

- MEYERRIECKS, A. J. 1967. Egrets serving as "beaters" for Belted Kingfishers. *Wilson Bull.* 79: 236-237.
- MUELLER, H. C., M. G. BIBEN, AND H. F. SEARS. 1972. Feeding interactions between Pied-billed Grebes and herons. *Auk* 89: 190.
- RECHNITZER, A. B. 1956. Foraging habits and local movements of the Wood Ibis in San Diego County, California. *Condor* 58: 427-432.
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Wood Storks using White Pelicans as beaters. — The Wood Stork (*Mycteria americana*) is frequently observed foraging amidst aggregations of various wading birds. Generally the storks wander through the assemblages as individuals or in small groups without utilizing a beater. Although the birds in the assemblage may be mutually benefited by the disturbance which renders prey easier to capture.

On 6 November 1977 I observed a large feeding assemblage of wading birds in a mosquito control impoundment on the Merritt Island National Wildlife Refuge in Brevard County, Florida. The shallow brackish water impoundment (approximately 300 by 1200 m) was ringed by cordgrass (*Spartina bakeri*). In the open area, about 50 White Pelicans (*Pelecanus erythrorhynchos*) were scoop feeding in a compact flock which was moving the length of the impoundment. About 15 Wood Storks were grope feeding and walking rapidly in a row, 1-2 m parallel to each side of the "raft" and moving constantly except when they paused to swallow fish. As the line of storks moved more slowly than the pelicans, the storks at the rear would rise, fly to the front of the line, and resume feeding. This "leapfrogging" was repeated numerous times as the pelicans dispersed and the storks formed several small groups which then began feeding among other wading birds in the cordgrass.

Heatwole (1965) and Dinsmore (1973) found the feeding efficiency of Cattle Egrets (*Bubulcus ibis*) increased several fold when foraging in close proximity to cows or tractors. Consequently, I assume the storks captured prey more efficiently when using the flock of pelicans as beaters. The relationship appeared to be commensal since the pelicans determined the direction of movement and did not directly interact with the storks. Thus, I assume the storks were exploiting the feeding habits of the pelicans. I have observed over 200 groups of foraging storks and this was the first time a single species was used as a beater and the second time "leapfrogging" was observed.

The several reports of ciconiiforms using another animal as a beater (Parks and Bressler 1963, Emlen and Ambrose 1970, Leck 1971, Courser and Dinsmore 1975) or "leapfrogging" (Meyerriecks 1960, Wiese and Crawford 1974, Gladstone 1977) have all been restricted to the family Ardeidae. The use of an interspecific beater and "leapfrogging" are, to my knowledge, unreported for the Wood Stork.

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LITERATURE CITED

- COURSER, W. D., AND J. J. DINSMORE. 1975. Foraging associates of the White Ibis. *Auk* 92: 599-601.
- DINSMORE, J. J. 1973. Foraging success of Cattle Egrets, *Bubulcus ibis*. *Amer. Midl. Nat.* 89: 242-246.
- EMLEN, S. T., AND H. W. AMBROSE, III. 1970. Feeding interactions of Snowy Egrets and Red-breasted Mergansers. *Auk* 87: 164-165.

- GLADSTONE, D. 1977. Leapfrog feeding in the Great Egret. *Auk* 94: 596-598.
- HEATWOLE, H. 1965. Some aspects of the association of Cattle Egrets with cattle. *Anim. Behav.* 13: 79-83.
- LECK, C. F. 1971. Cooperative feeding in *Leucophoyx thula* and *Podilymbus podiceps* (Aves). *Amer. Midl. Nat.* 86: 241-242.
- MEYERRIECKS, A. J. 1960. Success story of a pioneering bird. *Nat. Hist.* 69(7): 46-57.
- PARKS, J. M., AND S. L. BRESSLER. 1963. Observation of joint feeding activities of certain fish-eating birds. *Auk* 80: 198-199.
- WIESE, J. H., AND R. L. CRAWFORD. 1974. Joint "leapfrog" feeding by ardeids. *Auk* 91: 836-837.

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Wading bird use of the east Everglades. — Because of drainage, water management and development, the Florida Everglades is now divided into several distinct areas. Former Everglades land immediately south of Lake Okeechobee is now used for farming. North of U. S. Hwy. 41, the remaining Everglades is divided by levees and canals into three Water Conservation Areas. Most of the Everglades south of Hwy. 41, called Shark River Slough, is included within the boundaries of Everglades National Park. However a wedge of Everglades habitat that formerly was part of the upland water source for the park is not presently under public management (Fig. 1). This area, called the east Everglades or eastern Shark River Slough (Dade Co.), covers about 215 km². It is isolated by levees from the Water Conservation Areas to the north and from Everglades National Park to the west and is bounded by State Road 27 on the east and by a higher rock ridge near Chekika State Park on the south.

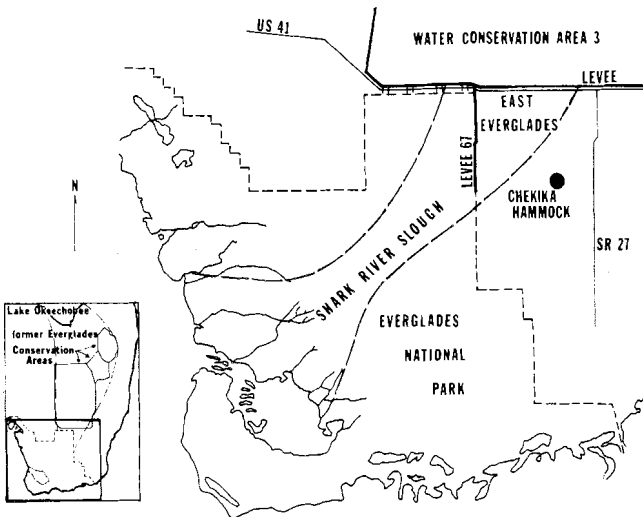


Figure 1. Map of south Florida showing the east Everglades.