NATIONAL ACADEMY OF SCIENCES

LIBBIE HYMAN

1888—1969

A Biographical Memoir by

LIBBIE HYMAN AND EVELYN HUTCHINSON

Biographical Memoir

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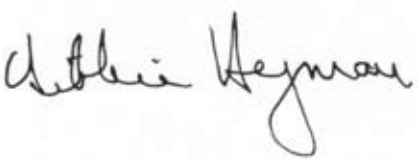

LIBBIE HENRIETTA HYMAN

December 6, 1888–August 3, 1969

BY LIBBIE H. HYMAN[1]
AND G. EVELYN HUTCHINSON[2]

"I WAS BORN IN DES MOINES, Iowa, December 6, 1888, of Jewish parents, both of whom were immigrants to the United States. My father, Joseph Hyman, came from a Polish village, name of Konin, located in a part of Poland that had been appropriated by Russia. It lay within the Russian Pale, where Jews were subject to brutal restrictions. At the age of fourteen he escaped across the border and made his way to London where he lived for some years, earning a living by plying the family trade of tailoring. Eventually he migrated to the United States, where he struck up a strong friendship with one David Goldman. The two men decided to migrate to what was then the far west (namely Iowa) and went to Des Moines, where they built a store, occupying the ground story with a clothing business.

"My mother, Sabina or Bena Neumann, was born in Stettin, Germany, one of eight children of a father who died young. She migrated to the United States and went directly to Des Moines, because she had a brother living there. He made a household slavey out of her and treated her roughly, after the best Prussian traditions. Finally she left him and went to work for a family named Posner. This Posner had married a sister of my father's, and my father—a bachelor in his late forties—was living with the Posners. He was twenty years older than my mother. The names Hyman and Posner are both invented names.

[1] Libbie Henrietta Hyman left with the Academy a brief autobiography of about 2,500 words, which I find so moving that I have quoted it here unedited. Since it is, however, overmodest, I have supplemented it with a more objective evaluation of her contributions to zoology.

[2] The Academy would also like to express its special thanks to Prof. James N. Cather of the University of Michigan for his editorial help in the preparation of this manuscript.

"My father and mother were married in 1884 and went to live in their own house in Des Moines where three children were born: my older brothers, Samuel and Arthur, then I. The family fortunes flourished as long as my father retained his partnership with Goldman. But my father had a scapegrace brother, name of Isaac, who persuaded him that big fortunes were to be made still farther west.

"My father therefore broke his partnership with Goldman and the family moved to Sioux Falls, South Dakota, where my last and youngest brother, David, was born. The Dakota venture failed and the family moved back to Iowa, settling into the town of Ft. Dodge, where I spent my childhood and youth. At first we lived in a rented house, then built our own house. My father opened a clothing store on the main street of the town but it was never successful and we lived mainly on the rentals from the Des Moines building.

"I was brought up in a home devoid of affection and consideration. My father, an aging man constantly worried about his declining fortunes, took practically no notice of his four children. My mother regarded children as property to be ordered about as she liked and to be used for her benefit. She seemed incapable of feelings of affection. She was also thoroughly infiltrated with the European worship of the male sex. My three brothers were brought up in idleness and irresponsibility, with the result that two of them never earned more than a bare living, whereas I, as a mere child, was required to participate in the endless work of the big ten-room house. For this reason I have violently hated housework all my life.

"My father was never cut out by nature to be a businessman. He was of a scholarly disposition and was particularly interested in travels and history, having a remarkable memory for historical dates. He had accumulated a small library of oddly assorted books, some of which could hardly be expected to interest anybody—as, for instance, a documentary history of New York state in several volumes. But there was also a complete Shakespeare, a Dante's *Inferno* with the Doré illustrations, and a complete set of the works of Dickens. I became acquainted with the novels of Dickens at an early age and have never ceased to admire and enjoy them.

"I was conscious from an early age of a strong interest in nature. This first took the form of a love of flowers. My earliest recollections concern flowers. As a child I roamed the woods that bordered the town, hunting the spring wild flowers. I learned their scientific names from a Gray botany book that my brothers had acquired in high school, but I puzzled over the classification until one memorable day when I suddenly realized that the flowers of a little weed known as cheeses had the same construction as hollyhock flowers. Thus I came to understand the families of flowering

plants. Later in my teens I collected butterflies and moths and arranged them in a frame. I believe my interest in nature is primarily aesthetic.

"I received my elementary education in the public schools of Ft. Dodge. At the high school I failed to attract the attention of the science teachers, of which there were two, one teaching physics, the other biology and chemistry. I subsequently met the physics teacher on the campus of The University of Chicago, where he was studying for a Ph.D. in physics. It was the teacher of German and English, Mary Crawford, a graduate of Radcliffe, who took an interest in me.

"I graduated from the Ft. Dodge High School in 1905 but did not know what to do with myself. I took and passed the state examinations for teaching in the country schools but was informed that I was too young to be appointed. I have always considered this a great piece of luck, as even then I hated the idea of teaching. During 1906 I returned to the high school, taking advanced work in German, but when that came to an end I was again at loose ends. Finally I took a job in a factory, pasting labels on boxes.

"I was coming home from the factory one autumn afternoon when I met Mary Crawford. She asked me what I was doing and was shocked when I told her. She said the Ft. Dodge High School was one of a number of high schools that had been approved by The University of Chicago, which then offered a scholarship paying a year's tuition to top students. Hence, in the fall of 1906, I set off for The University of Chicago. To the best of my recollection it had never occurred to me to go to college. I scarcely understood the purpose of college.

"At The University of Chicago I planned to take a basic course in each of the physical and biological sciences and then decide which one suited me best. I began with botany, to which I was strongly inclined anyway. But I somehow made an enemy of the laboratory assistant, name of Burlingame, who tried to have me flunked. This Burlingame was responsible for the fact that I did not become a botanist. I then tried chemistry for a while but dropped it when I realized that chemical advance is based on quantitative procedures. I am not suited by temperament for quantitative work. In the zoology department I met with much encouragement and decided to make a career of zoology. I have never regretted that consideration.

"I received my B.S. in 1910 and again was at a loss what to do next. I made a feeble attempt to obtain a zoological job that did not involve teaching. Finally Professor C. M. Child suggested that I enter the graduate school and work for a Ph.D. degree. This I did, taking my doctor's degree under him in 1915. I had soon perceived that Child was the outstanding member of the Zoology Department, but his original ideas and thinking

antagonized other zoologists and long prevented the recognition he deserved.

"After attaining my doctorate I again debated what to do other than teaching. Finally, Child got me appointed as his research assistant, and I occupied this position until his retirement. My work consisted of experiments on the physiology of planarians and other lower invertebrates. I do not regard any of this work as of outstanding importance. I am not a research type. I mainly accumulated data that bolstered Professor Child's ideas. My first publication was my doctor's thesis, entitled *An Analysis of the Process of Regeneration in Certain Microdrilous Olicochaetes.*

"In connection with my physiological work on hydras and planarians, it was necessary to have exact identifications of the species employed. I soon found that these common animals, used throughout the zoological world for a variety of purposes, were frequently misidentified, and in fact there had been no careful study of their taxonomy. In this way I became a taxonomic specialist on hydras and free-living flatworms. Such original work as I have published for the past thirty years or more consists mainly of such taxonomic studies.

"During my first year at the University I roomed with an uncle and aunt. In the winter of that year (1907) my father died. My return to attend his funeral was to be my last sight of Ft. Dodge, Iowa, until fifty years later.

"On my return to Chicago I took a room near the University. I had to work my way through college but was happy to escape from the unhappy atmosphere of my home. However, this escape was short-lived. My mother behaved after the manner of possessive mothers. She settled the family affairs in Ft. Dodge and moved the family to Chicago. Thus I was brought back into the same unhappy circumstances which lasted until the death of my mother in 1929.

"I never received any encouragement from my family to continue my academic career; in fact my determination to attend the University met with derision. At home, scolding and fault-finding were my daily portion. I have always considered it the great mistake of my life that I did not leave home after receiving my doctorate.

"I worked my way through graduate school by serving as laboratory assistant in various zoology courses. In the elementary course I felt that a better guide book was needed. Therefore I wrote *A Laboratory Manual for Elementary Zoology*, published in 1919 by The University of Chicago Press. It never occurred to me that it would find anything but local use; hence I was quite astonished when the Press informed me that the first printing had been rapidly exhausted. In 1929 I wrote a second expanded edition and this still has a considerable sale.

"Vertebrate anatomy was another subject in which I served as laboratory assistant and here, too, I felt that a better laboratory guide was badly needed. Therefore I wrote *A Laboratory Manual for Comparative Vertebrate Anatomy*, published in 1922 by The University of Chicago Press. Again I was surprised by the tremendous success of this book. I wrote the second edition in 1942 under the title, *Comparative Vertebrate Anatomy*, and this has continued to be highly successful. But I never liked vertebrate anatomy and since 1942 have abandoned all contact with the subject, refusing to consider making a third edition.

"Invertebrate zoology was always from the start my preferred subject. About 1925 I began thinking what I could do to further the teaching of this subject. I knew a good laboratory guide in this field was badly needed but was persuaded by colleagues to write an advanced text. I had no idea that this project would run to many volumes.

"By about 1930 I perceived that I could live on the royalties of my books. About this time, also, Professor Child came to the retiring age. Therefore I resigned my position as research assistant in the zoology department and have had no paid position since. I am amply supported by the royalties of my books, and so was left free to write a treatise on the invertebrates.

"The death of my mother left me with two bachelor brothers on my hands. Only my youngest brother ever married; he produced one daughter who has a son from the first of her two marriages. My bachelor brothers expected me to stay and keep house for them. To escape this situation I left Chicago in 1931, toured western Europe for fifteen months, and on return settled in New York to devote my entire time to the writing of a treatise on the invertebrates.

"I settled near the American Museum of Natural History in order to use the magnificent library of this institution. At first I worked at home but about 1937 was made research associate (honorary) of the Museum and assigned an office. Volume I of my treatise on invertebrates appeared in 1940, volumes II and III in 1951, volume IV in 1955, volume V in 1959. At present (1965) I am working on volume VI, which is near completion, but the rapid decline of my health and strength in the last few years makes it impossible for me to continue the project.

"I always wanted to live in the country and in 1941 bought a house in the village of Millwood in Westchester County, New York, about thirty-five miles north of Times Square. There I had full play for my passion for flowers and gardening. But it took me four hours daily to commute from my house to the Museum and back, and—added to this—the days I stayed home to work in the garden detracted seriously from work on my treatise.

If I had never bought that house I would undoubtedly be farther along with my treatise.

"Realizing that the house and garden were draining my time and strength, I sold the place in 1952 and returned to New York City, where I have lived ever since in a hotel apartment.[3]

"In 1961 my health was permanently impaired by surgery. I have never been really well since that time and have lived in a depressed state of mind. I never had much physical strength and was poor at sports, except swimming. In my youth I was a good swimmer and once saved a man's life. At the age of sixty I began losing strength and by now (seventy-six) have hardly any left. Lack of strength is the main reason that forces me to abandon my invertebrate project.

"The treatise on the invertebrates has brought me much fame and many honors but has given the zoological public an exaggerated idea of my scientific abilities. The treatise is essentially a compilation from the literature. My assets are some fluency in translating the main European languages and an ability to select and organize material in the literature.

"Member of Phi Beta Kappa, Sigma Xi, American Microscopical Society, Marine Biological Laboratory (Woods Hole), American Society of Zoologists (vice president, 1953), Society of Systematic Zoology (president, 1959), American Society of Limnology and Oceanography, Society of Protozoologists, American Academy of Arts and Sciences, National Academy of Sciences. Editor, *Systematic Zoology*, 1959–1963. Honorary degrees: Sc.D. The University of Chicago, 1941; Sc.D. Goucher College, 1958; Sc.D. Coe College, 1959; LL.D., Uppsala College, 1963. Daniel Giraud Elliot Medal, 1951; Gold Medal, Linnean Society of London, 1960." (L. H. Hyman's autobiography ends here.)

THE SCIENTIFIC WORK OF LIBBIE HENRIETTA HYMAN

In awarding the Linnean Society Gold Medal, Professor C. F. A. Pantin (by temperament perhaps the living person most qualified to judge and appreciate Hyman's work) said, after quoting Boswell, "What Boswell there says of Dr. Johnson's great *Dictionary* we can today say quite truly of Dr. Hyman's textbook of the invertebrate animal kingdom.

[3] I last saw her in a wheelchair, but most distinguished looking, being wheeled to the Museum Library.

Whole academies in more than one country have attempted to do what she has done. The debt of every zoologist to her is immense." Just before her death she received one final award, the Gold Medal of the American Museum of Natural History, presented to her at the centennial celebration of the Museum on April 9, 1969.

Hyman's earlier work, done under the direction of C. W. Child, primarily produced data, as she says, that bolstered Professor Child's ideas. His whole approach to the dynamics of form and development, usually subsumed under the title of the Axial Gradient theory, is now so neglected that it is doubtful if many of the current generation of postdoctoral fellows in developmental biology would have any idea what the expression means. But as the molecular processes underlying differentiation are more fully elucidated, it is certain that the time will come when the biology of the whole embryo again becomes interesting. The various, perhaps seemingly contradictory, morphogenetic ideas of the first half of the century will then be disinterred and will be seen to be crude simulacra of the latest concepts. At that time, certain of Hyman's papers, which give some of the best evidence for the phenomena in which Child was interested, will perhaps come into their own.

Before she ceased to be Child's assistant, she had embarked on the kind of research that made her the leading invertebrate zoologist of North America. Several papers on techniques for studying protozoans, flatworms, and coelenterates appeared in the 1920s, and in 1926, a short but very interesting note on the chydorid, *Anchistropus minor*, as a predator of *Hydra*.

A little later, her long series of taxonomic contributions on both flatworms and the coelenterates of the genus *Hydra* began. These papers initiated the modern period in the study of the soft-bodied, freshwater invertebrates in America. In

view of the great amount of experimental and ecological work that has been done during the last few decades, both on the planarian flatworms and the species of *Hydra*, the series on the taxonomy of North American species of these groups has had an importance rarely achieved by any systematizing work.

The discovery of a second species of the large brown hydra—then referred to a special genus, *Pelmato-hydra*, which has proved to be of some limnological importance—and of *Hydra littoralis*, now a well-known laboratory animal, may be mentioned. Her work on flatworms was very extensive, embracing all the major free-living groups, marine and terrestrial as well as freshwater. She was able to report the rediscovery of the peculiar large *Hydrolimax griseus* Haldeman, the sole member of a genus endemic to eastern Pennsylvania and New Jersey—a unique distribution that had not been found for nearly half a century and which, at the moment, may well be a somewhat forgotten endangered species.

She was greatly interested in the species that inhabit underground waters. Her work on flatworms was honored by a most important memorial symposium and volume, *Biology of the Turbellaria* (McGraw Hill, 1974), edited by N. W. Riser and M. P. Morse.

Significant as are these works to specialists, the great contribution of her life was the six volumes of *The invertebrates*. The only English precursor by a single author was Sedgewick's three-volume *Textbook of zoology* (1898–1909), which now—though sometimes useful—is quite naturally out of date. As Pantin pointed out, the only works that can be compared with Hyman's six volumes, containing over 4,000 pages, are of composite authorship.

In her autobiography she speaks of the work as "essentially a compilation from the literature," but it is a compilation by someone who had an extraordinary first-hand acquaint-

ance with her materials. Fortunately the invertebrate phyla that she was able to cover included most of those of which she had greatest experience in her own researches. She worried that the scientific public regarded the book as based on her own work rather than on the researches of others. Actually, though she was technically correct, her enormous knowledge did indeed make it the result of the workings of her own mind.

In 1967, suffering from Parkinson's Disease and forced to discontinue work, she wrote at the end of the preface to Volume VI: "I now retire from the field, satisfied that I have accomplished my original purpose—to stimulate the study of invertebrates."

She had indeed.

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