

REMEMBRANCES

Henry S. Fitch (1909–2009): Field Notes on a Wonderful Life¹

Henry Sheldon Fitch passed away on 8 September 2009, just a bit shy of his 100th birthday (25 December). In lieu of a traditional obituary, and because an autobiographical account of his life recently appeared (Echelle and Stewart 2000), several former students and colleagues each describe their personal memories of the man deservedly referred to as the “father of snake ecology.” Although each of the remembrances brings a different perspective, three common threads run through all of them, namely: Henry Fitch’s energy, enthusiasm, and decency.

Henry Fitch and the Practice of Natural History

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Texas Alligator Lizards were first described from the Devil’s River in 1858 and a century later, when I encountered them in photographs, there was still almost nothing known about those snaky, bright-eyed reptiles. As a Missouri youth, hungry for wilder places and imagining myself a trailblazing naturalist, I pored over accounts in Hobart Smith’s *Handbook of Lizards* of two related West Coast anguids — especially field studies by Henry Fitch, who referred to them as “unusually intelligent” and saw a Southern Alligator Lizard hold off Yellow-billed Magpies by hissing and threatening with open jaws, tail curled forward like a shield. Someday, I thought, I’ll roam the Mexican borderlands and learn something exciting about *Gerrhonotus infernalis*!

Fitch’s photo also caught my attention among the “influential saurologists” profiled in Smith’s *Handbook* because he wore a World War I cavalry hat and looked intense, as if distracted from some important task. His publications in our local college library provided a University of Kansas address, so I wrote announcing my upcoming herpetological career and asking questions about proposed Texas fieldwork. However pretentious that letter, right back came Henry’s cordial, hand written explanation of how to sex alligator lizards: “By grasping the base of the tail, gently twisting it, and exerting pressure with the thumb ventrally, one can cause a hemipenis to be exposed. Failing in several such attempts, one may be reasonably sure the specimen is a female.”

I knew ventral meant underside and penes were for copulation, but couldn’t have realized a high school internship with Henry would set my course or that he would author almost 200 publications, more than 4,000 pages on plants, snails, spiders, and diverse vertebrates. This unassuming man started graduate work at Berkeley’s Museum of Vertebrate Zoology in 1931, when the discoveries of Charles Darwin and Alfred Russel Wallace were still relatively fresh, and took his first academic position in 1948, five years before James Watson and Francis Crick unraveled DNA. Decades later, after Henry summarized half a century of fieldwork at a symposium

in his honor, a graduate student wryly noted that thanks to him she couldn’t call four years of horned lizard population research “long term.” Applause typically occurs *after* presentations, but his arrival at the podium that day provoked a standing ovation before he began speaking.

With Henry’s passing I want to honor his impact on biology and me personally by reflecting on a conundrum. Although Darwin, Wallace, and countless others have been drawn into nature by orchids, beetles, or whatever seized their fancy, and this is surely truer now than ever before, acclaim typically comes from generalizing rather than gathering facts. Ernst Mayr, for example, was renowned for evolutionary theory and less widely



COURTESY OF ALICE F. ECHELLE

Henry Fitch and Rainbow Trout; ca. 1920 at Klamath Lake, Oregon.

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so for describing more than 400 new species and subspecies of birds. At first glance then, Henry's career-long focus on organisms seems anachronistic, the widespread esteem in which he's held a bit surprising. In a forthcoming book, *Tracks and Shadows: Field Biology as Art*, I've set out to illuminate that stature as well as more generally assess the enduring values of natural history. Here I'll draw on correspondence and interviews of my teenage mentor, with the goal of addressing a question: why did he do it?

One of our extended dialogs was soon after Henry had fallen and spent a chilly night stranded in a creek, and except for the incident's notoriety he seemed surprisingly unfazed — search dogs were hopelessly confused because his scent trail was *everywhere* on the Reservation, and he'd been conscious when helicoptered to a hospital. Daughter Alice was visiting her folks, and we talked all afternoon and late into evening. Almost 80, with raven black hair, Henry's wife Virginia served fried chicken, mashed potatoes with gravy, corn on the cob, and home-made rolls, and she fairly sparkled as conversation meandered from our first visit and the whereabouts of former graduate students to details of Fitch family life. When I smiled at her mention of "youthful indiscretions," Virginia said she married young and divorced the other guy. "Then," she exclaimed, grinning at me and hugging her husband from behind his chair, "I met this wonderful guy!"

From time to time I checked a list of questions, and although in correspondence Henry had been enthusiastic about my book proposal, his answers weren't effusive. I'd known this wasn't going to be easy, if for no other reason than constitutional reticence — as Randy Reiserer wrote in a dissertation acknowledgment of his undergraduate advisor, "I never met anyone who can say so much with so few words, or indeed, without any at all." But I wanted to understand why Henry does the work, keeps catching still more snakes, and what the practice of natural history meant to him, so finally I blurted out something about having my own problems shrink in the face of grandeur and diversity. "Sounds good to me" was all he said, with a soft chuckle and maybe a hint of irony.

I also hoped to learn how Henry knew what to record, given he began gathering data in the 1930s for which there were no guiding theories. His papers typically set forth the ecology of target species, with insights woven among empirical findings — the thesis work on alligator lizards, e.g., addressed advantages of viviparity by noting that "Eggs left in the ground are exposed to...egg-eating reptiles, mammals, and insects, and to extremes of temperature and danger of desiccation, while those carried by the female probably stand a better chance of developing into independently successful young." In 1949 he'd laid out in *Ecology* details of *what* to write down, but almost nothing as to *why* particular information would interest other biologists. And in 1966 Robert MacArthur and Eric Pianka's brilliant paper on optimal foraging would inspire widespread measurement of parameters that Henry had been recording for decades with no conceptual prompting.

So I kept coming at the questions from various directions, hoping Virginia and Alice would jump in with something definitive or nudge him for details. My query about god resulted in a slight pause and "I have no religious beliefs although raised in that environment. Natural history does it for me." Asked about favorite habitats, Henry attributed his preference for deserts, "because they are open and have interesting animals," to a Nevada field trip during graduate school. At the mention of favorite species, he responded "alligator lizards, Copperheads, and gartersnakes, because they have interesting natural histories." By evening's end the best I could get was "my initial interest in zoology was innate" and "I wrote down everything that interested me."

Two years later I was back trudging up a hill on the Reservation. Henry was audibly winded as we crested the familiar limestone ridge and explained without a trace of self-pity that he'd lost stamina but hoped to complete one more field season. Otherwise he seemed no different than my last visit and at 91 his hair was light brown. He walked slightly stooped, in work boots with visibly thin soles, and was wearing khaki pants, a Berkeley herpetology course t-shirt, and a baseball cap decorated with various university insignia. The tattered cotton bag stuffed through his belt, custom made



MICHAEL V. PLUMMER

Henry and Virginia Fitch in 1975 at the University of Kansas Natural History Reservation (now the Fitch Natural History Reservation).

by Virginia, was for carrying snakes back to the house. He used a smooth, sturdy stick with a nail head protruding on the bottom to steady himself, hold onto tree limbs, turn over cover items, and probe matted grass for the long narrow tin pieces he'd laid out to attract snakes.

As our conversation turned to current projects, Henry spoke with quiet fatherly pride of a paper with Alice about changes in tree diversity over the past 50 years at the Reservation. Their findings were thought-provoking: Once largely prairie, perhaps the best-known square mile in North America had lost a third of its fauna since he arrived because of fire prevention, lack of grazing, and forest encroachment. On the bright side, there were still Bobcats and Timber Rattlesnakes in the vicinity, and a Black Bear was seen near here recently. As we returned to the house he pointed out a large cedar by the driveway, planted many years ago as a tiny family Christmas tree.

That night Henry sat in the front row for my campus lecture on organisms as the central focus of biology, during which I held up his capstone opus, *A Kansas Snake Community*, and introduced my teenage hero. I praised Henry's contributions to ecology and systematics, then said his greatest legacies are immediate products of the work itself — tens of thousands of observations archived, many museum specimens collected — and that in the scholarly tradition of his Berkeley advisor, Joseph Grinnell, he'd bridged Darwin's synthesis with twenty-first century science. As it happens, those individual organisms he studied demonstrated such things as substantial shifts in Copperhead diets over the decades, as prey populations responded to the habitat changes he documented.

Henry's accomplishments amounted to several better-than-average careers, I told the K.U. crowd, given his California and Louisiana work, decades at the Reservation, and his tropical expeditions. In fact, although mainly known as a herpetologist, his publications on mammals would eclipse those of the average "mammalogist." During the lecture I showed photos of island Cottonmouths that eat fish regurgitated by seabirds and have exceptionally large young, exemplifying, I pointed out, unusual and unexpected opportunities for research and enlargement of theory. Afterward Henry asked about the number of young in island snake litters, said he'd enjoyed my talk and our hike, then added with a characteristic grin and swing of the chin, "Oh, and thanks for the plug!"

Work can be a job, a career, or a passion, and for Henry the practice of natural history was all three. When I complained about funding he responded, "I have always spent my time on whatever interested me — with or without grants — and have greatly enjoyed all my projects, especially the fieldwork." In his eighties he was quoted in a book on Kansas

personalities, “I wouldn’t change a thing. People who work with animals in the field, whether snakes or birds or rodents or monkeys, find it deeply satisfying and wouldn’t trade it for any other kind of career — even though it may not be very financially rewarding.” And in 1995 he wrote Alice, “If as a young person I could have dreamed of my future and the world I would like to see, it would have been about the same as the life I have had. Getting a Ph.D., having a loving, supportive wife, children like you and John and Chester, grandchildren like Tyson, Lena, and Ben, living on the Reservation, teaching natural history, studying anoles and pitvipers, and making two dozen trips to nine countries in the tropics for herpetological research have all been great experiences.”

One visit, after the Fitches walked me to my truck, I drove back to Lawrence on a sultry Kansas night. A huge moon shone through fog and orange lightning flashed over surrounding fields as I pondered my admiration and affection for Henry. What, I wondered, makes him *tick*? Certainly he marched to his own drummer, unmindful of fads, which makes it all the more fascinating to contemplate his accomplishments, as well as how that stance affected his life more broadly. Maybe verbal frugality reflected limited interest in analytic thought, personally and professionally, which if nothing else protected him from the pettiness so common in universities. Maybe he was always so much within himself that he simply didn’t pay much attention to theorizing. And maybe those like Henry who go deeply into nature as children — he was catching snakes as a five-year-old — are especially prone to immersion as adults. We have to be out there.

Just weeks before Henry died he asked Alice and her husband Tony Echelle, if they might visit a local creek and catch watersnakes. When she replied, “Well, what then dad?” he said simply, “We’ll mark and recapture them.” Evidently the answers to my questions are equally straightforward: Henry was always driven by passionate curiosity and a penchant for detail, accentuated by parental encouragement, and those attributes combined in grad school with a framework for understanding biological diversity that harked back to Darwin and Wallace. That was enough. His approach worked, against formidable odds at times, and he was not inclined to do otherwise. A special gift for field biology and quiet but stubborn confidence must have been obvious to Grinnell in 1931, when an unusually shy but promising new student arrived at Berkeley, fresh off an Oregon pear ranch. Those traits were undiminished to the end, and Henry’s long, happy life was inseparable from the quest to understand nature.

Reminiscences of Henry S. Fitch

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For the past half century I was fortunate to have been a colleague and friend of Henry S. Fitch. During that time, we served on doctoral committees of one another’s students, co-advised some graduate students, and team-taught a graduate course in reptile biology. Although we never collaborated on a published paper, we each named a species of *Anolis* for the other. Henry avoided university politics and only reluctantly attended departmental meetings. Many of his colleagues mused that Henry lived in his own little world. But that world was much larger than they thought. He was at home on the University of Kansas Natural History Reservation (subsequently named for him), where he conducted intensive studies on the ecology and behavior of reptiles. Over the years he witnessed the succession of hardwood forest on the reservation, while methodically searching this square mile of land, capturing and recapturing thousands of snakes, and logging hundreds of pages of notes. His dedicated efforts culminated with the publication in 1999 of *A Kansas Snake Community: Composition and Changes Over 50 Years*.

However, Henry had a long and distinguished publication record before this finale. While at the University of California at Berkeley prior to moving to Kansas in 1948, he published a classic work on alligator lizards in 1935 and a highly perceptive work on western garter snakes (*Thamnophis*) in 1940. Two of his best-known works are on the natural history of reptiles, especially that on the Five-lined Skink in 1954 and his exhaustive study of the Copperhead in 1960. In addition to these systematic and ecological studies, Fitch provided us with important syntheses—reproductive cycles in lizards and snakes (1970) and sexual size differences in reptiles (1981). Consequently, his publications are cited extensively. A number of years ago, while Fitch was still an active member of the department, the chairman took it upon himself to tally citations to publications by all members of the department. For several consecutive years, Henry Fitch was the most cited.

During the warmer months of the year, the major exception to conducting field studies were the basketball games on the “sand lot” by the Fitch’s residence. Games would involve all members of the family and anyone who happened to be visiting the reservation. Henry displayed his usual dogged determination from his fieldwork to the basketball “court,” and one quickly learned to avoid his elbows under the basket.

In 1967 I introduced Henry to the tropical rainforest in Amazonian Ecuador, where he was the only member of the field party who would work in the field during the torrid afternoons, all the while lamenting the apparent absence of snakes. Customarily he went into his cabin and emerged a few minutes later with a towel wrapped around his middle and untied sneakers on his feet. To get to the dribbling bamboo spout loosely referred to as the shower, he had to cross the dirt “courtyard,” the home territory of a very aggressive goose, which took particular delight in nipping at Henry’s buttocks. One afternoon we heard Henry exclaim “ouch,” as he stood naked snapping his towel at the goose. He was completely unaware that he was the “floorshow” in the middle of camp.

Here I learned that Henry had poor night vision and consequently was primarily a diurnal biologist, but he was constantly amazed that we found so many snakes at night. Only after much cajoling did he accompany us twice on nocturnal forays during a month in the forest. However, I like to think that I influenced much of Henry’s subsequent work in the tropics, where he conducted numerous studies on the systematics and ecology of anoles and on populations and conservation of iguanas.

Henry Fitch was one of the last remaining naturalists. His breadth of knowledge was matched by very few of his contemporaries and scarcely imagined by his younger colleagues. His careful work on natural history is well worth emulating. Our knowledge of animals in nature would be far greater if many more biologists around the world followed in the footsteps of Henry S. Fitch.



Henry Fitch was modest and unassuming — but very competitive in basketball.