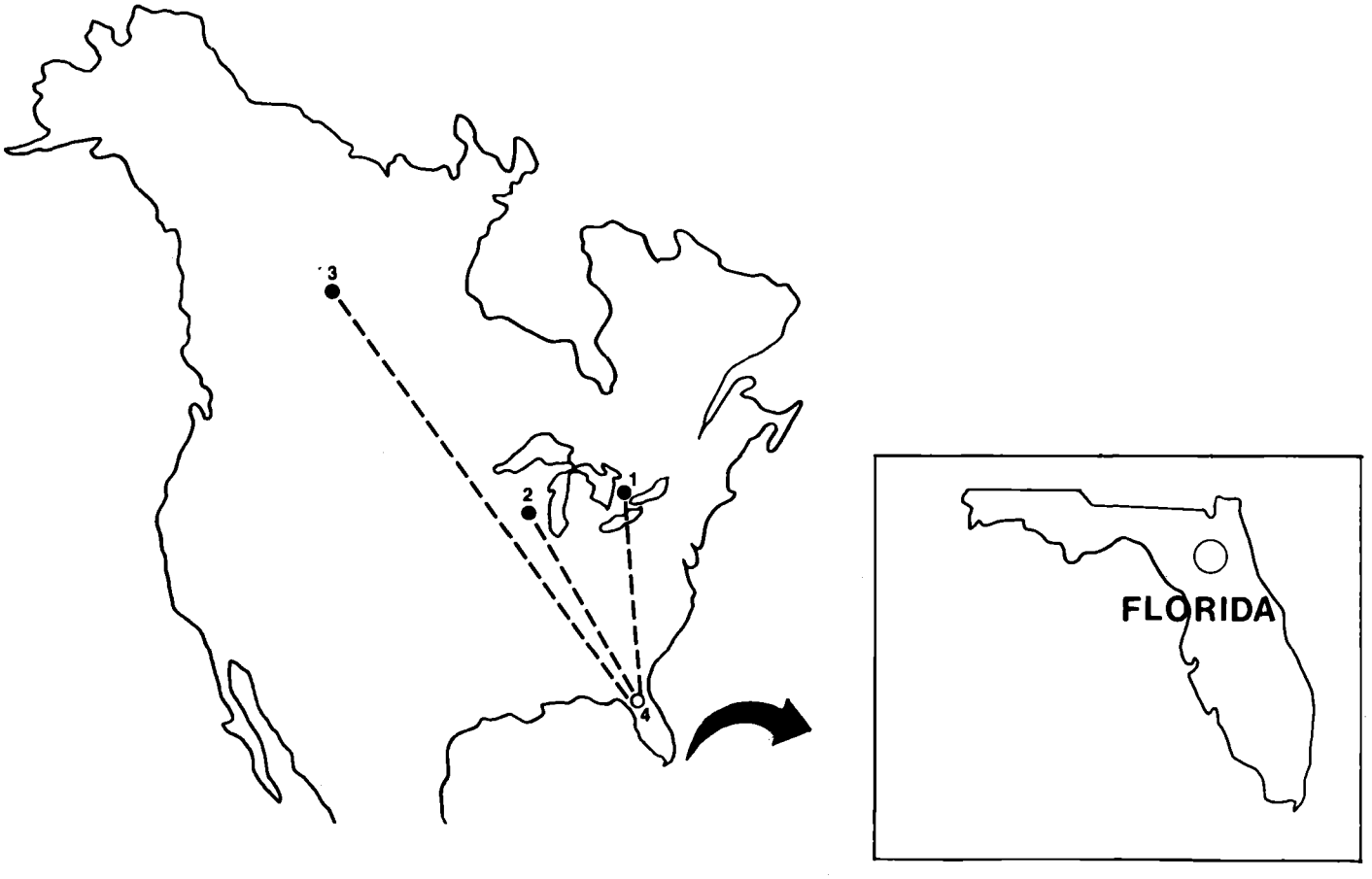
Bird Bands Recovered from American Alligator Stomachs in Florida

Michael F. Delany
Florida Game and Fresh Water Fish Commission
Wildlife Research Laboratory
4005 South Main Street
Gainesville, FL 32601

Birds are a relatively unimportant food for American alligators (*Alligator mississippiensis*) (Giles and Childs 1949, Valentine et al. 1972, Delany and Abercrombie 1986), and the recovery of United States Fish and Wildlife Service (USFWS) bird bands from alligator stomachs is infrequent. Published reports of such band recoveries indicate that the alligators were collected close to banding sites near the time of banding. In 1929, Chamberlain (1930) examined the stomach contents of an alligator collected in South Carolina and found 5 bands that were placed on Louisiana Herons (*Egretta tricolor*) and Little Blue Herons (*Egretta caerulea*) that year. Two of 309 alligators examined in Louisiana each contained 3 bands "recently" placed on Great Egrets (*Casmerodius albus*) (Valentine et al. 1972). A band placed on an Osprey (*Pandion haliaetus*) in 1977 was found that year during the examination of 22 alligator stomachs collected in North Carolina (Fuller 1981). This paper reports on USFWS bird bands recovered during the examination of alligators in Florida.

Stomachs were collected from 465 alligators in Alachua County, Florida (Fig. 1), from Orange, Lochloosa, and Newnans Lakes between 7 September and 14 October 1981-85. The study area lakes were large (12,250 ha total area), shallow (3 m maximum depth), and eutrophic. Except for some residences, shorelines were undeveloped and bordered by marshes and cypress (*Taxodium distichum*) swamps. Alligators ranged in length from 1.3 to 3.9 m and included 321 males and 144 females. Delany and Abercrombie (1986) report stomach contents for 350 of these samples but omit band recoveries and do not include bird species occurring in less than 1% of the stomachs.

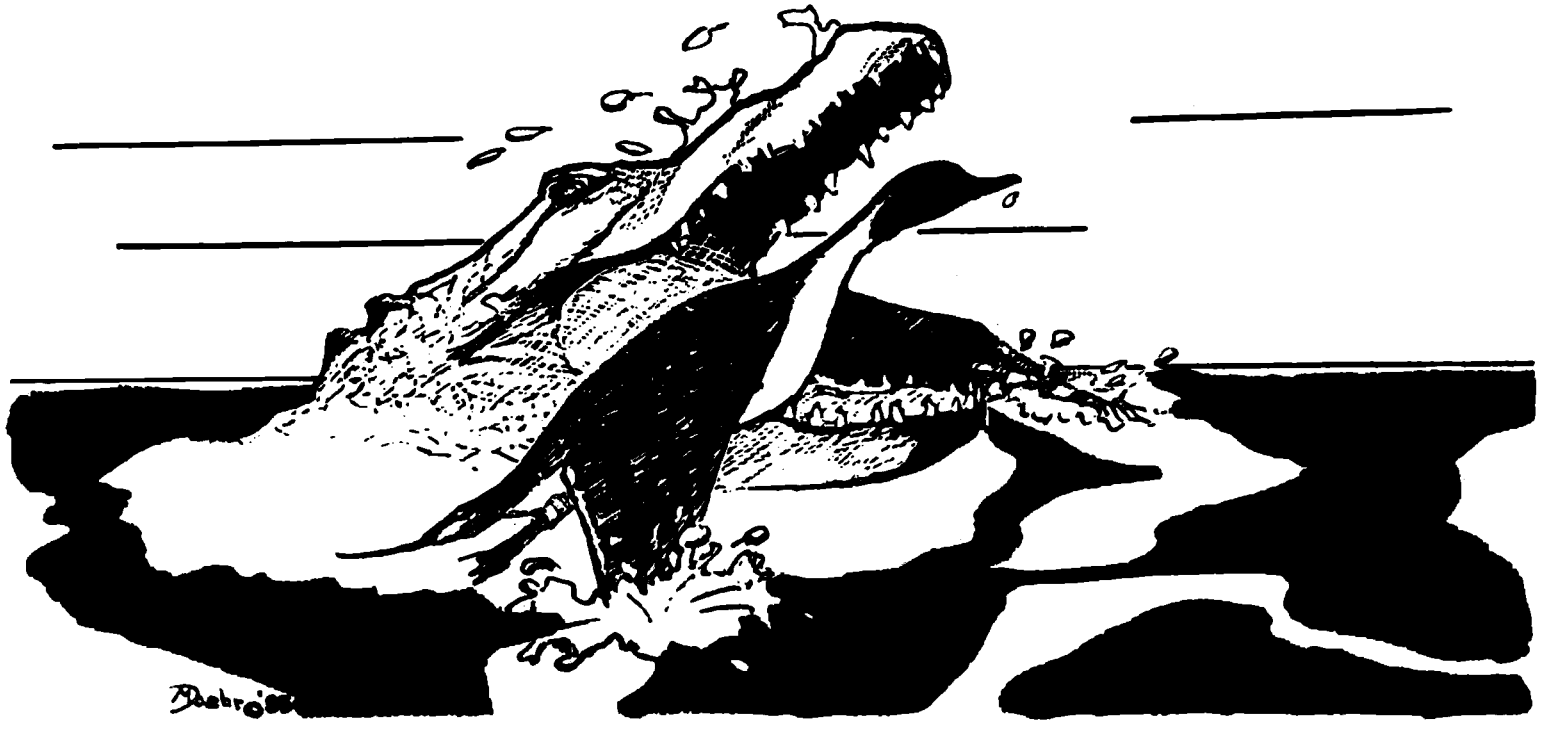
Figure 1. Distribution of 4 band recoveries from alligator stomachs collected in Alachua County, Florida, 1981-85. o = recovery site, • = banding site. Observation number (from Table 1) is indicated.



Four aluminum USFWS bird bands were found in 4 alligator stomachs (Table 1). Bands were from a Ring-billed Gull (*Larus delawarensis*), American Coot (*Fulica americana*), Northern Pintail (*Anas acuta*), and Osprey. Birds were banded when immature and, except for the Osprey, were probably consumed approximately one year later (it is not known how long bands are retained in an alligator's stomach). No bird tissue was present in stomachs containing bands. Bird remains were found in 9% of the stomachs examined by Delany and Abercrombie (1986) and constituted only 6.7% by volume of all food. Species identified included American Coot, Common Moorhen (*Gallinula chloropus*), Pied-billed Grebe (*Polilymbus podiceps*), Anhinga (*Anhinga anhinga*), Wood Duck (*Aix sponsa*), and Cattle Egret (*Bubulcus ibis*).

Table 1. Bird bands recovered from 465 alligator stomachs collected in Alachua County, Florida, from Orange, Lochloosa, and Newnans lakes, 1981-1985.

Observation	Species	Date banded	Age	Banding site	Date collected	Recovery site
1	Ring-billed Gull	8 July 1980	HY	Toronto, Ontario	7 October 1981	Lochloosa Lake
2	American Coot	22 July 1981	HY	Mayfield, Wisconsin	20 September 1982	Orange Lake
3	Northern Pintail	16 August 1983	HY	Ft. Providence, NW Territories	10 September 1984	Orange Lake
4	Osprey	23 May 1985	HY	Gainesville, Florida	19 September 1985	Newnans Lake



Alligators are versatile, opportunistic predators and bird species commonly found near water are potential prey. Some waterfowl crippled during hunting season may be consumed. Fledgling Ospreys sometimes land in water (T. C. Edwards, pers. commun.). The Osprey mentioned in this study was at most 5 months old and may have been captured and eaten while swimming to shore. It is possible that some birds are consumed as carrion.

Because birds appear to be incidental prey for alligators, it is not surprising that band recoveries are infrequent (less than 1% of this sample). Alligators at this latitude usually do not eat during winter (November-March) (McIlhenny 1935), and therefore are likely to ingest relatively few banded birds wintering in Florida. Further, classification of the alligator as an endangered species in 1967, and its consequent protection throughout its range since 1973, limited opportunities to examine stomach contents and recover bands. Unlike other reports of band recoveries from alligators, 3 reported here were long distance. These unusual recoveries and information on bird species consumed by alligators in Florida provides some insight into a natural mortality factor of overwintering birds.

Acknowledgments

Assistance with bird identification was provided by D. G. Mathiason and T. A. Weber. T. C. Hines initiated this study and S. A. Schwikert collected alligator stomachs. D. N. David and A. R. Woodward helped examine stomach contents. The Bird Banding Laboratory provided pertinent information. D. Broughton, R. T. Dumke, T. C. Edwards, and J. R. Goldsberry, Jr. graciously allowed the use of their banding data. The helpful comments of T. C. Hines and D. S. Maehr on an earlier draft of this manuscript are gratefully acknowledged. D. S. Maehr provided the illustration. T. L. Crown typed drafts of this manuscript.

Literature cited

Chamberlain, E. B. 1930. Notes on the stomach contents of an alligator. Copeia 3:83-84.

Delany, M. F., and C. L. Abercrombie. 1986. American alligator food habits in northcentral Florida. J. Wildl. Manage. (in press).

Fuller, M. K. 1981. Characteristics of an American alligator population in the vicinity of Lake Ellis Simon, North Carolina. M.S. thesis, Dept. of Zoology, North Carolina State University, Raleigh. 136pp.

Giles, L. W., and L. V. Childs. 1949. Alligator management on the Sabine National Wildlife Refuge. J. Wildl. Manage. 13:16-28.

McIlhenny, E. A. 1935. The alligator's life history. Boston, MA: The Christopher Publ. House. 117pp.

Valentine, J. M., J. R. Walther, K. M. McCartney, and L. M. Ivey. 1972. Alligator diets on the Sabine National Wildlife Refuge, Louisiana. J. Wildl. Manage. 36:809-815.

(Eastern)

A Self-tripping Trap for use with Colonial Nesting Birds

Peter C. Frederick
Dept. of Biology, University of North Carolina
Chapel Hill, N.C. 27514
Current address:
Dept. of Wildlife
118 Newins-Ziegler Hall
University of Florida
Gainesville, FL 32611

Many colonial nesting species are sensitive to human disturbance, and the capture of adults on their nests presents special problems. Cannon-netting may risk mass abandonment of the colony, destroy eggs, or injure birds. Many other kinds of traps may allow capture without abandonment, but require immediate removal of captured birds. Thus the capture of each bird requires a separate trip into the colony; and if more than a handful of birds are to be captured, such repeated distrubance may lead to large-scale abandonment or reduction of nesting success. Another problem withdoing any work inside colonies, particularly of Ciconiiformes, is that young will often leave the nest at the approach of a human, usually before the age at which they are able to get back in; this frequently leads to their death by starvation or predation.

The trap shown in Fig. 1 was designed for capturing White Ibis (*Eudocimus albus*) as part of study of mating behaivor (Frederick, P.C. 1985, PhD diss. Univ. of North Carolina, Chapel Hill, N.C.). This trap is a large cage, similar to one described by Burger (1971, Bird Banding 42:123 but has a self-tripping door instead of an open top for entrance. Both traps allow adults to incubate eggs or brood and feed nestlings until removal at the observer's convenience. In a coastal South Carolina colony, more than 70 adults were trapped on their ground-level nests in 1984 when young were from 1 to 12 days of age. These young became ambulatory after 5 to 7 days of age and would leave the nest at my approach. To prevent this, hoops of 1" mesh chicken wire (12.25" high × 17.5" diameter) were wired to each nest in the study area during incubation. The traps fitted withi these nest corrals when in use and were anchored by stakes into the mud below the low nests. Adults stepped over the nest corrals when entering the trap.

After setting up to 10 traps, I would watch them from a blind 30 to 40 m away. Adults usually entered the trap without reluctance, but it was important to place the door facing along normal entrance routes. Adults sometimes failed to press against the trip plate; weaving prominent pieces of the nesting material into the trip plate usually caused adults to peck at it and thus release the trip mechanism. On windy days, premature tripping was avoided by bending the trip trigger to increase friction. Adults never appeared to be alarmed at the closure of the door and nearly always brooded and fed young normally once entrapped. Because immediate removal was not necessary, I was able to operate 10 traps simultaneously,