

one of the adults using this nest and that there might be eggs remaining in the nest. (The preceding year two eagles were raised at this location.) In that two adult eagles were observed later in the day near this nest, it was concluded that the dead bird may have intruded into their territory. Perhaps this triggered the confrontation and an aerial battle between two or three eagles in which one bird was killed either by the other bird(s) or by a fall to the ground. Although aggressive behavior between adult eagles is seen rather frequently, this is the only Florida record I know of in which an aggressive encounter apparently resulted in the death of one of the individuals involved.

I thank Fred Lohrer for his helpful comments on an earlier draft of this note.—Richard E. Roberts, Division of Recreation and Parks, Department of Natural Resources, P. O. Box 8, Hobe Sound, Florida 33455.

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REVIEWS

A guide to bird behavior, volume I.—Donald W. Stokes. 1979. Boston and Toronto, Little, Brown and Company, 336 pp., \$8.95 paperback; and A guide to bird behavior, volume II.—Donald W. Stokes and Lillian Q. Stokes. 1983. Boston and Toronto, Little Brown and Company, 334 pp., \$14.95 cloth.—Publication of volume II provides an opportunity to review the set, as no previous review of the first volume has appeared in *The Florida Field Naturalist*. First, one should note that these books are *not* by the author of *Handyguide to the Coral Reef Fishes of the Caribbean* (by F. Joseph Stokes), despite remarkable similarity in size, covers, bindings and authors' names. Donald Stokes has, however, written a guide to nature in winter, one on observing insects, and a natural history of shrubs and vines. The present volumes are the first-ever field guides to behavior-watching in any group of animals insofar as I am aware.

The two volumes are similar in format, beginning with general introductory material, followed by specific accounts of about two dozen common North American avian species, and concluding with a glossary and separate bibliographies for each species' account. Volume II has a sort of appendix ("checklist of nests and displays") but neither book, alas, contains an index. The introductory material is disappointing, although somewhat helpfully expanded in the second volume. Here a "summary of maintenance behavior" is provided, ostensibly because it is "very similar in all species" (not entirely true) and so omitted from individual accounts. "Eating" is confusingly included in maintenance activities (which are preening, stretching, oiling, scratching and so on), yet differences among species are emphasized, thus immediately belying the foregoing assertion of great similarity. Statements such as "you can look at a new bird and guess what it eats, simply by looking at its bill" is certainly nonsense, and the account of preening is misleadingly oversimplified. Troubles continue with the section on "behavior at your feeder," where the text asserts that few animals fight over food (not true), that songbirds and passerines are the same thing (the former are a subset of the latter), that crest-raising occurs when two birds land near each other (sometimes, in some species), that

wing-drooping is a display (it is not), and that the last of "four aggressive displays" is "not exactly a display" after all.

The species' accounts follow a set pattern: a full-page watercolor of the species (reproduced in black-and-white), brief introductory remarks, a "behavior calendar," a "display" guide and "behavior descriptions" subdivided by categories. In general, the portraits (by J. Fenwick Lansdowne in volume I and John Sill in volume II) are fine, but rarely illustrate specific behavioral patterns. The species' accounts are the hearts of the volumes and therefore deserve close attention.

The accounts in volume I are not bad, but the knowledgeable reader keeps stumbling on apparent errors of commission and omission. Why is the famous "red-shouldered hawk call" of the Blue Jay missing from the list of vocalizations (pp. 141-142)? Does the incubating female really receive "all of her food from the male"? Why, in the account of vocalizations of the Black-capped Chickadee, did the author change the names of the vocalizations from the original work by M. S. Ficken et al. (which is probably the most complete vocal repertoire ever compiled on an avian species)? Indeed, the account seems influenced by the monograph of S. T. Smith, which is on the Carolina Chickadee! The drawing of the wing-flashing Northern Mockingbird (p. 190) is incorrect, and this behavioral pattern is cited as a display (which is unproven) while failing to mention its established use in flushing insect prey. The account of pre-copulatory behavior of the European Starling (p. 231) is incorrect in asserting that only pecking of the male by the female is known; reverse mounting has been described in the literature.

If the species' accounts in volume I raise eyebrows, those in volume II elicit groans. I took the account of the Brown Thrasher as a sample, finding the only "visual display" listed to be wing-fluttering by the female—which is asserted to be a courtship display whereas the only descriptions in the literature assign it to immediate invitation to copulation. Audubon's (1841) description of male courtship strutting, quoted in Bent (1948), is not mentioned, nor is the specific singing posture of the male. The text says in one place that males arrive on the breeding grounds before females, but later admits that in southern states the species is a permanent resident. The behavior calendar has a blank for flocking behavior, which will come as a surprise to anyone who has participated in Christmas Counts in the middle Atlantic states. Nowhere does the text warn that this is a furtive species, and that the supposed "very few signs of courtship and pair formation" are almost certainly due to lack of good observations rather than lack of behavior by the birds.

The accounts in volume I are better, I believe, because the best-studied species were chosen and the literature was easily accessible. The lesser studied species of volume II require more thorough literature searches, which effort seems lacking. Still, these books constitute a pioneering effort to make avian behavior accessible to all observers. Using them as guides is somewhat like taking Audubon's (1840) *Birds of America* into the field for species' identifications: it helps, but not as much as one would like. Still, if the books convert the reader to a confirmed behavior-watcher, then the purchase price will have been more than justified.—Jack P. Hailman, Department of Zoology, University of Wisconsin, Madison, Wisconsin 53706.