

# THE BULLETIN

MOUNT DESERT ISLAND  
BIOLOGICAL LABORATORY

1962

# MEMBERS OF THE CORPORATION

APRIL 1962

## Active Members

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Linda Cohen, Louisville, Kentucky  
William H. Cole, Rutgers University  
Dale R. Coman, Univ. of Penn. Medical School  
John Cook, New York, New York  
Edwin Cooper, Brown University  
John Copenhaver, Dartmouth College  
Beverly Cox, Central State College  
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William L. Doyle, Univ. of Chicago  
Ragnar Fange, University of Oslo  
Frederick P. Ferguson, Nat. Inst. Health  
Alfred P. Fishman, Columbia U. Col. of P. & S.  
Mrs. Alfred P. Fishman, New York, New York  
Roy P. Forster, Dartmouth College  
Mrs. Roy P. Forster, Hanover, New Hampshire  
Ernest C. Foulkes, May Inst. for Med. Res.  
Albert Frederick, Jr., Harvard Medical School  
Stanton Friedman, Cleveland, Ohio  
Hubert Frings, University of Hawaii  
Mable Frings, University of Hawaii  
Harry Fritts, Bellevue Hospital  
Irving Fritz, University of Michigan  
Mary S. Gardiner, Bryn Mawr College  
Mary Gasseling, Milwaukee, Wisconsin  
Edward G. Gerbic, Heublein Inc.  
Perry Gilbert, Cornell University  
H. Earl Ginn, VA Hospital  
David R. Goddard, Univ. of Pennsylvania  
Lewis Goldberg, Brooklyn, New York  
Arnold Goldschlager, Albert Einstein Col. of M.  
Leon Goldstein, Cancer Res. Inst.  
Aubrey Gorbman, Columbia University

(Continued On Last Page)



Volume IV No. 4

Bulletin of the Mt. Desert Island Biological Laboratory

Numbers 1, 2 and 3 were issued 1953, 1956, 1959  
respectively

Submitted for publication May 1962.

Alvin F. Rieck, Director



Laboratory Point At Ebb Tide

# THE MOUNT DESERT ISLAND BIOLOGICAL LABORATORY 1962

The Mount Desert Island Biological Laboratory is a marine biological laboratory situated on the coast of Maine near the mouth of the Bay of Fundy. It furnishes a research facility for investigations on local *flora* and *fauna*. Basic laboratory space with fresh and running salt water, simple glassware, basic chemicals and certain equipment are available for investigators.

No formal courses are offered. There are, however, many students who spend the research season in the laboratory of senior investigators thereby gaining research experience. Most of these students are selected by the investigators from their home institutions.

## History and Organization

The Laboratory was originally founded at South Harpswell, Maine in 1898 by J. S. Kingsley, then of Tufts College. The site at Salisbury Cove was donated to the Laboratory by the Wild Gardens of Acadia, a group instrumental in the establishment of Acadia National Park. Removal to the present location was completed in 1921. The first laboratory buildings, the salt water system and one of the cottages usually occupied by summer investigators were constructed or obtained with the generous gifts of local summer residents.

The Mount Desert Island Biological Laboratory was incorporated in 1913 under the laws of the State of Maine as a non-profit scientific and educational institution and it is owned and operated by the body of scientists whose names appear elsewhere in this publication. It functions without full time professional administrative personnel and in some ways is a cooperative enterprise. Income is derived from membership dues, laboratory fees, cottage rentals, income from investments and private and corporate donations and grants. The business and scientific management of the Laboratory is in the hands of the Director and the Board of Trustees. Separately printed copies of the by-laws of the Corporation are distributed to the members and may be seen by others upon request.

The Directors have been: Ulrich Dahlgren, Princeton University (1920-26), H. V. Neal, Tufts College (1926-31), William H. Cole, Rutgers University (1931-40), Roy P. Forster, Dartmouth College (1940-47), J. Wendell Burger, Trinity College (1947-50), Warner F. Sheldon, University of Pennsylvania (1950-56), Raymond Rappaport Jr., Union College (1956-59), Alvin F. Rieck, Marquette University (1959- date).

## Location

Mount Desert Island has long been famous for its scenic beauty and agreeable summer climate. It lies in the Gulf of Maine about 150 miles east of Portland, Me. and is connected to the mainland by a short bridge.

The land area of more than 100 square miles is featured by a range of ice eroded mountains that form a belt across the center and a narrow fiord six miles long that partially divides the east and west halves. Between the mountains lie numerous deep fresh water lakes and shallow ponds. Much of the mountainous area is a part of Acadia National Park and is protected against human depredations. The Island is separated from the mainland and adjacent islands by narrow deep bays. Spring tides average 13.2 feet and the mean tide is 10.6 feet. The average neap tide is 8.7 feet.

The many varied biological resources of the Acadian area are readily available. In summer, the cold waters of the Gulf of Maine are rich in marine life. The rocky shores, mud flats and strong tidal currents provide a large variety of forms. Proximity to fresh water lakes and ponds and the mixed terrain give further diversity to the forms available for investigation. As in every region certain forms are abundant, others are scarce or absent. Perusal of the research abstracts in past Bulletins will often give a good indication of forms that are readily available. The Director will be glad to furnish a candid estimate of the availability of any special forms that investigators may propose to use.

### **Physical Plant**

The laboratory is situated on a tract of about 150 acres fronting on Frenchmans Bay at Salisbury Cove in the Township of Bar Harbor. This rural village is in the more level open part of the north shore of the Island. Besides shore frontage, the Laboratory owns part of a fresh water pond and brook and its land varies from meadow to forest to sphagnum bog.

Investigations are carried on in single story buildings of frame construction which are located along the shore. Descriptions of individual buildings are as follows:

1. Neal Laboratory. The oldest and largest of the Laboratory buildings was remodeled in 1955 with funds provided by the National Science Foundation. There are now eight modern laboratories, four large rooms will each accommodate 3-4 persons and four small rooms each with space for 1-2 persons. Rooms are provided with gas and salt and fresh water. Water troughs with racks and salt and fresh water aquaria and large stone sinks are located outside along the north wall of the building.

2. Halsey Laboratory. This building was remodeled in 1961 with National Science Foundation Funds. Four rooms each capable of accommodating 3-4 people have gas and fresh and salt water. Refrigerator, ovens and salt water aquaria are located on a common terrace at the entrance.

3. Lewis Laboratory. This structure consists of two adjacent one room buildings each large enough to accommodate 3-4 people.

4. Kidney Shed — A single large laboratory which was used for many years by Dr. Homer Smith and his group.

5. Hegner Laboratory. The building contains ten separate laboratory rooms capable of accommodating 1-3 persons. Rooms are provided with salt and fresh water.

6. Darkroom Laboratory. This is a new structure built in 1962 with funds from the National Science Foundation. A darkroom for photography



is available for general use. A large laboratory room to accommodate 3-4 people with salt and fresh water is available to investigators.

7. Instrument Room. This building was renovated in 1955 for the purpose of housing equipment used in common by members of the laboratory. It contains a refrigerated centrifuge (International PR2), Warburgh apparatus (circular), Baird flame photometer, pH meters, Coleman spectrophotometer (Junior), Beckman spectrophotometer DU, muffle furnace, clinical centrifuges, small autoclave, deep freezes, refrigerators and stills.

8. Shop and Stockroom Building. The shop contains power and hand tools for woodworking. In the stockroom are chemicals, glassware, analytical balances, a fume hood and an area for glassworking.

9. Office and Library. A separate building, newly built in 1955 with funds provided by the National Science Foundation contains the Director's Office and houses the business records and library. The library is small comprising reference texts for biology and medicine with only a few complete journals (notably Biological Abstracts, Biological Bulletin and the Journal of the Marine Biological Association) as well as monographs and a sizeable reprint collection.

10. Dahlgren Hall. The former village school has been purchased and converted to use as a meeting hall. The single large room is capable of seating more than 120 people. Projectors for regular lantern slides, 35 mm. slides and 16 mm. silent motion pictures are available.

11. Bowen Hall. This building is one of the finest remaining examples of early 19th century island architecture. It is used as a recreation center and dining hall by the student group, those who occupy rooms in the village. It contains lavatories and showers.

12. Dock. Consists of two floats with livewells and attached livecars. It is attached to the shore by an inclined ramp and a permanent bridge and abutment.

13. A 32'6" gasoline powered collecting boat, the *Squalus* was constructed in 1958 with the support of the National Science Foundation. It contains a circulating sea water tank for transportation of specimens. Hand powered skiffs are also available for investigators.

Investigators are urged to bring their own specialized equipment and chemicals. In special cases the laboratory may be able to provide apparatus which would have long term usefulness for other workers. Since the Laboratory is closed for nine months of each year, the general policy has been to maintain as little delicate or especially valuable equipment as possible.

## Housing

Seventeen cottages suitable for families with children stand on land owned by the Laboratory. All are within easy walking distance of the Laboratory proper. The cottages are available to workers by the season, or occasionally for shorter periods. Occupants supply their own blankets, linen and silver, pay for utilities (electricity, gas, water and rubbish removal) and pay the laboratory for the use of the cottage.

Single investigators and couples without children rent rooms in homes in the village and take their meals in the Laboratory Dining Facility in Bowen Hall. A manager-cook is hired by the Laboratory Director. Other household chores (cleaning, table setting, dishwashing, etc.) are apportioned equally among the members of the group which usually numbers 20-25. The weekly charge is estimated for self-sustaining non-profit operation.

In order to encourage private construction and ownership of cottages by workers, the Laboratory has a policy of issuing leases on certain plots of laboratory land. Provision is made for sale or rental of the cottage to other workers in case the owner should find it impossible to continue to work in the Laboratory. In this way, the Laboratory is able to encourage capital investments by individual laboratory workers and at the same time insure that the land will remain under Laboratory jurisdiction. Seven privately owned cottages now stand on leased land. These are held by Drs. Bevelander, Doyle, Forster, Hogben, Rappaport, Sheldon and Wilde.

### **Recreational Activities**

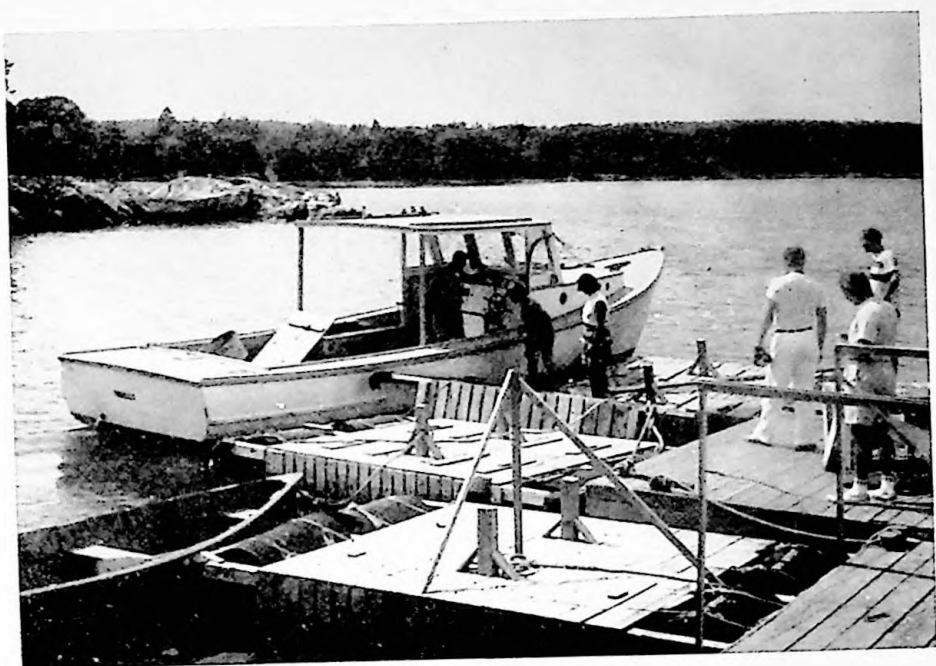
Besides notable scientific resources the Island provides many other features of interest for laboratory workers. Mt. Desert Island has long been known as one of America's most desirable summer regions. The cold waters of the Gulf of Maine make the summer climate superb. The ocean, rocky shores and mountains give unexcelled scenic beauty. The rather considerable distances from large metropolitan areas have helped to keep it relatively unspoiled.

Swimming, hiking, mountain climbing, picnicking, boating and sailing, ocean or fresh water fishing and many other sports are easily available. Acadia National Park with its excellent naturalist's program contributes to the general interest. In addition there are small museums of Indian and local lore, public gardens and cultural exhibits. The Island and adjacent coast serve as summer home or vacation sites for many well known scientists. Proximity to the two divisions of the larger year-around Jackson Laboratory adds scientific interest and resources.

Salisbury Cove itself is an old fishing and farming hamlet on the north shore of the Island. It lies on the main road between Bar Harbor and Ellsworth. The atmosphere here is quietly rural. The Laboratory colony comprises about 80 adults and 60 children of assorted ages, the whole numbering a considerable portion of the summer population of the village.

Bar Harbor proper, about six miles from the Laboratory, contains most of the services of a city including excellent shopping facilities and a good hospital. The widely publicized fire of 1947 did no damage to the Laboratory area, nor were its visible effects on the Island as marked as might be supposed. For biologists, the ecological changes produced by this fire are of great interest.







## APPLICATIONS

Fees for research space vary according to the demands made on the facilities. Each full season investigator is asked to pay at least \$100.00 if possible. This fee usually is paid by the investigator's home institution. In special cases fellowships can be arranged. All investigators have the use of the general facilities, but special arrangements are necessary if unusual demands are anticipated. Special glassware, chemicals and equipment should be brought to the Laboratory by the investigator.

Seventeen cottages owned by the Laboratory are available to investigators with younger children for the season or occasionally for shorter periods. Several privately owned cottages near the Laboratory are also usually available. The cost for use of these cottages is about \$300-\$350 per season depending on the size. Distant cottages are many times also available for short term rental.

Single investigators, students or couples without children may rent rooms in nearby private homes. These single people use Bowen Hall as a focal point of social activity and as a dining facility. A competent cook-manager is hired. Domestic chores are shared equally among the participants. The weekly cost is estimated to be self sustaining but non-profit.

Several Fellowships are available to young investigators and/or students. These are supported by funds from the Ulrich Dahlgren Memorial Fund (a gift from the American Philosophical Society) and by the National Science Foundation.

Applications and inquiries should be addressed to the Laboratory Director:

Dr. Alvin F. Rieck

June 1 - September 1

September 1 - June 1

Mt. Desert Island  
Biological Laboratory  
Salisbury Cove, Maine

Department of Physiology  
Marquette University  
School of Medicine  
Milwaukee 3, Wisconsin

## Scientific Activities

The following sections of the Bulletin are devoted to recording the scientific activities of the Laboratory during the years 1959, 1960 and 1961.

These are divided into two parts. First, the scientific personnel, staff and seminar programs are listed. Second, the research reports are listed alphabetically by first author for all three years.

# 1959

## SCIENTIFIC PERSONNEL

| Name                   | Institution                   |
|------------------------|-------------------------------|
| Dorothy Antkowiak      | University of Buffalo         |
| Gerrit Bevelander      | New York University           |
| *Bonnie Blanchard      | Pennsylvania Hospital         |
| John W. Boylan         | University of Buffalo         |
| Hans G. Borei          | University of Pennsylvania    |
| *Warren Brown          | Cornell University            |
| J. Wendell Burger      | Trinity College               |
| *A. Chapman            | St. Lawrence University       |
| *Janice Cohen          | New York University           |
| *John Cohen            | Brown University              |
| John Cook              | New York University           |
| John H. Copenhaver     | Dartmouth College             |
| *V. De Vita            | George Washington University  |
| V. De Vita, Mrs.       | George Washington University  |
| *P. J. Donovan         | Union College                 |
| *Michael Dunn          | Marquette University          |
| Alfred Fishman         | Columbia University           |
| *Peggy Forster         | Vassar College                |
| R. P. Forster          | Dartmouth College             |
| Hubert Frings          | Pennsylvania State University |
| Mable Frings           | Pennsylvania State University |
| A. Gorbman             | Columbia University           |
| Leon Goldstein         | Dartmouth College             |
| R. J. Goss             | Brown University              |
| C. W. Gottschalk       | University of North Carolina  |
| William C. Grant, Jr.  | Williams College              |
| H. O. Heineman         | Columbia University           |
| Walter N. Hess         | Hamilton College              |
| C. A. M. Hogben        | George Washington University  |
| *Carroll Howard        | St. Louis University          |
| David A. Karnofsky     | Sloan-Kettering Institute     |
| *William Lindsay, Jr.  | University of Pennsylvania    |
| *S. Lipson             | New York University           |
| R. A. Liversage        | Princeton University          |
| David B. Ludlum        | New York University           |
| Thomas H. Maren        | University of Florida         |
| *W. Mitchell           | University of Alabama         |
| H. V. Murdaugh, Jr.    | University of Alabama         |
| *D. Pullen             | University of Pennsylvania    |
| David P. Rall          | National Cancer Institute     |
| Raymond Rappaport, Jr. | Union College                 |
| J. Rhodin              | New York University           |
| Alvin F. Rieck         | Marquette University          |
| *S. N. Salthe          | Columbia University           |
| *J. Seabury            | Duke University               |
| R. Walter Schlesinger  | St. Louis University          |
| W. F. Sheldon          | University of Pennsylvania    |
| *P. Sheehan            | Hebron Academy                |
| *Anthony Steffek       | Marquette University          |
| T. M. Stevens          | St. Louis University          |
| Dan C. Tosteson        | Washington University         |
| Allyn Waterman         | Williams College              |
| Charles E. Wilde, Jr.  | University of Pennsylvania    |
| P. Wistrand            | University of Florida         |
| I. Zeidman             | University of Pennsylvania    |
| C. G. Zubrod           | National Cancer Institute     |

\*Student

## STAFF

Caretaker: Nelson Mitchell, Salisbury Cove, Maine

Collectors: James Burger, Columbia University  
David Gilbert, Harvard

Secretary: Charlotte Burkhart, Smith College

Co-op Manager: Wendy Sheldon, Oberlin College

## SEMINAR PROGRAM

### Tuesday Evening Seminars

- July     7   Charles E. Wilde, Jr., Department of Pathology, University of Pennsylvania. "Aspects of Cellular Differentiation in Vertebrates."
- 14   Aubrey Gorbman, Department of Zoology, Columbia University  
              "Phylogenetic Aspects of Hypothalamic Neurosecretory Systems."
- 21   Irving Zeidman, Department of Pathology, University of Pennsylvania  
              "Cancer: Some Current Thoughts on Virus Etiology, Carcinogenesis and Metastasis."
- 28   R. Walter Schlesinger, Department of Microbiology, St. Louis University.  
              "Modification of Cells by Persistent Virus Infection."
- August   3   Charles Gordon Zubrod, National Cancer Institute  
              "Cancer and Chemotherapy."
- 11   Gerrit Bevelander, Department of Histology, New York University  
              "The Effects of Tetracycline on Skeletal Development."
- 19   David A. Karnofsky, Sloan-Kettering Institute  
              "Antimetabolites and Sand Dollar Embryo Development."

### Friday Afternoon Informal Seminars

- July     10   Hans G. Borei (University of Pennsylvania), J. Wendell Burger (Trinity College) and Raymond Rappaport (Union College).  
              "Laboratory Uses of Local Marine Animals."
- 17   Roy P. Forster (Dartmouth College) and Leon Goldstein (Dartmouth College).  
              "Cellular Aspects of Active Transport by Renal Tubules."

- 24 Allyn Waterman, Department of Biology, Williams College  
"The Fetal Thyroid-Pituitary System of the Rabbit and Dogfish."
- 31 C. Adrian M. Hogben, Department of Physiology, George Washington University.  
"Physiology of the Fish Swim Bladder."
- August 7 Thomas H. Maren, Department of Pharmacology, University of Florida.  
"Electrolytes of Aqueous Humor and Cerebrospinal Fluid in *Squalus acanthias*: Effects of Carbonic Anhydrase Inhibition."
- 12 Hubert Frings, Department of Zoology, Pennsylvania State University  
"Midway Revisited."
- 14 Alvin F. Rieck, Department of Physiology, Marquette University  
"Photodynamic Action of the Eggs and Sperm of Sand Dollars".
- 21 H. Victor Murdaugh, Jr., Department of Medicine, University of Alabama.  
"Stop-Flow Analysis: Its Modifications and Implications."

#### **Thursday Afternoon Informal Seminars for Co-op**

- July 16 J. Wendell Burger, Department of Biology, Trinity College  
"The History of Mount Desert Island Biological Laboratory."
- 23 E. K. Marshall, Jr., Department of Pharmacology, Johns Hopkins University.  
"Cancer and Chemotherapy."
- 30 Roy P. Forster, Department of Zoology, Dartmouth College  
"Kidney Function: A Case History in Comparative Physiology."
- August 6 Richard J. Goss, Department of Biology, Brown University  
"Regeneration: New Parts for Old."



# 1960

## SCIENTIFIC PERSONNEL

| Name                   | Institution                                |
|------------------------|--|
| *D. Albert             | University of Pennsylvania                 |
| I. Alexandersson       | New York University College<br>of Medicine |
| M. Andrus              | University of Pittsburgh                   |
| C. Beers               | University of North Carolina               |
| Gerrit Bevelander      | New York University                        |
| Hans G. Borei          | University of Pennsylvania                 |
| A. Borut               | Duke University                            |
| John Boylan            | University of Buffalo                      |
| J. Wendell Burger      | Trinity College                            |
| *Charlotte Burkhart    | Princeton University                       |
| *John Cohen            | Albany Medical School                      |
| *S. Collins            | University of Louisville                   |
| *L. Fineman            | New York University                        |
| Albert Fishman         | Columbia University                        |
| *Peggy Forster         | Vassar College                             |
| R. Forster             | Dartmouth College                          |
| *S. Friedman           | University of Pennsylvania                 |
| Hubert Frings          | Pennsylvania State University              |
| Mable Frings           | Pennsylvania State University              |
| C. Frings              | Bowdoin College                            |
| Leon Goldstein         | Dartmouth College                          |
| R. Goss                | Brown University                           |
| H. Heinemann           | Columbia University                        |
| *J. Hardy              | New York University                        |
| *M. Hellman            | Dartmouth College                          |
| *R. Hobson             | George Washington University               |
| C. Adrian M. Hogben    | George Washington University               |
| K. C. Huang            | University of Louisville                   |
| *James Keller          | Marquette University                       |
| David Karnofsky        | Sloan-Kettering Institute                  |
| *R. Krugman            | Princeton University                       |
| *J. Kuller, Mrs.       | Dartmouth College                          |
| *William Lindsay, Jr.  | University of Pennsylvania                 |
| *M. Lockwood           | University of Buffalo                      |
| David B. Ludlum        | New York University                        |
| Thomas Maren           | University of Florida                      |
| *N. Meadow             | University of Pennsylvania                 |
| *E. Miller             | St. Louis University                       |
| *W. Mitchell           | University of Alabama                      |
| H. V. Murdaugh         | University of Alabama                      |
| *D. Nelson             | Washington University                      |
| David Rall             | National Cancer Institute                  |
| *M. Rankin             | Brown University                           |
| Raymond Rappaport, Jr. | Union College                              |
| J. Rawls               | University of Florida                      |
| J. Rhodin              | New York University                        |
| Alvin R. Rieck         | Marquette University                       |
| E. Robin               | University of Pittsburgh                   |
| G. Rodnan              | University of Pittsburgh                   |
| L. Schatz              | New York University                        |
| R. Walter Schlesinger  | St. Louis University                       |
| Bodil Schmidt-Nielsen  | Duke University                            |

\*Student

| Name                  | Institution                  |
|-----------------------|------------------------------|
| W. Sheldon            | University of Pennsylvania   |
| Eva Simmel            | Sloan-Kettering Institute    |
| *S. Spivak            | Washington University        |
| T. Stevens            | St. Louis University         |
| S. Takayama           | New York University          |
| Daniel Tosteson       | Washington University        |
| *Jerry Wacks          | State University of New York |
| Charles E. Wilde, Jr. | University of Pennsylvania   |
| *James Wood           | Birmingham, Alabama          |
| Irving Zeidman        | University of Pennsylvania   |
| Stephen Zsoldos       | New York, New York           |
| *Students             |                              |

## STAFF

Caretaker: Nelson Mitchell, Salisbury Cove, Maine

Collectors: James Burger, Columbia University  
David Gilbert, Harvard University

Secretary: Joan Johnston, Smith College

Co-op Manager: Linda Miller, Cornell University

## SEMINAR PROGRAM

### Tuesday Evening Seminars

- |        |    |  |
|--------|----|--|
| July   | 5  | <i>James Bond</i> , National Academy of Sciences. "Birds of Mount Desert."   |
|        | 12 | <i>Hugh Davson</i> , University of London. "Cerebro-Spinal Fluid and the Blood-Brain Barrier."   |
|        | 19 | <i>Warner Sheldon</i> , Department of Pathology, University of Pennsylvania. "Arteriosclerosis and the Function of the Heart."               |
|        | 26 | <i>Eugene Robin</i> , Department of Medicine, University of Pittsburgh. "Of Men and Mitochondria: Intra and Sub-Cellular pH."                |
| August | 3  | <i>Commander Short</i> , U. S. Coast and Geodetic Survey. "Activities of the Coast and Geodetic Survey."                                     |
|        | 9  | <i>George Brown</i> , University of Wisconsin. "Nitrogen Metabolism in Lower Vertebrates."   |
|        | 16 | <i>Thomas Maren</i> , Department of Pharmacology, University of Florida. "Kinetics of Carbonic Anhydrase Inhibition."                        |
|        | 23 | <i>Hubert Frings</i> , Department of Zoology and Entomology, Pennsylvania State University. "The World's Tiniest Microphones — Insect Ears." |

### **Friday Afternoon Informal Seminars**

- July     8    First Half of the Alphabet  
              "Investigators' Summer Research Projects."
- 15   Second Half of the Alphabet  
              "Investigators' Summer Research Projects."
- 22   Leon Goldstein, Dartmouth College  
              "Ammonia Metabolism in Fish, or the Decline and Fall of the  
              Teleost Kidney."
- 29   Daniel Tosteson, Washington University  
              "The Cellular Functions of Active Cation Transport."
- August   5   Bodil Schmidt-Nielsen, Duke University  
              "The Concentrating Power of the Mammalian Kidney."
- 12   Johannes Rhodin, New York University  
              "The Structure of the Gill."
- 19   Gerald Rodnan, University of Pittsburgh  
              "The Gouty Tunicate and So On."

### **Informal Seminars for the Co-op**

- July     9    Adrian Hogben, George Washington University  
              "Active Transport."
- 14   Thomas Maren, University of Florida  
              "Carbonic Anhydrase Inhibition."
- 21   Leon Goldstein, Dartmouth College  
              "Regulation of Ammonia Excretion in the Mammalian  
              Kidney."
- 28   E. K. Marshall, Johns Hopkins University  
              "Revolution in Drug Therapy."
- August   4   R. Walter Schlesinger, St. Louis University  
              "Introduction to Viral Particles."
- 15   Roy P. Forster, Dartmouth College  
              "Tubular Secretion."
- 18   H. V. Murdaugh, University of Alabama  
              "The Diving Reflex in the Seal."

# 1961

## SCIENTIFIC PERSONNEL

| Name                | Institution                   |
|---------------------|-------------------------------|
| *Daniel Albert      | University of Pennsylvania    |
| Irwin Arias         | Albert Einstein College       |
| *John Augustine     | Brown University              |
| Gerrit Bevelander   | New York University           |
| *Mordecai Blaustein | Brooklyn, New York            |
| Hans G. Borei       | University of Pennsylvania    |
| *James Brennon      | University of Alabama         |
| Philip Bromberg     | University of Pittsburgh      |
| J. Wendell Burger   | Trinity College               |
| *Judy Burger        | Mt. Holyoke College           |
| Nestor Carlisky     | University of Louisville      |
| Jamie Coelho        | New York, New York            |
| *John Cohen         | Albany Medical Center         |
| *Linda Cohen        | University of Louisville      |
| *Eva Conrad         | University of Pennsylvania    |
| *Edwin Cooper       | Brown University              |
| William L. Doyle    | University of Chicago         |
| Howard C. Elliott   | University of Alabama         |
| *Lewis Fineman      | Dartmouth College             |
| *Peggy Forster      | Vassar College                |
| *Stanton Friedman   | University of Pennsylvania    |
| Irving Fritz        | University of Michigan        |
| H. Earl Ginn        | New York University           |
| Leon Goldstein      | Cancer Research Institute     |
| Richard Goss        | Brown University              |
| William C. Grant    | Williams College              |
| Margaret Heineman   | University of Pittsburgh      |
| C. Adrian M. Hogben | State University of Iowa      |
| K. C. Huang         | University of Louisville      |
| Lisa Karnofsky      | Larchmont, New York           |
| David Karnofsky     | Sloan-Kettering Institute     |
| *James Keller       | Marquette University          |
| Marc Lewis          | National Institutes of Health |
| *William Lindsay    | University of Pennsylvania    |
| Richard Liversage   | University of Toronto         |
| David Ludlum        | New York University           |
| Richard Malvin      | University of Michigan        |
| James Manis         | Columbia University           |
| *Tom Manis          | St. Louis, Missouri           |
| Thomas Maren        | University of Florida         |
| H. V. Murdaugh      | University of Alabama         |
| *Alan Myers         | Princeton University          |
| *Robert Patterson   | George Washington University  |
| *Joel Pensley       | Princeton University          |
| *William Pylon      | University of Alabama         |
| Raymond Rappaport   | Union College                 |
| *James Rawls        | University of Florida         |
| Alvin F. Rieck      | Marquette University          |
| Eugene Robin        | University of Pittsburgh      |
| John Roberts        | Duke University               |
| Selma Sapira        | Pittsburgh, Pennsylvania      |
| Elinor Saulter      | University of Michigan        |
| David E. Schafer    | New York University           |

\*Students

| <b>Name</b>           | <b>Institution</b>          |
|-----------------------|-----------------------------|
| Leo Schatz            | New York University         |
| *Carol Schmid         | Trinity College             |
| Bodil Schmidt-Nielsen | Duke University             |
| Warner F. Sheldon     | University of Pennsylvania  |
| *Wendy Sheldon        | Oberlin College             |
| Eva Simmel            | Sloan-Kettering Institute   |
| Homer Smith           | New York University         |
| *Jeannine Snyder      | Eastern Michigan University |
| *Steven Strong        | Union College               |
| D. C. Tosteson        | Duke University             |
| Charles E. Wilde Jr.  | University of Pennsylvania  |
| Irving Zeidman        | University of Pennsylvania  |
| Stephen Zsoldos       | New York, New York          |
| *Students             |                             |

## STAFF

Caretaker: Nelson Mitchell, Salisbury Cove, Maine

Collectors: James Burger, Columbia University  
David Gilbert, Harvard University

Secretary: Carol Sudhalter, Smith College

Dining Hall Managers: Sandra Spatz, Waukesha, Wisconsin  
Elaine Wellstein, Milwaukee, Wisconsin

## SEMINAR PROGRAM

### Tuesday Evening Seminars

- July 11 *Marc Lewis*, Laboratory of Biochemistry, National Institute for Dental Research. "Physical Properties of Dogfish Skin Collagen."
- 18 *Friederich Dieck*, Associate Professor of Physiology, The George Washington University, "Infra-Red Receptors of Crustacea."
- 23 *Willie Smith*, National Cancer Institute, Radiation Branch. "Observations Concerning Recovery from Radiation Damage."
- August 2 *Victor Murdaugh*, University of Alabama Medical Center. "Perigrinations with Pinnipidae, or Above and Below Water with the Harbor Seal."
- 8 *C. A. Chapman*, Department of Geology, University of Illinois. "The Geology of Mount Desert Island."
- 15 *Joseph Hoffman*, National Heart Institute. "Active Transport Systems."
- 22 *Eugene Cronkite*, Brookhaven National Laboratory. "Rates of Cell Growth."

### Wednesday Afternoon Informal Seminars

- July 26 *Leon Goldstein*, Cancer Research Institute  
"The Action of Adrenal Steroids on the Liver."
- August 16 *Richard Malvin*, University of Michigan  
"Stop-Flow Analysis."

### Friday Afternoon Informal Seminars

- July 28 *Leo Schatz*, New York University  
"Histochemistry of Calcification in Crustacea."
- August 4 *Raymond Rappaport*, Union College  
"Division of Invertebrate Embryonic Cells."
- 11 *Richard J. Goss*, Brown University  
"Antigens, Antibodies and Antimetabolites."
- 13 *Eugene Robin*, University of Pittsburgh  
"The Haldane Centenary - The Control of Respiration."
- 25 *D. C. Tosteson*, Duke University  
"Gills and Salt."