

Lightning caused avian mortality is rare in the literature. Sindelar et al. (1980, Passenger Pigeon 42: 76-78) reported an adult Bald Eagle (*Haliaeetus leucocephalus*) died when lightning struck its nest, but young in the nest survived. Glasrud (1976, Can. Field-Nat. 98: 503) reported several Canada Geese (*Branta canadensis*) killed during a lightning storm.

Lightning mortality of Osprey may be more frequent than this single recorded event especially in areas with high lightning activity. A survey of Osprey nests on Merritt Island National Wildlife Refuge (Leenhouts 1986, 1986 Osprey inventory Merritt Island National Wildlife Refuge, Florida, unpubl. rept.) found 23 active nests, 13 in natural sites (pine or oak trees) and 10 on man-made structures (power poles, antennas, weather towers, bilby towers, etc.). The man-made structures are built out of metal or contain lightning grounding wires and may be more susceptible to lightning strikes. Studies by J. F. Kennedy Space Center personnel have shown that there are between 10,000-30,000 cloud to ground lightning strikes over the 29,000 ha of terrestrial habitat of the Merritt Island National Wildlife Refuge each year, most between the months of June-September. Lightning data are not precise enough to identify each strike location, but the launch pads and 150 m weather towers are struck on the average of two times per year and other tall towers are struck more often than their surroundings (James Stahmann pers. comm.).

Ospreys may be more at risk nesting on man-made structures than in trees and the risk is increased for late fledging birds (late May and June). Since death may be caused by other factors associated with a lightning strike other than direct electrocution, little can be done to protect Osprey nests at sites prone to lightning strikes. If these sites could be identified, then it may be possible to discourage Osprey use in favor of less prone sites.—Willard P. Leenhouts, Merritt Island National Wildlife Refuge, P. O. Box 6504, Titusville, Florida 32782-6504.

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REVIEW

The Marsh Hen. A natural history of the Clapper Rail of the Atlantic coast salt marsh.—Brooke Meanley. 1985. Centreville, Maryland, Tidewater Publishers. 123 pp., 33 black & white photos, 6 drawings by John W. Taylor. \$8.95, paperback.—Brooke Meanley has worked with Clapper Rails for several decades and probably knows as much about the secretive Marsh Hen as anyone. His book on the Clapper Rail is pleasant reading, thin enough to be consumed in two evenings. As subtitled, this book is of natural history of the Atlantic coastal salt marshes as much as of the Clapper Rail. A tribute to the 2 million acres of salt marshes along the Atlantic coast, The Marsh Hen reminded me of Teal and Teal's Life and Death of the Salt Marsh, Warner's Beautiful Swimmers, and even Michener's Chesapeake.

Eleven chapters cover all major aspects of the natural history of clappers, from systematics (are Clapper and King Rails conspecific?), foods and feeding behavior, courtship, nesting and parental care, to predators. Five appendices deal with U.S. subspecies or races of the clapper (Ripley, in Rails of the World, listed 24 subspecies throughout the geographic range), capturing, sexing, and aging the birds, and methods of censusing clappers in the salt marshes (not easy!). There is a peculiar chapter juxtaposing fall migration and the hunting season, yet failing to connect these events in any meaningful way. The main conclusion I drew from the section on hunting is that Clapper Rails are such easy marks that to call hunters of clappers "sportsmen" is generous.

I was most intrigued with the diversity of rail vocalizations (pp. 10, 43-45). With development of techniques for working in this difficult habitat, we may gain fascinating information on vocal communication in the clapper and other rails. Perhaps vocal diversity has been evolutionarily favored by the structurally closed nature of rail habitat?

Despite a testimonial on the book's back cover, the text is *not* "sufficiently detailed to satisfy the probing professional." In several places, I felt some frustration, wishing Meanley had presented a more thorough treatment of data. The reader is provided with textual anecdotes and tables of limited "raw" data, and by omission of any more rigorous presentation, is led to infer this to be the final word on rail biology. This surely is not the case, nor is it an economical use of space. I suspect this book was not written for biologists (one wonders in the absence of an author's preface). Nonetheless, discerning non-professionals will themselves distinguish between anecdotes and a desired, more rigorous summarizing of information.

The Marsh Hen should be viewed as an extended introduction to the original literature on the biology of Clapper Rails, and I recommend this short book as a relaxing diversion for both biologists and natural historians.—**Randall Breitwisch**, Department of Biology, University of Miami, Coral Gables, Florida 33124.

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