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WILLIAM BREWSTER MEMORIAL AWARD, 2009

JOANNA BURGER



Joanna Burger at Salt Marsh Island, Barnegat Bay, New Jersey, in 2009. (Photograph by Michael Gochfeld.)

The 2009 William Brewster Memorial Award is presented to Joanna Burger, Distinguished Professor of Biology at Rutgers University (RU) with a dual appointment in the Department of Cell Biology and Neuroscience and the Department of Ecology, Evolution and Natural Resources. She is also a professor in the New Jersey School of Public Health and a member of the Environmental and Occupational Health Sciences Institute (RU and the University of Medicine and Dentistry of New Jersey–Robert Wood Johnson Medical School). She earned a B.S. in Biology at the University of New York at Albany, an M.S. in Zoology and Science Education at Cornell University, and a Ph.D. in Ecology and Animal Behavior at the University of Minnesota, followed by a postdoctoral position in Comparative Psychology at the Institute of Animal Behavior at

RU, where she remains today. Her research and many publications have changed how people see birds, the ocean, and our environment, and many of her almost 50 graduate students have, like her, contributed to our deeper appreciation of our environment.

Burger's primary research efforts have focused on the social behavior of seabirds, including their coloniality, foraging behavior, and contaminant loads. Along with her long-term research on colonial seabirds of eastern North America, she has worked in the Antarctic, South America, and Africa. She has conducted research on the behavioral ecology of gulls, terns, and skimmers and studied how behavioral adaptations allow them to maximize reproductive success. In this area, she has written hundreds of papers and several books dealing with seabirds, coloniality, social behavior, ecology,

conservation, and effects of contaminants on birds. Her research on the ecology, behavior, and colony dynamics of seabirds, especially Common Terns and Black Skimmers, resulted in a book on each. Understanding competition and predation are recurrent themes in her work, and she has skillfully demonstrated how diverse factors affect the survival, adaptation, and reproductive success of colonial birds. Her research has led her to study the interaction between humans and birds and to find ways to promote healthy ecosystems in which birds and people coexist amicably. In addition to her research and scientific publications, her interest in teaching resulted in a textbook, *The Biology of Seabirds*, edited with B. A. Schreiber.

Natural history is one of the cornerstones of Burger's research, and curiosity one of the drivers. Her data reveal how terns, skimmers, egrets, and gulls survive in coastal environments with changing habitats, floods and storm tides, increasing human disturbance, and rising sea level. She is currently documenting how skimmers have shifted habitats to accommodate the rise in sea level, which allows them to continue using salt-marsh islands successfully. Her long-term study of reproductive success, habitat and colony-site selection, colony dynamics, and contaminant levels in Common Terns and Black Skimmers continues with her colleague

Michael Gochfeld. Since the 1970s, Burger and Gochfeld have used bird feathers as bioindicators of heavy-metal pollution in seabirds and used laboratory experiments and analysis to examine the effects of lead, chromium, and manganese on the behavioral development of gull chicks and the possible implications of the effect of these pollutants on people.

The AOU honors Joanna Burger for her thorough and insightful body of work on seabird behavior and ecology. For several decades, she has served as a role model for many young women ornithologists and an inspiration to all her colleagues through her commitment to excellence, exceptional dedication to ornithology, professionalism, and work ethic. We are proud to recognize a research scientist, teacher, and mentor who continues to increase our knowledge of the natural history, behavior, and ecology of birds.

Award criteria.—The William Brewster Memorial Award consists of a medal and an honorarium provided through the endowed William Brewster Memorial Fund of the American Ornithologists' Union. It is given annually to the author or coauthors (not previously so honored) of the most meritorious body of work on birds of the Western Hemisphere published during the 10 calendar years preceding the AOU meeting in which the award is given.

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ELLIOTT COUES AWARD, 2009

CHARLES R. BROWN AND MARY BOMBERGER BROWN



Left: Charles R. Brown in Keith County, Nebraska, July 2005 (photograph by Kathleen Brazeal). *Middle:* Cliff Swallows at a natural cliff colony site in Keith County, 27 May 1991 (photograph by C. R. Brown). *Right:* Mary Bomberger Brown at an Interior Least Tern and Piping Plover colony near Venice, Nebraska, June 2008 (photograph by Joel Sartore).

The 2009 Elliott Coues Award is presented to Charles R. Brown and Mary Bomberger Brown in recognition of their outstanding and innovative contributions to ornithological research. Charles R. Brown is presently a professor at the University of Tulsa, Oklahoma, while Mary Bomberger Brown is program coordinator

for the Tern and Plover Conservation Partnership at the University of Nebraska-Lincoln's School of Natural Resources. After graduating from Austin College, Charles went to Princeton University, where he began a study of the costs and benefits of coloniality in Cliff Swallows. Charles met Mary in 1981, when they worked

together on Cliff Swallows, and they became a stellar team, each bringing out the scientific best in the other. Charles accepted the position of assistant professor at Yale University in 1985, and he and Mary moved to the University of Tulsa in 1993. At both institutions, they continued their research on Cliff Swallows, obtaining several large research grants and publishing many important articles in scientific journals, including *Animal Behaviour*, *The Auk*, *Behavioral Ecology*, *Behavioral Ecology and Sociobiology*, *The Condor*, *Ecology*, *Nature*, *Science*, *Evolution*, and *Trends in Ecology & Evolution*. Their scientific productivity has been voluminous: they have jointly published more than 120 articles, and citations of these articles by scientists throughout the world have been copious.

Charles and Mary's research has changed the way that ornithologists and behavioral ecologists think about the costs and benefits of coloniality. Their demonstration of "information centers" (*Science* 234:83–85, 1986) set a new course for behavioral ecology, as did their comparison of the costs of ectoparasitism versus colony size (*Ecology* 67:1206–1218, 1986). Their analysis of ectoparasitism versus dispersal is exhaustive (*Ecology* 73:1718–1723, 1992), and their quantification of a heritable component to choice of colony size is elegant (*Proceedings of the National Academy of Sciences* 97:14825–14830, 2000). Their investigation of evolutionary change in response to a rare climatic event (*Evolution* 52:1461–1475, 1998) produced an important advance in our thinking about evolution. More recently, they have examined a bird-associated virus within their study population of swallows (*Molecular Ecology* 17:2164–2173, 2008), and this continuing research is likely to provide important insights into the ecology of arthropod-borne diseases. Among their myriad accomplishments, their finding of

rampant brood parasitism in Cliff Swallows is especially important (*Science* 224:518–519, 1984), as is their later discovery that individuals commonly transfer already-laid eggs between nests by moving them in their beaks (*Nature* 331:66–68, 1988).

Charles and Mary's long-term research on Cliff Swallows ranks as one of the most outstanding and most complete studies of any avian species. They now have a data set containing information for ~200,000 different banded individuals and >315,000 captures and recaptures. In tracking thousands of individuals over their careers, they have uniquely combined demography, coloniality, and lifetime reproductive success. *Coloniality in the Cliff Swallow* (University of Chicago Press, 1996) beautifully summarizes their research for professional biologists, and *Swallow Summer* (University of Nebraska Press, 1998) does the same for amateur ornithologists. Using behavioral observations, experimental manipulations, quantitative genetics, estimation of coefficients of natural selection, demography, epidemiology, and immunology, Charles and Mary have provided important insights into avian behavioral and population ecology. In recognition of their outstanding contributions to ornithology, the AOU is pleased to present each with a medal signifying receipt of the 2009 Elliott Coues Award.

Award criteria.—The Elliott Coues Award recognizes extraordinary contributions to ornithological research. The award is named in honor of Elliott Coues, a pioneering ornithologist of the western United States and a founding member of the AOU. There is no limitation with respect to geographic area, subdiscipline of ornithology, or time course over which the work was done. The award consists of a medal and an honorarium provided through the endowed Ralph W. Schreiber Fund of the AOU.

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NED K. JOHNSON YOUNG INVESTIGATOR AWARD, 2009

RENÉE DUCKWORTH

The Ned K. Johnson Young Investigator Award honors a lifelong supporter and former president of the AOU. The award, first presented in 2005, was created to recognize outstanding and promising ornithological research made by persons early in their careers, with the hope and expectation that such individuals will provide future leadership in ornithology within and beyond North America. The AOU is proud and confident in its selection of Renée Duckworth as the 2009 recipient of this award.

Duckworth studies the role of behavioral variation in driving ecological and evolutionary processes. Her work is unusual in that it integrates physiological and evolutionary ecology, quantitative genetics, and phylogenetic comparison to understand an understudied but important evolutionary process: range expansion. Duckworth received her Ph.D. from Duke University, where she studied the role of behavioral variation as a determinant of species distributions through a series of field experiments and surveys of selection on natural variation among populations of two songbird species. This work, published in *Proceedings of the National*

Academy of Sciences and several other prestigious journals, illuminated the roles of aggression and dispersal and their evolution in the reciprocal range shifts of Western and Mountain bluebirds. Duckworth's research fills a vacuum in evolutionary theory: What prevents populations from occupying larger areas than they do? The novelty of her approach is that she appreciates that no one level of biological organization is sufficient to explain a complex evolutionary process and uses diverse techniques to tease apart those interacting levels of organization. Her research has improved our understanding of phenotypic integration, another emerging but underexplored area in vertebrates, and of the influence of behavioral variation as a driver of species diversification.

After completing her graduate work, Duckworth was awarded an International Research Postdoctoral Fellowship by the National Science Foundation (NSF) to study at the Institute of Evolutionary Biology at Edinburgh University in Scotland, where she learned pedigree-based statistical models as a tool for investigating the genetic basis of variation in dispersal and aggressive behavior in



Renée Duckworth at Edinburgh University, January 2007.
(Photograph by Darren Obbard.)

bluebirds. This work resulted in a paper in *Evolution* that provided the first empirical documentation of genetic integration of dispersal and aggressive behavior in a wild population of birds.

In her current work as a G.G. Simpson Fellow in Evolution at the University of Arizona, Duckworth is conducting a large-scale ecological experiment to understand the roles of conservation programs and climate change in range changes of Western and Mountain bluebirds. This work has been recognized by the American Society of Naturalists, which awarded Duckworth its 2009 Young Investigator Award. Duckworth has already placed a priority on mentoring the next generation of ornithologists. She is currently the principal advisor for two undergraduate honors theses and one graduate student, and during her previous work she mentored nine other undergraduates, eight graduate students, and several high school students.

In spring 2010, Duckworth will start as an assistant professor in the Department of Ecology and Evolutionary Biology at the University of Arizona, where she will continue to investigate the evolutionary mechanisms that underlie range expansion in birds,

specifically focusing on the role of maternal effects on offspring dispersal strategies. Her work will be supported by a recently awarded NSF grant. To receive a large federal grant so early in her career underscores the novelty and rigor of her research. The AOU is proud to give its 2009 Ned K. Johnson Young Investigator Award to Renée Duckworth, with confidence that her future research will lead to further integrative discoveries and that her teaching will continue to inspire.

Award criteria.—The Ned K. Johnson Young Investigator Award recognizes outstanding and promising work by a researcher early in her or his career in any field of ornithology. Candidates excel in research and show distinct promise for leadership in ornithology within and beyond North America. They must have received their doctorate within 5 years of being nominated, must not have received the award previously, and must be a member of the AOU at the time of nomination. The award, presented for the first time in 2005, consists of a framed certificate and an honorarium provided through a gift to the endowment of the AOU honoring Ned K. Johnson, a life-long supporter and former president (1996–1998) of the AOU.

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RALPH W. SCHREIBER CONSERVATION AWARD, 2009

SCOTT R. DERRICKSON

The AOU's Ralph W. Schreiber Conservation Award was established in 2005 to honor persons who have made extraordinary scientific contributions to the conservation, restoration, or preservation of birds and their habitats. The life's work of Scott Derrickson has been in the science of captive breeding and recovery of endangered

birds, and his contributions and leadership in this arena have been extraordinary. Derrickson, trained under the tutelage of Frank M. McKinney at the University of Minnesota, completed his dissertation in animal behavior and ecology in 1977. His doctoral research concerned the dispersal and sexual behavior of dabbling ducks.



Scott R. Derrickson at the Conservation and Research Center near Front Royal, Virginia, in September 2009. (Photograph by Lisa Ware.)

After publishing several seminal papers from this Ph.D. work, Derrickson accepted a position with the Endangered Species Research Program of the U.S. Fish and Wildlife Service (USFWS) at Patuxent, Maryland. There he began a long and productive career working with endangered species. His early research in avian conservation developed methods of captive breeding and management for the Whooping Crane. This groundbreaking work was critical to the development of Patuxent's highly successful captive-breeding program.

Among the flagship programs in avian conservation in the early 1970s, perhaps none was more visible than that of the Whooping Crane. Derrickson conducted behavioral research on captive crane flocks and provided leadership on their management. His findings led directly to increases in productivity through multiple clutching for transfer of eggs to wild parents when flocks were being reestablished in Canada and Idaho. His research was also important to the development of successful captive-breeding protocols for Whooping Cranes.

Derrickson remained with the USFWS until 1984, when he moved to the Smithsonian's National Zoological Park to curate the bird collection. Since then, he has been involved in addressing many important avian captive-breeding and restoration problems at the National Zoo's Conservation and Research Center. He used his new curatorial position and zoo association to venture far beyond the typical duties of a bird curator, both in terms of conducting and directing cutting-edge research and in developing programs and policies to ensure the survival of dozens of critically endangered species. He has conducted research or advised on the captive breeding and recovery of Guam Rails, Puerto Rican Parrots, Hawaiian Crows, Micronesian Kingfishers, Mariana Crows, and Micronesian White-eyes. The last remaining Guam Rails and

Micronesian Kingfishers were rescued from the wild and established at the Conservation and Research Center under his supervision. Since then, many of these captive birds have been successfully reintroduced into the wild. Derrickson has also made incredibly important contributions to the conservation of Hawaiian and Mariana crows. He has also been active in the management of captive populations of cranes, pheasants, parrots, and Hawaiian forest birds. Most recently, he was a key participant in the AOU's "blue ribbon panel" review of the California Condor recovery program.

Derrickson's work has had a wide effect on avian conservation through the development of a captive-breeding and reintroduction paradigm that has been widely cited (e.g., *Conservation Biology* 10:338–348). Captive breeding was touted as a panacea for many declining populations in the 1990s. Possessing over two decades of experience with successful and unsuccessful programs, Derrickson had important perspectives on the roles of disease and domestication in breeding birds for reintroduction. These perspectives have become influential cornerstones for how to conduct captive breeding for conservation.

As Derrickson's career progressed, he assumed a wider administrative role. In addition to his duties as curator of birds at the National Zoo, he serves as deputy associate director of the Smithsonian's Conservation and Research Center. Despite these constraints on his time, Derrickson has sponsored or cosponsored numerous outstanding postdoctoral fellows at the zoo, many of whom, including Susan Haig, Lisa Sorenson, Michael Sorenson, Cathy Blohowiak, John Dumbacher, and Ginger Bolen, have gone on to successful careers in ornithology.

Derrickson's work has received wide recognition from agencies, conservation organizations, and the zoo community. He has

received awards from the American Zoo and Aquarium Association (1998), the USFWS (1997), and the Smithsonian Institution for his work. Many feel that modern avian conservation began with the application of science to management and recovery of endangered species, and Derrickson's efforts were at the forefront of this movement. In recognition of his extraordinary scientific contributions to the conservation of avian species, the AOU is honored to present the fifth annual Ralph W. Schreiber Conservation Award to Scott Derrickson.

Award criteria.—The Ralph W. Schreiber Conservation Award recognizes extraordinary scientific contributions to the

conservation, restoration, or preservation of birds and/or their habitats by an individual or small team (usually fewer than 10 people). Contributions from throughout the world and over any time course are eligible. Appropriate activities include (1) applied research, restoration, and educational actions that conserve birds or preserve significant habitats; (2) scientific examination of the principles of avian conservation and application of new insights into species restoration; and (3) scientific evaluation, guidance, creation, and oversight of avian recovery programs or habitat-reserve restoration programs. The award consists of a framed certificate and an honorarium.

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MARION A. JENKINSON AOU SERVICE AWARD, 2009

M. ROSS LEIN



M. Ross Lein recording songs of Dusky Flycatchers in the Castle River Valley in the Rocky Mountains of southwestern Alberta, June 2009.

(Photograph by Valerie Haines.)

With this award, we honor the memory of Marion Jenkinson Mengel, former treasurer and, in the words of the Wizard of Oz, “doer of good deeds” for the AOU. M. Ross Lein, the recipient for 2009, epitomizes the dedication, attention to detail, knowledge, and creativity that Marion brought to her many duties. Like Marion, Ross has served the AOU in many capacities, most notably as secretary for many years.

Ross was born in Estevan, Saskatchewan, where he developed an interest in nature, especially birds, at a very early age. As a high school student, he came under the influence of Robert W. Nero and C. Stuart Houston. After finishing high school, Ross entered the University of Saskatchewan, where he completed a B.A. in Biology in 1966 and, subsequently, an M.A. on “The breeding biology of the Savannah Sparrow at Saskatoon, Saskatchewan.” He then

journeyed to Harvard, where he became Ernst Mayr's last graduate student and completed an outstanding comparative study of vocal communication in wood warblers, one aspect of which was published in *Nature* in 1972. That paper, written and published by a graduate student, was an outstanding example of clear thinking and comparative study applied to the field study of birds. Upon completion of his Ph.D., Ross accepted an academic appointment at the University of Calgary, where he continues to this day as a professor in the Department of Biological Sciences.

Ross has supervised 18 graduate students and published numerous papers, many of which reflect his lifelong fascination with avian vocal and nonvocal display behavior. Many of his papers also reflect his love of the natural history of the Canadian prairies, boreal forest, and Arctic. Ross is a productive and successful scholar who has passed the love of ornithology on to many undergraduate and graduate students, but that is not why we celebrate him with this award.

Among his early contributions to the AOU was his service as book review editor for *The Auk*. Then, in the late 1990s, Ross agreed to stand for election as secretary of the AOU. He was re-elected nine times. As secretary he served five presidents and helped ensure that despite a number of organizational changes the AOU continued to run smoothly. Ross's knowledge of AOU history is the stuff of legend. If a question arose during discussion of a contentious issue, Ross could find the relevant historical information to put the question and issue in context. Many were the times that his information rescued a discussion from chaos and led to a productive resolution. The efficiency with which he organized business meetings, fellows meetings, council meetings, and anything else that needed organizing had to be seen to be believed. More

than once, a quiet word or two from Ross rescued a lost president and enabled the meeting to continue without a hint of trouble.

Unable to receive the award in person because of a scheduling conflict, Ross sent the following letter of thanks.

"I am deeply honored to have been selected by the Executive Committee to receive the Marion Jenkinson AOU Service Award for 2009. When I was a teenager, Stuart Houston encouraged me to consider ornithology as a career, as he encouraged a number of small-town boys from Saskatchewan, including past editor of *The Auk* Spencer Sealy.

"I attended my first AOU meeting in 1964, and the AOU has been my 'professional home' since that time. I met Marion Jenkinson at that meeting, although I did not realize her pivotal role in the functioning of the AOU at that time. At that meeting I also met Glen Woolfenden, Dick Banks, and Ned Johnson, all of whom became good friends, even though we were limited largely to annual interactions at meetings.

"Stuart, Glen, Dick, and Ned have all received the Jenkinson Award in the past. If I have provided valuable service to the AOU over my career, it is the result, in no small part, of the encouragement that they gave and the examples that they set."

Award criteria.—The Marion A. Jenkinson AOU Service Award was created by the Council in 1996 to honor Marion Jenkinson Mengel, who served the AOU as treasurer and in other capacities for many years. It is awarded to an individual who has performed continued extensive service to the AOU, including holding elected offices but emphasizing volunteered contributions and committee participation. Recipients are selected by the AOU Executive Committee. The award consists of a framed certificate.