

Robert Macleod Storm

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ROBERT MACLEOD (DOC) STORM has always considered himself a naturalist, and we would argue that many of the attributes that make a person an exceptional natural historian are probably heritable genetic traits. This is an untestable hypothesis, but we hope readers will allow us some latitude, particularly in this venue. We believe that we speak for all of his friends, family, former students, and colleagues when we refer to him as the Dean of Pacific Northwest Herpetology. Bob Storm arrived on a train in Corvallis, Oregon, in 1939 and has never left except for a stint as a medic in World War II. He earned both a Master's and a Ph.D. from Oregon State Agricultural College (now Oregon State University) and was hired as an instructor in the Zoology Department at OSU in 1948. He rose through the academic ranks to professor and advised a small army of graduate students and undergraduate zoology majors until his retirement in 1984 after 36 years of service.

Doc Storm was born on 9 July 1918 in Calgary, Alberta, Canada, to William Burns Storm and Nellie Haley Storm. At the time of his birth, Doc's father ran a wheat farm owned by his wife's parents, and it was on that farm that Doc and three more Storm children gained an appreciation for nature. In the mid-1920s, the family moved to Portland, Oregon, where his father joined one of his brothers in a construction business. While working in Portland, the elder Storm received word from another brother in Illinois informing him of an opening at Northern Illinois State Teachers College in DeKalb (now Northern Illinois University) for a math professor. His father took that job, eventually became chairman of the mathematics department, and ultimately retired from that position.

The move to Illinois from Portland, which occurred in about 1927, was made in a Star sedan, which was about the size of a Model T Ford. The car was plagued with breakdowns and eventually the family finished the trip to DeKalb on a train they boarded in Rock Springs, Wyoming, after the car expired.

Doc's oldest sibling, Elisabeth, is deceased, but two of his siblings survive. His brother, Bruce Storm, became an Associate Dean at the University of Southern California in the School of Business and is now retired. A younger sister, Barbara Jean, lives in Montana with her husband, Ken Jolley.

Doc has three children from his first marriage to Carol Offner: Robert Haley Storm born 19 December 1946, Ellen Christine Storm born 20 March 1949, and David Bruce Storm born 12 November 1953. A second marriage to Marvene Christensen produced three more children: Susan Kay born 8 July 1953, Marjorie Jane born 6 November 1961, and Michael Burns born 13 June 1963. Two of his offspring earned degrees in the life sciences: (Bob Haley in Zoology at University of Illinois and Marjorie Jane in Horticulture at Oregon State University). He has three grandchildren and two great grandchildren. Doc has been married to Patricia (Patty) Petzel since July 2000. Patty earned a degree in

Biology from OSU and is a lab preparator at Linn-Benton Community College in Albany, Oregon. The couple resides in Corvallis where Doc is Emeritus Professor of Zoology at OSU.

As a youth growing up in DeKalb, Illinois, Doc spent several summers working with corn researchers, helping with breeding experiments in the field plots. He also worked at various jobs for the local canning factory, hoeing beans, loading pea vines on a wagon, sorting sweet corn, and other tasks associated with that business. For several years he maintained a paper route, delivering papers after school hours; because of this, he was never able to go out for sports but has maintained a deep interest in them and is a loyal fan of the Oregon State teams. After graduating from high school in 1935, Doc enrolled at what is now Northern Illinois University, where he received his Bachelor's Degree in Biological Sciences. While in college, he worked week-ends for a grocery delivery and moving business. In the fall of 1939, he took the train to Corvallis, Oregon, where he enrolled as a graduate student at Oregon State Agricultural College (now OSU).

As a five year-old in Canada, his family lived on a ranch near the little town of Dalemead. Across the road from the Storm ranch was another ranch, occupied by a family with twin children, a boy and a girl. Young Bob became fast friends with the boy, and during one of their forays over the ranch landscape, they uncovered an adult toad of unknown species that his friend bombarded with dirt clods. This upset Bob but it was probably his first herpetological sighting. He also recalls seeing other species of wildlife on the ranch: a Red Fox running ahead of the flames during a field burn, sparrows fighting over bread crumbs, etc. The sightings were always exciting to him.

Growing up in DeKalb, he found a Tiger Salamander (*Ambystoma tigrinum*) in the basement of a friend's home. He still claims that it was the only salamander he had seen before he moved to Oregon. During his high school years, he spent much time collecting with a fellow student (Larry "Snake" Keegan) in the suburbs of Chicago. Keegan went on to publish a treatise on venomous animals of the Pacific Region (Keegan and Macfarlane, 1963).

In high school, Doc Storm took a biology course in his second year and credits his teacher, Mr. Oberlin, with getting him really interested in biology. Bob had a moderately religious upbringing, but this course first introduced him to the subject of evolution, and he became increasingly a student of the evolutionary process from that time forward.

When Doc arrived in Corvallis by train in 1939, he intended to major in fisheries and wildlife for his graduate degrees, although there was no graduate program in that field at OSU at that time. Soon after his arrival, he met Dr. Kenneth Gordon who convinced him to major in zoology and minor in fisheries and wildlife. There were no paid

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Fig. 1. Robert M. (Doc) Storm, Corvallis, Oregon, late 1940s.

assistantships for graduate students then, but Doc was paid hourly wages to help with instruction in several classes taught by Gordon (Field Biology, General Zoology, and Herpetology) and by Henry Hansen (General Biology), who later became Dean of the Graduate School at OSU. So, while doing his graduate work, he also learned to teach.

During his graduate studies at OSU, Storm twice drove a 1928 Model A Ford back and forth between Corvallis and DeKalb. He and his brother had paid \$100 for the car, which had a hand throttle and a top speed of 35 miles per hour. The car developed radiator problems at the onset of the second trip and water had to be added about every 25 miles. On board, he had an assortment of water containers and whenever he could, he would fill them with water. Needless to say, the trip was challenging. One of the toughest water stops was along the Willamette Highway (State Highway 58) where he had to get water from the Salt Creek Canyon, which involved a lengthy and steep descent and ascent.

Doc earned his Master's degree in 1941 (Storm, 1941) and intended to study the life history of Lewis' Woodpecker for his doctorate. A field trip with Kenneth Gordon to an area west of Philomath, Oregon, however, proved to be a seminal experience for Storm when he and Gordon collected many *Aneides ferreus* by stripping bark from old Douglas Fir stumps. This encounter convinced him that he really wanted to be a herpetologist, so he switched gears and upon finishing his Master's thesis in 1941 began work on his doctorate.

His doctoral studies were interrupted by World War II. He entered the army in October 1942 and completed his basic training at Camp Robinson, near Little Rock, Arkansas. After

the initial training was completed, he took more training at Camp Beale near Marysville, California, and final training at Ft. Meyers, Florida, where his unit practiced basic landings at sea. He finally ended up as a medic attached to the 37th Engineer Combat Battalion, which was deployed to a camp near Swansea, Wales. There they practiced more landings on the Gower Coast, and Storm became acclimated to the rigors of being in small boats in rough seas. From Swansea, his unit was quietly moved to Plymouth, England, in preparation for the Normandy Invasion. His battalion was among the first to land at Omaha Beach (Easy Red) during an incoming tide. Storm and a medic buddy left the landing craft carrying a stretcher between them, jumping into water some five feet deep. They struggled to the beach, hoping they were in just another practice, but soon faced the reality of dead or wounded soldiers and bullets striking the sand.

Further inland, the Germans were ensconced in "pill boxes" and were firing *enfilade* (up and down the beach) on the invasion force. There were many casualties, and the medics did the best they could under horrible conditions. Some medics, including Storm, carried a bottle of blood serum, and these were used up quickly. A considerable amount of time was spent leading the wounded back to the landing crafts as they became available. Storm was later awarded the Bronze Star for "courage under fire." His unit stayed on the beach for approximately six months. Days were spent sleeping and nights were spent helping unload ships. On one night, Storm revived a German prisoner who nearly succumbed to carbon monoxide poisoning. About two months into the encampment on Omaha Beach, Doc's younger brother, Bruce, a lieutenant in the army, managed a visit.

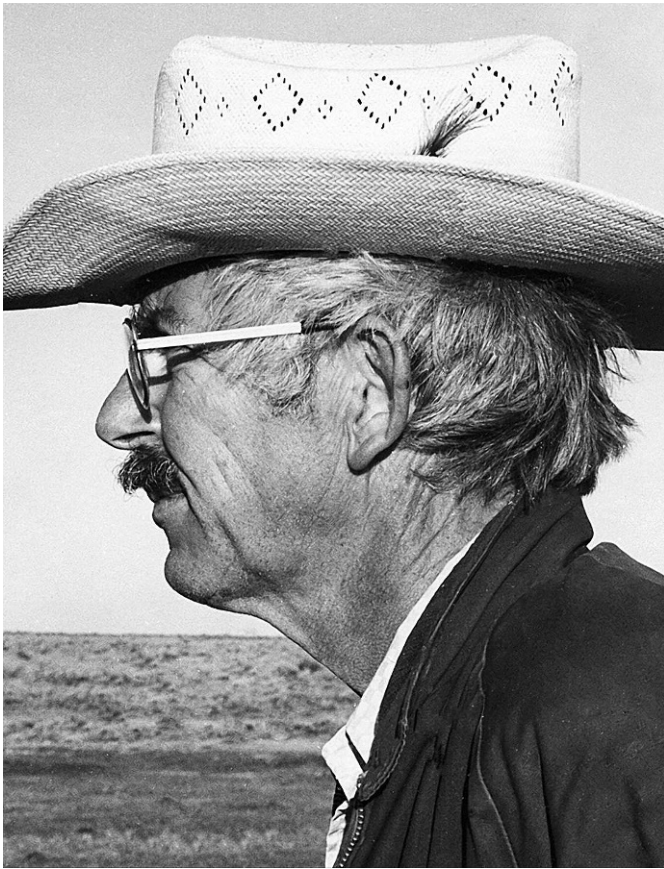


Fig. 2. Doc Storm in the field.

After his unit left Omaha Beach, they moved to the interior of France to an encampment on the banks of either the Marne or Meuse during the Battle of the Bulge. They saw no major action and served as backup to the main combat units in that battle. It was during his time as a medic running daily sick calls that Storm became known as Doc. Virtually everyone calls him by that name, even his wife.

The invasion at Omaha Beach left a lasting impression on Doc Storm. He recalls “windrows” of bodies on the beach that were stacked like cordwood, and the horrible smell. One morning shortly after the invasion, Doc was wandering around Omaha Beach and noticed that the tide pools had body parts in them—arms, legs, torsos, etc., and those parts looked like pieces of pure white statuary. The experience at Omaha Beach was a difficult period in his life and installed in him a hatred for wars of all kinds, as well as the inability to see why some humans seem so eager to get into war. Nonetheless, he returned to school in 1946 after his service in World War II and several months in Illinois working for DeKalb Hybrid Corn. He completed his Ph.D. in 1948 (Storm, 1948).

During graduate school, Doc was influenced by a number of herpetologists through their publications. He especially admired Hobart Smith, Edward Taylor, and Henry Fitch. He took Fitch collecting locally when he visited. Robert Stebbins has continually encouraged him throughout his long career at Oregon State University. Storm also took Albert Hazen Wright and his wife, Anna, on a successful trip to collect the Oregon Slender Salamander, *Batrachoseps wrighti*. Upon finding a single specimen of the salamander, Wright exclaimed “Anna, Anna, I found my salamander.” As a senior faculty member many years later, another

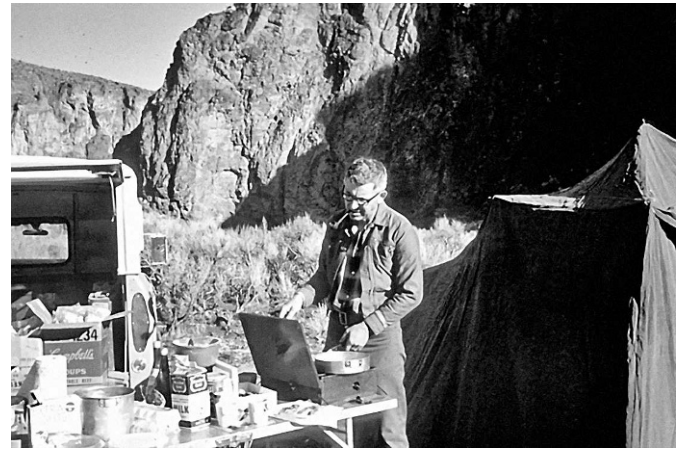


Fig. 3. Doc Storm at field camp in Trout Creek Canyon, Harney County, Oregon.

memorable trip occurred during the AIBS meetings in 1975. Doc took Carl Gans and other colleagues to the Santiam Pass area in the Oregon Cascades, where they collected *Batrachoseps wrighti* and *Elgaria coerulea*.

After receiving his Doctor's degree in 1948, Doc applied for a teaching position at a college in New York and was close to leaving OSU when Gordon convinced the president of Oregon State University that Storm should be hired to help with instruction in zoology. He was hired as an instructor in 1948 at an annual salary rate of \$3,200 on a nine-month appointment. He taught many courses early on, including Field Biology, General Zoology, Human Biology, Evolution, and Genetics. After a few years, he began to teach the courses he became famous for at OSU: Herpetology, Mammalogy, Ornithology, Vertebrate Zoology, and Zoogeography.

Herpetology at OSU was initially taught as a “field seminar” which consisted of local field trips. The trips were used to collect specimens for Zoology's natural history collections; herpetology did not become a formal course until 1950.

Doc Storm took his first trip to southeastern Oregon in the spring of 1953 and has been taking students and friends back to Cottonwood Canyon south of Fields, Oregon, on a regular basis ever since. There were five individuals on that first trip, of whom three were his graduate students: Philip Dumas (Ph.D. 1952), Richard Freiburg (Ph.D. 1954), a close friend, Bill Lightfoot, and Cal Giesler (M.S. 1952). The first trip was around the first of May, and the weather was so bad that the dirt roads in the Catlow Valley became impassable, forcing the group to take refuge at the Home Creek Ranch, which is still an active working ranch.

The Oregon Herpetological Society was founded in 1955 by David Jameson, James Kezer (both of the University of Oregon), and Doc Storm. The first meeting was at Humbug Mountain State Park on the south coast of Oregon. That society is still active, mainly as a herpetological husbandry group centered in Eugene. They met again at Humbug in spring 2005 to celebrate their 50th anniversary. Jameson, Storm, James Mackey, and James Conley all attended both meetings. Notable early members included Douglas Burns (discovered *Plethodon larselli* [Burns, 1954, 1962]), Theodore Davis, who emigrated to Canada and earned a Ph.D. at the University of Victoria in Patrick Gregory's lab working with *Aneides vagrans* on Vancouver Island (Davis, 2002), James

Table 1. Graduate Students of Robert M. Storm.

Year	M.S.	Ph.D.	Year	M.S.	Ph.D.
1950	Herbert G. Adams		1969	William E. Sype	Ronald G. Altig
1951	Donald G. Dunlap				Edmund D. Brodie, Jr.
1952	Denzel E. Ferguson	Richard A. Pimentel	1970		John D. Haertel
	John C. Giesler	Philip C. Dumas			Donald S. McKenzie
1953	Richard H. Eddy, Jr.				James O. Roberts
					Melvin L. Shamberger
1954		Richard E. Freiburg	1971	Margaret L. Macavoy	Jeffrey L. Briggs
1956		Nathan W. Cohen			Glen W. Clothier
		Donald G. Humphrey			Sheldon R. Johnson
		Denzel E. Ferguson	1972	Pamela H. Linn	Randall E. Brown
1959	John W. Goertz			Jeannine H. Riazance	Bill P. Lovejoy
	Oliver W. Johnson				Albert Mozejko
	Robert E. Moore				Ronald A. Nussbaum
	Kenneth R. Porter		1974	Ellen K. Shurtleff	
1960		Asa C. Thoresen		Cynthia K. Tait	
1961	Eugene D. Bawdon	Clifford V. Davis	1975	Jane R. Benson	Robert C. Clover
1962	Grace A. Hamilton			Lowell V. Diller	William E. Sype
1963	Elver H. Voth			Christine M. Hall	
1964		Joan D. Belz		Burt Marsh	
		Glenn R. Stewart	1976	DiAnne T. Motubu	
1965		Hugh C. Black	1977	Robert D. Pietruszka	James T. Taylor
		Oliver W. Johnson	1978		Robert L. White
1966	Glen W. Clothier	Cornelis Laban	1979	Jerry N. Moore	Joseph J. Beatty
	Robert R. Hollenbeck			Douglas C. Ure	
	James G. Wernz		1980		Hugh G. Hanlin
1967	Edmund D. Brodie, Jr.	Thomas D. Darrow	1981		Richard K. O'Hara
	Anthony J. Dorsch	John M. Smith	1984	Edith F. Moore	
1968	John D. Haertel		1986		Arlene T. Doyle
	Jeffrey L. Briggs	Elver H. Voth			

Riggs (collected the first *P. stormi*), and Alan St. John, an exceptional Pacific Northwest naturalist, photographer, and author (St. John, 2002, 2007).

For many years Doc taught during the summers at Malheur Field Station located south of Burns, Oregon. He was part of a team of Northwest academicians who wrote an NSF proposal that was funded and enabled a consortium of

northwestern colleges and universities to convert a former Job Corps Center into a field station. His major course there was Vertebrate Natural History, and after retiring from OSU he assisted in teaching a few Elder Hostel courses.

Storm was closely associated with the Friends of the Three Sisters Wilderness for several years and was president of that group for two terms during the 1950s, as well as serving as a council member. He participated in several annual pack trips into the Three Sisters Wilderness Area. While attending meetings and field trips with the Eugene Natural History Society, he met and became friends with Frances Newsom and Karl Onthank, early members and founders of the Friends of the Three Sisters Wilderness Society. During this period of his career, he also became acquainted with Olaus Murie, a federal wildlife biologist and preservationist (National Park Service) who became president of the Wilderness Society in 1945 and was responsible for the expansion of existing national parks and monuments as well as for the creation of new ones.

These two organizations helped to kindle what became a lifelong passion: Storm's interest in preserving wilderness areas. Growing up in Illinois provided him with little opportunity to develop an appreciation for protecting wild places. During the 1950s and 60s Storm made a number of hikes into the Three Sisters Wilderness, including at least one trek over the entire length of the Olallie Trail, from the McKenzie River end south to Frissell Crossing, with a friend, Ben Pruitt. This western area was ultimately removed from

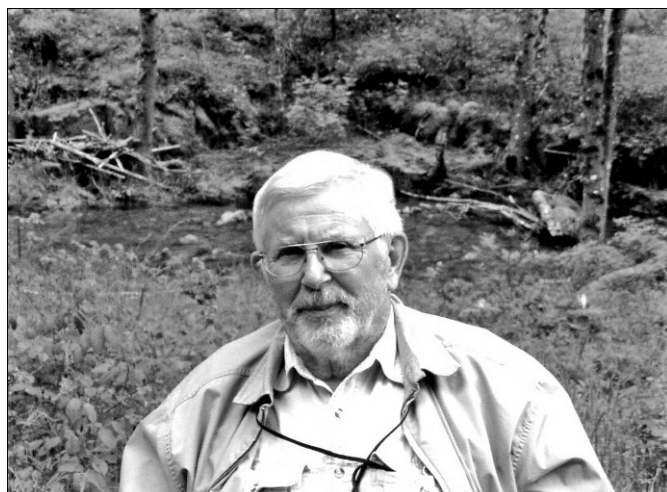


Fig. 4. On class field trip to the Applegate River Valley, Oregon, May 2003. Photo by J. R. Sapp.



Fig. 5. With Rubber Boa (*Charina bottae*), South Fork Coquille River, Oregon, April 2005. Photo by M. S. Rand.

the Three Sisters Wilderness Area, which was very discouraging for him. Shortly thereafter he stopped being actively involved with these organizations because he got the mistaken impression that he wasn't capable of influencing people or leading them. All of us who know him realize that nothing could be further from the truth. He wishes that he had remained actively involved in those two organizations because of the important things they have accomplished.

Doc Storm's most important and cherished contribution is the students he mentored during his years on the faculty at OSU (Table 1). Their theses and dissertations deal with nearly every group of vertebrates. He was famous for his open door policy where he was always available to talk with students. He advised 71 graduate students, including 37 who completed the Ph.D. He is proud of all. His students and their students have produced at least another 50 doctorates, most of them herpetologists. His first herpetology graduate student was Donald G. Dunlap (M.S. 1951), who demonstrated that Cascade Frogs (*Rana cascadae*) occurred in Oregon (Dunlap and Storm, 1951). Denzel Ferguson was like a son to Storm (although they argued constantly). Denzel studied systematics of *Ambystoma macrodactylum*. The nomenclature that Ferguson erected is still used at this writing (Ferguson, 1961). Ronald Altig (McDiarmid and

Altig, 1999; Altig and McDiarmid, 2007) and Edmund D. Brodie, Jr. (Brodie, 1977; Hanifin et al., 2008) both graduated in 1969 and have published widely in larval amphibian ecology and systematics and antipredator adaptations and coevolution, respectively. Ronald A. Nussbaum (Ph.D. 1972) described one of the first cryptic caudate amphibian species from the Pacific Northwest (Nussbaum, 1970) and executed the first comprehensive study of geographic variation in the genus *Dicamptodon* for his dissertation (Nussbaum, 1976).

Doc was also very much involved in undergraduate education at OSU and won the College of Science's Carter Award in 1974 for outstanding and inspirational undergraduate teaching. He was the Zoology Department's head adviser for many years and was its assistant chair for approximately the last six years of his career.

Storm has co-authored and contributed extensively to field guides to amphibians and reptiles of the Northwest with Nussbaum and Brodie (Nussbaum et al., 1983), as well as with Bill Leonard and others (Leonard et al., 1993; Storm and Leonard, 1995; Jones et al., 2005). His scientific publications numbered nearly 50 and were mostly concerned with herpetological topics. His first papers appeared in *Copeia* and *Herpetologica* in 1947 and dealt with the

discovery of the Groundsnake, *Sonora seminannulata*, in Oregon (Storm, 1947a), a description of the eggs and young (Storm, 1947b), and food habits of the Clouded Salamander, *Aneides ferreus* (Storm and Aller, 1947). His other published works in peer reviewed journals were mainly descriptive natural history papers; however, there were experimental papers on hybridization in Pacific Northwestern *Rana* (Haertel and Storm, 1970) as well as an experimental paper dealing with habitat selection in the Clouded Salamander, *Aneides ferreus* (McKenzie and Storm, 1970). Field work begun on the Cascade Frog (*Rana cascade*; Dunlap and Storm, 1951) continued into the 1970s when Briggs and Storm (1970), produced a paper on the population ecology of *Rana cascadae*. Further work on anurans produced a comparative analysis of the chromosomes from five Pacific Northwest species of *Rana* (Haertel et al., 1974).

Storm was a member of ASIH beginning at about the time he finished his Ph.D. in 1948. He attended many annual meetings of ASIH, as well as those of other herpetological societies. He is no longer an active member in any of the societies, but is an honorary life member of the Society for Northwestern Vertebrate Biology and credits ASIH for keeping him informed and current on scientific discoveries when he was younger. Doc noted during the interview that because of recent advances in molecular techniques, systematic relationships of many groups of organisms, including amphibians and reptiles, are better understood. He is also excited by the numerous papers on the behavior of amphibians and reptiles and believes that many of the same problems that needed study when he was an active researcher have not been fully resolved. One particular area that fascinates him is the existence of cryptic species among Pacific Northwest amphibians. As example, the Siskiyou Mountain Salamander (*Plethodon stormi*) was originally described in 1965 (Highton and Brame, 1965). Selected populations formerly assigned to this taxon in northwestern California have been described as a new species by Meade et al. (2005) using sophisticated molecular techniques, coupled with more traditional morphological analyses.

Doc Storm has spent a lot of his life outdoors, enjoying various pursuits related to herpetology, as well as bird watching, camping, hunting, fishing, photography, and gardening. He is still an avid birder and has been a regular participant on field trips to southwestern and southeastern Oregon each spring with OSU herpetology classes. He has always considered himself to be a natural historian. He is also a considerate and thoughtful adviser, and continues to maintain warm friendships with many of his former students and colleagues.

Postscript.—Robert M. Storm was interviewed at his home in Corvallis, Oregon, on 10 December 2005 by William P. Leonard and Joseph J. Beatty.

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