



## In Memoriam

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### IN MEMORIAM: WILLIAM ALEXANDER CALDER III, 1934–2002

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The life of William Alexander Calder III was ended abruptly on 23 April 2002, by acute leukemia. The disease was diagnosed only a short time before his death and progressed rapidly. Bill Calder's entire life was fast-paced; his mind and body never seemed to stop in his efforts to reach mountaintops, to solve physiological questions, or to offer solutions to environmental problems for newspaper readers or rural residents of remote parts of Mexico.

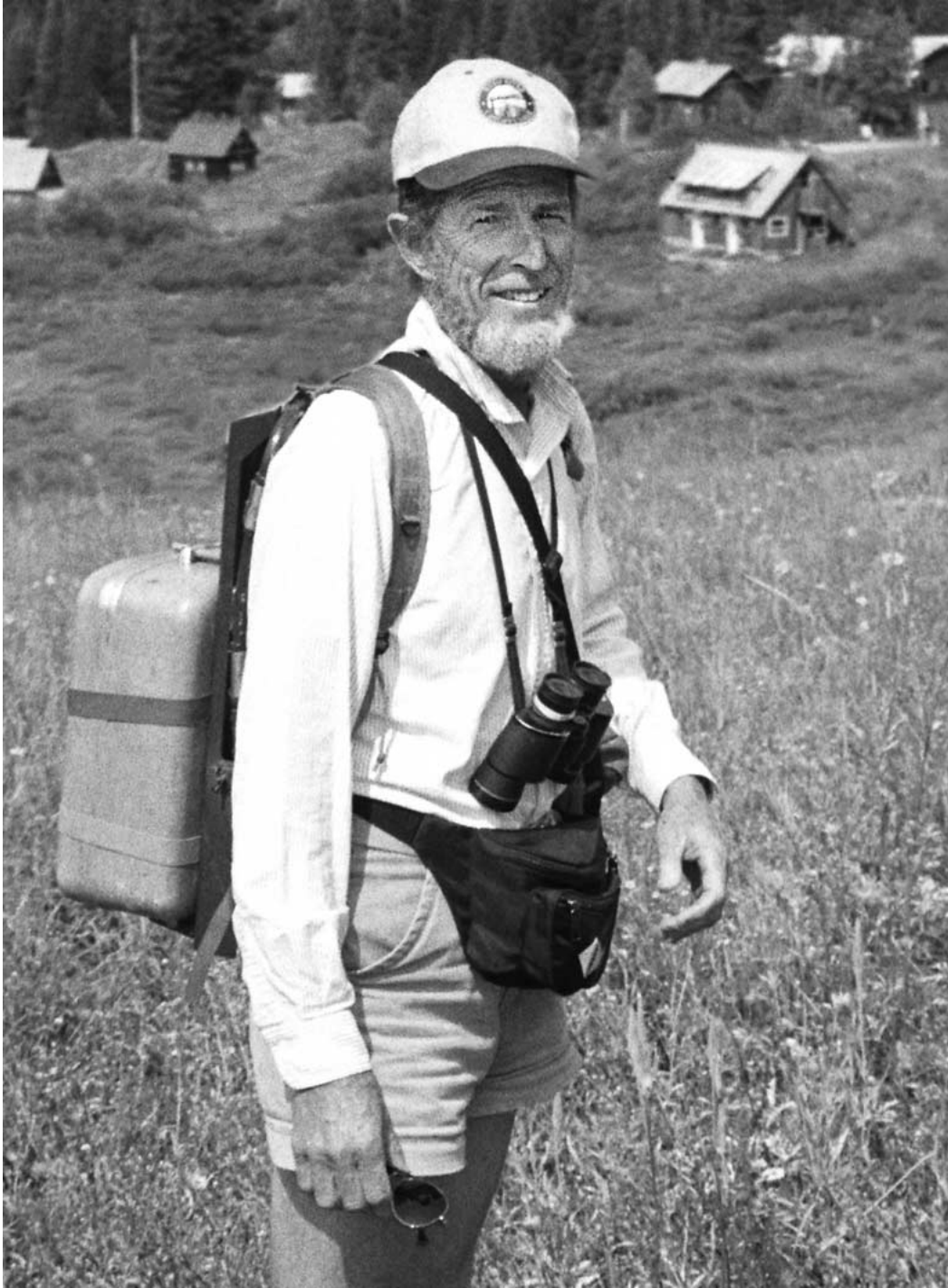
Bill was born in Cambridge, Massachusetts, on 2 September 1934. At age 16, participation in field trips sponsored by the Atlanta Audubon Society led to an interest in bird watching. He acquired a distaste for collecting when a professor shot a Great Blue Heron but failed to prepare the specimen. After two years at Emory University and summers spent as a Forest Service smoke-jumper in Montana, he completed his BS degree in zoology from the University of Georgia in 1955. Enlisting in the U.S. Coast Guard, he became a pilot of twin-engine seaplanes, doing search and rescue operations and fish and wildlife patrols in Florida, Texas, and Washington. Graduate school took him to Washington State University where he studied Zebra Finch metabolism for an MS thesis (1963) under the guidance of James R. King, and then to Duke for a Ph.D. dissertation (1966) on roadrunner metabolism with Knut Schmidt-Nielsen. During that time, two summers were spent as a seasonal naturalist at Grand Teton National Park, where his interest in hummingbirds was initiated by a Calliope Hummingbird nest, and one summer as a ranger-naturalist at Glacier National Park. After two years teaching at Virginia Polytechnic Institute, he moved to the University of Arizona at Tucson in 1969, becoming a professor in the Department of Ecology and Evolutionary Biology in 1974. He joined the AOU in 1961, becoming an Elective Member in 1974, and a Fellow in 1988.

Bill's earlier research publications concerned mainly water balance, respiration, and energetics of birds, but he published two papers on temperature relationships of the water shrew. In 1971 he spent the first of many summers at the Rocky Mountain Biological Laboratory (RMBL) in Gothic, Colorado. There he

investigated physiological problems associated with small size, especially of hummingbirds. For the rest of his life, most of his research focused on hummingbirds; it resulted in many papers on their physiology, ecology, and behavior. A significant departure was a sabbatical in New Zealand in 1976–1977, where he studied kiwi physiology. His interest in tiny mammals, tiny birds, and big eggs (as in the kiwi) led him to question many established ideas about the relationship between size and function; he wrote *Size, Function, and Life History* (1984, Harvard University Press). He contributed chapters to a number of books, most on hummingbirds, matters of size, and conservation issues.

Personal research with subsequent publication was not Bill's only goal; he was a dedicated teacher at both the graduate and undergraduate levels. He wanted students to question what they saw and read and to learn to derive their own answers. He was irreverent of established rule and used provocative questions daily in his classroom. He transmitted the joy of "doing" science; his own work proved it could be fun. Theories were never lacking in his discussions; he could always offer a theory about anything. Many ideas were not productive, but others led to fruitful research. The University of Arizona College of Science honored him in 2002 with its Career Mentoring Award, in recognition of a lifetime of excellence in teaching. He left a compelling model on how to live and how to do science, described by one of his colleagues as "equal parts of humor, keen observation, hard work, and absolute honesty."

Bill's love of the outdoors was a compulsion; he liked nothing better than to climb the nearest high mountain. At RMBL, he often invited new students or colleagues to talk with him, but that involved bushwhacking to a nearby 13,000 ft (3,950 m) peak! His physiological ecology course was dubbed "Backpacking 101." With his wife Lorene, he started graduate student seminars at which they would serve peppermint tea prepared on a wood burning stove and served in specimen jars. He was a regular participant in the 4th of July footrace, an eight mile (13 km) ordeal between Gothic and



WILLIAM A. CALDER III, 1934–2002

(Bill Calder at the Rocky Mountain Biological Station, Gothic, Colorado. Photograph taken in July 1999 by Lorene Calder.)

Mt. Crested Butte, all above 9,000 ft (2,700 m) elevation. He was often the oldest runner and his energy was legend—he could out-walk or out-run almost everyone. The no-talent show at RMBL was an annual event in which Bill made fun of himself and others. Music was a major part of his life; he made a backpacking mandolin for hiking and saved his better instrument for concerts with the Gothic Chamber Music Ensemble, which he had organized.

Bill wrote the species accounts in *The Birds of North America* for Broad-tailed, Calliope, and Rufous hummingbirds, with Lorene collaborating on two of them. He believed that researchers should write for the public and published articles in *Scientific American*, *Natural History*, *Wild Bird*, and other popular magazines. Often he was a consultant for major television productions on birds, particularly hummingbirds. At RMBL, he established a scholarship for journalism students who were interested in science. He was recruited by Gary Nabhan for the "Forgotten Pollinators" program at the Arizona-Sonora Desert Museum in Tucson. That involved considerable field study in Mexico on Rufous Hummingbirds, meshing well with his long-term efforts to track the species to and from its wintering grounds. During the course of many trips to Mexico, Calder introduced students there to the banding and study of hummingbirds. His banding included Neotropical migrants and he is

said to have "lost" many bands in Mexico, reputedly placed on nonmigratory species, contrary to banding regulations. Some of his Mexican students studied at the University of Arizona or RMBL, sometimes partially supported by funding set up by the Calders. On one trip to Mexico, he asked a participant "Have you ever looked at the eye of a hummingbird with a hand lens? You can see the universe there."

To describe Bill Calder as an environmentalist would be an understatement. He initiated and taught several conservation biology courses at different levels and was always prepared with quantitative data to support his points. Students in those classes were taken on many field trips; even if a student retained few facts, the outdoor experience would be of lasting value and ultimately benefit the environment. He lived what he preached (he regularly biked several miles to campus), did not throw things away, and built many things from scrap and spare parts. His resources have helped RMBL protect lands surrounding it.

Unrestrained enthusiasm and spontaneity aptly describe Bill's approach to life, science, family, environment, and teaching. He and his beloved and devoted Lorene were together for 47 years; their daughter Susan (who once bicycled from Tucson to Gothic with her father) and son Bill both share their parents' environmental concerns. Innumerable friends, students, and colleagues miss him and his inspiration.

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## IN MEMORIAM: PETER F. CANNELL, 1954–2002

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Peter Frederick Cannell, director of the Smithsonian Institution Press, died at his home in Bethesda, Maryland, on May 18, 2002, of a brain tumor. He had been an Elective Member of the AOU since 1988.

Peter was born in New York City on 17 September 1954. He attended the Buckley School and then Milton Academy in Massachusetts, where he first met Amanda Henderson; they were married in 1977. Peter's interest in birds and the rest of nature was sparked at Bowdoin College, particularly at its research station on Kent Island, New Brunswick, under the guidance of Charles Huntington. After receiving a BA in 1976, he was an intern for several months at the Manomet Bird Observatory, spent the academic year 1977–1978 as a teaching assistant at Bowdoin, and then returned to Kent Island as acting director of the research station for the field seasons of 1979 and 1980.

In the fall of 1978, Peter enrolled in the Evolutionary Biology Ph.D. program offered jointly by the American Museum of Natural History and the City University of New York. His 1986 dissertation, "Syringeal Complexity and the Ordinal Relationships of 'Higher' Birds," was based on the comparative examination and interpretation of over 600 specimens representing 57 families and 22 orders of nonpasserine birds. Two shared, derived characters of the syrinx imply a relationship between parrots and colies and corroborate a previous suggestion of Robert Raikow, based on hind limb musculature. Using cladistic character criteria, Peter concluded that "there is no current evidence to support a close relationship between Piciformes and Passeriformes."

During his years in graduate school, Peter received extensive experience in curating the world's largest bird collection, performed admirably as an