



This section of the Peconic vegetation map encompasses the Lab site. The map indicates that the dominant types of plant communities on the banks of the Peconic, in this particular area, are grass and pine.

Plant Life Along the Peconic

The Peconic River is 24 kilometers long and its headwaters are in the northwest section of the Laboratory. For more than 30 years the Safety & Environmental Protection Division (S&EP) has been keeping track of discharges from the Lab into the river and monitoring the quality of the water. But what of the ecosystem that adjoins the river? No vegetation survey had ever been done on the Peconic, nor on any other river on Long Island. But, in 1981, at Brookhaven, someone decided to take on this job.

Kyoko Inoue, wife of a visiting Japanese physician, and a botanist in her own right, was looking around for something interesting to do. She hit upon the idea of classifying the vegetation along the Peconic, an idea which S&EP decided had merit. So, ecologist Jan Naidu of S&EP and Inoue teamed up to do such a study, with two goals in mind.

The first was to discover the natural vegetation pattern along the Peconic

and then see what is imposed upon it by man and, second, to establish as a bench mark, a description of the vegetation in a defined area, in this case, the banks of the Peconic River.

As the area to be studied, they designated 200 meters on either side of the river. Over the next seven months, Inoue, with the help of Naidu when his other work permitted, classified the plants from the headwaters of the river at BNL, to Riverhead.

Each morning, Naidu drove Inoue to the spot along the Peconic where she was scheduled to work that day, and picked her up again about 4 p.m. The study was conducted by the Braun-Blanquet method, a technique more popular in Europe than here. This meant parceling out the area and then enumerating the location, type and density of the plants in the parcel. The information was marked on a grid from which a vegetation map was produced.

The work was not without its

hazards. Naidu tells of the day Inoue was chased out of the territory she was studying by shotgun wielding residents who had spotted this slight woman with a bag on her back, checking out the area.

Her work was completed in 1982 and a report, together with a detailed vegetation map, will be published here in September. It will be available to government officials and to all interested professionals.

Jan Naidu has continued the observations each year since. Now that a baseline has been established the annual surveys need not be so extensive "because we have a good idea of what is happening," says Naidu. His sampling includes certain areas where changes are possible due to alterations in the course of the river, or additional man-made activity on the banks.

Naidu has taken photos of various areas, but has not seen anything dif-

ferent. "We probably won't," he says, "unless there's a forest fire." He notes that there are indications around Riverhead that some changes may be in the offing due to increased housing and because the river has been dammed in several places. This makes the river expand and increases the sedimentation upstream, which causes stress on vegetation normally not under water.

"Having mapped out this whole area, we now have an opportunity to learn how plants interact with each other," says Naidu. "In the absence of pollution, there may be a natural dominance and this we want to find out." He hopes to produce a new map every five years.

Mrs. Inoue has returned to Japan and is now an ecologist at the Hakone Botanical Gardens. The work is funded by the National Ecological Research Division at DOE's Office of Health and Environmental Research.

Talks on Toxic Metals On BNL/Yugoslavia Agenda



During their May 3 visit to Brookhaven, the Yugoslavs visited the National Synchrotron Light Source. From left, BNL's Mark Barton describes the facility to Lado Kosta, head of the Department of Chemistry and Chemical Technology, Edvard Kardelj University, Ljubljana; Marko Saric, director of the Institute for Medical Research and Occupational Health, Zagreb; Ljubisa Rakic, director of the Department of Biochemistry, University of Belgrade; Cedomil Lucu, head of the Laboratory of Radioecology and Ecophysiology, Center for Marine Research, Institute "Ruder Boskovic"; and Dervish Rozhaja, head of the Department of Biology, University of Pristina. Missing from the picture are Peter Stegnar, head of the Department of Nuclear Chemistry, "Jozef Stefan" Institute, Ljubljana; and Krista Kostial, head of the Department of Mineral Metabolism, Institute for Medical Research and Occupational Health, Zagreb.

A delegation of seven top-level Yugoslav scientists from various research institutes and universities in that country spent the day at Brookhaven, May 3. They talked with a number of BNL scientists who share a common interest: health and environmental effects of toxic metals.

Their visit to Brookhaven was arranged by Herbert Kinney, Director's Office, and Eugene Premuzic, Department of Applied Science (DAS). Premuzic, who was born in Yugoslavia, explained that country's interest in toxic metals. "In 1945, Yugoslavia decided to industrialize. Today, they import cars to the U.S. They have been successful, but industrialization was done at the expense of the environment. Now they are realizing that brakes have to be applied, and they have come to the U.S. to learn how we handle pollution."

The Yugoslavs began their day at Brookhaven talking to Barry Gordon, Joel Pounds and Premuzic, all in DAS, about a new instrument for biological testing being built at the National Synchrotron Light Source (NSLS). Then came a meeting with Otto White, Safety and Environmental Protection (S&EP) Division, and Leonard Hamilton, DAS, and Premuzic, to discuss an ongoing joint U.S./Yugoslavia program on epidemiology and risk assessment at a synfuels plant in the Kosovo industrial complex. After meeting with Allen Goland, DAS, and Bernard Manowitz, DAS chairman, the Yugoslavs were guided around the NSLS by Mark Barton. A visit with

Kenneth Ellis and Bertrand Brill, both in Medical, and a tour of the nuclear medicine facilities and the inhalation toxicology facility rounded out their day.

Earlier in the week, the Yugoslavs had been in Washington, D.C., to participate in a workshop on heavy metals sponsored jointly by the National Academy of Sciences and the Council of the Academics of Yugoslavia.

Brookhaven has a long-standing collaborative relationship with Yugoslavia, stemming from the joint study at Kosovo. Based on discussions held during the May 3 meeting, says Premuzic, a number of future joint programs are planned. In particular, he mentioned interest in doing a study of an area in Yugoslavia where a kidney disease, called Balkan nephritis, is endemic. "Some research has been done, but the cause of the disease is still unknown. It's obviously caused by some kind of toxin, though," said Premuzic.

Brookhaven's involvement in inter-
(Continued on page 2)

Lecture Reminder

Kurt Gottfried, Professor of Physics at Cornell University, will present an AUI Distinguished Lecture on May 13 at 8 p.m. in Berkner Hall. He will discuss "Space Defense: Dream or Illusion?"



Mort Rosen

Robert Chrien, Physics, (second from left) was elected chairman of the 1985-86 Brookhaven Council and Michael Bender, Medical, (far left) secretary. Other members of the Council, elected by the senior staff of the departments they represent, are (seated) Carol Creutz, Chemistry; Stanton Cohn, Medical, and James Muckerman, Chemistry. At rear are Joseph Wall, Biology; Donald Lazarus, HEF; Theodorus Sluyters, HEF; Laurence Passell, Physics; William J. Marciano, Physics; David O. Welch, Applied Science; Joseph E. Pasciak, SLIM; Robert Bari, Nuclear Energy & Reactor; Hobart Kraner, SLIM. Members not present for the photo were Carl Anderson, Biology; Ralph Cerbone, Nuclear Energy & Reactor; and Gilbert Rowe, Applied Science. SLIM members represent S&EP, NSLS, Instrumentation, and Applied Mathematics. HEF (High Energy Facilities) represents the AGS Department, Accelerator Development Branch, Accelerator Theory Branch and Technical Projects Branch. The Council was established in 1962 to advise the Director on scientific staff matters.

Patent Awarded

U.S. Patent #4,488,943 was awarded to **Terje Skotheim**, Department of Applied Science, for inventing a polymer blend for use in photoelectrochemical cells for conversion of solar energy to electricity, as well as for developing methods for manufacturing such polymer blends. This patent is a continuation-in-part of previous patents issued to Skotheim.

Two of the goals of any photovoltaic cell are efficiency and higher output voltage. Most cells have a theoretical efficiency of 25% and voltage ranging from 0.2 to 0.5 volts per cell. The cells proposed by Skotheim's current patent reach 35% efficiency and 0.625 volts.

In his previous patents, there is described a photovoltaic cell having a semiconductor layer and an adjacent polymer electrolyte. To improve the electrical properties at the interface, a conductive film is placed between the semiconductor and the adjacent solid polymer electrolyte. One object of the present invention is to produce a polymer blend of a highly conductive polymer and a solid polymer electrolyte in order to achieve better charge transfer across the conductive film/polymer electrolyte interface of the cell. The highly conductive polymer is preferably polypyrrole or poly-N-p-nitrophenylpyrrole, and the solid polymer electrolyte is preferably polyethylene oxide or polypropylene oxide.

Yugoslavs

(Cont'd)

national collaborative programs is expanding, says Premuzic. Counting just the Yugoslavs, a number of them have already spent time at Brookhaven, learning from their American counterparts the latest U.S. developments in detection of toxic substances, epidemiological methods and statistical analysis. Next week, two Yugoslavs begin a two-month stay. They will be in S&EP, learning sophisticated techniques for carrying out an industrial hygiene program back in Yugoslavia. The Medical Department had hosted a previous pair, working with Michael Bender in cytogenetics and Eugene Cronkite in hematology, and before that, two Yugoslavs worked with Sam Morris in the Biomedical and Environmental Assessment Division, DAS.

Plan for Retirement

The Personnel Division will again be holding a Pre-retirement Planning Seminar for eligible employees. The seminar will take place early in June and will be conducted by Alan Entine, founder and director of the Mid-life Assessment Program at the State University of New York at Stony Brook. Laboratory employees who will reach age 55 this year, and their spouses, will be invited to attend. Employees, over age 55, who were unable to attend past seminars and would like to be included are asked to contact Mary White at Ext. 7994 by May 20.

Saturday Students Finish Semester

For 30 Suffolk County senior high school students, Saturday has been another school day — but not just any school day. Since January, these juniors and seniors have spent their Saturday mornings attending the High School Modern Physics Class at BNL. The 13-session semester will conclude on May 18 with a lecture and closing ceremonies at 9 a.m. in the Physics Department Seminar Room.

Physicist Harvey Wegner will give the closing address at this open meeting, after which the students will receive certificates and everyone will share in refreshments. Parents, teachers and any other interested parties are invited to attend.

Wegner and Glenn Price, Office of Scientific Personnel, developed the Saturday physics courses in 1984, to encourage gifted high school students to consider careers in physics, to keep them informed about recent developments in the field and to expose them to unique facilities that do not exist in high schools. In the second year of this effort, they were assisted by over 30 BNL physicists who each volunteered a Saturday morning or two to teach an advanced class in modern physics. Also assisting with the program were physics teachers Carole Escobar, Bellport H.S., and Bill Lynch, East Islip H.S.

The course was taught at a college freshman level. Classes involved lectures, as well as tours of some laboratories and facilities. In addition, the students watched as experiments were run in their presence, then did calculations based on data obtained during the demonstrations.

Disk Conversion Service Offered by P&GA

Does your IBM PC refuse to talk to your MICOM? BNL computer and word processor users who want to transfer information between incompatible systems, despair no longer.

Disk conversion is now being offered through the Composition Group of Photography & Graphic Arts Division using a Shaffstall MediaCom 5000 interface system. The interface converts information stored on one word processor or personal computer disk and stores it on another disk so that it can be used on a different system. The MediaCom 5000 thus can make more than 200 different computers, word processors and computerized typesetting machines compatible. The new system is also being used to exchange information between incompatible systems via the telephone.

The recently acquired Shaffstall MediaCom 5000 interface system eliminates the need for retyping when passing information between incompatible computers and word processors. The unit will read information from the 5¼-inch disks of mini- and microcomputers such as the IBM PC and Displaywriter, Wangwriter, Lanier and Xerox 860. It will write to other 5¼-inch or eight-inch disks of machines like TRS-80, Micom, Wang and NBI.

All Lab personnel can use this conversion service to exchange data and copy stored in incompatible machines. By converting their disks from those for personal computers to those for word processors, secretaries won't have to key into their word processors manuscripts originally written on a personal computer in order to format the information according to publishers' specifications.

Additionally, manuscripts to be typeset can be delivered to Composition on a disk or over the phone, and the information will be transferred to their computerized typesetting equipment using the new interface system. The Brookhaven Bulletin uses this service every week, telecommunicating copy produced on an IBM PC and stored on a 5¼-inch disk to Composition's Shaffstall MediaCom 5000. The interface transfers the stories to an eight-inch disk used by the Comp/Edit typesetting machines.

"This interface will capture every keystroke," explains Leo J. Casey, supervisor of Composition. "The transferred data and copy may require some minor adjustment by the recipient because not all the format commands will necessarily be understood by the general translation table of the interface. For regular customers of our service, we may be able to customize translation tables to make conversions more compatible with their particular needs."

Since the service began in January, the Shaffstall MediaCom 5000 in one instance saved over one million keystrokes and has been used mostly as an interface between word processors and the Comp/Edit typesetting system. The conversion process will be completed within half a day at most, depending upon the length of the file being transferred and Composition's schedule. To use the conversion service, contact Casey at Ext. 2952.

The MediaCom 5000 system has been connected to P&GA's optical character recognition (OCR) scanner. Therefore, a typewritten manuscript can be read by the scanner, and the information can be directly written to a floppy disk by the MediaCom 5000. The OCR was recently updated, so now it will read justified text and five type styles: 10 pitch OCR B, 10 and 12 pitch Courier 72, 12 pitch Prestige Elite and 12 pitch Letter Gothic. To use the OCR service, call Mary Wigger, Ext. 2926.

— Marsha Belford

Motorcycle Alert

If people on site Saturday morning hear a loud roar as if 150 motorcycles are approaching, that is exactly what is happening. The International Harley-Davidson Dresser Touring Assoc. is holding its annual meet this year at Riverhead. It is their custom to visit some institution or facility of special interest in the area where they are meeting and, this year, they have chosen to tour the Laboratory. So, 150 motorcycles each with two bikers aboard, will be here on May 11 for a few hours. They will not make the tour of the site on their bikes, but will climb onto the less exciting busses.



Roger Str... argh

Leo J. Casey using the Shaffstall MediaCom 5000 disk conversion system. He is inserting an eight-inch NBI disk and readying the system to convert the information on that disk to a 5¼-inch IBM PC disk.

BROOKHAVEN BULLETIN

Published weekly for the employees of BROOKHAVEN NATIONAL LABORATORY

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Call Aunt Jane From Home

It's very tempting to use Lab phones for personal business. With the increase in area codes that can be reached using the FTS automatic off-net dialing feature, conversing with Aunt Jane in Oshkosh or brother Tom in East Gyby is even easier. And who will know? What's a couple of bucks anyway?

Well, first of all, it's not a couple of bucks. Investigations by the U.S. Department of Energy's Inspector General have concluded that FTS abuse totals \$8 million a year.

As to who will know, don't forget we live in the computer age. Complete records are kept of FTS calls — calling number, called number, time and date of connection, and elapsed time. Such records were used to indict four DOE employees and 25 contractor employees on Federal felony charges for personal use of FTS.

Telephone service at the Lab is provided for the conduct of official business. For BNL's policy on personal calls, see the Lab phone directory, page X.

Addled Addresses

- Brookhaven National Lib
- Burhaven Natl Lb
- Brookhave Nathalp
- Brookhaven/H & J Tool
- 1565 Ocean Ave.
- Building 911A
- Bohemia, N.Y. 11973
- Brookhaven National Lavoratory
- Brookhaven Natl. Lab.
- No Street Given
- Upton, N.Y.
- Ookhaven Natl Lab
- Brokehaven National Lab
- Crookhaven National Lab
- Exclerator Dept.
- Brookhaven National Labs
- Cookhaven Nat'l Laboratory
- Billine 120
- Brookhaven National Labortory
- Uptown, N. Y.

Arrivals & Departures

Arrivals

Dana R. Beavis AGS

Departures

This list includes all employees who have terminated from the Laboratory, including retirees:
Horn-Bond Lin. DAS
Michael F. LeBrun App. Math
Thomas C. Nepsee DNE
Howard R. Pate Medical
Doris J. Pion Medical
Jayne A. Webster Medical

Diners Note

The Cafeteria will be closed on Saturday, May 11. On that day, snack bar service will be available from 9 a.m. to 2 p.m. at the Brookhaven Center.



PLAYOFF WINNERS: Coasters - (from top) Arthur Washington, Mike Fulkerson. At left are Mitch Williams and Fred Molone, at right, Bob Doty and Kevin D'Amico. Missing from photo are Kevin Cosgrove, Butch Allen, Lou Snead and Larry Smith.

BASKETBALL CHAMPS



LEAGUE WINNERS: Hollywood - center (from top) Bob Kowalski, Eddie Meier, Greg Mack. At left, George Grigg; at right, Alex Richardson. Missing from photo are Alex Heard, Rich Domenech and Dennis Nordstrom.

Alex Reben

WIS Reminder

The Brookhaven Women in Science dinner meeting will feature Daniela Sciaky and Reed Corderman who will talk about home and business uses of the personal computer. Time is 5:30 p.m., on May 15, in Room A, Berkner Hall. Send check for \$10.50, made out to Brookhaven WIS, to Angela Boccio, Bldg. 490. Reservations before May 14 to Eena Mai Franz, Ext. 7103, or A. Boccio, Ext. 3552.

IBEW Meeting

Local 2230, IBEW will hold its regular monthly meeting on May 20, 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.

Cafeteria Menu

Week Ending May 17

Monday, May 13	
Vegetable beef soup	(cup) .65 (bowl) .85
Beef Teriyaki & rice pilau	2.35
Ham steak & 1 veg.	2.15
Hot Deli: Italian-style meatball hero	2.20
Tuesday, May 14	
Cream of broccoli soup	(cup) .65 (bowl) .85
Southern fried chicken w/ stuffing & cranberry sauce	2.10
Ham hock & 1 veg.	2.15
Hot Deli: Top round of beef	(bread) 2.10 (roll) 2.30
Wednesday, May 15	
Split pea soup	(cup) .65 (bowl) .85
Baked meatloaf & 1 veg.	2.15
Chicken burrito & 1 veg.	2.15
Hot Deli: BBQ fresh ham	(bread) 2.05 (roll) 2.25
Thursday, May 16	
Pork & cabbage soup	(cup) .65 (bowl) .85
Spaghetti & sausage	2.45
Roast turkey & 1 veg.	2.20
Hot Deli: Pastrami	(bread) 2.05 (roll) 2.25
Friday, May 17	
Boston clam chowder	(cup) .65 (bowl) .85
Tuna noodle casserole & 1 veg.	2.15
Old fashioned beef stew on egg noodles	2.25
Hot Deli: Breaded fish fillet	(bread) 2.00 (roll) 2.20

BERA News

Motorcycle Club

A meeting will be held on Monday, May 13, at 5:15 p.m. in the Recreation Bldg.

Bowling

Purple League

High games were bowled by Ron Picinich 202, Mary Scheidet 201/177, Bob Jones 201, Marge Stoeckel 185, Karen Jacobs 176, Pat Manzella 176.

White League

Joe Mayeski rolled a 248/614 scratch series, Bob Barberich 221, Jim Griffin 213, Sharon Smith 202, Caryl MacDougall 194, 182, Marge Belligan 189, Lee Barberich 188.

Red/Green League

E. Sperry IV had games of 225/224/625 scratch, K. Riker 224/612 scratch, J. Medaris 240, H. Marshall 238, K. Asselta 224, E. Meier 215, J. Ferrante 213, N. Parrinello 212, B. Jones 204, E. Gill 204.

Mountain Club

The Mountain Club is going to canoe the Delaware River on June 8 and 9. We will camp and rent canoes in Narrowsburg, New York. The cost is \$30 per person for a two-day canoe rental and one night's camping. Narrowsburg is about a 3½-hour drive from the Lab. You can either drive up on Friday evening or early Saturday morning. Everyone is welcome. If you are interested in going, send a \$15 deposit, before May 31, to Don David, Building 510A. For more information, call him at Ext. 4821, or 286-2267.

Swim Club

The BNL Swim Club will meet informally at the Brookhaven Town/Mastic YMCA pool on Thursday, May 16, at 5:30 p.m. Swimmers who can offer rides and those who need one for this meeting or to swim after work should call Jim Lipka, Ext. 3372.



On April 23, 16 Riverhead youngsters came to visit BNL. Ranging in age from four to 16, they are students in an introduction to computers course offered in the Riverhead community as part of an outreach program coordinated by BNL's Affirmative Action Office. Here, Elaine Lowenstein (left), Public Relations, takes the youngsters on a tour of the Exhibit Center. They also visited Robert Bacharach in Management Information Systems Division and Bruce Barton in the National Nuclear Data Center, to learn about the computer capabilities in those areas. Both Bacharach and Barton geared their talks to be understood by the young audience, Bacharach by showing how computers are used in the space program, and Barton by having them first play computer games and then letting them run a simple program. Juanita Heyliger, Technical Information Division, served as their tour guide for the day. During their evening classes, held weekly at the First Baptist Church in Riverhead, the students have the use of ten Commodore 64 computers, supplied by the Lab. They are taught by Fran Ligon, Affirmative Action Office; Alex Richardson, Management Information Systems Division; and Melody Brown, Safety and Environmental Protection Division.

Peter Horton

