

# HISTORICAL PERSPECTIVES

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### CLARK HUBBS

DEAN A. HENDRICKSON AND MARGARET M. STEWART

CLARK Hubbs was born 15 March 1921, in Ann Arbor, Michigan. His parents were Carl Leavitt Hubbs, a noted ichthyologist, and Laura Cornelia Clark Hubbs. Although his mother had both a BA and an MA in mathematics from Stanford University, she switched to ichthyology and assisted her husband with his career throughout her life. Hence, early on, Clark was “imprinted” on fishes. Clark’s parents were the major influence on his professional choice.

Clark lived in Ann Arbor through a BA degree in zoology at the University of Michigan in 1942. He had two siblings, Frances, born in 1919, and Earl, born in 1922. A third child, Margaret, born in 1924, died in infancy. Frances married the noted ichthyologist Robert Rush Miller. Earl is a retired high school biology teacher. Thus, the world of fishes was the world they knew and enjoyed. The three children had the run of the Museum of Vertebrate Zoology and often created havoc with all kinds of pranks while their parents concentrated on fishes.



Fig. 1. Cathy and Clark Hubbs on vacation in Dublin, Ireland, 1999.

Fishes were the center of Hubbs family vacations as well. Clark remembers many fun family field trips from 1928 to 1938. He also noted that his interest was in part monetary from an early age because his father paid the children for their captures of new taxa during the fieldwork.

“The pay was five cents per species collected, one dollar for a new species or subspecies, and five dollars for a new genus.”

Some trips were more exciting than others. There was the 1938 field trip with their parents in Meadow Valley Wash, Nevada. The washbowl was frozen when they woke up, but at 10:00 AM, it was 86 F. Later, on the same trip, they camped in a city park in Las Vegas. The wind blew down a tree, which hit the family’s tent, narrowly missing crushing them.

In 1934, the family was in northwest Nevada where they collected an undescribed tui chub from a small puddle. It was the only specimen they could find at this locality, and Clark recalls his father mentioning that they may have just caused the extinction of that taxon. However, with only one individual, the future of that taxon was bleak. This was his first recollection of anything about endangered species or conservation. Luckily, they found hundreds of the same taxon at the next locality upstream.

Clark recalls another humorous story about his father. In 1922, the family was visiting his mother’s family in San Jose, California. While there, David Starr Jordan, unaware they were in San Jose, sent a telegram to Carl Hubbs in Ann Arbor saying he would like to work with him on the Japanese flatfishes. The telegram was forwarded to the grandparents’ house in San Jose, and, much to Jordan’s surprise, Carl appeared in his office ready to go to work three hours after the telegram was sent, appearing as though he had accomplished an impossible feat of rapid travel for the time!

It is not surprising that ASIH has played a major role in Clark’s life and career, for he has been going to meetings all his life. He joined as

a life member in 1940 while still in college. The first meeting activity he recalls clearly is the fun field trip after the 1934 meeting at Berkeley, California. The 1952 meeting was the first to be held in Austin, Texas. It ended with a financial deficit, but Frank Blair, Marion Toole, and Clark balanced the budget at the end by contributing \$10 each. Each Austin meeting (1952, 1961, and 1993) broke all previous ASIH attendance records.

As for recollections of other meetings, he recalls carrying \$1000 in his pocket to the restaurant for an Evolution Society meeting and the fact that the Safeway store in Corvallis during the AIBS/ASIH meeting in 1962 ran out of milk. At the 1964 ASIH meeting in Moorehead City, which very clearly overwhelmed the city, Joe Bailey slammed the door of a room in the Biltmore and the ceiling fell down. Clark's wife Cathy asked for eggs for breakfast, but the store was out of eggs and cereal, leaving only donuts for breakfast.

In 1963, when traveling from sabbatical in La Jolla, California, to the Vancouver, British Columbia, ASIH meeting, their car broke down in Oregon, causing them to buy a new vehicle there. They ended up having the U-Haul trailer from California towed to the trailer park near the meeting. The park charge was \$1/car, \$.50/trailer, so they ended up paying only \$.50/night. They left the meeting with a car with Oregon plates, a trailer with California plates, and Texas drivers licenses and used them going across the border both ways.

Collecting trips often resulted in memorable experiences. Clark recalls that his daughters got sick just before the family was to travel to a Southwestern Association of Naturalists meeting in Alpine, Texas, resulting in only Clark and son John (age 8) making the trip. They collected in Toyah Creek in Balmorhea, and later in Alpine, where a couple of station wagons full of Oklahoma State and University of Oklahoma ASIH members and students appeared. The group included many large men, who were most chagrined to learn that Clark and John had taken 16 species. The group had taken only four in the adjacent Pecos River.

On another occasion in 1949, he and Cathy were collecting together in the San Marcos River when a resident biologist was along. The biologist commented that he was surprised by Cathy's active participation and skill in collecting, and guessed that they must have been married for a long time. In fact, they were married only two weeks before. When Clark was working on *Crenichthys* in Nevada in the 1960s, passersby saw his car and high-tech equipment and guessed

that they were prospecting for uranium. They were disbelieving when told they were studying little fish (specifically their metabolic rates and sound production) and clearly thought the ichthyologists were hiding something.

Summers gave Clark an opportunity to do fieldwork for pay. During the 1939 summer, he worked as a field technician for the Michigan Institute for Fisheries Research at the salary of 40 cents per hour. One winter, his leg fell through an ice fishing hole; his leg did not feel cold until the car heater melted the ice on his pant leg.

The summer after he graduated, 1942, he served as stream survey leader for western Massachusetts. He was drafted into the army soon after. He served in the G-2 (intelligence) section of the 96th Infantry Division Headquarters. His jobs included combat infantryman, intelligence scout, topographic draftsman, and aerial photo interpreter. His division was involved in the invasion of Leyte (Philippines) and Okinawa, with many casualties. Although he did escape being a casualty in World War II, he did not escape the blue crab! He says he holds the record for the most severe blue crab pinch, a hole through his right calf muscle. That injury kept him from seining for six months and confused the Workman's Compensation bureaucrats.

After his discharge from the army in January 1946, Clark enrolled at the University of California Los Angeles, Hopkins Marine Station, Scripps Institution of Oceanography, and Stanford University. After finals at Stanford, Clark took the train home. Because he was tired from exams, he was uncommunicative with his seat mate. Someone reported that one of the FBI's most wanted was on the train wearing a green shirt. When Clark got off at Los Angeles, he was the only passenger with a green shirt. The police firmly stopped him, and when they returned to Central, a policeman on each arm, they passed the seat mate who "almost lost her eyeballs." Having a collection of personal fish in his luggage got him off.

Clark married Catherine V. Symons in 1949. Cathy was born 7 October 1922 in San Francisco, California. She met Clark on a Stanford Natural History Club (SNHC) field trip. Carl and Laura Hubbs also met on a SNHC field trip. In both instances, the Hubbs were the club president. Cathy has assisted Clark in many ways throughout his career and has always attended ASIH meetings with Clark. When asked about her contributions to his career, Clark stated that she helped with fieldwork, read proofs, and put up with his temperamental behavior. She raised

the kids and was a school librarian. Now she does a lot of volunteer work, primarily with literacy programs.

Cathy and Clark have three children, and Clark speaks proudly of them. Laura E. Hubbs-Tait (b. 1950) is Professor in Child Development at Oklahoma State University, holding an endowed chair. She has the only two federal grants in her college. Grandson Aaron was born in January 1982. Recently he was most upset when the Oklahoma City bombing caused the cancellation of his school field trip to the Science Museum there. Granddaughter Aidan was born in April 1985. In fourth grade, she was a starter on the sixth-grade boys soccer team. John C. Hubbs (b. 1952) also holds a Ph.D. He is a Research Chemist employed by Eastman Corporation in Kingsport, Tennessee. His research has produced about five patents for the company. His son Eric was born in December, 1982. Ann F. Hubbs (b. 1955) holds a DVM and Ph.D. and is employed by National Institute of Occupational Safety and Health in Morgantown, West Virginia. Her one child was born with severe birth defects. The three children's spouses all have doctoral level degrees (two MDs and one Ph.D.).

Clark served as acting instructor of biology at Hopkins Marine Station (Stanford University) during the summer of 1948, and took a job as instructor of zoology at the University of Texas in 1949. After he completed his doctorate at Stanford in 1951, he was promoted to assistant professor. The rest of his career has been at Texas rising rapidly through the ranks. In 1991, he retired as Clark Hubbs Regents Professor in Zoology Emeritus which he was awarded in 1988. He still maintains an office at the university where he arrives before 7:00 AM.

He served as chair of the Division of Biological Sciences (1974–1976) and of the Zoology Department (1978–1986). He also served as Visiting Professor at the University of Oklahoma (1970–1984) and at Texas A&M University (1969–1983). During his career at The University of Texas, he trained 41 master's and doctoral students. Included are some names familiar to ASIH members: for example, Victor Springer, George Drewry, F. Douglas Martin, Alexander Peden, and Kirk Winemiller.

Clark assumed a leadership role in his professional organizations. He has served as President of Southwestern Association of Naturalists (1966–1967), Texas Academy of Sciences (1972–1973), Texas Organization for Endangered Species (1978–1979), American Society of Ichthyologists and Herpetologists (1987), and American Institute of Fisheries Research Biolo-

gists (1995–1997). A major contribution to ASIH was his editorship of *Copeia* for 14 years. He also edited the *Texas Journal of Science*, *Southwestern Naturalist*, and *Transactions of the American Fisheries Society*.

Clark has published over 300 articles and contributions to his professional literature, primarily on fishes, but including a few on amphibians and one on *Drosophila* (as fish food). And he continues to publish. His first publication was with his father on the Pacific cutlassfish (*California Fish and Game* 27:29–30), and his first article in *Copeia* was in 1943, with Karl Lagler, on fall spawning of the mud pickerel (*Copeia* 1943: 131).

Clark sees his major contribution to his profession to be an improved general understanding of various aspects of biology of fishes of the American Southwest. His research includes taxonomic revisions, geographic distribution, and gynogenetic reproduction. More recent work has contributed information on geographic variation in life-history traits.

Also important are his many hybridization studies and studies of Amazon mollies and their interactions with sailfin molly. Three fishes have been named after him. He has also played an active role in protecting endangered species and working toward this end with a diversity of government agencies and nongovernmental agencies. He has taught many students, both undergraduate and graduate, in his various courses.

Clark has deposited a full set of his field notes in the Texas Natural History Collection, Ichthyology Division, University of Texas at Austin, and copies of many are available at the Museum of Zoology, University of Michigan, Ann Arbor. His extensive fish collections are deposited in the Ichthyology Division of the Texas Natural History Collection.

Clark has used his knowledge of fishes of the Southwest in assisting with the protection of aquatic ecosystems. He has testified as an expert witness in many court cases concerning water transfer and the building of canals and dams. These involved controversies such as the Edwards Aquifer, Lake Texoma, Cooper Dam, the Tennessee Tombigbee Canal, and many others.

He has received several awards for his role as an environmental activist. He has served on boards of several organizations including the Nature Conservancy, and continues that work with Texas Utilities Environmental Steering Committee, Rio Grande Fishes Recovery Team, Hubbs Sea World Research Institute, the University of Texas Marine Sciences Institute, and the southwestern division of the Environmental

Defense Fund. He sees biodiversity and available freshwater losses as the most important problems facing fishes today.

When asked what ASIH has contributed to his profession and to his life, Clark had ready answers: "Camaraderie, information dissemination through meetings and publications, and lots of fun editing the journal." He told an interesting story regarding an event that took place while he was editor and concurrently chair of biology. A botany professor teaching general biology allegedly made racist remarks during a lecture, resulting in a demonstration by African-American students in Clark's office. A number of students entered the office quite irate, demanding the firing of the professor but encountered there a friend of theirs, an African-American woman employed by Clark as the *Copeia* editorial office secretary. Her presence quickly defrayed the commotion.

What are the differences in ASIH then and now? Attendance at meetings has increased dramatically. Clark recalls objections in 1952 over the first split sessions in a two-day meeting. There are now, of course, far more papers and multiple concurrent sessions, and few objections to this.

Clark has a notable collection of fish clothing including many shirts that Cathy has made for him, and for her. He is especially proud of the Clark Hubbs Symposium t-shirt from the 1993 ASIH meetings in Austin. The shirt bears over 1000 signatures of his colleagues and professional friends. He has bequeathed his famous fish shirt collection, literally hundreds, to ASIH to auction for student travel funds for the society, certainly a unique gift to the society! It also says a lot about the good times that Clark Hubbs has had with his profession.

*Postscript.*—The original interview of Clark and Cathy Hubbs was conducted by Dean Henrickson on a flight from Austin to La Paz, Baja California Sur, for the 1996 meeting of the Desert Fishes Council. Additional material was taken from Clark's Home Page (<http://www.utexas.edu/depts/tnhc/.www/fish/hubbs/>).

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