

LONG ISLAND BIOLOGICAL ASSOCIATION

**ANNUAL REPORT
OF
THE BIOLOGICAL LABORATORY**

**COLD SPRING HARBOR
LONG ISLAND, NEW YORK**

1924

LONG ISLAND BIOLOGICAL ASSOCIATION
INCORPORATED 1924

THE BIOLOGICAL LABORATORY
FOUNDED 1890

THIRTY-FIFTH YEAR

1924

BOARD OF DIRECTORS

To serve until 1928:

Walter Jennings.....Cold Spring Harbor, N. Y.
R. C. Leffingwell.....Cold Spring Harbor, N. Y.
T. H. Morgan.....Columbia University
Charles R. Stockard.....Cornell Medical College
T. S. Williams.....Huntington, N. Y. *President*

To serve until 1927:

Marshall Field.....Huntington, N. Y. *Vice-President*
Arthur W. Page.....Cold Spring Harbor, N. Y. *Treasurer*
John H. J. Stewart.....Cold Spring Harbor, N. Y.
William K. Vanderbilt.....Centerport, N. Y.
H. E. Walter.....Brown University

To serve until 1926:

George Draper.....Presbyterian Hospital,
W. B. James.....Cold Spring Harbor, N. Y.
H. S. Jennings.....Johns Hopkins University
Mortimer L. Schiff.....New York City
W. W. Swingle.....Yale University

To serve until 1925:

C. B. Davenport.....Carnegie Institution of Washington. *Secretary*
H. W. De Forest.....Cold Spring Harbor, N. Y.
Childs Frick.....Roslyn, N. Y.
Henry Hicks.....Westbury, N. Y.
H. M. Parshley.....Smith College

R. G. HARRIS, *Laboratory Director*

Members of the Long Island Biological Association

Founders:

*Marshall Field
*Walter Jennings
*William J. Matheson

*Mortimer L. Schiff
*William K. Vanderbilt
†Robert B. Woodward

Patrons:

*Frank L. Babbott
Cleveland H. Dodge
*Edward Floyd-Jones
*Childs Frick
Mrs. E. H. Harriman
†A. Augustus Healy
August Heckscher
*Walter B. James
Mrs. Otto H. Kahn
*J. P. Morgan

†Henry F. Noyes
George D. Pratt
†Cornelia Prime
Howard C. Smith
Mrs. Willard D. Straight
Louis C. Tiffany
Wawepex Society
*Walter J. Whipple
Timothy S. Williams
*Mrs. Timothy S. Williams

Sustaining Members:

Helen T. Albro
Eleanor Allen
Grace Allen
Justin M. Andrews
Mary Auten
Frank L. Babbott
Max S. Bart
Mary Beard
George R. Biecher
Ernest W. Blanchard
Charles M. Bleecker
Mrs. T. Bache Bleecker, Jr.
Edward C. Blum
Helen Blust
Rosina C. Boardman
Floyd C. Bratt
Leland A. Brown
Lucille C. Brown
John T. Buchholz
L. Dudley Bumpus
Vincent G. Burns
Esther F. Byrnes
Dorothy W. Caldwell
J. Lincoln Cartledge
Edward L. Caum
Helen A. Choate
Edward D. Churchill
J. Loomis Christian
Henry S. Conard
Laura T. Craytor

Charles B. Davenport
Frances G. Davenport
F. Trubee Davison
Maude Dawson
Henry W. DeForest
Johnston DeForest
Robert W. DeForest
Fairman R. Dick
Abigail C. Dimon
Russell A. Dixon
Harper B. Dodd
Agnes Doetsch
Henry P. Dorman
Frank N. Doubleday
Edith M. Douglas
Mrs. George T. Douglas
Marin S. Dunn
S. A. Everett
Calvin F. Fencil
Lydia M. Fletcher
George S. Franklin
Florence M. Frost
Henry J. Fry
Arcadia Giura
Robert A. Goodell
R. H. Gray
Susan A. Green
N. M. Grier
T. Hale Ham
Benjamin R. Harris

The persons whose names are preceded by an asterisk () have pledged themselves to amounts necessary to qualify them for their respective classes of membership, upon condition that the entire fund for the purchase of land be raised.

†Deceased.

Mrs. Glenn G. Hayes
O. M. Helff
Annie P. Henchman
Myra Herman
M. Catherine Hinchey
Anton G. Hodenpyl
Gail H. Holliday
Davenport Hooker
Perry S. Horenstein
Clarence A. Horn
Marian E. Hubbard
Robert C. Hutchinson
Harrison R. Hunt
Samuel Heller
Henry Hicks
Everett C. Jessup
Florence L. Jones
Richard H. Jones
Sarah Elizabeth Jones
Celia Kaufman
E. Corinne Keaty
Clyde E. Keeler
Emma L. Kemp
Margaret Kesler
Beatrice Klingensmith
Marie B. Knauz
Martin J. Knorr
Sidney I. Kornhauser
Eleanor Kress
Anna Lansing
D. W. LaRue
R. C. Leffingwell
Milton I. Levine
Gerald M. Livingston
Christina B. Locke
Elizabeth M. Lord
Carolyn E. MacDonald
E. Carleton MacDowell
Josephine C. Marshall
Marion I. Martin
Ralph E. Martin
H. S. Mayerson
E. Lenore Meid
Marie C. Menefee
Valy Menkin
Florence Middleton
George D. Morgan
Mattie Beth Morgan
Daniel P. Morse
Frances H. Miller
Louise A. Nelson
Acosta Nichols

Mrs. George Nichols
Isaac Oeland
C. Mervin Palmer
Quentin Pan
H. M. Parshley
William H. Parsons
James E. Peabody
Hugh L. Porter
Eugene L. Power
H. S. Pratt
Frank L. Rainey
John E. Ranken
Walter M. Rankin
Helen Reed
Ida L. Reveley
Dorothy F. Rice
Edward L. Rice
Kenneth S. Rice
Aute Richards
John K. Roosevelt
W. Emlen Roosevelt
Asa A. Schaeffer
Mary-Light Schaeffer
E. L. Schaffer
Fanny J. Schwartz
Donald Scott
Ida Sitler
William Smith
Margaret A. Spencer
Joseph H. Stickler
Harley L. Stowell
Stella G. Streeter
F. H. Swett
W. W. Swingle
George F. Sykes
Mrs. F. C. Thomas
Mary Thomas
E. N. Transeau
Isabel H. Tuthill
Victor C. Twitty
Gertrude R. Twomey
Daniel V. Troppoli
Clarence C. Vernam
Emilia Vicari
H. E. Walter
Myrtle H. Waterfall
Betty P. Watt
Helen M. Wells
David D. Whitney
Alice W. Wilcox
Mrs. Joseph H. Willets
C. D. Williams

J. Walter Wilson
Mrs. O. K. Wing
Henrietta M. Wood
Willis D. Wood
Louise Wright

Sewall Wright
Myrtle E. Wylie
Paul B. Yates
Raymund L. Zwemer

The following, though not members of the Long Island Biological Association, have contributed to the Endowment Fund:

E. LeGrand Beers
Albert De Silver
J. G. Dettmer

William G. Low
John Hill Morgan
James H. Post

Herman Stutzer

Members of the Women's Auxiliary Board

President, Mrs. Walter Jennings
Vice-President, Mrs. Childs Frick
Secretary, Mrs. Archibald B. Roosevelt
Treasurer, Mrs. George Nichols
Chairman House Committee, Mrs. Hamilton Hadden

Mrs. Arthur Ballantine
Mrs. A. F. Blakeslee
Mrs. C. B. Davenport
Mrs. Henry de Forest
Mrs. Johnston de Forest
Mrs. Richard Derby
Mrs. A. H. Diebold
Mrs. George Draper
Mrs. Marshall Field
Mrs. Sidney Fiske
Mrs. Childs Frick
Mrs. Rodman Gilder
Mrs. Hamilton Hadden
Mrs. W. Averell Harriman
Mrs. Reginald G. Harris
Mrs. John D. Hewlett
Mrs. Henry Hicks
Mrs. Geo. S. Hornblower
Mrs. Clyde Huntington
Mrs. O. B. James
Mrs. Walter B. James
Miss C. Jennings
Mrs. H. S. Jennings
Mrs. Walter Jennings
Miss Elizabeth Jones
Miss S. Elizabeth Jones
Miss Abbie E. Jones
Mrs. Otto H. Kahn
Mrs. R. C. Leffingwell

Mrs. Wilton Lloyd-Smith
Mrs. Graham Lusk
Mrs. E. Carleton MacDowell
Mrs. Van Santvoord Merlesmith
Mrs. Acosta Nichols
Mrs. George Nichols
Mrs. J. W. T. Nichols
Mrs. Arthur W. Page
Mrs. Gurdon S. Parker
Mrs. H. M. Parshley
Mrs. Lee J. Perrin
Mrs. John Ranken
Mrs. Archibald B. Roosevelt
Mrs. George Roosevelt
Mrs. John E. Rousmaniere
Mrs. C. C. Rumsey
Mrs. Mortimer L. Schiff
Mrs. J. H. J. Stewart
Mrs. Charles R. Stockard
Mrs. W. W. Swingle
Mrs. Edwin P. Taylor
Mrs. H. C. Taylor
Mrs. F. C. Thomas
Mrs. H. E. Walter
Mrs. Payne Whitney
Mrs. T. S. Williams
Mrs. Keyes Winter
Mrs. Willis D. Wood

Honorary Members:

Mrs. Andrew Carnegie
Mrs. E. H. Harriman
Mrs. Willard D. Straight

LABORATORY DIRECTOR'S REPORT

The year just completed is unique in the history of the Biological Laboratory. For some time the retiring director, Dr. Charles B. Davenport, and others deeply interested in the welfare and progress of the Laboratory, have realized that the increase in facilities and equipment has not been adequate to meet increasing demands made by biologists and neighbors upon the Laboratory. This situation seemed to be inevitable so long as the Laboratory remained a department of the Brooklyn Institute of Arts and Sciences, that institution already having heavy domestic demands upon its resources. The wholly reasonable and happy plan to transfer the control of the Laboratory to biologists and neighbors was cordially received by the Brooklyn Institute of Arts and Sciences and by the groups just mentioned. With the accomplishment of the transfer, a fitting climax to Dr. Davenport's long and faithful directorship was realized.

LONG ISLAND BIOLOGICAL ASSOCIATION

The Long Island Biological Association was formed as a membership corporation to receive certain real and personal property and the income of moneys then in the hands of the Brooklyn Institute of Arts and Sciences, and to carry on the work of the Laboratory. The properties included Blackford Memorial Hall, the income of the Endowment Fund and the Temple Prime Scholarship Fund, and miscellaneous dormitory and laboratory equipment. The lease of the land upon which the Laboratory stands, together with the botany laboratory, Hooper Hall, the Cottage and the John D. Jones laboratory, from the Wawepex Society, was transferred to the Long Island Biological Association, Inc. At the same time the Wawepex Society stated its willingness to renew the lease for fifty years from the date of expiration of the present lease.

At a meeting of the Association in August, 1923, the following persons were selected to constitute a temporary Board of Directors: Messrs. T. S. Williams, Henry W. DeForest, Walter B. James, M.D., George Draper, M.D., Walter Jennings, John H. J. Stewart, Henry Hicks, Frank Overton, M.D., Prof. H. E. Walter, Dr. G. Clyde Fisher, Prof. H. M. Parshley, Prof. D. S. Johnson, Prof. H. D. Fish, Dr. C. B. Davenport, Mrs. C. C. Rumsey, Prof. W. W. Swingle. This board elected Timothy S. Williams, chairman; Charles B. Davenport, secretary, and Reginald G. Harris, acting director. Four new members, Mr. Marshall Field, Mrs. Otto H. Kahn, Mr. Mortimer L. Schiff and Mr. W. K. Vanderbilt, were later added to the Board of Directors.

At the first meeting of the Board of Directors of the Corporation, held in February, 1924, the offer of transfer by the Brooklyn Institute of Arts and Sciences of the property already mentioned was accepted, and the following officers were elected: President, Col. Timothy S. Williams; vice-president, Mr. Marshall Field; secretary, Dr. Charles B. Davenport; treasurer, Mr. Arthur W. Page; and laboratory director, Dr. Reginald G. Harris.

It is noteworthy that the office of laboratory director is no longer a seasonal occupation. The laboratory director is in residence at the Laboratory throughout the year, occupied with executive duties and research. This change in the nature of the office is a step toward the realization of the policy to make the Laboratory of use to biologists throughout the year.

The purposes of the Long Island Biological Association as expressed in the certificate of incorporation are:

(a) To establish and maintain an institution and laboratories for scientific research in biology and other kindred subjects.

(b) To conduct special investigations in agriculture, horticulture, the breeding of domestic animals, the promotion of oyster cultures and marine fisheries, the protection and conservation of animal and plant life, zoology, botany and biology; and to diffuse information and give instruction thereto.

(c) To furnish specimens, materials and facilities for biological and medical investigation through the agency of other educational institutions, medical schools and hospitals, particularly in Greater New York.

(d) To take, hold and convey real property by grant, lease or otherwise for the purposes of the corporation.

(e) To take, hold and use for the purposes of the corporation moneys, securities or other property received by gift, bequest, membership dues or otherwise.

(f) To act as Trustee of any Trust created for the carrying out of any or all purposes of the corporation.

Classes of Members

The following classes of members in the corporation were formed:

Class I. Founders—consisting of those who by bequest or gift have each contributed to the capital funds of the Association at least \$5,000 in money or property.

Class II. Patrons—consisting of those who have each contributed at least \$500 to the Association, but less than an amount sufficient to qualify them as founders.

Class III. Sustaining Members—those who contribute fixed annual sums for the support of the Association.

Members of all classes shall have equal voting powers:

Women's Auxiliary—The Board of Directors or the Executive Committee may appoint annually a Women's Auxiliary Board, with such powers as may be prescribed from time to time. Such Auxiliary Board shall determine its own organization and cooperate with the Board of Directors in all matters relating to the welfare of the Association. Particularly it shall arrange for a visiting day at the Laboratory, for the formation of children's classes for nature study, for increasing the membership and friends of the Association, and shall endeavor in all ways to promote the mutual interest of the Laboratory and the community. All funds received by the Auxiliary Board shall be paid over to the Treasurer of the Association.

The response of friends and alumni of the Laboratory to invitations sent out by the President, Secretary and Laboratory Director, to become members of the Association has been deeply gratifying. A body of over 170 sustaining members has been built up, contributing nearly \$1,800 annually to the support of the Laboratory. These contributions have been received largely from new friends.

THE WAVEPEX SOCIETY, Inc.

The Wawepex Society of Cold Spring Harbor was founded by John D. Jones (who founded the Biological Laboratory also), for the purpose of holding certain real estate at Cold Spring Harbor and other property. The three acres of land, the main Laboratory and three other buildings are leased by the Association from the Wawepex Society. Its officers are: John H. J. Stewart, governor; Charles M. Bleecker, scribe; Walter J. Whipple, custodian.

THE BIOLOGICAL LABORATORY

The first year of the transition period has been very gratifying to the officers and members of the Association. If the enrollment at the Laboratory may be used as an indication of its usefulness then it may be said that the Laboratory has enjoyed during the past year the most useful period of its existence. The total number of students and investigators who have made use of the facilities offered this year is greater than that of any previous year.

This is particularly significant in view of the fact that the tuition was raised for the current year from \$50 to \$60. Previously an increase in tuition was followed immediately by a decrease in enrollment.

Additions to the Staff

Certain additions were made to the staff of instruction and investigation. The addition of Prof. W. W. Swingle, of Yale University, to the Laboratory staff is the most important single step in providing for an increase in investigation at the Laboratory. Three persons took advantage of the oppor-

tunity to carry on research under Dr. Swingle's direction, while 38 enrolled in the lecture course on the Endocrine System.

Results have justified the addition of Mr. O. M. Helff, of Yale University, to the Staff of Instruction in Field Zoology.

Several changes, with a view to improving facilities for scientific work at the Laboratory and relieving certain crowded conditions, have been effected. Due to the increase in the size of the class in Systematic and Field Botany, rendering previous quarters inadequate, the lecture hall has been turned over to the department of botany. The addition of running water, and certain minor changes which are being carried out, will make the present building a suitable laboratory for botanical work.

A frame wall tent was procured for use as an operating room. At the present time the basement of the botany building is being remodeled. It will be available next summer for use as an animal and operating room.

The library of the Laboratory has been increased by the generous gift of Mr. Arthur W. Page of seventeen volumes of the Nature Library, published by Doubleday, Page Company.

Three tents were purchased and placed on the Laboratory grounds to accommodate some of the students who otherwise would have been forced to live at some distance from the laboratory. Other changes were effected in various buildings with a view to utilizing all available space.

It is hoped that arrangements will be made during the present year so that all workers at the Laboratory, who so desire, may be accommodated on the Laboratory grounds. This will call for the purchase of more tents, and the utilization by the Laboratory of the "Cottage," which has been rented to the Carnegie Institution of Washington for some time.

Research

The increase in research carried on at the Laboratory is gratifying. The problem of development is receiving special attention in studies on the interaction of external and internal conditions in metamorphosis, and in investigations concerning the function of various endocrine glands in amphibia, fishes and higher animals. Regeneration, genetics, cytology, plant and animal distribution and ecology, and protozoan parasites in sea and land birds were subjects of research carried on at the Laboratory this year. These studies form the basis of some ten or twelve monographs which have already been published or soon will be in various scientific journals. An important list of the plants occurring in the region of Cold Spring Harbor has been prepared by the Instructor in Botany and is now in press.

The following public evening lectures were given at the Laboratory during the summer:

- Dr. W. W. Swingle—Internal Secretions in Relation to Development.
- Dr. George Draper—Modern Clinical Methods.

- Dr. H. H. Laughlin—Biological Factors in Immigration.
Dr. A. M. Banta—Studies on the Control of Sex.
Dr. R. C. Murphy—Field Work of the American Museum in Polynesia.
Dr. Oscar Riddle—Complete Sex Transformation in Adult Animals.
Dr. W. K. Gregory—Origin of Man.
Dr. C. B. Davenport—Mechanics of Heredity.
Dr. R. G. Harris—Paedogenesis.

Immediate Future of the Laboratory

The future of the Laboratory depends directly upon the Long Island Biological Association. The maintenance and improvement of the Laboratory is the *raison d'être* of the Corporation. The Laboratory has several pressing needs, the importance of which, in view of its present activity and future development, cannot be too strongly presented. The first of these in point of importance and urgency is the acquisition of additional land for immediate use and future extension. Such land, flanking the present holdings of the Laboratory to the north and west, is available and a fund for its purchase is nearly completed. It is to be hoped that friends of the Laboratory, seeing the desirability of obtaining the land in question, and the urgency of the need, will make possible its purchase in the immediate future. It may be said that upon its acquisition depends the future of the Laboratory.

It will provide a site for a much needed Research Laboratory. Present facilities for research are inadequate. The immediate demand is insistent. The need could adequately be met for the present by an appropriation of \$10,000. This would permit the erection and equipping of a research laboratory, to be ready for use next June.

The third pressing need of the Biological Laboratory is a boat suitable for taking students to distant collecting grounds and for dredging. The Laboratory does not own any power boat at the present time; and the "Beagle," previously rented from the Carnegie Institution of Washington, is now inadequate to meet the demands made upon it, due to the increase in the number of students at the Laboratory.

The future of the Laboratory is indeed big with possibilities. The location of the Laboratory, its proximity to New York, the varied habitats of the region, these and many other factors bring about the ever increasing demands made upon it by biologists and neighbors. In order to meet these demands the Laboratory looks to the Long Island Biological Association for financial support and moral encouragement. The Laboratory is deeply grateful to the Association and its officers for the encouraging support of the past year, which is greater than that of any previous year. The growth of the Laboratory, the returns it gives, warrant even more support. It is for the Association to say whether the Laboratory shall be relegated to an inferior position due to inadequate equipment or whether it shall be able to play an important rôle in the development of biology.

FINANCIAL STATEMENT, 1924

STATEMENT OF BALANCES ON HAND, DECEMBER 6, 1924

Current Expenditure Account.....	\$3,083.21
Temple Prime Scholarship Fund.....	106.77
Fund for the Purchase of Land.....	3,650.00
	<u>6,839.98</u>
BANK BALANCE—Bankers Trust Company. 12-6-24.....	\$6,839.98

ANALYSIS OF CURRENT EXPENDITURE ACCOUNT

<i>Receipts</i>	<i>Expenditures</i>
Brooklyn Institute 3-20-24 \$1,794.44	Salaries \$8,232.27
Endowment interest 1,169.81	Expenses 9,828.72
Contributions:	<u>\$18,061.01</u>
Wawepex 1,500.00	Balance 3,083.21
Others 1,774.00	
Tuitions 4,523.50	
Rentals 2,491.72	
Other receipts 7,890.75	
Total.....	Total.....
\$21,144.22	\$21,144.22

ANALYSIS OF TEMPLE PRIME SCHOLARSHIP FUND

Received	\$306.77
Expended	200.00
	<u>\$106.77</u>
Balance.....	\$106.77

ANALYSIS OF ENDOWMENT ACCOUNT

Received	\$3,650.00
Balance	<u>\$3,650.00</u>

Persons Matriculated at the Laboratory in 1924

Name	Registration	Institution	Graduate or Undergraduate
Eleanor Allen	F. Z.	Brown	Undergraduate
Justin M. Andrews	R.	Johns Hopkins	Instructor
Mary Auten	E. S. & F. Z.	Randolph-Macon Women's	Instructor
Clara G. Bart	F. Z.	Hunter	Graduate
Max S. Bart	F. Z.	College of City of N. Y.	Graduate
A. Dorothy Bergner	R.	Goucher	Graduate
George R. Biecher	E. S. & F. Z.	Lebanon Valley	Graduate
Ernest W. Blanchard	F. Z.	Brown	Undergraduate
Helen Blust	E. S. & F. Z.	Lake Erie	Graduate
Alice L. Brown	R.	Kansas and Cornell	Graduate
Clarence L. Buck	F. B.	Beloit	Graduate
Walter E. Bullington	R.	University of Tennessee	Graduate
E. Wilbur Cook	E. S. & F. Z.	Centre	Graduate
Eva Dawson	E. S. & F. B.	University of Michigan	Graduate
Maude Dawson	F. B.	University of Michigan and Ohio State	Graduate
Pearl E. Dewsnap	F. Z.	Brown	Undergraduate
Russell A. Dixon	F. Z.	University of Pittsburgh	Undergraduate
Harper B. Dodd	F. Z.	Bloomsburg State Normal	Graduate
Agnes Doetsch	P. E.	Goucher	Graduate
Marin S. Dunn	F. Z.	University of Penns'vania	Graduate
Calvin F. Fencil	F. Z.	Lebanon Valley	Graduate
Lydia M. Fletcher	F. Z.	Brown	Undergraduate
Susan A. Green	F. B.	Smith; University of Chicago	Undergraduate
Frances Greenberg	E. S. & F. Z.	New York University	Graduate
T. Hale Ham	C. A.	Dartmouth	Undergraduate
Margaret R. Haase	C. A.	Randolph-Macon Women's	Undergraduate
Rachel Haynes	E. S.	Mount Holyoke	Graduate
Myra Herman	E. S. & F. Z.	Hunter; Columbia	Graduate
M. Catherine Hinchey	F. B.	Brown	Undergraduate
Gail H. Holliday	E. S.	Washington and Jefferson	Graduate
Perry S. Horenstein	F. Z.	Brown	Undergraduate
Joseph B. Howland	E. S. & F. B.	Rutgers	Undergraduate
Robert C. Hutchinson	E.S.&F.Z.	Ohio Wesleyan	Undergraduate
E. Corinne Keaty	F. Z.	Louisiana State	Graduate
Emma L. Kemp	E. S. & F. B.	Columbia	Graduate
Beatrice Klingensmith	F. Z.	University of Pittsburgh	Graduate
Marie B. Knauz	F. Z.	University of Pittsburgh	Graduate
Martin J. Knorr	F. Z.	Dartmouth	Undergraduate
Vera Koerhing	E. S.	Smith	Graduate
Lillian K. Kreuger	E. S. & C. A.	Ohio State	Graduate
Chi-liang Kwei	C. A.	Wellesley	Undergraduate
Beulah Leathers	F. Z.	Brown	Undergraduate
Edward Levine	Misc.	New York University	Undergraduate

Milton I. Levine	Misc.	Cornell Medical College	Undergraduate
Christina B. Locke	F. B.	Boston	Graduate
Elizabeth M. Lord	E. S.	Mount Holyoke	Graduate
E. Carleton MacDowell	E. S.		Graduate
Charlotte MacDowell	E. S.		Graduate
Ruth E. Macmillan	E. S. & F. Z.	Lake Erie	Undergraduate
Anna W. March	E. S.		Graduate
Josephine Marshall	E. S. & F. Z.	University of Pittsburgh	Undergraduate
Marion I. Martin	F. B.	University of Pittsburgh	Undergraduate
Ralph E. Martin	E. S. & F. Z.	Lebanon Valley	Graduate
E. Lenore Meid	E. S. & F. B.	Goucher	Graduate
Miriam Menkin	E.S. & C. A.	Cornell; Columbia	Graduate
Valy Menkin	R. & E. S.	Columbia	Graduate
Frances H. Miller	F. Z. & E. S.	Wellesley	Undergraduate
George D. Morgan	F. Z.	Denison	Undergraduate
Olivia Naly	F. Z. & E. S.	Lake Erie	Undergraduate
C. Mervin Palmer	P. E.	Penn State	Graduate
Quentin Pan	R. & E. S.	Dartmouth	Graduate
M. Edith Pinney	R.	Milwaukee Downer	Graduate
Helen Reed	F. Z.	Bucknell	Graduate
Marjorie C. Roach	F. Z.	Brown	Undergraduate
Leonard P. Sayles	R.	Brown	Graduate
Asa A. Schaeffer	Misc.	Kansas	Graduate
Mary-Light Schaeffer	F.Z.&E.S.	Brown	Undergraduate
Rhea Schutte	F. B. & E. S.	Salem University	Graduate
Fanny J. Schwartz	F. B. & E. S.	Hunter; Columbia	Graduate
Keller Shelar	F. Z. & E. S.	University of Pittsburgh	Graduate
Joseph H. Stickler	C. A. & E. S.	Yale	Graduate
Helen Streeter	F. Z.	Smith	Undergraduate
Victor C. Twitty	F. Z.	Butler	Undergraduate
Gertrude R. Twomey	F.Z.&E.S.	Hunter	Graduate
Myrtle H. Waterfall	F. B.	Boston	Graduate
Isabelle Watson	E. S.	University of Chicago	Graduate
Betty P. Watt	E. S.	Wellesley	Graduate
Bernal R. Weimer	F. Z. & E. S.	Bethany	Graduate
Edward J. West	F. Z.	Brown	Graduate
Edith White	F. B.	Wooster	Graduate
Howard B. Witter	F. Z.	Brown	Undergraduate
Myrtle E. Wylie	F. Z. & E. S.	University of Pittsburgh	Undergraduate
Paul B. Yates	C. A. & E. S.	Washington and Lee	Undergraduate
Raymund L. Zwemer	R.	Hope College; Yale	Graduate

F. Z.: Field Zoology
 F. B.: Field Botany
 C. A.: Comparative Anatomy

P. E.: Plant Ecology
 E. S.: Endocrine System
 R.: Research

