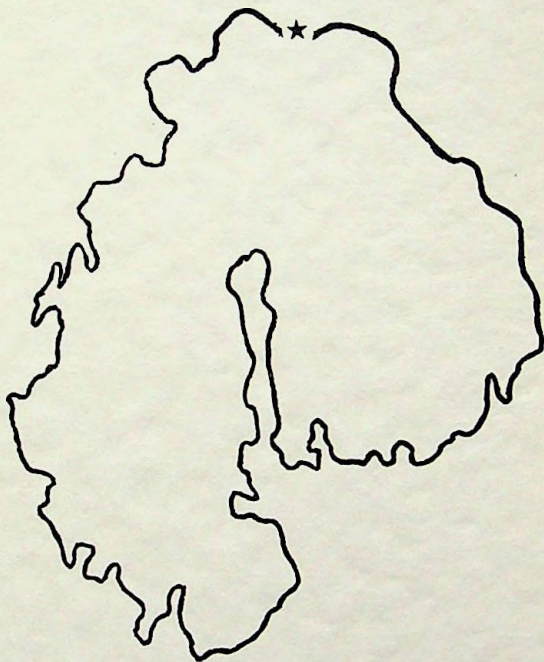


THE BULLETIN

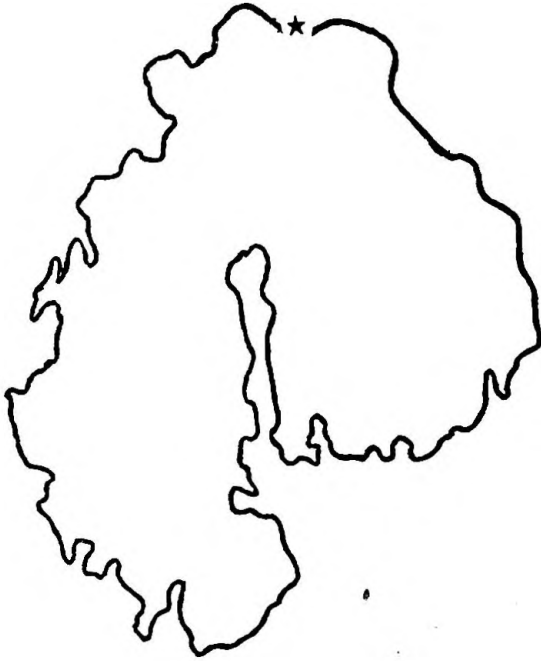
Nineteen Hundred and Fifty



Mount Desert Island Biological
Laboratory

THE BULLETIN

Nineteen Hundred and Fifty



Mount Desert Island Biological
Laboratory

This number (1950) is the final number of Volume III of the Contributions of the Mount Desert Island Biological Laboratory. Volume III includes numbers, 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939, 1940, 1941, 1950. No numbers were issued between 1941 and 1950. Each number summarizes the work of the Laboratory for the preceding calendar year. Number 1950 summarizes the calendar years 1942 through 1949.

Appended to this number is a list of publications resulting in whole and in part from work at the Laboratory during the period covered by Volume III. It is probable that some titles were not secured for this list. The Laboratory would be grateful for any addenda.

J. WENDELL BURGER, DIRECTOR.

January 30, 1950.

DESCRIPTION OF THE LABORATORY, 1949

The Mt. Desert Island Biological Laboratory is now the only American marine laboratory servicing the Acadiana area, that north of Cape Cod. The Laboratory is operated largely by biologists and for biologists. Its sole purpose is to offer basic research facilities which its workers can use as seems best to them. The Laboratory is supported by no institution or foundation, and is not committed to a single specialized program. While the Laboratory operates primarily for biological research, it also welcomes mature teachers and students whose primary aim is to secure first-hand knowledge of a regional fauna and flora. In the past the Laboratory has ventured sporadically into the field of formal undergraduate work, but it now feels that it can do a more worthwhile educational job by training in research young people who have committed themselves further to biology than has the summer school undergraduate.

The Laboratory was founded at South Harpswell, Maine, in 1898 under the name of The Harpswell Laboratory, by Dr. J. S. Kingsley of Tufts College. In 1913 it was reorganized as a scientific (non-profit) corporation under the laws of the State of Maine. In 1921, the Laboratory was moved to its present location at Salsbury Cove, Mt. Desert Island, Maine, and in 1923, its name was changed to the present one. Its original land at Salsbury Cove was deeded by the Wild Gardens of Acadia, and its present development in land, buildings, and equipment has come largely from the gifts from private philanthropy. Despite lack of endowment, and ample revenues, the Laboratory has grown and developed steadily, so that today despite its financial anemia it carries only a small, self-liquidating debt. For operating revenue it depends on laboratory fees, cottage rentals, and membership dues. For capital improvements and other expenses, it depends on the generosity of its friends. The practical management of the Laboratory is in the hands of the Director, who has always been a practicing biologist. The directors have been: Professor Ulric Dahlgren, (1920-26), Dr. H. V. Neal (1926-31), Dr. William Cole (1931-40), Dr. Roy Forster (1940-47), Dr. J. Wendell Burger (1947—). The by-laws of the Corporation are to be found in 1934 Bulletin number.

The Laboratory has a unique environmental location. Mt. Desert Island has long been world famous for its scenic beauty and agreeable summer climate. The Island, which is connected to the mainland by a very short bridge, is of about one hundred square miles. It is partially filled with bold, ice-eroded mountains, between which lie large, deep fresh water lakes, and small shallow ponds. Much of the mountainous area belongs to Acadia National Park, and is protected against human depredations. The fresh-water invertebrates are especially good. Because of the mixed terrain, the flora is also diversified. Vari-

ous estates, public and private gardens add to the variety of the flora.

The Island is surrounded by two deep narrow bays which are extensions of the Gulf of Maine, at about the mouth of the Bay of Fundy, and is almost bisected by a natural fjord. The various environmental situations characteristic of the Acadian area are easily available. The marine flora and fauna are of course largely Acadian. As in every area, there are forms which are abundant and will please those who are interested in them, and there are forms which are scarce or wanting. The Director will be glad to furnish his candid estimate on individual requests. A perusal of research abstracts in past Bulletin numbers will give a picture of the larger available forms.

The Laboratory itself is a tract of about one hundred fifty acres, fronting on Frenchman Bay at Salsbury Cove. This rural village is in the more level and open part of the Island, and was once the center of the Town of Bar Harbor. Beside shore frontage, the Laboratory owns part of a good-sized fresh water pond and brook, and its land varies from meadow to forest to bog.

In addition to its biological location the Laboratory is fortunate in its social location. The Island and the Laboratory have as its summer home or as visitors many scientists and intellectuals. The proximity to the two divisions of the large Jackson Memorial Laboratory adds to the scientific resources and atmosphere. The Acadia National Park with its naturalist's program also contributes to its environment. In addition, there are small museums of Indian and local lore, public gardens, cultural exhibits, etc. Bar Harbor proper which is about six miles from the Laboratory contains most of the services of a city, including a good hospital and medical practitioners. The atmosphere in the immediate vicinity of the Laboratory is quietly rural. The much publicized fire of 1947 did no damage to the Laboratory area, nor were its visible effects on the Island as a whole as marked as might be supposed. For a biologist the ecological changes produced by this fire are of interest.

The Laboratory buildings are equipped with the basic facilities for research. There is running salt and fresh water, electricity, Pyrofax gas, distilled water, compressed air, tanked O₂, a marine dock, aquaria, live-cars, dark room, clinical centrifuges, chain-o-matic balance, electric ovens and refrigerators, Beekman pH meters, basic chemicals, glassware, smaller apparatus, and collecting equipment. The tissue culture laboratory is a model for organization and equipment. The Laboratory will buy special apparatus which has a long-term usefulness to the Laboratory. Investigators, however, are urged to bring their own specialized equipment and chemicals. Since the Laboratory is closed for nine months and is unheated, the care of much permanent delicate equipment is too hazardous an undertaking.

The Laboratory buildings 1-9 are grouped together on the shore as the Weir Mitchell Station) are:

1. Neal Laboratory (Main Laboratory). Ten research rooms, each suitable for one or two people, a stock room, and water troughs with aquaria.

2. Hegner Laboratory. This building is devoted entirely to problems of tissue culture under the supervision of Dr. Philip R. White. It is a self-contained unit with five laboratories for Dr. White's associates, in addition to Dr. White's laboratories and general purpose rooms.

3. Halsey Laboratory. This consists of four large rooms each capable of handling up to four people.

4. Fresh-water Laboratory. This consists of two adjacent, large one-room buildings, each suitable for up to four people.

5. Kidney Shed. A single large one room laboratory which has been used for many years by Dr. Homer Smith.

6. Library and Office. A single room building, containing Biological Abstracts, reference books, monographs, reprints, and journals which are devoted to marine zoology, such as Biological Bulletin. The set of Biological Abstracts is a gift of Dr. William Cole.

7. Dark-room Laboratory. A one room structure with salt and fresh water.

8. Marine Dock. This contains built-in live wells, and has attached live cars, row boats and a motor dory.

9. Shop. A one room structure with elementary tools.

10. Dahlgren Hall. A class-room building which can seat about 100 people.

11. Bowen Hall. The dining hall, containing also one two-room apartment, a single dormitory room, and public lavatories and showers. This is one of the finest examples of "colonial-type" structure on the Island.

12. Five cottages completely equipped for family living which are rented to workers. These are designated as: The Emery House, the Liscomb Cottage, the Byrnes Cottage, the Hoskin Cottage, and one without a name.

13. In addition, the Laboratory has under life-tenancy leases, several other houses, and has two rental leases of parcels of land.

SPECIAL PROGRAMS

1. Tissue culture and growth studies. In 1947, Dr. Philip R. White, Institute for Cancer Research, Fox Chase, Philadelphia 11, Pa., remodeled and equipped the Hegner Laboratory for a research program in his special area. Dr. White has room and facilities for about eight investigators and students who wish to work with him in

learning his technique or on independent problems. *All inquiries for this program should be addressed to Dr. White directly.*

2. Research training in renal and cardiovascular physiology. With the financial support of the Heart Institute of the Public Health Service, the Laboratory will in 1950 somewhat expand its program of training in the above areas. The training program will be training by participation and doing, supplemented by formal and informal lectures and discussions. It is designed for those who have committed themselves to biological research, and is not to be considered as a summer school program, for those who want a few semester hours of credit. On the whole, the trainees will be selected by our senior investigators in these areas, and any applicant must have their approval. The Director, however, will be willing to receive a few other applications provided they are supported by a recognized research institution or person.

APPLICATIONS

Individual research rooms rent from \$75 - \$250 for the annual season from June 15 to September 15. For some space, smaller monthly or weekly rates are available. Each worker is, of course, entitled to the facilities of the Laboratory, but is requested to bring his own specialized equipment. Several Fellowships supported by the Ulric Dahlgren Fund are available annually to research workers or students (except undergraduates). These fellowships cover all or part of the laboratory fees. Rooms in private homes, tourist camp cottages equipped for housekeeping, and a few larger cottages are available in the immediate vicinity. For non-cottagers, board is supplied in the Dining Co-op in Bowen Hall. In the Co-op a competent cook is hired, but the organization and the work is done by the members of the Co-op on a non profit basis. All applications and inquiries (except as noted above) should be addressed to:

J. WENDELL BURGER, *Director*,
TRINITY COLLEGE,
HARTFORD 6, CONNECTICUT.

ACQUISITIONS 1941-50.

1941. Proceeds from the sale of the Hall House to Dr. Wm. Cole used to erect on Weir Mitchell tract 2 single room laboratories.

1941-42. Erection of a cottage by Dr. Edwin Hiatt on land leased to him on the McCagg Tract (plot 9.) This cottage now owned by Dr. Warner Sheldon.

1945-46. Purchase of School House, now Dahlgren Hall, from the Town of Bar Harbor.

1946-47. Purchase of the Hoskins Cottage from Dr. Margaret Hoskins.

1946-47. Gift of the Byrnes Cottage from Dr. Esther Byrnes and Bryn Mawr College.

1947. Erection of a new marine dock.

1947-50. Remodeling, refurbishing, and enlargement of the Hegner Laboratory by Dr. Philip R. White.

1947. Gift of \$3,000 from the American Philosophical Society for the purchase of scientific equipment.

1948. Gift of Biological Abstracts by Dr. Wm. Cole.

1948. Establishment of the Ulric Dahlgren Fund principally by a gift of \$10,000 from the American Philosophical Society. The interest from this fund is to be used for Fellowships at the Laboratory.

1949. Clear title given to the Weir Mitchell Tract by the Wild Gardens of Acadia.

1949. Gift from Wild Gardens of Acadia of two large tracts of land contiguous to the western boundary of our previous holdings.

1949. Gift of four acres of land by Mr. Asa Wasgatt.

1949-50. Gift by Mrs. Emilie Dahlgren of a plot of land contiguous to that of Dahlgren Hall, where the Dahlgren House stood before it was lost by fire in 1949.

1949-50. Receipt of a grant of \$10,044 from the Heart Institute, National Institute of Health, Federal Security Agency to support for 1950 a program in training in research in renal and hemocardiopvascular physiology.

1941-50. The Laboratory is indebted to its friends and members for gifts of money, materials, and services. The Laboratory exists solely for the promotion of biology, and no one person or clique regards it as a personal possession. The present Director feels he cannot comment too strongly on the fine internal spirit of the Laboratory.

MEMBERS OF THE CORPORATION

* Died, resigned, or membership discontinued 1941-50. Unstarred names represent the membership as of January 1, 1950.

ACTIVE

*Howard B. Adelman, Cornell University.

Edward Ajemian, Rutgers University.

Carolyn Albrecht, University of Rochester College of Medicine.

James B. Allison, Rutgers University.

W. Parker Anslow, Jr., New York University College of Medicine.

Norman K. Arnold, Dartmouth College.

Merrill Baratz, University of Rochester College of Medicine.

- C. Dale Beers, University of North Carolina.
 Robert Berliner, Goldwater Hospital, N. Y.
- *R. J. Bing, Johns Hopkins University.
 William D. Blake, Yale University School of Medicine.
 Mrs. Louise DeKoven Bowen, Chicago, Ill.
 Stanley E. Bradley, College of Physicians and Surgeons, Columbia University.
- Frank A. Brown, Jr., Northwestern University.
- *J. H. Brown, Mellon University.
 Ralph Buchsbaum, University of Chicago.
- *Hermon C. Bumpus, Ducksport, Mass.
 J. Wendell Burger, Trinity College.
 Earl O. Butcher, New York University College of Dentistry.
 E. G. Butler, Princeton University.
- *Esther F. Byrnes, Philadelphia, Pa.
 John and Dorothy Cairns, University of Texas.
- *Robert W. Clarke, New York University College of Medicine.
 William H. Cole, Rutgers University.
 Dale R. Coman, University of Pennsylvania School of Medicine.
 Edwin G. Conklin, Princeton University.
 Charles H. Crowder, Jr., University of Virginia.
- *Ulrich Dahlgren, Princeton University.
 Mrs. Ulric Dahlgren, Princeton, N. J.
 Floyd Davidson, Baylor University.
 A. B. Dawson, Harvard University.
- *George B. Dorr, Bar Harbor, Me.
 T. U. H. Ellinger, Duquesne University.
- *Gardner Fay, Wellesley Hills, Mass.
 Roy P. Forster, Dartmouth College.
- *Allan L. Friedlich, Howard University Medical School.
 Mary S. Gardiner, Bryn Mawr College.
 Edward Gerbic, New Brunswick, N. J.
 Thurlow M. Gordon, Jr., Brookfield, Conn.
 J. T. Halsey, Tulane University School of Medicine.
 Ira B. Hansen, George Washington University.
- *Robert W. Hegner, Johns Hopkins University.
 Mrs. Robert Hegner, Winter Park, Fla.
- *Edwin P. Hiatt, University of North Carolina School of Medicine.
- *Hope Hibbard, Oberlin College.
 Elizabeth Hoffman, New York University.
- *Margaret M. Hoskins, New York University College of Dentistry.
 A. S. Johnson, Rutgers University.

Rudolph T. Kempton, Vassar College.
 Thomas Kennedy, Goldwater Hospital, N. Y.
 Nancy Kent (Zieber), University of Wisconsin.
 *James B. Knight, Princeton University.
 Michael Ladd, New York University College of Medicine.
 *Addison Lee, University of Texas.
 Warren H. Lewis, Wistar Institute.
 *Frank R. Lillie, University of Chicago.
 Clarence C. Little, Jackson Memorial Laboratory.
 Mr. and Mrs. George Lovell, New York University College of
 Medicine.
 Jerold Lucey, New York University College of Medicine.
 Ethel Sue Lumb, Washington University.
 *Edward F. Malone, University of Cincinnati Medical School.
 E. K. Marshall, Jr., Johns Hopkins University School of Medi-
 cine.
 Edward C. Matthews, McGill University.
 Helena Miller, Duquesne University.
 *James A. Miller, Emory University.
 Dwight S. Minnich, University of Minnesota.
 Gairdner B. Moment, Goucher College.
 Edith Mortensen, George Washington University.
 Stuart Mudd, University of Pennsylvania School of Medicine.
 *Frank J. Myers, Ventnor, N. J.
 J. D. Myers, Duke University School of Medicine.
 Mrs. H. V. Neal, Salisbury Cove, Me.
 *E. Clifford Nelson, Augusta, Me.
 Thurlow C. Nelson, Rutgers University.
 J. S. Nicholas, Yale University.
 Stanley J. G. Novak, Belmont, Mass.
 George H. Parker, Howard University.
 James Peskin, University of Michigan.
 Lawrence Raisz, New York University College of Medicine.
 Mr. and Mrs. Ray Rappaport, Yale University.
 Alfred C. Redfield, Woods Hole Oceanographic Institution.
 *Wilbur A. Robbie, University of Iowa.
 *David O. Rodick, Bar Harbor, Me.
 *Serenus B. Rodick, Bar Harbor, Me.
 George B. Roth, George Washington University.
 John Sayen, University of Pennsylvania Hospital.
 J. R. Schramm, University of Pennsylvania.
 *M. W. S. Schramm, International Cancer Research Foundation.
 George E. Schreiner, New York University College of Medicine.
 J. P. Scott, Jackson Memorial Laboratory.

Joseph Seronde, Jr., Presbyterian Hospital.
 James A. Shannon, Public Health Service, Bethesda, Md.
 Warner F. Sheldon, University of Pennsylvania School of Medicine.
 Edwin Smith, Bar Harbor, Me.
 Homer W. Smith, New York University College of Medicine.
 Margaret H. D. Smith, Tulane University.
 Willie W. Smith, Public Health Service, Bethesda, Md.
 Benjamin Spector, Tufts College Medical School.
 John Taggart, Columbia University.
 *Charles Tanzer, New York, N. Y.
 R. Amory Thorndike, Bar Harbor, Me.
 *W. Byers Unger, Dartmouth College.
 John A. Wheeler, Princeton University.
 John Whitcomb, Bar Harbor, Me.
 Philip R. White, Institute for Cancer Research.
 E. P. Wilmer, Granville, N. Y.
 George W. Wooley, Sloan Kettering Foundation.
 Donnell B. Young, George Washington University.
 Edward L. Young, Brookline, Mass.
 *E. Lorraine Young, III, Brookline, Mass.
 *Pari Zia-Wahlrath, Northwestern University.
 C. Gordon Zubrod, Johns Hopkins University School of Medicine.

ASSOCIATE MEMBERS

Frank L. Babbott, Brooklyn, N. Y.
 John H. Barnes, Philadelphia, Pa.
 *George P. Berry, Rochester, N. Y.
 Robert E. Blum, Brooklyn, N. Y.
 *Edith G. Bowdoin, New York, N. Y.
 *H. S. Colton, Flagstaff, Ariz.
 Edwin H. Denby, New York, N. Y.
 Samuel S. Fels, Philadelphia, Pa.
 Mrs. Elizabeth Gordon, Baltimore, Md.
 Thurlow Gordon, Sr., New York, N. Y.
 M. Robert Guggenheim, Bar Harbor, Me.
 *Mrs. Walter Ladd, Far Hills, N. J.
 *Mrs. Morris Loeb, New York, N. Y.
 *Mrs. Lea M. Luquer, New York, N. Y.
 *Theodore Marburg, Baltimore, Md.
 C. L. Marlatt, Washington, D. C.
 *Hugh Matheson, Miami, Fla.
 *Mrs. Henry Morgenthau, New York, N. Y.

- *Walter K. Myers, Washington, D. C.
- Frank Ober, Boston, Mass.
- Mrs. D. S. Rhodes, Brookline, Mass.
- Mrs. Stanley Rinehart, New York, N. Y.
- David Rockefeller, New York, N. Y.
- Mrs. A. H. Royce, New York, N. Y.
- *William J. Schieffelin, New York, N. Y.
- Joseph Seronde, Sr., New Haven, Conn.
- *Miss Grace Simmons, Southwest Harbor, Me.
- Herschel C. Walker, New York, N. Y.
- *Mrs. Paul Warburg, New York, N. Y.
- *Davenport White, Washington, D. C.
- *Mrs. Charlton Yarnall, Devon, Pa.

TRUSTEES

ELECTED FOR THREE YEAR TERMS

TO SERVE UNTIL 1942

Earl O. Butcher
 Esther F. Byrnes
 J. T. Halsey

Clarence C. Little
 Dwight E. Minnich
 *Homer W. Smith

TO SERVE UNTIL 1943

*William H. Cole
 Robert W. Hegner
 Warren H. Lewis

E. K. Marshall, Jr.
 Stanley J. G. Novak
 David O. Rodick

TO SERVE UNTIL 1944

Hermon C. Bumpus
 J. Wendell Burger
 Ulric Dahlgren

George B. Dorr
 Roy P. Forster
 John Whitcomb

TO SERVE UNTIL 1945

Earl O. Butcher
 Esther F. Byrnes
 J. T. Halsey
 A. S. Johnson (elected 1944)

Clarence C. Little
 *Dwight E. Minnich
 *Homer W. Smith

TO SERVE UNTIL 1946

*William H. Cole
 Warren H. Lewis
 E. K. Marshall, Jr.

Stanley J. G. Novak
 David O. Rodick

TO SERVE UNTIL 1947

J. Wendell Burger
Ulric Dahlgren
Roy P. Forster

E. P. Hiatt
John Whitcomb

TO SERVE UNTIL 1948

J. Wendell Burger
Roy P. Forster
Thurlow Gordon, Jr.

A. S. Johnson
R. Amory Thorndike
John Whitcomb

TO SERVE UNTIL 1949

Earl O. Butcher
Esther F. Byrnes
J. T. Halsey
Clarence C. Little

Dwight E. Minnich
Helen Neal
*Homer W. Smith
Philip R. White (elected 1947)

TO SERVE UNTIL 1950

Stanley E. Bradley
*William H. Cole
Warren H. Lewis
E. K. Marshall, Jr.

Stanley J. G. Novak
Serenus Rodick
Edwin Smith (elected 1948)

TO SERVE UNTIL 1951

J. Wendell Burger
Roy P. Forster
Mary S. Gardiner
Thurlow M. Gordon, Jr.

A. S. Johnson
R. Amory Thorndike
John Whitcomb

TO SERVE UNTIL 1952

J. T. Halsey
Clarence C. Little
Dwight E. Minnich

Warner F. Sheldon
*Homer W. Smith
*Philip R. White

* Members of the Executive Committee.

OFFICERS

ELECTED ANNUALLY IN AUGUST

1941 - 1946

President: Ulric Dahlgren, Princeton University.
Vice-President: Dwight E. Minnich, University of Minnesota.
Treasurer: John Whitcomb, Bar Harbor, Me.
Secretary: J. Wendell Burger, Trinity College.
Clerk: David O. Rodick, (1941-43), Bar Harbor, Me.; John Whitcomb, (1944-45), Bar Harbor, Me.; Mrs. H. V. Neal, (1945-46), Salsbury Cove, Me.
Director: Roy P. Forster, Dartmouth College.

1946 - 1947

President: Dwight E. Minnich, University of Minnesota.
Vice-President: William H. Cole, Rutgers University.
Treasurer: John Whitcomb, Bar Harbor, Me.
Secretary: J. Wendell Burger, Trinity College.
Clerk: Mrs. H. V. Neal, Salsbury Cove, Me.
Director: Roy P. Forster, Dartmouth College.

1947 - 1950

President: Dwight E. Minnich, University of Minnesota.
Vice-President: William H. Cole, Rutgers University.
Treasurer: John Whitcomb, Bar Harbor, Me.
Secretary: Roy P. Forster, Dartmouth College.
Clerk: Mrs. H. V. Neal, Salsbury Cove, Me.
Director: J. Wendell Burger, Trinity College.