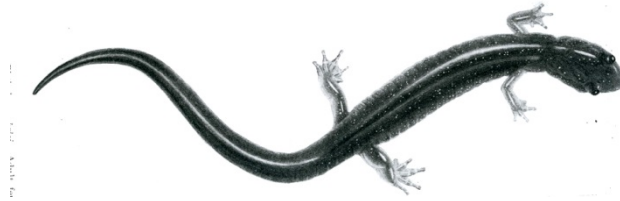


**BIOGRAPHICAL SKETCH
AND
BIBLIOGRAPHY OF RICHARD HIGHTON**



Richard Highton
Department of Zoology
University of Maryland

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Cover Image: *Plethron wehleri* from
Bishop 1941. Salamanders of New York fig. 45.

Biographical Sketch

I was born in 1927 in Chicago, Illinois. My parents were Albert H. and Helen Taylor Highton. My father was born in England but came to the United States on a combination steamboat and sailing ship when he was six years old. He had only a grammar school education, but worked in the printing business and became very interested in the English language. He later was one of the coauthors of the first Funk and Wagnalls unabridged dictionary and also wrote two books on proofreading and copyediting for printers. My mother was a librarian first at the Holyoke, Massachusetts public library and subsequently at the University of Chicago library. My father was interested in herpetology and read all of Raymond L. Ditmars' popular books on reptiles and also went to many of Ditmars' lectures for the public in New York City. In 1938, our family moved back to New York. I was encouraged to become a herpetologist by keeping numerous pet reptiles in our apartment. Ditmars gave me my first pet snakes. Carl Kauffeld, Curator of Reptiles and later Director of the Staten Island Zoo, and the reptile keepers at the Bronx and Staten Island zoos were very encouraging to youngsters who were interested in herpetology; they spent a great deal of time talking to young visitors on weekends.

During World War II, I attended and graduated in 1945 from the Bronx High School of Science, which was an ideal place to enthuse youngsters interested in a career in science. I began college at New York University (at the old uptown campus) but went into the army for one and a half years from 1946–1948 and served in the occupation force in Italy in the medical department, returning to NYU in 1948–1950 for a BA degree with a major in biology and minors in mathematics and sociology. In 1948, after getting out of the army, I bought a car. Carl Gans and I (we both lived in the Washington Heights neighborhood) took a field trip to the Great Smoky Mountains. I became excited about studying the salamanders of the southern Appalachians and decided to work primarily on salamanders, especially after reading the interesting papers of Nelson G. Hairston on the ecology of *Plethodon* of that region. I have since spent many summers in the southern Appalachians and have hiked many of the trails and traveled on most of its jeep roads collecting salamanders. My collections have been given to the United States National Museum. In 1950, I married Anne Adams, who is interested in art and music. We have been married for 67 years and have four children: Barbara, who is a musician and teaches the flute at a music academy; Kim, a former ballerina; Scott, a photographer; and Caitlin Ann who teaches dance. We have six grand-children and one great-grandchild.

From 1951–1956, I attended graduate school at the University of Florida in Gainesville where I received an MS (1953) degree with a thesis on the life history of *Plethodon grobmani* in Florida and a PhD (1956) on the relationships of the salamanders of the genus *Plethodon* (both in biology with a minor in geology). During that period, there were four faculty members in the Biology Department with strong interests in herpetology (Archie Carr, Coleman J. Goin, Arnold B. Grobman, and William Riemer), so it was one of the best departments in the field at the time. There also were many graduate students working in herpetology, as well as the Florida State Museum's fine collection of Florida material. There was a special emphasis on field studies not only in herpetology but also in other vertebrate groups, making graduate education there a most exciting experience. The chairman of the department was the famous ecologist and ethologist W. C. Allee. He was successful in hiring PhD graduates from the laboratories of some of the leading biologists in the country to be faculty members

in his department. They came from the labs of Sewall Wright (University of Chicago), G. E. Hutchison (Yale University), Victor Twitty (Stanford University), and E. C. Olson (a student of Alfred Romer at Harvard) from the Field Museum and University of Chicago, all of whom taught upper level courses in their respective fields that biology graduate students could take and/or assist in teaching laboratories.

In the days when Post-Doctoral Research Associates were just being initiated, I was awarded the only one in the Graduate School at the University of Florida, but after only two months, I was offered a tenure-track position in the Zoology Department at the University of Maryland to teach the undergraduate course in genetics and graduate courses in systematics and population genetics. I later taught other courses in herpetology, vertebrate zoology, evolution, zoogeography, and general zoology. The department had a forward-looking chairman, George Wharton, one of the two founders of the Society of Systematic Zoology, who convinced the administration of the University to allow professors in the department to teach only a single course each semester, in order to permit the faculty to concentrate on developing strong research programs. Maryland was an ideal place to study the plethodontid fauna of the nearby Appalachian Mountains, which were near enough to visit as often as every weekend during the active seasons of salamanders. I received National Science Foundation grants for thirty years to support my research. I taught at the University of Maryland for 42 years (1956-1998), longer than anyone in the history of the Zoology Department (now Biology), and since my retirement have remained in the department full time doing research. I had 13 PhD students (eight in herpetology: Richard D. Worthington, Robert G. Jaeger, Rudolph T. Danstedt, Douglas F. Fraser, Gary Fellers, Robert B. Peabody, S. Blair Hedges, Carla A. Hass), and 25 MS students completing their degrees in my lab.

I was active in the American Society of Ichthyologists and Herpetologists, winning a Stoye Award in 1953, serving on the Board of Governors, and as Secretary (1967–1973), and President (1976). I also was President of the University of the Maryland Chapter of Sigma Xi (1979-1980), and was the Salamander Section Editor for the Catalogue of American Amphibians and Reptiles (1978–1992), and a member of the Committee on Standard and English Scientific Names for North American Amphibians and Reptiles, 1999–present.

When I first went to the University of Florida, I wished to work on the genetics of taxonomic characters in *Plethodon* salamanders, but nothing was known about the life history of the local species, so I spent the first two years finding out when they bred, how rapidly they grew and matured, and the season of egg-deposition; this research was my MS thesis. But in spite of the transplantations of pituitary glands and injections of gonadotropic hormones, I was never able to induce females to deposit their eggs in the laboratory (except after they had already mated in the field). So I had to put aside my interest in genetics until later. For my PhD dissertation, I did a taxonomic study on the genus *Plethodon*. When I came to Maryland, I started to work on the comparative life histories of local *Plethodon* species. I have continued this work by comparing the life histories of all eastern species of the genus in a project that is nearing completion.

At Maryland, I became interested in microgeographic variation of morphological characters of eastern *Plethodon* and have done a number of studies on several species. But I was able to begin to study their

genetics in the 1960s when we used electrophoresis of proteins to evaluate geographic genetic variation within species and to determine the amount of divergence between species. This research led to the discovery of numerous previously unknown species in a genus which has little morphological divergence between many of its species. At the present time, I am looking into the presence of cryptic species in other North American genera of amphibians and reptiles.

With the arrival of Jim Peters in the Division of Amphibians and Reptiles, I was invited to become a Smithsonian Research Associate in the Department of Vertebrate Zoology and was offered the opportunity to deposit my research vouchers in the USNM collection. I began to transfer portions of my research voucher collection to the museum in the mid 1980s.

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Endnote – Contributions to the history of the Division of Amphibians & Reptiles – USNM

As one grows older, there comes a desire to record one's past experiences and also the history of one's workplace. None of us in the USNM Division of Amphibians and Reptiles has expressed a desire to write a divisional history for the past half-century. As an alternative, I am encouraging colleagues who have been associated with the division to create autobiographical sketches. Although such sketches will not provide a detailed history of divisional activities, each offers a unique perspective of past divisional activities and insights into each author's contribution to the division and, of course, a window into the author's personality.

The SHIS series is an obvious outlet. SHIS has been a facet of the division's contribution of research information to the herpetological community since its establishment in 1968 by James A. Peters.

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Previously published contributions to divisional history

- SHIS 1. A list of the herpetological publications of the United States National Museum, 1853-1965. James A. Peters 1965 [revised 1968].
- SHIS 42. A revised list of the herpetological publications of the National Museum of Natural History (USNM) 1853-1978. Ronald I. Crombie 1979.
- SHIS 51. Biography and bibliography of James A. Peters. Frances J. Irish & George R. Zug 1982.
- SHIS 101. Herpetological publications of the National Museum of Natural History (USNM), 1853-1994. Ronald I. Crombie 1994.
- SHIS 147. Biographical sketch and bibliography of W. Ronald Heyer. W. Ronald Heyer & Miriam H. Heyer 2016.
- SHIS 148. Biographical sketch and bibliography of James B. Murphy. James B. Murphy 2016.
- SHIS 149. Biographical sketch and bibliography of C. Kenneth Dodd, Jr. C. Kenneth Dodd, Jr. 2016.
- SHIS 150. Biographical sketch and bibliography of Carl H. Ernst. Carl H. Ernst 2016.