

William Brewster Memorial Award, 2008

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SPENCER G. SEALY



Spencer G. Sealy at Delta Marsh, Manitoba, 11 June 2008.
(Photograph by Mélanie F. Guigueno.)

Colleagues describe Spencer Sealy as an “ornithologist’s ornithologist” with an exceptionally broad and deep knowledge of birds and a passion to understand their behavior and ecology. He is recognized as one of the world’s experts on avian brood parasitism, having produced, with students and collaborators, a body of research that has greatly added to our understanding of complex behavioral and evolutionary interactions between parasitic cowbirds and their passerine hosts. Sealy has shown what can be achieved when practical field skills are combined with a keen sense of hypothesis-testing in natural systems. With long-term field work centered at the Delta Marsh Field Station in southern Manitoba, supplemented by studies in Texas, Saskatchewan, and Costa Rica, he has used observational and experimental techniques, as well as microsatellites and radiotelemetry (in collaboration with H. L. Gibbs), to elucidate mating systems and to

identify attributes of hosts that promote selectivity by cowbirds in their choice of nests. Those attributes include nest-defense behavior and its acquisition, nest placement, host quality, and host tolerance of parasitism, all examined in terms of the consequences of parasitism for the hosts. Sealy’s research not only covers proximate mechanisms, but provides a thorough study of coevolution between parasite and host. Over the past two decades, he has authored or coauthored about 50 papers on brood parasitism alone, and many of the findings of those studies have been synthesized in chapters published in *Parasitic Birds and their Hosts: Studies in Coevolution* (edited by S. I. Rothstein and S. K. Robinson), *Ecology and Management of Cowbirds and their Hosts* (edited by J. N. M. Smith and others), and *Avian Incubation: Behaviour, Environment, and Evolution* (edited by D. C. Deeming).

Although some cowbirds apparently lay indiscriminately in multiply parasitized nests, Sealy's work has broken new ground by highlighting the potential of cowbirds to be more selective in their use of hosts. They may lay fewer eggs on smaller egg-laying ranges than previously thought and use information on host quality and nesting synchrony to maximize their fitness. Removal of a host egg by female cowbirds in association with laying is variable, and its function is complex and still poorly understood. Incubation of cowbird eggs and of the host's eggs may be enhanced. Sealy's research has also revealed finely tuned responses by hosts; some hosts discriminate between female cowbirds and predators at the nest and react according to the level of the threat in relation to the stage of the nesting cycle. Acceptance of costly parasitism by most hosts seems to outweigh losses incurred during rejection, but in some cases, evolutionary lag may be invoked. Cowbird embryos develop unusually quickly, outpacing host embryos and, hence, usually hatch first, particularly in nests of smaller hosts. After hatching, cowbirds receive more food because they are better competitors, not because they possess exaggerated features that hosts cannot resist.

Sealy grew up in Saskatchewan, where he developed an interest in birds at a young age. While working toward his M.Sc. (University of British Columbia, 1968) and Ph.D. (University of Michigan, 1972; supervisor Robert W. Storer), he completed the first major research on the breeding ecology of auklets on an island in the Bering Sea and feeding and breeding biology of murrelets in the Queen Charlotte Islands. This background led him to join others in founding the Pacific Seabird Group in the early 1970s. Immediately after graduation, he was hired at the University of Manitoba, where he is currently a Professor in the Department of Biological Sciences. This pioneering ornithological researcher on the Canadian prairies has been especially instrumental in developing a large and active research program at Delta Marsh, which has focused on the breeding ecology of passerines

such as the Yellow Warbler (*Dendroica petechia*) and on brood parasitism. His lab group has been large, diverse, and productive. With about 50 students over the years, Sealy has published more than 230 papers on a vast array of species and topics.

Throughout his career, Sealy has maintained a strong interest in natural history and has actively supported the efforts of amateur ornithologists and regional journals such as *Blue Jay*. He was also responsible for developing the ornithological collection at the University of Manitoba and has visited innumerable bird collections around the world to gather information on topics ranging from historical distributions of birds to plumage, cowbird hosts, and egg characteristics. Maintaining such an active research program is a considerable achievement, considering Sealy's heavy administrative responsibilities in several ornithological societies, including the Society of Canadian Ornithologists—Société des ornithologistes du Canada and the AOU, for which he is currently Editor of *The Auk*.

Although Spencer Sealy is being honored with the William Brewster Memorial Award particularly for his thorough and insightful body of work on avian brood parasitism, few ornithologists can match the breadth of his knowledge and the diversity of his interests, which include avian morphology, distribution, behavioral ecology, and physiology. Such expertise comes only with extremely hard work and exceptional dedication over more than four decades. The American Ornithologists' Union is proud to recognize such a researcher, who continues to inspire students and colleagues.

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.