

IN MEMORIAM: FRANCES HAMERSTROM

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Frances Hamerstrom died 29 August 1998 at age 90 in Port Edwards, Wisconsin, U.S.A. Fran (pronounced Fron) was well known for her work on Greater Prairie Chickens (*Tympanuchus cupido*), Sharp-tailed Grouse (*Pedioecetes phasianellus*) and Northern Harriers (*Circus cyaneus*). She published over 150 scientific papers, dozens of popular articles and 12 books. She once remarked that "if you are the kind of person who wakes up every morning wanting to make the world a better place, it gives a certain zest to everything you do." Those who knew Fran will agree; there was a certain zest to everything she did.

Despite the societal stuffiness of her privileged childhood, Fran was drawn to wild animals at an early age. Her fondness for raising young wild animals and nursing sick ones to health reinforced in her mind that she was different from other people in her social setting. It also laid the foundation for a "hands-on" style of wildlife research that emphasized personal contact with the animals of study. To Fran, bringing free-flying raptors into her household to study them just made good sense. It seemed odd to her to think that a scientist could ask meaningful research questions without having first-hand knowledge of an animal's daily needs.

Fran's research style and personality complimented those of her husband and teammate, Frederick (known to his friends as Hammy), who preceded her in death by eight years. This exceptional life-long team was appropriately labeled a "super organism" by an anonymous apprentice. Thus, it is virtually impossible to refer to them individually in their wildlife careers. That is not to say that they behaved alike. Fran was often spontaneous and impulsive whereas Frederick was methodical and meticulous. Fran was sometimes outspoken and prone to embellishment whereas Frederick was the quiet master of understatement. Both were fiercely committed to saving our natural heritage. They accomplished so many things together because their differences strengthened their sum.

Fran was in the vanguard of "equal opportunity" for women in wildlife biology long before it was popular or even considered. The male-oriented profession precluded specific employment in her early professional life and significantly limited it later on. Fran was keenly aware of the male chauvinism associated with the embryonic wildlife profession and would subtly call attention to this fallacy by physically out-manning men in the field. Her relatively recent book, "Is She Coming Too?" is testament to this historic awareness. When Frederick gained an educational appointment, or employment, Fran accompanied him and participated as a volunteer, or pursued complimentary avenues. Her efforts were soon recognized and occasionally rewarded with a token salary, but more often the agency got two highly qualified people for the price of one. Thus, the Hamerstroms jointly conducted field research on pheasant, Northern Bobwhite (*Colinus virginianus*), hawks and owls under Paul L. Errington at Iowa State College from 1932-35, and research on prairie chickens, Sharp-tailed and Ruffed (*Bonasa umbellus*) Grouse, Sandhill Cranes (*Grus canadensis*), furbearers, and Great Horned Owls (*Bubo virginianus*) for the U.S. Resettlement Administration in central Wisconsin from 1935-37. While at Iowa, Fran received an award for "the woman most likely to succeed in research". The Hamerstroms studied prairie chickens as Research Fellows under Aldo Leopold at the University of Wisconsin (1937-41), where Fran became the only woman to ever earn a graduate degree (M.S.) under Professor Leopold. They conducted joint research on deer, songbirds, small mammals, prairie chickens, and Sharp-tailed Grouse through the University of Michigan Museum of Zoology (1941-49) with a leave for military duty (1943-46) during which time, Fran was a medical technician in the laboratory of U.S. Army Beaumont General Hospital, El Paso, TX U.S.A. They became project leaders of the Wisconsin Department of Natural Resources Prairie Grouse Management Research Unit with headquarters in Plainfield, WI U.S.A. (1949-72). During this tenure, they gained international recognition for their scholarship and successful efforts to ensure a permanent place for prairie chickens on the Wisconsin landscape. Fran was awarded an honorary doctorate degree from Carroll College in Waukesha, WI U.S.A. in 1961. Upon retirement from the Wisconsin Department of Natural Resources in 1972, they became unsalaried Research Associates at the University of Wisconsin-Stevens Point and continued wildlife research until their respective deaths. Their lifetime achievements are even more remarkable when one considers that they conducted exhaustive field studies on harriers, Osprey (*Pandion haliaetus*), kestrels, Harris Hawks (*Parabuteo unicinctus*) and several other species coincident with their tenure on other official projects. They were stellar role models.

Although Fran's research on grouse was more noteworthy to many, she always held a special fascination with raptors. Her first major scientific paper (co-authored with Errington and Frederick) was on the food habits of Great Horned Owls. It won The Wildlife Society's Terrestrial Publication Award in 1940. Ironically, the paper was a disappointment to her. As a woman in a male-oriented profession, she felt a strong need to prove herself by publishing her first significant paper as the sole author. Errington just assumed she would want her relatively small contribution to become part of his major paper. She went on to publish 70 papers on birds of prey and to receive The Wildlife Society's publication award (as a co-author with Frederick and Os Mattson) a second time in 1957 for her work on prairie chicken management.

One of Fran's most exhaustive studies was a long-term project on the breeding ecology of Northern Harriers in central Wisconsin. From the 1950s to 1980s she and co-workers banded close to 300 adult and 650 nestling harriers, and conducted over 20,000 small mammal trap nights. She documented that food abundance was the mechanism regulating harrier mating systems and local population densities. She also noted that those relationships changed during the years that the pesticide DDT was used. Keeping with her habit of maintaining several research projects simultaneously, Fran also conducted a long-term nest box study of American Kestrels (*Falco sparverius*). During the winters of their later years, she and Frederick conducted studies on Harris Hawks in Texas and Ospreys in Mexico.

Raptors held more than a scientific interest for Fran. She was an accomplished falconer who, at age 12, took her first quarry with a male kestrel. Later she helped pioneer artificial insemination techniques with Golden Eagles (*Aquila chrysaetos*). It was not uncommon for Fran to apply traditional falconry techniques in her raptor research projects. She maintained close ties to falconers throughout her life and was a member of the North American Falconers Association, the British Falconers Association and the Great Lakes Falconers Association.

Her lifetime interest in raptors also made Fran an early supporter of the Raptor Research Foundation. She received the President's Award from the Foundation and was the Central Director in 1975–76. In 1990, the Foundation created an award in the Hamerstrom name given to individuals who made significant contributions to the understanding of raptor ecology or natural history. In 1992, the Journal of Raptor Research dedicated a special issue to the Hamerstroms' contribution to science. Upon Frederick's death, Fran journeyed to tropical rainforests, a region that apparently always intrigued her but which Frederick had little desire to visit because of the heat and humidity. She initially traveled to the Congo where she "hunted with the pygmies" as she put it. She made at least five consecutive trips to the Amazon basin, always traveling alone and training physically for the ordeal beforehand. She was initially interested in the hunting practices of rainforest societies and started to collaborate on a book on that subject with a native. But, like the birds she studied, Fran returned to Wisconsin each spring to continue her research on kestrels.

Few people in the profession of wildlife biology have earned so many awards from such a breadth of organizations. She received the Josselyn Van Tyne Award from the American Ornithologist's Union, the Chapman Award from the American Museum of Natural History, the United Peregrine Society Conservation Award and the Edwards Prize from the Wilson Ornithological Society. A sample of other organizations that bestowed awards include the Raptor Research Foundation, The Wildlife Society, National Wildlife Federation, International Crane Foundation, Citizens Natural Resources Association, Deutschen Ornithologen—Gesellschaft, Wisconsin Department of Natural Resources, Wisconsin Society for Ornithology and Wisconsin Academy of Sciences, Arts and Letters. Fran was a member of over 20 scientific societies including all the major North American and several European ornithological societies, The Wildlife Society, Raptor Research Foundation, Ecological Society of America and the American Society of Mammalogists. She also was a member of several wildlife conservation societies and writers associations. In the last 20 years of her life, Fran devoted more time to writing popular books and preferred to be defined as a writer rather than an international wildlife biologist. Her book "Strictly for the Chickens" won the August Derleth Award.

One of Fran's least-recognized contributions to the field of science was her service as an educator and role model. The Hamerstroms employed a European model of apprenticeship whereby they allowed qualified individuals to live in their home and become part of their daily lives. The 100 or so apprentices were called gabboons. The term means slaves that conduct the lowest form of labor. During the banquet at a Raptor Research Foundation annual meeting, Fran looked around the room and pointed out the large number of Foundation officers and meeting attendees who had been through the Hamerstrom household. It was a testament to the influence the Hamerstroms have had on the field of raptor research.

The gaboon system ensured that science was only part of an apprentice's learning experience. Gabboons were treated to introductions with visiting professionals from all over the world. Since before World War II, the Hamerstroms had strong connections to European scientists. Gabboons were schooled in subjects as diverse as proper table manners, correct English and carpentry. They also enjoyed Fran's fine cuisine, which was the subject of her wild foods cookbook. Anyone who washed dishes and put the antique china back in the cupboards quickly realized that every piece had its place and it was not negotiable. Certain strict household rules evolved as a defense mechanism against legions of houseguests each year. Like Leopold, the Hamerstroms imparted on gabboons a strong appreciation for fine art and disdain for the trappings of technology. The walls of their unpainted pre-civil war construction

farmhouse in rural central Wisconsin were adorned with original art work. The house had no indoor plumbing but each person was allowed private bathing time at "the pond" where they had a chance to see a Green Heron (*Butorides striatus*) or a brood of Wood Ducks (*Aix sponsa*).

Fran's model for a biologist was one with more field sense than statistical prowess or experimental design skills. This view was also evident in most of her publications, which often lacked statistical rigor but were rich with high-quality data. Her thoughts on statistics were that if a pattern wasn't obvious from a look at the raw data, it either wasn't real or more samples were needed to know for sure. She lamented the fact that contemporary students often knew very little basic biology about the animals they were studying even though they may have had a good grasp on the scientific process.

The Hamerstoms set the standard for a dedicated work ethic. They used their home as a research center, they brought gabbons into their daily lives and they believed that if animals did not recognize weekends and eight-hr days, it didn't make sense for researchers to do so either. It was obvious that wildlife research was more of a passion for the Hamerstoms than a job. This philosophy stemmed from Leopold's expectations of his graduate students and was the basis for the "Hamerstrom rule of thirds". The rule is that researchers should spend one-third of their time on the bureaucratic folly required by their employer, another one-third of their time should be spent on tasks both the employer and the researcher want to do and one-third of their time should be spent doing exactly what the researcher pleases. Fran was quick to note that this last one-third was beyond a regular 40-hr week, and she maintained it was that portion of their time that made the prairie chicken work a success. Even while in Michigan from 1943–46, she and Frederick took personal time to visit the booming grounds in central Wisconsin each year to monitor their marked birds.

Fran also was a model in her advocacy of keeping wild pets. She believed that if the public was to really appreciate wild animals they must be allowed to experience them first hand, much as she had done as a child. She believed the risk of harm to an individual wild pet was less than the benefit of letting a child feel the wonder and responsibility of caring for that pet. Although Fran rehabilitated many injured wild animals over her lifetime, she realized in mid life that emphasizing the welfare of an individual animal over that of the population was misguided. In her book *Strictly for the Chickens*, Fran tells the story of capturing a hen prairie chicken with a nasty infection. Frederick was ready to end the bird's suffering and make a study skin from it. Fran intervened and cleansed the wound, stitched it up and released the bird. Years later she recaptured the same hen and thus became somewhat of a heroine for saving its life. Of that incident Fran wrote, "But year after year I watched the range of our prairie chickens disappear under the plow and drainage. And I began to grow up. I came to realize that the saving of one individual for sentimental reasons is nothing compared to preservation of habitat for a species. Frederick knew this all the time."

Even in death Fran was a role model. She saw countless life and death cycles through harrier and vole population highs and lows. Better than most people she knew that in nature, death was necessary and healthy for the good of the population. As with her husband, Frederick, and former professor, Aldo Leopold, there was no funeral so that death would be mourned; funerals are for the living and the commercial enterprises that materialize out of the death event. Instead she slipped quietly away to become part of that natural cycle she spent her life preserving.