



William Brewster Memorial Award, 2009

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Source: *The Auk*, 127(1) : 243-244

Published By: American Ornithological Society

URL: <https://doi.org/10.1525/auk.2010.127.1.243>



The Auk 127(1):243–244, 2010
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Printed in USA.

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.