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Obituary



Chandler Seymour Robbins (1918–2017)

Chandler Seymour Robbins, one of the most widely admired and internationally respected field ornithologists, died in Laurel, Maryland, on 20 March 2017, at the age of 98. A modest man, he will be fondly remembered for his many achievements and his lifelong dedication to studies of birds and their habitats. Of his hundreds of publications, the best known is Birds of North America: A Guide to Field Identification, coauthored with Bertel Bruun, illustrated by Arthur Singer, and edited by Herbert Zim, published in 1966 and revised in 1983. This 'Golden Guide', with its opposing range maps, sonograms and plates comparing similar birds, set new standards for field guides. More than six million copies have been sold.

Born in Belmont, Massachusetts, on 17 July 1918, Chan was birding by the age of 12. Before he had completed his undergraduate studies at Harvard University in 1940, his advisor, the

legendary birder Ludlow Griscom, warned him against ornithology as a career choice, citing the paucity of opportunities. But in 1945 Frederick Lincoln invited Chan to join the Bird-Banding Laboratory of the U.S. Fish and Wildlife Service. That position also allowed him to work toward a Masters degree at George Washington University, which he received in 1950. In 1948, he married Eleanor Cooley, with whom he had two sons and two daughters. The Patuxent Wildlife Research Center served as Chan's base for a 60-year career in public service, from which he retired in 2005 at the age of 87.

Chan wanted everyone to become better educated about birds because such knowledge can inspire an appreciation of wildlife and a commitment to its conservation. He worked tirelessly with local, regional, national, and international groups to compile data and standardize field methods. In his lifetime and with his helpers, he ringed more than 450 species of birds in the United States, Canada, Central America, and the Caribbean. He participated in more than 400 Christmas Bird Counts.

Starting in 1956, Chan made 10 trips to Midway Atoll to study seabirds. One of the many Laysan Albatrosses *Phoebastria immutabilis* he ringed that year had a chick and must have been at least 7 years old. On his last trip in 2002, he re-ringed the same bird a quarter of a mile away, sitting on an egg. In December 2016 that bird, now at least 66 years old, was seen to be rearing a chick. It is now the oldest known wild bird in the world, and holds the record for the longest reproductive life. Chan and his colleagues showed that by modifying the dunes and thereby the updrafts, the naval air base on the atoll could coexist with the seabirds.

Chan was a major contributor to the National Audubon Society's Breeding Bird Census and Winter Bird-Population Study, methods for mapping birds in gridded habitats, modeled after the Common Birds Census in the UK that had been run by the BTO since the early 1960s. His results contributed to more synthetic works like his summary with Robert Stewart of the avifauna of Maryland and the District of Columbia. He adapted breeding bird atlas methods developed in Britain for regional summaries in the USA and served as

senior editor for the atlas of the breeding birds of the same area. Another early cooperative project was Operation Recovery, a program begun in the 1950s to net and ring birds during autumn migration at coastal sites along the eastern seaboard of North America.

From 1961 to 1974 Chan served as Chief of the Migratory Nongame Bird Studies Section of the U.S. Fish and Wildlife Service, a unit that is now under the U.S. Geological Survey. During that time, with his detailed knowledge of the distribution and habitat requirements of birds in the mid-Atlantic states, especially in landscapes that combined agriculture and woodlots, Chan developed his concept of forest fragmentation – that some forest interior birds were excluded from small woodlots by their size. That idea became an important paradigm in the field of conservation biology, although its link to the theory of island biogeography was a stretch.

Chan's concern about the effects of pesticides on bird populations was part of the impetus for his design of the most ambitious citizen science program of all, the North American Breeding Bird Survey (BBS). It involved point counts, which had been developed in France. A volunteer workforce of skilled birders, who loved their cars, would drive along a 24.5-mile prescribed route 1 day in June and stop every half-mile for a 3-min point count of birds seen and heard. By 1968 this project had nearly 2000 routes throughout the USA and Canada. Now administered by Patuxent, Environment Canada's Canadian Wildlife Service, and Mexico's CONABIO (National Commission for the Knowledge and Use of Biodiversity), this Breeding Bird Survey assesses the status and trends of bird populations on a truly continental scale (https://www.pwrc.usgs.gov/bbs/bbsnews/Pubs/Birding-Article.pdf). New and creative uses of BBS data continue to appear regularly. The BTO's Breeding Bird Survey, which started in 1994, uses more intensive sampling at a smaller scale. Observers walk line transects, first developed in Finland, through 1-km squares. Both programs involve the cooperation of coordinators, data managers and statisticians.

When trends first became apparent in the BBS data, Chan and his colleagues were alarmed by declines in populations of Neotropical migrants. That concern led to the establishment of Partners in Flight, a joint government and private conservation partnership and from 1984 to 2000 to a program to study the effects of forest fragmentation on migrants wintering in Mexico and Central and South America.

Chan received many awards, including the Arthur A. Allen Medal from the Cornell Laboratory of Ornithology in 1979, an Honorary Doctorate of Sciences from the University of Maryland in 1995 and the Elliott Coues Award from the American Ornithologists' Union in 1997. After he retired in 2005 at the age of 87, he just switched to volunteer service and continued his field studies. His winsome personality and legendary flat-top haircut are gone, but fond memories and his many published contributions remain.

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