BROOKHAVEN BULLETIN

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BROOKHAVEN NATIONAL LABORATORY

Summer Student Special Edition

'What I Did for My Summer Vacation' — Four Students' Views on Brookhaven

Once again this summer, high school, college and graduate students, and their teachers are taking advantage of BNL's wide range of educational programs. The offerings through the Office of Educational Programs (OEP) are allowing participants to learn about modern science while working with the Lab's scientific, technical and professional staff.

Sampled at random from this year's participants in OEP's various student programs, here are some students' views on what they like best about working at BNL:

Michael Santana is a senior, majoring in electrical engineering at New York Institute of Technology in Central Islip. He is joining approximately 54 undergraduate juniors and seniors participating in the 42nd annual Summer Student Program, BNL's oldest summer offering.

Michael Santana

Students in this program arrived on June 8 and will finish their appointments on August 14. They have been working in areas relating to their majors, such as applied mathematics, physical and life sciences, engineering, science journalism, and library science.

Santana is working in the Plant Engineering Division with Charles Johnson, a rigger, and Swapna Mukherji, a project engineer and Supervisor of the Electrical Design & Construction Group, updating fire-alarm diagrams for the Lab.

As Santana explains, "The thing that I like most about my experience at BNL is the hands-on experience that I'm gaining and the opportunity to learn by watching the engineers at Plant Engineering."

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"The thing that I like most about the Lab is working around researchers from all areas of science. It brings the sciences altogether," says **Sarah Conditt,** a sophomore biology major at Trinity University, Texas.

Sarah Conditt

Conditt is working in the Biology Department with Walter Mangel, a scientist, as one of the Lab's Summer Interns. She is studying the makeup of trypsin, a protease, and how it functions.

Conditt's program allows BNL to keep in touch with previous DOE High School Honors Research students, by giving appointments to college freshman and sophomores who had previously received this honor. This year, six students are summer interns.

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"What I really enjoy at Brookhaven are the basic research methods that I am learning within the Department of Applied Science [DAS], the lectures provided by the Community Summer Science Program, and, especially, the

(continued on page 2)

Coming Up

Deborah Shaver, Vice President of ICF Incorporated, will be the guest speaker at a Brookhaven Women in Science seminar on Wednesday, August 12. Her discussion of "Issues Surrounding the Transport of Radioactive Materials" will begin at 3:30 p.m., in the Chemistry Department's Hamilton Seminar Room, Bldg. 555.

DOE High School Honors Program

First Suffolk County Student To Represent New York State

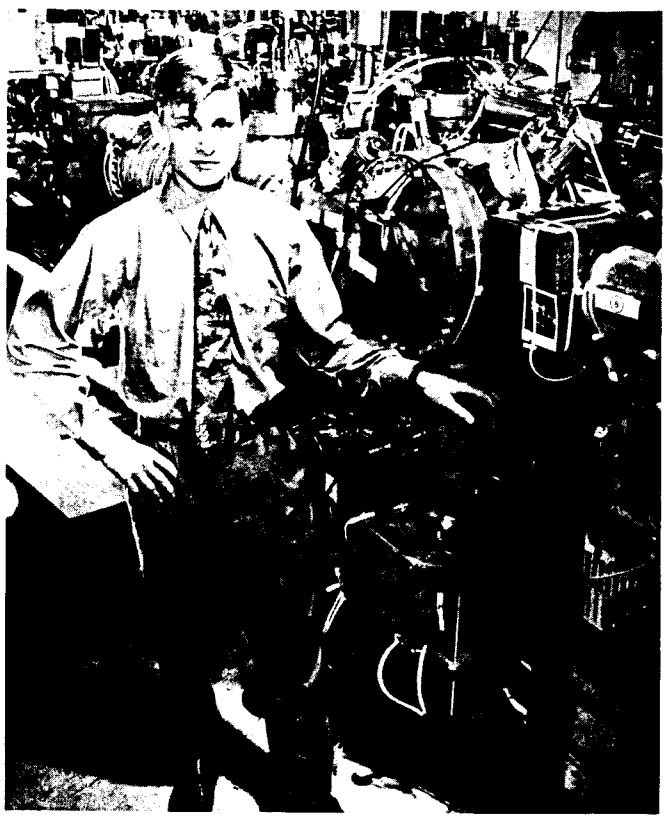
For the first time in the seven years that BNL has participated in the Department of Energy's (DOE) High School Honors Program, a Suffolk County student has been chosen to study science at the Lab.

Alexander Rice, the 17-year-old covaledictorian of William Floyd High School's class of 1992, is among 60 high school students who were selected this year by the governors of their home states to do research for two weeks at BNL.

The focus of the DOE High School Honors Students' stay is the National Synchrotron Light Source (NSLS) — the world's most intense source of x-ray and ultraviolet radiation, which is used by scientists from around the world to reveal the structure and nature of materials that cannot be probed using conventional microscopes or light sources.

A resident of Shirley, Rice was chosen over 28 other students from New York State. He and the kids from the 49 other states will also be joined by students from Belgium, Canada, France, Germany, Italy, Japan and

(continued on page 2)

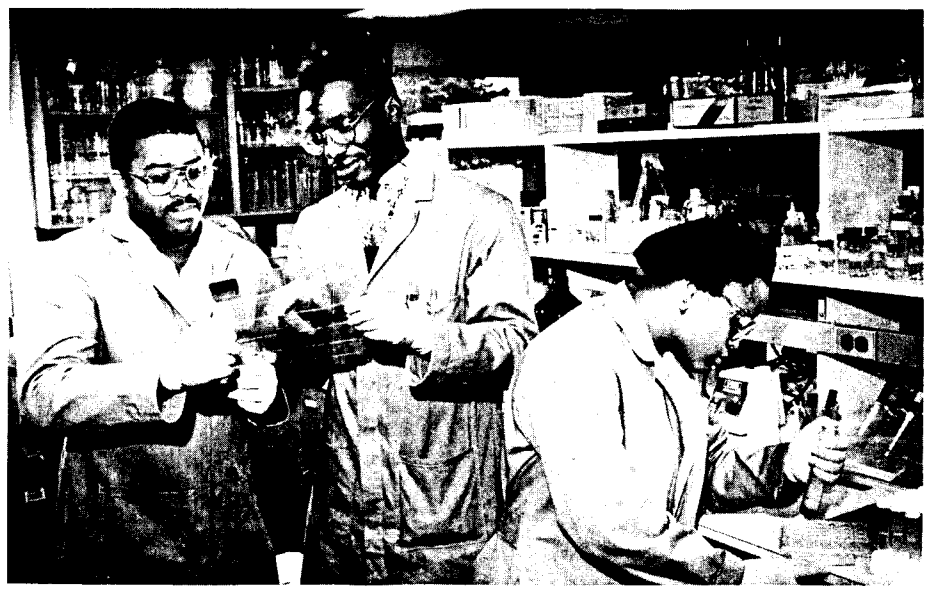


Photos in this issue by Roger Stoutenburgh.

DOE high school honors student Alexander Rice of Shirley at the NSLS x-ray ring.

BKX Science Competition Winners

Science Is Key for Three



BKX science competition winners at BNL: (from left) Chuckwudi Perry, G. Bernard Conyers and Erica Thompson.

"Science holds the golden key to the royal palace of knowledge." So says the motto of Beta Kappa Chi (BKX), the predominately black honor society that promotes scholarship in pure and applied science.

If this is true, then G. Bernard Conyers, Chuckwudi Perry and Erica Thompson hold the key in their hands.

The three were winners in this year's 49th annual BKX science competition. And they took BNL up on its annual offer to all BKX winners in areas related to Lab research to spend a summer at Brookhaven.

Conyers, a junior chemistry major at Morgan State University in Baltimore, is working with Catherine Lawson, an assistant biophysicist in the Biology Department. He says, "I'm learning a lot here. The people that I work with are interesting and fun. They make learning fun."

"I find working at the Lab to be very interesting. I never knew how much work went into meteorology. My time at the Lab is meeting my expectations," says Perry, a senior at Prairie View A&M University in Texas, majoring in electrical engineering.

He is working with Ronald Peierls, a senior physicist and Head of the Analytical Sciences Division (ASD), and Joyce Tichler, a computer scientist in the ASD of the Department of Applied Science.

Thompson, a physics major who just graduated from Fisk University in Tennessee, says, "I like working at the Lab because I am meeting a mix of scientists from all areas of the field. Since I want to go to medical school, I am glad to have been given this wonderful opportunity to do research in biological sciences."

Thompson is working with Robert Brugger, a senior scientist, at the Medical Research Center in the Medical Department.

As Robert Thomas, a program manager in the Office of Educational Programs (OEP) explains, "The objective of BKX is to promote interest in

(continued on page 3)

NYU Teacher Training

School Curricula to Be Enriched By Teachers' BNL Experience

For the second year in a row, BNL is hosting the New York University (NYU) Teacher Training Program. This unique program, sponsored by the U.S. Department of Energy, was created last year for teachers working towards permanent certification in math and science.

According to Karl Swyler, a program manager in the Office of Educational Programs, the teachers receive six graduate credits from NYU for doing research for six weeks during the summer. In the fall, the teachers are expected to incorporate what they have learned over the summer into their schools' curricula.

"What is unique about this program is that it is the first attempt by an educational institution to bring math and science teachers into a professional environment like the Lab. It benefits the teachers, but more importantly, it benefits their students," says Swyler.

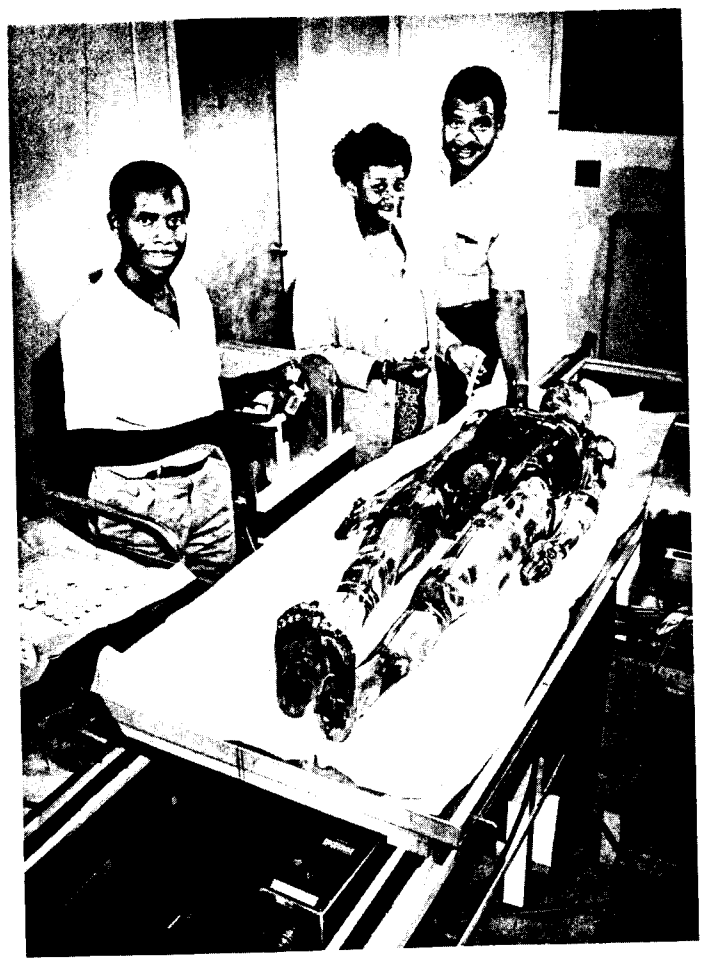
Teachers Agree

Teachers involved in the program agree.

Patrick Campbell, a math teacher at Morris High School in the Bronx is working for Joseph Gatz, a technical research associate, at the Medical Research Center in the Medical Department.

He says, "I feel that the NYU program is great. It changed the way I view math and science. It also made me change the way I will teach my math classes."

Gatz continues, "For example, I never emphasized to my class that some aspects of math are applicable to science. Here, I am working on a circuit that requires knowledge of the metric system. Since the United States does not use the metric system, I deemphasized it in my classroom. Now, I will explain to my students the value of knowing the metric system, as well as other aspects in math."



NYU graduate student Wendy Dunson demonstrates to fellow NYU student Patrick Campbell and Teacher Research Associate Larry McCoy how to place gold foils in a phantom of the human body, which is used in calibration tests.

"One valuable thing that I realized here is how my students feel when they are in the classroom and don't understand what is going on," says Wendy Dunson, a biology teacher at John Jay High School in Brooklyn, working for Seiichi Yasumura, a research collaborator in the Medical Reserch Center.

Explains Dunson, "Here, I found myself in that position a few times. So I learned that the only way that some of my students will learn the material that I teach is by asking questions on their own and actually doing the work independently."

Larry McCoy, a math and science teacher at the Brian Piccolo Intermediate School 53 in Queens, got so much out of the NYU program that he decided to come back to BNL as a teacher research associate. As a part of the NYU program last year, McCoy helped design what is known as the eggmobile project.

The eggmobile is a small-scale vehicle made from wood, sheet metal and a sneaker that shows the impact of a car crash on the car's occupant. The vehicle contains either an egg or a small doll, which can be fastened in place in the vehicle with a seat belt.

When the vehicle is pulled with the attached rubber hose which acts like a slingshot, the eggmobile accelerates along a five-foot long track until it hits a metal barrier. The crash results demonstrate the importance of seat belts in preventing injury.

This year McCoy is working with Jerome Barancik, a scientist, and Carol Kramer, a community health associate, in the Injury Prevention and Analysis Group of the Department of Applied Science. With the help of summer students, McCoy is trying to find ways to build the eggmobiles out of cheaper materials, such as egg cartons.

"This will allow all schools to have access to the eggmobile, without worrying about budgetary restraints," says McCoy.

McCoy is also working on a manual that will show teachers how to use the eggmobile to teach science in the classroom. Included in the manual will be ways of teaching acceleration, speed, mass and time using the device.

About the NYU program, McCoy says, "The program is great in that it bridges the gap between math and science teachers, and mathematicians and scientists. Teachers need to be in an environment where math and science is being used, so, when they return to their classrooms, they can show their kids how these subjects are used in the real world. The more I learn about math and science in the real world, the more I can give to my students."

— Lorraine Madigan

English Classes Offered on Site

The Lab is offering free English as a second language classes to employees, guests, visitors and their spouses, on Monday evenings beginning at 7 p.m.

Anyone wishing to enroll should attend an orientation and assessment meeting, which wil be held Tuesday, August 4, in the Personnel Training Room, Bldg. 459. The meeting for beginners will be held at 7 p.m.; intermediates will meet at 8 p.m.

For more information, call Starr Smith, Ext. 7631.

Suffolk Student (cont'd)

Mexico. Each student in the program was selected for outstanding achievements in science. The students started their research on July 22 and will end their stay on August 4.

This is not Rice's first experience at the Lab: He was here in the summer of 1990, when he participated in the Community Summer Science Program. Through this six-week program, the Lab offers lectures on modern science.

"I am very happy to have been chosen for the DOE honors program. Since I want to be a physician, I was looking for something to do within the science field for this summer. I remembered the High School Honors Program appeared in a booklet that I received from the Lab a year ago. So, I went to my guidance counselor, filled out an application and mailed it in," says Rice, who admits, "I was very surprised to be chosen."

According to Lars Fruenlid, an NSLS assistant scientist, the students in the program are divided into several groups, depending on their interests, and each group is conducting a team experiment.

"The purpose of the program is to point the students in the right direction," says Furenlid, "We try to get the students to work with their groups to make decisions on their own."

At beam line X26, Rice and his group are measuring trace elements in human hair samples. "This experiment is giving the students the opportunity to work with x-ray fluorescence — the study of x-rays coming from a sample," says Furenlid.

Rice seems to be following in the footseps of his parents: His mother, Tanya Erdely, M.D., is a pediatrician in Mastic. His father, Damon Rice, is a calculus and advanced math teacher at the William Floyd High School.

"The fact that Alex is the only representative from the state at the Lab is quite extraordinary," says the elder Rice. "I'm sure that he will do fine. This whole thing is quite an honor for him."

Rice will be attending Duke University in the fall, to major in biology and pursue his pre-med studies.

— Lorraine Madigan

Equipment Demo

A Canon representative will demonstrate a CJ10 desktop color copier, printer and scanner today, Friday, July 31, and on Monday and Tuesday, August 3 & 4. The presentation will take place each day from 10:30 a.m. to 1:30 p.m. in conference room B of Bldg. 725.

Hospitality News

Newcomers to BNL will be welcomed by the Hospitality Committee on Tuesday, August 4, at 9:30 a.m., at the playground in the apartment area. This meeting will be an opportunity for those new to the apartment area to become acquainted with each other and others living off site.

Spouses of Lab employees and guests are welcome, and coffee, tea and cake will be served. Bring the children; juice will be provided for them.

Students' Views (cont'd)

friendly environment that I found at work and in the dorms. In all, it is an excellent summer," says Gallaudet University sophomore **Nickolaus Jungheim.**

Nicholaus Jungheim

Jungheim is working in the Injury Prevention and Analysis Group with Community Health Associate Carol Kramer, learning medical coding techniques and how to apply the techniques he is learning. This summer, four hearing-impaired Gallaudet University students are at the Lab, working in DAS and the Medical Department.

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A. Lauren Wills, a senior at North Carolina State University, majoring in civil and environmental engineering, says, "I like the fact that the work at the Lab is hands-on. I do a lot of creative thinking here, unlike in school, where it is mostly all instructional."

Wills is working in the Oceanographic & Atmospheric Sciences Divi-

A. Lauren Wills

sion of DAS with Scientist Charles Flagg, drawing corrolations between wind patterns on the east coast, using statistics from a computer. Her stay is funded by the U.S. Department of Energy's Environmental Restoration and Waste Management Program.

These and the other summer offerings discussed in this issue of the Bulletin are only a sampling of the many educational programs offered at BNL. For a complete listing, contact OEP, Ext. 4503, Bldg. 438.

— Lorraine Madigan

Swimarathon '92 — Sign Up ASAP

Both swimmers and helpers are needed at the Lab pool on Saturday, August 8, for Swimarathon '92, sponsored by the Brookhaven Employees Recreation Association (BERA) to benefit the American Cancer Society (ACS).

The reward for doing a job well swum for this good cause will not only be a good feeling, but also a commemorative, limited-edition ACS Swimarathon'92 T-shirt.

On that date, individual swimmers and teams of up to 12 members are needed to put in as many laps as they can between 9 a.m. and 9 p.m. — with rests allowed between sets of laps. After signing up sponsors who pledge for each mile the swimmer completes in BNL's 33.3-yard pool, each swimmer will earn tax-deductible contributions to the ACS.

Helpers are needed to check-in the swimmers, count their laps, and assist with entertainment and refreshments.

So sign up as soon as possible, using the forms available at the pool, Bldg. 478; the BERA Sales Office, Berkner Hall; or the Recreation Office, Bldg. 185.

Cafeteria Menu

Monday, August 3

Soup: Navy bean	.80/1.10
Entree: Linguini Alfredo	3.20
Entree: Chef's choice	3.20
Fitness: Baked fish Kiev	3.45
Carvery: Hot pastrami sandwich	2.95
Grill: Monte Cristo	2.95
Special: Hot dogs by the ounce	

Tuesday, August 4

Soup: Cream of turkey	.80/1.10
Entree: Braised steak w/onions	3.65
Entree: Chef's choice	3.20
Fitness: Veal Florentine	3.45
Carvery: Hot roast beef sandwich	2.95
Grill: Chicken tenders on croissant	2.95
Special: Spaghetti bar (plate)	3.00

Wednesday, August 5

Soup: Tomato	.80/1.10
Entree: Chicken & dumplings	3.35
Entree: Chef's choice	3.20
Fitness: Fresh vegetable quiche	3.20
Carvery: Hot baked ham sandwich	2.95
Grill: Barbecue pork on a bun	2.95
Special: Tacos by the ounce	

Thursday, August 6

Soup: Corn chowder	.80/1.10
Entree: Cayman Island shrimp curry w/rice	3.65
Entree: Chef's choice	3.20
Fitness: Chicken tarragon	3.35
Carvery: Corned beef sandwich	2.95
Grill: Reuben sandwich	2.95
Special: Fruit by the ounce	

Friday, August 7

Soup: Seafood gumbo	.80/1.10
Entree: Roast leg of lamb	3.35
Entree: Chef's choice	3.20
Fitness: Fillet of fish w/Creole sauce	3.45
Carvery: Turkey sandwich	2.95
Grill: Agean gyro	2.95
Special: Hot dogs by the ounce	

Cape Fear now playing at the Center Club, 8 p.m.

Film badges will be changed tomorrow. Please place your badge in its assigned rack space before leaving work today.

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Register Your Children For Child Care, Kindergarten

September is approaching — and so is the first day of school at BNL's new full-day kindergarten for the up and coming five-year-old children of BNL employees.

To begin on Wednesday, September 9, the kindergarten will operate weekdays, from 8 a.m. to 5:30 p.m. A certified elementary education teacher licensed by the state will staff the kindergarten, with the aim of preparing children for first grade through developmentally appropriate teaching.

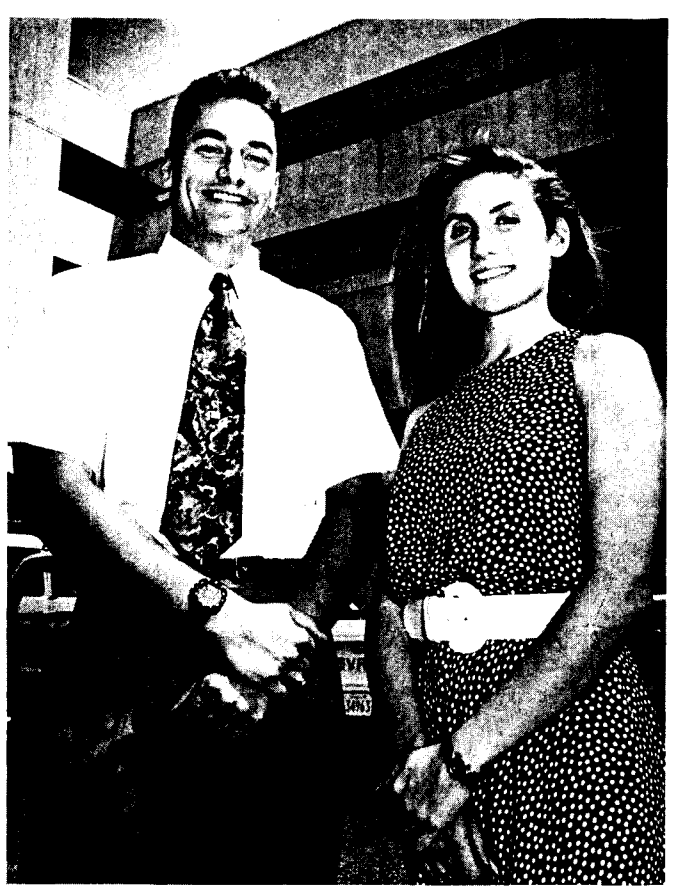
Bldg. 370 on Yale Road in the apartment area is being renovated now for the kindergarten, which will accommodate 25 children and be run by the same organization that operates BNL's Child Development Center (CDC).

Opened on the first day of school last September, the CDC will be entering its second year of providing quality child care to employees' preschool children, from eight weeks to four years of age.

At the CDC, children are grouped according to age and take part in age-appropriate activities that develop their emotional, intellectual, physical and social skills. Open weekdays, also 8 a.m. to 5:30 p.m., the CDC can take care of up to 96 children, on full- or part-time schedules.

To register your child for either the CDC or its new kindergarten, call Ext. 7416.

USMMA Students on Board
From Ship to Shore



USMMA Midshipmen Matthew Kane and Elizabeth Fox, on board at BNL.

Earlier this summer, Midshipmen Matthew Kane and Elizabeth Fox — both senior engineering students at the U.S. Merchant Marine Academy (USMMA) in Kings Point — traded their maritime uniforms for civvies, when they spent two weeks at BNL fulfilling an internship requirement for graduation.

Kane was assigned to the Relativistic Heavy Ion Collider (RHIC) Project, where he studied administration and management techniques under the supervision of John Hauser, Assistant Project Head, RHIC Administration and Management Systems. Meanwhile, Fox worked with M. Sue Davis, Acting Associate Director for Reactor, Safety & Security, to learn about the overall management of the Lab.

— Lorraine Madigan

BKX Winners (cont'd)

science education and scientific research on the undergraduate level."

In 1921, undergraduates at Lincoln University, Pennsylvania, proposed the BKX motto for a black student scientific association. Believing in the motto, three science faculty at the university established BKX in 1923, in their attempt to define a place for science within a liberal arts education at a time when African Americans were largely excluded from the world of science.

Today, BKX has over 11,000 members in over 50 chapters, which have been established at nearly all the historically black colleges and universities in America.

Since 1943, BKX has been holding an annual science competition for its members, which has been cosponsored since the beginning by the National Institute of Science (NIS). This is a non-profit organization set up to encourage the exchange of scientific information through the presentation of scholarly research by students and faculty at predominantly black colleges and universities.

Since 1972, BKX and NIS have been joined in their annual sponsorship by BNL — which became interested in the competition as a result of its Brookhaven Semester Program (BSP).

According to Thomas, in 1968, BNL established the BSP to give students from historically black colleges and universities the opportunity to spend an academic semester, either fall or spring, studying and doing research at the Lab.

For the first time, this year, the Lab hosted the annual NIS-BKX-BSP competition, at the Radisson Plaza hotel in Melville, April 1-5. The meeting was attended by approximately 350 students. Thomas and Yreana Renée Flack, a senior educational programs representative, hosted the gathering on behalf of the BSP, with support from the OEP, the U.S. Department of Energy, and Associated Universities, Incorporated.

Thomas says, "Usually, our semester students do very well at the competition, and the Lab usually has one or more of its students win prizes."

Awards are handed out for the best presentation of the paper on the most interesting research in biology, chemistry, mathematics, physics, psychology and computer science. Often the best prize that each winner receives is prestige, but sometimes monetary prizes are awarded.

In addition, BNL offers the winners of each category the opportunity to spend the summer doing reseach at the Lab. And this year, BKX winners Conyers, Perry and Thompson took advantage of that opportunity.

Thomas says, "The NIS-BKX-BSP competition is very important and meaningful to the students involved. For example, the opportunity for Chuck Perry to be at BNL has already resulted in his decision to go to graduate school — a wonderful decision for him and for us."

— Lorraine Madigan

Golf Tournaments

The fifth golf tournament of 1992 sponsored by the BERA Golf Association (BGA) will be held on Monday, August 10, at the Timber Point Golf Course.

To be played as a four-person scramble, the tournament will begin at 10 a.m. To register and obtain details about scramble-format requirements, call See-Meng Wong, Ext. 2111. The sign-up deadline is Thursday, August 6. Tournament fees, which are to be paid to the starter on the day of the tournament, are $21 for members and $22 for nonmembers.

The BGA is also taking registrations and payments for its sixth tournament of the season, scheduled for Thursday, September 3, on Bethpage State Park's blue course.

Greens fees for this tournament are $18 for members and $19 for nonmembers, to be paid by check made out to the BGA and sent to Bob Mills, Bldg. 901A, by Friday, August 7. To reserve a tee time, which can be scheduled between 10:30 a.m. and 12:30 p.m., for the tournament, contact the starter, Bob Sabatini, Ext. 3509.

Arrivals & Departures

Arrivals

Andrew T. Mingino.....NSLS
Thomas Vogt.....Physics

Departures

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

Yanjun Ma.....NSLS
Carol Ann Salata.....Chemistry

BWIS Meeting

BNL Senior Chemist Joanna Fowler will be the guest speaker at the summer meeting of Brookhaven Women in Science. She will speak about "PET and Drug Research" on Wednesday, August 5, at 5:15 p.m., in the Chemistry Department's Hamilton Seminar Room, Bldg. 555.

Positron emission tomography, or PET, is a medical imaging technique for measuring glucose metabolism and other biochemical processes in the brain and other organs. Fowler and her colleagues have used a PET instrument at Brookhaven to study neurological and psychiatric disorders, as well as cocaine abuse. Fowler's talk will focus on the use of PET in the study of cocaine and in the development of new drugs.

The meeting is open to all, and summer students are encouraged to attend. The talk will be followed by a picnic dinner, including submarine sandwiches and soda, for $3 per person, no reservations necessary.

Atlantic City Trip

The next BERA-sponsored, one-day trip will be to Trump Castle Hotel and Casino on the Marina on Saturday, August 22. The initial cost will be $20, but the hotel-casino will give a $7.50 coin return, and a choice of either $5 towards food or an additional $2.50 in coins and a $5 deferred-return voucher.

The bus will leave the Brookhaven Center promptly at 9 a.m. and return before midnight. There will be an extra pick-up at LIE Exit 63, if requested.

Tickets are on sale now at the BERA Sales Office in Berkner Hall, weekdays from 9 a.m. to 2 p.m. If you have any questions, call Carolann Zebrowski on Ext. 3347; Rosalie Piccione, Ext. 3160; or M. Kay Dellimore, Ext. 2873.

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.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside candidates.

DD 8146. TECHNICAL POSITION - (term appointment) Will be responsible for the collection and analysis of environmental and some effluent samples, both on and off site. Duties include sample collection, field measurement of limited chemical parameters, processing of samples in preparation for laboratory analysis, maintenance of sample collection database/records, and maintenance of field equipment. Knowledge of EPA methods and quality-assurance procedures as applied to collection, transport and preliminary processing of environmental samples would be helpful. The ability to work outdoors for extended periods year-round is required. Safety and Environmental Protection Division.

LF 8144. PROGRAMMING POSITION - (term appointment) Requires a BS in computer science or equivalent, with 1-2 years of experience in computer programming on a SUN UNIX platform using SYBASE/SQL. Responsibilities include developing application programs to integrate the environmental protection functions of field-sample collection, laboratory analysis, data reporting and quality assurance, as well as providing SUN system support and administration. (Reposting) Safety and Environmental Protection Division.

NS 8148. ADMINISTRATIVE POSITION - Requires BS in physical sciences and minimum of 2 years' professional training experience. Knowledge of environmental/hazardous waste regulations and graduate instructional technology credits highly desirable. Duties will include performing all aspects of TSD-based instruction for hazardous and radioactive waste-management issues. Safety & Environmental Protection Division.

Motor Vehicles & Supplies

91 TOYOTA TERCEL - 5-spd., ac, tape deck, blue, $8,000. Walter, Ext. 3086.

91 GEO STORM - 5-spd., ac, p/s, p/b, air bag, am/fm, remaining warr., new struts, etc., $7,000. Dusan, Ext. 5665 or 201-546-7014.

91 SUZUKI RM250 DIRT BIKE - fast, extras, well maint., used one season, excel. cond., $1,950. Bob or Lois, Ext. 4904 or 929-4753 eves.

91 ACURA INTEGRA LS - 5-spd., factory alarm, ac, p/windows, p/sunroof, low mi., $13,500. Sharon, Ext. 5919 or 722-3010.

90 JEEP - 4-cyl., 5-spd., a/c, am/fm cass., white w/gray hardtop, clean, v.g. cond., asking $8,500. Lillian, Ext. 2531.

90 GEO STORM - white, p/s, p/b, ac, a/t, am/fm stereo cass., 48k mi., $7,500. Armand, Ext. 2456.

89 PONTIAC GRAN PRIX - 2-dr., gray, a/t, ac, 60k mi., $6,500 firm. Pat, Ext. 2539.

89 GEO METRO - 5-spd., 4-dr., red, ac, am/fm, 80k mi. $2,995. Joe, Ext. 2898 or pager 0925.

89 DODGE DAKOTA SPORT 4x4 - white, all options, excel. cond., $9,500. Heidi, 281-7873.

88 DODGE CARAVAN - a/t, ac, cruise, tinted windows, tilt wheel, excel., $7,200. 369-0432.

67 MUSTANG - white, orig. 289 eng., must see, $4,500. Wayne, 698-2798.

64 LINCOLN CONTINENTAL - 4-dr. classic, 96k orig. mi., 429 engine, make offer. Gene, Ext. 3445 or 273-1989.

CAP - small pickup w/6½' bed, all alum. w/rack, sides w/tool shelfs, rear glass lift door, good cond. Mike, Ext. 3981.

TRUCK TIRES - four 5-ply, all terrain B.F. Goodrich, 31x10.0 R 15LT, $100/set. Earle, Ext. 4308.

RUNNING BOARDS - Dee-Zee, alum., never used, fits Jeep Cherokee, 67" long, orig. $180, asking $100. Chris, Ext. 2022 or 395-6112.

CAR RAMP - $10. 744-3502.

SOFT TOP - Jeep Wrangler, fits full doors, used only 2 summers, gray, $300. Slawko, Ext. 4453 or 369-2338.

SNOW PLOW - 6', p/angle, complete w/hitch, will trade for Hobbie-type sailboat. Ext. 7702 or 878-1468.

Boats & Marine Supplies

25' CATALINA 251 - 230-h.p. Mercury cruiser ib., 1989 Tandem trailer, many extras, $8,000. 289-6640.

23' CORONADO SAILBOAT - 6-.p. Evinrude, large cabin, sleeps 4, $2,500. Liz, Ext. 3348 or 298-3235.

23' FORMULA - 1978, 251 FWC OMC i/o, low hrs., 1988 Shoreline, surge brakes, excel. cond., $11,500. Jon, 563-9089.

22' MARSHALL CATBOAT - fresh-water cooled Yanmar diesel, VHF radio, dept sounder, Danforth compass, head. Gordon, 477-2269.

18' SHARPIE - 50-h.p., galv. trailer, p/winch, v.g. cond., asking $1,750. Tom, 331-1455.

18' VICTORIA - shoal keel, trailer, cabin, sleeps 2, 4.5-h.p. Mercury, full set of sails, $2,500. Mike, 744-4579.

16' GARVEY - clam boat, fg over wood, must sell. Dave, 286-3903.

12' SEA MOTH CATAMARAN - $200. Ext. 2125, 5334.

DEPTH RECORDER/FISH FINDER - Sitex paper print-out, model # HE-357, cost $340, asking $75. Toner, Ext. 2769.

Furnishings & Appliances

BEDROOM SET - queen-size, complete, $690; living room, bone white, sofa bed, loveseat, glass/brass tables, $900. Doug, Ext. 4661.

CHINA - porcelain, service for 4 or 8, pastel flower design, brand-new, never used, $40/four, $80/eight. Ext. 5922 or 727-3863.

CHEST OF DRAWERS - child's, $20; TV stand, $10; mini TV, $20; oval redwood table, $20; Tonka trunk, $20. Kathy, 744-2203.

COUCH - w/queen-size bed, like new, two-tone tan. 281-6263.

DINING ROOM - dark pine, table w/leaves & pads, 2 arm & 4 side chairs, china buffet, excel. cond., best offer. Jim, 924-5422.

DINING ROOM - china closet w/light, table w/pads, 6 chairs, $600; blue sofa, loveseat, swivel chair, $300. Steve, Ext. 5892.

DINING ROOM SET - 6 chairs, table, china closet, buffet, $1,500; kitchen set w/4 chairs, $175; king headboard, $75; more. Ext. 4519 or 924-6051.

LIGHT FIXTURES - chandelier & other assorted items. Ext. 3334 or 744-2404.

MICROWAVE - $40; small desk, $30; dining room table, $50; bookshelves, $30; dresser, $50; queen-size futon, finished, $250. Jim, Ext. 2163 after 8/2.

REFRIGERATOR - 1.4 cu. ft., dorm-size, used 1 semester, $90; suiter suitcase, $5. Pat, Ext. 3807.

REFRIGERATOR - Whirlpool, white, self-defrost, 20 cu. ft., 2 yrs. old, best offer; Sealy Posturepedic sofa bed, beige. Irving, Ext. 2827 or 423-8384.

SEWING MACHINE - Singer, antique treadle-type, orig. cabinet. Mike, 929-4716.

SOFA BED - Castro convertible, gold w/brown trim, king-size, very good cond., $150. Tom, Ext. 4507 or 878-1060.

WASHER & DRYER - Whirlpool, apt.-size, excel. cond., sink hook-up option, $100/both. Janene, Ext. 4660 or 929-0401.

WATER BED - queen, motionless, best offer. Victor, 737-6517.

Tool, House & Garden

COMPRESSOR - 2 h.p., hardly used, $100. Ripp, Ext. 4622.

KEROSENE HEATER - 25,000 Btus, used 1 season, excel. cond., $30. Janene, Ext. 4660 or 929-0401.

LAWN MOWER - Sears, 21" cut, 3½-h.p., rotary, side chute, $60. Dan, Ext. 4987 or 698-7322.

LAWN MOWER - Roper, 22", like new, 1 yr. old, eng. self-propellled, $110. Alex, Ext. 2967.

MAPLE TREES - Japanese red, $10-$45+; well pump, 1½ h.p., FW, 3 stage, $75; Deming shallow well pump, ¾ h.p., $75. 265-6542 after 6 p.m.

TRACTOR - International Cadet, $350; 6-wheel off-terrain vehicle, $450; Cadet tractor w/bucket, $3,000; chain saw, $350. Ray, Ext. 3082.

GARDEN TRACTOR - Gravely, 2-wheel w/30" mower, sickle bar, tiler, snow plow, dealer rebuilt, good cond., $600. Louis, 367-6684.

Sports, Hobbies & Pets

BICYCLE - 10 spd., $85. Jim, Ext. 2163 after 8/2.

BICYCLE - 17 spd., make offer. Helen, 281-6263.

BIKE RACK - trunk-mount, $20. Ext. 3701.

CAMERA - Nikon 8008N, auto focus, excel. cond. Stu, Ext. 4108.

CAMERA - Nikon F3HP SB16, dedicated flash, 35-200 Tokina zoom lens, mint cond. Irv Meyer, 929-4326.

EXERCISE BIKE - v.g. cond., $25. Tom, Ext. 4563.

EXERCISE BIKE - Sears, orig. $100, sell for $50. Paul, Ext. 4156.

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

FERRET - 1 yr. old, male, neutered, descented, cage, very playful, $100. 289-8212.

GUITAR AMP - GK250RL, $200; wireless system, Nady 201, $225. Doug, Ext. 4661 or 434-7812.

JET SKI - 300S, fast, fun, new battery, excel. cond., $1,300. 878-1178.

SCOOTER - Bravo, 3-wheeler, new battery, orig. $2,700, asking $800. 281-7844 eves.

SLEEPING BAG - 2-person, can be made into 1, $25/pair. 929-4904.

WATER SKIS - excel. cond., $25. Toner, Ext. 2769.

Audio, Video & Computer

CD PLAYER - Fisher, works well, $100; compact refrigerator, good for college student, $50. Steve, Ext. 4498.

COLOR TV - Panasonic, 19", random access tuner, color turns off occasionally, best offer. Morris, Ext. 2366.

COLOR TV - $200. Jim, Ext. 2163 after 8/2.

COMPUTER - Atari 520ST, color monitor, 2 disk drives, assorted software, mouse, good for beginner, $225 neg. Wadman, Ext. 5384.

COMPUTER - Apple IIC, color monitor, Image-writer printer, ext. 5.25" drive, joystick, much software, $300. Mike, Ext. 5972 or 744-4579.

COMPUTER - Apple 2+, 48k, 1 disk drive, green monitor, character printer, games, programs, $175 or best offer. Jim, Ext. 7513.

CORDLESS PHONES - new, orig. $90, asking $45; cordless phone w/answering machine, new, orig. $180, asking $80. 737-6517, leave message.

SLIDE PROJECTOR - Bell Howell cube, w/22 cubes, like new, $40. 929-4904.

Miscellaneous

AIRLINE TICKETS - 4, round-trip, Islip-Tampa, FL, depart 9/5, returns 9/12, $604/for all. Joe, Ext. 4498.

AIRLINE TICKETS - 2, round-trip. Tampa, FL, $314. Ripp, Ext. 4672.

AIRLINE TICKETS - 3, one-way, JFK-Chicago, 8/21. B. Jefferson, Ext. 5834.

AIRLINE TICKET - one-way, Islip-San Diego, 9/13, $25 to change date, $75. Shen, 744-3502.

AIRLINE TICKET - one way, Islip-San Francisco, 9/1, $25 to change date, $105. 929-8443.

CONCERT TICKETS - U2, Giants Stadium, 2 pairs, 8/11, $34/ea. Liz, Ext. 3348.

CONCERT TICKETS - 2, David Bryne, Jones Beach, 8/15, $60/pair. Warren, Ext. 4939 or 924-7552.

GLOBE - 9", world, new, $5. 281-7844.

JACKET - brown leather, bomber, fully lined, hardly worn, size 36, $40 neg. Ext. 5922 or 727-3863.

LOOM - counter balance, floor, 29", wide reed, $175 or best offer. Jim, Ext. 7513.

TYPEWRITER - Royal, manual standard, old, new cond., asking $30. Mike, 929-4716.

Yard & Garage Sales

HOLBROOK - 8/1, 9-4 p.m., multi-family, household, baby items, furniture. Ginger La. off Springmeadow Dr., Woodgate Village condo.

Lost & Found

FOUND - keys in AGS main control room. Paula Hughes, Ext. 4619.

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

BRENTWOOD - 1-bdrm., l/r-d/r combo, newly done, close to r/r, S.S. Pkwy. & LIE, ½ hr. from Lab, $650/mo. includes all. Donna, Ext. 2456 or 224-1447 eves.

HOLBROOK - 3 bdrm., full bath, eik, l/r, d/r, priv. ent., driveway parking, BBQ area, $850/mo. includes all, 8/1 occup. Armand, Ext. 2456.

LAKE RONKONKOMA - 3 lg. rms., eik, l/r, bdrm., bath, own thermostat, w/w, cable, priv. ent., ½ mi. LIE, 1 mi. LIRR, 20 min. BNL, $700/mo. all, 1 mo. sec. 588-2477 after 5:30 p.m

MIDDLE ISLAND - share condo, master bdrm., walk-in closet, furn. pool, tennis, cable, $430 all. Ext. 3160 or 289-5704 after 5 p.m.

MILLER PLACE - 1-bdrm. apt., l/r-kit. combo, spare room, priv. ent., util. incl., avail. immediately. 473-1658 after 6 p.m.

PORT JEFFERSON - large furn. rm., no smoking, $100/wk., clean/quiet. 473-6432.

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

RIDGE - 2-bdrm. condo, 1½ baths, l/r, d/r, kit., fully carpeted, w/d, $750/mo. Kathy, Ext. 2267 or 345-6520 after 6 p.m.

RIDGE - 3-bdrm. ranch, lg. eik, laundry rm., 1½ baths, fenced yard, 3 mi. from Lab, $925/mo.; furn. studio apt., fenced-in yard, 3 mi. from Lab., $485/mo. Ext. 2673 or 744-8632.

RIDGE - 3-4 bdrm., l/r, d/r, kit., d/w, 5 min. to Lab, no pets, $950/mo. + util., 1 mo. sec., avail. 8/1. Ext. 5076 or 744-4615.

SHIRLEY - bedrm., nonsmoker, employed responsible person, $85/wk.; 2½ rm. apt., priv. ent. & driveway, one employed, responsible nonsmoking person, $450/mo. 281-6263.

SOUND BEACH - 2-bdrm. house, l/r, d/r, eik, bsmt., oil heat, Miller Place schools, $725/mo. + util., avail. 9/1. 744-3502.

SOUND BEACH - 2-bdrm. home, new siding, storms & screens, half bsmt., lg. eik w/new cabinets, lg. walk-in closets, walk to water, $700/mo. + util. Don or Sue, 473-6570 after 7:30 p.m.

STONY BROOK - furn. 1-bdrm. apt. for prof. couple or single, near SUNY, 2nd floor priv. home, quiet area, eik, l/r, master suite, nonsmoker, no pets, $700/mo. incl. util. 751-2149.

WADING RIVER - 2 bdrm., 1 bath, priv. ent. & drive, fp, 10 min. to Lab., no pets, $700/mo. incl. all. John, Ext. 4028 or 929-1029.

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

YAPHANK - Whispering Pines, 2-bdrm. condo, 1½ baths, l/r, d/r, kit., 5 appl., fp, bsmt., w/w, cac, att. gar., pools, tennis, clubhouse, 5 min. to Lab, no pets, $900/mo. Susan, Ext. 7988.

MT. DESERT ISLAND, MAINE - lakefront, full furn. 1 rm. cottage w/sleeping loft, kitchenette, bath, fp, deck on Echo Lake, Acadia Nat. Park, 7/25-10/15, $425/wk. Bob, Ext. 2514.

CATSKILLS - 3-bdrm. chalet w/sleeping loft, full furn., near Hunter Mt. Music Festivals, great for hiking, fishing, rafting, swimming, golf, etc. Kay, Ext. 4501 or Bea, Ext. 3642.

SALEM, NY - 3-bdrm. house, 2 baths, rent weekly or weekends, nearby Saratoga & Manchester, Vt., 45 min. to Lake George. Willy, 924-6724.

HILTON HEAD ISLAND, SC - 2-bdrm. condo, sleeps 6, fully furn., 2 baths, pool, beach, golf nearby, April-Sept., $450/wk. for BNL employees & family members. Guy, Ext. 3147 or 689-5378.

MT. HOLLY, VT - rustic A-frame surrounded by forest, easily accessible to lakes, boating, hiking, biking & horseback riding, weekends $225, week $325. Tom, Ext. 2823.

ST. MAARTEN, NETHERLANDS, ANTILLES - week of Oct 10-17, 1-bdrm. condo, sleeps 4, kit., l/r, 2 baths, balcony over Harbor Town, beach, pool, casino on premises. John, 924-4262.

For Sale

BELLPORT VILLAGE - secluded home near golf & tennis, French doors, decks, outdoor jacuzzi, 2 bdrm. w/sleeping loft, 2 baths, ⅔ acre, s. of S. Country, $248,000. Sue, Ext. 2888 or 286-0422.

CENTER MORICHES - bldg. lot, ¾ acre wooded, close to Main St., $49,000. Roger, Ext. 7518 or 878-8847.

E. PATCHOGUE - 1 bdrm., bath, eik, l/r, utility rm., detached gar., $80,000. 475-7241.

E. SETAUKET - 3-bdrm. ranch, 2 baths, fin. bsmt., new roof, Andersen windows, rm. ac, fans, igs, landscaped, ⅓ + acre, vinyl siding, new roof, must see, $149,000. 878-9239.

HOLTSVILLE - 2-bdrm. ranch, l/r, d/r, big kit., fp, pool, fenced backyard, low taxes, 15 min. to BNL, $97,900. 289-1732 after 6 p.m.

MIDDLE ISLAND - Coventry Manor, 3-bdrm. townhouse, 2 full baths, kit., l/r, d/r, laundry rm., cac, 5 appl., encl. patio, pool, tennis, more, ask. $95,000. Rosalie, Ext. 3160 or 289-5704 after 5 p.m.

MT. SINAI - 3-bdrm. ranch, 1½ baths, ½ + acre, gar., lg. bsmt., treed, excel. school dist., near shopping, low taxes, $142,000. 331-6473.

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

NORTHAMPTON/RIVERHEAD - 3-bdrm. house, 2 full baths, fin. bsmt. w/possible rental, landscaped, 20 min. from Lab, move-in cond., low taxes, ask. $119,000. Pete, 369-2944.

N. SHIRLEY - 3-bdrm. ranch, ⅓ + 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 - 3-bdrm. L-shaped ranch, d/r, sunken l/r, eik, oak floors, fin. bsmt., workrm., 2-car gar., parklike ½ acre, igs, deeded beach rights, $179,900. Mike, Ext. 5972 or 744-4579.

RIDGE - 3-bdrm. ranch, country kit., 2½ baths, laundry/mud rm., fenced yard on ⅓ acre, ideal M/D, 3 mi. from Lab, $127,000. Carol, Ext. 2673 or 744-8632.

RIVERHEAD - 12'x65' mobile home, 2 bdrm., new kit., bath, wood siding, Andersen windows, lg. l/r, d/r, 8'x10' shed, cooperative park, pets allowed, $33,000. Beth, Ext. 4986 or 369-4295.

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

SHIRLEY - 5-bdrm. ranch, full fin. bsmt., 1½ baths, gar., fenced-in yard, w/w carpet, ask., $100,000. Fred, 399-6166.

SHOREHAM - 3-bdrm. ranch, l/r w/fp, eik, fdr, lg. den, fin. bsmt., lg. deck, ½ + acre, landscaped, SWR schools, low taxes. Ken, 744-0722.

SOUND BEACH - 2-bdrm. home, new vinyl siding, storms & screens, 12'x12' eik w/new wood cab., hardwood floor, walk to water, $83,000. Don or Sue, 473-6570 after 7:30 p.m.

S. SETAUKET - 4-bdrm. house, 2½ baths, handyman special, 2-car gar., lg. lot, 3VSD. 331-5768.

SPEONK/WESTHAMPTON - 2-bdrm. Liberty mobile home, 14'x60', eik, w/d, d/w, 10'x10' shed, family park, $35,000. Dave, Ext. 5460.

WADING RIVER - private beach community, 3-bdrm. ranch, 1½ baths, eik, all appl., fdr, a/c, treed, ½ acre, bsmt., lg. shed, deck, county water, $128,000. Saxon, 929-4701.

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

YAPHANK - Whispering Pines, 3-bdrm. condo, 2½ baths, eik, d/r, l/r, fin. bsmt., gar., patio, new w/w, fp, 5 appl., many extras, immac. cond., pool, tennis, $114,900. J. Bennett, Ext. 5406.

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

N. CAROLINA - 1.13 wooded waterfront acres, comm. pool, clubhouse, 30' boat slip on Pamlico River, $38,000. Ken, 281-5565.

Wanted

GOLF CLUBS - women's left-handed, reasonable. Ext. 3334 or 744-2404.

HOUSE TO RENT - 3 or 4 bdrm. house needed, furn. or unfurn., in the Brookhaven, Bellport or E. Patchogue area, need as of 9/1, Mike, 286-3903.

HOUSE TO SHARE - close to BNL. Henry Chapman, Dept. of Physics, SUNY-Stony Brook, 632-8095, leave message.

TREADMILL - looking for relatively new variable speed, variable inclining. Jenn, Ext. 2196.

Ads left out of this issue due to lack of space need not be resubmitted to appear in the next issue.

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