BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

National Database on Fresh Water Developed at BNL

Since 1970, surface waters in the northeast United States have become less acidic. During the same time period, acidity has been increasing in the Southeast. Nevertheless, the sensitive surface waters of the Northeast are still significantly more acidic than those of the Southeast, and there is concern for their ecological health. How do we know all this?

The information is contained in ACID, a national database of surface water chemistry developed at Brookhaven by George Hendrey, Nicholas Gmur and Christopher Hoogendyk of the Terrestrial and Aquatic Ecology Division in the Department of Applied Science. ACID plays a key role in the national assessment of fresh waters that are sensitive to or have been affected by acid deposition.

Fresh water covers 57,180 square miles, or roughly 2%, of the surface area of the 48 contiguous states of the U.S. That 2%, which includes streams, lakes, reservoirs and canals, is used for domestic, industrial and recreational purposes. Little, if any, remains in a completely natural condition. Says Hoogendyk, "We tend to take our sources of fresh water for granted, and we often underestimate how fragile the natural systems are and the extent of our impact on them."

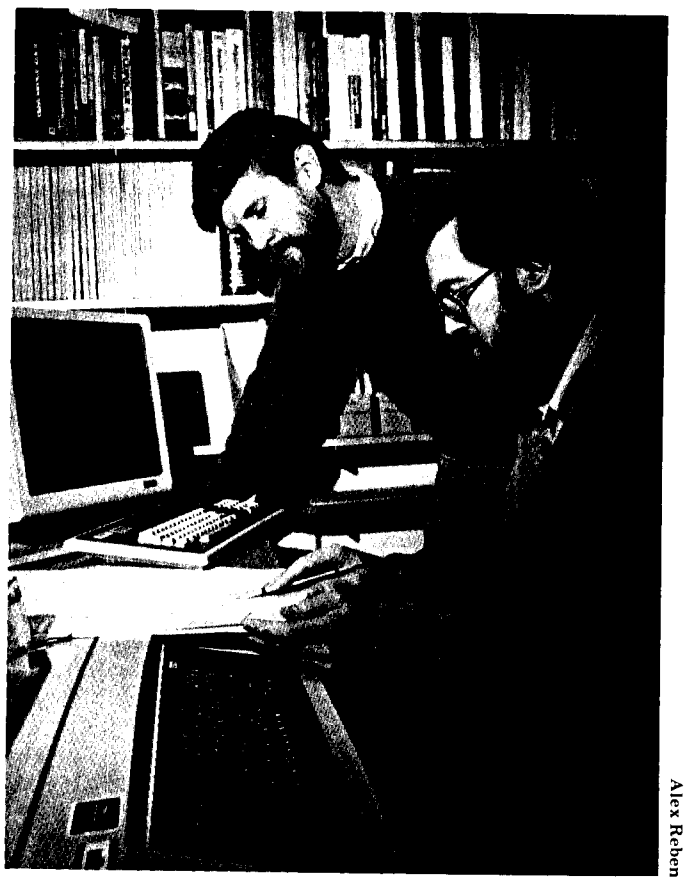
ACID contains information from nearly one million observations taken at 50,000 sampling stations around the country. The bulk of the data comes from the 1970's, although a small fraction of it goes as far back as the 1920's and 30's.

In the National Acid Precipitation Assessment Program (NAPAP), mandated by Congress and headed by an interagency task force, Brookhaven is the only laboratory gathering historical water quality data on a national scale. "To do a proper job of assessment," says Hoogendyk, "you need the historical background to see what's really happening now. Because of the variability of ecological systems, 10 to 20 years of data are required to assess trends."

The BNL database is stored on Applied Math's VAX computer. The database is so large that it has been divided into ten separate regions of the country, each in its own set of disk files. Together, they occupy 256 million bytes of storage.

To get a feeling for how much data are contained in ACID, think of it this way. If all the data were printed at 80 characters to a line, 64 lines to a page, the resulting stack of paper would be about 21 feet tall.

In brief, here is how the database was developed and how it is used. Seventy-five percent of the information came from EPA's own database, STORET. The balance was collected by Gmur over a two-year period from about 250 sources nation-wide.



Nicholas Gmur (left) and Christopher Hoogendyk check data taken from ACID, a national database on surface water chemistry.

Alex Reben

The data has to be checked for errors. Initial screening is done by the computer, which flags certain anomalies. "Sometimes, it's just a matter of a misplaced decimal," says Gmur. "Occasionally, influences such as acid mine drainage result in unusual data values." Gmur determines the cause of anomalies and corrects them in the database.

Then comes the analysis, described by Hoogendyk as a multistage process. He begins by writing a database retrieval program that scans through the database and selects the pertinent data. He then writes another program to do a first pass at the analysis. This program might, for example, apply regression analysis to each of the stations having adequate data. Because of the tremendous quantity of data, the usual approaches are not adequate at this step. Therefore, Hoogendyk relies on statistical methods he has developed to assemble the analyses into a regional picture. It is this regional picture that is of interest for assessment purposes.

ACID is the brainchild of George

(Continued on page 2)

bnl Lecture
Unexplored States

It is thought that a few microseconds after the big bang, all matter existed as a plasma of quarks before condensing into the "elementary" particles of our cosmos today. In the 214th Brookhaven Lecture, Physicist Thomas Ludlam, Physics Department, will discuss "The Quest for Quark Matter," at 4:30 p.m. on April 24, at Berkner Hall. He will review the developments in experiment and theory which have sparked the interest of both nuclear and particle physicists in reproducing the thermodynamic enviroment of the very early universe in the laboratory.

Scientists hope to recreate such conditions through ultra-relativistic heavy ion collisions in high energy accelerators. Collisions on this scale have, so far, only been glimpsed in rare cosmic ray events. They should reveal unexplored states of nuclear matter, as well as provide a new environment for the study of fundamental interactions which govern the behavior of elementary particles.

It is believed that the colliding nuclei can be brought to such extreme conditions of temperature and pressure that the components of the nucleus decompose to a plasma of quarks and gluons. The temperatures involved are a million times greater than at the core of the sun. The transition from normal nuclear matter to "quark matter" has not been observed but is predicted on the basis of the theory of strong interactions.

Ludlam will relate plans for accelerating heavy ion beams in existing high energy proton machines at Brookhaven and in Europe, culminating in the possibilities suggested by the proposed Relativistic Heavy Ion Collider (RHIC) at BNL.

In 1969, Thomas Ludlam obtained his Ph.D. in physics from Yale University, and he remained there as a faculty member until 1978. In September of that year, he joined the staff of the BNL Physics Department as an associate physicist. He was appointed physicist in 1980. He has participated in high energy physics experiments at Brookhaven, CERN and Fermilab, and has a particular research interest in detector development.

Thomas Ludlam

Alex Reben

Ludlam now heads the FY 85 Relativistic Heavy Ion Collider Task Force and acts as the physics coordinator. This task force continues the development of BNL's research and accelerator plans for RHIC, particularly in the areas of theoretical and experimental physics, detector design and user involvement.

A high energy physicist, Ludlam was active on earlier RHIC task forces, in heavy ion conferences and working groups. He was co-chairman of the "Quark Matter '83" conference which brought together 300 nuclear physicists and high energy physicists who are interested in collaborating on ways to test theories about quark matter. He is a member of the LBL Bevalac Nuclear Science Program Advisory Committee and sits on the Executive Committee of the AGS Heavy Ion Users Group.

All those interested in getting together after the lecture are invited to go with the lecturer to a restaurant off site. If you want to be part of this group, call George Rabinowitz, Ext. 7637.

From ACID to AQUAFFECTS

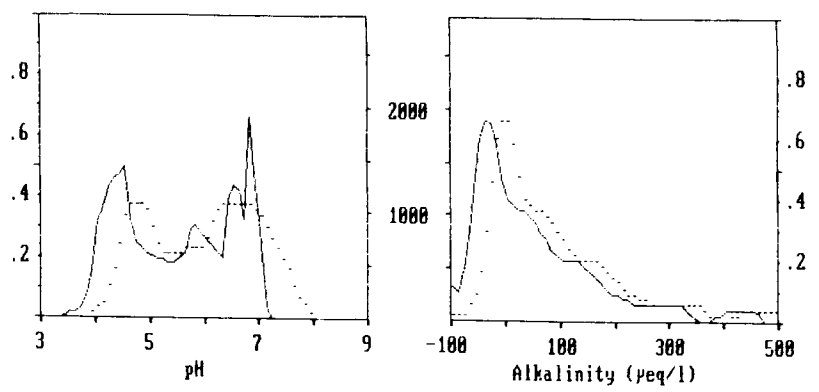
A few weeks ago, Christopher Hoogendyk and Edward Kaplan spent a day at EPA headquarters in Washington demonstrating a unique computer program. Called AQUAFFECTS, the program can be used by policy makers to evaluate potential regulations in light of how they might affect water chemistry and fish populations in lakes.

Says Kaplan, acting head of the Terrestrial and Aquatic Ecology Division in the Department of Applied Science, "When we designed the program, we wanted something that could be applied on a regional scale. We also wanted a user friendly program that could be put on small computers of the kind people have in their offices."

For this first-time effort, Hoogendyk wrote the program for an IBM PC using data on the Adirondacks extracted from ACID. AQUAFFECTS translates deposition of sulfate into acidity in lake water and relates that to effects on fish. Ultimately, they would like to do comparable programs for other regions around the country, adding a choice of other water chemistry models and building in uncertainty analysis.

"The program is flexible, model parameters can be changed at will, and there are even analytical routines to aid in the interpretation of results," says Kaplan. The program also displays results in graphs, such as the ones below showing existing water chemistry alongside projected water chemistry resulting from hypothetical increases in acid deposition.

Distributions for population of Adirondack lakes



Dotted lines = existing chemistry. Solid lines = model output.
Outside scales are probability density.
Center scale is number of lakes in the Adirondacks.

Flip page for fish output.

Meet the Danes Who Built the House

Their Viking forefathers were good shipbuilders and traveled by longboat over the North Sea to raid and colonize wide areas of Europe from the 9th to the 11th century. The five Danes sent to BNL by the Danish government have the same spirit of adventure as their ancestors, but they are good housebuilders and have crossed the Atlantic via airplane to demonstrate the art of putting together a prefabricated, Danish modular house, as well as their versatile construction skills.

Ole Hauerberg, Bjarne Pedersen, Frank Petersen, John Soerensen and Tage Steffensen are employees of Hosby Huse A/S, a 27-year-old Danish housing company that manufactured BNL's Danish House and whose homes have been erected throughout Europe, England and North Africa. Therefore, though this is the first house they have built in America, it is not out of the ordinary for these men to be working outside of their own country.

It is uncommon for the five to put together a house from start to finish, for the different tasks involved in erecting a Hosby house are usually performed by specialized teams of Hosby workers. Petersen, Soerensen and Steffensen normally work together as members of one of the 12 building crews, of which Steffensen is foreman, as he is for this project.

There are six bricklaying teams, and Hauerberg belongs to one of them. Pedersen, a painter, works with two carpenters on one of the three finishing teams. Six groups of two men lay the foundations for Hosby homes in Europe, but the foundation of BNL's Danish House was put in by Plant Engineering.

In general, after placing the prefabricated, insulated pipes and ducts in the crawl space of the foundation, a building crew erects the floor, wall, ceiling and roof elements, as well as the completed bathroom units. In about four days, the house is up, and the building team moves on to another site. A finishing crew and a group of bricklayers take over to complete the house. Erection and completion takes about three weeks, or 660 man-hours excluding the foundation work.

As they did to assemble this house, the Danes work 12 to 14 hours a day, often six days a week. As Petersen explained, they receive a fixed price per house depending upon the model they are building. The fewer days they work on one house, the more money they make.

Though each was skilled in his trade before going to work for Hosby, they received about six months of on-the-job training in how to assemble a prefabricated, modular house on a site. Since much of the cutting and building takes place in the factory, Petersen, Soerensen and Steffensen had to learn which panels to start with, and how to fit and seal the pieces together. The three now have new building crews apprenticed to them. "We teach them which end is up by erecting several houses together," explains Petersen.

The five like the Hosby method of doing their jobs and moving on to a new site, and they like working in different countries. Since they could not go home to Denmark on the weekends while working in this country, the five have used their weekends to travel on Long Island, through upstate New York to Niagara Falls and to Connecticut.

The Danish workers arrived on March 11, but they could not begin work on the house until March 20 because the six containers holding the parts for the house were delayed in shipping. The men experienced a number of hold-ups in hooking the house's plumbing and electrical systems into the respective utilities because of the difference between European and American systems.

Alex Reben

(Rear, from left) Frank Petersen, John Soerensen and Tage Steffensen; (Front, from left) Ole Hauerberg and Bjarne Pedersen.

Language was another minor problem: no one in the Department of Applied Science speaks Danish. Of the workmen, only Petersen is fluent in English and is the group's translator. English was his first language, as he was born and raised for 10 years in Canada. Pedersen and Soerensen remember a little English from school. From their working in West Germany, Hauerberg and Steffensen picked up German, and thus are able to talk to Walter Loss of DAS, who is fluent in German and serves as the liaison between the Danes and the Lab.

Hauerberg, Pedersen, Soerensen and Steffensen are returning to Denmark today. Petersen is staying until Thursday, April 25, to help the Danish interior designers position the furniture selected for the house.

As foreman, Steffensen usually calls Hosby twenty-four hours before completing a job to ask where his crew is to report next. Now that they have finished BNL's Danish House, the Danes are looking forward to going home and taking a vacation. If they return to the U.S., they'd like to come back with their families as tourists.

— Marsha Belford

Danish House Tour

The Danish House will be open to employees today, April 19, only from 3:30 p.m. to 6 p.m.

The morning hours have been cancelled.

Orthopedic Implants

An Overview of the History, Design and General Experience with Orthopedic Implants will be given by David Hoeltzel, Department of Mechanical Engineering, Columbia University, on Wednesday, April 24. Samples of the various devices will be displayed and discussed. This, the second Engineering Seminar, will take place at 3:30 p.m. in the Large Seminar Room, Physics Building. Tea will be served at 3 p.m. All those interested in this subject are welcome to attend. 14004

I.B.E.W. Meeting

Local 2230, I.B.E.W., will hold its regular monthly meeting on April 22 at 6 p.m. in the Knights of Columbus Hall, Railroad Avenue, Patchogue. On the agenda will be regular business, committee reports and the president's report.

Arrivals & Departures

Arrivals

Joseph L. Gallitelli ..... Plant Eng.
Kelly Leahy ..... Staff Svcs.
Anthony H. Shane ..... Plant Eng.

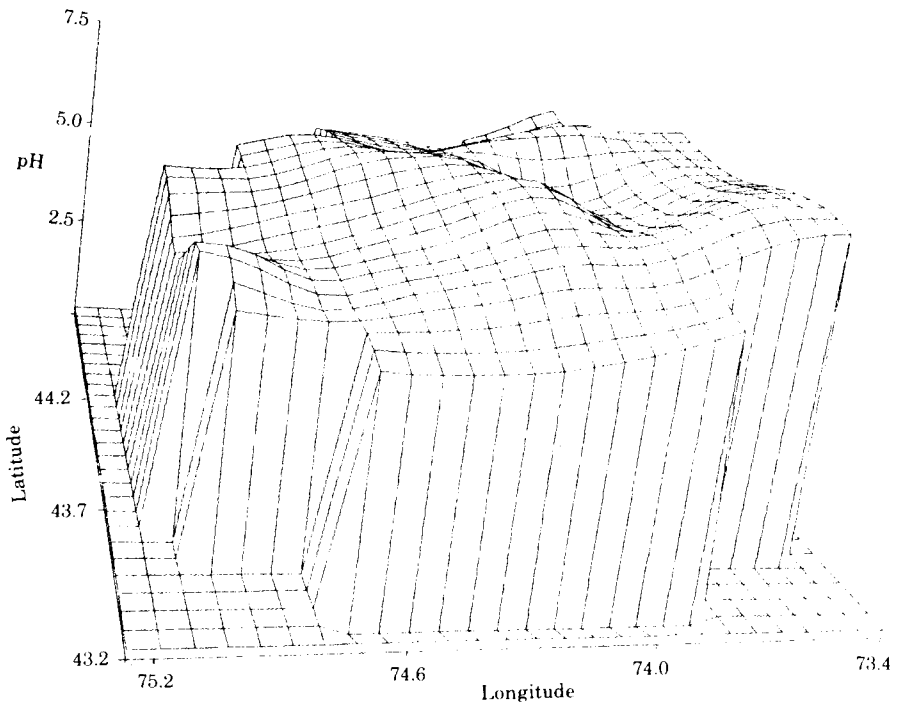
Departures

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

James R. Lehmann ..... Medical
Robert L. McGraw ..... DAS
Lewis E. Raymond III ..... Plant Eng.

Stockroom Closing

Building T-90 will be closed for inventory on April 25 and April 26. Please make all necessary withdrawals of stock prior to 3 p.m., Wednesday, April 24. This will give the Supply and Materiel Division sufficient time to prepare for the inventory. Emergency requirements should be processed through John Scharpeger, Ext. 2974.



Median pH's in lakes of the Adirondacks for the period 1975-82. Depressions in the pH surface coincide with high elevation areas, and the general rise in pH from west to east is related to the gradual transition from a granitic to a limestone geology. Michael Hauptmann, S&EP, and Anne Meinhold, DAS, have recently provided programming support to the ACID team, including the generation of these computer-drawn three-dimensional graphs.

Mary Cooper, Applied Mathematics Department, poses with Suffolk County Executive Peter F. Cohalan at his office in Hauppauge on April 2, on the occasion of his proclaiming Secretaries Week from April 21-27. Cooper, a Sr. Admin. Services Asst., is president of the Upton Chapter of Professional Secretaries International.

Database (Cont'd)

Hendrey, head of the division and temporarily assigned by BNL to work at the U.S. Department of Energy in Washington. In 1979, Hendrey conceived of the database to do a quick look at the relationship between surface water chemistry and the geology of the eastern United States. As the project grew in size, Gmur became responsible for gathering data and checking their quality, and Edward (Chip) Balzar, no longer with BNL, did much of the computer programming.

Hoogendyk, an ecologist with expertise in statistics, computers and systems modeling, joined the team a few years later to spearhead the monumental task of expanding the database to include the entire U.S.

This year, for NAPAP, BNL is summarizing the surface water chemistry of three regions: the Adirondacks, the upper Midwest, and the Blue Ridge Province in the Southeast.

— Mona S. Rowe

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Bike Repair

Now that the weather has warmed up, it's time to dust off your Lab bicycle and get some exercise while you make your way around the site. If your bicycle needs repair, just call Fred Pond in Supply and Materiel, at Ext. 7238. He will make arrangements to have it picked up and repaired. The service is free. 10753

NYC Train Trip

The Hospitality Committee is planning a group railroad trip to New York City on Wednesday, May 1. Departure will be at 7:55 a.m. from the Patchogue LIRR station. Round-trip fare for adults is $5; children under five years ride free.

Reserve a ticket by sending your fare through the U.S. mail to BNL, P.O.Box 322, Upton, New York 11973. Please do not send cash. Checks or money orders, payable to BNL, must be received by Friday, April 26. Put the date of the trip, your BNL life number and your phone number on the back of your check or money order. Your tickets will be given to you at the railroad station on the day of the trip. Refunds will be made only if cancellations are received by the Monday morning preceding the trip.

Attention Aliens

This is to remind aliens who hold any type of appointment to the Laboratory that they must advise Personnel Records about changes in visa status. Changes that must be reported include extension of a nonimmigrant visa, change in type of nonimmigrant visa, transfer from nonimmigrant to immigrant visa, and granting of U.S. citizenship

Cafeteria Menu

Week Ending April 26

Monday, April 22		
Old fashioned Dutch green bean soup	(cup)	.65
	(bowl)	.85
Turkey chow mein on rice		2.10
Eggplant Parmesan & 1 veg.		2.20
Hot Deli: Baked ham	(bread)	2.00
	(roll)	2.20
Tuesday, April 23		
Navy bean soup	(cup)	.65
	(bowl)	.85
Veal patty scallopini & 1 veg.		2.20
Fish 'n chips		2.10
Hot Deli: Italian sausage hero		2.20
Wednesday, April 24		
Turkey noodle soup	(cup)	.65
	(bowl)	.85
Pot roast of beef & 1 veg.		2.25
Corned beef & cabbage		2.15
Hot Deli: BBQ fresh ham	(bread)	2.00
	(roll)	2.20
Thursday, April 25		
Ham & vegetable soup	(cup)	.65
	(bowl)	.85
Beef Burgundy over noodles		2.20
Chicken patty Parmesan & 1 veg.		2.20
or w/ spaghetti		2.40
Hot Deli: Sloppy Joes		2.20
Friday, April 26		
Boston clam chowder	(cup)	.65
	(bowl)	.85
Macaroni & cheese w/ 1 veg.		2.10
Fried chicken finger basket		2.35
Hot Deli: Breaded fish fillet	(bread)	2.00
	(roll)	2.20

Hospitality News

On Thursday, June 6, the Hospitality Committee will sponsor a bus trip to Old Westbury Gardens and historic Westbury House. The bus will leave from the Brookhaven Center at 10 a.m. and return at 5 p.m. The admission fee to the Gardens is $3.50/person. We suggest you bring along your lunch. Picnicking is permitted in designated areas.

Old Westbury Gardens was the 100-acre estate of industrialist John S. Phipps. It is a historic house museum and its horticultural display garden is listed as one of the most outstanding in the United States.

If you would like to join on this tour, call Gillian Love, 928-8579, or Zuna Van Rooyen, 929-6961, no later than Friday, May 17. Reservations will be accepted on a first-come, first-served basis.

—BERA News—

Cooking Exchange

"French Art" will be the theme of the April 24 meeting of the International Cooking Exchange. Variations in French cuisine from haute to nouveau will be demonstrated. Cooking Exchange meetings are held in the Recreation Building on the second and fourth Wednesdays of each month from 12:30 to 2:30 p.m. The club is open to employees and their immediate family members. A one dollar donation entitles those present to copies of the day's recipes, samples of the prepared dishes, and coffee or tea. Babysitting is provided at fifty cents per child.

For more information, call Dee Polychronakos, 744-3578, or Michiko Tanaka, 744-3690.

Motorcycle Club

The Cycle-trons spring gathering will be held on Saturday, April 20, at 10 a.m. at the Berkner Hall parking lot. We will leave at 10:30 for a ride. The rain date will be Sunday, April 21, same time and place. Everyone is welcome.

Rifle & Pistol Club

The rifle team has scheduled the use of the range on Tuesday evening, April 23, for a League match make-up.

Camera Club

Tired of depending on the corner drugstore for processing your film? Now you can experience the thrill of developing your own film and printing your own pictures. The Camera Club meeting on Thursday, April 25, will be devoted to learning how to develop film; on Thursday, May 23, printing and enlarging negatives will be the topic. Meetings are held at 5:30 p.m. in the Recreation Building. Members and prospective members are encouraged to attend.

A members-only photo exhibit at Berkner Hall is planned for the week of June 10. Contact Lew Jacobson, Ext. 5193, or Rick Bowman, Ext. 4672, for details if you cannot attend the next meeting.

Team Walk

Walkers are still needed for the 15.5 mile walkathon on April 28 on behalf of the L.I. Chapter of the March of Dimes Birth Defects Foundation. Call Blanche Laskee on Ext. 2873 and sign up.

A Race to Remember Ted Landry

Hosting a spring event at the Laboratory on the third Sunday in May has become a tradition with the BNL Roadrunners. Dating back to the early 1970's, it is the oldest club-sponsored, continuous series road race on Long Island. But this year, that tradition will take on a new focus as the club sponsors "Ted's Twosome Five-Mile Race" on May 19 at 10 a.m.

The event is being dedicated to Edward (Ted) Landry, who was killed last July while bicycling. Landry, a former president of the BNL Roadrunners, left the Lab in 1982. Landry's good friend Bill Thomlinson (NSLS) said, "Ted was one of the better runners on Long Island, but he enjoyed running with runners of any ability. He was a wonderful person."

That's why the BNL Roadrunners have committed themselves to making this, what Thomlinson expects to be, "the class race of the spring," with several unique features. Thomlinson credits Landry's wife Elaine for setting the character of the event and for many good ideas.

The proceeds will go to the Edward Landry Trust Fund, to be used as a perpetual gift to the University of New Hampshire, were Landry did his graduate work, for financial assistance to graduate science students. "We need about $10,000," said Thomlinson, "so the fund can carry itself. We started with about $3,000 that people had donated after Ted's death, and every penny that we bring in from this race will go into the trust fund."

As the Landrys had often run together, Elaine Landry felt this should be a couples' race. For this event, a couple consists of one male and one female runner: husband and wife, brother and sister, father and daughter, or just friends are a few of the possibilities. Anyone who wants to run but hasn't got a partner may fine one with the assistance of the BNL Roadrunners. For the race, the ages of the partners are combined and a category assigned based on the total. Couples will run as individuals, but their finishing times will be added together for a final score. Entry fees are $7 for singles, $10 for a couple.

Twosome events are rare, but "great fun," said Thomlinson, who added that "enthusiasm is really starting to catch on." There are lots of reasons to be enthusiastic about this race:

• **Awards** — Since entry fees must go towards the trust fund, all awards are being donated. Local merchants, businesses and friends are being very generous: the man and woman winning in the overall couple category will each receive a Gore-Tex running suit; the second overall couple will each get a pair of running shoes; a gift certificate will go to each half of the third overall twosome. Separate awards will also be made to married couples and to the top BNL couple (both BERA members).

Most of the other awards are donated trophies, some from fellow runners and others from the collection Elaine and Ted Landry had amassed over their years of running. She has saved the engraved plates and mounted them on plaques. The trophies have been redesigned by Jim Vaughn, and new labels will be affixed to them for their new owners.

• **Pre-registration Perks** — Anyone who preregisters by Friday, May 10, will receive a long-sleeved T-shirt commemorating the race. All the T-shirts are being donated by Analytab Products, Inc., for whom Landry worked after leaving BNL. For applications and information on preregistration, contact Thomlinson, Ext. 3937, Bldg. 510E. Registration on the day of the race, from 7-9 a.m., does not include a T-shirt.

• **The Course** — The five-mile course, which will be monitored by the BNL Radio Club, will include the "Landry Mile," a loop in the apartment area dedicated to Landry when he left BNL. The course is flat and fast, and The Athletic Congress (TAC) has offered to certify it so times will be eligible for establishing nationally recognized records.

• **Refreshments** — Soft drinks and M&Ms will be available to all participants. Why M&Ms? That was another of Elaine Landry's ideas, because, said Thomlinson, "Ted could smell an M&M twenty miles away, and he would find it."

• **Videos** — A tape highlighting major racing events of 1984-85 will be shown in the gymnasium before the race. The finish of the twosome race will also be videotaped for viewing after the event.

Despite all its assets, Ted's Twosome Five-Mile Race still needs one thing: volunteers. Said Thomlinson, "We need people who aren't going to buckle under pressure, who won't be running and who are going to show up the morning of the race." Volunteers will help Jeanne Penoyar and Gus Prince with publicity, John Brodowski and Jerry Hastings with the course, Dean Chapman at the finish line, Dave Penoyar with the timing and John Ferrero with same-day registration, To volunteer your services, contact Skip Medeiros, Ext. 2665, Bldg. 475.

Though registrations have been coming in for weeks now, it won't be known until race day how many entries there will be. "If the race is one to be proud of, the numbers are irrelevant," said Thomlinson. "We want to raise a lot of money for the trust fund, but we also want everybody who's working so hard on it to walk away after it's all done saying, 'That was a beautiful event. It was a fitting tribute to a beautiful person.' "

— Anita Cohen

A Pre-Race Clinic

What did Ted Landry share with such great runners as Bill Rodgers, Grete Waitz and Greg Meyer? A great coach — Bill Squires. In honor of Landry, Squires is holding a runners' clinic at Berkner Hall, on Saturday, May 18, at 6:30 p.m., the evening before Ted's Twosome Five-Mile Race. At this *free* clinic, Squires will address runners of all abilities on "How to Put Speed Into Your Running the Easy Way." Everyone is welcome to attend.

Basketball

Game 1

Longshots — 74		Coasters — 72	
P. Brown	8	K. D'Amico	6
J. Gaeta	8	R. Doty	18
J. Garrison	11	F. Malone	4
R. Rowley	15	B. Allen	13
R. Seymore	15	L. Smith	4
E. Taylor	6	L. Snead	2
L. Walcott	9	A. Washington	8
B. Jasper	2	M. Williams	17

Game 2

Hollywood — 66		Runaways — 52	
R. Domenech	6	S. Gilbert	10
G. Grigg	8	T. James	14
A. Heard	1	P. Johnson	14
R. Kowalski	2	G. Shepherd	4
G. Mack	14	G. Smith	1
E. Meier Jr.	16	M. Tardd	9
D. Nordstrom	11		
A. Richardson	8		

Final Standings

Team	Won	Lost	Place
Hollywood	8	3	1
Longshots	6	5	2
Runaways	5	6	3
Coasters	3	8	4

Playoff Championship — April 25 at 6 p.m.

Bowling

High games were bowled by M. Apelskog 204/180, D. Cunningham 200, M. Reynolds 198, R. Rosati 185, K. Kissel 180. Congratulations to B. Jones on her good bowling.

Purple League

Bob Jones rolled a 238, Dick Adams 219, Ken Riker 211/202, Rich Eggert 200.

Red/Green League

High games bowled by K. Asselta 238, 226, 202 for a 666 scratch series, R. Adams 205, 247, 622 scratch, J. Medaris 221, 202, 608 scratch, N. Combatti 222, E. Meier 211, K. Riker 210, C. Neuls 206, C. Bohnenblusch 200.

White League

High games bowled by A. Pinelli 223, K. Asselta 216, F. Gaetan 211, P. Callegari 203, 200, S. Gushue 203, L. Barberich 193, C. MacDougall 190, K. Vogel 184, 175, J. Thiede 184, J. Penoyar 179, S. Asselta 178.

Classified Advertisements

Placement Notices

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

Each week, the Personnel Office lists new personnel placement requisitions. The purpose of these listings is, first, to provide open placement information on all non-scientific staff positions; second, to give employees an opportunity to request consideration for themselves through Personnel; and, finally, for general recruiting purposes. Because of the priority preference policy stated above, each listing does not necessarily represent an opportunity for all candidates. As a guide to readers, the listings are grouped according to the anticipated area of recruitment.

Except when operational needs require otherwise, positions will remain open for one week following publication date.

For further information regarding a placement listing, contact the Employment Manager, Ext. 2882.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside applicants.

2222. RESEARCH ENGINEERS (5) - Requires BS or MS in electrical engineering or equivalent and five years' experience. Will be involved in the design and construction of irradiation facility and related hardware. Experience in one or more of the following areas is necessary: instrumentation and control, power supplies, analog/digital systems and circuit design, computer interfacing and CAMAC. Department of Nuclear Energy.

2223. RESEARCH ENGINEERS (2) - Requires BS or MS in mechanical engineering or equivalent and five years' experience. Will be involved in the design and construction of irradiation facility and related hardware. Experience in vacuum technology and CAD/CAM is highly desirable. Department of Nuclear Energy.

2224. DESIGNER POSITION - Requires a minimum of five years' demonstrated experience in mechanical design fundamentals, including optical, vacuum and mechanical components. An AAS degree in machine design or equivalent background desirable. National Synchrotron Light Source Department. Reposting of Job #2028.

2225. CLERICAL POSITION (half-time/temp. - 9/30/85) - Requires excellent typing skills and an aptitude for details. Duties include processing of books, reports, etc., utilizing a library database and answering telephone reference requests. Previous library experience a plus. Nuclear Waste Management Library, Department of Nuclear Energy.

2226. CARPENTER - Under minimum supervision lays out, constructs, modifies and maintains buildings and component parts from construction drawings, rough sketches or verbal instruction. Works with wood, wood substitutes, and combination materials and flooring, roofing and wall materials. Plant Engineering Division.

2227. NUMERICAL CONTROL PROGRAMMER - Requires a minimum of five years' programming experience using manual and computer-assist methods. Will be responsible for determining the most economical and expeditious methods for usage of numerically controlled equipment. Tape preparation and verification for input, as well as set-up information and sketches is required. Experience in Compact II or APT desired. CAD/CAM experience a plus. Central Shops Division.

2228. P&GA SPECIALIST - (evening shift 5:00 pm to 1:00 am) - Requires one to two years' experience operating a shared logic word processing system. Photography and Graphic Arts Division.

Autos & Auto Supplies

49 FORD - 2 dr., all orig., must sell, $3,800. Lou, Ext. 3499.

WHEEL COVER - Chevy, $3.50. Ext. 4192.

82 CHEVY MONTE CARLO - a/t, 6 cyl., p/s, p/l, p/w, a/c, am/fm stereo, rear def., 49k miles, $6,350. John, 289-9470.

78 MERCURY MARQUIS WAGON - excel. cond., $2,500. 744-9746 eves.

MOTORCYCLE HELMET - Hondaline, Stag-XL, $25; 4 qts. 2-cycle engine oil, $1.50 qt. Nick, Ext. 2490.

76 FORD PINTO STATION WAGON - $900. Ext. 2442 or 3125.

ENGINE/POWER GLIDE TRANS. - 235 CI, and rear for 1955-1964 Chevy, 68k miles. Joe, Ext. 2556.

80 PONTIAC BONNEVILLE SAFARI - 5.7 liter eng., runs well, low mileage; '77 Honda 750F Super Sport, low mileage, many extras, runs excel., best offer. Jim, 665-7535.

72 SUNBIRD - V6, 5 spd., new tires, battery, radiator, alternator, muffler, best offer. 732-1877.

74 PONTIAC GRAND PRIX - a/t, p/s, p/b, a/c, am/fm, low mileage, mint cond., $2,850. 473-0382 after 5 p.m.

77 BMW - 320i, good cond., 116k miles, $4,500. 289-8718.

SNOW TIRE - (1) G78-15, $5. Ext. 2906.

79 JEEP - C57, 8 cyl., a/t, brown/yellow/orange, Renegade package, sunroof, a/c, welded hitch bumper, am/fm cassette, excel. cond. Ext. 3084.

73 FORD WAGON - good transp., $300. 286-3791 after 6 p.m.

74 HORNET - V6, a/t, many new parts, body rust, front crashed, $300. Ext. 2675.

73 FORD GRAND TORINO WAGON - clean and good running cond., $700. Steve, 744-4787 eves.

82 CELICA ST - sports coupe, 5 spd., a/c, good cond., $5,995. 737-0076.

83 MAZDA B-200 SPORT - 17k miles, cap, 5 spd., $5,400. Ext. 5350 or 698-8684.

74 OLDS WAGON - runs well, body in good cond., $800. 821-0144 after 5 p.m.

78 HONDA 750K - fairing, radio, excel. cond., $1,500 firm. 929-6798.

82 CITATION - 47k miles, very good cond., $4,500. 286-8424.

70 DODGE VAN - 318, a/t, new trans., heavy duty trailer hitch, $750. Ray, Ext. 3536.

FORD TRUCK PARTS - 1973 to 1979, call for your needs, reasonable. Dick, Ext. 3499 or 589-9103.

TRAVEL TRAILER - 17-1/2 ft., sleeps 6, self-contained, new tires & brakes, excel. cond., $2,800. Artie, Ext. 2697 or 325-0743.

76 GMC PICKUP - 1 ton, needs some minor work, w/11' camper, good cond., $5,000 takes all, or will sell separately. Ext. 4547 or 472-1338 eves.

79 CHEVETTE - 97k mi., good cond., $1,200. 581-7656.

50 DODGE CORONET - class coupe, 1 family, low mi., mech. perfect, new brakes, rebuilt carb., wide w/w, needs cosmetics for show, $3,000. Ext. 4392 12:00-1:00.

75 FIAT - 128, 4 spd., am/fm, good eng., (2) new tires, needs work, $350, neg. Ext. 3714 or 3208 after 7 p.m.

72 COACHMAN - 24' tandem wheel, sleeps 6, bunk house, refrig., stove/oven, hot water, ducted heat, center bath, asking $35,950. 744-3284 eves.

76 TOYOTA LAND CRUISER - 4 WD, 4 dr., mag wheels, priced to sell. 286-9389.

75 CHRYSLER NEWPORT - 2 dr., high mi., runs well, asking $600 or best offer. 727-5912.

RIMS - white spoke, 8x15", 5-hole, with hub covers, chrome nuts, $125. Bob Kiss, 467-4222.

76 MUSTANG - a/c, p/s, good cond. Don, Ext. 5329 or 878-2215 eves.

79 FORD FIESTA - 4 spd., good mpg., some new parts, needs light work, $1,000. 585-3527 days.

77 GREMLIN AMC - 6 cyl., red, 68,900 mi., Cragars, am/fm stereo, good cond. 585-1656.

76 FORD VAN - 6 cyl., a/t, p/s, p/b. 467-0871 after 7 p.m.

71 BMW 2002 - good mech. cond., bad body damage, needs restoring. 325-0609 after 7 p.m.

79 PINTO - excel. cond., 4 spd., orig. owner, good mpg., new clutch & exhaust, $1,500. Ext. 4605 or 281-5456.

PIONEER TS100 SPEAKERS - 4", $20/pair; TS107, 4", $25/pair; Jensen 10 oz., 4", $30/pair; Jensen 20 oz., 5-1/4", $35/pair; power antenna, $20, all new. Tony, Ext. 2462.

74 FORD THUNDERBIRD - good cond., 460 V8 engine, am/fm stereo, a/c, p/s, p/b, a/t. 924-0848.

77 EL CAMINO - V8, p/s, p/b, a/c, new paint, runs well, asking $2,500. 289-6519.

82 KAWASAKI - 440 LTD, new in '84, low mi., mint cond., garaged, $1,300. Larry, Ext. 4666 or 929-4798.

79 MERCURY BOBCAT - station wagon, 2 dr., 4 cyl., a/t, 77k mi., $1,950. Ext. 3405 or 3389.

76 CHEVY MALIBU - 6 cyl., 3 spd. stick, high mi., looks good and runs well, $850. Skora, Ext. 5046 or 744-9677.

TIRES - (4) new, Laredo S/R Uniroyal, with rims, 31x105, 6 lugs, never used, $450. 286-0372.

71 VOLVO 164 - 4 dr., 6 cyl., a/c, p/s, p/b, 125k mi., am/fm, new paint. Ext. 3565 or 878-2233.

Boats & Marine Supplies

ANCHOR - Danforth, 13 lbs., with chain and shackles, $25. 589-4363 after 6 p.m.

21' RENKEN - 1983, cuddy, 120 OMC, I/O, full canvas, d/f, CB, compass, $9,000. 585-1856 after 6 p.m.

26' PACEMAKER - 1968, Sport Fisherman, 318 cu. Chrysler, f/w cooled, 110V/12V REF, VHF, d/f recorder, excel. cond. Don, Ext. 5329 or 878-2215 after 6 p.m.

27' REVELCRAFT - 1962, plywood, 318 Chrysler, FWC, sleeps four, good cond., $1,100. Frank, 399-4480.

UNFURLING JIB - used two seasons, from 20 ft. O'Day, orig. cost $375, sell for $100. Ext. 4680 or 286-1331.

14.2' CAPRI - 1984, sailboat, by Catalina, multi-colored sails, fully equipped, w/trailer, easy to handle, $2,500. Otto, 472-0339.

25 HP OUTBOARD - elec. start, very low hours. Ext. 2023.

24' CHRYSLER - w/115 HP Evinrude, PWR, trim & tilt, cabin sleeps 2, new rug, $2,300. Jim, Ext. 2050.

23' CHRYSLER - 1968, cabin boat, fiberglass, twin Volvo engs., sleeps 4, extras, $4,500. 399-3381.

23' SLOOP - finely crafted European cruise-race, keel, sleeps 4, head, galley & dinette, 3 sails, many extras, $8,500. Ext. 4605 or 938-8353.

21' GALAXY - 1983, deep v cuddy cabin, 120 HP Volvo, 30 hrs., port-a-potty, am/fm cassette, compass, depth, full swim platform, full canvas, like new, extras, $8,800. Ext. 3589 or 281-3635.

21' SLOOP - San Juan Mark II, swing keel, sleeps 4, excel. cond., custom trailer, $6,990. 924-0848.

21' THUNDERBIRD - 1969, fiberglass, 300 CID, I/O Chevy, trailer, $2,500. 589-6181.

14' GLASPAR - and Highlander trailer, asking $300. Ext. 3369 or 286-1213 after 6 p.m.

Miscellaneous

KIRBY VACUUM CLEANER - w/attachments, $25. Ext. 4153 or 732-5829.

CB ANTENNA - 2 element beam w/rotor & coax, $125. Mike, 281-3263.

LAMP TABLES - (2) $10. 727-5912.

COLONIAL STEREO - excel. cond., all wood, $75. Larry, Ext. 2021 or 281-7240.

STEREO SET - $80; color TV, $85; sewing machine, $40; guitar, $30; humidifier, $2. Ext. 3124.

LAWN ROLLER - can be pushed or towed, $15; lawn spreader, $10; 24"-60" fir trees, you dig, $5 ea. 878-6637.

GARDEN TRACTOR - Sears, 10 HP, 36" mower deck & 42" sweeper, like new, $595. Al, Ext. 4615 or 751-8462 after 6 p.m.

SIAMESE KITTENS - Lilac, Blue, will be ready to leave mother soon. Ramona, 928-3085.

FURNITURE - black naugahyde, 88" couch, $150, club chair & ottoman, $50, hi-back recliner, good, $50. 751-6076.

POOL - above ground, 18', excel. cond., w/filter, pump, ladder, and accessories, $100. Ext. 5277.

ANTIQUE ARMOIRE - & dresser, English pine, $900. 331-9771.

ROTOTILLER - for 10 HP tractor w/belts & pulleys, asking $250; seed spreader, like new, tractor mount/flex. shaft drive, 1 Bu. cap, asking $55. 929-4522.

MOPED - Kreidler, West Germany, no insurance required, 100 mpg, 26 mph, like new, many extras, $300. Walter, Ext. 4605 or 938-8353.

COLECOVISION - rarely used, includes 2 cartridges, $80; Kerosun kerosene heater, used 1-1/2 seasons. Mike, Ext. 2538.

MAGAZINE COLLECTIONS - 80 Micro, 1980-1984, Backbacker 1-21, best offer. Ext. 4222.

HAM RADIOS - Hallicraft HT32A, $75; Hammarlund HQ-110, $60; Heath DX60/VFO, $50; Mosley TA-33SR, $75. Ext. 7790 or 751-6076.

DRESSER - 64" length x 32" height x 21" wide, 4 drawers each side, closet in center of chest, lots of space, maple, $60. 732-3338.

POOL FILTER - 1 HP, Sand, s/s, used 2 mos., vacuum system included. 475-6938.

SNOW BLOWER - and power edger, w/Toro power handle, $200; living room set, 5 pieces, $300; circulator pump for hot water heating system. John, Ext. 4491 or 744-5867.

TELEPHONE ANSWERING SYSTEM - DuoFone Tad-110, like new, 1 yr. old., excel. working cond., $75/firm. Cathy, Ext. 2063.

DRESSER - 5 drawer, solid wood, $40; bed rail, $5; bicycle training wheels, $10; table lamp, $5. Inan, Ext. 3370.

BATHROOM VANITY - white & gold, formica cabinet with circular sink, all plumbing, $30. Sue, Ext. 3675 or 473-6570.

BOY'S BICYCLE - Schwinn La-Tour, 10 spd., 26", yellow, like new, $145. Bobbie, Ext. 7288.

MEN'S BIKE - 3 spd., Sears, new tires, $50. Austin, Ext. 5329 or 363-2796.

BOY'S BICYCLE - Ross, 26", maroon, 3 spd., like new, $75; classical guitar, Yahama w/hard case, like new, $210. Nick, Ext. 3988.

FIREPLACE INSERT - Glacier Bay, airtight stove, excel. cond., $595. Ext. 2705.

BUREAU - 9-drawer, cherry wood, $60. Ext. 7141 or 288-3216 eves.

SOFA - slate blue velvet, 90", contemporary, 8 mos. old, excel. cond., orig. $550, asking $400. 732-2570 eves.

POOL FILTER - 3/4 HP, earth filter and cover for 18' pool, both for $25. 698-3394 after 3 p.m.

BASS AMP - acoustic, profess., piggy back, lifetime guarantee, 200 watts, $500. Ripp, Ext. 4672.

EUONYMUS BUSHES - deep green leaves, 1 ft./ht., need protected sunny location, $3/ea.; Craftsman rotary mower, 20", good cond., $35. Tom, Ext. 4084 or 878-1060.

COLOR TV - 16", GE, $50. Tony, Ext. 3927 or 3209 after 6 p.m.

TABLE LAMPS - 2 for $10. 727-5912.

VEGETABLES - 6-pack, 4-pack flowers, large selection, $.75/pack, delivery week of 5/13. Ray, 727-6818.

AIRTIGHT WOOD STOVE - $75. Bob Kiss, 467-4222.

TELEXTENDER - for Pentax, 2X, $8; drink recipe book; Ultima Pro 100/110 camera. Susan, Ext. 4267.

MEN'S BICYCLE - 3 spd., Sears, new tires, good cond., $40. Ext. 5329 or 363-2796.

CIRCULAR SAW - 8", B&D, commercial duty, good cond., $40. 567-9025 after 6 p.m.

WOMEN'S HIKING BOOTS - Wolverine, size 7-1/2 med., $15. Gene, Ext. 3354.

HAMMERLUND RECEIVER - HQ129X, $50; grid dip meter gen. radio, $25. Ext. 4082/7696 or 289-1003.

PENTAX CAMERA - 35mm, new, with skylight, carry case, etc., program plus model. Mike, 331-5042.

FURNITURE - couch, fireside chairs, marble top cocktail table, excel. cond. 286-0355 after 4:30 p.m.

BEDROOM SET - baby items, good cond. 732-6776.

FIREPLACE INSERT - Glacier Bay, airtight stove, excel. cond., $595. Ext. 2705.

REFRIGERATORS - (3) used, 6', 10' 19'; portable dishwasher, good running cond., make offer. 588-4987.

CONSOLE STEREO - colonial, excel. cond., beautiful piece of furniture, $75. Larry, Ext. 2021 or 281-7240.

MOBILE KITCHEN UNIT - counter top, oven, sink and refrigerator, must see, $550. Ext. 5186 or 588-0677.

FREEZER - upright, 17 cu. ft., Montgomery Wards, $100. Ext. 3401.

DINING ROOM SET - modern, 4' round, glass table, 6 chrome chairs, excel. cond., $295. 751-0061.

COLOR TV - 13", $130; Sansui portable stereo system, $200; bicycle pump, $5. Bernd, Ext. 3405 or 3389.

PICNIC TABLE - round, 4 benches, umbrella, 2" redwood, excel. cond., $100. 473-7667.

LUGGAGE - carry-on garment bag, new, used once, $25 or best offer. Ext. 2914 or 286-3742 eves & weekends.

Free

LHASA APSO - male, needs good home, owner moving. Ext. 2890 or 289-0532.

DOUBLE OVEN RANGE - GE, needs work, you pick up. Ext. 3293.

Real Estate

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

For Sale

E. PATCHOGUE - S. Durkee La., large custom Cape Cod, beautiful 1/2 acre lot, walk to beach and marina, 4 bdrms., 2 baths, study w/fireplace, full basement, attic, garage, S. Country School Dist., $153,000. 289-9724.

YAPHANK - 2 mi. from Lab, 2 bdrms., 1-1/2 bath condo., basement, ceiling fans, oil heat/hot water, like new, pools, tennis, club house, lovely, quiet community, $81,990. Henry. Ext. 4547 or 924-6688.

RIDGE - split, l/r, d/r, eik, den, 2 baths, 2 bdrms., garaged, fenced yard, dog pen, w/w carpet, wood stove, private lake, $86,000. 929-4776.

SHOREHAM - center hall, Colonial layout, private beach, 4 bdrms., l/r, d/r, f/r with fireplace, study, $215,000. 744-5709.

For Rent

FLORIDA - West Coast, Gulf-front 2 bdrms., 2 bath condo, furn., swimming pool, all appliances, avail. until Nov. 1, $550/mo. 744-9746 eves.

SHAWNEE VILLA - vacation resort in the Pocono's, full accommodations for 6-8 people, week starting 6/8/85 thru 6/15/85, $500. Charlette, 348-2856 days or 286-0913 after 6 p.m.

LAKE RONKONKOMA - cottage, 1 bdrm., l/r, dining area, kitchen, min. to SUNY/Smithtown, 20 min. to Lab, $475 incl. elec. & water. 588-1889.

FARMINGVILLE - 1 bdrm. apt., $500 incl. all plus cable. 732-2141 before 1 p.m.

MYRTLE BEACH, SOUTH CAROLINA - ocean-front condo., 2 bdrms., 2 full baths, sleeps 6, balcony view of ocean, pools, sauna, jacuzzi on premises, 36 golf courses in area, $550/week. 584-7258.

MIDDLE ISLAND - 1 bdrm. apt., 15 min. from Lab, single male preferred. 698-4895.

Lost & Found

LOST - 4/1/85, money, in women's locker room at gym, money needed, please return, no questions asked. Pat C., Ext. 3565.

Car Pools

DIX HILLS - rider seeks car pool. Maryann, Ext. 5124.

Wanted

REPAIR PERSON - for noisy GE a/c. Morris, Ext. 4192.

RIM - 13", 5 lug. Janet, Ext. 2345 or 929-8152.

BERA CHESS CLUB MEMBERS - would you like to play a grandmaster? Kim, Ext. 7110.

WELL PUMP - 1 HP, 2 stage, 220V, reasonable. Bob, Ext. 5010.

OUTBOARDS - broken, damaged, 1970 and up. Bill S., 567-3417 or 281-6498.

HIGH CHAIR - safe, sturdy, good cond. Guryn, Ext. 3878.

SITTER - house & cat, 2 weeks in June, 3 weeks in August. Pete, Ext. 3328.

HOUSEMATE - to share 2 bdrm. house, Sound Beach, 20 min. to Lab, $260/mo. plus 30% util. Greg, Ext. 5508 or 744-1793 eves.

INFANT CAR SEAT - porta-crib, to borrow, May 1&2. Chuck, Ext. 3382.

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

Classified Ad Policy Deadline is 4:30 p.m. Friday for publication Friday of the next week.