

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The picnic will be held, rain or shine, from 11 a.m. to 7 p.m., with refreshments, games, races, softball, tennis, volleyball and all sorts of fun — which includes just sitting and relaxing. Bring your own food or buy hot dogs, hamburgers, etc. Ticket sales are limited, so buy yours soon! At $3 per person, free for children under three, tickets are being sold first come, first served at the BERA Sales Office at Berkner Hall, Ext. 3347; and by Michelle Cummings, Ext. 2077; Renée Flack, Ext. 3316; Liz Mogavero, Ext. 3940; Betty Pergan, Ext. 2937; and Rosalie Piccione, Ext. 3160.

Special Invitation To Summer Visitors

Students and other summer visitors are invited to enjoy a special trip to New York City on Saturday, August 1. The modest cost of $20 includes bus transportation on a luxury air-conditioned coach, on-board breakfast, a 90-minute cruise of New York Harbor, a visit to the South Street Seaport with three free hours in the Seaport Mall, and a two-and-a-half-hour visit to Chinatown.

Sponsored by the Office of Educational Programs, the bus will leave from the Brookhaven Center promptly at 8:30 a.m. Seats are limited and will be allotted first-come, first-served. To reserve your seat, bring $20 — cash only — to Renée Flack, Science Education Center, Bldg. 438, Ext. 3316, no later than Friday, July 24.

Hospitality News

The next meeting of the Women's Forum conducted by Marion Davis-Parzen will be Tuesday, July 21, at 10 a.m., in the playground in the apartment area.

The forum meets every third Tuesday of the month, to discuss women's issues, and to share experiences and concerns. Wives of Lab employees and guests are welcome. Bring the children.

Addled Addresses

- Brook heaven National Laboratory Research Library
- Brookeron Natl Lab General Delivery
- Brookhaven Nution Lab
- Association Universities, Inc.
- The Brodeliaven National Laboratory
- Brookhaven National Lab Division of Vocation
- Brooken National Laboratory
- Working Natl Lab
- City of Upton William Floyd Pkway
- Book Heaven National Laboratory

Stony Brook Events

The annual International Theatre Festival at the State University of New York at Stony Brook's Staller Center will feature the following five professional productions, all starting at 8 p.m. For tickets, call the box office, 632-7230 or 632-7227.

- **The Russian Clowns, July 22-26** — These seven crazy dreamers will forever change your ideas about clowns.
- **Up 'n Under, July 29-August 2** — Britain's Hull Truck Theatre Company performs John Godber's comedy about a rugby team that prefers the pub to the playing field.

Get in the Swimarathon '92 For the American Cancer Society

On Saturday, August 8, see how far you can swim in the Lab pool and how much money you can raise for the American Cancer Society (ACS), during the third annual BNL Swimarathon sponsored by the Brookhaven Employees Recreation Association (BERA).

From 9 a.m. to 9 p.m. that day, swimmers may put in as many laps as they can — and take breaks between sets of laps. Since Swimarathon '92 is not a race or an endurance test, all participants may go a good distance to raise money for a worthy cause by swimming discontinuously as much as they wish over those 12 hours.

The BNL Swimarathon is open to BERA members, both individual and team swimmers. If enough swimmers from one department, division, group or club wish to sign up as a team, they may do so.

In turn, each swimmer or team will be asked to sign up sponsors who will pledge money per lap. The total donation that each sponsor makes based on the number of laps swum will be a tax-deductible contribution to the ACS. Flat donations are also welcome and tax deductible.

In addition to swimmers and sponsors, Swimarathon '92 needs volunteers to check in swimmers, count laps, serve the free food and refreshments, and keep the music playing.

For their in-the-water or on-land efforts, all participants will be awarded commemorative T-shirts, donated by the ACS.

To sign up to swim or to help during the BNL Swimarathon, use the coupon below, or use the forms available at the pool, Bldg. 478; the BERA Sales Office, Berkner Hall; or the Recreation Office, Bldg. 185. Send completed registrations to M. Kay Dellimore, Recreation Supervisor, Bldg. 185. Sponsor sheets will then be sent to each registered swimmer.

Classified Advertisements

Placement Notices

The Laboratory's placement policy is to select the best-qualified candidate for an available position. Consideration is given to candidates in the following order: (1) present employees within the department/division and/or appropriate bargaining unit, with preference for those within the immediate work group; (2) present employees within the Laboratory; and (3) outside applicants. In keeping with the Affirmative Action plan, selections are made without regard to age, race, color, religion, national origin, sex, handicap or veteran status.

Each week, the Personnel Division lists new placement notices. The purpose of these listings is, first, to give employees an opportunity to request consideration for themselves through Personnel, and, second, for general recruiting under open recruitment. Because of the priority policy stated above, each listing does not necessarily represent an opportunity for all people.

Except when operational needs require otherwise, positions will be open for one week after publication.

For more information, contact the Employment Manager, Ext. 2882, or call the JOBLINE, Ext. 7744 (282-7744), for a complete listing of all openings.

(continued on page 4)

BNL Swimarathon '92

Sponsored by the Brookhaven Employees Recreation Association to benefit the American Cancer Society

Name _____ Life No. _____

Department/Division _____ Bldg. _____

Ext. _____ Fax _____ Home tel. (optional) _____

Swimmers — I am signing up to swim laps as a(n)

[ ] individual [ ] team member _____
name of team

Helpers — I volunteer to help during the

[ ] morning [ ] afternoon [ ] evening

Return form to: M. Kay Dellimore, Recreation Supervisor, Bldg. 185.

Classified Ads (cont'd)

SCIENTIFIC RECRUITMENT - Candidates may apply directly to the department representative named.

POSTDOCTORAL RESEARCH ASSOCIATE - trained in molecular biology with experience in DNA cloning, sequencing and expression, to conduct research on regulatory enzymes associated with photosynthetic membranes. Previous experience with in vitro mutagenesis and a strong interest in protein structure/function relationships are desirable. Contact: Geoffrey Hind, Biology Department.

POSTDOCTORAL RESEARCH ASSOCIATE - trained in protein biochemistry with experience in protein purification, peptide analysis and analysis of terminal covalent modifications, to conduct research on proteins associated with stromal surface of the thylakoid membrane. Experience with phosphoproteins is desirable. Contact: Geoffrey Hind, Biology Department.

LABORATORY RECRUITMENT - Opportunities for Laboratory employees.

DD 1039. SECRETARIAL POSITION - Requires an AAS in secretarial science or equivalent experience, and broad knowledge of Laboratory policies and procedures, as well as excellent oral and written communication skills. Will provide varied secretarial support such as processing technical reports and administrative paperwork for the Chemical Sciences Division. WordPerfect 5.1 for Windows experience is required. Department of Applied Science.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside candidates.

LF 2335. TECHNICAL POSITION - Requires an AAS, experience with handling heavy components with machine-shop tools, assembly and maintenance of pressurized gas-handling networks, and operation and maintenance of electromechanical devices. Safety and quality-assurance awareness, experience with computerized data acquisition, and knowledge of chemistry is desirable. Will assist in operation of combustion research facility. Duties include preparation of experiments, maintenance and testing of facility components, and calibration of instrumentation. May direct and coordinate the work efforts of other technical-support personnel assigned to the project. Department of Nuclear Energy.

NS 0612. NUCLEAR REACTOR OPERATOR TRAINEE - Requires an AAS or equivalent experience in reactor operations as well as demonstrated mechanical ability. Previous reactor experience desired; naval reactor experience preferred. Must be able to obtain and maintain a security clearance. Must be able to work rotating shifts. (reposting) Reactor Division.

NS 0644. REACTOR SHIFT SUPERVISOR - Requires bachelor's degree in engineering or a related field and a minimum of five years' technical experience. Mechanical aptitude, supervisory skills and a willingness to work rotating shifts required. Previous power plant experience desirable; naval or commercial reactor experience or maritime experience preferred. Must be able to obtain and maintain a security clearance. (reposting) Reactor Division.

Motor Vehicles & Supplies

91 MITSUBISHI ECLIPSE TURBO - Amazon blue, loaded, w/sunroof, 5.5k mi., 2 mos. old, asking $16,500. Sean, 666-5848.

90 GEO PRISM - 4-dr. sedan, a/t, p/s, p/b, cass., ac, 55k hwy. mi., excel. cond., $6,750. 331-8170.

89 GEO METRO - 5-spd., 4-dr., red, ac, am/fm ETR, $2,995. Joe, Ext. 2898.

89 DODGE RAM CHARGER - ac, a/t, 318 V-8, p/b, extras, 19.4k mi., $9,500. 369-3899.

89 DODGE CARAVAN - a/t, ac, 5-pass., p/l, cruise, tint, rear window wiper, $7,900. 369-0432.

88 MAZDA PICKUP - low mi., am/fm stereo, ac, f/g cap, bedliner, excel., $5,250. Jim, 467-7556.

87 OLDS DELTA 88 ROYAL BROUGHAM - full power, garaged, 38k mi., extra clean, $7,300. Carole, Ext. 7100 or 924-4097.

86 PONTIAC 6000 - 4-dr., a/t, ac, cruise, p/windows, am/fm stereo cass., good cond., $2,850. Tom, 661-5695.

85 DODGE ARIES WAGON - good body, engine runs, has bad cyl., p/s, p/b, ac, 79k mi., asking $700. 878-8847 after 3 p.m.

85 FORD ESCORT - h/b, white, a/t, p/s, p/b, 80k mi., $900 neg. Vish, Ext. 3087.

84 HONDA ACCORD - maroon, 2-dr. h/b, 5-spd., am/fm cass., new tires, clutch, brakes, looks great, runs well, $2,900. Tom, Ext. 7196 or 286-2505.

81 CADILLAC SEDAN DEVILLE - loaded, new tires & radiator, good cond., $2,000 neg. 475-8242 wknds. or leave message.

81 DODGE ARIES - s/w, 4-cyl., p/s, p/b, great family car, $550 neg. Mitch, Ext. 4212 or 928-7732.

81 CUTLASS - rebuilt V-8 & trans., all power, $2,700. 281-7935 eves.

81 HONDA PRELUDE - blue, 104k mi., a/t, ac, sunroof, recent front tires & struts, very dependable, $2,200. Bob, Ext. 5689.

80 VW RABBIT - diesel, good mpg, runs well. Phil, Ext. 4216 or 654-3732 after 6 p.m.

79 FIREBIRD FORMULA 301 - V-8, orig. owner, high mi., runs well, looks good, $950 or best offer. Ron, Ext. 2175 or 269-9542.

77 MINI WINNIE - 25', sleeps 5, loaded, 49k mi., $8,000 neg. 878-2040.

71 GMC VAN - 8-cyl., needs brake line, runs well, best offer. Bill, Ext. 7230 or 924-5505.

69 CHEVY C-20 - 8-cyl., a/t, 8' bedliner, toolbox, cap, extras, $1,000. Dan, Ext. 4095 or 874-2838.

69 CHEVY CAMARO - classic, R/S, $1,000. Jim, Ext. 3372 or 821-0250.

67 MUSTANG - white, orig. 289 eng., body good cond., int. needs work, $4,500. Wayne, 698-2798.

29 WILLYS KNIGHT - 4-dr., orig., runs & drives well, spare engine, $2,900. Andy, Ext. 7666.

NOSE - complete, for '74 Chevy Monte Carlo, asking $150. Bill, Ext. 2214.

CAR RADIOS - 2 am/fm stereo, fit GM late model cars, $45 ea. Walt, Ext. 7154.

RIMS - Chevy, 15"x7", 6-lug, alum., dish, $75/4. Jim, Ext. 4026.

TIRES - 195-70HR-14, steel-belted, new, $20; 950-16.5 Dunlop, truck, good cond., $35. Bob, Ext. 5010.

RAMPS - steel, good cond., $10. Victor, Ext. 2395.

Boats & Marine Supplies

22' MARSHALL CATBOAT - freshwater-cooled Yanmar diesel, VHF radio, depth sounder, Danforth compass, head. Gordon, 477-2269.

19' STINGRAY - cuddy cabin, loaded, show model, 140 i/o, low hrs., showroom cond., Coast Guard pkg., sleeps 4. John, Ext. 3499.

18' KLEPPER KAYAK - double fg, w/rudder, mast step, $400. Ext. 7657.

16' GLASPAR - 35-h.p. Evin., tilt trailer, ready for water, good shape, elec. start, lights, maint. free, $650. Tony, 281-2513.

16' BOWRIDER - f/g, 65-h.p. Evinrude, galv. trailer, p/winch, $1,100. Jim, Ext. 3372 or 821-0250.

12' MINI FISH SAILBOAT - good cond., w/ballon rollers. 727-8631.

LORAN - Simrad, old but reliable, TDs only, has all connectors, manuals, etc., $75; windsurfer, v.g. cond., w/harness, $215. Ext. 4168.

Furnishings & Appliances

COUCH - 72", beige, $95; wall unit, 3" shelf, $20; patio umbrella, $20; ottoman, $20; maple end table, $20. Kathy, 744-2203.

COUCH - Ethan Allen, 7', excel. cond; GE freezer, 15 cu. ft. 325-0447.

DINETTE SET - contemporary, almond mica, 6 mauve chairs, like new, $150. 286-7122.

DINING ROOM SET - cherry, 6 chairs, table, china closet, buffet, $1,500. Ext. 4519 or 924-6051.

DINING ROOM SET - table w/2 leaves, 6 chairs, china closet, asking $125; rolltop desk/bar, $50. Bob H., Ext. 4446 or 654-3989.

DINING ROOM SET - early American, trestle table, 2 leaves, 4 chairs, deacon's bench, breakfront, dry sink, ask. $900. Rhoda, 921-1962.

DISHWASHER - Hotpoint, portable, w/butcher-block top or converts to under-the-counter, excel. cond., $85. Bill, 924-5505.

ELECTRIC RANGE - Kenmore, 2 ovens, self-cleaning, $25. Roger, Ext. 7518.

FILE CABINETS - 4-dr. & 2-dr., heavy steel,, good cond., $40 & $20. Bob, Ext. 5010.

MATTRESSES - queen, $150; twin, $75; shelf, $30; foldable table w/chairs, fabric padding, $45; utility carts, $10/ea. Wen, Ext. 3723 or 928-7083.

REFRIGERATOR - Whirlpool, self-defrost, 20 cu. ft., best offer; misc. tables, $100; cocktail & end tables, $35. Irving, Ext. 2827 or 423-8384 eves.

SOFA & CHAIR - Col., 2 sets slipcovers, blue/white, beige/white, good cond., $425. Ext. 4697 or 744-9423.

SOFA BED - tan, armchair, coffee table, $80. Vincent, Ext. 4706 or 588-0874.

STOVE - elec. range, 220V; kitchen metal cabinets, tables, bedroom furniture, misc. toys, exercise rower. Mitch, Ext. 4212 or 928-7732.

TABLE - round, wood, folding sides, light chestnut, 2 chairs, orig. $95, sell for $65 firm. 474-3799 afternoons.

TABLE - beautiful, thick, dark pine, 6'x3', two 1' leaves, china closet, serving table, new cond., $1,000. Saxon, 929-4701.

WATER BED - solid oak, queen, w/drawers, motionless, $300 neg. John, Ext. 3499.

Tools, House & Garden

CHAIR LIFT - Stair-O-Lator, 1/3 h.p., 115 Vac, fits on side of existing stairs, best offer. Ray, Ext. 3695.

DOOR - rear wooden door, 3 light, 32"x78", $10; 3 storm/screen triple track windows, white, 32"x51½", $10/ea. Bill, Ext. 2022.

FAUCET - kitchen, model 5996, Kohler Epicure, single lever, chrome; model 5922, double sink, gray, 33"x22", $600. Jose Sanchez, 399-1868.

FIREWOOD - seasoned locust, you pick up, $100/cord; push lawn mower, $7; bedroom set, $95; Surdiac coal stove, excel., $200. 878-6637.

GARAGE DOOR OPENERS - one 1/3-h.p., not working, $10; one ½-h.p., works, needs some parts, $20, both Sears. Victor, Ext. 2395.

LAWN MOWER - Snapper, 26", riding, grass catcher, needs work, no reverse, otherwise good, $175 neg. Walt, Ext. 7154.

MAPLE TREES - Japanese red, $10-$45+; Sears riding tractor, 12 h.p., 4' deck, snow blower, batt. start, tow trailer. Mauro, 265-6542 after 6 p.m.

POOL - 12'x36", SLM, used 1 season, in box, access., filter, etc., $80. Ray, Ext. 3680.

SHOWER BASE - 38", corner, fg, white, new, orig. $200, now $100 or best offer. Sue, Ext. 3492 or 289-6844.

SHUTTERS - louvered, 6' long, new, painted white, $5/ea. 727-8631.

Sports, Hobbies & Pets

BIKE - 16", girl's, white, $35. Paul, Ext. 4156.

BIKE - Cilo, model Sport-SE, SIS gears, used twice, 30 miles, $250; Cilo helmet, $50. Larry, Ext. 4295.

BIKES - 1 Mongoose, 20", $45; CA1-Mongoose, $200; GT Performer, $120. George, Ext. 4453.

BICYCLES - 3-spd., $35, 1 spd., $25, both women's. Ext. 3701.

BICYCLE - Columbia, 20", girl's, good cond., $25. Ext. 7459 or 567-9025.

BICYCLE HELMETS - Giro, metallic red, large, $50; Bell Tourite, large, $10. 473-2473.

CAMERA - 35mm, Pentax 1000, w/adjustable focus, carry case; 12" b&w TV; GE VHS recorder/player. Kathy, Ext. 2267.

CAMERA - Nishika, 35mm, 3-D, case, flash, instruct., brand-new, $350 neg.; child's 35mm, Vivitar, $15; auto. flash, $20. Angela, Ext. 7321.

DACHSHUND PUPPIES - minis, brown, red, black, 4 males, 1 female, papers, shots, born 6/18, excel. temperment, $300. B. Palmer, 821-2854.

EXERCISE BICYCLE - clone of Tunturi, ergometer, w/40 lb. flywheel, speedometer, mech. energy computer, runs well, $100. Ext. 7196 or 286-2505.

EXERCISER - 2-spd., motorized, good cond., $50. Victor, Ext. 2395.

FISH TANK - 27 gal., hexagon, w/magnum motor, supplies; 125 Sega game system, gun & cartridge, $85; Kodak disc camera, $10. Tracy, Ext. 5864.

ORGAN - electric, solid state, wood cabinet, dual keyboard, bass, foot paddles, 10 instruments, Vibratox cords, $75. Joe, Ext. 4786.

PARROT - African Grey, book, leg banded, perch trained, $450. 281-3515.

POOL COVER - for 18' pool, $20. Paul, Ext. 4156.

R/C HELICOPTER - Futaba 7-channel radio; official size lacrosse goal & helmet, must sell all. Joann, 472-6742.

SCUBA FINS - great shape, $25. 369-0432.

Audio, Video & Computer

NINTENDO - $50; 5 games, $10/ea.; $80/all. Ext. 7505 or 689-8605.

TV - 17", color, works well, but needs color adjustment, $15. Paul, Ext. 4156.

Miscellaneous

AIRLINE TICKET - one way, Islip to San Francisco, Sept. 1, $105, $25 to change date. 929-8443.

ALBUMS - rock, jazz, popular, progressive rock, etc., $4/new, $3/used. 474-3799 afternoons.

PORT-A-CRIB - wood, new matt., bumpers, $40; infant & toddler tubs, $12/both; highchair, $35; walker, $35; playpen, $25; car seat, $20. 821-0125.

ELECTRIC BLANKETS - twin, $8; queen, $15; queen floral blanket, $5; assorted bath towel sets, $4/set. Henry, Ext. 5214 or 727-7227.

SLIDE RULES - 10" and 20", log/log duplex, ivory/wood, good cond., 20" $50, 10" $20, leather case. Ernie, Ext. 7632.

TICKETS - Paula Abdul & Color Me Badd, Jones Beach, tonight July 17, 3 orch. seats, $95. Mike, Ext. 7941.

Free

PAPERBACK BOOKS - 474-3799.

BUNNIES - gray, buff, brown, ready to go, male & female. 589-0255.

TABBY KITTENS - healthy. 751-3203.

FEMALE DOG - 8 mo. old, neutered, has all shots, for loving home. Kelly, 563-6062.

Lost & Found

LOST - gold earring, in women's locker room, 703. Joanne, Ext. 3711.

Car Pool

QUEENS - Throggsneck Bridge, 2-person car pool needs more members. John, Ext. 7669.

Real Estate

Real Estate advertised for sale or rent is available without regard for the race, color, creed, sex or national origin of the applicant.

For Rent

BROOKHAVEN HAMLET - 1-bdrm. apt., l/r, kit., fully tiled bath, furn. or unfurn., cable TV, priv. ent., immaculate, no pets, mature single only, $575/all. Fred, Ext. 4798 or 289-4798.

COMMACK - new kit., l/r, bdrm., bath, pvt. ent., avail. 8/1, $650/all. 543-4960.

CORAM/MT. SINAI - studio, kitchenette, full bath, fp, pri. ent., free cable. $500/all. 696-3782.

EAST SETAUKET - 1-bdrm. apt., l/r-kit. combo, ground floor, sep. ent., w/d, w/w, newly painted, no pets, $650/single, incl. util. 751-6091.

HOLBROOK - 1-bdrm. house, unfurn., 20 min. to Lab, near stores, nonsmoker, no pets, $680/mo., + util., sec., light maintenance. F. Kuehl, Ext. 7947 or 588-2268.

MILLER PLACE - 3-bdrm. house, 2 baths, l/r w/fp, eik, d/r, computer rm., n. side of 25A, avail. 7/6, $1,200/mo. + elec. Sue, 928-7571 after 6 p.m.

MILLER PLACE - 1-2 bdrm. apt., bath, l/r, kit., pri. ent., cable, use of yard, w/d, avail. 8/20, $575/mo. + elec. Mitch, Ext. 4212 or 928-7732 after 6 p.m.

NORTH PATCHOGUE - 1 bdrm., bright, patio, pri. ent., pool, $600/all. 654-5607.

PATCHOGUE - 1-bdr. apt., $600/all. 363-7032.

PORT JEFFERSON STATION - cozy 1-bdrm. apt., priv. ent., ground level, $500/mo. incl. elec., water & heat. 757-1973.

PORT JEFFERSON - large furn. room, nonsmoker, clean, quiet, $100/wk. 473-6432.

RIDGE - studio apt., furn., fenced-in yard, 3 mi. from Lab, $485/mo. Carol, Ext. 2673 or 744-8632.

RIDGE - studio apt., all new, priv. ent., secluded yard, w/w, cable, must see, nonsmoker, $550/mo. Karen or Jim, 924-6885 after 5 p.m.

RIDGE - 2-bdrm. condo, 1½ baths, l/r, d/r, kit., fully carpeted, w/d, $750/mo. Kathy, Ext. 2267 or 395-6520 after 6 p.m.

ROCKY POINT - 2 bdrms., patio, garage, appli., laundry, comfortable & quiet, 1 block to beach, no pets, $750+. 744-3021.

SELDEN - studio apt., priv. ent., kit., close to shops, $550/mo. pays all, 1 mo. sec. 689-1539.

SHIRLEY - 3-bdrm., l/r, d/r, full fin. bsmt., lg. fenced yard, quiet neighborhood. 399-0742.

SHIRLEY - 2½-rm. apt., priv. driveway & ent., single employed person, nonsmoker, responsible, $450/mo; 1 bdrm. at $85/wk. Helen, 281-6263.

SOUND BEACH - 1-bdrm. full bath, kit.-l/r combo, cable, priv. ent., $600/mo. incl. all; also 2-bdrm. apt., l/r, kit., bath, near shops, beach, $650+elec. Jutta, Ext. 2671 or 744-3284 after 6 p.m.

SOUND BEACH - 2-bdrm. house, Miller Place schools, $750/mo. + util., avail. in Sept. 744-3502.

S. JAMESPORT - 3 bdrms., l/r, d/r, kit., util. rm., porch, walk to beach, no pets, $650/mo. + util. Walt, Ext. 2241 or 698-0576 or 722-5801.

STONY BROOK - 4 bdrm., completely furn., newly renovated, ac, fp, 1 mi. to SUNY, for 1 yr., avail. late Aug., ask. $1,600/mo. 751-1291.

STONY BROOK - 1-bdrm. apt., furn., suitable for prof. couple or single, 2nd floor of priv. home, eik, l/r, cable, nonsmoker, no pets, quiet neighbor, $700/mo. Paul, 751-2149.

WADING RIVER - 3 bdrm., secluded, wooded, 15 rolling acres, priv. beach rights, $1,100. 929-6755.

CHESTERTOWN, NY - 18 mi. N. of Lake George village, Schroon River waterfront, sleeps 6, fully furn., w/d, pri., $550/wk. Darlene, 345-5365.

HILTON HEAD, SC - 2-bdrm. condo, sleeps 6, fully furn., 2 baths, beach, golf nearby, Apr.-Sept., $450/wk. Guy, Ext. 3147 or 689-5378.

For Sale

BLUE POINT - 3 bdrm., 1½ bath, gar., deck, sun room, quiet street, walk to beach, 100'x172', must see, must sell, $169,900. 665-3760 eves.

EAST MARION - 1 acre building lot, adjacent to Greenbelt, walk to sound. 325-0447.

E. SETAUKET - 3-bdrm. ranch, 2 baths, full fin. bsmt., new roof, Andersen windows, ac, fans, igs, landscaped, vinyl siding, $149,000. 878-9239.

MIDDLE ISLAND - 4-bdrm. Col., ½ acre, 2½ baths, lg. kit., d/r, den, fp, 2-car gar., 10 min. to Lab, $139,000. Susan Dwyer, Ext. 3496 or 924-2722.

MIDDLE ISLAND - lakefront 2-bdrm. co-op, upper unit, clean, bright, newly painted, l/r, d/r, kit., all appl., cac, gas heat, w/w, pool, tennis, clubhouse, 10 min. to Lab. 924-5282, leave message.

MIDDLE ISLAND - Fairview at Artist Lake, 2-bdrm. condo, 1½ baths, cac, GE appl., French doors, pool, clubhouse, mint cond., 5 min. from Lab, $79,900. Mark, Ext. 2238.

MORICHES - Waterways condo, 3 bdrm., 2 full baths, gar., l/r, d/r, kit., dw, dbl. oven, w/d, ac, fp, deck, hi-hats, clubhouse, tennis, marina, 24 hr. sec., $160,000. 874-8981.

MT. SINAI - 2-bdrm. ranch, ¾+ acre, 1 full bath, l/r, kit., dinette, bsmt., oversized gar., $120,000. 473-6432.

MT. SINAI - 3 bdrm. ranch, 1½ bath, ½+ acre, garage, lg. bsmt., treed, excel. school district, central location for shopping, low taxes, excel. area, asking $142,000. 331-6473.

N. PATCHOGUE - 2 bdrm., l/r, d/r, kit., full bsmt., det. gar., siding, new roof, $109,000. 928-6541.

N. SHIRLEY - 3-bdrm. ranch, 1/3+ acres, fenced yard, new boiler, HW heater, windows, renovated contemp. kit., bsmt., IGS, by Southaven Park, extras, mint, $115,000. Jim, Ext. 2957 or 281-4541.

N. SHOREHAM - L-shaped ranch, 3-bdrm., d/r, sunken l/r, eik, oak flrs., fin. bsmt., workroom, 2-car gar., park-like ½ acre, IGS, deeded beach rights, $179,900. Mike, Ext. 5972 or 744-4579.

PORT JEFFERSON - 3VSD, 0.4 acre, short walk to harbor area, 3 bdrm., 2 full baths, $149,000. Joe, Ext. 3887.

PORT JEFFERSON VILLAGE - mint ranch in Harbor Hills, 4 bdrms., eik, d/r, l/r w/fp, den, 2 baths, cul-de-sac, yard, beach, amenities, low taxes, $180,000. Frank Terrano, 928-0516.

RIDGE - 3-bdrm. ranch, country kit., 2½ baths, laundry/mud rm., fenced yard on 1/3 acre, ideal m/d, 3 mi. from Lab, $127,000. Carol, Ext. 2673 or 744-8632.

ROCKY POINT - 3 bdrm. ranch, den, country kit., new stove, new oil burner, fenced yard, clean, good cond., new DuPont w/w, ceiling fans, $97,500. Toni, 821-0758.

SOUTH BELLPORT - cottage, l/r, front doors to patio/porch, 2-story keeping room, 4 small bdrms., 1/3 acre, w/flower garden & potting shed, $285,000. Nancy, (212) 243-2848.

S. SETAUKET - 4-bdrm., 2½ baths, handyman's special, 2-car gar., lg. lot, 3VSD. 331-4768.

WADING RIVER - priv. beach comm., 3-bdrm. ranch, cac, 1½ baths, fd/r, eik, all appl., fin. bsmt., shed, deck, treed, cac, County water, ½ acre, $128,000. Saxon, 929-4701.

WADING RIVER - on beachfront, 10 rm. year-round house, 5 bdrm., 2 baths, d/r, l/r w/fp, upper/lower decks, full bsmt w/ apt. w/sep. ent., incl. adj. lot, SWRSD, $275,000. Kathy, 929-8443.

YAPHANK - Colonial Woods condo, 5 min. to Lab, 2 bdrm., 1½ baths, fin. bsmt., wet bar, rec. facil., red. to $99,000. Monica, 924-3846.

PRINCE EDWARD ISLAND, CANADA - waterfront, 2.2 acres, $19,000. Ann, 874-3275.

NEW PORT RICHEY, FL - 2 condos, 1 bdrm., 1½ baths, $35,000, & 2 bdrm., 2 baths, $55,000, both furn., adult comm., security, clubhouse, golf, pool, tennis, Florida rm., etc., will finance. 928-9136.

OCALA, FL - corner property, zoned for townhouse, water & elec., close to Orlando, $18,000 neg. 929-3298.

PALM BAY, FL - near Melbourne, 2-bdrm. condo, 2 full baths, l/r, d/r, kit., w/d, pvt. screened patio, completely furn., heated pool, $55,000 or rent long-term or monthly. 732-2588 after 5 p.m.

N. CAROLINA - 1.13 wooded acres, waterfront community, pool, clubhouse, 35' boat slip on Pamlico river, $38,000. Ken, 281-5565.

SHAWNEE, PA - timeshare week 40, kit., d/r, sleeps 6, fp, golf, indoor pool, horseback riding, rafting, canoeing, $8,000 neg. Tom, Ext. 5350.

Wanted

CRIB MATTRESS - reasonable. 878-2239.

DEHUMIDIFIER - also two 30" folding louvered doors & one 24" wide. Paul, Ext. 7697 or 878-3297.

DOOR - flush, residential, interior, approx. 36"w x 80"h, standard. John, Ext. 7671.

HESS TRUCKS - by private collector, will pay cash. Jim, Ext. 4026.

HOUSE TO SIT/RENT - by former Physics Dept. emp., wife & child, 7/22-29. Ext. 2752 or 751-6571.

NANNY - full time, Mon.-Fri., 10 a.m.-7 p.m., 18 yrs. old or older & experienced. Meryl, 286-5925.

OARS - 7' or 8' long. Mary Lynn, Ext. 7796.

TUTOR - for the Arabic language, want to learn basic phrases & key words. Mike, Ext. 2238.

The Brookhaven Bulletin is printed on paper containing at least 50 percent recycled materials, with 10 percent post-consumer waste.