BioOne COMPLETE

Chandler S. Robbins, 1918–2017

Authors: Sheppard, Jay M., Dawson, Deanna K., and Sauer, John R.

Source: The Auk, 134(4) : 935-938

Published By: American Ornithological Society

URL: https://doi.org/10.1642/AUK-17-140.1

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

Downloaded From: https://complete.bioone.org/journals/The-Auk on 28 Mar 2024
Terms of Use: https://complete.bioone.org/terms-of-use

The Auk
Ornithological Advances
AmericanOrnithology.org

Volume 134, 2017, pp. 935–938
DOI: 10.1642/AUK-17-140.1

IN MEMORIAM

Chandler S. Robbins, 1918–2017

Jay M. Sheppard,[1]* Deanna K. Dawson,[2] and John R. Sauer[2]

[1] Laurel, Maryland, USA
[2] USGS Patuxent Wildlife Research Center, Laurel, Maryland, USA
* Corresponding author: jaymsheppard95@gmail.com

Published September 27, 2017

The first day of spring 2017 marked the passing, at the age of 98, of Chandler S. Robbins, one of the great American ornithologists. Chan, as he was called, was a man of boundless energy, unflagging positivity, and exceptional intellectual capabilities. He spent his long career entirely with the U.S. government, which provided him with a forum that perfectly complemented his skills. As a field ornithologist arriving at the Patuxent Research Refuge in Maryland in the 1940s, he gathered the threads of a nascent paradigm in ornithology that combined the emerging need for information on bird distribution and population change with publicly collected bird data. Frank Chapman, Frederick Lincoln, and Wells Cooke had defined the essential ideas of citizen science for the Christmas Bird Count (CBC), bird banding, and phenology data, but Chan brought an appreciation for the needs and capabilities of citizen scientists that transformed our way of gathering bird population data. He connected with birders individually and collectively through bird clubs, organized counts, and a field guide that was focused on the development of the song identification skills required for scientific bird counting. Combined with a superhuman tolerance for the bookkeeping aspects of bird counting and a love of being in the field, Chan's bully pulpit in public service enabled him to launch monitoring programs and research initiatives that have formed the basis of North American bird conservation.

Chandler Seymour Robbins was born on July 17, 1918, in Belmont, Massachusetts. His family has deep New England roots. Chan's parents and grandparents were all interested in natural history, and his curiosity about birds started before he was a teenager. At an early age, he met some of the prominent ornithologists of the day, including William Brewster and Ralph Hoffman. At the age of 16, he organized and compiled his first CBC, which Ludlow Griscom questioned for its report of Barrow's Goldeneyes from a local freshwater pond. (The identification was later confirmed.) Chan graduated from Harvard in 1940 with a degree in physics. Ironically, Griscom, Chan's mentor at Harvard, advised him not to get a degree in biology, as ornithologists had limited employment opportunities! While at Harvard, Chan saw his cousin, Franklin D. Roosevelt, receive an honorary doctorate and graduated in the same class as John F. Kennedy. Chan received his M.Sc. from George Washington University in 1950, and the University of Maryland awarded him an Honorary Doctorate of Science in 1995.



Chandler S. Robbins in Panama in 2012. Photo credit: Carlos Bethancourt

In 1940, Chan began teaching math and science at a school in Vermont and was nature director at a summer camp in New Jersey. Influenced by an uncle who became a minister after serving in World War I, Chan worked in the Civilian Public Service during World War II. He transferred to Patuxent in 1943 and was hired by the U.S. Fish

© 2017 American Ornithological Society. ISSN 0004-8038, electronic ISSN 1938-4254
Direct all requests to reproduce journal content to the AOS Publications Office at pubs@americanornithology.org

Downloaded From: https://complete.bioone.org/journals/The-Auk on 28 Mar 2024
Terms of Use: https://complete.bioone.org/terms-of-use

and Wildlife Service (FWS) in 1945. At the time, FWS director Ira Gabrielson had a strong interest in the field research at Patuxent, which also hosted bird-banding and research programs supervised by Lincoln and John Aldrich. Thus, Chan had the opportunity to conduct fieldwork and to participate in national programs. As Chan was an exceptionally talented birder and natural historian, he quickly earned the respect of his supervisors and colleagues.

Chan's arrival at Patuxent was a defining moment for his career. Robert Stewart, Sr., hired him and they initiated a series of field projects, including breeding bird censuses at Patuxent and around Maryland. Their initial intent was to use the data to assess the effects of habitat on birds. However, Chan realized that this dataset formed a baseline for longitudinal studies that could provide strong inferences regarding environmental effects on bird populations. With Stewart, he also produced the classic state bird book *Birds of Maryland and the District of Columbia* (Bureau of Sport Fisheries and Wildlife, 1958). In addition to the observational surveys, Chan and others banded birds in forested habitats at Patuxent, a project that later became a long-term study that was among the first to use capture–recapture data to estimate population size (Stamm et al., *Bird-Banding*, 1960; Nichols et al., *Studies in Avian Biology* 6, 1981).

Chan used a variety of his historical datasets to address the effects of forest fragmentation on bird populations (U.S. Forest Service General Technical Report NC-51, 1979) and collaborated with Robert Whitcomb in the 1970s in relating bird occurrence to size of woodlots and other landscape features (Whitcomb et al. in *Forest Island Dynamics in Man-Dominated Landscapes*, Springer, 1981). Chan extended this work across Maryland to relate the probability of occurrence of species to forest size. Results from that study (Robbins, Dawson, and Dowell, *Wildlife Monographs*, 1989, which received a 1990 outstanding publication award from The Wildlife Society) led to efforts in Maryland and elsewhere to identify and conserve large, unbroken tracts of forest while there was still time. In 2012, Chan said that this was the work of which he was most proud.

In addition to the fieldwork at Patuxent in the 1940s, Chan was assigned office work in the Bird Banding Laboratory, synthesizing data to map bird distributions for the American Ornithologists' Union (AOU) *Checklist*. For Chan, this must have been a dream job, as it allowed him to work with senior ornithologists in Washington and elsewhere. Lincoln, in particular, was a visionary in designing banding studies that relied on many collaborators to produce inferences at a continental scale. Lincoln, Stewart, and Aldrich were mentors who all influenced Chan's thinking and provided him opportunities and models for organizing and conducting scientific studies and publishing the results.

Although his job titles and supervisory roles changed from junior biologist to chief of nongame bird studies to (ultimately) U.S. Geological Survey senior scientist, the topics Chan worked on remained remarkably consistent throughout his career. He was uniquely skilled in the combination of quantitative and ornithological knowledge required for this work. The FWS had been developing range-wide surveys of American Woodcock, Common Snipe, and Mourning Dove; in the 1950s, Chan worked on refining those surveys. In the late 1940s, he also became active in hawk migration counting. Naturally, he continued his active participation in CBCs, eventually participating in more than 420 and compiling 207 on 10 count circles in 4 states over 82 years.

To Chan, what we now call "citizen science" must have seemed a logical means of obtaining continent-scale data on birds. Chan administered the Bird Phenology Program started by Cooke in the 1880s. Although the program was in decline, data from volunteer observers were collected through the 1960s, and Chan saved this historical dataset for posterity. After visits to Great Britain and Europe in the early 1960s, Chan adopted the idea of breeding-bird atlases, spurring a major movement using volunteers. Chan was senior editor for the 1983–1987 atlas project, *Atlas of the Breeding Birds of Maryland and the District of Columbia* (University of Pittsburgh Press, 1996), served on the coordinating committee for the second Maryland atlas (2002–2009), and advised many others on their own state atlas projects.

In 1956, Chan collaborated in the development of Operation Recovery, a cooperative banding program for migrants using mist nets that lasted into the 1970s. Operation Recovery was an ambitious project designed to recapture banded birds as they moved southward along the East Coast in fall. Although few birds were recaptured at other sites, the project trained hundreds of banders in ageing and sexing of birds and in recording banding effort data. Chan saved the Operation Recovery data, believing that they deserved additional analyses. Some of the banding sites later became full-time bird observatories.

The creation of the Breeding Bird Survey (BBS) was undoubtedly one of the most important scientific achievements of Chan's career, and it grew organically out of his own research. Chan's early postwar work included before–after counts of bird abundance on plots experimentally treated with aerial spraying of DDT, helping to define a critical role for future pesticide research at Patuxent. All of these studies captured the attention of Rachel Carson, who was then editing manuscripts for the FWS. In *Silent Spring* (Houghton Mifflin, 1962), Carson provided convincing evidence of pesticide effects on birds and highlighted the paucity of population-level data to show the effects on regional bird populations. This book, its supporting studies, and public concern allowed Chan to argue

Downloaded From: https://complete.bioone.org/journals/The-Auk on 28 Mar 2024
Terms of Use: https://complete.bioone.org/terms-of-use

convincingly to Aldrich, his supervisor, that continent-scale surveys of birds should be developed to address this deficiency. It was a remarkable moment, as Chan had the knowledge, experience, and contacts to muster a corps of expert volunteer observers. He also had the methodological and administrative experience with roadside surveys to know it could be done, the free postage that official government mailing then enjoyed, and his boundless energy.

After a pilot year in Maryland and Delaware and a variety of experiments to optimize the count protocol, Chan launched the BBS in 1966. The BBS is now the primary monitoring program for nongame birds in North America, covering most of the continental United States and Canada, with expansion into Mexico now under way. It just passed the 50-year mark (Sauer et al., *The Condor*, 2017) and provides population-change information for more than 500 bird species. Many people assisted Chan with the logistics and implementation of the BBS, and, by the 1980s, Chan's role in the survey was advisory. However, he remained an active participant, conducting BBS routes through 2008, consulting on its operation and analysis, and publishing results. Robbins et al. (*Proceedings of the National Academy of Sciences*, 1989) used BBS results to detect declines in populations of Neotropical migrant bird species. This groundbreaking study was an important impetus for the founding of Partners in Flight in 1990. Today, the BBS annually samples more than 3,200 routes, using more than 2,000 observers.

Chan collaborated with Bertel Bruun and Herbert Zim to produce *A Guide to Field Identification: Birds of North America* (Golden, 1966), which was a triumph of form and substance. The text was accompanied by Arthur Singer's brilliant illustrations, with text and images for each species on opposing pages. For the first time in one volume, both sonograms and range maps were included for nearly all North American species. Chan has said that he was initially reluctant to compete with his friend Roger Tory Peterson's popular guides, but that ended when the editors agreed to include sonograms. Chan made most of the sonograms from his own field recordings, which he later donated to the Cornell Lab of Ornithology. The "Golden Guide" quickly became a best seller and, including a second edition (1983), eventually sold more than 7 million copies. How many persons this field guide led into ornithology or a related field is not known, but many members of the AOS will attest to the influence of the Golden Guide in their own choice of career.

Chan was a great advocate of bird banding as a tool for conservation and science. His own banding projects spanned his life from high school until 2014. In those eight decades, he banded more than 300 species and 190,000 individuals. In 1956, he was asked to conduct studies to reduce bird–aircraft collisions on Midway Atoll. As part of those studies, he banded more than 90,000 birds, primarily albatrosses, over 10 years (1956–1966). He returned in 2002 for additional study. One Laysan Albatross that Chan had banded in late 1956 as a breeding adult was rebanded by him in 2002 and called "Wisdom." In early 2017, Wisdom was still producing offspring and was considered to be the oldest wild bird in the world, at an age of at least 66 years.

During the 1980s and '90s, Chan conducted studies of habitat use by wintering migrant and resident birds in the Neotropics. With a team of colleagues and volunteers, he banded and counted birds at a variety of sites in Mexico, Central and South America, and the Caribbean. As with Operation Recovery, these field efforts produced considerable banding and recapture data, a rich dataset for future analyses. Characteristically, Chan worked closely with local biologists and volunteers, and, in the final years of the project, he worked with Guatemalan scientists to develop a monitoring program in the Cerro San Gil Reserve. In gratitude for Chan's mentoring and support, the Guatemalan conservation organization Fundaeco dedicated the Chandler Robbins Biological Station at the reserve in 1996.

Chan was a life member of the AOU, Cooper Ornithological Society, Wilson Ornithological Society, Association of Field Ornithologists, and Waterbird Society. He became an Elective Member of the AOU in 1949 and a Fellow in 1970. Although he never served as an officer in any scientific society, he served on numerous committees, advisory boards, and boards of directors in these and other state, national, and international ornithological and conservation organizations. He was the editor (1948–2013) of the Maryland Ornithological Society's *Maryland Birdlife* and the technical editor for *Audubon Field Notes/North American Birds* (1952–1989). The list of papers, books, maps, annotated checklists, and articles authored or coauthored by Chan since 1937 exceeds 650.

He was the recipient of numerous awards and honors, among them the AOU's Elliott Coues Award, Cornell Lab of Ornithology's Arthur A. Allen Award, the Audubon Naturalist Society's Paul Bartsch Award, and the FWS's Meritorious Service Award. At the age of 96, Chan received the American Birding Association's Roger Tory Peterson Award for lifetime achievements and the National Wildlife Federation Conservation Achievement Award.

Chan's wife of six decades, the former Eleanor Cooley, died in 2008. Survivors include his four children—Jane and Nancy of Beltsville, Maryland; Stuart of Laurel, Maryland; and George of Pittsfield, New Hampshire—and five grandchildren and eight great grandchildren.

Chan and Eleanor believed in investing in the future through the conservation of our natural resources. Early on, they donated the proceeds of his Golden Guide to conservation efforts. They set up numerous trusts to fund

Downloaded From: https://complete.bioone.org/journals/The-Auk on 28 Mar 2024
Terms of Use: https://complete.bioone.org/terms-of-use

college scholarships and conservation organizations, and purchased and donated important habitats in need of protection. Although it was mostly imperceptible even to close colleagues, Chan was a man of faith. He sang in the choir and taught Sunday school for many decades. In a 2008 interview, Chan said,

> I feel. . .all of nature is God's creation, and that we need to protect it. We need to pass it on to our descendants. Pass it on physically as well as mentally in a way. Many times this spring, when I realized I was not seeing warblers in my yard, I realized that I've lost a good bit of what I used to take for granted.

Although he officially retired in 2005, Chan worked until the end of his life. He would come into his office at Patuxent several days each week to work on a variety of projects. Chan gave his final presentation to a local bird club in November 2016 and went birding near his home the day before going into the hospital for the last time. All who knew him will sorely miss him, and generations to come will benefit from his work. His was a life well birded.

The authors wish to thank the many colleagues, friends, and family who contributed ideas, data, and thoughts to this memorial. The Patuxent Wildlife Research Center has a special website to commemorate Chan, with biographical information, a complete bibliography, and pictures: https://www.pwrc.usgs.gov/robbins/index.cfm. Personal memories and tributes are also posted on the website.

Memorials Editor: Ted Anderson, ted020@centurytel.net

Downloaded From: https://complete.bioone.org/journals/The-Auk on 28 Mar 2024
Terms of Use: https://complete.bioone.org/terms-of-use