BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

A Pilot Study Of Black Lung Disease

The symptoms are shortness of breath, a racking cough and a buildup of mucus. In medical circles, it's called coal workers' pneumoconiosis. But it's better known as black lung disease —and for good reason. An autopsy of a miner's lung reveals widespread deposits of black coal dust.

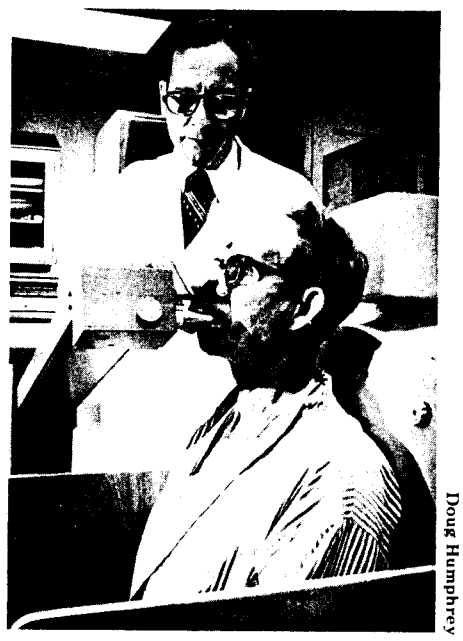
For the past 11 months, coal miners from the hills of West Virginia have been coming to BNL to participate in a study of coal workers' pneumoconiosis. The study was initiated jointly by Eugene Cronkite at BNL and David Heydinger at the Marshall University School of Medicine in Huntington, West Virgina. Now coordinated by BNL's Bertrand Brill, the main objective of the DOE-funded pilot study is to find ways to identify the disease early on.

It can take ten years for the disease to develop to a point where it is detectable by X-ray, according to Herbert Susskind, one of the BNL researchers in the project. He says some miners who exhibit the symptoms may even have normal X-rays after 30 years in the mines. X-rays are therefore not the most reliable diagnositic tool for this disease. They indicate only *structural* changes in the lung and do not measure the extent of *functional* impairment.

That's why the miners come to BNL. Here, they are studied in a variety of different ways, but notably with nuclear medicine techniques, which measure lung function. Susskind says Brookhaven is the only place where nuclear medicine is being systematically applied in the study of this disease.

Each miner spends five days at the Medical Department's hospital, under the care of physicians Julio Acevedo (who recently left BNL) and Junichi Iwai. In addition to the nuclear medicine studies, the miner has a physical examination (which includes X-rays, read by physician Harold Atkins), takes a barrage of laboratory tests and undergoes a series of pulmonary function exams. Many of these tests are done with technical assistance from William Harold, Lorraine Tassinari and William Lehman. Says Susskind, "The facilities here are so extensive, we can make a comprehensive assessment of the miner's medical, physiological and biochemical status."

All the miners who come to Brookhaven are patients of Donald Rasmussen, a physician on the staff of the Marshall University School of Medicine, who operates a clinic in Beckley, where he diagnoses and evaluates black lung disease. Collaborating with BNL researchers in this project, Rasmussen at this time sends to Brookhaven only those miners who show symptoms. A good percentage of them have normal chest X-rays.


Doug Humphrey

Coal miner seated in front of gamma camera during nuclear medicine study. He is breathing through a spirometer as Herbert Susskind, Medical Department, introduces through the mouthpiece a tracer which will measure lung volume.

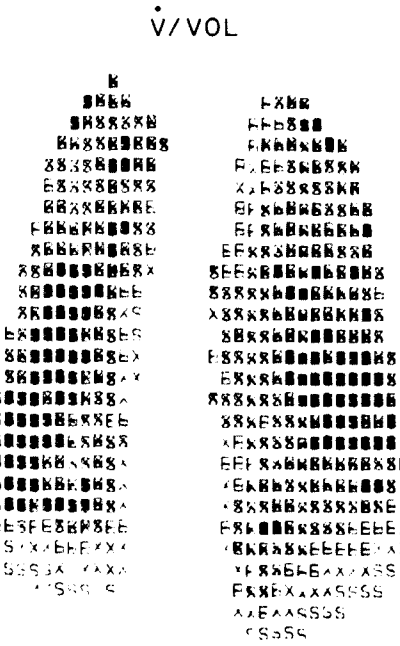
Thirty-four miners have been studied so far. They range in age from 43 to 65. All are retired now, but on the average, each put about 35 years into the mines.

Out of the 34, 20 miners are life-long non-smokers. Susskind says these non-smokers are critical to the study because of the controversy over the relative contributions of coal dust and cigarette smoke to the disease. In the case of a cigarette-smoking coal miner who has black lung disease, it is difficult to single out the culprit. Is it the cigarette smoke, the coal dust, or a combination of the two?

BNL's research on the non-smokers points to coal dust. Says Susskind, "All the non-smoking miners we have studied clearly have the disease. For them, coal dust is the cause."

Coal dust is mostly carbon and trace elements. But Susskind says the big problem is not *what* coal dust is, but that it consists of microscopic particles so small they aren't coughed up or washed out by mucus. He says these particles penetrate into the far

(Continued on page 3)



Point by point distribution of krypton-81m activity in a coal miner's lungs as determined by computer analysis. The krypton is used to measure air flow in the lungs, and the darker the points, the more krypton (air) is present. While healthy lungs will show a gradient of light to dark going from top to bottom, the irregular distribution of krypton in this patient's lungs indicates regions of impairment.

One Of The Miners

At 59, Dullin Shelton has just retired from coal mining. Like other retirees, he plans to take it easy, but Shelton actually had no choice about an early life of leisure. His activity is limited by impaired lung function.

Shelton is one of the coal miners who was examined here in the Medical Department as part of the BNL/-Marshall University School of Medicine collaborative study on coal workers' pneumoconiosis. He volunteered for the study because he felt "it may not help me, but it may help others later."

An ex-smoker for many years, Shelton is a valued subject for the study because of the controversy over the relative contributions of coal dust and cigarette smoke to the disease. He said he smoked an old cob pipe when he was young, but got pneumonia once and couldn't smoke. That made him decide that if he could stop for two weeks, he could quit forever, which is what he did.

He started working in the mines at the age of 20, following his brother who was already a miner. Except for a brief layoff "when the mines were worked out and closed down," forcing him to move with his family from North Carolina to West Virginia to get work, he was a miner for 39 years, staying with the same company for all that time. Finally, "when I figured I couldn't come up with my end of it," he retired.

Shelton has a farm in West Virginia, where he raises and grows most of the food for his family. He is also a skilled carpenter and enjoys woodworking. "As long as I take it easy, it's alright," he said. "It just takes longer to do everything." —M.S.R.

Student Assists Lung Project

A good portion of data analysis for the West Virginia coal miner study was done by Tracie Holmes, a Longwood High School student working at BNL through Personnel's Co-op Program. Holmes started in the Medical Department's pulmonary lab in October 1979, and until this June, when she graduated from high school, she maintained a busy schedule attending classes all morning and working at the Lab all afternoon.

"The reason I wanted to work in the Medical Department is that I plan to go to medical school," said Holmes, who felt that she had learned much at the Lab she could not have learned at school. She took data from results of various tests on the coal miners and did statistical analyses to find correlations.

This past summer, Holmes enrolled in a program for science majors at Spelman College in Atlanta, Georgia, where she is a freshman this fall, majoring in chemistry. Her long range plans are to go on to medical school and eventually pursue a career in general practice or pediatrics. The middle one of five children, Holmes says she likes to help people and is particularly interested in health and nutrition. —M.S.R.

Doug Humphrey

Tracie Holmes

Palmer Design Chosen For ISABELLE Magnets

"We will build the standard large aperture ISABELLE using cable instead of braid in the magnets," said Nicholas Samios, BNL Deputy Director for High Energy Physics, in summing up the decision made on September 1 when he presented a plan for a 1987 accelerator start-up to a five-member DOE panel in Washington, D.C.

Samios' presentation supplied DOE with information needed to make decisions about 1983 budget allocations. "The DOE people are very supportive of the route Brookhaven is going to take," Samios said. The panel included Alvin W. Trivelpiece, Director, Office of Energy Research; James Leiss, Assoc. Director for High Energy and Nuclear Physics, OER; N. Douglas Pewitt, Deputy Director, OER; William Wallenmeyer, Director, Division of High Energy Physics; and J. Ronald Young, Asst. Director for Management, OER.

The large aperture superconducting cable magnet, designed by BNL physicist Robert Palmer, was one of five designs being considered for use in ISABELLE. "We picked this one because it was the best," Samios said. "Basically, we're just replacing the braid with a cable that has been tested in hundreds of magnets. We retain nearly everything else in the original ISABELLE concept — the same luminosity, the same physics — all at energies of 400 × 400 GeV. And we can do this in an acceptable time-scale, at an acceptable cost, for the good of the national program. We now anticipate that ISABELLE will be complete and operational by 1987, if not sooner, and we plan to put our full efforts on that approach."

Samios continued, "Not only was the cable magnet successful, so were the picture frame (Danby) magnet and the three-layer magnet being developed at Berkeley. The standard braid was also making good progress. I believe we could have built the machine with any one of these choices."

"We could have also built ISABELLE with the small aperture magnets designed at Fermilab," Samios added, explaining that this fifth alternative will be kept as a backup. "If for some unforeseen reason we're unsuccessful," he said, "we're retaining this option." Earlier this year, this magnet was being considered seriously, but, Samios said, "When we compared alternatives, it didn't turn out to be the best choice — partly because we can't build the small apertures as fast as we thought. We'd have to set up the factory here, rather than at Fermilab, and we'd also have to make modifications."

The ISABELLE Division is now updating magnet documentation to reflect the changes inherent in the switch from braid to cable. Production of the standard aperture braid magnet has already stopped so the division can put its full focus on the new design. The first full-size cable magnet should be completed and tested by November.

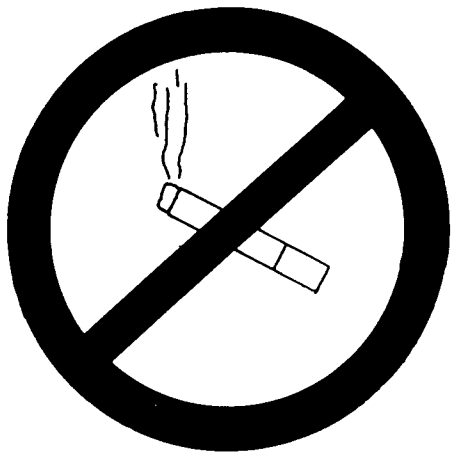
Lecture

Noted British scientist John Cairns will deliver the 25th AUI Distinguished Lecture on Thursday, September 17, at 8 p.m. in Berkner Hall. Professor Cairns, who is now at the Harvard School of Public Health, will speak on "The Present Status of the Cancer Problem." His lecture is open to the public.

In Memory of Haworth

Maurice Goldhaber has prepared a memoir of Leland J. Haworth for the 1981 Year Book of the American Philosophical Society. Haworth was director of the Laboratory from 1948-61. A copy of the memoir has been placed with Dr. Haworth's papers in the archives at the Research Library, and may be perused there.

A Chance To Call It Quits



Smokers who wish to stop smoking, will have an opportunity to make the break next month in a workshop on site and in the company of fellow employees.

A six session Smokers Withdrawal Workshop will be given from noon to 1 p.m. on October 15, 16, 21, 23, 28 and 30, in a room to be designated in Berkner Hall. The workshop will be limited to 40 people and a $15 fee will be charged. The fee is tax deductible. Employees who wish to participate are asked to get prior approval from their supervisors.

The format of the program has been developed by the American Lung Association of Nassau-Suffolk. Participating in the presentation of the program at BNL will be Dr. Judith Katsin, head of the Employee Assistance Program, and Caroline Kramer, R.N., Occupational Medicine Clinic.

There can hardly be anyone in the United States who is not now aware of the health hazards of smoking. Still, approximately 38% of adult men and 30% of adult women smoke cigarettes regularly, and teenage smokers are on the increase. The Lung Association's workshop is based on the premise that cigarette smoking is a habit acquired because it satisfies particular needs of a smoker. To be able to give up the habit, the smoker must learn new habit patterns to satisfy each of these needs.

The sessions will include films and talks by a physician, followed by group discussions on what has been presented. "The approach is educational." says Dr. Katsin. "There are no gimmicks and participants are not pressured to quit. They make their own decisions. We want to help them determine their personal triggers for smoking, and suggest more constructive behavior. An important factor in successful withdrawal from smoking is support. We will do all we can to be supportive and employees will be encouraged to help each other." Dr. Katsin says further workshops will be planned if sufficient interest is expressed in the initial program.

Before the start of the workshop, participants will be given a pulmonary function screening test to detect possible lung damage. As the workshop is limited, smokers are urged to send in the registration form below, as soon as possible. The first 40 registrants will be contacted and given a date for a screening test, and fees will be collected at that time. Participants will be expected to attend all six sessions.

To: Smokers Withdrawal Workshop
Occupational Medicine Clinic, Bldg. 490

I wish to attend the workshop.

Name _____

Ext. _____ **Bldg. No.** _____

Every Day Is Wash Day

Anyone who has ever done the family wash can appreciate the challenges faced by the crew at the BNL Hot Laundry. On a daily basis, they contend not only with such visible stains as grease, oil, and food, but also with the invisible residue of radiation.

Cleaning contaminated garments was the initial reason for the site laundry. That's also the reason it was dubbed the "Hot" Laundry, an appellation it still bears even though that kind of work accounts for only a small portion of the Lab's wash today.

An average of 6000 pounds of laundry is washed at BNL each week. Of this, about 1500 pounds are "hot" lab coats and overalls from departments like the HFBR, Biology, and Chemistry. Two 140-pound capacity washing machines are reserved exclusively for laundry with low levels of contamination. If health physics personnel determine that contamination cannot be washed out, an item is destroyed. When the wash is done, the "hot" water empties into a special holding tank which is also under the jurisdiction of the health physics staff.

All other Lab wash — about 4500 pounds weekly — is cleaned in two washers with a total capacity of 280 pounds. This includes towels and bedding from on-site housing units and the Fire Department; tablecloths and napkins used for banquets at the Brookhaven Center; sheets for an experimenter's cot in the Tandem Van de Graaff; lab coats from non-contaminated areas; towels for groundskeepers and the Police Department; and patient laundry and staff uniforms from the Medical Department.

Doing laundry involves more than just washing. Items must be picked up and delivered, dried and folded, often pressed and sometimes mended. Orchestrating these activities is Hot Laundry supervisor Oscar Blevins, assisted by lead man Ray Mayo. Working with them are other Plant Engineering Division personnel: Norman Nelson, Dotty Luther, Mary Kish, and Madeline Stawski. Over the summer months, the group has been assisted by William Jensen and Walter Saunders.

Laundry personnel take turns driving the laundry truck and bringing the wash back to Building 650 on Cornell Avenue. There, pockets of lab coats and uniforms are routinely checked to make sure they're empty. However, "foreign objects" sometimes do sneak into the "hot" laundry, which goes directly from special delivery bags into the reserved washing machines. Nelson recalls at least one time when someone left a fountain pen in a garment and everything was washed with dark ink.

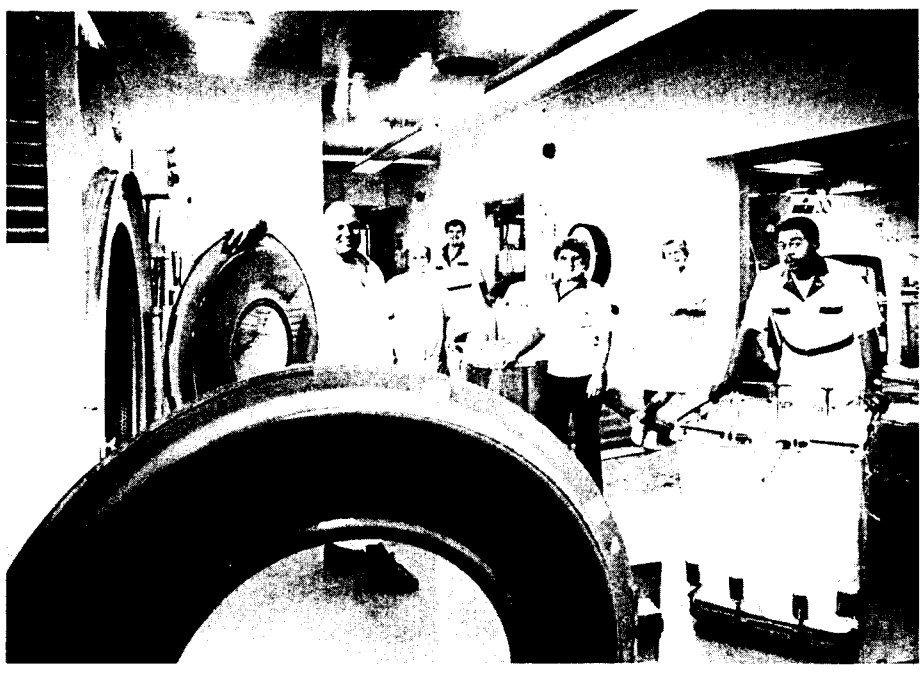
But most Lab laundry is washed with a special formula, biodegradable soap that is delivered in 200 pound drums. Afterwards, towels are dried completely, then folded; but all other laundry is partially dried, then pressed. Flat pieces go through the "mangler," a giant presser that can iron an item as large as a king size sheet. Pieces like lab coats and uniforms are done on large tailor-type presses. Nothing is ironed by hand. As necessary, laundry personnel mend the uniforms of some departments on darning machines.

"Most of our equipment has been replaced within the last ten years so it's pretty new," said Henry Boomer, general supervisor of custodians and protective clothing. All machines receive a thorough checkup annually and emergency repairs are handled by BNL electricians and the heavy equipment shop.

Finished laundry is packed in deep bins or wrapped in small packages, depending on the amount being returned. In the case of Housing's wash, both procedures are used. Luther explained that there's a logical and simple reason for doing this, "Small parcels are much easier to carry upstairs, of course."

When finished wash is returned, the deliverers do not return to the laundry with an empty truck. As any homemaker can attest, there's always more waiting to be done . . .

— Anita Cohen



Doug Humphrey

Pausing in their work at the BNL Hot Laundry are (from left) Norman Nelson, Madelaine Stawski, Bill Jensen, Dotty Luther, Mary Kish, and Walter Saunders. Not present: Ray Mayo, Oscar Blevins.

Whitehead Named Personnel Deputy

Janet C. Whitehead has been appointed to the post of Assistant Manager, Personnel and Labor Relations, effective September 1. In this capacity she will serve as deputy to Personnel Division head, Robert D'Angio, and will continue to be responsible for the recruitment, employment and recreation functions of the division.

Doug Humphrey

Janet Whitehead

Whitehead succeeds Peter Paige who retired on June 30. The craft apprenticeship and tuition refund programs, formerly administered by Paige's office, will now be the responsibility of William Hempfling who is in charge of training.

A graduate in political science from the College of William and Mary, Janet Whitehead found herself doing administrative work on one of her first jobs in Manhattan, and this led to her career in personnel. She has been at the Laboratory since 1961 except for a two-year period in the early 70s when she left to return to school, and later to work in civil service administration in the Midwest. Throughout her years at the Lab, her main concern has been with the recruitment and hiring of non-scientific employees, as well as the development of affirmative action and related work-study programs for students. She was appointed Assistant Personnel Manager in 1975 and achieved full managerial status in 1978.

Whitehead says her new appointment will not create any major changes in operations, and she can be reached at the same extension.

Stony Brook Event

The Youth Goodwill Mission of the Republic of China will present a Chinese variety show on September 15, at 8 p.m. in the Fine Arts Center Theater of SUNY at Stony Brook. The group of talented young performers from Taiwan colleges and universities will present songs and dances from both classical and folk traditions, as well as a demonstration of skills in the martial arts. For reservations, call 246-5678; information 246-9179.

Arrivals & Departures

Arrivals

Kamta Rai ..... Applied Math.
Asko E. Vehanen ..... Physics
Bruce W. Wieland ..... Chemistry
Andrew M. Zangwill ..... Physics

Departures

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

Maged M. El-Batanouny ..... Physics
Michael T. Foran ..... Energy & Env.
Randy K. Koleda ..... Accelerator

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Black Lung (Cont'd)

reaches of the lung and deposit there, building up into masses called macules. Although damage is small at the location of any one of these macules, their distribution can be widespread and can result in severe lung function impairment.

According to Susskind, one of the promising ways to assess changes in lung function is with nuclear medicine techniques. Supervised by Bertrand Brill and Yoshihara Yonekura, the nuclear medicine studies involve three radioactive tracers, inhaled by or injected into the patients. Krypton-81m is used to measure air distribution in the lung, technetium-99m measures blood distribution, and xenon-127 measures lung volume. The xenon radioisotope is made by Powell Richards and his group, using the Brookhaven Linear Isotope Producer (BLIP), and the krypton radioisotope is made at BLIP or by Alfred Wolf and his colleagues in the Chemistry Department, using the 60-inch cyclotron.

The radioactive tracers measure lung function on a localized level. Values are obtained at hundreds of locations throughout the lung and are analyzed by computer, using software developed by Howard Pate. Susskind reports that significant functional impairment at the small airway level of the lung was measured in all the miners. While conventional pulmonary tests of gas exchange also revealed lung function impairment, Susskind notes that the nuclear medicine techniques are more precise because they pinpoint the regions of impairment.

"It appears that the nuclear techniques are well-suited to the study of this disease," says Susskind. "And using nuclear medicine in combination with clinical chemistry and pulmonary function tests, this study has already produced significant results."

Susskind adds that the project is going well except for one major problem — not enough measurements of healthy persons. He says a small number of healthy people have taken the same tests given to the coal miners. As expected, results for the healthy people look very different. But to do a better statistical analysis — to prove that the miners do not fall within a wide range of "normal" — more healthy volunteers are needed.

— Mona S. Rowe

Something For Everyone

When the workday's over at BNL, many Lab employees participate in one of 38 activities sponsored by BERA. So if you're a physicist who's also a camera buff, a secretary with a yen to learn judo, an engineer seeking bridge players, or anyone else with a specific interest, you'll probably find other BNL'ers who share your enthusiasm by checking out the groups listed here.

Activity	Description	Contact Name	Contact Phone
Afro-American Culture Club	Meets regularly to promote cultural awareness and encourage intercultural exchange.	Dwight Brown	2879
Archery Club	Uses outdoor range year-round; provides free instruction to beginners.	Joseph Bauernfeind	3274
Art Committee	Organizes professional and employees' exhibits.	Eleanor Dahl/ Per Dahl	7125 3500
Astronomy Club	Shares interest in the skies through observation and lectures.	Cesar Sastre	4077
Aviation Club	Meets monthly to promote understanding, safety, enjoyment of flying; all are welcome.	Ronald Dobert	4082
Badminton Club	Plays year-round; holds winter tournaments in gym.	John Guthy	4411
Basketball League	Teams compete regularly in gym.	Robert Rowley	3354
Bowling League	Leagues bowl at local alleys, Sept.-April.	Richard Larsen	3810
Bridge Club	Plays duplicate bridge weekly at Brookhaven Center.	Colin Durston	2598
Camera Club	Meets monthly; uses club's darkroom facilities for black & white and color processing.	Lewis Jacobson	7636
Camping Club	Organizes campouts spring, summer, and fall, at Lab and off-site; holds monthly meetings.	Charles Watson	3254
Choral Group	Rehearses four-part harmony, particularly in Nov. & Dec. for annual Christmas concert.	John Weeks	2617
Concert Committee	Organizes series of music concerts at Berkner Hall.	Donald Lazarus	4643
Cooking Exchange	Meets alternate Wednesdays, Oct.-May, for international cooking demonstrations.	Ruth Fernow	928-8465
Cricket Club	Plays at ball fields, spring, summer and fall.	David Cox	3818
Fly Tyers Club	Fresh-water fans meet weekly year-round.	John McCafferty	3764
French Club	Meets year-round for discussions, lectures, movies, dinner parties.	Ralph Weston	4373
Golf League	Teams compete weekly; holds tournaments at local courses; May-August.	Ronald Webster	2845
Ham Radio Club	Uses club's transmitting equipment in Recreation Bldg., meets year round.	George Walzcyk	4243
Handball Club	Plays at noon time on courts at AGS Heliotron Area.	Gerald Bennett	7590
Judo Club	Meets weekly in gym.	Robert Marascia	4672
Microprocessor Club	Meets weekly to discuss growing microprocessor technology.	James Hainfeld	3372
Motorcycle Club	Plans frequent outings; meets monthly.	George Stenby	2012
Mountain & Canoe Club	Plans year-round trips; meets as necessary.	Harold Upseth	4324
Nursery School Committee	Operates classes for 3 and 4 year old children of Lab employees, Sept-June.	Ruth Fernow	928-8465
Racquetball Club	Uses Royal Racquetball Club courts in Coram.	Richard Horwitz	4134
R/C Model Aircraft Club	Flys radio-controlled model planes during scheduled weekends, April-Oct.	John Nicolellis	4244
Rifle & Pistol Club	Holds shoots year-round at BNL range and elsewhere; meets monthly.	Otto Jacobi	4406
Runners and Cyclists Club	Schedules meets spring and fall; holds planning meetings as necessary.	Jeanne Penoyar (Run) Gerry Morgan (Cycle)	2634 4841
Soccer League	Plays Mondays, 5:30 p.m. at ball fields; plays in gym during winter.	Kenneth Batchelor	4674
Softball League	Leagues play from May-Aug. on ball fields.	Charles Bohnenblusch	4748
Special Events Committee	Organizes events, including picnics, dinner-theatres, and contemporary entertainment.	Rosalie Piccione	3160
Table Tennis Club	Plays at noon time in Recreation Bldg.	Charles Zein	3950
Tennis Committee	Sets rules for court use; organizes tournaments.	Gail Williams	3338
Theater Group	Aims to present two full-scale productions each year.	Sandra Lane	7159
Touch Football League	Plays in ball fields, Sept.-Oct.	Edwin Taylor	7589
Volleyball League	Plays in gym, twice weekly, Nov.-March.	Dennis Weygand	3737

Gym Schedule

The normal weekend schedule at the gym will resume on Saturday, September 12.

Saturdays

10:00 - 1:00	badminton (west side) volleyball (east side)
1:00 - 5:30	general activities

Sundays

1:00 - 5:30	tennis (per signup sheet)

Cafeteria Menu

Week Ending September 18, 1981

Monday, September 14

Corn chowder	(cup)	.60
	(bowl)	.70
Sweet 'n' sour pork on rice		1.65
Broiled chicken livers & 1 veg.		1.60
Hot Deli: Grilled Reuben		1.70

Tuesday, September 15

Beef vegetable soup	(cup)	.55
	(bowl)	.65
Stuffed pepper w/spaghetti		1.60
Roasted turkey & stuffing w/cranberry sauce		1.60
Hot Deli: Sausage & pepper hero		1.70

Wednesday, September 16

Navy bean soup	(cup)	.55
	(bowl)	.65
Shrimp & fries		1.87
Turkey à la king over rice		1.55
Hot Deli: Pastrami	(on bread)	1.65
	(on roll)	1.75

Thursday, September 17

Chicken noodle soup	(cup)	.55
	(bowl)	.65
Chicken Pattie Parmesan w/spaghetti		1.60
Breaded pork chop & 1 veg.		1.65
Hot Deli: Roast beef	(on bread)	1.65
	(on roll)	1.75

Friday, September 18

Fish chowder	(cup)	.60
	(bowl)	.70
Breaded fish fillet & 1 veg.		1.55
Roasted top round of beef w/1 veg		1.65
Hot Deli: Chili dog		1.60

Camera Club

The Camera Club will meet on Wednesday, September 16, at 5:30 p.m. in the Recreation Building. Plans for the coming year will be discussed.

Following the business meeting, a slide show, entitled "Holland - A Garden of Pictures", will be shown.

Afro-American Club

All employees are invited to attend a general meeting of the Afro-American Culture Club on Thursday, September 17, at 5:15 p.m. in Berkner Hall, Room A. Plans for the fall and Black History Month '82 will be discussed.

T-shirts with the colorful Club logo may be ordered from Renee Flack, Ext. 3316.

Motorcycle Club

The Motorcycle Club will meet on Monday, September 14, at 5:15 p.m. in the Recreation Building. On the agenda is a discussion of a possible field event and a report on the Motorcycle Safety Foundation.

Scholarship Alert

Up to ten 1982 AUI Trustee Scholarships will be awarded to children of regular employees of Brookhaven National Laboratory. Awarded competitively, the scholarships are renewable for up to four years of study toward an academic degree. In addition, up to three scholarships may be awarded to minority group children of employees of BNL and NRAO; eligibility will be determined by applicable federal criteria.

To qualify for a scholarship, the applicant must be a son or daughter of a regular employee of BNL who began full-time employment no later than January 1, 1981, or a son or daughter of a retired employee or of an employee who died when in regular service at the Laboratory. In the case of stepchildren, eligibility will be established if the employee regularly claims the child as a dependent for income tax purposes.

Eligible applicants must be secondary school seniors who will be graduated during the current academic year and entering college in the fall.

Each scholarship will be in the amount of $1,500 per year and is paid directly to the college.

Applications are due December 1, 1981. For more information, application forms and Critical Data Schedules, contact the Office of Scientific Personnel, 40 Brookhaven Avenue, Ext. 3338.

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.

The determination of the best-qualified candidate for available positions will be based upon education, experience and other job-related criteria. Such factors will be evaluated and measured against the demonstrable requirements of the available vacancy, as well as the Laboratory's Affirmative Action objectives.

The Laboratory is committed to a policy of Equal Opportunity in its selection and placement of personnel. Its objective is equality of opportunity in employment, training, and promotion without regard to race, color, religion, national origin, sex or handicap.

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, as indicated below. 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 Personnel Placement Supervisor, Ext. 2882.

LABORATORY RECRUITMENT: Opportunities for present Laboratory employees.

1627. SECRETARIAL POSITION - Requires an AAS degree or equivalent experience, significant Laboratory experience and excellent communication skills. Will be responsible for supplying all necessary secretarial and administrative services for a divisional office. Department of Energy and Environment.

Autos & Auto Supplies

72 PINTO - am/fm, manual, good on gas, needs work, runs OK. $350. Ext. 3326 or 286-0497.

78 HONDA — XR75 Dirt Bike, excel running, new chain. Powerol Hi Pro pipe. $350. Cliff, 369-1768.

TORINO - Sta. wgn, reliable. $300. Joe, 475-8440.

76 DODGE VAN - B300, 1 Ton, insulated, p/s, p/b, a/t, V8, good running cond. Asking $2,300. Harry, Ext. 5018 or 744-2715.

70 OLDS CUTLASS - Supreme, new paint, FM 8 trk, w/booster, mint cond. $1,500. 475-5635.

RIMS - 14" Dodge or Plymouth rims; also 14" Ford Hubcaps (set of 4) Morris, Ext. 4192.

RIMS - (2) Ford, 5 hole; (2) Chevy, 5 hole. $5. ea. pair. John, Ext. 2080.

77 YAMAHA - motorcycle, 360cc, elect. start, 7500 mi, excel cond, extras. $850. John, Ext. 4185 or 929-8204.

TIRES - (2) G78-14 on GM rims, $15. Paul, Ext. 2447.

73 FORD TORINO - Sta. wgn, white, p/s, p/b, good cond. $800. Chris, 589-5126.

79 CHEVY MALIBU - 6 cyl, p/s, p/b, 29,000 mi, excel cond. $3,995. 732-0144.

69 PLYMOUTH FURY - blue, 2 dr, sedan, p/b, p/s, a/c, $425; 1969 Toyota parts, rear axle & gas tank. Hank, Ext. 3848 or 472-0553.

73 DODGE MONACO - wgn, a/t, p/b, p/s, a/c, CB am/fm stereo, radials, 2 extra snows, 76,000 mi, many new parts. $1,200. Ext. 3926.

DYMO BARS - protect engine, chrome plated for 1000cc Suzuki, new. $20. Dan, 277-1284.

TIRES - (2) FR78-15 w/w radial General dual steel II, $20. ea. Bob C., Ext. 4722 or 928-9359 eves.

66 BRONCO ENGINE - Transfer case; 1973 Vega GT trans, rear, frontend, parts, tires. 744-3968.

TIRES - (2)F7814 Sears superguard belted, w/w, balanced on Plymouth wheels, almost new. Monty, Ext. 2431.

70 CHEVY - Sta. wgn, 96,000 mi, v.g. cond. $800. Ext. 3701 or 375-8128 eves.

78 SKYLARK - V6, a/t, p/s, p/b, landau roof, low mileage. $4,000; 1978 Honda CB550 four 3000 miles motor guards, sissy bar, excel cond. $1,800. Rich, Ext. 4662.

78 OLDS CUTLASS - Supreme, a/c, p/s, p/b, am/fm stereo, 6 cyl, orig. owner, excel cond. $5,000. David, Ext. Ext. 3145.

68 VW BUG - very good cond. $600. Ext. 3954.

CYCLE CARRIER - for Moped or trail bike. $30. Dee, Ext. 3675 or 286-8909 after 5:30.

75 PONTIAC - Grand Prix, all power, 2 tone, must be seen. Asking $2,800. Fred, Ext. 4823.

MUST SELL - (2) 15" 60 tires, label still on tire, $100; (2) FR78-15 tires, $20. 399-4213.

HONDA HAWK - motorcycle, 400cc, low miles, excel cond. $1,200. 585-7094 eves.

79 JEEP CJ7 - Renegade, 6 cyl, a/t, Quadratrac, p.s, p.b, am/fm CB, moon roof. Kochis, Ext. 4447 or 744-6526.

RIMS - (2) 15" for Pontiac; (2) 14" for Oldsmobile. $5. ea. Jack, Ext. 7942.

75 CHEVY - Sta. wgn, 69,700 miles, a/c, p/s, p/b, new brakes, exhaust, roof rack, excel. $1,550. Ext. 5033.

74 HONDA - CB360, 3K on rebuilt engine, many extras, excel cond, garaged. $850. Pete, Ext. 4612.

67 BUICK ELECTRA 225 - good running, good body, excel int, 4 extra tires incl. $350. Ext. 4017.

78 MOTORCYCLE - GL1000 Gold Wing Honda, 4000 mi, like new. $2,600. 473-8783.

74 CHEVY IMPALA - 4 dr. sedan, 350 V8, 86K mi, a.c., p.s., p.b., excel cond. Asking $1,400. Itaru, Ext. 4530 days. Ext. 3079 eves.

MG - hardtop, fiberglass black. Best offer over $200. John, Ext. 7601 or 273-6072.

TIRES - (2) LR70-15, steel belted radial, 7 ply mounted on Chevy C10 rims, both $45; C10 tailgate, $40. Jim, Ext. 4040 or 289-0876.

71 DATSUN - 510 Sedan, needs work, $200. or best offer. M. McGrath, 472-4087.

79 KZ400 - rack, sissy bar, case guards, excel cond, 64 MPG. $1,250. Mike, Ext. 5206.

75 VEGA - new battery, brakes, timing belt, am/fm radio, no rot. $1,200. Artie, Ext. 2697 or 325-0743.

69 VOLVO - wgn, a/t, a/c, Calif. car, no rust, new radial, battery, tie rods. Best offer. Ext. 2368 or 928-6654.

76 BROUGHAM VAN - 33,000 mi, 18 feet full headroom, enclosed toilet, completely equipped, comfortable camper. 286-1192.

76 TRIUMPH TR7 - am/fm, sunroof, a/c, 4 spd, new tires, paint, clutch, 52,000 mi, mint. $3,600; 1969 Ford Mustang - Grande, small V8, a/t, am/fm, no rust. $800. Ext. 3457.

CUSTOM PARTS - acccessories, performance for your vehicle, low prices. Name brands. Hans, 281-5563 or Ext. 4581.

69 KARMAN GHIA - some rust, am/fm, 110 K miles, but will run forever. $750. Ext. 3088 or 689-8095.

74 DODGE MONACO - excel cond, p/s, p/b, stl belted radial tires, $850. or best offer. Ext. 4826 or 3183.

69 PONTIAC - 4 dr. good car. $350. Ext. 7699 or 821-1435.

67 SAAB - Model 96, 2 dr. sedan, light blue. $650. Ext. 4240 or 286-0295.

74 OLDS - Toronado. $550. 588-2477 after 6 p.m.

78 750 HONDA - low mileage, Ferring strip back case, radio, new battery. Like new. $2,500. 821-1036 after 5:30 p.m.

77 CHEVY PICKUP - C-10, excel. cond, inside & out, sunroof, custom interior, auto. $4,500. Rick, Extr. 2907 or 924-6199.

Boats & Marine Supplies

SEA SHARK SAILBOAT - good cond. 265-7696 after 5 p.m.

1956 SAILBOAT - wood, cabin, main sail, jib & spinnaker, needs work. $500. 623-8228.

SAILBOAT - lighting class, wood hull, mint cond, built 1963. Asking $1,200. For details, Pete, Ext. 7627.

22' GARVEY - w/125 Johnson, excel cond. $2,500. Steve, 475-2537 after 5 p.m.

20' FIBERGLASS BOAT - very wide, needs some work. $500; 25' double Ender Dory Nova Scotia built; 1978 35 HP Johnson manual generator, very little use. Kochis, Ext. 4447.

17' O'DAY DAY SAILER - w/trailer. $1,800. Dan, 286-0745 or 665-6959.

16' ALUMINUM FISHING OPEN CRAFT - w/40 HP elec start Evinrude outboard, mfg. trailer to fit. $1,100. 585-7094 eves.

1975 SEAFARER - 22' Sloop, Genoa, sleeps 4, fully equipped, excel cond. Ext. 4798 or 929-4940.

16' LARSON - 65 HP, trailer, new top, steering, fuel tank, prop. mainly Lake used. Asking $1,900. 475-3648.

23' LUHRS - Sports fisherman 1959 Lap-Strick, 6 cyl, good cond, sleeps 2, cheap to run. Ext. 2556 or 727-3894.

Miscellaneous

CARNEGIE HALL - Frank Sinatra Concert, two (2) tickets for Sunday eve 9/20/81. 2/$44. Ext. 4695.

BICYCLES - (5) ladies & men's, operating cond, 20" to 26", $2 to $15 ea; lawnmowers, rotary (3) in various stages of disassembly, good for parts or may be rebuilt. $20 for all. 878-2935.

BELT EXERCISER - good cond, $30; full wet suit, 3/16" thick skin, one side, good cond, $35; firewood cut & split, seasoned, cherry and locust approx ½ chord. U-pick up. We're moving $30. 878-2935.

QUARTZ HEATER - excel thermo-tech, new, guaranteed, 500-1000-1500 watt selector. 924-4991.

AMPLIFIER - McIntosh 30 watt, $150; McIntosh pre amp, $175; JBL C-34 speaker, $250; Rek-O-Kut turntable, $75 w/pickup. Ext. 4758.

BEDROOM - dining room; furniture, sofa. 265-7696 after 5 p.m.

QUALITY - blank tape cassettes C-90 ferrite CrOz Fe/Cr. $2.75 ea. Ext 2521 or 928-8379.

CAMERA - Olympic OM-1 excel cond. $200. Ext. 3326 or 286-0497.

EXERCISE BICYCLE - nearly new, adjustable tripod for camera; antique Singer sewing machine; other items. 293-7368.

WATER DISTILLER - new, for pure uncontaminated drinking. Ext. 3688 or 363-7032.

TABLE SAW - new Sears 8" w/or w/o motor. Al, Ext. 3354.

DOOR - exterior, new 2'8"x6'8"x1¾"; 3 windows R pre hung fir. $110. 924-6582.

VISE - heavy duty bench vise approx 4 in. jaws. $20. Call Terry, Ext. 3284 A/C shop noontime.

TORO - 7 hp rider mower, 25" cut, grass catcher, 2 yrs old, like new. $700 firm. 929-4655 after 5 p.m.

BIKE - boy's Schwinn Sting-ray, 20", 3 spd, very good cond. $45; fence posts, locust, 5 ft long, 75¢ ea (25). 581-7656.

TABLE LAMP - Early American, wood look w/eagle. $10. Karen, Ext. 5228.

TV- 19" color Midland-Radio Shack, $150; dining room 48" dia glass table w/6 chairs, $400; dresser mirror, $70. 331-9349.

BATHROOM SINK - w/faucets and 48" sliding closet doors. Paul, Ext. 2447.

GASOLINE ENGINE - 8 hp, cast iron, horizontal shaft, good cond. $60. Walter, Ext. 3397 or 567-9025 eves.

AMERICAN HOLLY - 4', $3 ea. You dig them; 3½ ft dwarf Alberta spruces, $20 ea. I dig 'em. John, 744-5867 after 6 p.m.

PEERLESS - Natural gas heater 23x13x21, $15; G.E. fan, 18" dia, $10; old school desk, $20; motors. 751-2867.

COMMERCIAL CLAMRAKE - 8' "T" handle, $80 retail. Best offer. 981-4051 anytime.

1963 VINTAGE - ampeg amplifier plus separate Manny reverb, also vintage, work well. Both $195. 878-1688 eves.

REFRIG - G.E. Frost Free, 18 cu ft., avocado, side by side, 4 yrs old, perfect, like new. Ext. 4959.

MOUNTAINEERS - Summit Magazine, July '63 - June '72. Dennis, Ext. 4259 or 736-2534 after 6 p.m.

JERRY INFANT - front carrier, red, never used, orig price $27, sell for $15. Ext. 4933.

CAMERA - 35mm Canonet, flash, case, filter, tripod, etc. $75. Artie, Ext. 2697.

SOFA & LOVESEAT - black vinyl tufted, very good cond. $200. Bob C., Ext. 4722 ;or 928-9359 eves.

BATH VANITY - formica, used medicine cabinet and toilet. $20. 472-0553.

KENMORE - stainless steel 30" range hood w/light and fan. $45. Dave, 924-4968.

QUEEN SIZE BED - mattress, box spring and stand. Chiropractor, almost new. $200 neg. 878-1135 anytime.

BICYCLE - boy's, good cond. Reasonable. Ext. 2487 or 928-6930.

SHOULDER PADS - (2) for football, youth sizes, excel cond, hardly used. 928-6930.

SOFA - contemporary loveseat, excel cond. $100. Ext. 7744 or 751-6390.

ORGAN - Wurlitzer Theater, walnut finish, including rhythm box, excel cond for $1,000. 399-1031.

CAMERAS - Kodak Instamatic #104, $7.50; Kodak Instamatic #30, $15; electric can opener, $6. Irv Meyer, Ext. 3038 or 929-4326.

END TABLES - (2) ea; coffee table, fair cond. $40. Kochis, Ext. 4447.

WOOD OR COAL STOVE - Timberline, heats 2400 sq ft, only one season old. 929-6066 after 4:30.

OFF SEASON SALE - windsurfing board, complete $695; 3 or more $560. Call Dinos, Ext. 4666 or 477-1783.

SURDIAC COAL STOVE - 44K BTU/h, 13,200 sq ft black w/piping and coal. $1,000; water bed, $175. 288-3118.

TYPEWRITER - Smith Corona, elec, needs cleaning, $50; Deewan bed/sofa, $80; kitchenette table w/2 chairs, $60. 331-9349.

BICYCLES - girl's Ross 26" compact trimatic, like new. $70; (2) 20" boy/girl convertibles, $20 ea. Jack, Ext. 7942.

BEDROOM SET - 7 pc modern dark wood w/blue and white 13x13 rug and hanging blue lamp. $450. Ext. 3457.

DINING ROOM SET - medium hutch, buffet, 2 leaves, 6 chairs. Must see, mint cond. 289-1085 after 4 p.m.

DINING ROOM SET - china closet, buffet, table w/3 leaves and pads, 6 chairs. $400. 981-4419.

LAWNMOWER - Toro 21" rotary, excel cond w/grass catcher, new blade, etc. $50. Stan, Ext. 3284 or 286-1062.

TYPEWRITER - manual office type, excel cond. $40. Ext. 4058 or 286-0436.

PINE GUN CABINET - glass front w/drawer at bottom, excel cond. $125. 929-4133.

TV - B&W, $65; sofa, $25; mattress, $8; sleeping bag, $10. Yona, Ext. 3403 daytime or Ext. 3245 eves.

SKI EQUIPMENT - Rosemont boots, men's size 12, $15; Caber boots, men's size 8, $15, Kastle 195cm skis, $25; Head 720 skis, 203cm, $20; Solomon 202 bindings, $25; orange carpet w/pads, 12'x14', $50. 929-4886 after 5:30.

CAR SEATS - (2) for child, $20 ea; TV B&W 23", $20; am/fm radio, $8; coder, $7; vinyl pool, $4, snow slide, $2. Yukiko, Ext. 3079.

MIGHTY MAC - boy's winter jacket, size 16, excel cond, blue. $20. Ext. 3801 or 289-5770 after 6 p.m.

ROOF RACK - Chrysler type fully adjustable, stainless rub rails, ideal for vans. Broncos. Fred, Ext. 4823.

CANON CAMERA - Canonet 35mm tripod, case, strap, filter, flash, etc. $75. Artie, Ext. 2697.

PIANO - 1930's Wright Player Piano, good cond. Best offer. 289-1585.

VENDING MACHINES - new, still in crate, mechanically operated, must see. Scarifice. 924-3066.

KITCHEN RANGE - coal/wood/gas; l/r chairs; slipcovers; grill; coffee table; range; oil burners/electric. 325-1961.

STEREO CABINET - 4 sections, sliding shelf, 698-3856.

WASHER - small portable, fits everywhere, very good cond. $50. Ext. 7699 or 821-1435.

ROUND POOL - 24"x4', diatomaceous earth filter, alum. ladder, bottom vac, skimmer, complete $275; Deming water pump system, 30 gal holding tank, pressure switch, pump just rebuilt. $100. Ext. 4532 or 277-4091.

G.E. 21 CU FT REFRIG - frost free energy-saver button, on rollers, almond-color. Moving - must sell. Paid $800, scarifice $500. Ext. 2913 or 698-7591 eves.

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

RIVERHEAD AREA - mobile home 10x50, 1 bdrm, stove/refrig, washer/dryer, tool shed, covered patio. Air cond. Ext. 3138.

SHOREHAM - 3 bdrm ranch, 9 yrs. old, l/r, formal d/r, eik w/skylight, den, woodstove, bsmt, garage, w/w carpet, S&S, fully landscaped ⅔ acre, 16'x32' deck, oil heat. $1535 taxes, assumable high mortgage. $61,500. Ken, Ext. 4421 or 744-0722.

SHOREHAM VILLAGE - custom ranch, 3 bdrm, 2 baths, fam. rm w/fp, d/r, l/r, gourmet kitchen, 2 car o/s garage, 0.8 acre, w/w throughout, new oil burner, good financing, walk to priv. beach, tennis, club. Ext. 3064 or 821-0890 after 5:30 p.m.

ROCKY POINT - 2 bdrm house corner Kale & Univ., fenced, alum. siding, thermal awn. windows, 1 car garage. 744-9822 after 6 p.m.

MANORVILLE - 3 bdrm ranch, 1 acre, country kit, full bsmt, 1½ baths, garage, all appliances, w/w, s/s. $43,000. Pete, Ext. 3868/4574 or 878-1225.

For Rent

FLORIDA - Hutchinson Island, unfurn., 2 bdrm, 2 bath apt., deluxe appliances, enclosed porch, river view, ocean bathing, tennis, pool, fishing dock. No children or pets. $525/mo. annual. 751-8598.

FLORIDA - West Coast/Springhill, furnished house in Mackle Community, near lakes & gulf. $100/wk. Ext. 4226 or 261-2719.

MIDDLE ISLAND - Opposite Golf course, 260' on river, 3 bdrm Colonial, l/r, kitchen, d/r, washer/dryer, self-clean oven, refrig/freezer, quiet, dead-end street. 924-3755.

EAST MORICHES - 4 bdrm Cape Cod, full d/r, full bsmt, 1 acre, priv. but near town & schools. $375/mo. For appointment call 878-2935.

POCONO's - Chalet, sleeps 5, tennis, hiking, fall Special $75/wkend. Bob, Ext. 4551 or 289-2159.

RIVERHEAD/JAMESPORT - Waterview, 4 acres, 5 bdrms, 3-car garage, l/r, d/r, lg. kitchen, OHW, woodburning stove, 10 mos. Call (305) 892-9118 or (516) 727-3527.

WADING RIVER - 3 rm apt, furn or unfurn, all utilities incl, ideal for single male, walk to private beach, 15 min to Lab. Avail Oct. 1, $325/mo. 929-8772.

EAST PATCHOGUE - 3 bdrm, f/p, water view, 20 min to Lab. $350/mo + utilities. Ext. 3482.

MASTIC BEACH - lovely 3 bdrm ranch in wooded area, ½ mile from Bay, near Smith Pt. $450/mo. + util. Ask for Pat, Ext. 7635.

Carpools

WEST ISLIP/BRIGHTWATERS - 2 man car pool seeking to expand. Bernie Manowitz, Ext. 3037 or Bob Goodrich, Ext. 3062.

FROM PATCHOGUE VIA BELLPORT - 9 yr old car pool, on-time, has vacancy for paying rider. Alyce, Ext. 2901.

Wanted

PLYMOUTH/DODGE - slant 6 cyl. engine, pay up to $100. for good one. Joe, Ext. 4254 or 281-7683.

MG MIDGET BODY - 1970 to 1974, reasonably priced. Ruth Faine, Ext. 4173 or 878-2278 after 5 p.m.

KEROSENE HEATER - about 7,000 BTU, Omni-15 preferred. Don, Ext. 4417.

POOL TABLE - full sized, slate based. John, 744-3883 after 6 p.m.

TIRES - pair H78-14, snow or regular. Paul, Ext. 2447.

TRAILER TIRE - 4.80x4.0, four holes; wood splitting ax (Maul) John, 744-5867 after 6 p.m.

TRAINS - Lionel, American Flyer, accessories, any cond. brings good price. Carole, Ext. 3362 or 924-4097 eves.

LUGGAGE CARRIER - molded plastic for auto roof, reasonable. Dennis, Ext. 4259 or 736-2534 after 6 p.m.

CARSEAT - safe type for toddler. Paul, Ext. 2017 or 744-7708.

HOMES - for 3 affectionate, neutered cats, black /white, gray/white and black. Kathy, Ext. 4615.

PERSONS - interested in 1971 Bellport High School Class Reunion. If interested contact Mike G. Ext. 3659 or 286-2454.

TRAINS - Lionel, any "0" gauge or "027" gauge cars, track & equip. Frank, Ext. 3120.

BICYCLE - 5 spd or 10 spd. in good cond. Lee, Ext. 7629 or 929-3023.

CLARINET - wood for student. Jim, Ext. 3372.

RUG - 12x20, any color, inexpensive. Linda, 744-0722 after 3 p.m.

COFFEE MILL - manual, wall or table model. Ext. 4240 or 286-0295.

BICYCLE RACK - for car, reasonable. Ext. 5294.

MEN'S BIKE - good cond. 475-5430.

EXERCISE BICYCLE - stationary type, reasonable price. Ext. 4612 or 289-0687.

WELDING EQUIPMENT - gas or electric for misc. hobby work, contact Fred Kuehl, 282-4823.

TICKET - Dance enthusiast wants to buy ticket to Alvin Ailey Ensemble. If you have one please call 475-1840 Ext. 16.

BABYSITTER - my home, Pt. Jeff. area, own transp. 3 days/wk./ 473-0475 after 6:30 p.m.

Services

Services are listed as a courtesy to BNL employees. They are neither screened nor recommended by the *Bulletin*.

B&G BOAT REPAIRS - all types, 30 yrs. experience. 698-1176, 289-1516 eves.

SANDBLASTING - trailers, chassis, headers, oil pans, boxes, any kind metal equip. Reasonable rates. 744-3968 after 4 p.m.

FIRESIDE CHIMNEY SWEEPS - fireplaces, wood, coal & oil flues. Lab employee discount. Fully insured. Bill, 584-6425.

BABYSITTING - Mother will babysit my home, Medford area, meals served. 289-3899.

HOUSE PAINTING - Interior/exterior, professional, quality materials, insured. Call Bob, 289-7657 after 6 p.m.

BABYSITTING - reliable mother w/playmate, wkdays, my home, any age, Coram area. Joan, 732-1610.

KAYAK LESSONS - equipment supplied, eves & wkends, 1½ hr. lesson $10. Ephasis on physical fitness & wildlife tours. Ernie, Ext. 5383.

LIMO SERVICE - luxury chauffeur driven for wedding, all occasions. Roy, Ext. 4664 or 744-8779.

DIVERSIFIED INCOMES - full time, spare time income, no investment required. 698-5861 after 7:30 p.m.

BABYSITTING - reliable, Mastic/Moriches/Shirley area. $1.50 hr. Heidi, 281-7873.

ABOVE/IN GROUND POOL INSTALLATIONS - and repairs, insured, licensed. Work Guaranteed. Pat, 363-2497.

FRESH CLAMS - any size by order only. $1.75/doz. Ken, Ext. 5042.

SPACKLING/TAPING - no job is too small, 30 yrs. experience. Bill, Ext. 3277 or 286-8185 eves.

WALLPAPER HANGING - sanitas, vinyl, flocks, etc. 20 years experience. Free estimates. 281-3183.

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