

BULLETIN BOARD

Volume 22, Number 7

Published by the BNL Public Relations Office

February 15, 1968

English Botanist Reviews BNL Book

In a recent issue of *Science*, D.O. Hall, of the Department of Botany, King's College, London, England, reviewed the nineteenth volume of the Brookhaven Symposia in Biology series.

Energy Conversion by the Photosynthetic Apparatus is a collection of some 40 papers presented at a BNL meeting which concentrated on the energy conversion aspects of photosynthesis in bacteria, algae, and higher plants. The 524-page illustrated book was published by the Information Division for the symposium committee headed by John Olson of the Biology Department.

"With the rapid publication of this volume," said Hall, "the low price, the comprehensive subject index, and the large number of participants from ten different countries, students of photosynthesis at all levels have an important source book of current research in the field. It is important to have these collections available every couple of years so that one may easily keep up with research developments in photosynthesis, which covers such varied disciplines."

Margaret Dienes of the Information Division was the editor of the volume that was printed by the Graphic Arts Group. This was the largest single volume ever produced in the Lab, according to Robert P. Brown, Graphic Arts Supervisor. Because of its great number of pages, the book could not be bound on site, and had to be sent to a commercial bookbinder for finishing.

Copies of the volume may be obtained from the Clearinghouse for Federal Scientific and Technical Information, for the bargain price of \$3.00 each.

Think It's Cold Here?

In International Falls, Minnesota, it's so cold that a mill worker takes his battery out of his car every night and puts it on the kitchen stove to keep warm. A local dairy delivers the milk in heated - not refrigerated - trucks.

Home owners wrap fuel-oil lines with electric heating wires to keep the oil from becoming syrupy as it flows from outside tanks to burners. Water pipes are buried seven or eight feet deep - just deep enough to avoid the freeze.

During a three-week period in December and January, the temperatures dropped to 30 below or colder on 11 days. One day last month the reading was 46 below.

"It was so cold here one winter that a woodpecker was pecking away at a water pipe. The trees were frozen so hard he didn't know the difference," said an old-time resident.

Next time you feel cold, remember you live in one of the garden spots of America!

Arrivals & Departures

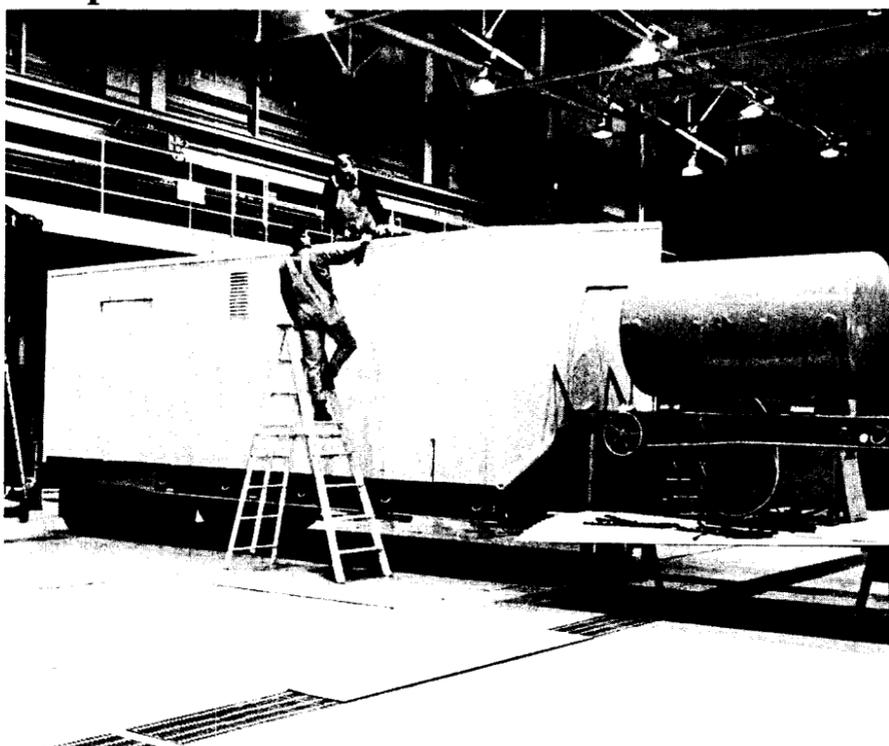
Arrivals

Marie V. BrennerFiscal

Departures

Joseph F. Murray, Jr.Security

Compressor Room On Wheels



George Reisert and Emil Emanovsky of the Carpenter Shop apply roof sections to a building covering a portable air compressor set for use by the Seven-Foot Test Facility of the Bubble Chamber Group. The compressors were mounted on a surplus trailer so they could be moved around as the Seven-Foot Facility was changed in location. Photo by Rosen

Dual Celebration At Los Alamos Lab

Government, scientific, and education leaders from throughout the United States will gather in Los Alamos today, February 15, for a dual purpose - observance of the 25th anniversary of the Los Alamos Scientific Laboratory and groundbreaking for the Los Alamos Meson Physics Facility.

Scheduled to participate in the event are Dr. Glenn T. Seaborg, Chairman of the U.S. Atomic Energy Commission; U.S. Sen. Clinton P. Anderson of New Mexico; Charles J. Hitch, President of the University of California; and representatives of Associated Western Universities.

LAMPF is a \$55-million proton linear accelerator of energy more than 10 times higher than the most powerful machine of this type now in operation. The one-half-mile long accelerator will be used to explore the nucleus of the atom and will be utilized by scientists from all over the United States. It is expected to be in operation by 1972.

The first permanent building to be erected will be an Equipment Test Laboratory at a cost of more than \$700,000. This building will be used for fabrication of a major part of the accelerator structure, as a test stand for the radio frequency power tubes, and will contain various other laboratory facilities.

The original contract for a scientific installation at Los Alamos was dated January, 1943. The first contract was between the University of California and the Manhattan Engineer District (the World War II forerunner of the AEC). The University of California's contract has continued ever since - making it one of the nation's "oldest" nuclear contractors.

Casting Call For Brookhaven/Facade

BNL's biggest and best original stage presentation, Brookhaven/Facade, is ready for casting. There will be need for talent in nearly all of the stage arts. All BNL personnel and members of their families are eligible to apply.

What is your forte? Acting? Pathos, bathos, drama or melodrama, Shakespearean or Method acting, the BERA Theater Group can use you. Comedy? High or low, drawing room, slapstick, stand-up or sit-down, come down and try out for a part. How about opera? Grand or Soap, there is room for you. (So far, no horse-opera parts, but if you have the talent, our writers are ready to write you in.) Singers, dancers, pantomimists, all are needed and wanted.

Of course, there will be music and we'll want BNL's best musicians - longhair, pop, bop, blues and go-go. Folk-rock and pop-rock as well as the Memphis and Liverpool sounds will give way to a new one - the BNL sound.

And don't forget the need for production-type personnel behind the scenes - stage-hands, construction hands, prop men and shop men; people to work on costumes - period, modern and futuristic.

Director Ron Peierls will be conducting try-outs in the Recreation Building on Monday, Tuesday and Wednesday, February 19th, 20th and 21st, and the following Tuesday, and Wednesday, the 27th and 28th. For further information, call Ron Peierls or Co-producers Anna Passel or Charlie Meinhold. To help you remember, the dates are before and after the George Washington's Birthday weekend. C'mon down!

Brookhaven National Laboratory

This is the first article in a series released by the AEC, telling about its major installations and laboratories in the United States.

The Life Sciences

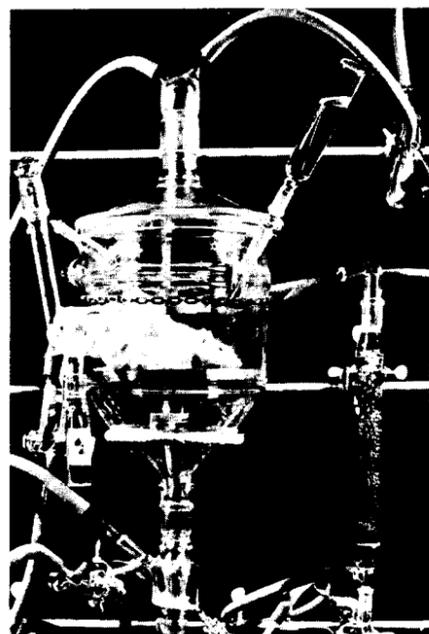
Brookhaven National Laboratory was established in 1947 as a center for fundamental and applied research in the nuclear sciences and related fields. It has one of the most impressive collections of research hardware in the world. These facilities cover a wide range of nuclear equipment from a hot laboratory, designed for experimentation with highly radioactive material, to a giant particle accelerator or "atom smasher."

Operating on an annual budget of approximately \$50 million, the Laboratory is run under contract to the AEC by Associated Universities, Inc., an organization sponsored by nine northeastern universities. They are Columbia, Cornell, Harvard, Johns Hopkins, Massachusetts Institute of Technology, Princeton, Pennsylvania, Rochester, and Yale. Scientists from other colleges, universities, laboratories, and research groups are permitted to use Brookhaven facilities for experiments and research on an equal basis.

An integral part of the Medical Research Center, the Medical Research Reactor was built to explore the use of reactors in the study of man and disease. The ports permit neutrons to pass through the reactor shielding to treatment rooms. One room is designed for partial or whole body irradiation of patients for various clinical studies. The other is used for animal studies preliminary to studies on human patients.

Extra-Corporeal Radiation

Leukemia is a disease of blood-forming organs in which abnormal numbers of white cells appear in the blood stream. In some respects, leukemia resembles an infectious disease. In other respects, it re-



Mouse metabolism products being collected for analysis. 9-864-65

sembles cancer. In any case, no cure for it has yet been found.

Massive doses of high level radiation can destroy the unwanted cells that cause this fatal disease, but such powerful treatment would destroy the patient too. What is the way out of this dilemma?

Now, after four years of experimentation with animals, a partial answer has been found at the Brookhaven National Laboratory.

The procedure is simply to irradiate the patient's blood *outside* his body and to return it to him after the treatment. One

(continued on page 2)

Brookhaven (continued)

end of a plastic tube is surgically placed in an artery and the other end in a vein in a patient's forearm. Without mechanical aid, the patient's heart then pumps the blood out of the artery and through the tube, most of which is enclosed in a gamma radiation device near his bedside.

As the blood flows through the irradiator, the radiation-sensitive leukemia white cells are destroyed while the more resistant red cells are not affected. Then, still pumped by heart action alone, the blood flows back into a vein in the patient's body.

More than a score of patients, upon referral of their physician, have been selected and admitted to the Hospital of the Laboratory's Medical Research Center

The experiment, begun in 1961, is part of a Brookhaven biological research program designed to study the long-term effects of radiation damage in a forest community.

On another, 10-acre site, is the Gamma Garden. Plants are arranged here in a circular pattern around a cobalt-60 gamma radiation source that operates 20 hours a day. Brookhaven scientists study changes occurring in the plants and the factors affecting their sensitivity to radiation. Such changes are being watched at Brookhaven on both the whole plant and whole animal level and - increasingly - at the cellular and molecular levels.

One interesting fact known for years is that the decreased life expectancy caused by radiation in animals closely resembles



Two patients are shown in the BNL Medical Research Center undergoing treatment of leukemia by extracorporeal irradiation (ECI) of their blood.

for the treatment. Those selected are treated without charge.

Brookhaven scientists stress that the new procedure - called ECIB for Extra-Corporeal Irradiation of the Blood - is not a cure but a controlled treatment for some leukemia, the cause of which is still unknown. But they have found that ECIB has significantly lengthened the lives of some of those on whom it has been tried.

"It is true that the new treatment is not a cure," declared Dr. Glenn T. Seaborg, AEC Chairman, "but it gives us added hope that in time we may come to control and conquer this dread disease."

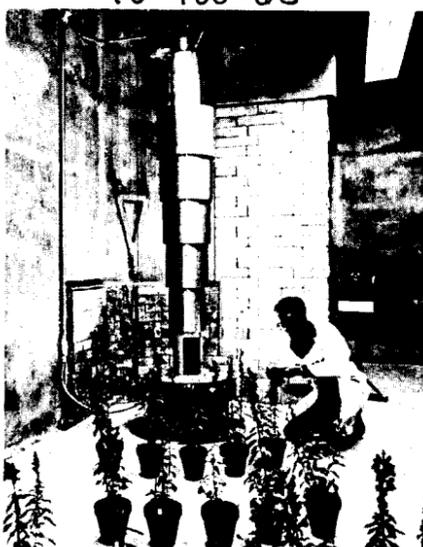
In the Radiation Forest

A strange world exists on a 50-acre wooded tract in the northeast corner of the Brookhaven site. In the center of the tract is a cesium-137 gamma radiation source that sends out its rays over the expanse of natural forest. Trees close to the source have died. Signs of deterioration gradually disappear as the distance from the source increases. Near the center, only primitive lichens grow unaffected by the rays and only behind the protective trunks of the dead trees does grass grow and survive. 7-76-62



Aerial view of the Radiation Forest.

an accelerated natural aging process. Experiments with mice at Brookhaven show a close relationship between natural aging and cell changes that can be induced by radiation. Scientists believe that this is further evidence that cell changes play an important, though not exclusive, role in aging. 10-900-65



The Biology Department's Controlled Environment Facility for Radiobotany.

Will such studies some day lead to a lengthened life span for man? Scientists at Brookhaven and elsewhere who are working on the problem of aging cannot yet be sure. In any case, however, the work is typical of a broad effort at Brookhaven to understand better the biological processes in man - a program that extends to studies to define more clearly the character of diseases which affect the human body.

The second part of this article, which deals with the Physical Sciences will appear next week.

Two Physicists Receive 1967 Research Award

Dr. Val L. Fitch and Dr. James W. Cronin of Princeton University have been awarded the 1967 Research Corporation Award for their fundamental researches into the symmetries of physics and of nature itself.

The award, given annually for outstanding achievements by scientists making "notable contributions to human knowledge, but who have not already been accorded major honors," was presented by Dr. James S. Coles, president of the Research Corporation, a foundation for the advancement of science.

The two Princeton physicists each received a plaque, citation and \$5,000 honorarium at a dinner in their honor.

The 1967 award is the 33rd given since the prize was instituted in 1925, and 13 recipients have subsequently received Nobel Prizes. The award jury is composed of nine distinguished scientists of varying disciplines of whom six are Nobel Laureates.

Dr. Fitch and Dr. Cronin are being honored for their investigations in high energy physics and their challenges of some of the fundamental principles which had been believed to be valid in explaining the particles of physics.

Results of their experiments performed at Brookhaven National Laboratory's AGS have cast doubt on several long-held laws of nature, including time reversal invariance which states that physical laws remain unchanged when the direction of time is reversed. The work of Drs. Fitch and Cronin indicate that there may be exceptions to this rule.

Bookmobile

Have you seen a blue-and-white bus-like vehicle near the bank on Friday mornings recently? It's not a re-painted and converted Con Edison truck - it's the Bookmobile.

The Bookmobile visits BNL every other Friday from 10:00 to 10:45 a.m. at the People's National Bank and brings library material within easy reach of all BNLeers. Books can be borrowed without charge for a four-week period. All you have to do is register. The next visits will be Friday, February 23 and March 8.

Service Awards February 1968

- Twenty Year**
- Dominy, Jerry K. Chem
 - Fuller, Lawrence E. Nuc Engr
 - Hatch, Loranus P. Nuc Engr
 - Janik, Frank Accel
 - Oltmann, Adolph Nuc Engr
 - Orlowski, Bronislas M. Info
 - Tower, Marion S. Reactor
- Ten Year**
- Bruno, Nicholas A. Plant E&P
 - Cole, Issac W. Physics
 - Davis, Judson G. Nuc Engr
 - Fox, Bernard R. Nuc Engr
 - Geisbusch, Walter J. Bio
 - Hilgemeier, Theodore M. Accel
 - Jackson, Robert E. Accel
 - Kalish, Sheldon Nuc Engr
 - Mogk, Robert T. Nuc Engr
 - O'Beirne, Edward R. Staff Svcs
 - Oldham, George E. Plant E&P
 - Racaniello, Vincent P. Accel
 - Richardson, Richard C. Instr & HP
 - Rosenka, Adolf W. Shops
 - Schirmer, John G. Accel
 - Stonebridge, Donald H. Reactor
 - Tassinari, Silvio J. Nuc Engr
 - Tasso, Maria A. Info
 - Weth, George G. Nuc Engr
 - Drager, Raymond F. Nuc Engr

BULLETIN BOARD

Published Weekly for the Employees of Brookhaven National Laboratory

CARL R. THIEN, *Editor*
DOLORES DEL CASTILLO, *Editorial Assistant*
JUDY KALTSCHMIDT, *Copy Preparation*

40 Brookhaven Ave. Upton, N.Y. 11973
Telephone 516 924-6262 Ext. 7238

NORBERT J. DERNBACH
Public Relations Officer

Here and There

Dolores del Castillo

Charles B. Bartlett (formerly NED) has been transferred from AEC's Division of Licensing and Regulation to the Division of Reactor Development. He will be responsible for the R & D program concerned with investigating the ultimate disposal of intermediate and high level radioactive wastes.

George A. Baker (Applied Math) presented a paper, "The Nature of the Energy of a Many-Fermion System as a Function of the Strength of the Interaction Potential," at Los Alamos Scientific Laboratory on February 12.

The American Crystallographic Association held its winter meeting in Tucson, February 4-7. Chemistry Department members attending the meeting were Ivan Bernal, Sam LaPlaca, Ljubica Muir, Robert Thomas, and Walter C. Hamilton, who was recently elected Vice President of the Association. Philip Coppens (also of Chemistry) presented a paper entitled "The Significance of Discrepancies Between X-Ray and Neutron Thermal Parameters" at the meeting.

Kenneth J. Foley (Physics) has recently returned from CERN where he attended a Topical Conference on High Energy Collisions of Hadrons January 15-18. He represented the Lindenbaum group which has recently made impressive contributions in the area of high energy particle collisions.

Ronald G. Walter (AGS) left BNL on February 9 to go on military leave.

Dale W. Lick (Applied Math) lectured at the Drexel Institute of Technology, Pittsburgh, yesterday. The title of his lecture was "On Some Non-Linear Partial Differential Equations."

Norris E. Bradbury, a distinguished scientist and director of the Los Alamos Scientific Laboratory, has been named to receive the Atomic Energy Commission Citation. This citation is presented to individuals who have made especially meritorious contributions to or have been clearly outstanding in the nuclear energy program.

Gabriel L. Miller (Bell Tel. Labs, formerly of I & HP) and Veljko Radeka (I & HP) were named the inventors of "Fast Multiplier Employing Field-effect Transistors" for which U.S. Patent No. 3,368,066 was granted to the AEC on February 6, 1968.

Longwood High School, Middle Island, is offering an evening adult education program. Advance registration will be held on Monday and Tuesday, February 19 and 20, with classes beginning the week of February 26. Brochures describing the courses being offered are available at the Office of Scientific Personnel, 40 Brookhaven.

Radiation and Chemical Processing

The January 15, 1968 issue of Chemical and Engineering News included a 20-page feature article entitled "Organic Free Radicals," by Dr. William A. Pryor of Louisiana State University.

In the article, Pryor mentions some uses of radiation which are of interest. Excerpts from the article follow:

"... This Dow ethyl bromide process was the first radiation-based chemical process put into commercial practice other than cross-linking polymers by radiation. However, radiation has become one of the fastest growing processing techniques in the chemical industry. Most of the radiation is supplied by cobalt-60, and the price of this isotope has decreased significantly in recent years. Furthermore, AEC has made available a competitive isotope, cesium-137, at prices as low as 12.5 cents/curie. Radiation is used extensively today for the sterilization of various materials; the biggest use at present in this country is in the sterilization of medical supplies and instruments. A 500,000 to 750,000 curie cobalt-60 source is used in Australia by Gamma Sterilization Pty., Ltd., for sterilizing animal fibers for carpets and medical instruments.

The use of radiation in the chemical process industries is becoming more important. Esso Research uses radiation to initiate the sulfoxidation of hydrocarbons to prepare sulfonates for use in biodegradable detergents. At least one U.S. company is pilot-planting radiation-initiated polymerization of ethylene, and Takasaki Radiation of Japan is using electron irradiation to polymerize trioxane to a polyacetal. A great deal of research is being done on cross-linking polymers in the structure of wood or cement or on metals as an enamel. The core of the nuclear reactor offers radiation at essentially no cost; recently Brookhaven National Laboratory established an experimental unit for the study of chemical reactions in a reaction tube inside a reactor. It is conceivable that radiation will become an extremely important source of energy in the chemical process industry in the years ahead. . . ."

Mountain Club Meets

The BNL Mountain Club will hold its second Annual Meeting Thursday, February 29 (note change of date) at 8 p.m. in the Recreation Hall. New officers will be elected, the budget approved, and various possible amendments to the bylaws considered. Past trips will be described, and future ones planned. All members, as well as persons wishing to join, should be sure to attend.

The Thursday afternoon climbing section is meeting again on a semi-regular basis - 5:30 p.m. behind the Cosmotron. Beginners, seconds and leaders are urged to attend.

There will be a Club trip to New Hampshire for climbing and/or skiing the weekend of February 17. Anyone interested call Ed Cole at Ext. 7101.

Bowling News

by Pat Towey

Rose league - M. Heine rolled a 695 gross with high game of 213.

Red league - E. Sunberg happy with his 225/209 scores; Dimwits as a team had an average of 181. How is that for bowling?

Committees will be forming shortly for work on Awards Night -

Slo-Break Basketball

by George Latham

Last Thursday night some games were played to complete the first half of the season and other teams started the second half. In the Universities League there were two upsets. Medical won its first game of the year, 27-15 over the Dirty Sox. Darrel Joel had 12 points for Medical and Jim Humbert scored 6 for the Dirty Sox. Biology lost its first game of the year, 21-28 to the Stratums. Oscar Thomas had 13 points for the victors while Bill Studier had 6 for Biology.

In the Associated League Physics downed the Knacks 30-28. Lou Sneed had 9 points for Physics while Bob Safronek hit 10 points for the Knacks. The Rat Pack behind Mike Zguris, who had 25 points, turned back A M D, 53-36. Alan Saltzman had 10 points for A M D.

The final First Half records:

Associated League	W	L
A M D	5	1
Knacks	4	2
Physics	3	3
Rat Pack	3	3
Old Timers	1	5
Universities League		
Biology	6	0
Highballs	5	1
Dirty Sox	2	4
Stratums	2	4
Medical	1	5

Theater Group . . .

The BERA Theater Group has been active since 1948. Its principal objectives are to give BERA members and their families an opportunity to participate in all phases of theatrical activities and at the same time to provide worthwhile entertainment for the entire laboratory community.

The Group usually puts on two full-scale productions per year, one in the Spring and one in the Fall. Recent productions have included *A Thurber Carnival*, *Separate Tables*, *Three-Penny Opera*, *Summer and Smoke*, *Heartbreak House*, *Hotel Paradiso*, *The Roar of the Greasepaint*, *the Smell of the Crowd* and *Born Yesterday*. Tryouts for plays are open to all BERA members and their families. In addition to the director and cast, the productions require many helping hands in a variety of areas such as set design, construction, painting, props, make-up, costumes, lighting, publicity. The major productions are performed in the Laboratory Theater which seats over 900 and has a well-equipped stage with particularly good lighting facilities.

During the summer, the Theater Group has often sponsored a group of one-acters, or a cabaret evening. At its approximately monthly meetings, the Group has programs of talks, demonstrations, or presentations of scenes or short plays. Other activities include occasional theater parties and unrehearsed group readings of plays.

The Group is administered by an executive committee that consists of the President, Vice-President, Secretary, Past-President and the Chairmen of three standing committees. These officers are elected annually in June. Voting membership in the Group is open to anyone who has attended at least three general meetings, or who has participated in any capacity in a production or program in the past two years. There are no membership fees. A budget covering production costs and other expenses of the Group is provided by BERA, and the income from ticket sales goes to BERA.

Evelyne Crochet to Perform at Brookhaven

The Fifth Concert in the Brookhaven Series will take place at the Center on Tuesday, February 27 at 8:30 p.m. The piano will be in the spotlight as Evelyne Crochet performs works by Mozart, Schumann and Schubert.



Miss Crochet received her basic training at the Paris Conservatoire where she studied piano with Yvonne Lefebvre. She continued her studies in the United States under Rudolf Serkin and in Switzerland under Edwin Fischer. She has received high honors at the Geneva International Competition and the Tchaikovsky Competition in Moscow. In addition to Miss Crochet's solo recitals she has appeared with leading orchestras in the United States, Europe and South America. She has also recorded the complete works of Gabriel Fauré, a feat warmly praised by the critics.

Miss Crochet's program at Brookhaven is as follows:

Fantasy in C minor, K. 475.....Mozart
Sonata in A minor, opus 42.....Schubert
Kreisleriana, opus 16.....Schumann

Admissions: Adults, \$3.00; Children, \$1.50; Non-employee Guests, \$3.50. Refreshments will be served at the Center following the Concert.

BERA Movie Schedule

February 15

The War Lover
Short: Spanish Riding School

March 7

Le Bonheur
Short: Wind & River

March 14

La Strada
Short: Muscle Beach

March 28

Nobody Waved Goodbye
Short: Georgie & the Dragon

April 4

Breathless
Short: Date with Dizzy

April 11

Ivan the Terrible, Part I
Short: Fish Market

April 18

Ivan the Terrible, Part II
Short: The Violinist

April 25

Tom Jones

Baseball Tickets On Sale Soon

We are happy to announce that BERA's box seats for the 1968 NY Met Baseball Games at Shea Stadium will be placed on sale beginning February 27th. The 8 seats, which are excellently located on the third base side of the field, are still priced at \$3.50 each. Orders (accompanied by cash or check) will be accepted at the Recreation Office.

We have a total of fifty-one playing dates which include all the night games, all the Sunday games, a few Holiday dates, Ladies Night, and the Old Timers Game. Plan now - believe it or not, Spring and the start of the season are just a snowball throw away.

Since supplies are limited, sales are on a first come, first serve basis. A schedule of available dates is now posted at the Recreation Office and will be published in the next issue of the *Bulletin Board*, space permitting.

Night Photography At the Camera Club

The next regular meeting of the BNL Camera Club will be on Monday, February 19, at 8 p.m. in the Lounge of the Recreation Building. Two 25-minute commercial slide programs will be given.

The Anso program, "Elements of Prize Winning Slides," presents slides from a recent national photo competition. "Color Photography After Dark" is a Kodak presentation loaded with tips on how to photograph the United States from coast to coast, from dusk 'till dawn.

Following the slide showings, there will be a showing and judging of black-and-white and color prints as well as slides, for entry in the forthcoming North Shore competition. Everyone is welcome to attend this meeting.

Tickets Available Personnel Services

Tickets and Reservations Available - Theatre tickets may be purchased at a 20% discount and reservations for dinner/theatre may be made at a 10% discount. Schedules and prices are posted in the Recreation Office. All orders must be placed in person at the Recreation Office between the hours of 9 a.m. and 1 p.m. daily, and accompanied by a check or money order made payable to the theatre at least two days in advance. Dinner/theatre requires only a \$5.00 deposit per person. Sorry - no discounts on Saturday nights.

Mineola Theatre - Now through February 18 "The Homecoming" with Orson Bean; February 20 through February 25 "Festival of India Dance, Drama, and Music" from India.

Wedgewood Dinner Theatre - February 14 through April 7 Tom Poston in "A Funny Thing Happened on the Way to the Forum."

LI Ducks Hockey - Reservations for discount tickets may be made by calling the Recreation Office, Ext. 2808, at least two days in advance of desired date. Reservations can only be accepted for any one of the three upcoming scheduled games and must be paid for at the LI Arena Box Office. Schedule information is posted at the Recreation Office. Next three games: February 16 New Haven; February 17 New Haven; February 23 Clinton.

Met Baseball Tickets - Sale will begin soon.

Boat Shows - Sorry, we have information on ticket sales but no tickets to the boat show at the NY Coliseum. However, we are expecting tickets for the upcoming Long Island shows.

The Boat Show at the Island Garden will run from March 9-17.

There will be no ticket reservation service the week of February 19-23.

Classified Advertisements

Autos & Auto Supplies

62 MERCEDES BENZ 190 - 4 dr sedan, good cond inside & out. \$1140. AT6-2265.

65 CHEVROLET IMPALA - 2 dr h.t., auto trans, ps, r/h, orig owner. L. Rogers, Ext. 7227.

59 DODGE - Town & Country, carryall. \$37. W. Barthold, 878-2879.

62 CHEVROLET BISCAYNE - 2 dr, 6 cyl, std trans, snow tires incl. \$450. Jim, HR3-0288.

2 FORD RIMS - 15", excel for snow tires. \$2.50/ea, \$4/pr. Elliott, Ext. 7189.

49 JEEP - 4 w/d, rebuilt 53 motor only 10 mo old, new carb, good tires. Best offer over \$325. Jerry, Ext. 2117 after 4.; 475-5195 days.

66 FORD MUSTANG - Conv, 15,000 mi. V-8, reg gas, auto trans, power top, red, snow tires, perfect cond. Must sell. J. Jacobs, Ext. 2955.

64 BUICK SKYLARK - 4 dr sedan, V-8, auto trans, ps, r/h, air cond, tint windshield, w/w tires, excel cond. \$1350. Ext. 590.

57 FORD - Station Wagon, 2 dr, 6 cyl, body fair, eng good. \$75 or best offer. AT9-0371.

SUPER CHARGER - Paxton McCullough, for small cubic inch eng, needs something. Cheap \$20. Mike, Ext. 2871.

66 OLDS CUTLASS - All white, ps, r/h, very clean, 17,000 mi. \$1850. GR5-6116.

AUTO RADIO - Solid State, Universal, 12 volt, like new. \$20. S. Cohn, Ext. 7423.

57 FORD - Ranch Wagon, 8 cyl, auto trans. \$150. Ext. 2840, 924-3581 after 5.

60 DODGE - 4 dr h.t., auto trans, r/h, ps, delux model. Reasonable. R. Dagradi, Ext. 7677, 878-1731.

61 VALIANT - 4 dr sedan, white, r/h, needs tune up & 2 tires. \$150. Bill, Ext. 2126.

TONNEAU COVER - For Triumph TR-4, good cond. \$15. R. McAllister, Ext. 2852.

TRAILER HITCH - For 61 Mercedes Benz, Model 190, used only 3 times. \$15. Mildred, Ext. 7752.

64 T-BIRD - Full power, good cond. \$1700. Bob, Ext. 2167, 585-4973.

53 CHEVROLET - Coupe, rebuilt 58 eng, new muffler system, 4 extra tires, excel 2nd car. Don, Ext. 2411, 727-5836.

61 TRIUMPH - Conv, red, needs work. \$275. Bonnie, Ext. 2361.

65 CATALINA - H.t., power, auto trans, air cond, extras, good cond, new rubber. Ext. 7239.

61 FORD FAIRLANE - Std trans, 65 motor, 6 cyl, radio, 2 dr. \$400. 281-6971.

62 FORD GALAXIE 500 - Std trans, excel cond, 8 cyl, radio, good tires. \$600. 281-6971.

60 TRIUMPH TR-3 - Eng recently overhauled. TR-4 trans. D. Michael, Ext. 7615, 751-8776.

59 CHEVROLET - Rebuilt 283 eng, ¾ race cam, solid lifters, 327 fuely heads, 3 spd Hurst shifter, slicks, extras, car is in good cond. \$350. PA7-4233.

65 VW - Sedan, red, orig owner. Sacrifice \$800. WA9-4822 after 6.

Boats & Marine Supplies

20' CHRIS CRAFT - Conv to outboard in water, 2 bunks, head & sink. Best offer. John, 878-2863.

EVINRUDE - 15 hp outboard motor w/cruise-a-day tank & hand dolly. \$70. 475-6272.

23' LUHRS - Hardtop, 170 hp V-8, fishwell, radio, canvas, bow rail, many custom extras. \$2795. 941-4467 after 6.

17' CABIN CRUISER - W/60 hp Scott outboard. As is, \$500. C. Nagle, Ext. 2552, 281-7627 after 5.

21' FINLANDER SKIFF - W/shelter cabin, 65 hp Universal, Monel gas tank, full canvas, winter cover, head, many extras. \$1500. Ext. 7166.

DAY SAILER - 17' O'Day, new in 65, Hild sails, trailer, boat cover, lights, anchor, pump, etc. \$1550. Spinrad, Ext. 2533.

14' CHRIS CRAFT - 35 hp, Evinrude, navy top, lights, elec start. \$350. Walter, GR5-4103.

59 EVINRUDE - Outboard, 2 shift control cables, etc, in storage. \$275. John, 878-2863.

17'4" PEARSON - Fiberglass, 66 Johnson 100 hp, compass, S.W. Tach, speedometer, fully equipped trailer, ready to go. \$1550. Gordon, Ext. 2991.

Miscellaneous

FOLDING COTS - 2 w/mattresses for those weekend guests. Both for \$12. John, Ext. 458.

ELEC MOTORS - 2, heavy duty, washing machine type. Make offer. P. Swan, GR5-2629.

FREE - 54 Plymouth generator & radiator; jet-action agitator for Frigidaire washing machine. Carmen, Ext. 2736.

HOT WATER HEATER - 30 gal John Wood glass lined, 5 yrs old, excel, guaranteed 10 yrs. \$35. AT6-8945.

BOTTLE GAS - Range Chambers, good cond. Make offer. PA7-1278 after 5.

LAND - 150'x150', Manorville. \$2400. F. Hill, 878-2399.

SKI BOOTS - Mens Rieker double boots, 10w, \$20; Childs skis, 160 cm, \$8; child's boots, 5, \$10. Borg, Ext. 2924.

STAMPS - Will trade 3 books of Triple-S Blue Stamps or 1 book of Consumers Green Stamps for same amount of Plaid Stamps. M. Jahng, 281-9298.

POODLE - AKC, black, female mini, 9 wks old, lovely. \$100. 286-0667 after 5.

TONE ARM - GE 16", very good cond. \$10. Ext. 423.

PROPERTY - ½ acre, E. Patchogue, well located. Priced for quick sale. GR5-0539.

IRONING BOARD - Hinged, w/recessed door. \$4.50. Ext. 2144.

DOORS - Inside, sliding, hinged, outside w/storm door & screen; windows, single, double in frames, Louvres in frames. Cheap. Ext. 2144.

ICE SKATES - Girls, size 7; 7.35x14 snow tire; portable typewriter w/leather case. All priced to sell. 298-8601 after 6.

64 MAGNAVOX TV - 27", Maple colonial console cabinet, videomatic control, like new. \$328 new, asking \$125. Steve, Ext. 7756.

HANSON - Surfboard, 50-50, 9'6". \$150. Ann, Ext. 456.

U.S. PROOF SETS - 57, \$7; 59, \$10; 64, \$12.50; 1888 3-cent nickel, xf, \$17; mirror surface silver dollars, \$4.50; assorted Canadian cents, will sell or trade. S. Wagner, Ext. 618.

RATS - College-bound owner will reluctantly part w/variety of pet rats in return for TLC. Rabbitt, 744-6645 eves.

CRAFTOOL - 6" Lapidary outfit w/motor. 281-6784 after 6.

DRUMS - 3 pc, 14" cymbal, Zim-Gar, white pearl. \$75. Gary, Ext. 476, 878-0414.

DINETTE - Lg, 6 chairs, oval table w/leaf, still new. Was \$169, now \$100. Dechert, Ext. 7356, 475-6272.

BOYS BIKE - 24", good cond. \$15. Joe, Ext. 7310. SH4-5431.

MOTOROLA TV - 21", blonde console w/swivel base, good cond. \$50. J. Cross, Ext. 585.

STEREO EQUIPMENT - Finest playback, professional, AR, DYNA, Janszen system, excel cond, 1 yr old, will install. Orig cost over \$1000, sacrifice, \$575. Ext. 2888.

RADIO - Zenith Navigator portable, am, short wave & long wave bands. \$80 new, sell for \$15. Ext. 7503.

GERBILS - 5 wks old. \$2/ea. Rabbitt, 744-6645.

POODLE - At stud, 12" dark apricot, son of Darwin Dizzie Dollar. R. Breuning, 924-8681.

TELESCOPE - 180x refracting prism, by "Tasco" w/tripod, extra lens, sun filter, finder scope, 1.5x terrestrial erecting eye piece & more. \$25. S. Anderson, Ext. 2412.

OUTDOOR DRYER - Folding, Sears. \$10. 751-4204.

ELEC RANGE - 40", good cond. \$25 firm. GR5-7366.

CLOTHES DRYER - Natural gas, Whirlpool, in good cond. Ext. 435.

SHOTGUN - Brand new, 12 gauge Remington 870 Wingmaster, never used. Best offer over \$90. Jerry, Ext. 2532.

WASHING MACHINE - Westinghouse, \$25; refrigerator, \$15; radio-phone, \$7. Hirono, Ext. 7205.

ANTIQUÉ SKEINER - \$20. B. Kohler, Ext. 395.

FLOWER POTS - Several, clay. Yours for the asking. Ext. 2492.

TOM-TOM - 1 new Slingerland floor model, 16"x16", w/cover, silver sparkle. Was \$114, sell for \$65. GR5-3707 after 5.

DRUM SET - Roger, 1 yr old. \$350. Pete, SE2-5957.

TV - Console, good picture. \$25. Ext. 2948.

HALLICRAFTERS - XS-130 receiver w/R-50 speaker, all new. \$200 value for \$150. G. Hughes, Ext. 2846.

VACUUM CLEANER - Shetland 800 series, upright, good cond. \$10. Lou, Ext. 2849.

PISTOL - Plainsman .175 CO², 2 power, adjustment screw, good cond. \$10. Luccioni, Ext. 560, 732-3762.

STEREO UNIT - Heath Kit, preamp A141A, FM tuner, AJ12, turntable RP3, GE-VRII diamond. \$40/ea. \$100 total. Ralph, Ext. 7193.

Houses

BROOKHAVEN VILLAGE - 8 rm Colonial on Bellport Bay, bulkheaded canal w/dock in backyard, panelled liv rm & den, lg double garage. \$31,000. AT6-0322.

SAYVILLE - 7 rm, 3 bedrm ranch, rec rm w/fireplace, s/s, full basement, attached garage, .3 acre, treed corner lot. \$18,500. LT9-6752.

HOLBROOK - 3 bedrm custom built ranch, 2 baths, wood panel liv rm, garage, full basement. 585-5267.

PT JEFF STATION - 4 bedrm hi-ranch, din rm, rec rm, w/w throughout, s/s, 100x160 landscaped, 2 car garage, refrig, washing machine. \$19,900 or rent, \$190/mo. HR3-9264.

WADING RIVER - 2 bedrm ranch, w/w carpeting, baseboard h/w heat, double garage, full basement, 130'x150', dogwoods surrounding area. 929-4714.

BLUEPOINT - Bay area, custom cape, 3 bedrm, basement, hot water oil, 1½ car garage, w/heated workshop, fenced lovely trees. \$18,000. Sessions, EM3-6109.

BROOKHAVEN VILLAGE - 3 bedrm, liv rm, din rm, family rm, w/fireplace, garage, 1½ baths, landscaped ½ acre. 286-1218.

OAKDALE - Idle Hour, 4 bedrm colonial split, cathedral liv rm, fam rm, 1½ baths, garage, landscaped, patio, extras, \$19,500. R. Strand, LT9-1889.

YAPHANK - 3 bedrm ranch, fam rm, basement, baseboard oil heat, 1½ garage, fenced, wooded ½ acre. \$16,000. 924-3062.

BROOKHAVEN VILLAGE - 4 bedrm ranch, liv rm, din rm, porch, 1½ baths, double garage, 1½ acres, fully landscaped, 150' frontage. \$31,000. AT6-1358.

FLUSHING - 2 family, detached, finished basement, laundry rm, workshop, garage, near Queens college. \$33,000. S. Borenstein, 212-461-4965.

HOLBROOK - 3 bedrm custom built ranch, 2 baths, wood panel liv rm, garage, full basement. 585-5267.

For Rent

E. ISLIP - 3 bedrm house, at end of quiet dead end street, 1 yr lease. \$150/mo. R. Ehler, Ext. 7163.

BELLPORT/E. PATCHOGUE - 4 bedrm home, s/s, din rm, 1½ baths. AT6-8517 after 5:30.

TO SUBLET - Lg 3½ rm apt in Pt Jeff Sta, walk to train & shopping, swimming pool avail. \$140/mo incl gas & heat. Avail March 1. 473-1064.

SUMMER - July & August, 8½ rm house, compl furn, 1 mile from bay, E. Patchogue. \$300/mo. J. Olson, Ext. 441.

PATCHOGUE - Old house needs work, livable, want handy man type tenant, will make very good deal on rent for right party. George, Ext. 7144.

WADING RIVER - 3 bedrm house. Ext. 618.

FURN HOUSE - 2 bedrm, liv rm, bath, kit & din rm, all paneled, 5 min to Lab, close to shopping. De-Guisepe, 281-8044 after 5.

Wanted

BUYER - Wading River, 2 bedrm ranch, w/w carpeting, baseboard h/w heat, double garage, full basement, 130'x150', dogwoods surrounding area, good location. 929-4714.

HOUSE - Or unfurn apt to rent, on north shore, 2 bedrm min, Pt Jeff, Miller Place or Mt Sinai. B. Lundgren, Ext. 7782.

BABY SITTING JOB - Will care for child of substitute teacher in my home; have a 16 mo old girl. D. Flannery, 924-6977.

SOMEONE - To take 4 drs, 2 storm windows & 2 screens free, if you can use them. J. Hallock, Ext. 2480.

16" BIKE - Any cond. T. Erickson, Ext. 686.

BLOOD DONORS - For open heart surgery patient. For info call Asselta, Ext. 7668.

REPTILE COLLECTOR - Please contact Sherman, Ext. 2341.

HOUSE - 2 bedrm unfurn, preferably around the Shoreham Village area, married couple, no children. J. Domish, Ext. 648.

HOME - For 5 puppies, spaniel-terrier mix. Your choice free. Bill, Ext. 2126.

BICYCLE - Sports or light tourer w/gears & 21" frame. Hind, Ext. 2795.

HOMES - For pet rats, all sizes shapes & colors, excel pets; also gerbils, \$2/ea. Rabbitt, 744-6645.

AUTOMATIC - .45 cal, 1911 model, in good to excel cond. Ernie, Ext. 2934/2428.

GITAR - For beginner. GR5-8599 after 5:30.

HARDTOP - For 61-62 Corvette. Doni, Ext. 7105.

CHARACTERS - From literature, for more info about the forthcoming Bal Masque call E. Dahl, Ext. 7411.

PROPERTY - 100'x100' or equiv at Ridge, south of Jericho, west of Wm Floyd Pkwy. Winter, Ext. 560.

Carpools

N. BAYSHORE/ISLIP AREA - 1 additional driver needed for existing 4 man carpool. J. Hooper, Ext. 2824.

DRIVER - For N. Bayshore/Bayshore area pool. Dick, Ext. 2374.

PAYING RIDER - Needs ride from Medford near Route 112 & Southaven Ave. R. Caprera, Ext. 448, 289-8248.

MASSAPEQUA - & points west, 1 or 2 additional drivers wanted for 5 man carpool. Dave, Ext. 2554.

Classified Ad Policy:

- The Bulletin Board's classified section may be used only by active and retired Laboratory employees.
- All items for sale or rent must be the advertiser's property.
- Persons listing houses, apartments, or rooms for sale or rent, do so with the understanding that these must be available without regard to race, creed, color, or national origin.
- Ads associated with a full- or part-time business cannot be accepted.
- Ads should be restricted to 20 words or less and typed or

printed on the form provided. (Additional copies of the form are available at the Bulletin Board office.) Twelve noon on Friday is the deadline for inclusion in the following week's issue.

6. Ads are run on a space-available basis; those not carried because of space restrictions will be held for inclusion in the next issue.

7. Ads are run only once and must be resubmitted if they are to be repeated.

- | | | |
|--|---|--|
| <input type="checkbox"/> For Sale: Auto & Auto Supplies | <input type="checkbox"/> For Sale: Houses | <input type="checkbox"/> Carpools |
| <input type="checkbox"/> For Sale: Boats & Marine Supplies | <input type="checkbox"/> For Rent | Check <input checked="" type="checkbox"/> the heading applying to your ad. |
| <input type="checkbox"/> For Sale: Miscellaneous | <input type="checkbox"/> Wanted | Print or type your ad in 20 words or less. |

If this ad concerns housing for sale or rent, such housing is available without regard to race, creed, color, or national origin.

Employee's Signature..... Life No..... Ext.....

Send to: BULLETIN BOARD, 40 Brookhaven Avenue