

## Obituary

### Daryl R. Karns (July 23, 1949--June 7, 2011)

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Daryl Ralph Karns died unexpectedly at age 61 on June 7, 2011, near his home in Madison, Indiana (Fig. 1). He left a legacy of global scientific research in the field of amphibians and reptiles, and a teaching career that spanned 27 years at Hanover College in Hanover, Indiana. Karns was born the son of Ralph R. and Lillian M. Heinze Karns on July 23, 1949. He is survived by his wife, Dr. Pamela A. Middleton, his brother, Rodney Karns, his sister, Jarmila Fuller, and their families. He grew up in Homewood, Illinois, on the far southeast side of Chicago and attended the Homewood-Flossmoor Community High School.

Daryl's career path was strongly influenced by several school field trips to the Field Museum of Natural History in Chicago where Daryl became a young expert on dinosaurs and other vertebrates. These were capped off with a personal "field trip" arranged by a close friend of his mother's to the home of Karl P. Schmidt, Chief Curator of Zoology at the Field Museum, who was also a resident of Homewood, Illinois. Thirty years later, sitting in what had been Schmidt's office at Field Museum, Daryl would recall the details of the artifacts in K. P. Schmidt's home "museum" and how it stimulated his interest in natural history.

For his undergraduate work Karns attended the University of Wisconsin-Madison from which he received his bachelor's degree in zoology in 1972. He went on to the University of Kansas where he served as a curatorial assistant in the paleontology collection at the Dyche Museum of Natural History, and earned a master's degree in systematics and ecology in 1974. While at the University of Kansas, he planned and designed a series of field identification guides to the vertebrates of Kansas utilizing an illustrated flow chart.

Next Karns joined the U.S. Peace Corps which led to his assignment in Senegal, West Africa, as a research scientist in the Smithsonian Institution-Peace Corps Environmental Program (SI-PCEP) from 1974 to 1976. SI-PCEP was an international initiative to develop biodiversity and conservation biology projects. While serving in Senegal, Karns collaborated with Mamadou Cissé of the Département de Zoologie des Vertébrés terrestres at the Institut Fondamental d'Afrique Noire (IFAN) and the University of Dakar. They conducted surveys and later published papers on the systematics and ecology of Senegalese lizards.

Following his work in Senegal, Karns initiated his Ph.D. work at the University of Minnesota (Minneapolis). There he worked



**FIGURE 1.** Professor Daryl R. Karns, 23 July 1949 – 7 June 2011. This photograph was taken in March of 2011 adjacent to the trail head of the nature trail system now named The Daryl R. Karns Natural History Trails on the campus of Hanover College, Hanover, Indiana. The photograph was taken by Sandra Guthrie.

as a curatorial assistant and research assistant at the James Ford Bell Museum of Natural History, while conducting his doctoral research in the Department of Ecology and Behavioral Biology at the University under the direction of Professor Philip Regal. His research, which involved extensive field work in the peat bogs of northern Minnesota, focused on the effects of acidic bog habitats on amphibian reproduction; it was completed in 1984. Whenever Daryl talked about the temperature extremes and insect concentrations that he encountered during his year-round visits to the bogs, it gradually became clear that he really loved the challenges that came with working in “difficult” habitats.

Karns joined Hanover College as an assistant professor in 1984. He was promoted to associate professor in 1990, and to full professor in 1997. He was also appointed Interim Director of the Rivers Institute at Hanover College for 2004-2005, and subsequently to the position of Director of Science Programs at the Rivers Institute. While he was at Hanover Karns met and married (in 1996) a fellow college professor who subsequently returned to medical school and became a physician, Dr. Pamela A. Middleton.

From the time he arrived at Hanover Daryl was an enthusiastic and vibrant teacher who brought his passion for research into the courses he taught: introductory biology, biodiversity, herpetology, tropical

biology, ecology, evolution, conservation biology and comparative anatomy of vertebrates. He also directed numerous student independent study projects, and his enthusiasm for working with students was characterized by energy, sensitivity, and genuine concern for their welfare and career paths.

For the past 21 years, Daryl Karns was a primary investigator in field research at the Field Museum of Natural History that was so much a part of his early life. This began in the summer of 1989, when Daryl first met Harold K. Voris, Curator of Amphibians and Reptiles, at the American Society of Ichthyologists and Herpetologists meetings in San Francisco and they discovered their common connections with both Hanover College and the Field Museum. At that time Robert F. Inger and Voris were conducting a number of systematic herpetological surveys in Southeast Asia. They had initiated surveys in 1986 at Danum Valley in the Malaysian state of Sabah on the island of Borneo, and Harold's invitation to Daryl to join him for the work in Borneo proved too much for Daryl to resist. Harold vividly recalls Daryl's great excitement--especially since his primary research interest was in evolutionary ecology--on taking his first trip to Borneo where Alfred Russel Wallace had made evolutionary history through his collections and reports on the vast tropical diversity of Southeast Asia.

Daryl's formal affiliation with the Field Museum began in 1990 as a Research Associate. It was the beginning of an extremely productive period in his life in which he worked with Harold Voris, researching amphibians and reptiles of Southeast Asia, especially the aquatic snakes. But Daryl's affiliation with the Field Museum was more than a formality—he became a valued and welcomed member of

the Field Museum community. He conducted tours for Field Museum, participated in Members' Nights, attended seminars, brought Hanover students to work there during the summers, and in general he became a Field Museum "regular" whose company and keen mind were enjoyed by all. At one point Daryl reflected on this experience, saying, "I was raised in the south suburbs of Chicago and visited the Field Museum many times as a child. Today, it is still a thrill for me every time I walk into the central hall of the Field Museum, one of the great museums of the world, and disappear behind those mysterious doors labeled 'Research Staff Only.' My Research Associate position over the last 14 years has allowed me to do things and go places that belong in the domain of National Geographic specials."

By 1992, Daryl began to work with Harold on the aquatic snakes of Southeast Asia with an emphasis on homalopsid snakes. They began with field studies on *Enhydris plumbea* in an abandoned rice paddy in Sabah, Malaysia on the island of Borneo. This wetland habitat was located with the help of Rob Stuebing, a faculty member of the University of Malaysia, Sabah campus. Daryl and Harold benefitted greatly from the generous logistical support and hospitality of Rob and his family, as well as that of the staff and administration at the Sabah State Museum. In fact, it was in Rob's lab that Daryl was bitten on the thumb by a large female *E. plumbea* while applying a PIT tag. After calmly removing the snake from his thumb he continued to work while remarking on how it stung. Later at a local coffee shop Daryl held his thumb in an iced coffee, hoping that it would reduce the swelling but it just drew stares. *Enhydris plumbea* is mildly venomous and much later the photograph of



**FIGURE 2.** Daryl Karns with a local fisherman at a wetland in Uttaradit Province in northern Thailand in June of 2007. This is a wetland where Daryl, John Murphy and Mr. Prapon Noiwan located *Enhydris jagorii* during a survey for homalopsid snakes. This was Daryl's last of many trips to Southeast Asia. Photograph by John C. Murphy.

the bite on Daryl's thumb made it into print with an unintentional twist that became the basis for later joking--in the figure caption the snake identification was scrambled and *Enhydris plumbea* became "*Enhydrina plumbea*"--*Enhydrina* being a genus of extremely deadly true sea snake! After that Voris liked to introduce Karns to fellow herpetologists as the guy who suffered an *Enhydrina* bite and lived to tell about it!

Under the sponsorship of the Prince of Songkhla University in Hat Yai (Thailand) and Dr. Vachira Lhekchim, a four-year project on the ecology of *Enhydris enhydris* on the edge of Lake Songkhla was initiated in 1995 by Karns and Voris. During this project Jack and Raynoo Cox generously provided hospitality in Bangkok that included many wonderful Thai meals at

their home and in the numerous great local restaurants. This project was the first in which John Murphy (also a Research Associate at Field Museum), Harold and Daryl worked together in the field and from this point on they worked as a research team. Daryl's enthusiasm in the field was very contagious. He was always interested in following the trail for another kilometer or looking over the next hill despite temperature extremes or rain. Typically, while exploring Angkor Wat in Cambodia one steamy sunny day, Daryl decided that he should not pass up climbing to the top of a Khmer pyramid despite the fact that the temperature was well above 40°C!

During Daryl's 2001-2002 sabbatical, the team focused on the ecology of mangrove-dwelling snakes at two locations

on the island nation of Singapore. This work was sponsored and generously hosted by the faculty and students of the National University of Singapore (NUS) and the Raffles Museum of Zoology. It was here, with the industrious efforts of Siva (N. Sivasothi) at NUS that the “Snake Hunters” group was formed. This was a volunteer group of about 30 students and local naturalists who worked with the Field Museum team to conduct nightly snake surveys in local mangrove swamps. Professor Bruce Jayne (University of Cincinnati and Field Museum Research Associate) also joined this effort, conducting feeding studies on two species of crab-eating homalopsids. Daryl’s focus was on radio-telemetry of both the Bockadam snake (*Cerberus rynchops*) and the crab-eating snake (*Fordonia leucobalia*). In this work he excelled. His trademarks—keen interest, patience, and careful data management—allowed him to succeed in tracking snakes in mangrove swamps, certainly among the most challenging habitats to work in on our planet.

Daryl’s final field work in Southeast Asia began in 2004 with a focus on several species of snakes in Indochina, the center of distribution of the family Homalopsidae. This research was sponsored by Chulalongkorn University in Bangkok and the faculty and students of the Thai Turtle Lab led by Dr. Kumthorn Thirakhupt as well as Tanya Chanard and many others at the National Science Museum of Thailand. Our aim was to learn as much as possible about the natural history, ecology, distribution, dispersal abilities and population relationships of the species in Thailand’s wetlands (Fig. 2). This field work extended through 2007 and left us with an inventory of results on three fascinating species: *Enhydryis enhydryis*, *E. plumbea* and *E. subtaeniata*.

Karns’ work on homalopsid snakes also became a vehicle for involving a number of Hanover College students in research at the Field Museum, in Singapore and Thailand, as well as at Hanover, yielding a long list of “homalopsid alumni”—biology majors who worked on homalopsid snake research at some point during their years at Hanover, usually as part of their respective independent studies.

A prolific writer and presenter, Karns published nearly 40 peer-reviewed journal articles and technical reports. He authored or was involved in 18 popular articles, reviews and videos, contributed 31 conference papers, and gave 43 seminars and public presentations. As in the field work, during the data analysis and writing phase of our collaborations Daryl’s enthusiasm for discovery coupled with his careful analyses and love for scientific writing made working with him a joy. His skills as a proofreader extraordinaire and honest critic made him indispensable to our program. Tragically, Daryl’s untimely death occurred before he could learn that a homalopsid snake species new to science was being described in his honor by John Murphy (*Myron karnsi* Murphy, 2011. Raffles Bull. Zool. 59: 203-210). Naming this new species after Daryl was a highly deserved tribute to his many contributions to our knowledge of homalopsid snakes, and he would have considered it one of his highest honors.

Karns will be remembered at Hanover for being an outstanding teacher, dedicated faculty member and colleague, and for his wide-ranging contributions to the Rivers Institute. To recognize the many significant contributions he made to his field, Karns received the first annual Hanover College Faculty Award for Excellence in Scholarly and Creative Activity at this year’s Honors

Convocation, held April 7, 2011. And, at the memorial service held for Daryl on the campus of Hanover College, June 12, 2011, the President of the College officially named the nature trail system at the College, *The Daryl R. Karns Natural History Trails*.

Daryl had many wonderful characteristics that stood out in all the arenas of his life: he was a hard worker, very reliable, always respectful of others, and had great personal and intellectual integrity. His positive outlook, enthusiasm, and great sense of humor made us all want to have his companionship throughout our lives. He will be greatly missed by his many students, colleagues and friends at Hanover College, at Field Museum and in Southeast Asia.

#### ACKNOWLEDGEMENTS

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