

Tammy Rosenblum and Wayne Penello of DAS use a submersible pump to take 25-gallon samples of sewage effluent from a Stony Brook sewage treatment plant.



Local oyster boats carry Brookhaven virologists out into the waters of Oyster Bay for sampling. The crew of the *Waldron* stands by to assist in the operation as (front to back) Wayne Penello, Mac Thomas and Edward Landry of DAS lower an automatic pump into the water.



Ted Landry, a geneticist on the virology team, prepares to lower the acidity on one of the water samples by running a preliminary chemical test on a small portion of it.



The BNL team is doing coliform bacteria counts of their water samples in addition to running virus concentration and analysis. Lois Baranowsky, DAS, pours the water through special membrane filters which catch the bacteria for later growth and identification.



Back on a dock at the shore of Oyster Bay, Landry and Thomas run the 100-gallon sample through the first leg of the analysis process - the portable virus concentrator.

Virus Study Profiles Long Island

A Brookhaven survey of viruses in Long Island waters will be part of a full-scale water resources study for area legislators. New virus data from this \$110,000 research grant will aid the Nassau and Suffolk Bi-County Regional Planning Board in formulating management plans for the next 20 years.

James Vaughn and Edward Landry of DAS head the virology team that will complete the first major examination of aquatic virus presence throughout a large ecosystem.

"No one has ever conducted a single, coordinated virus study that is so broad in approach before this," said Vaughn. "The range and variety of systems we're looking at is extensive and being surveyed simultaneously. We're getting a reasonable accounting of just what viruses are there and how many."

At this time there are no recognized standards for virus pollution. Vaughn explained that in the past, public health experts were not technologically equipped to do effective analyses for virus presence and the costs were too high.

"Within the next five years, viral standards will exist," he said. "What is needed is creation of a uniform analysis procedure so that it can be done quickly and cheaply in a public health laboratory. We have undertaken the Long Island virus study because the BNL environmental virology facility has the unique capability to routinely handle human virus sampling."

According to members of the Laboratory's virology team, virus presence is an important aspect of water resources because they have a greater disease-causing potential than bacteria. He explained, "You don't need as many viruses to cause an infection - one may be sufficient while several thousand *Salmonella typhi* are needed to start a typhoid fever infection. Also, viruses have a greater ability to survive than bacteria in most environments."

Brookhaven's virus profile examines effluent from two Nassau County sewage treatment plants and three in Suffolk County, overflow from area septic tanks, and water from public wells in Oakdale and Bayport, in addition to some private wells.

Samples are collected from surface water at Lake Ronkonkoma, Pentaquit Creek, Oyster Bay and the Great South Bay. Also, groundwater is taken from the recharge basin in North Massapequa and below a landfill in Babylon.

Water sampling is spread over the 21 viral survey stations in a one-month cycle. One hundred gallon samples of water have to be taken at each station because of the low, but potentially dangerous, concentration of virus particles in the water. Sewage effluent is the only exception, of which only 25 gallons is taken due to high concentrations of viruses from the human enteric tract.

"The water samples are brought back to the Lab and run through a virus concentrator containing several filters," explained Vaughn. "The main filter is made of fiberglass with spaces large enough for all the particles to pass through. Lowering the acidity of the water allows aluminum salts, which are added to the water, to give a relative electric charge to the virus protein coat. An electrical bridge forms between the virus and the filter, causing the virus to attach to it."

The filter performs a process of "selective absorption," according to Vaughn. A reverse process of chemical elution allows the virologists to remove all the viruses absorbed from 100 gallons of water into two liters of water.

"This is still too much water to work with," he said. "We then lower the acidity again, and add aluminum salts. The aluminum salts now form an insoluble complex with the viruses and they both precipitate." (Continued on page 2)

Virus . . . the non-living germ?

A virus is an infectious agent made of a nucleic acid core surrounded by a protein coat. When outside the host that it infects, the virus is not really "alive."

Virologist James Vaughn, DAS, said, "Going by the classic biological definition of what life is, a virus is only about one-third alive." He explained that the virus acts as a chain of molecules, called a macromolecule, of nuclear cell-material that maintains itself with the protection of the coat.

The "nucleic acid" core is made of either DNA (deoxyribonucleic acid) or RNA (ribonucleic acid). The backbone of the core is formed by a chain made with links of phosphates and deoxyribose or ribose sugars. Any of four possible chemicals - called bases - may attach to the sugar links in the chain.

The sequence of these bases forms a genetic code that is passed down from generation to generation. This genetic code - like a chemical Morse Code with four types of signals - maintains the chemical instructions for the cell to carry on all its essential function such as metabolism, growth, differentiation and reproduction.

The virus has only one strand of genetic material, the biochemical messages necessary for reproduction. Since the virus has none of its own reproductive organs, the virus' genetic material must operate the reproductive cell machinery of some host cell it invades.

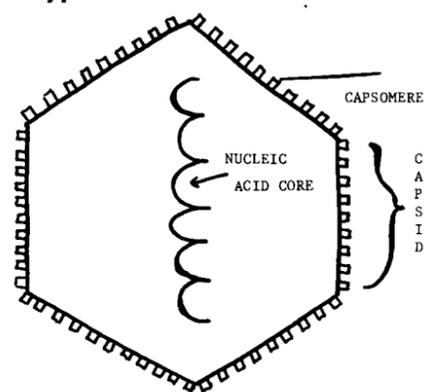
"The virus has a receptor site that can detect matching receptor sites on specific host cells," Vaughn said to explain how the virus selects a host cell to invade. "The virus attaches itself to the host cell and enters by injection, absorption, or one of several other processes."

After the virus invades the host, the single strand of genetic material loses its protective coat and becomes "activated." Instead of sitting inertly, the virus' nucleic

acid macromolecule masquerades as one of the host's chromosomes. By giving orders as though it were one of the host's chromosomes, the virus' chromosome is able to take control of its host's biochemical processes.

The virus chromosome orders the host's cell machinery to stop making chemicals for the host cell's survival and to start making the building blocks for the virus. The invading virus reproduces itself by assembling these identical parts in a process called "replication." When too many of the viruses are replicated, the host bursts from the extra volume. Then the virus spreads to new host cells, creating an infection in the organism.

A Typical Virus



This is a schematic outlining the structure of a typical virus. Many protein units called "capsomeres" are joined to form the surface of the capsid coat. Types of viruses vary in the number of sides they have in the coat, forming a kind of geodesic dome. Inside the capsid rests one strand of genetic material comprising the nucleic acid core. Some viruses have a tail or other structures protruding from the head. Bacteriophages, viruses that attack bacteria, often have such tails. Other viruses protect the capsid with an additional layer of fatty material, referred to as a "lipid envelope." This basic virus structure shown in the diagram is most like the viruses that attack human cells which act as the specific host.



Youth On Campus tour Suffolk County Community College. Their host was Daniel Deponete, Dean of Students.

YOC Program Completes Its 12th Year At BNL

This week, thirty Youths On Campus wound up two months' on-the-job training, lectures and vocational guidance at the Laboratory, and will now return to school, or hit the job market.

The students are the latest graduates of the YOC program started in 1965, not just to provide summer employment, but to help young people particularly those in high school improve basic skills, receive career guidance and become aware of career opportunities.

The 1976 program includes 16 women and 14 men who were assigned clerical and technical jobs in just about all the departments. Thirteen are alumni of BNL's High School Co-op Program which is in operation during the academic year.

During their stay here they received a valuable cross-section of information: on data processing from Joseph Weynand, ADP; on money matters from Richard Egert, AUI Audit; on technical careers from Gregory Bagley, Accelerator; on energy research from Murrey Goldberg, DAS; and they toured the machine shop under the guidance of Bob Lehn, Head of Central Shops. Particularly popular was an afternoon spent at the Computer Center where each student worked one-to-one with Applied Math personnel. Throughout the summer, an Office Practices session was conducted twice a week by Lyn Kalbach and Elaine Taylor.

Professionals from outside the Laboratory advised the students on career opportunities in aviation and the civil service, as well as instructing them in telephone procedures and preparing for interviews. Mock interviews were conducted for the students last week in Personnel to give them practice in this important area. To encourage students who are thinking of continuing their education, a tour of Suffolk County Community College was arranged.

According to Dolores Seay, coordinator of the program, "It continues to be a really worthwhile program, and some students have already landed full-time jobs, aided by their experience at the Laboratory."



Dede Seay, coordinator of the Youth On Campus Program, conducts a mock interview.



Mendez Alzona works in DAS plotting curves from data points in fuel streaming and freezing experiments.



Elaine Taylor (left) and Lyn Kalbach (right) acted as instructors for the Youth On Campus office practices class, and Colleen Holland (center) assisted in the administration of the program.

Virus Study

(Continued)

tate out of solution."

All the viruses from the two liters of water are now mixed with the solid precipitate-known as a "floc" - that sits at the bottom of the solution. Most of the liquid is decanted off the top, and then the viruses are again chemically eluted from the floc.

"This gives us the viruses from 100 gallons of water in 30-50 milliliters of liquid," Vaughn said. "The viruses are put in tissue cultures to grow where they can be isolated, counted and identified by immunological tests."

The concentration process of selective absorption not only selects for viruses over other microorganisms, but is specific for viruses which are found in the human intestinal section called the enteron. Vaughn explained that polio, coxsackie, and ECHO are the three most common "enteric viruses."

"Hepatitis virus is the only disease-producing virus that has clearly been proven to be transmitted in water," said Vaughn, "but we cannot assay for the hepatitis virus since it can't be grown in a tis-

sue culture. All we can do is measure the enteric viruses as an index of fecal contamination."

Coliform bacteria is the traditional index of human fecal contamination where human disease-producing microorganisms are commonly found. Vaughn cautions that this may not be the most accurate system for assessing the dangers of fecal pollution in water systems.

"Viruses will survive in water up to eight times longer than bacteria, so you could have zero coliform bacteria and still have a number of viruses," said Vaughn. "Enteric viruses are also a better indication of pollution than coliform bacteria because a lot of organisms that give you a positive coliform test don't come from the human enteric tract and probably don't carry human diseases."

The project is being run under the "208 Program," a local attempt to assess Long Island water resources and establish long-range management plans. The program was established under the EPA by Section 208 of the Federal Government's Safe Drinking Water Act of 1972. A Citizen's Advisory Committee and a Technical Ad-

visory Committee supervise the research efforts paid for by a \$5.5 million EPA grant.

"We are providing basic information for decisions on water management for the next 20-50 years," explained Vaughn. "These decisions, which will affect all aspects of life on Long Island, will be based on the 208 Program study. This will include Brookhaven's unique set of virus data, that very few planning boards have."

—Clifford Cockerham

Upton School Update

Upton Nursery School for three and four year olds begins their new year soon. Classes begin on September 13 (It was previously announced that school would begin September 8.) and there are still a few openings for children of Brookhaven employees. Upton Nursery School is a cooperative school in which the parents assist the teachers at each session, helping to keep tuition expenses down. The program is a varied one which includes outdoor activities, crafts, music, art and some field trips.

So, let your child in on the fun and learning by enrolling now. For further information call Sharon Paschos at 928-4270.

Cafeteria Menu

Week Ending September 3, 1976

Monday, August 30	
Tomato Bouillon	
Franks & Baked Beans	1.05
Barbecued Fresh Ham & 1 veg.	1.30
Tuesday, August 31	
Cream of Chicken Soup	
Chopped Steak & 1 veg.	1.10
Beef Stew w/Rice	1.25
Wednesday, September 1	
Scotch Broth	
Shrimp Chow Mein on Rice	1.10
Barbecued Breast of Lamb & 1 veg.	1.15
Thursday, September 2	
Puree of Mongol	
Spanish Omelet w/Fr.Fr.	1.10
Short Ribs of Beef & 1 veg.	1.30
Friday, September 3	
Clam & Celery Soup	
Seafood cakes & Spaghetti	1.05
Pot Roast & 1 veg.	1.30

Labor Day Food Service

At the Cafeteria the snack bar will be open from 9:00 a.m. to 2:00 p.m. daily on Saturday, Sunday and Monday, September 4 through September 6.

The Tap Room at the Brookhaven Center Club will be closed on Saturday and Sunday, reopening at 5:00 p.m. on Monday evening, September 6.

The Vended Food Service in Building 912 will be in operation throughout the Labor Day weekend.

It's . . . Cricket

In what is referred to as the "glorious uncertainties of cricket," the Brookhaven XI lost to the Empire State XI in a near tie of 55 to 56 at the BNL Recreation Park last Sunday.

Batting first, the Empire States scored 56 runs after losing their first 4 wickets without scoring. Grahame Williams was top scorer for the Empire States with 20 runs.

The Brookhaven XI scored 55 runs in the first nine wickets with five more players yet to bat. John Millener, with 29 runs, was top scorer for the BE's.

In typical cricketing fashion, the Empire States, with a well-placed field and steady bowling, eliminated the remaining opposition who failed to score the two runs needed for victory. The quality of play on both sides has noticeably improved. This probably accounted for the close scores.

After playing in 90° heat the Brookhaven Cricket Club members refreshed themselves at the usual after-game barbecue. Though heat took its toll, after several hours of relaxation and beverages their spirits were revived. A late-evening special committee was formed to do research on Shoreham phyto-plankton, but few details are available.

This coming Sunday an informal match is planned so the summer visitors can get in one more game.

Spectators welcome!

Arrivals & Departures

Arrivals

Harold Basch.....Chemistry
James E. Manuel.....Applied Science

Departures

Jacob Gilat.....Chemistry
Jean A. Laissue.....Medical
Hisamitsu Nakadomari.....Applied Science

New York City Train Trip

The Hospitality Committee is planning a group railroad trip to the city Wednesday, September 1. Departure will be at 8:32 a.m. from the Patchogue LIRR station. Round-trip fare for adults is \$2.45, children under 6 years ride free. Reserve a ticket by sending your fare through the U.S. Mail to P.O. Box 322, Upton, New York, no later than August 25. Make checks payable to "Cash." Refunds will be made only if cancellations are received before noon on August 27.

Any and all are welcome to participate. Participants must leave as a group on the above scheduled morning train but are free to return to Patchogue on any train leaving New York the same day.

BROOKHAVEN BULLETIN

Published Weekly for the Employees of Brookhaven National Laboratory

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Letters To The Editor

To all my friends at Brookhaven,
My sincere thanks for all the lovely flowers, cards and phone calls. Your thoughtfulness was much appreciated and will always be remembered.

Ruth Petit

August Retiree



Radford J. Sprague, a Water and Sewerage Operating Engineer in Plant Engineering, will be retiring today. He has been a Lab employee since February 18, 1963.
—photo by Rosen

Pre-Season Bowling Info

Plans for the 1976-77 bowling season are now being formulated. There are still openings for bowlers in the ladies', men's and mixed leagues. There is room for all level of bowlers; so if you are a bomber or a bummer, come on out and join the fun. Individuals who would like to bowl full time or as a substitute may call Marie, Ext. 2456, who will try to match you with teams seeking bowlers.

Although league structure is set, every effort will be made to accommodate you if you would like to enter a team in any of the above leagues. For more information call Bob Jones, Ext. 3512, or Marge Stoeckel, Ext. 2459.

Team captains who have submitted completed applications will be notified shortly of captain's meetings.

Inner Tube Derby

How fast can you paddle an old inner tube? This was the question asked by life-guard Rich Parsons to the children of the BERA Summer Recreation Program last Friday as they competed in the Inner Tube Derby at the swimming pool.

This last pool special of the year was well attended as many eager little folks kicked and splashed their way across the water in an effort to win a prize. Fortunately, there were no blow outs en route to victory... all the tubes and all the children held up fine. Everyone enjoyed an afternoon of fun and excitement.

Basketball Clinic Ends

Carl Verdi and Bob Skeeter have announced the finish of the BERA Summer Basketball Clinic for 1976. Awards day saw participants receive trophies for outstanding play and sportsmanship. Winners were: Sean Holden, John Carew, Kristen Holden, Steve Kisslinger and Ed Casswell. The season's "Most Valuable Player" award went to Kristen Holden.



Hundreds Enjoy Water Carnival

The BERA Summer Recreation Program's highlight event, the Water Carnival, took place last Thursday evening at the swimming pool. Hundreds of children, parents and guests crowded the pool deck to watch and compete in such thrilling events as the crazy dive contest, inner tube races, kick-board races, cup and spoon relays and the ever popular penny fetch. The competition was fierce but the children loved every minute of it. All left happy as trophies and ribbons were awarded to jubilant winners and tootsie pops were distributed to young and old alike.

Winners were:

Sprint-Freestyle 10 & Over

1. Ido Gileadi
2. Arne Bahler
3. Tom Detweiler

Sprint-Backstroke 10 & Over

1. Paul Devlin
2. Anne Bahler
3. Tom Detweiler

Craziest Dive 10 & Over

1. David Chivelly
2. Maureen McNerney
3. David DeVito

Inner Tube 10 & Over

1. Noreen Jochen
2. Paul Devlin
3. Anne Behler

Balloon Race 10 & Over

1. Paula Kochmann
2. David Humphrey
3. Frank Humphrey

Penny Fetch 10 & Over

1. Ido Gileadi
2. Tom Detweiler
3. David DeVito

7-9

1. Irene Doskoes
2. Maurisa Holden
3. David Polywoda

4-6

1. Megen Holden
2. Randall Polywoda
3. David Glass

Push Ball With Nose 7-9

1. Joe Carew
2. David Polywoda
3. Uzi Gileadi

4-6

1. Randy Polywada
2. Megen Holden
3. Christina Acevedo

Ping-Pong in Spoon 4-6

1. Randall Polywada
2. Christina Acevedo
3. David Hainfeld

7-9

1. Joe Carew
2. Jeff Achey
3. Seamus Rutherford

Straw and Birdie 7-9

1. Sharon Doskoez
2. Lynn Skelton
3. Vincent Polywada

4-6

1. Megen Holden
2. Randall Polywada
3. Maureen McTague

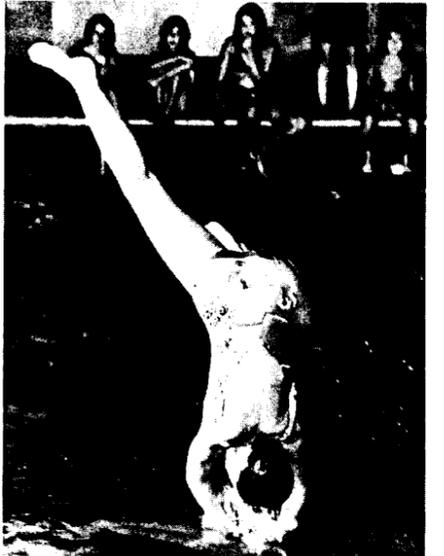
Kickboard Races 7-9

1. Woody Ma
2. Joe Carew
3. Lynn Skelte

4-6

1. Randy Polywada
2. Maureen McTague
3. Megen Holden

The Recreation Staff would like to take this opportunity to thank all the children and parents who have been so nice to us this summer. We hope you have enjoyed the fun as much as we have enjoyed you.



Softball

Ed Taylor

League I

Ravens 6 (3-1) - Old Timers 2 (1-3)

Leroy James (HR) and Bob Barone (triple) supplied the hitting for the Ravens, in a tight contest. Harold Bolling pitched a strong game for the Ravens.

Blue Jays 10 (2-2) - Hawks 4 (2-2)

Mike Irocci pitched a good game for the Blue Jays. Mark Patrick hit a homerun and played well defensively for the winners.

League II

Dirty Sox 11 (3-3) - Bubble Boys 7 (4-2)

Jim Vaughn (homerun and triple) and Mike Dag (HR) paced the Dirty Sox.

Six Pax 16 (4-2) - Metallurgy 1 (1-5)

Ed Meier, Ken Riker and Lou Addressi combined for 10 hits and Denny Klein had a homerun for the Six Pax.

League III

Phoubars 10 (3-3) - Medical 6 (2-4)
Circuits 20 (6-0) - Sweathogs 3 (1-5)

The Circuits clinched their first league championship as they crushed the Sweathogs 20 to 3. Jeff Gaffney (4 for 5 with a HR), Jerry Levine (4 for 4), George Hughes (3 for 4 with 2 doubles) and "Woody" Greenlaw (3 for 5) paced the Circuits. Congratulations to the Circuits!

League IV

Power Packers 21 (2-2)
Streakers 14 (3-1)

John Usher led the Power Packers with 2 homeruns. Ken Batchelor played well at 3rd base for the winners.

Charlie Browns 16 (2-2)
Nuke Powers 7 (1-3)

League V

Odd 15 17 (3-2) - T.N.T. 14 (1-4)

Junie Langehorne went 4 for 5 for T.N.T. in a losing cause.

Turkeys 10 (3-2) - Balls & Strikes 9 (1-4)

In a very close game the Turkeys edged the Balls & Strikes by one run. Great defense by the Turkeys held the Balls & Strikes in check until the winning run was scored by the Turkeys' pitcher, Glenn Snape, in the 7th inning. Both teams played hard and enjoyed one of their more exciting games of the season.

Oh Kays 13 (5-0) - Diamonds 11 (2-3)

In a full team effort, the Oh Kays held off a late Diamond rally to preserve their 12th straight victory. Ruth Faine, Sydell Lamb and Rosemary Mack played well for the Oh Kays. Ken Asselta (grand slam), homerun), Pat Manzella and Linda Asselta played inspired ball for the Diamonds.

Classified Advertisements

Placement Notices

Each week the Personnel Office lists personnel placement requisitions, currently being processed. The purpose of these listings is, first, to give notice of all non-scientific staff positions being filled and, second, to give employees an opportunity to request consideration for themselves through the Personnel Office. In filling vacancies, the Laboratory's objective is to give first consideration to present employees, as follows: employees within the immediate group having the vacancy, employees within the department or division, employees within the Laboratory as a whole.

For further information regarding a placement notice, or to request consideration for an available position, contact Supervisor, Personnel Placement & Development, extension 2874 or 2882.

185. SECRETARIES - AAS degree or equivalent in secretarial science and experience in technical typing and general office procedures. One position will involve assignment to Washington, D.C., working in liaison with BNL and ERDA. Department of Applied Science.

186. ELECTRICIAN A - Trade qualified individual to lay out, construct, install, maintain, repair and operate (in accordance with the national electrical codes, or as otherwise directed) electrical systems, equipment, controls and related devices.

May be required to perform similar duties on other than maintenance division equipment and facilities. Plant Engineering Division.

187. BUILDING & GROUNDS UTILITY WORKER - Plant Engineering Division.

188. KEYPUNCH OPERATOR - Part-time position. Seeking two to three year's experience on IBM 360/30 equipment. Shift work. Administrative Systems & Data Processing Division.

189. COMPUTER SCIENCE ANALYSTS - Seeking minimum BS or equivalent in computer science/mathematics with up to two years' experience in scientific programming. Seeking prior experience with CDC SCOPE operating systems for one of these positions. Applied Mathematics Department.

190. DATA SERVICES ASSISTANT - Temporary position. Assignment involves preparation and processing of computer data and mathematical calculations. Department of Applied Science.

191. PROGRAMMING ASSISTANT - Temporary position. Assignment involves coordination of data processing jobs and maintenance of computerized data storage system. Will also provide assistance to staff members in numerical analysis. Physics Dept.

192. TECHNICIAN - Temporary position providing laboratory assistance in fabrication and testing of electro-mechanical instrumentation. Physics Dept.

193. PROGRAMMER/ANALYST - Seeking degree in Business Administration or the equivalent with experience in budgeting, data base management software and real time interactive systems. Written and implemented modelling systems experience for budgeting or financial planning desirable. Administrative Systems & Data Processing Division.

Autos & Auto Supplies

71 GREMLIN - Good running cond, \$800. Ext. 3854, 928-4270.

73 MG MIDGET - New clutch, muffler, battery, tires, am/fm, 8-track, good cond. \$1800. Ext. 2874, 289-8459 after 5:30.

73 VOLVO - 1800ES w/fuel injection & overdrive. 826-8239 days.

71 VW - Superbeetle, automatic-stick shift, new tires, am, 8-track tape, back window defogger, recent tune-up, clean. \$1000. Rus, 878-4184.

RIMS - (4) 8.00x16.5 8-hole w/8.00x16.5 10-ply tires, Ideal for spares. \$70. 924-3553 after 5:30.

64 JEEP - Willys CJ5, low mi, hydraulic snow plow, good tires & 4 snows w/removable cap. \$1000. Lou, Ext. 4605.

67 CHRYSLER - New Yorker, must see. \$400. Steve, Ext. 4072.

68 CHEVY - Pick-up C-10, 6 cyl, 3-spd, many new parts, very good cond. \$1100. Mitch, Ext. 3084.

46 WILLYS - CJ2-A, less than 300 mi on new motor, new paint, roll bar, plow, excel running cond. \$1150. Mitch, Ext. 3084.

70 VW - Fast back, 2-dr, new tires, low mi, good cond. Matt, Ext. 3935, 543-9128 after 6.

69 PLYMOUTH - 2-dr, V8, ps, 66,000 mi, runs well. Best offer. Roger, Ext. 3817; Eungs; Ext. 3031.

REAR BUMPER - '70 Chevrolet Impala or Caprice, excel. \$35. C. Golub, Ext. 2491.

TRAILER HITCH - For '70 Chev, also fits most late GM cars. \$20. C. Golub, Ext. 2491.

66 CHEVY - Bel Air, 4-dr, auto, ps, excl running cond. \$495. 286-8696.

67 CADILLAC - Sedan de Ville, very good cond. Ext. 3828, 751-7250.

ENGINE & TRANSMISSION - Chev 283, \$125; position rear end, \$25. Joe, 928-7035.

69 CADILLAC - Sedan de Ville, \$940. Ext. 3267, 473-2594.

70 RENAULT - Automatic, a/c, 49,000 mi, radials, excel cond. Ext. 2255, 473-3618.

70 SCOUT - FWD, very clean, good cond, 57,000 mi. 727-1962, 369-2075.

68 FORD - Mustang, auto, V8, clean, excel running cond, ps, rh, 2 extra snow tires, attached trailer hitch. \$600. Pete, 286-1214.

71 TOYOTA - Pickup, am/fm, rear bumper, chrome rear wheels, cover for rear, snow tires on wheels, must be seen. \$1325. 744-2725.

66 DODGE - Dart, 2-dr, good engine & tires. \$275. Ralph, Ext. 4673.

TIRE - Snow, 650-13. \$20. 744-5871.

73 PONTIAC - Firebird, 6 cyl, 3-spd, am/fm stereo, excel cond. Best offer over \$2200. 234-0773 after 6.

74 DATSUN - B210, automatic, radio, all new tires, new brakes, winter tires, garaged, clean, excel cond. \$180. Jiri, Ext. 3589.

RIMS - (2) 13", \$3; (2) VW 5-hole, \$5. O. Booker, Ext. 4719, 727-5912.

72 CHEVY - Nova, 6 cyl, 2-dr, std, new tires, low mi. Asking \$1495. Ext. 3525.

72 VEGA - Hatchback, 4-spd, new engine, body good. \$1250. Ext. 4504, 473-1523.

69 VW BEETLE - New factory rebuilt eng, new tires, front end damaged. Cheap. Ext. 2495, 928-6930.

72 FORD LTD - 4-dr htdp, ps/pb, 351 V8, steel radials. \$1300. 585-7856.

71 GREMLIN - Good running cond. \$800. Ext. 3854, 928-4270.

WHEELS - (2) ea, 14" from 66 Mustang, 4 holes. H. Brown, Ext. 4773.

70 CUTLASS SX - 455 cu in, ps/pb, ac, am/fm stereo, dual exhaust, buckets, console, excel cond, new radials & exhaust. \$1400. Eric, 751-3686.

TRANSMISSION - 4-spd Chrysler Hurst shifter, good cond. \$75. Lee, 286-0436.

TIRES - Recaps & used, extra rims avail. Ken, 289-8212 eves.

73 CJ5 - 6 cyl, 32,000 mi, warn hubs, tow bar, rear seat, oil & amp gauges. 732-1298.

72 CHRYSLER NEWPORT - Excel cond, 49,000 mi. Ext. 4885.

TIRES - (4) 155-13, good cond. Ext. 3354.

66 KARMAN GHIA - Recently inspected, new tires, master cylinder, etc., 40 mpg, excel running cond. 722-4976 eves.

67 CHEVY - Impala, excel cond, orig owner, perfect running cond. \$450. 722-4976 eves.

74 CHRYSLER - Town & country station wagon, 21,000 mi, excel cond. \$3900 firm. Don, 473-1682.

AIR FILTER - Lee AFL-89 for 68-74 Oldsmobile, 68-75 Pontiac V8's. \$2.50. Steve, Ext. 3469.

Boats & Marine Supplies

13 1/2' FLYING JR - Sloop, all fiberglass, aluminum spars, 3 sails, trailer, fully equipped. \$1000. Ext. 4597, 929-4940.

12' ALUMINUM BOAT - '67 Appleby built-in floating gear & '57 18 hp Johnson completely reconditioned. Ed, Ext. 4249.

OUTBOARD - Johnson 90 hp engine, running cond. \$200. Walter, Ext. 4039.

SAILBOAT - Snark model, polystyrene hull, dagger board, sailing manual. \$80. Peter, Ext. 4498.

17' DIXIE - '70, fiberglass tri-hull boat w/walk thru front, incl Cox tilt trailer, 80 hp Merc outboard, canvas top. 289-2935 after 4.

32' CHRIS CRAFT - Twin '73 6 cyl engines, fully equipped, ready to go. \$4500. 727-2939.

ANCHOR - 150 lb mushroom mooring anchor. \$45. 473-0058 after 4.

BOAT HORN - 12 V, 10" trumpet style, never used. Half price, \$8. H. Brown, Ext. 4773.

18' THOMPSON - In/outboard, rebuilt eng, new manifold, many accessories, Cox tandem trailer w/elec winch, boat & trailer A-1 cond. O. Booker, Ext. 4719, 727-5912.

MARINE FLARES - 4 to a pkg, 24 pkg, \$3; (14) 2 lb fire extinguishers, \$2.50 ea; 24 pairs of Wondu-cup grease cups for trailers, \$1.50/pair; 1 gal bilge cleaner, \$2.50; 600' 1/2" nylon rope, 15¢/ft. Guy, Ext. 3147.

TRAILER HITCH - Never used, fits most cars, \$15; 1 gal soft finish blue bottom paint, \$35; 1 pair chrome towing mirrors, \$10; 1 set of pump pressure air horns for boat deck, need work, \$3; battery operated hand bilge pump, \$10. Guy, Ext. 3147.

32' BALTZER - Twin 125 Chrysler, 60 hrs new transom, camper back, ideal family/fishing boat. 331-1718.

Miscellaneous

ENGINE - 4 cycle, 4 hp w/7 to 1 gear reduction, reversible. \$25. Ext. 4058, 286-0436.

2 ROLLAWAY BEDS - \$20 ea. 286-9626.

FIREPLACE - Modern, free standing, red porcelain finish w/fitted screen, grate, matching 90° elbows & interior pipes. \$150. Van't Hof, 286-0534.

TYPEWRITERS - Royal w/full 18" carriage, excel, \$40; Remington w/15" carriage, very good, \$30. Ext. 4058, 286-0436.

COOLER - Scotch, all metal, 52 qt size, inside galvanized, very sturdy. \$8. Ext. 4058, 286-0436.

WOMAN'S COAT - Camel hair, fur collar & cuffs, size 14, like new. \$35. Sally, 878-2935.

JIGSAW TABLE MODEL - 18" throat w/external motor, Sears, cast iron, adj tble. \$30. Fred, Ext. 4597.

HUNTING BOW - 50 lb pull, 75 mph silenced, 6 mos old, used twice, mint cond. Paid \$150, sell for \$100. Mike, Ext. 2302.

REFRIGERATOR - 13 cu ft w/100 lb freezer, excel workng cond. \$75. Joan, Ext. 2016, 286-0716 after 6.

WEDDING GOWN ENSEMBLE - Pearls & sequins, headpiece, long veil, train, slip, size 12. \$250 new, asking \$75. Louise Licari, 924-5422.

YARD SALE - 3 families, Aug 28 - 29, 10-4, Woodville Rd, Middle Island. Rhodus, Ext. 3284, 924-3522.

ICE CREAM MAKER - Electric, \$9; stereo record player, \$4; fireplace screen, \$4. 744-7170.

TV - RCA 22" b/w console, 2 speakers. Ext. 3392, 475-8330.

EXERCISE BIKE - \$10, (2) air conditioners, (1) 220 V, (1) 110 V, \$35 both. Harris, 475-8504.

GITAR - 1/2 size, custom made Tatay, excel cond. \$75. 286-2265.

PIANO - Sohmer console spinet. 286-0612.

BOY SCOUT UNIFORMS - (2) summer, excel cond. \$7. 286-2265.

ICE SKATES - Women's size 8 1/2, excel cond. \$4. 286-2265.

BOOKS - (50) Hardy Boys, complete, excel cond, \$30; stamp album, partially filled, perfect for beginners, \$10. 286-2265.

ELEC GENERATOR - Sears 1250 Watt alternator on 3 1/2 hp gas engine. \$125. Ext. 4240, 286-0295.

WASHING MACHINE - Portable, needs work, 10 lb cap, Sears. \$25. 929-4903.

KODAK CAROUSEL - Auto-focus slide projector w/F3.5, 4 to 6" zoom Ektanar lens. \$195 firm. 298-8851 after 6.

ANTIQU TWIN BED SET - W/box spring, man's & women's dresser w/mirror. \$175. 727-4515.

POWER SWEEPER - 30" Craftsman w/dethatcher attachment, 3.5 hp engine, new cond. \$150. 475-4787 after 5.

KITCHEN SET - 48" round pedestal table of white marbled formica & 4 chairs w/black upholstery, excel cond. \$50. 928-7993.

ELEC RANGE - GE, 40", white, 4 burners, 2 ovens w/timers, good cond. \$70. 286-0384.

BIKE - 3-spd Raleigh, 26" girl's bike, excel cond. \$45. 286-8062.

YORKSHIRE TERRIER PUPPIES - Male, 15 wks, 1st shot, health certificate, top quality, sturdy, AKC. \$250 up. Daly, Ext. 2902, 475-2627 eves.

POOL - 21'x4', all accessories, buyer must dismantle; encyclopedia, 25 vol, perfect cond. 286-0376.

SHOES - Men's 9 M, new, brown leather, \$13; new shirts, brown 15-33; white 15-34; green 15. \$3 ea. Ext. 3609.

SNOW TIRE - 650-13, Firestone. \$20 w/rim. 744-5871.

SPRING COAT - Good cond, size 12, \$8; blue blazer, size 12, \$4; blue pullover men's shirt, \$3. Ext. 3609.

JEANS - Brand new, polyester, 32-30, brown, \$5; spring coat, size 14, \$8. 744-5871.

GLASS DOORS - Aluminum sliding, 6'x6'8" w/screen, excel cond. \$60. 475-6231.

DRUM SET - 4-pc Ludwig w/hi hat & cymbals. Mike, 878-2486.

TEAK CAMPAIGN BED - Black vinyl mattress & wedge cushions, excel cond. 286-8812 eves.

DOG RUN - 10'x6' chain link dog run. \$175. Ext. 2345, 472-1735 after 6.

STEREO - Panasonic 8-track tape recorder/player, am/fm receiver w/speakers. \$90. Paul, Ext. 4309.

DISHWASHER - Butcher-block top, 1 yr old, convertible, \$200; Danish modern buffet w/china top, \$100; Castro hi-riser w/cover, \$100. Ext. 3128, 473-8566.

TV - 23" b/w Zenith console, good working cond. \$30. Bill, Ext. 2022.

WINDOWS - Sliding glass aluminum, (5) 5' long x 3' high w/screens, (1) 3'x3' w/screens. \$5 ea. Bill, Ext. 2022.

VENETIAN BLINDS - (6) 32 1/4", (2) 62 1/2" wide. Free, Bill, Ext. 2022.

SADDLE - Handmade Western, deep seat, good cond. Asking \$100. Pat, Ext. 3168.

PUPPIES - 6 strong beautiful puppies looking for a good home. 732-5791.

STEREO - Panasonic portable, am/fm, 8-track, battery or electrically operated. Asking \$75; 2 box speakers, \$10. Pat, Ext. 3168.

CHANDELIER - Mediterranean, 1 yr old, 3 tiers, \$60; accordian, 120 bass, excel cond, \$100 or best offer. Linda, Ext. 3168, 727-7304 after 5.

CLOCK RADIO - Westinghouse am, like new. \$5; Motorola b/w TV, old but good, works well, \$15. Don, Ext. 4551.

2MTR FM - Link model, 2210 transceiver w/mike pre-amp, manual & crystals for 70, 34, 82, 94 tran & 70, 82, 94 rev. Asking \$40. Don, Ext. 4551.

CLAM RAKES - 18 teeth. Asking \$10. 286-0158 eves.

COLOR TV - \$25; old chest, \$5; kitchen table w/3 chairs, \$35; radio/hifi console, \$10; steamer trunk, \$5. 331-1718.

TYPEWRITER - Smith Corona, 15" wide carriage, modern office style. \$35. Ext. 4240, 286-0295.

YARD SALE - Something for everyone, Aug 28 & 29, 31 Senix Ave, Center Moriches, turn corner at MacDonalds & follow sign. Ext. 3361.

Ads left out of this issue because of lack of space need not be re-submitted in order to run in next week's issue

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 Rent

SHIRLEY - Furnished lbr, near Smith Pt Park. \$225/mo, incl utilities. Ted, Ext. 3046.

VERMONT - Chalet, sleeps 12, all conveniences, lake swimming fishing, hiking, nearby theatre, music, horseback riding, golf tennis, rented weekly, monthly, seasonal. 757-5599.

WADING RIVER - 3 br ranch, fireplace, finished basement, beach rights, furnished or unfurnished. \$300/mo, Sept-June. 929-6507.

BELLPART VILLAGE SOUTH - 2 br furnished house, large lr w/fireplace, dr w/ fireplace, 2 baths, glass enclosed porch. \$250/mo + util, Sept-Apr. 286-1985.

SHIRLEY - 2 br, 1/2 block from beach, boating, secluded, immed occupancy. \$275/mo.

MILLER PLACE - Furnished 3 br house, 2 baths, fireplace, all appliances, wooded acre, screened porch, garage, no pets, couple preferred. \$350/mo + util, Oct/Nov '76- July '77. Ext. 3821, 473-6624.

PT JEFF STATION - 2 br apt, large lr, eat-in-kit, patio, walking distance to shopping center. \$295 incl heat, hot water, gas. Ren, Ext. 3395, 928-8149.

SHIRLEY - 4 br ranch, 100x175 fenced yard, 2 full baths, finished basement. \$300/mo. 281-9023 after 6.

WADING RIVER - Beach front, large 1 br basement apt, fully furnished, ac, 15 min to Lab, lease. \$250/mo incl util. 929-8443.

WADING RIVER - New 3 br hi ranch, 3 blocks from water, priv beach, 15 min from Lab, yearly rental, avail Sept 1. \$350/mo. Ext. 3121, 744-5261.

PATCHOGUE VILLAGE - Furnished rm, priv home, off-street parking, village conveniences, suitable congenial mature woman. 475-2627 after 6.

VERMONT - 3 mobile home on 10 acres, close to golf, tennis, fishing, avail weekly or weekends. Bob, 473-8186 after 6.

EAST PATCHOGUE - Unfurnished house, eat-in-kit, + 3 rms + 1 bath, 2-car garage, suitable for 2 persons, Oct occupancy. \$300/mo + util. 475-2195.

For Sale

PATCHOGUE VILLAGE - 3 br ranch, expansion attic, finished basement, most appliances, country kit, attached garage, exterior maintenance free. \$34,000. Ext. 2290, 475-7694.

SHIRLEY - 3 br ranch, on 1 acre, dr, lr, eat-in-kit, full basement, attached garage, shed, w/w carpeting, 4 appliances. \$36,000 or rent w/options. 281-1458.

CLEARWATER BEACH - 100'x150' building plot near Gardiner's Bay, Town of E Hampton, walk to priv beach, margin rights. \$13,500. Ext. 3469, 281-4371 after 6.

CENTER MORICHES - 1 1/2 acres off Sunrise Hwy. 924-6118 after 5.

MIDDLE ISLAND - Custom cape, 8 rms, garage, full basement, 1/2 acre, 3 mi to lab, grounds & extras a non-verbal experience. 924-8813.

MASTIC - 3 br ranch, near Lab, carpeting, appliances, 100'x150', fenced yard, full basement. \$29,000. Ext. 2042, 399-0374 after 5:30 & weekends.

S SETAUKET - Attractive 3 br ranch, den w/fireplace, large lr, eat-in-kit, basement, garage, brick patio, treed. 751-6921.

MASSAPEQUA - 100x100 corner waterfront plot, bulkheaded, dead-end st, all util in street, garage, driveway, cesspool, trees shrubs. 727-7769.

POCONOS - 1 acre, water, elec, horseback riding, skiing, tennis, priv community, gate guard. Ext. 3870, 723-3003.

Carpools

PT JEFF EAST MT SINAI - 3 person pool needs new members. Ext. 3327.

SHOREHAM - Driver of Valiant seeking car pool. Bill Turner, Ext. 2106.

Wanted

71-72 VAN - W/parkway windows, auto, reasonable. Vin Champou, Ext. 4285, 281-8928.

BABYSITTER - In Holtsville area, part time. Ext. 3123, 289-0532 after 6.

GENERATING PLANT - Elec, 110/220 V, 5 KVA or larger. Tom, 281-4080 eves.

HOME - For German pointer, good hunting dog, needs room to run, good home only. Mike, Ext. 2302.

CHEVY VAN - Engine not important. Mac, 928-7035.

RIMS - For 67 Ford Mustang, and/or #78-14 tires, reasonable cond at reasonable price. Matt, Ext. 4089.

ELECTRIC TYPEWRITER - Good cond. Ext. 3121, 744-5261.

HANDYMAN - Electrical appliances. Janet, Ext. 3326, 929-8152.