BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

BNL Lecture: The AChE-in-3-D Story — Electric Ray Torpedoes, Alzheimer's, Snake Venom and More!

What do electric ray torpedo fish off the coast of California have in common with human brain cells? How does this tie in with Alzheimer's disease, the venom of green mambas from the jungles of Africa, ancient Chinese folk medicine — and BNL's Protein Data Bank (PDB)?

The fascinating connection linking this unlikely list is the enzyme Acetylcholinesterase, AChE for short, which is one of the roughly 3,500 proteins, nucleic acids and other important biomacromolecules whose 3-D structures are stored in the PDB and easily available everywhere on the World Wide Web.

AChE works in the brain's communication system, breaking down the chemical neurotransmitter acetylcholine once it has transmitted a signal from one brain cell to another.

Since some of the symptoms of Alzheimer's disease are believed to be associated with a deficiency in acetylcholine, designing agents to inhibit AChE may be a way to alleviate the effects of this terrible disease. Using AChE in *Torpedo californica*, which is 55 percent identical with human AChE and much easier to do experiments with, researchers at the Weizmann Institute of Science in Israel crystallized the enzyme and then started to determine its structure and how it functions.

Leading the AChE research team at Weizmann was BNL's present Protein Data Bank Head, Joel Sussman, who is also a senior scientist with a joint appointment in BNL's Chemistry and Biology Departments and a professorship in the Department of Structural Biology at Weizmann. To talk about this research and some of its implications for medicine and science, and to demonstrate the latest advantages of the enzyme's structure's being stored in the PDB, Sussman will deliver the 306th Brookhaven Lecture, "AChE in 3-D: Mysteries Revealed From the Crystal Structure," on Wednesday, May 17. The talk will begin at 4 p.m. in Berkner Hall, and Sussman will be introduced by Biology Department Chairman William Studier.

Roger Stoutenburgh

Joel Sussman examines the electrostatic properties of the 3-D structure of AChE.

In his lecture, Sussman will describe how the "incredibly beautiful" crystalline form of AChE was made; the excitement and surprise of discovering its unusual formation, with a deep, narrow gorge that the acetylcholine has to enter and penetrate to reach AChE's active site. He will also explain why, because AChE acts so extraordinarily quickly — breaking down acetylcholine at a rate of 20,000 molecules per second — the only way to see and record it was by using high-powered x-ray beams in diffraction techniques, which was done at beam lines built by Biology Department scientists at the National Synchrotron Light Source.

These new techniques, as Sussman will note, are among the reasons why the PDB, started in Chemistry Department in the early 1970s, has expanded so rapidly in the past seven years. He will also explain the advantages to researchers worldwide of this remarkable resource.

Sussman will detail other information: the vital importance of AChE's electro-

(continued on page 2)

BWIS Seminar

Determining the Structure Of Tumor-Suppressor Protein p53

Cheryl Arrowsmith

What do breast cancer, prostate cancer, lung cancer, bladder cancer and pancreatic cancer have in common? These and many other cancers are marked by the disruption or elimination of multiple tumor-suppressor genes, which code for proteins that inhibit cell replication.

The hallmark of cancer is the uncontrollable proliferation of cells, which compress and damage normal tissue, and which may invade neighboring organs and establish distant colonies throughout the body. While the development of cancer can result from the activation of oncogenes, which code for proteins that encourage cell replication, many cancers, such as those listed above, arise because of inherited and/or accumulated defects in tumor-suppressor genes.

One such gene is p53, which resides on human chromosome

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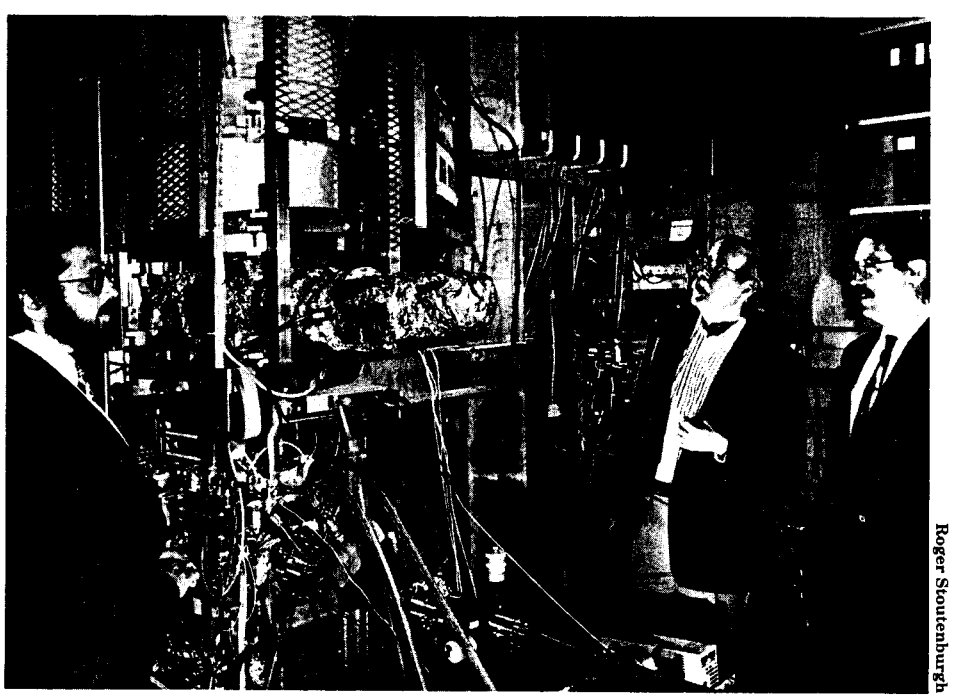


Roger Stoutenburgh

NREL Director Visits BNL

Visiting the Lab on March 10 to discuss ongoing and possible future joint programs was Charles Gay (right above), the recently named Director of the National Renewable Energy Laboratory (NREL) in Golden, Colorado. A U.S. Department of Energy laboratory for the development of new energy conservation and solar technology, NREL collaborates with BNL in programs involving health and safety, energy planning and advanced photovoltaic energy technologies. Following discussions with BNL Director Nicholas Samios, Department of Applied Science (DAS) Chairman James Davenport and Department of Advanced Technology Chairman Romney Duffey, Gay was photographed with Paul Moskowitz, DAS (left), and Kelvin Lynn, Physics Department. They are standing in front of a unique positron annihilation spectroscopy system perfected at BNL by Lynn and Palakkal Asoka-Kumar, Physics, to detect electronic structural defects in materials. The BNL research will provide valuable data needed for large-scale manufacturing of photovoltaic modules. Gay also visited James McBreen and James Wegrzyn, both of DAS, and Margaret Bogosian, Deputy Manager of the Technology Transfer Office, to discuss other BNL/NREL technical projects in progress.

Warming to New Oil Heat Technology

Roger Stoutenburgh

During the ninth annual Oil Heat Technology Transfer Conference and Workshop, held at BNL March 22-23, oil heat marketers, equipment manufacturers and researchers saw a demonstration of the RotriX oil burner, developed in Germany to meet new environmental regulations there. Looking at the unit are: (from left) Peter Hofbauer, Viessmann R&D; Jack Sullivan and John Carey, both from the New England Fuel Institute (NEFI); Roger McDonald, BNL's Department of Applied Science (DAS); and Harold Prell, Viessmann Manufacturing Co. The quartz-glass combustion chamber of the demonstration unit is framing another conference participant, one of close to 200 conference attendees. The two-day meeting began with a keynote address by Sullivan, who is the newly elected Executive Vice President of NEFI. Over half of the technical agenda was devoted to transferring to industry DAS's research and development in oil-heat technology. The conference was sponsored by BNL, the U.S. Department of Energy and the Petroleum Marketers Association of America.

New Liquid-Discharge Limitations: SEP Monitoring Stepped Up

Stricter release limits for wastewater discharges into waterways and groundwater are not only reflected in a new five-year State Pollutant Discharge Elimination System (SPDES) permit that BNL received from the New York State Department of Conservation (NYSDEC) effective March 1. They are also seen in BNL's efforts to reduce effluent releases and in stepped up monitoring of wastewater by BNL's Safety & Environmental Protection (SEP) Division.

"The new limits reflect the continuing efforts by the state and the Laboratory to reduce environmental releases, particularly those that might affect the Peconic River or the sole-source aquifer beneath the site," says Robert Casey, Head of SEP.

The U.S. Environmental Protection Agency has delegated authority to the NYSDEC to carry out provisions of the Federal Clean Water Act, which includes establishing effluent release limits and administering a permit program. In BNL's SEP, Barbara Royce and Robert Lee are responsible for implementing the new requirements of the SPDES permit.

"The revised SPDES permit establishes much more restrictive effluent release limits for discharges from the Lab's Sewage Treatment Plant [STP]," Royce said. "So all employees must be even more diligent in their efforts to prevent unacceptable materials from being poured down laboratory sinks."

Roger Stoutenburgh

The Safety & Environmental Protection Division's Robert Lee and Barbara Royce inspect one of the new flow-monitoring stations located along the Peconic River, downstream of the BNL Sewage Treatment Plant.

Wastewater discharges from BNL operations are released to the environment as indirect discharges to the Peconic River after being treated at the STP, or, in the case of stormwater and cooling water, as direct discharges to one of seven on-site groundwater recharge basins. Water from recharge basins percolates to Long Island's sole source aquifer.

Under the new permit, monitoring requirements for discharges from the STP to the Peconic River have increased in both frequency of analysis and in number of analytical parameters. Five chemicals used on site have been added to the list of 16 that must be monitored at the STP. In addition, effluent limits for discharges have been drastically reduced for inorganic elements such as copper, iron, lead, silver and zinc — some by a factor of four or more. For example, lead limits were reduced from 0.067 parts per million (ppm) to 0.019 ppm.

Regulations for monitoring recharge basins have also become more stringent. Previously, water in these basins only had to be tested for pH, a measure of acidity or alkalinity, and flow. Under the new permit, routine sampling and analysis for oil and grease, volatile organic compounds, metals and other materials, and reporting of analytical results are required for all recharge basin discharges.

In addition, wastewater from certain industrial processes, including photo processing, printed circuit-board manufacture and metal cleaning, must be monitored at the locations where they originate. These processes have been targeted under the new permit because of their potential to discharge toxic organic and metallic materials.

Four additional steps must now be taken to meet the standards of the new permit: bioassay testing of STP discharge to determine the toxicological effects to freshwater organisms; an engineering study to reduce the amount of processed or cooling water discharged to the STP; rerouting floor drains connected to recharge basins to the STP; and preparing of a best-management-practices plan to reduce or eliminate contaminants in storm-water runoff.

The increased monitoring potentially may cost the Lab an extra $40,000 per year for analytical services and the time equivalent to one-half of a full-time employee. Also, monthly paperwork required to comply with the new permit has increased from three to a minimum of 13 pages.

The SPDES environmental monitoring data and compliance status are summarized annually in the Site Environmental Report, which is available through the SEP Division, the Public Affairs Office, the BNL Research Library and local public libraries.

— Diane Greenberg

BWIS Lecture (cont'd.)

17. The normal protein product of this gene functions in several biochemical pathways, including those enabling a cell to repair damage to its DNA. Because of the important function of the p53 protein, its inactivation through deletions, mutations or interactions with cellular or viral proteins appears to be a key step in the development of many human cancers.

"The Structure of the Tetramerization Domain of Tumor-Suppressor Protein p53, as Determined by Multidimensional NMR Spectroscopy" will be discussed at the next seminar sponsored by Brookhaven Women in Science (BWIS). To be presented on Monday, May 15, at 4 p.m. in the Hamilton Seminar Room, Bldg. 555, the talk will be given by Cheryl Arrowsmith, a senior scientist with the Ontario Cancer Institute, a teaching hospital affiliated with the University of Toronto, Canada. All are invited.

As the speaker will relate, the tetramerization domain of the p53 protein contains a number of important functions associated with p53 activity, including transformation, oligomerization, nuclear localization and a phosphorylation site for p34/cdc2 kinase. As Arrowsmith will explain, the tetramerization domain forms a symmetric dimer of dimers.

She will conclude by presenting the results of modeling based on the observed structure, which suggests possible modes of interaction not only between adjacent domains, but also with DNA.

Cheryl Arrowsmith received her Ph.D. in physical organic chemistry in 1986 from the University of Toronto. After a stint at Stanford University as a postdoc, 1986-89, and then a research associate, 1989-91, she became an assistant professor in the Department of Medical Biophysics of the University of Toronto in 1991. She holds her present position of Senior Scientist in the Division of Molecular and Structural Biology of the Ontario Cancer Institute.

After the lecture, to dine with the speaker at 6:30 p.m. at Ladakin's in Moriches, contact Eva Bozoki, Ext. 3701, by 5 p.m. today.

BNL Lecture (cont'd.)

static properties; the "back door" hypothesis as a possible way out of the deep gorge and a possible aid for drugs being designed to circumvent AChE's excessive action; the significance of the discovery that toxins from green mamba venom, which paralyzes the nervous system, have a complementary structure to AChE; and that an herb called huperzine, long a folk medicine used to help elderly people in China regain their memory, may soon be tested for management of Alzheimer's disease.

Joel Sussman received his B.A. in physics at Cornell University in 1965, and his Ph.D. in biophysics at the Massachusetts Institute of Technology in 1972. He has held many visiting professorships at institutions including Duke University, University of California, Berkeley, Fox Chase Cancer Center and Rutgers University.

In 1976, Sussman had joined the Weizmann Institute, Israel, serving over the years in many capacities, including Head of the Department of Structural Chemistry, 1984-5, and Head of the Kimmelman Center for Biomolecular Structure and Assembly, 1988-9. In 1993, while a professor at Weizmann, he joined the Brookhaven Protein Data Bank Advisory Board for a year. Then, in 1994, retaining his Weizmann appointment, he came to BNL to head the PDB.

Among Sussman's honors for outstanding research were Israel's Bergmann Prize in chemistry, 1979, and the U.S. Army Science Conference Award, 1992.

After the lecture, all are invited to join Sussman for discussion and refreshments. All those wishing to have dinner with the speaker at a restaurant off site should call Minette Cummings, Ext. 4726.

Healthline Lecture

The Interplay of Genes, Environment in Human Disease

In recent years, research has been identifying the genetics underlying many diseases, including obesity, breast cancer and diabetes. Further findings, however, are revealing that most disease arises as a result of the interplay of human genes and people's environments. So, many of the most common diseases are thought to be preventable through healthy living.

"Genetics and Environment in Common Human Disease" will be the subject of the next Healthline lecture, on Wednesday, May 17, from noon to 1 p.m. in Berkner Hall. Sponsored by the Health Promotion Program (HPP) of the Occupational Medicine Clinic, the lecture will be presented by physician Victor Penchaszadeh. All are invited; the talk will be available on audiocassettes at the Research Library.

Board certified in pediatrics, clinical genetics and clinical cytogenetics, Victor Penchaszadeh, M.D., is the Chief of the Division of Medical Genetics in the Department of Pediatrics at Beth Israel Medical Center, New York City. He is also a member of the Panel of Experts in Human Genetics of the World Health Organization.

To register for this lecture, return the bottom portion of the Healthline flyer recently sent to all employees to Health Promotion Specialist Mary Wood, Bldg. 490. For more information about HPP and its Healthline lecture series, call Ext. 5923.

ANS Meeting

Marshall R. Cleland of Atomic Energy of Canada, Ltd., will speak on "Food Irradiation — Its Status and Prospects," at the next meeting of the Long Island Section of the American Nuclear Society (ANS), on Wednesday, May 17, at the Radisson Hotel, Islandia. Cleland holds 15 patents to date, including one for the Dynamitron accelerator.

Following cocktails at 6 p.m. and dinner at 7 p.m., the speaker will be introduced by Frank Patti of BNL's Reactor Division.

All are welcome. For reservations, call Jeanne D'Ascoli, Ext. 2277, by Monday, May 15.

Atlantic City Trip

A few seats remain for the next BERA-sponsored, one-day trip to the Claridge Hotel and Casino on the boardwalk in Atlantic City, on Saturday, June 10. The initial cost will be $22, but the hotel-casino will give a $12 coin return.

Buy tickets now at the BERA Sales Office. For more information, call Andrea Dehler, Ext. 3347; Rosalie Piccione, Ext. 3160; or Kay Dellimore, Ext. 2873.

Note to Employees:

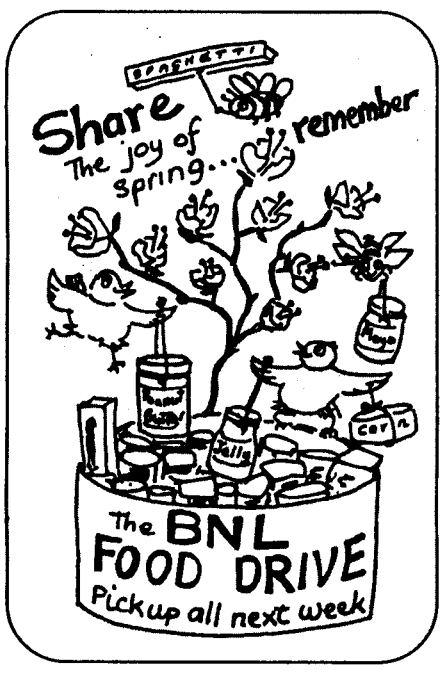
Attendance at lectures, meetings and other special programs held during normal working hours is subject to supervisory concurrence.

June Bus Trip: Art, Gardens, Sculpture

On Saturday, June 24, join the Art Society-sponsored bus trip to old-world Old Lyme, Connecticut. There, relive the sparkling summers of the American Impressionists, who painted meadows, orchards and river scenes around Miss Florence Griswald's mansion-cum-boardinghouse. It is now a museum of period rooms, art works and memorabilia of over 100 painters, including landscape masters such as Childe Hassam, Willard Metcalf and William Chadwick.

After wandering in the museum gardens and the village, and having lunch, speed forward in time to the free sculpture garden of the Aldrich Museum of Contemporary Art in Ridgefield, which also has eating places nearby.

The bus will leave the BNL tennis court parking lot at 7 a.m. and return by about 9:45 p.m. The Florence Griswald Museum ticket is $4, and the bus ticket is $21. Call Liz Seubert, Ext. 2346 or 286-8563, evenings, for reservations.



Clarifications

In the Brookhaven Bulletin of May 5, 1995:

• From the photograph caption headlined "First Visit of Congressman Forbes," it could be inferred that the April 19 visit by Congressman Michael Forbes was the very first time he had come to the Lab, but it was not: On November 22, 1994, then Congressman-elect Forbes came on site to be given an overview of the Laboratory. Hence, his April 19 tour was his first visit as a Congressman.

• In the story announcing the AUI Distinguished Lecture given by Lev Borisovich Okun, it was not pointed out that both T.D. Lee and C.N. Yang were summer visitors at the Lab in 1956, when they did their Nobel Prize-winning work on parity nonconservation. In fact, though C.N. Yang came from the Institute for Advanced Study, he listed Brookhaven as his affiliation on the 1956 *Physical Review* paper for which he and Lee were awarded the 1957 physics Nobel, since he was a BNL visiting senior physicist at the time they wrote and submitted the manuscript.

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Baldwin Again Wins Long Island Science Bowl

For the second consecutive year, Baldwin Senior High School has won the Long Island Science Bowl, organized by BNL's Office of Educational Programs. This regional contest involving schools in Nassau and Suffolk Counties is part of the National Science Bowl sponsored by the U.S. Department of Energy (DOE) and the Cray Research Foundation.

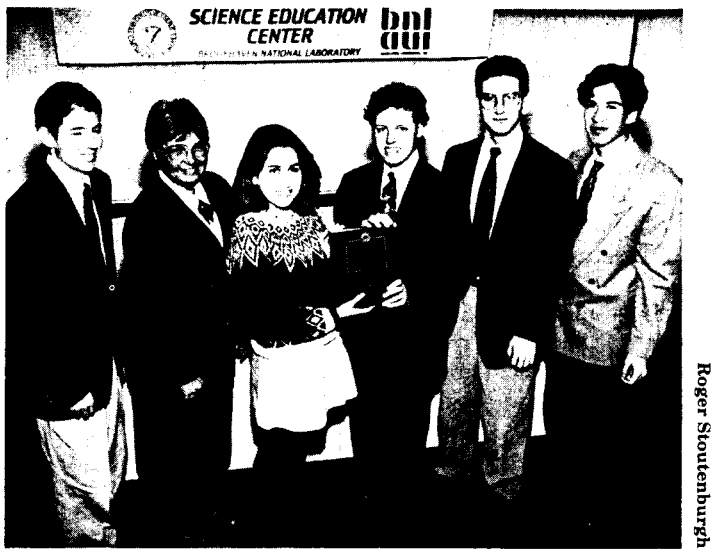
As the winner from Long Island, the Baldwin team was provided with an all-expense-paid trip to Washington, D.C., from April 28-May 1, during which it participated in the national competition.

The National Science Bowl is an academic tournament in which outstanding high school students answer science and math questions. DOE initiated the annual contest in 1991 to increase interest in science and mathematics among American pre-college students. About 8,000 students from 38 states participated in 56 regional contests this year.

The winning team in the national contest, Van Nuys High School from Van Nuys, California, has their choice of one of four prizes: two weeks of study at the International School of Physics in Sydney, Australia; a one-week science project at British Petroleum in Prudhoe Bay, Alaska; one week in a New Mexico-based, hands-on science camp sponsored jointly by Los Alamos and Sandia National Laboratories; or one week of research at two DOE facilities in Hawaii — the Kauai Test Facility Rocket Range and the Pacific International Center for High-Technology Research Ocean Thermal Energy Conversion Site.

At the regional competition held on February 12 on site, 30 BNL scientists volunteered as moderators, rules judges and timekeepers, while four BNL Museum Program staff members of the Public Affairs Office were scorekeepers.

In addition to Baldwin Senior High School, the other high schools that placed in the top eight out of 47 schools in the Nassau-Suffolk regional competition were: Roslyn, taking second-place; Massapequa and Garden City, placing third; and George W. Hewlett High School in Hewlett, JFK High School in Plainview, Ward Melville High School in East Setauket and W.T. Clarke High School in Westbury, all tying for fourth place.



Roger Stoutenburgh

The Baldwin Senior High School team members who won the Long Island regional Science Bowl held at BNL are: Brian Staskowski (left), Staci Mesher (center, left) and Lee Ashendorf (center,right), who are displaying the standard reference, *Chemical Rubber Corporation Handbook of Chemistry and Physics*; and Adam Jacobs and Jason Bressner (right), with team coach Barbara Riess.

1995 Basketball Champions

Roger Stoutenburgh

Wild horses couldn't stop the Mustangs from galloping off with the regular season, nine games to one. But, by defeating the Mustangs 66 to 55, Magic won the 1995 championship game on April 13 and once again worked its wizardry to become the Basketball League champions for a second year in a row. The back-to-back champs are: (back row, from left) Albert Langhorn, co-captain Terrence Buck, Raymond Jackson, Patrick Brown, captain Mitchell Williams; (front row, from left) Edward Gregory, Troy Mayo, Fred Maier and Dennis Ryan; missing is Carlos Victoria. For leading his team's defense, Raymond Jackson was named the game's most valuable player.

Mountain Club

The Mountain Club has reserved the Watch Hill group campground on Fire Island for Memorial Day weekend, May 26-29. All BNL surf, sun and nature lovers and their families are invited to camp with the club. Call Nancy Kuehner, 878-6947, after 6 p.m., or Nancy Nagy, 821-2652, for more information.

Arrivals & Departures

Arrivals

Albert B. Andrews .... Comp. & Comm.
Joseph A. Drozd ..... RHIC
Maxim Y. Gorbunov ..... App. Science

Departures

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

Steven C. Bradley ..... Reactor

Software Demo

The Rasna Corporation will present a demonstration of MECHANICA technology for design synthesis, on Wednesday, May 17, in the CCD seminar room, Bldg. 515, beginning with coffee and refreshments at 9 a.m. After a round table with BNL users at 9:30 a.m., the software demonstration will begin at 10 a.m.

Based on the geometric element analysis (GEA) technology for structural simulation and optimization, MECHANICA has applications for static, model, thermal, buckling, dynamic response and nonlinear simulations.

All are welcome to attend. For more information and to reserve a seat, call Pam Mansfield, Ext. 7286.

AIX Meeting

The next meeting of the AIX Local Users Group will be held on Thursday, May 18, at 2 p.m. in room 2-160, Physics, Bldg. 510. For further information, contact Ronnie Evans, Ext. 2851.

Microcomputer Club

The next meeting of the BERA Microcomputer Club will be held on Thursday, May 18, at noon in the lobby of Berkner Hall, during which a representative from Hauppague Computer Works will demonstrate its Win/TV video overlay and capture card for the PC. The Win/TV cards show a live video overlay under Windows, 0S/2 and WindowsNT; can capture high-quality video images to disk; and are used for security, medical imaging, desktop publishing and image analysis.

All are welcome to attend; bring your lunch. For further details, contact Steve Stein, Ext. 5694.

In Memoriam

Arthur E. Nelsen, who retired from the Supply & Materiel Division (SMD) on January 28, 1977, died on March 15 at the age of 80. He joined the Lab on January 10, 1966, as a janitor in the Plant Maintenance Division. In 1968, he transferred to SMD, where he was working as a stores clerk when he retired.

Andrew Ruzicka, who had retired on June 30, 1980, died on April 29. He was 67 years old. He began his 18-year career in the Biology Department on March 19, 1962, as a field & greenhouse worker. Ruzicka retired as a senior laboratory specialist.

Wednesday, May 17
11:30 a.m. to 1:30 p.m.
in the parking lot
opposite Berkner Hall,
between the tennis courts and
the Science Education Center

Be Social Saturday

Tomorrow, Saturday, May 13, at 8 p.m. in the North Ballroom of the Brookhaven Center, all are invited to fox trot, lindy, mambo, waltz, etc. the night away at the monthly informal social sponsored by the BNL Ballroom, Latin & Swing Dance Club. The suggested donation of $1 per person goes to the club's CD music fund. For more information, call John Millener, social chairman, Ext. 3853.

Bowling

Annual Awards Party

The annual Bowling awards party will be held at Rock Hill Country Club on Friday, June 9, from 6 to 10 p.m. The cost is $10 for bowlers and $15 for guests, which includes dinner and an open bar. For tickets, contact Debbie Botts, Ext. 7218, by Friday, May 26.

Scores for week of May 8

Red and Green League

R. Wiseman 290/647 scratch series, K. Asselta 257, J. Cuccia Jr. 256/223/212/691 scratch, R. Mulderig Sr. 252/237/660 scratch, K. Koebel 248/235/210/693 scratch, H. Arnesen 247/223/611 scratch, R. Eggert 239/607 scratch, R. Prwivo 223/219/211/653 scratch, R. Mulderig Jr. 237, B. Giuliano 231, J. Griffin 228, E. Larsen 226, A. Warkentien 225, K. Riker 219, R. Raynis 213, F. Griswold 210, J. Goode 209, M. Palumbo 208, N. Scala 205, E. Meier 204, H. Dawson 200.

Winner of Second Half: Portsiders

Purple and White

M. Meier 248/220/216/684 scratch series, S. DiMaiuta 236/205/620 scratch, E. Meier 224/187, N. Besemer 224, D. Fisher 212/211/602 scratch, K. Botts 206/192, E. Sperry IV 205/204/601 scratch, S. Logan 194/192, M. Haller 190/175, E. Sperry III 189, C. MacDougall 187/182, D. Klein 187, P. Pozzoli 186, M. Reynolds 182, S. Smith 181/180, M. DiMaiuta 181, C. Wood 181, K. Riker 180.

Winner of Second Half: Strike Outs

Note to Diners

Because the annual Elementary School Science Fair will occupy Berkner Hall on Saturday, May 13, the Brookhaven Center will be open instead of the Cafeteria from 9 a.m. to 2 p.m. for meal service.

Cafeteria Menu

Monday, May 15	
Soup: Five-spice red pepper	.90/1.20
A la Carte: Pork loin w/braised apples	3.95
Lite: Tortellini w/tomatoes & artichokes	3.65
Deli: Turkey w/apple-mustard sauce	3.20
Grill: Pastrami & swiss melt	3.30
Tuesday, May 16	
Soup: Provençal spinach w/ham	.90/1.20
A la Carte: Chicken tortillas w/guacamole	3.95
Lite: Gingered pepper steak	3.85
Deli: BBQ beef brisket w/vegetable slaw	3.20
Grill: Harvest vegetables	3.30
Wednesday, May 17	
Soup: Chicken chili	.90/1.20
Display Cooking: Asian kitchen sauté	4.75
Deli: Pork roast w/rum-lime glaze	3.20
Grill: Beef brochettes over rice	3.30
Thursday, May 18	
Soup: Turkey rice	.90/1.20
A la Carte: Baked macaroni & cheese	2.95
Lite: Chicken sauté w/shallots & herbs	3.95
Deli: Creole NY sirloin w/corn bread	3.20
Grill: Two-cheese quesadilla	3.30
Friday, May 19	
Soup: French vegetable	.90/1.20
A la Carte: Turkey w/Dijon pecan glaze	3.85
Lite: Garlic halibut w/mushrooms	3.95
Deli: Pastrami Dijonnaise	3.20
Grill: Mahimahi	3.30

Classified Advertisements

Placement Notices

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

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

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

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

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

SCIENTIST - With established record in neutron scattering, such as in the fields of magnetism, lattice dynamics, statistical mechanics, phase transformations, polymers and complex fluids. Comparable additional experience in x-ray scattering is preferred. The successful candidate will be expected to attract funding in these areas and to provide intellectual leadership to junior scientists. Contact: John Axe, Physics Department.

POSTDOCTORAL RESEARCH ASSOCIATE - Trained in chemistry, with a strong background in homogeneous catalysis, to study liquid-phase reduction of carbon monoxide with novel catalysts. A knowledge of CAD will be a plus. Contact: Devinder Mahajan, Department of Applied Science.

POSTDOCTORAL RESEARCH ASSOCIATE -Trained in condensed-matter physics or physical chemistry, with experience in crystallography and/or x-ray/neutron scattering, to join the materials chemistry program. Experience with low-temperature (dilution refrigeration operation) and ultrahigh vacuum techniques is desirable. Studies will include the imaging of Rayleigh Benard convective flows in helium mixtures, monolayer and multilayer adsorption on surfaces, and liquids entrained in porous media, using the HFBR and the NSLS. Contact: John Larese, Chemistry Department.

Motor Vehicles & Supplies

94 FORD PROBE S.L. - & '86 Buick Skyhawk. Cassella, 585-2084.

92 GEO METRO - 16k mi., 5-spd., 45 mpg, 3-yr. warr. Joe, Ext. 4496.

91 BUICK LE SABRE - 4-dr., 6-cyl., 40k mi., full power, custom roof & trim, orig. owner, excel. cond., $10,500. Peter, Ext. 4235 or 462-9839.

89 HONDA CIVIC - s/w, high mi., runs well, $2,300 neg. Robin, Ext. 5589.

88 TOYOTA TERCEL - a/t, 4-dr., 98k mi., runs well, $1,850. Wei, 341-1086.

88 STERLING 825SL - red/camel int., luxury sports car, $5,500. Chellie, Ext. 7416/7426/4308.

87 VIKING POP-UP - 16½', sleeps 6, sink, stove, icebox, $1,000. Sue, Ext. 7235 or 399-7997.

87 DODGE ARIES - runs well, good station car, asking $1,500. Mike, Ext. 3558 or 929-5035.

86 PORSCHE 944 - turbo sports car, red/black, loaded, 86k mi., mint, $10,000 firm. Jim, Ext. 2183.

86 HONDA CIVIC - h/b, red, 5-spd., sunroof, am/fm cass., 113k mi., good cond., $2,100. Kevin, Ext. 2963 or 744-0871.

85 PONTIAC 6000 - white, 4-dr., 98k mi., a/t, new tires, rear shocks & fuel pump, tuned up, minor rust, $1,600. Rick, Ext. 3932 or 472-9789 after 5:30 p.m.

85 TOYOTA CAMRY - 4-dr., 5-spd., ac, maint. cond., orig. owner. Ext. 4342 or 924-3066.

84 PONTIAC TRANS AM - black, gray int., 8-cyl., 5.0 liter engine, 5-spd., $2,400. Rich, 744-4816.

84 OLDS CUTLASS SUPREME - a/t, V-8, new paint, brakes, trans. & alum. rims, all new parts, excel. cond., $3,800. 399-7744.

84 MUSTANG - conv., beige, 83k mi., 3.8 liter, V-6, a/t, am/fm cass., p/s, p/b, like new cond., $4,500 or best offer. 286-3231.

84 CADILLAC ELDORADO - clean, runs well, low mi., reasonable, 585-8590.

84 LASER - 2.2 liter, for parts; '78 Plymouth Satellite, 318 V-8, elec. problem, 2-dr.; '85 Chevy Celebrity s/w, needs engine, V-6. June or Brian, 243-0998.

83 TOYOTA CELICA GT - high mi., well maint., 5-spd., p/s, p/b, am/fm cass., no rust, excel. tires, $1,200. Ext. 4340.

83 HONDA ACCORD SE - fully loaded, 77k mi., new water pump, belts & brakes, orig. owner, fair/good cond., $2,250. Jack, Ext. 7640 or 928-3545.

80 TOYOTA TERCEL - h/b, 5-spd., ac, am/fm, red, 138k mi., no rust or dents, looks great, runs well, $850. Brian, Ext. 3102 or 821-4530.

76 VOLVO 242 DL - s/t, runs well, $900 neg.; '77 244 DL parts car, not running, good body, $300 neg. Steve, Ext. 3018 or 369-5181.

76 CHEVY MALIBU CLASSIC - 350 small block, Holley 4-bbl. carb., Edelbrock manifold, chrome headers, B&M quicksilver, posirear, $1,500. Phil, 286-1348.

69 MUSTANG - convert., 6-cyl., 3-spd., am/fm cass., 86k orig. mi., recent tires, brakes, exhaust, top & int., $3,800. Ext. 3288.

66 NOVA RACE CAR - new motor, $25,000 invested, $10,000 firm. Steve or Willie, Ext. 3849 or 929-0586 after 6 p.m.

TIRES - 4, P195/75/R14, B.F. Goodrich, 2 good, 2 like new, on GM rims, R.W.D., $90. Ben, 698-6436 eves.

Boats & Marine Supplies

36' EGG HARBOR - 1961, sleeps 6, twin International 392 cu. engines, extras, $5,000. 399-7744.

25' SEA RAY - 1984, original, 290 hrs., $11,000. Mike, Ext. 2115 or 665-4495.

23' DORSETT - 165-h.p. Mercruiser, FWC, p/s, many extras, asking $2,300. Mike, Ext. 3558 or 929-5035.

19' O'DAY MARINER - 1979, galv. trailer, good cond., $3,000. 286-1097.

19' STINGRAY - 1986, Bowrider, 120-h.p. Mercruiser i/o, am/fm stereo cass., mooring cover, 5-pc. vinyl cover, p/trim. 286-2319.

19' SEA RAY - 1985, 140-h.p. Mercruiser i/o, cuddy cabin, DF, mooring cover, many extras, $4,800. John, Ext. 2012.

19' CITATION - 1987, cuddy cabin, 165-h.p. i/o, Shoreline trailer, radio, DF, extras, very low hours, excel. cond., $9,500. Pete, Ext. 4235 or 462-9839.

17' O'DAY SAILBOAT - outboard, trailer, excel. cond., $2,300. Ed, 581-1509.

ANCHOR - 35-lb., CQR, $200; spinnaker pole for 35' boat, $200. Bill, Ext. 2434.

BOAT CRADLE - welded steel, 6'x12' for 28' sloop, fits boats 28'-32', orig. $650, best offer. 744-5096.

ENGINE - Mercury o.b. mark 55H, 1957 stock racing hyro, short props, tools, tach, best offer. Joe, 281-7683.

JET SKI - 1987 Kawasaki 300, excel. cond., $1,000. 878-1178.

ROPE - 1" hemp, never used, 300 feet, $200. Dan, Ext. 3185 or 765-5405.

Furnishings & Appliances

BASSINET - cloth-covered wicker, 1 yr. old, orig. $100, make offer. Warren, Ext. 2080 or 924-7552.

DRESSER - 6 drawers, black porcelain knobs, excel. cond., 43"x17"x29", $30. 286-9725 eves.

FREEZER - Kelvinator, 9 cu. ft., chest-type, excel. cond., $100. 924-4193.

LOVE SEAT - & sofa, cream w/earth-tone colors, $500. L. Collins, Ext. 5342.

MATTRESS - boxspring, frame, queen, $230; 2 sofas, $70 & $90; storm door, $60. Ext. 3842 or 929-6925 after 7 p.m.

REFRIGERATOR - 19 cu. ft., good cond., $200 neg. John, Ext. 7340 or 732-2702 eves.

REFRIGERATOR - Frigidaire, frost-free, 21 cu.ft., $175; coffee table, 60"x20", marble, $35; VCR, Zenith, $100. Yan, Ext. 2930 or 689-6319.

SOFA BED - full-size, gray/brown color, excel. cond., $100. Alan, Ext. 3790.

WATER BED - deluxe super single, w/2 sets of sheets, $90; 5-shelf glass & chrome étagére, $30; dining room set, $450. Sue, Ext. 7235.

Tools, House & Garden

AIR TANK - 20-gallon, from Sears compressor, $15. Jim, Ext. 5400.

ANNUALS - $10/flat, $5.50/½ flat. Ray, 727-6818 after 4 p.m.

BULBS - canna, giant red, 3/$1; fig trees also avail. Jim, 325-9293.

DAHLIAS - mostly white, whole root clumps, $1/ea. Joe, Ext. 2898.

DOORS - full louver bi-fold, pre-hinged, 35½x78½, 1" thick, $15/ea. or $25/both Linda, Ext. 2733 or 395-6784.

HOSTAS - 50¢/shoot, free delivery orders over $25. 689-9234.

LAWN MOWER - Craftsman, 20" cut. 3½ h.p., $55. Dan, 698-7322.

LAWN SWEEPER - 30", good cond., $25. 567-9025 eves.

WATER HEATER - Sears, elec., 30-gallon, new, still in box, $150. Roy, 727-6714.

WOOD CHIPPER - Mighty Mac, 1990, 12-h.p., chips up to 5" logs, orig. $3,200, now $1,500. Rich, Ext. 3354 or 589-9103.

Sports, Hobbies & Pets

AQUARIUM - 55-gallon, complete, fresh or saltwater, $175; cockatiels, pair, $100. 584-5972.

BICYCLE - Nashbar, 300ETR road bike, 27"x1⅛" tires, 67cm frame, 18-spd., Shimano components, asking $250; bike helmet, lg., $10. Phil, Ext. 5669.

GOLF CLUBS - women's right hand, w/bag, $100; men's right hand, w/bag, $75. Paula, Ext. 4619 or 928-7769 after 5:30 p.m.

KENNEL - Vari, 27"x20"x19", brand-new, $25. Sue, Ext. 7235 or 399-7997.

LABRADOR RETRIEVERS - yellow, avail. early June. 924-5505.

MOUNTAIN BIKE - 18-spd., excel. cond.; Nordic Track Achiever, hardly used, calorie counter, calibrated resistance, $450 neg. 878-1617 after 6 p.m.

PIANO - Cable & Sons of NY, baby grand, 5', plays well, excel. cond., $1,500. Jenny, 345-5325.

SOFTBALL GLOVE - for lefty, children's small, $5. 289-8212.

Audio, Video & Computer

AMPLIFIER - Alpine, 50-watts per channel, stereo car amp, Alpine passive graphic equalizer, $150/pair. Chris, Ext. 2326.

COMPUTER - Abest 286, 40 meg HD, 1 RAM, 12 MHz, one 3½", two 5¼" drives, 14" mono. monitor w/MGA, mouse, printer. Ext. 2272 orr 732-7634.

TURNTABLE - PL-400 Quartz, lock, direct drive, new diamond stylus, $75; albums, approx. 200, mostly popular, list of artists avail., neg. Dennis, Ext. 4482.

TV - Mitsubishi, 46" projection screen, oak case, $400. 363-7633 after 5 p.m.

Miscellaneous

AIRLINE DISCOUNT COUPONS - 2, good for Canada, U.S., Bermuda, Caribbean, Mexico, Paris, Frankfurt, $100. Pam, Ext. 7286.

GOWNS - spring/summer, for proms, weddings, parties. Ext. 5938.

JEWELRY - & collectibles, Avon, large assortment, 1979+. 654-0812.

JEWELRY - cameo necklace, black; amethyst heart-shaped earrings; watch; Pat nameplate w/gold Texan rope, best offer. 325-5546.

LUGGAGE - Samsonite leatherette, 4 pieces, good cond., $50 firm. Helga, Ext. 2381.

TRANSPORTATION VOUCHER - American Airlines, exp. 6/19/95, worth $220, sell for $120. Ext. 7505 or 689-8605.

Free

WASHER - Speed Queen, heavy-duty, works fine, you pick up. John, 924-4193.

Yard & Garage Sales

MASTIC - Sat. 5/13, 9 a.m-3 p.m., 247 N. Titmus Dr. between Sunrise Service Rd. and Moriches-Middle Island Rd.

ST. JAMES - 6/3, 9 a.m.-3 p.m., 14 Fifty Acre Rd, off Edgewood Ave., 1st right, household items, odd tables, pictures, etc.

Lost & Found

FOUND - bifocals, gold metal frame, driveway in front of NSLS, Bldg. 725, Mon. 5/8. Ext. 2345.

Car Pools

LIE EXIT 36 - fourth needed. John, Ext. 5181.

Real Estate

Real Estate advertised for sale or rent is available without regard for the race, color, religion, sex, age, national origin, disability or veteran status of the applicant.

For Rent

BELLPORT VILLAGE - upstairs 1-bdrm. apt., full bath, all new, village amenities, $625/mo. includes util. & cable. Jim, 744-2095 after 6 p.m.

CALVERTON - 2-bdrm. townhouse, 5 appl., carpeted, cac, fp, patio, upper deck. Henry, Ext. 7595.

EAST MORICHES - large, furnished, studio apt., full bath, kitchenette, large enclosed front porch, 1 acre, quiet street, near water, 10 mi. to Lab, $575/mo. incl. util. & cable, avail 8/1. Stefan, Ext. 2163.

EAST SETAUKET - sunny, 1-bdrm. apt., near SUSB, l/r-kit. combo, ground floor, sep. ent., w/d, w/w, no pets, no smoking, $650/mo. Valerie, 751-6091.

NORTHPORT - new 1 bdrm., priv. ent., parking, sep. thermostat, carpeted, priv. beach, walk to town beach, restaurant, golf, nature area, $800/mo. incl. util., unfurn., furn. avail. Ray, Ext. 7224 or 261-6455.

PATCHOGUE - 1-bdrm., priv. ent., all new, nonsmoker, $625/mo. includes all., sec. 289-0967 after 6 p.m.

RIDGE - 2-bdrm. condo, all appl., 2 mi. from Lab, $700/mo + util., sec. & refs. req. 878-6016 after 6 p.m.

SELDEN - 1-bdrm. apt., l/r-kit. combo, patio, ground floor, priv. ent., quiet street, nonsmoker, no pets, $575/mo. all. 732-7568.

STONY BROOK - 1-bdrm. apt., furn., nonsmoker, ½ mi. from SUNY SB and RR station, $350/single, $400/couple. 689-1350.

WADING RIVER - 1-bdrm. apt., l/r, kit., full bath, lg. 2nd floor, priv. ent., part furn., driveway space, no pets, $600/mo. incl. util. + sec. Maryellen, Ext. 2979.

WADING RIVER - lg. studio apt., unfurnished, full kit., near beach, driveway parking, quiet, 15 min. to Lab, electric & heat provided, $500/mo. Bill, 722-4489.

KEY WEST, FL - oceanfront studio timeshare, 5-star Coconut Beach Resort, sleeps 2, refrig., microwave, ac, TV, pool, Jacuzzi, fish, swim, nightlife, week of July 29-August 5. Pat, Ext. 2539 or 929-3586.

HILTON HEAD, SC - 2-bdrm. condo, sleeps 6, full furn., 2 baths, pool, beach, golf nearby, through Sept., $475/week. Guy, Ext. 3147 or 689-5378.

For Sale

AMITYVILLE - 2-bdrm. condo, 2 baths, adults 55+, marina, pool, clubhouse. Jennifer, 243-3467.

BAITING HOLLOW - 3-bdrm. ranch, 2 baths, cath. ceiling, open floor plan, fp, country kit., full bsmt., secluded setting, deeded beach rights, adjacent golf course, winter Sound view, $199,900. 727-5790.

BRIGHTWATER FARMS/BAYSHORE - 3-bdrm. Col., l/r, fd/r, eik, den, bsmt., new walks, Belgium block, 2 tiled baths, fenced, 35 min. to Lab, $127,500. Bill, Ext. 2762 or 665-3782.

CENTER MORICHES - 3-bdrm. house, 2-car gar., apartment & playroom, lg. yard, close to all, $140,000. George, 878-1178.

MILLER PLACE - 3-bdrm. ranch, d/r, l/r, eik, 2 full baths, deck, 100'x100' property, full bsmt., $147,900. Bob, 928-0916.

N. SHIRLEY - 1+ acre, all brick house, 3-car gar., 3 baths, 3 kits., deck, patio. William, 345-5783.

PATCHOGUE - 3-bdrm., 2½ baths, l/r, d/r, eik, 2 fp, den, heated breezeway, 1½-car gar., on Great South Bay, completely upgraded, $200,000. Gasper, 654-0812.

PATCHOGUE - 4-bdrm. Cape, 2 full baths, lg. kit., fd/r, l/r w/fp, full bsmt., 2-car gar., 100'x150' lot, walk to RR, village, bay & F.I. ferry terminal, $139,900. 475-8888.

PORT JEFFERSON VILLAGE - 4-bdrm. custom-built, 3½ baths, fin. daylight bsmt., 2-car gar. 331-4768.

RIDGE - 3-bdrm. ranch, 2½ baths, country kit., laundry rm., fenced yard, 3 mi. from Lab, $118,000. Carol, Ext. 2673 or 744-8632.

RIDGE - 4-bdrm. Col., l/r, d/r, den, fp, 2-car gar., lake rights, ask. $135,000. Mike, Ext. 3558 or 929-5035.

SHIRLEY - 3 bdrm., bsmt., gar., new appl., new w/d, d/r, new kit., alarm, 5 min. to BNL, dead-end street, fixed assum. mortgage, 8%, 20-yr. balance, home warranty, $93,000. Jim, Ext. 4150 or 281-0489.

SHOREHAM - 4-bdrm. col., 2½ baths, ⅓ acre, taxes $3,300, SWRSD, excel. cond., immed. occupancy, $169,000. Ralph or Joyce, 744-8782 after 6 p.m.

SHOREHAM - 4-bdrm. contemp., 2 lg. decks, deeded beach rights, SWRSD, ½ acre, $2,400 taxes, $194,900. Holly, 744-4738.

WADING RIVER - 3-bdrm. Colonial, 2½ baths, 2-car gar., custom kit., Jennair, gazebo, shed, igs, igp, deck, steam bath, satellite dish, SWRSD, 1.1 acre, $199,900. 929-8323.

WADING RIVER - 3-bdrm. remodeled farmhouse, c. 1900, 2 baths, l/r, d/r, OHWH, 0.53 acre, new kit., patio, porch, shed, ½ mi. to beach & park, low exp., taxes $2,600, $157,000. Bill, Ext. 2906 or 929-6189.

PORT CHARLOTTE, FL - ¼ acre bldg. lot, developed neighborhood, ready to build, $9,000. 929-8323.

Wanted

BABY CRIB - white, w/dresser. Darla, 751-6705.

BABY-SITTER - p/t, 6/26-9/1, in my E. Northport home, M & W, 8-5:30 p.m. for 6 yr. old, own transportation, $75/wk. Lori, Ext. 7036 or 462-2359.

CHILD CARE - f/t, my Setauket home, caring nonsmoker w/genuine love for children desired, June/July start, refs. Paula, Ext. 3293 or 751-8240 eves.

DRAWING TABLE - Anco-type, all wood, A-frame stand, 23"x31" size; rototiller, gas-powered, mini-size. John, Ext. 7671.

HOUSE/APT. - reliable family looking for 2-3 bdrms. in Shoreham-Wading River, Rocky Point, nonsmoking, no pets. Hongbin, Ext. 5872 or 821-5240.

OARS - and oarlocks, also scallop dredge. Carl, Ext. 4783 or 929-5781.

OUTBOARD - 6-12 h.p. w/12V battery charger output or conversion w/charger option. George, Ext. 3061 or 751-0265.

MOVIE VIEWERS - to see *What Happened Was*, 1994 Sundance Film Festival winner, Theatre Three, May 22, 8 p.m., starring Karen Sillas. Janet, 929-3910.

YARD WORKER - need general yard work done on regular basis. Pat, 929-4734.

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