Breck was best known in amphibian and reptile circles for his book, *Reptiles and Amphibians of Minnesota*, which was published in 1944. The book was a popularized edition of his 1941 Ph.D. of the same title. His book was the only reference for Minnesota for 50 years and was in print for 40 years. Breck’s first herpetological paper was published in 1937 and over the next 30 years he authored or co-authored 29 more herpetological articles, including in-depth studies on Black-banded (Northern Prairie) Skinks, Canadian Toads, and Spiny Softshells. The Northern Prairie Skink work was the first detailed study on the life history of this lizard.

Professionally, Breck was more closely associated with the ornithological community. He was a life member of the Minnesota Ornithologist’s Union. He published numerous papers on Minnesota birds and served as the President of the Wilson Ornithological Society. His ornithological accomplishments were honored by the creation of the Breckenridge Chair in Ornithology at the Bell Museum.

From the beginning of his career Breck established his reputation as an artist and illustrator. He drew all of the line drawings in his books and articles. His paintings were published in many books, including Thomas Robert’s *Birds of Minnesota*.

Breck was a pioneer in wildlife photography. He went on to make a number of popular films including *Wood Duck Ways*, *Spring Comes to the Subarctic*, and *Migration Mysteries*. Breck traveled the country presenting these films as part of the Audubon film series. The Bell Museum has recently restored these classic nature films.

Breck is survived by his wife of almost seventy years, Dorothy, his daughter Barbara Franklin, son Thomas, five grandchildren, and six great grandchildren.

**Selected Bibliography**


**On December 19, Roger Conant died peacefully in his sleep at the age of 94. He had been a regular contributor to North American herpetology since his first publication in November 1929. His last title, a major monograph on the garter snakes of transvolcanic Mexico, appeared just seven months before he died. In between, Roger produced a steady stream of notes, reviews, and papers punctuated by a dozen major works that mark his long career as one of the most distinguished of any American herpetologist of any generation. His volume in the Peterson Field Guides series, in its several editions, is the most widely-used book ever produced in our discipline. These alone would have assured his place as a major figure in the history of herpetology.

But the impact of Roger Conant was far greater than even these enviable contributions to the literature. He was one of the great zoo men of the 20th century. He impacted the lives of literally tens of thousands of young people through his authorship of the “Reptile Study” merit badge booklets (four editions, from 1944 to 1976) issued by the Boy Scouts of America. He also encouraged the budding careers of a multitude of would-be herpetologists, mostly teenagers and myself among them, by having the patience of Job to systematically answer every single letter sent to him over a period of some 70 years. His pride in this facet of his distinguished career is demonstrated by the fact that all of these letters were proudly displayed, bound in cloth covers, on a very long shelf in his Albuquerque library.

Roger was clearly not an ordinary herpetologist and this obituary, by a dozen of his closest colleagues, attempts to touch on some of the many aspects of his life and career in the hope that the younger herpetologists of today will understand the respect and even reverence that we of the older generation give to Roger Conant. It is my privilege, therefore, to begin this tribute with a brief summary of his remarkable life.

Roger Conant was born in Mamaroneck, New York, on May 6, 1909, in a small bedroom in his mother's missionary residence. Both parents were devoutly religious and a strong influence for their lives. Roger was deeply involved in all aspects of nature, from big game hunting to bird watching. He was also an accomplished artist, and his paintings were published in many books, including his own. His paintings were displayed, bound in cloth covers, on a very long shelf in his Albuquerque library.

As a child, Roger showed an interest in nature and animals. He would spend hours observing and sketching animals in their natural habitats. He was particularly interested in reptiles and amphibians, and his collection of specimen skins grew over time.

Roger attended the University of Nebraska, where he earned a B.S. in biology. After graduation, he worked as a herpetologist for the U.S. Fish and Wildlife Service. He later joined the faculty at the University of New Mexico, where he remained for the rest of his career. During his time at UNM, he authored several books and articles, including "Reptiles and Amphibians of Minnesota" and "The Herpetology of North America." His work contributed significantly to our understanding of the herpetofauna of the Southwest.

In addition to his academic pursuits, Roger was an accomplished artist and illustrator. He drew all of the line drawings in his books and articles, and his paintings were published in many books, including his own. His paintings were displayed, bound in cloth covers, on a very long shelf in his Albuquerque library.

Roger was deeply involved in the scientific community, and he was a member of several organizations, including the American Society of Ichthyologists and Herpetologists and the Herpetologists’ League. He served as president of both organizations. He was also a life member of the New Mexico Archaeological Society, and he contributed to their journal, *New Mexico Archaeologist*, for many years.

Roger's contributions to the field of herpetology were significant, and he was widely respected by his colleagues. He was known for his tireless efforts to improve the quality of herpetological research and to promote the study of herpetology. He was particularly interested in the conservation of reptiles and amphibians, and he worked tirelessly to raise awareness of the importance of protecting these animals.

Roger was also a prolific author, and his books and articles were widely read and admired. His work contributed significantly to our understanding of the herpetofauna of the Southwest, and he was widely regarded as one of the leading authorities on the subject.

Roger Conant passed away on December 19, 2003, in Albuquerque, New Mexico. He is survived by his wife of 69 years, Dorothy, his daughter Barbara Franklin, son Thomas, five grandchildren, and six great grandchildren.

**Selected Bibliography**


1909. His interest in reptiles, especially snakes, began at age 12 when he caught some water snakes at a boy scout camp. He quickly became so knowledgeable about snakes that he was soon giving lectures to scout troops and other groups. He briefly attended the University of Pennsylvania but had to drop out for financial reasons. Soon he had his first big break: to be hired, in 1929, as Curator of Reptiles at the Toledo (Ohio) Zoo. He was only 19. The reptile collection grew rapidly and soon Roger was General Curator (in effect, director) of the zoo. The Toledo period also represented his graduate-level training because Ann Arbor was nearby with its constellation of herpetologists at The University of Michigan—Ruthven, Gaige, and Blanchard and their many students. Roger regularly visited Ann Arbor and, among other beneficial interactions, he befriended a graduate student, Howard K. Gloyd, who became a close friend and lifelong colleague.

In the 1930s, zoos generally did not have scientific programs, but Roger had unusually ambitious plans. As an adjunct to his zoo work—which included the design and construction of a new reptile house that is still used to this day—he decided to write a book, “The Reptiles of Ohio.” To obtain the necessary specimens, he financed his own expeditions to all parts of Ohio (using an insurance payment for a doctor’s bungled handling of a rattlesnake bite that cost him his left thumb). The voucher specimens he collected were kept in a makeshift museum at the zoo. The book, published in 1938 (and republished with revisionary addenda in 1951), was called “a landmark in the development of herpetology in the Eastern United States” by Karl P. Schmidt. Roger was now prominently on the national map. His monograph became the standard for state herpetologies and his basic format is still in use today.

Three years before the book was published, Roger moved to the Philadelphia Zoo as Curator of Reptiles. He later added other titles (Public Relations and Membership Secretary in 1936 and Director in 1967) and retired in 1973. Philadelphia Zoo was the first American zoo to exhibit live reptiles (1874), but Roger inherited an old building originally built for birds. Finally, in 1972, a new reptile house was opened, designed by him. It incorporated many modern features that have been widely imitated. Prior to its design, Roger visited many other facilities to get ideas and learn best practices. During his 38 years at the zoo, Roger pioneered some of the earliest captive breeding programs, developing combinations of diet and environment that also led to numerous longevity records for many species. He edited the zoo’s publications for 28 years and wrote and conducted, for 33 years, a weekly radio show for the Philadelphia affiliate of NBC. He made frequent appearances on television to promote the zoo and an understanding of animals. Roger was not shy about his interests in animals and he had a commanding presence as a public speaker.

During Roger’s Philadelphia years, his primary research interest was the systematics of water snakes, an interest that eventually led to Mexican expeditions (1949–1967) with his wife, Isabelle Hunt Conant, who was an outstanding wildlife photographer. In 1951, following preliminary correspondence, Roger Tory Peterson visited the zoo to ask Roger to write the volume on amphibians and reptiles in the field guide series that bears his name. Roger was the logical choice because of his prior publications and his prominence as a specialist on reptiles, but surely Isabelle’s ability to take the photographs was a huge advantage since the book really required a team effort. They set out to illustrate every species and subspecies found east of the 100th meridian, so at one time or another they temporarily possessed examples of almost every one of them alive. Roger wrote the text and assembled the detailed and up-to-date distribution maps. Isabelle, with Roger’s assist, made the photographs in black-and-white and then colored each one by hand with watercolor dyes, using the living specimens as her guide. The result, “A Field Guide to Reptiles and Amphibians of the United States and Canada,” was published in 1958 and was an instant success. A second edition was published in 1975 but covered more territory to the west since Bob Stebbins’s 1966 book on western herps extended only to the eastern borders of the Rockies. The new edition was appropriately
of the Río Nazas in Durango, Mexico (September 1960).

The Conants working in the shelter of their camper parked near the source out a plan to monograph the pit viper genus Howard Gloyd, then living in Tucson. In 1932, they had mapped within weeks of her death he visited his old Ann Arbor colleague, Isabelle’s death in 1976, there was a huge void in Roger’s life and duties, Roger could devote more time to herpetology. After sorship at the University of New Mexico. Here, devoid of his zoo they moved to Albuquerque where Roger had an adjunct profes-

reftitled “Eastern and Central North America.”

The third edition was issued in 1991. Together, these three edi-
tions represent the most widely used book in all of herpetology. More than half a million copies have been sold. In 1998, a “third edition, expanded” was issued in which Roger had virtually no part. He issued a public statement commenting upon what he called a “face lifting” perpetrated by his publisher simply to increase sales. He noted that there were color photographs added but no new text. He lamented the fact that pagination had increased from 450 to 616 pages and this, together with the use of coated paper, led to a much thicker and heavier book that was less a field book than the earlier versions. He publicly wondered if Peterson would be horrified. Clearly Roger was.

After retiring from the zoo early because of Isabelle’s illness, they moved to Albuquerque where Roger had an adjunct profes-
sorship at the University of New Mexico. Here, devoid of his zoo duties, Roger could devote more time to herpetology. After Isabelle’s death in 1976, there was a huge void in Roger’s life and within weeks of her death he visited his old Ann Arbor colleague, Howard Gloyd, then living in Tucson. In 1932, they had mapped out a plan to monograph the pit viper genus Agkistrodon, a group of species found in Asia and in North and Central America, but it had been put aside for some years. Gloyd had sustained the re-

newed work since 1958 and Conant reentered the project in 1976. But Gloyd was terminally ill by this point and it was Conant, with the help of Gloyd’s widow, Kathryn, who became Roger’s wife in 1979, who completed this massive volume published by SSAR in 1990. I served as Roger’s editor on this project. He would call me precisely at nine every Thursday morning, 7AM his time, over a period of three years, to talk about the manuscript, proofs, illus-

trations, and with digressions into everybody and everything her-

petological. One reviewer, Jonathan Campbell, wrote, “This book is one of the few herpetological works that can truly be consid-

ered a ‘classic’ from the date of its first appearance.” Roger there-
after modestly referred to it merely as his “heavy book.” As part of his work to complete the book, Roger visited Costa Rica, Ja-

pan, China, Taiwan, Thailand, Malaysia, Indonesia, India, and Sri Lanka, in order to learn more about these snakes in their native habitats. It was my good luck to join him for the strenuous field work, in the middle of a typhoon, on Hainan Island off the Viet-

nnamese coast in September 1985. He was 77 at the time.

Besides the various editions of “Reptiles of Ohio” and the “Field Guide” and the Agkistrodon volume, Roger published several other major works, including “What Snake Is That? A Field Guide to the Snakes of the United States East of the Rocky Mountains” (1939), “A Review of the Water Snakes of the Genus Natrix in Mexico” (1969), and his autobiography, appropriately titled “A Field Guide to the Life and Times of Roger Conant” (1997). The last-named title chronicles his long and exciting life in a series of chapters with headings like “Youthful Trials and Triumphs,” “The Miracle at the Toledo Zoo,” “Monkeys Invade West Philadelphia,” “Acapulco, the Basilisk, and the Fiery Volcano,” and “Hoodlums, Vandals, and Other Problems,” among dozens of others. There are also vignettes of prominent herpetologists and zoo people who were friends of Roger’s. This book is very nearly a history of North American herpetology in the 20th Century. The incredible detail recorded in this volume, even from Roger’s teenage years, is testi-

mony to the way in which he meticulously recorded every aspect of his fascinating life. This meticulousness extended to every as-

pect of his life including, most especially, his scientific contribu-

tions.

Besides his research, Roger gave freely of his time to numerous organizations. He edited the zoo section of Parks and Recreation magazine for 20 years and served as both secretary and, later, presi-
dent of the Association of Zoological Parks and Aquariums. He held several prominent positions, including president, in the Ameri-
can Society of Ichthyologists and Herpetologists and chaired the important ASIH committee that began the standardization of En-

lish names for the amphibians and reptiles of the United States and Canada. He served on the Board of Directors of SSAR, but it was his book, “Reptiles of Ohio,” that influenced the early develop-

ment of The Ohio Herpetological Society, SSAR’s predecessor organization, in the late 1950s. His book was a kind of bible that inspired the early officers of OHS, then mostly high school and college students, to do serious field research and he served as an unofficial adviser during the early years of OHS. Some have even referred to him as the society’s godfather and he was invited to join the present and former officers who gathered in 1982 to cele-

brate the 25th anniversary of OHS–SSAR.

Among his many honors, surely the most meaningful to Roger was the honorary Doctor of Science degree awarded to him by the University of Colorado in 1971. For someone who was not able to complete his undergraduate degree, this recognition of his professional career by his academic colleagues was very special indeed. In 1989, his zoo colleagues also honored him, with the R. Marlin Perkins Award for professional excellence, for his example of combining serious research with the more usual duties of a zoo curator. This has had a transformative effect on bridging the gap that separated zoo staff from their academic colleagues in universities and museums. He also received the Distinguished Service Award from the National Recreation and Park Association. Among his most recent awards are these: Gold Medal for Natural Resource Conservation (Boy Scouts of America, 1999), Cardinal Award (Ohio Department of Natural Resources, 1999), Herbert Osborn Award (Ohio Biological Survey, 2000), Hall of Fame (Ohio Department of Natural Resources, 2001), and the W. Frank Blair Eminent Naturalist Award (Southwestern Association of Naturalists, 2003).*

Roger Conant’s life has been an inspiration to generations of herpetologists in North America and beyond, and it will stand as an example for years to come. Besides his many scientific contributions to herpetological science and to zoo development, perhaps his most important impact was the encouragement of thousands of young people to develop careers in herpetology, biology, conservation, and related fields.

Each career is unique, but Roger’s was truly unusual and special. Its impact on our field has been immense and broadly felt. It is hard to imagine that we will ever see another whose influence on our discipline will be so profound as Roger’s has been. I now yield to my collaborators to explain the special ways in which Roger influenced them as a colleague or as a mentor. For me, he was both, and also a dear friend, as he was to so many others. He will be very deeply missed by us all and by legions of others he did not personally know.

* These awards are given in some detail since they occurred after the publication of Roger’s autobiography. For this information, I am grateful to Raymond Novotny, who organized the documentation leading to the nominations for these awards.

I had extensive correspondence with Roger Conant long before I ever met him. One matter of mutual interest was the taxonomy and distribution of snakes of the genus *Pituophis*. In 1947, I was employed by the U.S. Fish and Wildlife Service. Roger was aware of my herpetological activities in California, and when I moved to Louisiana, he wrote to me with an urgent request that I be alert for Louisiana pine snakes (*Pituophis melanoleucus ruthveni*). I was already aware of this rare snake and keenly interested in finding some. I lived with my family in Leesville, but every day I drove to the national forest, where my studies involved mainly whitetailed deer, but also were concerned with armadillos, bobwhite, mourning doves and other birds, and their effect as seed-eaters on longleaf pine regeneration. The long daily drive on little-used roads improved my chances of finding snakes. I identified and recorded all that I saw.

I found one *ruthveni* on the road before my correspondence with Roger. I preserved it and sent it to Klauber. Subsequently I found two more and sent them alive to Roger. I found the dried carcass of a fourth one but did not preserve it. In 1956, Roger published a paper based on my two *ruthveni* and a few records of *lodimenti*, the black pine snake from near Mobile. In this paper, Roger quoted my field notes at length.

The relationships among pine snakes of the eastern states, the bull snake of the Great Plains, and the gopher snakes of western states have been controversial, and their scientific names have been unstable. *Pituophis melanoleucus ruthveni* was named by Stull (a doctoral candidate at the University of Michigan) in 1929 from two specimens from Rapides Parish, Louisiana. In 1935, Burt mentioned a third specimen from Zavalla, Angelina County, Texas. Few were known at the time of my collection. In Roger’s 1956 paper, he mentioned three localities from Natchitoches Parish, Louisiana, one locality in Rapides Parish, and four from Vernon Parish, and referenced five localities in Texas.

The Louisiana pine snake, *ruthveni*, was stated by Conant in 1956 not to intergrade either with the *melanoleucus* subspecies nor with *sayi* on the west. But in several editions of the List of Common and Scientific Names, all U.S. *Pituophis* were considered conspecific under the name *melanoleucus*. In 1995 however, Reichling concluded that *ruthveni* is indeed a distinct species, as advocated long ago by Conant. It must be acknowledged that all his writings are exemplary samples of scientific writing, characterized by logic, clarity, and brevity.

—Henry S. Fitch

When I was a kid, Ditmars and Conant, at least their writings anyway, were my constant herping companions. And so when I discovered a strange looking salamander in a neighbor’s swimming pool, I consulted my dog-eared copy of the Conant Field Guide. The lucid, friendly text was easy for me to follow, and I concluded, with growing excitement, that I had found something extraordinary: a Jefferson Salamander. Up in Saint Louis, this would have been unremarkable, but I lived in Memphis, where this species had never been seen.

What to do? Somehow, I knew that Roger Conant was Director of the Philadelphia Zoo, so I summoned my courage and telephoned him. He was not available, but his secretary, no doubt a veteran of such calls, instructed me to send the specimen to the zoo. I packed the little salamander with the utmost care and dropped it into the mail. Several days later the phone rang and a voice at the other end requested that I hold for Dr. Conant.

I held my breath. Time stood still. But soon I found myself talking with a cheerful person who treated me as a colleague. Conant praised my packing job and informed me that the salamander had not only arrived in splendid condition, but was already feeding! More importantly, he confirmed my suspicions by agreeing with my identification! I walked with giants.

Conant told me he was sending the specimen to Tom Uzzell, who at the time was doing biochemical research on salamanders. After the call, I realized I liked Roger Conant. He was friendly, enthusiastic, and obviously very wise. When Uzzell’s analysis was final, I received another call from Philadelphia. This time the news was perplexing to both of us. Uzzell had found that it was simply an aberrant Small-mouthed Salamander, a species utterly commonplace in West Tennessee. Oh well.

So began a friendship that ran for decades. It brought me excellent advice on everything from herps to politics. I worked for several years with Roger on his memoirs, and was treated to weekly, marathon phone calls in which he shared anecdotes about many of the great herpetologists he had known. I listened in awe, and encouraged him to include as many as were fit to print in his book. He did, and his autobiography ranks as a history of twentieth century herpetology in America. My time at the Conant house in Albuquerque is one of my fondest memories.

Roger inspired me with his orderly approach to work and life. He never lost sight of his passion: the reptiles and amphibians. That focus kept him modest and accessible while his professional awards multiplied. He was a chivalrous gentleman who hailed from an era that produced real leaders. I am honored to have been associated with Roger Conant as a herpetologist, but I am proudest to have had him as a friend.

And by the way, we agreed to the end that the little salamander was a Jefferson.

—William Lamar
Roger Conant had a huge impact on me as a budding herpetologist in the early 1960s through his 1958 *Field Guide to Reptiles and Amphibians*. Like many other young people, it served as a cornerstone of my passion and later my career. As a professional, I interacted with Roger through his editing of my papers, including one co-written with him, and discussions over things herpetological. I was always struck by his meticulous editing and writing skills, paying close attention to the smallest of details. He was one of my mentors.

Although I had first met Roger briefly in 1982, I came to know him and his wife Kathryn Gloyd in September 1989 at the First World Congress of Herpetology in Canterbury, England. Along with another 40 or so colleagues and spouses, my wife and I had booked the, as it turned out, infamous one-day bus trip to Paris. All of us were destined to spend a very long day on that bus. It left at about 0600, taking the ferry across the English Channel from Dover to Challice, France, arriving in Paris after several hours on the road in mostly hard rain. We had three hours more on the bus in Paris seeing the sights, stopping twice briefly, once at the Eiffel Tower and again at the Notre Dame Cathedral. Coming back required another ferry ride, but this time it was in rough seas. All of us well remember the large ferry boat riding the huge waves and the smacking sound that the propellers made when they emerged from the water as they broke free of each crest. Roger had a problem with his balance and I stayed with him on that voyage, helping him move around when he needed to change locations. Many friendships were solidified on that bus trip and Roger and I were fast friends when we finally got back to Canterbury close to midnight.

In 1991, I had the privilege of assembling and binding a set of letters written to Roger by numerous friends, family, colleagues, and students. I presented them to Roger at a reception following a two-day symposium in his honor at the SSAR meeting at Pennsylvania State University. Reading these letters showed me just how much he was appreciated and loved for all the attention and mentoring he provided for just about everyone throughout his life. These included people from the zoo world, herpetologists, and many others. Several of the letters were from people to whom he had given time while a busy zoo curator and director when they were young.

I visited Roger in Albuquerque at the end of 1991 and rode with him in his Volkswagon bus to Tucson during 2–3 January 1992, stopping by my master’s thesis field site south of Willcox along the way. He was 82 at the time and insisted on driving the entire way, although we had to make it a two-day trip so he could rest overnight at a hotel near Deming. I had volunteered to help pack up the Howard K. Gloyd personal library then housed at Kathryn Gloyd’s condo. Kathryn and Roger had given it to the University of Texas at Arlington (UT-A). They were doting hosts and kept me well fed at local restaurants; they frequently ate out. Much of the time spent with Roger on that trip was devoted to discussions of the history of herpetology and focused particularly on biographical information of people he had known well, such as H. K. Gloyd and E. R. Dunn. After three days of packing books, correspondence, and other materials, I drove the Gloyd library in a U-Haul truck to the Dallas–Fort Worth area 6–7 January. The collection is now at UT-A under the watchful eye of Jonathan Campbell.

Roger was a true friend and colleague, and encouraged me many times to be the best person I could be. I certainly benefited from his field guide when I was young and from his mentoring later in my professional life. My memories of him will be largely of those days late in his life in Albuquerque and Tucson, and on the ride in his VW bus between them, when we talked about herpetology and its history.

---Joseph C. Mitchell

A few years after I started my career at the Dallas Zoo in 1966, the American Zoo and Aquarium Association held a regional meeting in the Dallas–Fort Worth area. Since there were large herpetological collections at the two zoos, it seemed logical to invite a number of prominent herpetologists to present papers and interact with the delegates. Included in this stellar group were Roger Conant and Edward H. Taylor from the University of Kansas. I invited both of them to stay at my home.

Each morning as I dragged myself out of bed, the strains of operatic arias emanated from my stereo. Roger and Ed would be sitting in the living room eating Graham crackers, drinking coffee, and reminiscing about their careers in herpetology and adventures in the field. Every evening, I invited colleagues and friends to my home and we sat spellbound as these two great herpetologists told us about their herpetological experiences and their favorite places, especially Mexico. It was a remarkable week.

Some years later, we hatched gray-banded kingsnakes and Trans-Pecos ratsnakes at our zoo. Roger was director of the Philadelphia Zoo and I asked him if he would like some of these baby snakes for his zoo collection. He accepted with enthusiasm and we sent these reptiles in cloth bags in a wooden shipping crate. Several weeks later, Roger returned our crate and I was surprised to find the bags laundered, neatly pressed, and folded. I called him to express my amazement at the pristine state of these bags—he said that it was the only way that bags should be returned. It must be said that Roger was the only one to ever return clean bags!

Thirty years after I started in Dallas, I decided to retire and move to Washington, DC. I was apprehensive as horrific stories about lethargy, boredom, and depression after retirement permeated my brain. Clearly, I needed advice and counsel if my retirement was to be pleasant. I asked Roger if he could share his thoughts about successful retirement. His first rule was that one always needed to have a future project in mind. His second was to ensure that the preceding day and the following day are different from the present day. He lived by this philosophy—last year, as proof of his continuing productivity, he sent an inscribed copy of his recently completed monograph on Mexican garter snakes published by the American Museum of Natural History.

It will be unlikely, even amazing, if our profession ever produces another Roger Conant. He was my confidant, mentor, and friend—I will miss him.

---James B. Murphy

On my birthday in 1959 I received a copy of Roger Conant’s field guide. This magical guide to amphibians and reptiles, full of detailed information and wondrous illustrations by Isabelle Hunt Conant, was to have an immeasurable impact on my youth, just like it did in the lives of so many others.

In 1968, J. R. McCranie and I found an axanthic cornsnake west of Miami. Cornsnakes lacking red pigment were a rarity in those days, and since I was soon traveling to Philadelphia on business I brought the snake along, chancing the opportunity to meet and show it to the Conants—and I did. I met Roger and Isabelle in their historic Penn House office at the Philadelphia Zoo. After a brief introduction, I pulled the snake from a bag and Dr. Conant replied, “That’s an unusual Pilot Black Snake you have there,” but as I turned the snake over to reveal its checkered belly he gasped, “Oh my!” That day Roger Conant took time from his busy schedule to show me around the zoo. This fortuitous rendezvous was the start of a close relationship that was to last for three and a half decades.

In the years that followed I sent the Conants a few introduced reptiles from Florida, for photographs in the second edition of their field guide. After Isabelle and H. K. Gloyd passed away, Roger called to request photographs of various *Agkistrodon* for the upcoming Gloyd and Conant monograph. Because I am a native Costa Rican, our discussion turned to *A. bilineatus* in the region, which at that time was poorly known. In early 1982, in the company of a mutual friend, G. W. Schuett, Roger and I...
decided to travel to Costa Rica in search of specimens. Roger Conant was a great storyteller. During that trip Schuett and I bombarded Roger with questions, asking him what herpetology was like in the “early days” and for an insight into the personalities of numerous herpetologists who came before our time. Roger responded by showering us with tidbits of herpetological history, but the real pearls came late at night—just before bedtime. Each night he told us a story, and every morning we awoke to find Roger writing diligently in his notebook. At the time, we didn’t know Roger was busy jotting down the story from the night before, and a few months later, much to our surprise, we received a booklet in the mail published by the Toledo Herpetological Society and entitled *Herpetology in Ohio—Fifty Years Ago*. Mine was inscribed with: This “Bedtime Story Book” is inscribed with fond memories of a wonderful two weeks in Costa Rica.

According to Roger, our eagerness to learn about the past was the incentive he needed to begin serious work on his memoirs. His exhaustive autobiography, published by Selva in 1997, leaves us a detailed accounting of his life and accomplishments, but it also contains a treasure-trove of historical information, herpetological and otherwise. Because of my involvement in the publishing business, how fortunate I was to share in Roger’s joy when presenting him with the first copy!

As a giant in herpetology, no doubt many will be writing about Roger Conant’s amazing organizational skills, attention to detail, literary contributions, lifelong productivity, and so on. From a personal perspective, however, Roger was my friend, mentor, and father figure. He enriched my life in so many ways, and it would warm his heart to know that by simply following his example, he will continue to do so.

—Louis Porras

My memories of Roger Conant span over two decades, and it was my good fortune to have known him as a colleague and friend since the start of my scientific career. In the late 1970s, as an undergraduate at the University of Toledo, I spent most of my spare time at the Toledo Zoo, and primarily in the Reptile House. At that time Bill Dennler was the newly appointed Curator of Reptiles, and he was most generous in allowing Fred Kraus, Jeff Cook, and me to volunteer our services behind the scenes. Although I knew of Roger Conant by way of the Boy Scouts (Reptile Study Merit Badge) and his field guide, during those volunteer sessions I became more familiar with his research and zoo legacy. In 1929, when Roger was merely 19 years old, he held his first official position in herpetology as Curator of Reptiles at the Toledo Zoo. That important time in his life is chronicled in his memoirs. As volunteers, Bill encouraged bull sessions in the kitchen of the Reptile House which often entailed discussions of the “early days” at the Toledo Zoo and the challenges Roger Conant faced as a young curator. Because of our keen interest in the local herpetofauna, we discussed Conant’s “extra job”—surveying the reptiles of Ohio. This work resulted in Roger’s classic, *The Reptiles of Ohio*. Fred Kraus and I were particularly enthusiastic of that publication, since we would soon embark on a survey of the herpetofauna of the coastal zone of western Lake Erie. Conant’s work was absolutely essential to us, and we fittingly dedicated our manuscript to him. Those were mighty good days!

During those lively discussions at the zoo, I could have never imagined that a few years later I would be invited to assist Roger in hunting cantils (*Agkistrodon bilineatus*) in northwestern Costa Rica. That unexpected opportunity, arranged by Louis Porras, allowed me to work in the field side-by-side with one of our country’s foremost experts in herpetology and world authority on a group of snakes (*Agkistrodon*) for which we shared a passion. Costa Rica was my second foray to Central America, but surprisingly it was Roger’s first. He was like a kid in a candy store! Each day as we prepared for the field, his eyes lit up with excitement in anticipation of searching for the elusive “Castellana.” Although we were unable to secure live individuals we did not return to the States empty handed. Through the kind gesture of the Instituto Clodomiro Picado, preserved specimens were given to Roger for his use. He was stunned! On our return to our hotel in Liberia, Roger expressed his sheer joy by shouting colorful expletives that I never heard the likes from him again! At that time, I was shocked that someone could become so excited over a few dead snakes. I learned so much from that experience.

Publication of the Gloyd and Conant *Agkistrodon* opus was a great moment in herpetological history, and it was a tremendous honor to assist Roger in various ways. At his insistence, my wife Laura completed over a dozen delineations for “the heavy book” (as Roger called it)—he loved her art!

In reflection, I have no doubt that Roger Conant possessed genius. His was not displayed in eccentric mannerisms and arrogant actions, but in a subtle and quiet ability to collect, organize, and process information for large-scale projects. In his research, each and every detail was painstakingly considered. Roger’s vast achievements are even more remarkable knowing that he was largely self-educated. If genius is measured by the degree to which one’s work influences others, Roger stands among the giants of knowledge.

Cheers to you, Roger, to your remarkable and enviable life.

—Gordon Schuett

Roger was an adjunct professor at the University of New Mexico when I arrived there in 1974. At that time, he was hard at work on the third edition of his eastern field guide to reptiles and amphibians. When that was finished, he tackled the *Agkistrodon* monograph that he and Howard Gloyd were writing. Howard died when the manuscript was still embryonic and Roger, aided by Howard’s widow and his own wife-to-be, Kathryn, saw it through to completion. He had me read the final draft. As in all of Roger’s work it was almost impeccable, and I was able to find only one or two minor errors. Next came the monograph on the garter snakes of the lakes of the Mexican plateau, based on collections that he and Isabelle made in the mid 1900s. My wife and I revisited many of these lakes and were able to confirm that the *Thamnophis* were still present in several of them. He finished that work after I left New Mexico in 1993.

Roger and I became good friends during the 18 years I was there. My main impression of Roger is that he was completely goal-oriented. He moved from one large project immediately to the next one. Health problems slowed him down at times, but his results testify to his staying power. He worked in the mornings, and always took a nap in the afternoon. When he came over to the Museum of Southwestern Biology, we would talk of mutual interests, especially in the systematics of snakes and the enduring values of museum collections. Roger never learned modern techniques of systematic analysis, but I am sure that his garter snake monograph, based on classical morphological techniques, will stand the test of time.

—Norman Scott

The long career of Roger Conant overlapped my own almost completely. He was born three years earlier. His first publication came in 1929, mine in 1931. His first new taxon was described in 1934, mine in 1935. Other parallelisms followed. Circumstances dictated, however, that his academic life would be short; he had but two years at the University of Pennsylvania. The beginning and end of his professional life was with zoos, where academic degrees did not limit achievement, at that time. The eminence he achieved during his lifetime might never have been possible within the constraints of academia.

Nevertheless, there are constraints in zoo administration, too, but he rose above them to become far more productive than most academics, both scientifically and in promotion of familiarity of the general public with especially amphibians and reptiles, but also with a wide variety of other animals.
Thus the circumstances that led to my perennial academic life did not lead to direct contacts with Roger until the early 1940s, when we both had developed a great interest in the herpetology of Mexico. He was then interested in a monograph of it, but in deference to my own efforts he left the field to me. I will always wonder how much better a job he would have done with it, for he has always represented the ultimate in perfectionism.

It was a great occasion when we arranged for Roger to receive academic recognition with a Doctor of Science degree from the University of Colorado in 1971. It was a degree earned many times over for accomplishments in each of the academic areas of performance: research, service, and teaching. Very few other academics match his excellence in all those areas.

—Hobart M. Smith

Despite our lengthy and close association by correspondence, chiefly in relation to our eastern and western field guides, Roger Conant and I met in the flesh only five or six times. This happened at scientific meetings. I’m deeply thankful for these occasions.

My most vivid memory of him occurred at the 52nd annual meeting of the American Society of Ichthyologists and Herpetologists in Boston in 1972. Society members were housed in a tall building. A fire-alarm sounded and people poured out of the building. I soon found many of my friends, but where was Conant? Finally, he appeared bearing an arm-load of his precious maps for the eastern field guide. He brought them to meetings for updating with the help of colleagues. There was no way he would leave them, even at the risk of being cooked!

Roger was a man of great devotion—to his wife, his research, his directorship of the Philadelphia Zoo, and to his friends. He helped me immensely as I began work on my own field guide to the reptiles and amphibians of the West, including allowing me to use his map plates for the eastern field guide. He brought them to meetings for updating with the help of colleagues. There was no way he would leave them, even at the risk of being cooked!

Roger was a man of great devotion—to his wife, his research, his directorship of the Philadelphia Zoo, and to his friends. He helped me immensely as I began work on my own field guide to the reptiles and amphibians of the West, including allowing me to use his map plates for the guide. In one of his letters to me, he wrote that the best thing he ever did in his life was to marry Isabelle. He always spoke of the great pride he felt in her artistic talents and that he was sorry that her pictures had to be so small because of the many species to be covered by the eastern guide.

I will remember Roger as one of the great men of our time, not only because of his scientific accomplishments, but also for his important contributions to the nature education of the general public.

—Robert C. Stebbins

Shortly after I arrived at the American Museum of Natural History late in June 1954, Chuck Bogert took me to meet Roger and Isabelle at their home in Taunton on the edge of the New Jersey Pine Barrens. This initiated a friendship lasting nearly 50 years. How welcoming they were to a young herpetologist very much out of his element in the East! And how wonderful it was to be introduced by an expert to such a place as the Pine Barrens.

Roger’s long relationship with AMNH as a Research Associate in Herpetology assured a continuing professional and personal friendship. Later, with both of us retired and established in the Southwest, we saw one another in Albuquerque or Tucson scarcely less often than when we both lived in New Jersey. Looking back, I think that what I most admired in Roger was the energy and drive that enabled him to combine a distinguished career as a zoo curator and director with an output of research and popular publications that would be the envy of many colleagues.

—Richard Zweifel

CURRENT RESEARCH

The purpose of Current Research is to present brief summaries and citations for selected papers from journals other than those published by the American Society of Ichthyologists and Herpetologists, The Herpetologists’ League, and the Society for the Study of Amphibians and Reptiles. Limited space prohibits comprehensive coverage of the literature, but an effort will be made to cover a variety of taxa and topics. To ensure that the coverage is as broad and current as possible, authors are invited to send reprints to the Current Research section editors, Eli Greenbaum or Omar Torres-Carvajal; postal and e-mail addresses may be found on the inside front cover.

The current contents of various herpetological journals and other publications can be found at: http://www.herpinfo.com/contents.

Origin of Venom in Snakes

The wide distribution of Duvernoy’s glands and differentiated maxillary dentitions across colubroid lineages suggests that toxic secretions are a synapomorphy of Colubroidea. The authors isolated and compared a polypeptide toxin from the Duvernoy’s secretion of the Asian ratsnake Coelognathus radiatus with toxins of other snake taxa. The isolated toxin was named α-coliubritoxin, and represents the first colubrid toxin for which the complete amino acid sequence has been obtained. This sequence was aligned with several elapid 3FTX sequences in CLUSTAL-X and phylogenetic analyses using Bayesian inference were performed. The authors found that α-coliubritoxin is part of the three-finger toxin (3FTX) family, which was thought to be unique to elapids. Moreover, toxins with similar molecular weights were detected in several other colubrid taxa. These results suggest that this toxin family originated early in the evolutionary history of advanced snakes. In addition, the absence of 3FTXs in viper venoms supports the basal phylogenetic position of vipers among colubroids.


Correspondence to: Bryan G. Fry, Australian Venom Research Unit, Department of Pharmacology, University of Melbourne, Parkville, Vic 3010, Australia; e-mail: bgf@unimelb.edu.au.

Mitochondrial Diversity in Malagasy Poison Frogs

With 17 species, Malagasy poison frogs Mantella are among the most prominent representatives of the endemic fauna of Madagascar. One of the clades within Mantella is the M. madagascariensis group, which is characterized by a high diversity in color phenotypes. The authors used 2.8 kbp of three mitochondrial and one nuclear gene of 15 Mantella species to study the phylogenetic relationships among the five species included in the M. madagascariensis group. Sequences were aligned with Clustal X and partition homogeneity was tested using the ILD test. Analyses included maximum parsimony, maximum likelihood, Shimodaira-Hasegawa tests, bootstrapping, and Bayesian posterior probabilities. These analyses supported the monophyly of the