

reaucratic hurdles, no requirements to meet, no administrator or overzealous curator to curry favor with. You had free access to everything Brodkorb had ever acquired from the first day you walked into his office. It was the most precious gift he would ever give and he fought tenaciously for the freedom to give it.

As late as 28 September 1988, at the Los Angeles meeting of the Society of Avian Paleontology and Evolution, which was held in honor of Brodkorb's 80th birthday, Pierce told me emphatically that he did *not* want his collection to go to the Florida Museum of Natural History. In a will dated 31 July 1987 he left his skeleton collection to the Field Museum, although that was not its eventual disposition. The end of that story has not yet been written, and I will leave it for others to tell.

One of Brodkorb's greatest achievements, with his knowledge and accessibility, his fossils, his books and papers, and above all his osteological collection, was to create an environment—a self-sufficient world of scientific inquiry and discovery. His students and colleagues had complete freedom to enter this world and derive as much or as little from it as their abilities and interests permitted. Although the collection he labored over so long remains in Gainesville, the environment that he created with it is unfortunately gone forever. But those who were privileged to enter that world, and to be inspired by it while it existed, now pay grateful tribute to a truly unique figure in 20th century ornithology by continuing the work he started.

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## IN MEMORIAM: GORDON W. GULLION, 1923-1991

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Gordon W. Gullion, a University of Minnesota professor and world-renowned expert on Ruffed Grouse (*Bonasa umbellus*), died on 23 September 1991 after a long battle with cancer. Gullion's three decades of research on Ruffed Grouse and other forest wildlife have been instrumental in the development of practices used by public agencies and private foresters to manage forests for the combined benefit of wildlife and timber production.

Gullion was born in Eugene, Oregon, on 16 April 1923. His parents gave him the two-volume set of the National Geographic Society's *Book of Birds* for Christmas, 1937; after reading it through, he started his life list by entering a Song Sparrow on 26 January 1938. He received his B.S. degree at the University of Oregon at Eugene and his M.S. at the University of California at Berkeley under the direction of the notable wildlife scientist, Starker Leopold. In his studies of the American Coot (*Fulica americana*), Gullion first described the voice differ-

ences between the sexes, histology and development of the frontal shield, sex and age determination, molt, territorial and courtship activities, and seasonal variation in interspecific and intraspecific territorial activity. After working for seven years on Sage Grouse (*Centrocercus urophasianus*) and Gambel's Quail (*Callipepla gambelii*) with the Nevada Fish and Game Department, he joined the Department of Fisheries and Wildlife at the University of Minnesota in 1958.

As head of the forestry wildlife project at the Cloquet Forestry Center for 32 years, he conducted a management-oriented study of the Ruffed Grouse and its habitat relationships that is unequalled in duration and intensity. His studies clearly have identified the influence of specific habitat components, especially aspen, on the life history of Ruffed Grouse and, from these, he formulated forest-management procedures to benefit grouse and other wildlife. For two decades he collected grouse wings and tails

from Minnesota hunters and showed how frequency of color phases varied in relation to grouse population cycles, providing a basis for other researchers to demonstrate the linkage of color phases and aspects of grouse behavior and reproduction.

Hundreds of students, researchers, land managers and private forest owners have been influenced by Gullion and his research. In the Ruffed Grouse Society he played a key role by authoring wildlife-management booklets and newsletter articles, and by serving on the national board of directors and as chairman of the research committee since 1972.

Gullion authored over 160 professional and

popular articles including *Grouse of the North Shore* (1984) and *The Ruffed Grouse* (1989, Minocqua, Wisconsin). During his final year he was honored by the Minnesota Forestry Association with an award for "excellence in wildlife habitat management"; by the North Central Section of the Wildlife Society with its premier award, the Professional Award of Merit; by the Izaak Walton League with its Honor Roll Award; and by Minnesota Governor Arne Carlson for "outstanding work in forestry and Ruffed Grouse research." The Department of Fisheries and Wildlife, University of Minnesota, has established a fund for an endowed chair to honor Gordon Gullion and to perpetuate his work.

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## IN MEMORIAM: HAROLD H. AXTELL, 1904–1992

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Born in Tuxedo, New York, in the Hudson Highlands, Harold Axtell's interest in nature commenced at an early age. After years as a musician with dance bands, he entered Cornell University in 1940 and earned his doctorate in vertebrate zoology in 1947. He then came to the Buffalo Museum of Science as curator of biology, retiring in 1969.

While at Cornell, Harold associated with Arthur Allen, Paul Kellogg and Albert Brand, particularly in their early work studying and recording bird vocalizations, for which his acute hearing and musical training made him especially expert all his life. His phonetic renderings of bird sounds such as, for example, the White-throated Sparrow and Connecticut Warbler, ran into the many hundreds.

An all-around naturalist and field biologist, Harold concentrated on ornithology and particularly the fine points of field identification

of birds, to which he devoted a great deal of time in later years. He became internationally known for his expertise in this and was respected and admired by many field birders as well as professional ornithologists. In the 1950s he pioneered a verification system for bird sight records for the Buffalo Ornithological Society, methods of which have been incorporated or adapted in subsequent systems by other organizations.

In connection with this system he wrote several thoughtful and comprehensive articles in *The Prothonotary*, the Buffalo Ornithological Society's publication, on the question of whether a sight record can be scientific and how to write verification reports on them. He was elected a Fellow of the Buffalo Ornithological Society and in 1951 became an Elective Member of the American Ornithologists' Union.