STANLEY A. TEMPLE, Ph.D.

Concise biography including achievements
and contributions to conservation

This document summarizes Stan Temple's meritorious achievements in instruction, research and outreach in the field of wildlife ecology and conservation over his 37 years of on- going professional service. For 32 years he occupied the faculty position once held by Aldo Leopold, the first academic position in the world devoted to wildlife management. He was the first to hold the University of Wisconsin's Beers-Bascom Professorship in Conservation, in large part because of the overall excellence of his complementary programs in teaching, research and outreach. He co-founded and chaired the graduate program in Conservation Biology and Sustainable Development in the Gaylord Nelson Institute for Environmental Studies. He received the Spitzer Land Grant Award in recognition of his all-round excellence in instruction, research, and outreach in the field of wildlife conservation. Since his "retirement" from academia in 2008 he continues to be fully engaged as a Senior Fellow at the Aldo Leopold Foundation where he has given dozens of public lectures on conservation topics each year, reaching a cumulative audience of over 5000 in just the past 5 years. Stanley A. Temple continues to be a quintessential wildlife conservationist with his outstanding accomplishments in instruction, research and outreach. His amazing career and huge impact are summarized in a 2011 article from the University of Wisconsin news service https://news.wisc.edu/stan-temple-a-life-saving-threatened-species/

Brief biography

Stan Temple (b. 1946) grew up in Cleveland, Ohio where the curator of ornithology at the Cleveland Museum of Natural History noted Stan's intense interest in birds and invited Stan to work in the bird collection when he was a high school student. Stan spent nearly as much time in the museum as he did in class. When Stan was 10, he met Rachel Carson who took an interest in Stan and became a mentor and a friend.

With a scientific orientation to his passion, Stan was accepted to Cornell University, the leading institution for ornithology in the US. Stan continued at the Cleveland Museum as Associate Curator while an undergraduate at Cornell where he earned a BS in Biological Sciences in 1968. As a Cornell student he became Curator of the Bird Collection and continued in that role until he earned his Ph.D. in Ecology and Evolutionary Biology from Cornell in 1972.

The World Wildlife Fund hired Stan as an endangered species biologist enabling him to continue his research on endangered birds on the island of Mauritius in the Indian Ocean. In Mauritius, his innovative research helped to save endangered birds including the Mauritius Kestrel and the Pink Pigeon and the Calvaria tree, whose seeds Stan discovered had not germinated since the extinction of the Dodo.

In 1976, Stan was hired as a faculty member of the Department of Wildlife Ecology at the University of Wisconsin-Madison, filling the position that had previously occupied by Aldo Leopold and Joseph Hickey (both in the Wisconsin Conservation Hall of Fame). In 1980 he was named Beers-Bascom Professor of Conservation, a position he held until becoming Emeritus in 2007.

Conservation Research Accomplishments

Stan Temple's research program focuses on important wildlife conservation issues that need scientific attention. He has produced over 320 publications, an average of 4 publications per year as an Assistant Professor, 7 per year as Associate Professor and 14 per year as a Full Professor. He supervised the research programs of 52 M.Sc. and 23 Ph.D. and several postdoctoral students in Wildlife Ecology, Conservation Biology and Sustainable Development, and Land Resources. His 1978 book on management of endangered species expressed a paradigm that continues to guide approaches to recovering species threatened with extinction. He and his students worked in 21 countries with some of the world's rarest and most endangered species. None of those species have gone extinct and most are recovering as a result of his work. In the Wisconsin and the North Central region he contributed substantially to high-profile recovery efforts for Peregrine Falcons, Trumpeter Swans and Whooping Cranes among other rare species.

Stan Temple's peers in professional organizations have given him prestigious awards that recognized his accomplishments as a researcher. *The Wildlife Society* awarded him Honorary Membership for his lifetime achievements in wildlife conservation. The *Wisconsin Society for Ornithology* gave him its highest honor, the Golden Passenger Pigeon Award, for outstanding contributions to conservation and ornithology. Only five other individuals, including Temple's predecessors at UW-Madison, Aldo Leopold and Joseph J. Hickey, have been recipients. The award citation highlights his accomplishments "as a researcher who has earned world-wide recognition for his numerous and important contributions to conservation and ornithology." The *American Association for the Advancement of Science* promoted him to the status of Fellow "For contributing to the preservation of biological diversity through applied research on threatened wildlife." His Chevron Conservation Award recognized his many accomplishments as a conservation scientist. The *Society for Conservation Biology* awarded him its highest honor on only the third occasion when the award was presented. The citation notes his "distinguished research in the field of conservation biology" and specifically mentions several of his research contributions. He is a Fellow of the *American Ornithologists' Union, the Explorer's Club* and the *Wildlife Conservation Society.*

Because almost all of Dr. Temple's research has been applied, hundreds of conservationists have used his work in their diverse management activities. Several research projects stand out, however, because the results had a major direct impact on conservation programs in Wisconsin and in the North Central region. His research on habitat fragmentation and its impacts on wildlife provided the justification for several conservation projects in Wisconsin and elsewhere. The Nature Conservancy's plan for managing the Baraboo Hills revolves around his research on songbirds and their population dynamics in fragmented landscapes. This research affected management plans for National Forests in northern Wisconsin and elsewhere in the North Central region. His research on the impacts of free-ranging cats on wildlife has been used as the scientific basis for control programs on several managed natural areas around the U.S., and has been used to support legal challenges to laws that allowed cats to roam freely through sensitive wildlife areas. The Humane Society of the U.S. modified its policy on free-ranging cats largely on the basis of his research. Among his ongoing research on endangered species, the work with the endangered Grenada Dove on the island of Grenada resulted in the adoption of the dove as the National Bird and initiation of a major recovery project that includes the creation of a new national park and a new dove reserve. California Condors and Mauritius Kestrels, among other extremely rare and endangered species, have been raised in captivity and reintroduced to

the wild using techniques that Temple developed. As an especially satisfying reward for his years of effort, the Peregrine Falcon, an endangered species with which Temple has long worked, was taken off the Endangered Species list because of the success of a recovery effort that he helped design and initiate. He continues to be recognized as an authority on endangered species recovery and was an author for two chapters in the 2012 edition of "The Wildlife Techniques Manual: Management."

On the University of Wisconsin campus, he provided guidance to research activities by serving on committees, such as the Graduate School Research Committee, that affect many researchers in disciplines. He was a founding member of the Biological Sciences Planning Advisory Committee that developed strategies to enhance biological research on campus. He served for 12 years on the UW Arboretum Committee, chaired the Committee, and helped develop the Arboretum's strategic plan in ecological restoration. He was a founder of and the second Chair of the Madison Ecology Group that promotes excellence in ecological research and integrates the wide diversity of ecologists across campus.

Conservation Education Accomplishments

During his 32-year teaching career, Dr. Temple educated more than 10,000 students who took eight different courses in wildlife ecology, each with a central theme of conservation. Aldo Leopold once taught two of those courses. "Principles of Wildlife Ecology" is a popular introductory survey course that covers ecological principles that form the scientific basis for wildlife conservation. "Principles of Wildlife Management" is the core conservation course for wildlife majors; it covers a wide range of topics relating to wildlife management. "Extinction of Species" focuses on his specialty, conservation of biodiversity and the management of endangered species. "Conservation Biology" is an advanced course that addresses the loss of biological diversity and conservation strategies for preserving it. "Human- Animal Relationships: Biological and Philosophical Issues" is a general survey of the broad topic of how human beings interact with animals; he taught the section of the course dealing with wildlife and conservation. "Ecotoxicology: Effects on Ecosystems" is an advanced course that deals with the impacts of toxic substances on wildlife and the ecosystems in which they live. "Avian Ecology" presented basic ecological principles and conservation issues involving birds. In addition to these courses in which he has been involved substantially, he also gives regular guest lectures in other courses that have a strong conservation theme. He has also been an active participant in t seminars, such as "Conservation Biology and Sustainable Development Seminar" and "Earth Systems Science Seminar," and he led the Department of Wildlife Ecology's "Special Topics" course and "Departmental Seminar" 16 times. He was the department's Curriculum Chair for 22 years. Even after retirement he has continued to teach a popular graduate seminar on "Aldo Leopold and the History of Conservation Thought." He served on a number of campus committees that address instructional issues, including: the Biological Sciences Planning Advisory Committee, the Undergraduate Biology Education Committee, the Committee on Natural Resources Instructional Programs, and the College Curriculum Committee.

Three of his courses were singled out repeatedly for their high quality: "Principles of Wildlife Ecology," "Human-animal Relationships: Biological and Philosophical Issues," and "Extinction of Species." Each was included regularly on the Wisconsin Students Association's list of best courses on campus. Professor Temple received every teaching award given by the College of Agricultural and Life Science and UW-Madison for which he was eligible. Prestigious off-

campus awards have specifically recognized the excellence of his teaching. In 1992, he received an international "Chevron Conservation Award" for professional conservation education. His teaching about wildlife management and conservation biology, was highlighted. In 1994-95, he received a Fulbright Fellowship. This prestigious award allowed him to train professional wildlife conservationists in Trinidad and other parts of the Caribbean region.

In 1990, he played a lead role in the creation of a new graduate program in Wisconsin's Gaylord Nelson Institute for Environmental Studies. The Conservation Biology and Sustainable Development Program quickly achieved recognition for its innovative, interdisciplinary approach to training graduate students to succeed at the complex challenge of preserving biological diversity while meeting human needs. This degree program has been widely considered one of the best programs of its kind in the world. He helped design the program's centerpiece course, "Conservation Biology," and taught it for 18 years. He was the Chair of the Conservation Biology and Sustainable Development Program until he retired.

He was one of the chief architects of the UW Center of Excellence in the Conservation and Management of Biological Resources, which recognizes campus programs in wildlife ecology, forestry, and limnology. His election as Fellow in the American Association for the Advancement of Science cited his "innovative contributions to the teaching of wildlife conservation."

Conservation policy, legislation, and public leadership

Dr. Temple has testified 18 different times to the U.S. Congress and to the Wisconsin State Legislature as an expert witness on conservation programs and legislation, such as the reauthorization of the Endangered Species Act and the creation of a National Biological Survey. He was contracted by the Congressional Office of Technology Assessment to prepare a major report on exotic wildlife in the U.S. He served on three environmental committees of the National Academy of Science's National Research Council.

Stan Temple has done an amazing amount of public service and education about wildlife in Wisconsin and elsewhere. He has been heavily involved in voluntary outreach activities within the conservation community and the ecological community, and several of these activities have included key leadership responsibilities. He was a founder and the third President of the Society for Conservation Biology, an organization that represents professionals involved in the conservation of biological diversity. He served on the Society's Board of Governors, a position he held for nine years. He was Chairman of the Board of the Wisconsin Chapter of The Nature Conservancy, and during his chairmanship he steered the Conservancy in the direction of landscape-scale protection for important natural areas. He organized or helped organize five large professional meetings on the UW-Madison campus: an International Conference on Management of Endangered Species, an annual meeting of the American Ornithologists' Union, the 50th Anniversary meeting of the Wisconsin Society for Ornithology, an annual meeting of the Society for Conservation Biology, and two annual meetings of the Ecological Society of America and the inaugural meeting of the Association for Environmental Studies and Sciences.

He created and was the first Editor of the journal, *Bird Conservation.* For five years, he served as the Editor of *The Passenger Pigeon,* the Wisconsin state ornithological journal published by the Wisconsin Society for Ornithology. When he took over the editorship, he dramatically upgraded the journal and turned it into what one reviewer called "the best state bird journal" and "a

remarkable transformation." He was the Associate Editor of *Conservation Biology*, the journal of the Society for Conservation Biology. During the 5 years he was on the editorial staff, *Conservation Biology* rocketed from being a new journal to holding the number 14 position on Science Citation Abstracts' ranking of the impact that journals have had on the biological sciences. He served as an Associate Editor of the Ecological Society of America's *Ecological Applications*, the American Ornithologists' Union's *The Auk*, and the Society of American Foresters' *Forest Science*. He regularly reviews books for *Science* and other journals.

Dr. Temple has served on boards of directors or advisory boards for many conservation or scientific organizations, including: American Institute of Biological Sciences, Cornell Laboratory of Ornithology, Council of Biological Editors, International Crane Foundation, International Union for the Conservation of Nature (World Conservation Union), International Council for Bird Preservation (Birdlife International), Organization for Tropical Studies, Society for Conservation Biology, The Nature Conservancy, Wisconsin Society for Ornithology, Ecological Society of America, American Ornithologists' Union, Sand County Foundation.

His work on endangered wildlife and biodiversity issues has been very visible, and media coverage of his work has been an inevitable result of the public's keen interest in these subjects. There have been hundreds of local, national, and international press releases about his work over the years, and the stories have been featured on the front page of newspapers in the North Central region. His recent research with the Aldo Leopold Foundation, using Aldo Leopold's historical records to investigate climate change (www.news.wisc.edu/21429) and soundscape ecology (www.news.wisc.edu/21058), has been widely covered by the media. He has contributed many semi-popular articles to widely read science and conservation magazines; he has had feature stories in *Natural History*, and his wildlife photographs have appeared in *National Geographic Magazine* and elsewhere. Temple has given hundreds of lectures to conservation groups in Wisconsin and nearby states, across the U.S., and around the world. As part of the steering committee for Project Passenger Pigeon – an ad hoc effort to use the 2014 centenary of the extinction of the Passenger Pigeon as a conservation education opportunity, Temple gave nearly 100 public talks in Wisconsin in 2014. He also helped with and appeared in an award-winning documentary From Billions to None: The Passenger Pigeon's flight to extinction. He recently gave a TED talk on the perils of "de-extinction", bringing back extinct species using recovered DNA (www.youtube.com/watch?v=DCnhQzwgP-A). He has organized and led workshops for professional conservationists working for such diverse organizations as the Wisconsin Department of Natural Resources and the New Zealand Wildlife Service.

Professor Temple has received several awards in recognition of his outreach service to the wildlife conservation community. The Wisconsin Society for Ornithology gave him its second highest honor, the "Silver Passenger Pigeon Award," in recognition of his long and important service to the organization. Only one other individual, Aldo Leopold, has ever received both the society's Golden and Silver Passenger Pigeon Awards. The Society for Conservation Biology gave him its first "White Lady's Slipper Award" in recognition of his "Outstanding Contributions to the Society for Conservation Biology." Temple's election as a Fellow of the American Association for the Advancement of Science highlighted his "skillful leadership of conservation organizations." The Zoological Society of Milwaukee County gave him their highest award "For Outstanding Contributions to Conservation" in recognition of the role he played in helping establish and implement their Conservation Scholarship program that has funded dozens of graduate students in wildlife conservation in Wisconsin.

Stanley A. Temple, Ph.D.
Summary of contributions

Stanley A. Temple is the Beers-Bascom Professor Emeritus in Conservation in the Department of Forest and Wildlife Ecology and former Chairman of the Conservation Biology and Sustainable Development Program in the Gaylord Nelson Institute for Environmental Studies at UW–Madison. For 32 years Dr. Temple held the academic position once occupied by Aldo Leopold, and during that time he won every teaching award for which he was eligible. He and his students have helped save many of the world's endangered species and the habitats on which they depend. He is currently a Senior Fellow with the Aldo Leopold Foundation. He has received major conservation awards from the Society for Conservation Biology, The Wildlife Society and the Wisconsin Society for Ornithology. Among other recognitions of his achievements, he is a Fellow of the American Ornithologists' Union, Explorers Club, Wildlife Conservation Society, and American Association for the Advancement of Science. He has been President of the Society for Conservation Biology and Chairman of the Board of The Nature Conservancy in Wisconsin. Dr. Temple has a PhD in ecology from Cornell University where he studied at the Cornell Lab of Ornithology.

Selected achievements (summary):

Fellow, Wisconsin Academy of Sciences, Arts and Letters
Worked on conservation issues in 21 countries, helped save some of the world's rarest and most endangered species
Past president, Society for Conservation Biology
Past chair, The Nature Conservancy (Wisconsin),
Past editor, "Bird Conservation"
Fellow, American Ornithologists' Union
Fellow, American Association for the Advancement of Science,
Senior fellow, Aldo Leopold Foundation
Beers-Bascom Professor Emeritus of Conservation
Winner of several UW-Madison teaching awards
Founder and past chair, Conservation Biology and Sustainable Development Program, UW

Affiliations: Department of Forest and Wildlife Ecology and Gaylord Nelson Institute for Environmental Studies, University of Wisconsin, Madison, WI 53706 and Aldo Leopold Foundation, Baraboo, WI 53913.

Education: B.S., 1968, Biological Sciences, Cornell University; M.S., 1970, Ecology, Cornell University; Ph.D., 1972, Ecology and Evolutionary Biology, Cornell University.

Professional Career: Aldo Leopold Foundation, Senior Fellow, 2007-present; University of Wisconsin, Beers-Bascom Professor Emeritus in Conservation and Professor Emeritus of Wildlife Ecology and Environmental Studies, 2007-present; University of Wisconsin, Beers-Bascom Professor in Conservation and Professor of Wildlife Ecology, 1984-2007; University of Wisconsin, Beers-Bascom Professor in Conservation and Associate Professor of Wildlife Ecology, 1980-1984; University of Wisconsin, Assistant Professor of Wildlife Ecology, 1976-

80; Cornell University, Research Associate, Laboratory of Ornithology,1975-76; World Wildlife Fund, Endangered Species Biologist,1972-75; Cornell University, Teaching Assistant and Curator of Bird Collection, 1967-72; Cleveland Museum of Natural History, Associate Curator, 1964-69.

Conservation-oriented research:
Birds, ornithology, wildlife ecology and management
Endangered species, wildlife conservation, biodiversity, conservation biology,
Aldo Leopold and his ideas on environmental ethics and environmental health Conversations Around the Green Fire: Stanley Temple talks with Curt Meine
De-extinction: using biotechnology to bring back extinct organisms (The Dawning of De-extinction Raises Many Questions)
How climate change is affecting Wisconsin's plants and animals
Professor Temple has made important contributions to the study of endangered and threatened peregrine falcons, whooping cranes, trumpeter swans, Andean condors, hook-billed kites, Mauritius kestrels, Seychelles kestrels, Puerto Rican amazons, Mauritius parakeets, Grenada Doves, Hawaiian crows, loggerhead shrikes, and dickcissels. He has also worked on the responses of wildlife to habitat fragmentation, human impacts on wildlife populations and the ecology of avian predators. His pioneering work showing the devastating impacts of cats on bird populations has earned him both acclaim and notoriety.

Conservation education: During his 32-year teaching career over 10,000 students took his courses at UW-Madison, including Principles of Wildlife Ecology, Extinction of Species, Principles of Wildlife Management, Avian Ecology, Conservation Biology, Ecotoxicology, Human-animal Relationships, and Caribbean Island Ecology, among others.
Dr. Temple supervised the research programs of 52 M.Sc. and 23 Ph.D. and several post-doctoral students in Wildlife Ecology, Conservation Biology and Sustainable Development, and Land Resources

Conservation policy formation, legislation, and public leadership: Dr. Temple has testified 18 different times to the U.S. Congress and to the Wisconsin State Legislature as an expert witness on conservation programs and legislation, such as the reauthorization of the Endangered Species Act and the creation of a National Biological Survey. He was contracted by the Congressional Office of Technology Assessment to prepare a major report on exotic wildlife in the U.S. He served on three environmental committees of the National Academy of Science's National Research Council.

International Conservation Initiatives: His work in international conservation began in Mauritius in the early 1970s. Recently he advised the Trinidad and Tobago's Forestry Division, and Trinidad's Ministry of the Environment in biodiversity inventories and creating wildlife, forest and national parks policy. He and his students have worked in 21 countries, including Mexico, Chile, Argentina, Grenada, Western Samoa, Round Island (Indian Ocean), Trinidad, and the United Kingdom, New Zealand and other nations.

Publications and Presentations: Over 320 peer-reviewed articles, including The Nasty Necessity: Eradicating Exotics (May 1990, Conservation Biology), Modeling Dynamics of Habitat-Interior

Bird Populations in Fragmented Landscapes (Nov 1988, Conservation Biology), Do Predators Always Capture Substandard Individuals Disproportionately from Prey Populations? (May 1987 Ecology), The Problem of Avian Extinctions (Dec 1985 Current Ornithology), Reintroducing birds of prey to the wild (1978 Current Ornithology) and 7 books including Wisconsin Birds: A Seasonal and Geographical Guide, Endangered Birds, Bird Conservation, and Endangered birds: Management techniques for preserving threatened species. Scores of popular articles and other written communications for the public. Hundreds of public talks in Wisconsin and elsewhere.

Leadership in Conservation and Related Organizations: ALDO LEOPOLD FOUNDATION, Science Advisor, 1984-present, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE: Fellow (1995-present), AMERICAN ORNITHOLOGISTS' UNION: Fellow (1987-present), Conservation Committee (1976-present). CORNELL LABORATORY OF ORNITHOLOGY: Board of Directors (1986-2004), COUNCIL OF BIOLOGICAL EDITORS: Council Member (1986-2001), ECOLOGICAL SOCIETY OF AMERICA: Associate Editor and Editorial Board (1995-present), INTERNATIONAL CRANE FOUNDATION: Board of Advisors (1977-present), THE NATURE CONSERVANCY: Board of Trustees (1987-present), ORGANIZATION FOR TROPICAL STUDIES: Board of Directors (1992-present), SOCIETY FOR CONSERVATION BIOLOGY: President (1991-93), (Board of Governors (1987-present). SOCIETY OF AMERICAN FORESTERS: Associate Editor, Editorial Board, Forest Science (1994-2000), PROJECT PASSENGER PIGEON: Steering Committee (2010-2-15), among others.

Selected Professional Memberships: American Institute of Biological Sciences; American Ornithologists' Union; American Association for the Advancement of Science; British Ornithologists' Union; Caribbean Forest Conservation Association; Cooper Ornithological Society; Council of Biological Editors; Ecological Society of America; National Audubon Society; Association of Field Ornithologists; Raptor Research Foundation; Society for Conservation Biology; Society of Caribbean Ornithology; The Nature Conservancy; The Wildlife Society; Wilson Ornithological Society; Wisconsin Academy of Sciences, Arts and Letters; Wisconsin Society for Ornithology, among others.

Honors and Awards: Chevron Conservation Award; Fulbright Scholar; Society for Conservation Biology: Award for Distinguished Achievements in Conservation, White Lady's Slipper Award for Outstanding Service; The Wildlife Society: Honorary member; University of Wisconsin: Beers-Bascom Professorship in Conservation, Chancellor’s Award for Excellence in Teaching, College Excellence in Teaching Award, Spitzer Award for All-round Excellence in Teaching, Research and Outreach, Fellow of University Teaching Academy; Explorers’ Club: Research Fellow, Wisconsin Society For Ornithology: Golden Passenger Pigeon Award for outstanding contributions to ornithology, Silver Passenger Pigeon Award for outstanding contributions to the Society; Zoological Society Of Milwaukee County: Award for Outstanding Contributions to Conservation, Wisconsin Academy of Sciences, Arts and Letters: Fellow, among others.