



WILLIAM BREWSTER MEMORIAL AWARD, 2001: STEPHEN I. ROTHSTEIN

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STEPHEN I. ROTHSTEIN



Stephen I. Rothstein has made unique contributions to the fields of behavior, ecology, evolution, and conservation of birds over the past three decades. His most influential and widely cited works concern the interactions between parasitic birds and their hosts, in particular the evolution of host defenses to brood parasitism. Among his most novel, careful, and elegant experimental studies were those testing for rejection of Brown-headed Cowbird (*Molothrus ater*) eggs by hosts, revealing that most songbirds could be classified as either acceptors or rejecters of foreign eggs. Absence of intermediate levels of rejection suggested that selection for parasitic egg recognition must be very strong in hosts, indicating that once the behavioral mechanism needed to recognize and eject parasitic eggs evolved, it

would be fixed rapidly in the population. His contributions to research involving cowbirds and other parasitic birds have also involved co-editing (with Scott K. Robinson) an influential book entitled *Parasitic Birds and Their Hosts: Studies in Coevolution*.

His behavioral and theoretical studies have expanded to encompass brood parasitism in South American cowbirds and Old World cuckoos, as well as detailed analyses of population trends, breeding ecology, dispersal, and vocalizations in the Brown-headed Cowbird. His studies of avian vocal behavior have improved our understanding of the behavioral and evolutionary significance of repertoires and dialects, exposing the relative importance of vocal learning, dominance interactions, and female choice

in the origin and maintenance of dialects in songs of the Brown-headed Cowbird.

Over the most recent decade, Rothstein has applied his unparalleled knowledge of cowbird biology to conservation programs involving endangered species potentially affected by brood parasitism. He consistently provides well-reasoned, if controversial, opinions about the role that Brown-headed Cowbird parasitism plays in population declines and endangerment of North American songbirds. He has assumed a major role in performing and evaluating research required to discover the effects of cowbirds on western species such as Least Bell's Vireos (*Vireo bellii*) and Southwestern Willow Flycatchers (*Empidonax traillii*), and in helping to convene researchers with diverse opinions for reasoned dialogue about management options. In the last five years, those contributions also involved editing, along with several colleagues, two conservation-oriented books dealing with cowbird effects and appropriate management responses and entitled *Ecology and Management of Cowbirds and Their Hosts* and *Research and Management of The Brown-headed Cowbird in Western Landscapes*. In addition to his ongoing work on nest par-

asitism, Rothstein also maintains a highly successful research program on dominance and status signaling in White-crowned Sparrows (*Zonotrichia leucophrys*), conducted largely in his own backyard. He has also published mathematical models and reviews analyzing the action of natural selection on reciprocal altruism, cooperation, spite, and intragenomic conflicts.

For his internationally renowned and fundamental contributions to the fields of behavioral ecology, evolution, and conservation of birds, his incisive and objective evaluations of the works of other researchers and his contributions to educating and training young ornithologists, the American Ornithologists' Union is pleased to present the 2001 William Brewster Memorial Award to Dr. Stephen I. Rothstein.

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 a given AOU meeting.