

the Bulletin Board

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CHRISTMAS HOLIDAY PAY SCHEDULE

Monday, December 26th, will be observed as the CHRISTMAS HOLIDAY, and the last four hours of scheduled work preceding Monday will be observed as the half-holiday before Christmas.

The Peoples National Bank facility will be open from 8:00 a.m. to 12:30 p.m. on Friday, December 23, and all weekly pay checks will be distributed during those hours at the bank.

Weekly employees on a shift basis who will not be able to pick up their pay checks on Friday due to the early closing of the Laboratory may have their checks mailed to them if they will leave their life number, name and address with the Cashier not later than Monday, December 19.

As the weeks following the Christmas holiday and the New Year's holiday are short weeks, it would be appreciated if supervisors will arrange to deliver the weekly time cards in person to the Pay-roll Section no later than 9:00 a.m. on the Tuesdays following these holidays.

SATELLITE FRAGMENTS STUDIED AT BNL

Fragments of Discover XVII, which was recovered on November 14 from the air over the Pacific Ocean, are being studied by members of BNL's Chemistry Department. Fragments from this satellite are particularly interesting to scientists, because a solar flare coincidentally took place during the flight of the satellite. When a solar flare, or sun storm, occurs, particles are sent into space from the sun. BNL chemists want to look at activity which might have been induced by the solar flare.

The satellite was launched on November 12 from Vandenberg Air Force Base in California, and was recovered some 50 hours and 31 orbits later. The satellite returned to earth after a signal from the ground fired a rocket which sent it earthward. The orbit of the satellite varied from about 612 miles to 112 miles from the earth.

COMING

MOVIE	January 9th
CONCERT	January 18th

BIOLOGY'S ENZYME FACTORIES

BNL has a large population of experimental animals. These animals play a fundamental part in many of the programs of the Biology and Medical Departments. The arrival of three heifers on site was mentioned in a previous issue of THE BULLETIN BOARD. The story of their experimental use is illustrative of the role of laboratory animals in research in the life sciences.

The cow in the photograph above is being prepared for the collection of pancreatic juice, a secretion containing enzymes required for the digestion of food in the small intestine. The pancreas is a gland (sometimes called the sweetbread) which makes connection with the upper region of the small intestine (the duodenum) through a short tube about $\frac{1}{8}$ inch in diameter, the pancreatic duct. The secretion formed by the pancreas flows into the intestine through this tube. By surgical procedures the duct in the animal shown was artificially lengthened with the aid of plastic tubing, a loop of which was brought to the outside. The exteriorized loop is provided with a coupling so that the flow of juice to the intestine may be interrupted at will and the secretion collected for study. Since the survival of the animal depends on an adequate flow of the pancreatic juice, collections are made for limited periods only.



The animal pictured above weighs about 450 pounds and produces on the average $\frac{3}{8}$ of a gallon of pancreatic juice every 24 hours. The juice contains about $\frac{3}{8}$ of one per cent of mineral matter, mostly salt and baking soda, and roughly one per cent of protein in the form of the digestive enzymes. Comparatively speaking this level of protein output is enormous. If, for instance, the protein were retained for growth instead of being secreted in the juice, the pancreas would double its weight every 36 hours! (turn to page 2)

ENZYME FACTORIES - continued

The high level of protein production has made the pancreas an organ of considerable interest to those concerned with the study of biological protein synthesis. Moreover, this remarkable output of proteins in the form of enzymes has as a consequence the accumulation of relatively large amounts of these enzymes in the gland itself. In non-secretory organs enzymes are usually present in very much smaller quantities, a circumstance that greatly increases the problem of their isolation in quantities sufficient for detailed studies. The high levels of secretory enzymes present in the pancreas have long made this organ a useful starting material for the preparation of a number of valuable and interesting enzymes. It is largely for this reason that some of the best characterized and most intensively studied enzymes known in biochemistry are derived from the pancreas of the cow. In the experiments now being undertaken by members of BNL's Biology Department the pancreatic juice, rather than the gland itself, is serving as a concentrated starting material for the isolation of several of the less prevalent enzymes known to be present in the gland. To prepare these enzymes in the quantities desired by more conventional procedures from the gland tissue (obtainable in bulk at slaughtering establishments) would require more extensive facilities than are available for this purpose at BNL at the present time.

It is of interest to recall that forty years ago the nature of enzymes was still a controversial subject. Were they proteins or not? An increasing body of evidence was suggesting that they were. But the extraordinary catalytic activity of many enzymes, which made possible their detection in extremely small amounts, and the ease with which the activity of many enzymes could be destroyed, led some of the leading investigators of the day to the belief that enzymes were special substances connected to proteins but unrelated to them. The situation was aggravated because at that time no enzyme had ever been isolated in a highly purified condition. The experiments that decisively settled the issue during the late twenties and early thirties represented a triumph for American biochemistry. Sumner at Cornell, and Northrop and Kunitz at the Rockefeller Institute isolated several enzymes in pure form and demonstrated by exhaustive tests that in each case the enzyme activity was associated with the protein. Sumner worked with urease, an enzyme from jack beans, but more comprehensive studies of Northrop and Kunitz dealt with the enzymes of the digestive tract of animals, in particular the enzymes in the pancreas of the cow. These pioneering efforts opened the way for a rational approach to the study of enzyme chemistry and introduced methods of procedure that have since become standard in the isolation of enzymes from biological materials.

BNL NEWS FLASHES

The Snowstorm — which hit Eastern Long Island on Sunday night and Monday was classified as a blizzard, according to BNL's Meteorology Group, even though our snowfall measured 12 inches, compared to about 18 inches further west on the Island. The three elements necessary for an official blizzard - heavy snow, strong wind, and low temperatures - were all present. Early Monday morning the wind blew at 30 m.p.h., with gusts up to 50 m.p.h. The temperature dropped gradually but steadily from about 22 degrees on Monday morning to about 9 degrees on Tuesday morning. The latter temperature represents the low for the season so far.

New Nuclear Engineering Building — Work is progressing on schedule; the building is essentially "closed in." Occupancy is planned for March, 1961. The furniture and furnishings plan has been completed.

"PEPE"

Coupons have been made available to our employees for discounts to the motion picture extravaganza, "Pepe," starring Cantinflas (of "Around the World in 80 Days" fame), as well as 35 other stars at the Criterion Theatre in New York City. Three dates **only** have been set aside for our reduced price: January 8, 16, and 24. Pick up the mail order exchange coupon at the Personnel Office, 58 Brookhaven Avenue.

WEEKLY SAFETY HINT

ED REICH, Supervisor and Safety Coordinator for Utilities Maintenance states: "Warning tags placing equipment out of service must be respected. These tags have been put on equipment or controls either because of an unsafe condition or because the equipment is being repaired. Failure to heed these warning tags could result in a serious injury."

MAILING CHRISTMAS CARDS

The U.S. Post Office requests that you separate your Christmas Cards to various cities and states in bundles with rubber bands around them or in boxes.
S. GARRETT, Postmaster

**SECOND BROOKHAVEN
LECTURE WEDNESDAY**

By Dr. Irving Schwartz

Title: Current Ideas on the Endocrine Regulation of Cellular Processes
Lecture Hall: 8:00 p.m., Wednesday, December 14

Buffet dinner at Brookhaven Center starting at 6:00 p.m. Make reservations in advance, by calling Ext. 2302 before 5 p.m., or Ext. 2453 in the evenings.

**LAST CHANCE FOR CHRISTMAS
CANDY AND COOKIES**

Orders for Christmas Candy and Cookies are now being taken at the Personnel Office at 58 Brookhaven Avenue. All orders must be accompanied by payment. The last day to order is Friday, December 16.

The last U.S. check for a Revolutionary War pension was issued in 1911. The last pension payment for the War of 1812 came in 1946. Commenting on these figures, a Veteran's Administration official said: "I suspect we are a relatively permanent agency."



BERA BOWLING

GREEN LEAGUE

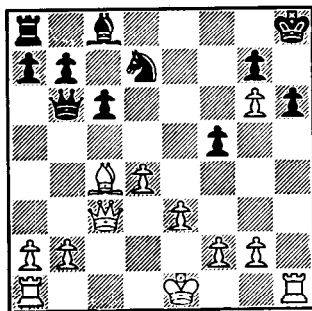
The Old Timers II lost to the Reefers 3-1, each team having 4 men. J. Kampe had 210-532 and J. Lucas 205-198/583 for the Reefers. The Old Timers III whipped the Old Timers I 3-1. Gil-martin's 184-505 and D. Adam's 200-538 aided the losers. F. Reams had a 513 series for the winners.

The Fire Dept. won over the Black Birds 4-0. P. Peter and J. Rhodes had 521 and 519, respectively, for the F.D. The Electrons lost to the Mole-Stars 3-1. D. German had 210 for the Mole-Stars.

LEAGUE STANDINGS

1. Old Timers II	27-13
2. Old Timers III	25-15
3. Fire Dept.	21-19
4. Reefers	21-19
5. Mole-Stars	18-22
6. Black Birds	17-22
7. Electrons	17-23
8. Old Timers I	14-26
High avg. J. Lucas 169	
High game J. Cobb 226	
High series T. Holmquist 584.	

CHESS PROBLEM



White to move

The playoff between Dr. L. Miller and J. Cummings for the BNL 1960 championship, sponsored by BERA, ended in a draw, and will be played over again Tuesday night, December 31, at the Recreation Building.

In this week's problem it is white's move and win. Answer elsewhere in this week's BULLETIN BOARD.

"THE TENTH MAN"

Discount tickets are now available for Paddy Chayefsky's comedy hit "The Tenth Man" now playing at the Booth Theatre in New York. They may be obtained at the Personnel Office,

BASKETBALL

The Big Five held their first place position by opening up a 12 point half-time gap, which Metallurgy was never able to close. The winning score was 35-28.

In what looked like the first double shut-out in history, Biology eked out a narrow victory over Health Physics. Each team was even with a grand total of 4 field goals, but the Bio's converted 5 foul shots to win 14-9.

The Old Timers had the most fun but the least points as they gave way to the Odd Balls 25-21.

The league will play this week and skip the 20th and 27th. The action will be resumed on Tuesday, January 3.

RECREATION HOLIDAY SCHEDULE

GYMNASIUM – the gym, because of a scheduled Christmas party and in order to have the floor refinished, will be closed for all activities from December 19th to January 3.

RECREATION BUILDING – the Recreation Building will be open for only scheduled activities and department Christmas parties from December 15 to December 22. The building will be closed for all activities the week of December 26.

SWIMMING POOL – the pool will be closed on Friday, December 23. It will be open during the holiday week on December 27, 28, 29, and 30.

RECREATION OFFICE – the office will be closed from December 23 to January 3.

UPTON ARCHERY CLUB

Meeting December 15

An informal organizational meeting of the Upton Archery Club was held at 5 p.m. on November 4 at the Recreation Building. At the meeting, tentative organizational rules were discussed.

In accordance with the results of the last meeting a formal meeting will be held on **Thursday, December 15, at 5:15 p.m.** in the Recreation Building. Among other things, the election of officers and a poll taken to determine the number of members who would like to shoot one night a week indoors will be the order of business.

It is hoped that all members will attend the meeting and bring some new talent with them to make it a success. Girls – don't think that this is a "men only" sport. We'd welcome your support, too. For more information call Al Delph, Ext. 439, or Frank Humphry, Ext. 451.

SKI CLUB TRIP



Last chance to sign up for Ski Club bus trip on January 6-8 to the North Creek Area in upstate New York. The total cost is \$37 – this includes bus fare, hotel, food, cocktail party, and ski instruction. You **must** have your deposit (\$10.00) in by December 15th. If enough people sign up, the BNL club will have the bus to itself. For any additional information, call either J. Walsh, Ext. 454, or Ginger Moore, Ext. 301-40. **HURRY! DEADLINE IS THURSDAY!**

RANGERS AND

KNICKERBOCKERS TICKETS

Discount tickets to New York Rangers hockey games and New York Knickerbockers basketball games at Madison Square Garden are available at the Personnel Office, 58 Brookhaven Ave. The discounts amount to about 30% for Rangers games and 50% for Knickerbockers games.

UPTON RIFLE AND PISTOL CLUB

On Thursday, December 8, the pistol shooters defeated the Riverhead Sportsmen by a score of 978 to 876. Leading the team in this smashing victory was Paul Colsmann, with a score of 264, followed by P. Hichborn 242; J. Kopp 240, and J. Diener 232.

The last two matches for the year are on Thursday, December 15, at Riverhead, and Sunday, the 18th, at Southampton.

The Wyatt URP's lost two very close matches the week before last. The score with the Mattituck club was 888 to 883, and the match with the Southampton team ended in a 983-967 score. The big guns who tried to bring home a victory were: First Match – P. Colsmann 251, M. Johnson 234, P. Buhl 216, and F. German 182; Second Match – P. Colsmann 257, J. Kopp 247, J. Rutherford 232, and P. Hitchborn. 231.

ANSWER TO CHESS PROBLEM

WHITE

BLACK

1. R x P check P x R
2. P - Q 6 check K - N 1
or N - B 3, 3 Q x N
check and mate in two
3. P - Q 7 check K - B 1
4. Q - R 8 mate.

ARTHUR MURRAY**DANCE LESSONS**

The regular Tuesday evening dance lessons will resume on Tuesday, December 20, at 8:30 p.m., in the Recreation Bldg. New students are still welcome.

1961 ICE FOLLIES

Exchange tickets to the Shipstad and Johnson "Ice Follies" at Madison Square Garden are now available at the Personnel Office, 58 Brookhaven Avenue. Employees may take advantage of the one third discount prices on January 10-13, 16, 17, 19, and 22.

CLASSIFIED ADS**FOR SALE**

COLLISION SALE - Parts for sale from a 1954 Ford Mainline 6, Std. shift. You want a part? Any Part? Will sell cheap! Make me an offer. Bill Walsh, Ext. 481.

1952 PLYMOUTH - 4 dr. sedan. Good mech. cond. Call Purohit, Ext. 581, or 710 evenings.

1955 FORD - Blue & White Auto. shift. \$500. Carl Cantera, Ext. 2376.

1960 OPEL - Good condition, fully equipped. 7800 miles. Ext. 576.

1960 RAMBLER - American Super. 2 dr., two tone grey, auto. trans., R&H and extras. 7000 miles. Sacrifice \$1500. 9-12 and 1-4. Call West. 4-3134. Weekends and evenings Eastport 5-0183-R.

HOUSE - Brand new one-story colonial ranch in Patchogue. 90'X175' lot; 8 rms., 4 bedrooms, hot water heat; garage; electric range. \$15,900. Call JU 5-8110.

HOUSE - Yaphank on wooded corner lot, 125'X200', two bedrooms on main floor, extra room in full cellar, modern kitchen, dishwasher, five years old, 10 minutes from Lab. \$10,800. SH 4-5096.

SPLIT LEVEL HOUSE - 3 bedrooms, living room, dining room, kitchen, bath and half, play cellar, forced air heat, 100'X140' lot, one block to school, south of Main St. in Patchogue, extra large rooms, large closets, attached garage and breeze-way, large type mortgage, small cash required, low taxes. Call GR 5-3147 any time.

MOBILE HOME - 1959 Detroit, 45'X10', 2 bedroom, fully equipped plus extras. Asking \$4,000. R. Hambley, Ext. 378 or Eastport 5-0467.

BOY'S FIGURE SKATES - Ice skates, size 3, like new, used only two seasons. Price \$3. Ext. 2365.

ARGUS PROJECTOR - 200 watt. Cheap. R.A. Beth, Ext. 2263 or AT 6-8215.

BOY'S ICE SKATES - size 3. Will sell or exchange for size 5. J. Forrest, Ext. 472.

16 MM PROJ. KODAK MOVIE CAMERA - Bell & Howell, Plus Projection screen, \$185. Call 782.

ELEC. HOT WATER HEATER - Forty gallon two element, in good condition. \$10. AT 6-8299.

GIRL'S FIGURE ICE SKATES - Size 3, good condition. \$3. Ext. 363.

ELEC. HOT WATER HEATER - 50 Gallon, 10 gal. stone sink with faucet, condition good. Washing machine, Whirlpool, 8 years old, condition fair. All for \$25. J. Reilly, Ext. 2387.

REFRIGERATOR - Hotpoint, 6 cubic ft. good condition, noiseless operation. \$35. AT 6-8206.

8 FOOT PRAM - 2 years old. Very good condition. \$40. Also 1 1/2 H.P. Evinrude - It runs. \$20. John T., Ext. 2376.

A.E. FISCHER FLUTE - Wood, in very good condition. \$35. One training violin, canvas case, Excel. cond. one year old, little use. \$15. Call Ext. 2352, 12:00 to 12:30 p.m.

LOVE SEAT - Duncan Phyfe style. Upholstered in rose colored floral textured fabric, \$25. Also, fully automatic washer, Norge, good appearance and mechanical condition, \$45. W. Adams, Ext. 2143 or GR 7-0488J.

BICYCLES - boy's 24 in. balloon tires, new saddle, \$12; boy's 20 in., good condition, \$10. Also brand new foreign car tire size 6:40 X13 tubeless blackwall, German brand. A real bargain if your size. \$12. W. Adams, Ext. 2143 or GR 7-0488J.

ICE SKATES - girl's white figure skates. Size 5, \$4. Ext. 687.

2 FORD RIMS - 16 in. Ideal for truck or trailer. \$4 each. Brand new, Ext. 2467.

CHILDREN'S FIGURE SKATES - black, in perfect condition. One pair size 2, and one pair size 3. \$5 each. Call AT 6-8807.

FOR RENT

HOUSE - 8 rooms completely furnished. Modern kitchen, automatic washer and dishwasher. Playroom and study. Lot 75'X120', garage. 21 Bell St., One block south of Bellport Village. \$120 per month from Feb. 1 to Oct. 1. Ext. 315 or BE 7-0596.

WANTED

SET OF DRUMS - for a band. Ext. 791, Tony Wistowaty.

APARTMENT - 1 or 2 room apartment (furnished) in the BNL neighborhood on the North or the South shores, for a bachelor. More interested in a low rent than in the quality of wall paper. Call Rai, Ext. 301; after hours; Ext. 763.

STAMPS - American, foreign, all kinds and shapes to exchange, swap, buy, or sell. Fourth grade level enthusiast. Preferably in geographic vicinity of Bellport for more convenient visual transactions. Call BE 7-0294 after 3:30 p.m. Ask for James.

BABY'S HIGH CHAIR - in good condition. MacKenzie, Ext. 572.

GIRLS FIGURE SKATES - In good condition Size 7 1/2. Ext. 609.

LOST

RAINCOAT - October 12 in Brookhaven Center. Woman's London Fog Raincoat. Someone mistakenly took my raincoat and left hers. Ext. 408.

CAR POOL

Driver wanted to join existing car pool from vicinity of four corners, Patchogue. K. Sumrow, Ext. 2463.

FOUND

Pair of men's gloves in Research Staff Building after concert. Call Personnel Services, Ext. 2106.