



Fig. 1. American crocodile photographed in Collier County, Florida.

the breeding range. Our sighting suggests that observers should be aware of the possible occurrence, and need for documentation of crocodiles along the west coast of Florida.—Kenneth C. Alvarez, Florida Park Service, P.O. Box 398, Osprey, Florida, 33559.

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Three unusual waterfowl in north Florida phosphate mines.—Phosphate mining in Hamilton County, Florida, during the past decade has greatly increased the non-forested wetlands available to wildlife, and waterfowl are conspicuous components of these artificially created wetlands (Montalbano et al. 1978, King et al. 1980, Maehr 1980, Schnoes and Humphrey 1980). These habitats now cover over 1300 ha in north Florida. In addition to the expected wetland birds, several unusual waterfowl species have been observed at Occidental Chemical Company's Suwannee River and Swift Creek mines, located 12 km north of White Springs, Florida (Stafford 1979, Maehr 1981). We report in this note on the occurrence of the White-winged Scoter (*Melanitta fusca*), Oldsquaw (*Clangula hyemalis*), and Cinnamon Teal (*Anas cyanoptera*) from this northernmost Florida phosphate mine.

The White-winged Scoter can only be expected as an occasional wanderer in Florida (Sprunt 1954:83). It is primarily reported along both coasts in pairs or as single birds with concentrations along the northeast coast and Gulf coast south of Tallahassee (Robertson 1971). On 5 November 1979, an adult male White-winged Scoter was observed by R. Repenning and B. Barbour near shore in a settling pond, which was primarily open water. The bird submerged and resurfaced about 30 m away where it was observed for several minutes.

Three adult female White-winged Scoters were shot by hunters on 29 November 1980, 6 December 1980, and 11 January 1984 and identified at the Florida Game and Fresh Water Fish Commission waterfowl check station at Occidental's Suwannee River Mine. Other inland records include: "below Oldtown" (Dixie County) on 20 October 1917, Lake Dora (Lake County) on 2 March 1952 (Sprunt 1954:83); Paynes Prairie (Alachua County) on 25 October 1958 (D. E. Birkenholz *in* Stevenson 1959); Lakeland (Polk County) 22 November 1970 (J. B. Edscorn, G. J. Horel, and W. P. Johnson *in* Robertson 1971); and 7-23 December 1972 (P. J. Fellers and J. B. Edscorn *in* Woolfenden 1973).

Oldsquaws appear to have become regular winter visitors at Occidental. In addition to Stafford's (1979) record, undocumented sightings have occurred every year since 1977 by Florida Game and Fresh Water Fish Commission personnel. Most recently, a male and female Oldsquaw were seen on 12 January 1984 in an open-water settling pond at Occidental.

The western-breeding Cinnamon Teal is an infrequent winter visitor east of the Mississippi River (Sprunt 1954:71). Two adult male Cinnamon Teal were harvested by hunters at Occidental on 2 December 1981 and 23 November 1983. Both birds were using settling ponds characterized by patches of open water and cattail (*Typha* sp.). Other inland records for Florida include Lake Iamonia (Leon County) on 18 February 1893, Lake Jackson (Leon County) on 17 November 1906, Shell Hammock (Polk County) on 1 December 1951 (Sprunt 1954:72), near Corkscrew Swamp (Collier County) on 26 December 1976 (J. Hansen and L. Riopelle *in* Stevenson 1976), and Myakka River State Park (Sarasota County) on 22 December 1981 (L. Atherton, Helen Dowling, and William Dowling et al. *in* Stevenson 1982).

The occurrence of two individuals of this rare Florida species from a single locality is noteworthy, especially because harvest records may represent only a portion of the total number of Cinnamon Teal using this area. Further, the opportunity for observing waterfowl is reduced due to difficult travel in and around phosphate mines, and often their restricted access.

Continued occurrences of Oldsquaws and new records for White-winged Scoters at Occidental support the suggestion that a cross-peninsula travel route between the Gulf of Mexico and the Atlantic Ocean may exist for some of these sea ducks (Robertson 1971). Further, the multiple inland sightings of all three species mentioned herein suggest that their occurrence may not be accidental. The creation of artificial wetlands associated with phosphate mining in Hamilton County has apparently provided habitat for these birds. If so, Occidental's settling areas will likely continue to produce unusual sightings. However, the physical nature of phosphate-mine settling ponds and associated vegetation is strictly temporary. Altered water levels can easily convert once productive waterfowl wintering habitat to little-used willow swamps. A special effort should be made by those visiting phosphate mines to document unusual waterfowl species.

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REVIEW

Estimating numbers of terrestrial birds.—Studies in Avian Biology Number 6. C. John Ralph and J. Michael Scott (Editors). x + 630 pp., 1981. \$20.00. Published by the Cooper Ornithological Society. Send orders to Allen Press, Inc., P.O. Box 368, Lawrence, Kansas 66044.—Subtitled "The proceedings of an international symposium held at Asilomar, California, October 26-31, 1980," this publication, containing citations to more than 1400 scientific papers, is an excellent summary of current research on avian censusing techniques. Fifteen state, national, and international organizations served as sponsors for the meeting, which was attended by approximately 400 people from around the world. The symposium drew so much interest because avian censusing is an important tool used by scientists, biological consultants, and amateurs to address questions related to bird population fluctuations, interspecific interactions, long-term population changes, and land management techniques. More technical reviews of this volume will be available to scientists, therefore I will assess the books' value for amateurs and comment on bird censusing efforts in Florida.

The Proceedings consists of 82 papers in nine sections. Section topics are: estimating relative abundance and density, comparing census methods, sources of bias, sampling design, and data analysis. Each section opens with introductory remarks by the section chairperson and ends with a summary/critique.