

the Bulletin Board

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VISITORS' DAYS

If you wish to attend either of the two Visitors' Days, October 22 and 23, please send your application for tickets to Mrs. Mariette Kuper, Building 460, by Wednesday, August 31. Due to the heavy demand for tickets for Saturday, October 22, it was decided to hold an additional Visitors' Day on Sunday, October 23. On this day there will be only three admission periods: 11-1:30, 1-3:30, and 3-5:30. Since the demand for Sunday has not been as heavy as for Saturday, employees and their friends and families may prefer to come on the 23rd.

COLLEGE TEACHERS TO VISIT BNL

A group of college genetics teachers attending the National Science Foundation Summer Institute at Cold Spring Harbor will be at the Laboratory on Wednesday, August 24. They will visit the Research Reactor and the Biology Department.

Officers attending a Naval Reserve Seminar at the U.S. Naval Training Device Center at Port Washington, L.I., will visit the Laboratory on Thursday, August 25.

FILM COMPANY AT BNL

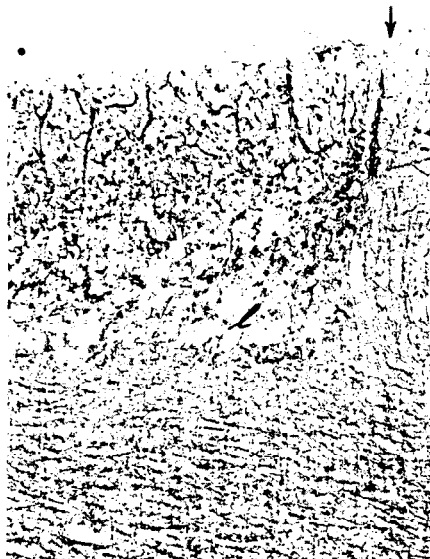
Last week Francis Thompson, Inc., did additional camera work at the Laboratory for a short color motion picture which it is making for the USAEC. This film, which is concerned with the peaceful uses of atomic energy, will also show other research installations. The film will accompany an AEC exhibit to Buenos Aires, Rio de Janeiro, Caracas, and Lima this fall and winter. A gamma radiation pool, designed and built at BNL, will be part of that exhibit.

This film represents a new technique whereby three sections are projected simultaneously on three separate but adjacent screens. There will be a Spanish language sound track for showings in South America, except in Brazil, where a Portuguese sound track will be used.

BNL SAFETY RECORD

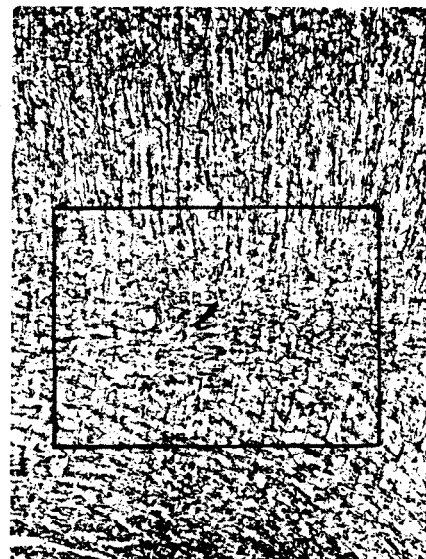
11 DISABLING INJURIES at BNL thus far in 1960 (for a rate of 3.61 injuries per 1,000,000 manhours - compared to the AEC Research Contractor rate of 1.63).

REGROWTH OF BRAIN NERVE FIBER



14 DAYS AFTER IRRADIATION

In photo on left, taken 14 days after irradiation, radiation damage to nerve fiber is apparent (area marked L). In photo on right of different animal, but similar exposure and adjacent section, pattern of nerve fiber structure is nearly normal 49 days after irradiation.



49 DAYS AFTER IRRADIATION

Experiments involving irradiation of brain tissue of laboratory animals by a beam from BNL's 60 inch cyclotron have resulted in evidence that nerve fiber in the brain can regrow after radiation damage. The experiments were carried out by Dr. Jerzy Rose and Dr. Leonard Malis as Research Collaborators in the Medical Department, with the technical assistance of members of the BNL staff, in particular Dr. Charles Baker of the Physics Department. Drs. Rose and Malis are affiliated with Mount Sinai Hospital in New York City and the University of Wisconsin, respectively.

In these experiments the scientists irradiated a layer of the cerebral cortex of laboratory animals with a beam from the cyclotron. The proton, deuteron, and alpha particle beams from the cyclotron are very useful tools for experiments such as these since the area of radiation damage can be pinpointed extremely accurately. The area between the surface of the brain and the area which the scientists wish to irradiate is relatively undamaged. The necessity for surgery is obviated, thus further reducing the area of injury.

The cerebral cortex is the perceiving center of the brain. The senses - sight, hearing, smell, and touch - report their sensations to this area. The cerebral cortex is the control center for voluntary action. Thought processes and memory are also functions of this highly important area of the brain.

The cerebral cortex is composed of many extremely thin layers of nerve units, or neurons. The function of these layers is as yet relatively unknown. Each neuron is composed of a nerve cell proper, a long fiber known as an axon, and one or more shorter branches called dendrites. Messages to and from the brain are transmitted through long chains of dendrites.

(Continued on Page 2)

BRAIN NERVE FIBER—(Cont'd)

The original purpose of the experiments was to learn something about the function and origin of neurons in various layers of the cerebral cortex. During the course of the experiments, however, an entirely unexpected phenomenon appeared.

Some time after irradiation of a thin layer of the cerebral cortex (the length of time varied from one to several months depending upon the intensity of the irradiation), the presence of fibers was observed in the area of total destruction (See photographs). This phenomenon was startling and significant since it indicated that nerve fibers were regrowing. Regrowth of fiber of nerve tissue outside the brain had been observed often and an occasional axon or dendrite in the brain had been known to sprout and branch. What was novel in the findings of Drs. Rose and Malis was that the growth of the fibers was luxuriant, that their patterns were enduring and that the new structure in the injured area resembled quite remarkably the fiber structure before irradiation. Since the nerve cells proper did not reappear, it was concluded that the fibers from adjacent normal cells had invaded the injured area.

The scientists suggest the possibility of a continuous growth process in nerve fibers. The radiation had destroyed a layer, or several layers, of cells and fibers, but had not destroyed the natural capabilities of the surrounding tissue to grow. Surgical experiments had not resulted in regrowth because the area of destruction was much wider than that which occurred in the radiation experiment. Consistently, if heavy radiation doses are given and genuine scarring occurs, regrowth will not take place.

Experiments involving irradiation of layers of the cerebral cortex by a beam from the 60-inch cyclotron are continuing. The effect on behavior and function of the brain of these isolated lesions is also being studied.

ADVICE TO THE LOVE LAWN

Now is the best time of the entire year to plant a new lawn. The ideal seeding season will last until September 15, 1960. If you are planning a new lawn, pick up a copy of "How to Plant and Maintain a Lawn" at Personnel Services, 58 Brookhaven Avenue.

Renovation of an old lawn can also be started at this time. Established lawns may be fertilized starting September 1. When chemical fertilizers are applied, be sure that the grass is dry and brush materials off the grass blades with a drag (door mat, piece of chain link, etc.). Watering a lawn immediately following a fertilizer application will prevent an unsightly temporary burn.

THE UPTON RIFLE AND PISTOL CLUB

The URP pistol shooters will again have a chance to beat the Brookhaven Pistol Club in a match. The duel will be at our own range on Sunday, August 28. Starting time is 2 p.m. and any caliber pistol may be used, so bring your favorite shooting iron and come on out to the range.

The results of the DCM match on August 16 were: 1. M. Johnson 296-292; 2. P. Colsmann 297-290; and 3. C. Goodzeit 295-292. The next DCM match will be on Tuesday, August 30, at 5 p.m.

WEEKLY SAFETY HINT

Dr. L. Hanks, recently appointed Safety Coordinator in the Medical Department, offers this reminder:

"In event of chemical splashes, it is important to immediately remove the saturated clothing as well as to wash off the exposed skin affected. Use the Safety Shower!"

(In a recent BNL incident involving a broken flask of Phenol, the injury was aggravated because the individual did not use the Safety Shower nor remove the clothing until arrival at the Industrial Medicine Division).

FINAL SUMMER FILM - A FRENCH COMEDY

"LETTERS FROM MY WINDMILL" will be shown on Monday, August 29. This French farce directed and produced by Pagnol is composed of three stories.

1. **The Three Low Masses** - The devil takes over the body of a dunce who is the sexton for the priest of an ancient chateau where Mass is said at Christmas Eve. In this unsuspected form, the devil so torments the priest with tempting talk about the Christmas dinner . . . that the priest loses himself to gluttony and there is the devil to pay.

2. **The Elixir of Father Gaucher** - It all started when Brother Gaucher inherited some home-made brew and its recipe from his rowdy Aunt Begonia, and the problem that arises when the good fathers set out to make and sell the wine for charitable purposes provide comedy that is nothing short of hilarious.

3. **The Secret of Master Cornille** - Pagnol proclaims again his love of the good earth, of wheat grains pounded into flour, and of the ultimate loaf of bread. This sentimental story of an ancient miller who, for eighteen years, has been pretending to compete with the newfangled steam mills is Pagnol at his best. His last scene is a festival out of Breughel, and the actors - most of them Pagnol's associates in earlier days - are his own inspiration. Daxely and Rellys, new to American audiences, have something of the lantern jaw, the innocent humor, and a feeling for characterization in the tradition of France's Raimu and Fernandel.

MONDAY, AUG. 29 AT 7 AND 9 P.M.
LECTURE HALL - ADMISSION 75¢

THEATRE GROUP NOTES**ELECTION OF OFFICERS, AUGUST 24**

Election of officers will be held at the next Theatre Group Meeting, Wednesday, August 24, at 8 p.m. in the theatre building.

At this meeting, the play for Fall, 1960, which is yet to be selected, is one of the important matters to be discussed. We have a volunteer director who will present to the group the conditions under which he will agree to undertake direction of a play of his choice. Be sure to come to the meeting.

"HIT THE DECK" EXTENDED

The run of HIT THE DECK at the Jones Beach Marine Theatre has been extended up to and including September 5th. Discount tickets for BNL employees are available for this extra period, as well as the rest of the originally-scheduled season.

SUMMER STUDENT PLAY

THE LESSON, by Eugene Ionesco, will be presented by the summer students on Thursday evening, August 25 at 8:30 p.m. at the BNL Theater.

This play is an excellent example of a modern French drama with an ironic twist. It is a satire on life, and especially academic life. The role of the pupil will be played by Penny Lawrence, while the maid will be played by Grace Albrecht. Jerry Minerbo, director, of the play, will also play the role of the professor.

There will be a presentation of American folk music by Bevalyn Bunker and Irwin Brodo. Following the performance will be a get together and dancing at the Recreation Building. Soft drinks and beer will be available. Admission for the evening's entertainment is 75¢.

PLAY SESSION, SWIM CLASSES TO END WITH SPLASH PARTY FRIDAY

The On-Site Play Session is ending its final week at the Recreation Building on York Lane. Throughout the summer over 60 children were enrolled, with an average enrollment of 40 and an average daily attendance of 35. The final event was a field day program. As we go to press the points are being tabulated and will be announced next week.

Swim classes are also in the final week. A testing program for those eligible to receive Red Cross cards is now being conducted. A total of 186 beginners, intermediates, and swimmers were enrolled in this year's program.

The climax of the children's recreation and swimming program at BNL will be a splash party at the pool Friday, August 26. If your child is enrolled in the swim classes or is in the on-site play session and is 8 years of age or over, he is eligible. Children should be at the pool by 12:20. Games, contests, and prizes for all.

BERA FISHING CONTEST

The largest entries in each specie are:

| | |
|-----------------------|------------------------------|
| Striped Bass..... | No entries |
| Sea Bass..... | No entries |
| Blackfish..... | 5 lb., 2 oz. - F. Cermak |
| Bluefish..... | 3 lb., 4 oz. - J. Davis |
| Cod..... | 24 lb., 7 oz. - N. Sowiak |
| Flounder..... | 1 lb., 13 oz. - A. Kokinelis |
| Fluke..... | 2 lb., 5 oz. - G. Schwender |
| Kingfish..... | 12.5 oz. - W. Castleman |
| Mackerel..... | 1 lb., 9 oz. - A. Beckwith |
| Porgy..... | 3 lb., 0 oz. - A. Schroeder |
| Tuna..... | No entries |
| Weakfish..... | 2 lb., 14 oz. - J. Klein |
| Brook Trout..... | No entries |
| Brown Trout..... | 12 oz. - K. Jellet |
| Large Mouth Bass..... | 2 lb., 2 oz. - J. Klein |

LET'S GO BOWLING



It's hard to believe, but it's that time again. The BNL Executive Bowling Board has met and entry blanks and information sheets have been prepared and distributed to last year's captains. The season's start is just around the corner. It's time for you to round up your team and complete an entry form.

Our leagues compete on a handicap basis - this means everyone, beginners or veterans, can join in the fun. Last season saw approximately 300 employees rolling in 5 different Lab leagues at the Patchogue Bowling and Patchogue Recreation.

NORTH SHORE

The completion of new alleys in Port Jefferson has brought forth many requests to start a league on the North Shore. Pick up an entry blank and state your preference. If enough entries are received a league will be formed.

All three alleys are now holding open our time preference (6:00 p.m.). It is important for us to form our leagues early so that we may begin the competition in September. Teams filing the earliest entries will be given preference. Don't be disappointed - send yours in now.

NEW INDIVIDUAL BOWLERS

If your department does not have a team, perhaps you can stir up some interest and start one. If you would like to join our leagues as an individual, give your name to the Recreation Office, Ext. 391. They will suggest you to established teams looking for more bowlers.

NEW TEAMS

All it takes is five men or women and a phone call or a stop at the Recreation Office. Come on - let's go bowling!

TENNIS TOURNAMENT

The BNL Tennis Tournament saw four more men advance to the quarter finals in the Men's Singles last week. T. Ishida and D. Thomas advanced via the forfeit route while J. Brandon, last year's champ, and A. Auskern pounded out their victories on the court. Brandon took F. Shively 6-2, 6-0, and Auskern defeated N. Hein 6-4 and 6-0.

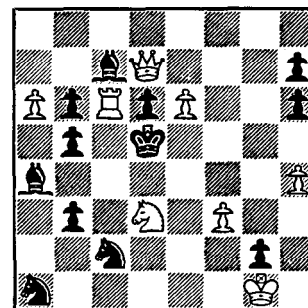
PICNIC PICTURES

The pictures taken on the day of OPERATION GET-TOGETHER No. 3 have been printed and are now on display at the Cafeteria. Copies can be obtained by placing your order at Personnel Services, 58 Brookhaven Avenue. Orders accompanied by payment (10¢ each) will be taken until Friday, September 2. Negative numbers are printed on each picture.

CHESS PROBLEM

In this week's problem it is white's move. He can mate in three moves.

White mates in three



Watch that block.

How? Answer on Page 4.

SOFTBALL STANDINGS

NATIONAL LEAGUE

| | Won | Lost | % |
|-----------------|-----|------|------|
| 1. Metallurgy | 11 | 2 | .846 |
| 2. Thumpers | 9 | 3 | .750 |
| 3. Plant Maint. | 10 | 5 | .667 |
| 4. Phoubars | 8 | 4 | .667 |
| 5. Old Timers | 10 | 6 | .625 |
| 6. Dirty Sox | 6 | 9 | .400 |

BROOKHAVEN LEAGUE

| | | | |
|-------------------|----|----|------|
| 1. Cosmotron | 10 | 6 | .625 |
| 2. Potsareebies | 8 | 8 | .500 |
| 3. Health Physics | 7 | 9 | .437 |
| 4. Gnats | 4 | 11 | .267 |
| 5. Medical | 3 | 13 | .187 |
| 6. Derelicts | 3 | 13 | .187 |

ANSWER TO CHESS PROBLEM

| | WHITE | BLACK |
|----|---------------|---------|
| 1. | Q - N 7 | K x R |
| 2. | Q - B 3 check | K - Q 4 |
| 3. | N - B 4 mate | |
| | OR | |
| 1. | Q - N 7 | K x P |
| 2. | R x B | K - B 4 |
| 3. | Q - B 7 mate | |
| | OR | |
| 1. | Q - N 7 | N - Q 5 |
| 2. | Q - K 5 check | P x Q |
| 3. | N - N 4 mate | |

POOL, GYM CLOSED

The swimming pool and the gymnasium will have completed their summer schedules this Wednesday, August 31. Both facilities will be closed during the month of September. Announcements of future schedules will be made in THE BULLETIN BOARD for the fall season.

WANTED

TWO-BEDROOM HOUSE - For rental by end of October. Prefer E. Patchogue, Patchogue, Bellport area. Atlantic 9-0919.

WOOD FRAMED STORM WINDOWS - Three 24x50½ inches; Five 32-36x50½; One 24x37 inches; One 28x37 inches. Call G. Rover 5-5960 after 6 p.m.

H-O TRAINS AND TRACKS - To purchase or exchange with a Lionel starter set. L. Newman, Ext. 2149.

CAMERA - Good 35 mm. Also good quality HI-FI speaker and tone arm. Call D. Weber, Ext. 2259.

HOME FOR PET - who stays behind when we leave for Europe. Black dog, 3 years old, spayed female. Breed - 100% pure dog. Good with children. Weston, Ext. 2241 or 2145.

BABY CRIB - without mattress for overflow of visiting relatives' babies. Price no object up to \$10. Call F. Bartlett, Ext. 456.

CLASSIFIED ADS

Due to lack of space the BULLETIN BOARD is unable to print all of the Classified Ads. The remainder will be printed in the next issue.

FOR SALE

DODGE 1952 - Club Coupe. Runs well. 18 mi. per gal. Owner leaving country. Ext. 301-24 (Ext. 2280 after 5).

1960 VOLKSWAGEN MICROBUS - coral and cream station wagon, heater, 5000 mi., excellent cond. Atlantic 9-0919.

1958 ENGLISH FORD CONSUL - light blue, 4 door, 4 cyl. Excellent cond. 26,000 mi. \$900 or best offer. John S. Ext. 2416.

1954 VOLKSWAGEN - excellent condition, 68,000 mi., major overhaul at 50,000 mi. Many extras including extra fuel tank, \$650. Bellport 7-1389.

1959 RENAULT DAUPHINE - heater, windshield washers, low mileage, excellent cond., blue. \$1,100. J. Backes, Ext. 2341.

1953 CHEVROLET - 4 dr. sedan. R&H, excellent cond. Owner leaving Lab Sept. 15. E. Hayon, Ext. 628 or Bellport 7-0334-J.

1952 HILLMAN - 4 dr. sedan. Recent work, dependable. Second car. Asking \$240. willing to quibble. J. Walsh, Ext. 454.

TRADE - 1953 Plymouth Suburban for 20-24 ft. bay boat hull (motor not needed) or fifteen \$10 bills, or 7½ \$20 bills. All offers cheerfully considered. Bellport 7-0708-M.

HOUSE - Sayville residential area. 2 bedroom Cape Cod, 6 yrs. new. Attached garage, expansion attic, sundeck, full basement. Landscaped plot 75x100 ft. Economical oil-fired forced hot air heat. Brand new oil hot water heater. Aluminum storms and screens throughout. City water and gas. Two cesspools. Sacrifice \$11,500. Call Casey Sayville 4-6652.

HOUSE - 3 bedroom ranch in village of Bellport. Open plan kitchen, dining and living area; 1½ baths; attached garage; screened porch; radiant heat; draperies; built-in bookshelves; wooded lot close to schools; \$15,700. Bellport 7-0759-W.

OUTBOARD MOTOR - 7.9 h.p. Champion. Completely rebuilt last year. Used 10 hours. \$40. Dimitri, Ext. 2212. After 6 Mohawk 9-9202.

12 FT. DUCK PUNT - new bottom, no leaks, \$25. 30 decoys, Black Duck and Broadbill. All wood; plus weights and lines, \$2 each. Craftsman rotary lawn mower, 18 in. Runs well, \$15. 19 in. RCA TV, floor model, mahogany cabinet with doors. Good cond. \$50. G. Rover 5-4627 after 5:45.

14 FT. WOLVERINE RUNABOUT - with front and center decks, windshield, compass, running lights, full length seat cushions, steering wheel. Mark 55 40 h.p. Mercury outboard motor with remote controls, 6 gal. gas tank, 2 propellers; 1 for speed - 1 for heavy load or water skiing. \$425. W. Kalinowski, call noon-time Ext. 2129 or Bellport 7-1474-J evenings or weekends.

15 FT. RUNABOUT - Wagemaker fiberglass. Navy top, speedometer and controls. Two cushion type and 1 vest type life preserver. 1958 35 h.p. manual start Evinrude motor.

Speeds to 28 m.p.h. 1957 Tee Nee trailer. Everything brand new last season except trailer. Very good ski boat. Total cost last year, \$1,390. Asking \$925. Will demonstrate. R. Meyer, Ext. 481. After 6 p.m. Sayville 4-5757.

PRESSURIZED CRUISING TANK - 6 gal. capacity for all Johnson and Evinrude outboards up to 1958 inclusive. Excellent cond., \$10. E.W. Rogers, Ext. 481.

15½ FT. RUNABOUT - Lyman. 18 h.p. Evinrude, remote controls, etc. In water, ready to go. R.A. Beth, Ext. 2263 or Atlantic 6-8215.

OUTBOARD MOTOR - 2 h.p. air cooled and used only one season. \$65. Bellport 7-1482-R.

FRIGIDAIRE - 9 cu. ft. with freezer across top, \$70. Double bed box spring with Hollywood metal frame, \$15. Bunk bed, \$25. Chest of drawers, \$5. 50 ft. snow fence suitable for enclosing play yard. Bellport 7-1482-R.

DESK - 60 inch, \$40. Child's kneehole desk, \$6. 24 in. and 26 in. girl's bicycles, \$10 ea. Stroller, \$2. Simmons Lawson hide-a-bed, newly slipcovered, \$75. File cabinet, \$10. Double bed, box spring and mattress, \$20. Ext. 797.

FOR RENT

BELLPORT - Completely furnished 2½ room apartment. All utilities, private entrance. Lease, \$85/mo. Available September 1. Can be seen any time. Ext. 2463.

APARTMENT - 4 rms., all utilities. Private entrance. Lease \$110. Bellport, Available now. Ext. 2463.

RANCH BUNGALOW - 5 rooms. 20 by 14 living room. Picture window. All hard wood floors. 100 by 130 plot. Shaded area. Lease 1 yr. minimum. \$90 (Furnished \$100). A. Russo, Ext. 639.

APARTMENT OR ROOM - Fully furnished. In private home. Own entrance. Available Sept. 1. 203 Bay Ave., Patchogue, L.I. G. Rover 5-1371.

APARTMENT - 2 bedroom, living rm., dining rm., and new modern kitchen. Centrally located to stores and L.I. Sound. \$125 per mo. Ext. 460.

COTTAGE - 3 rm. furnished. Complete kitchen, TV. Shirley. Suitable for 3 or 4. Atlantic 1-7978.

BUNGALOW - 4 rm. Neatly furnished. Fireplace, fenced and landscaped. 15 mi. from Lab. Center Moriches. Call Ext. 2453. Rent, seasonal or year round.

HOUSE - Bellport, lovely spacious house and grounds. 4 bedrooms, living rm., dining rm. Sun porch, modern kitchen, third floor, recreation rm. in basement and greenhouse. Available for occupancy early September. 1 yr. H. Snyder, Atlantic 6-8875.

CAR POOLS

Would like ride from corner Amity & West Ave., Patchogue. J.A. Cockrill, Ext. 781.

Wish to join or form car pool from vicinity of St. James. G. Wall, Ext. 618.