

# THE ORIOLE

A Quarterly Journal of Georgia Ornithology; Official Organ of the  
Georgia Ornithological Society



VOL. 45

MARCH 1980

NO. 1

# THE ORIOLE

(ISSN 0030-5553)

## EDITOR

Bill P. Lovejoy, Biology Department, Georgia Southern College, Statesboro, Georgia 30460

## EDITORIAL COMMITTEE

Robert L. Crawford, Chr.; George A. Dorsey; Milton N. Hopkins, Jr.; H. Branch Howe; Emil K. Urban.

THE ORIOLE is mailed to all members of the Georgia Ornithological Society not in arrears for dues. Classes of membership are as follows:

Regular .....	\$ 8.00	Library .....	\$ 8.00	Patron .....	\$ 50.00
Family .....	\$12.00	Sustaining .....	\$15.00	Life .....	\$100.00
Student .....	\$ 5.00	Garden Club .....	\$15.00		

All manuscripts and books for review column should be submitted to the Editor of The Oriole.

All dues should be remitted to the Treasurer of the Society: John M. Swiderski, 3735 Tulip Tree Road, Marietta, Georgia 30066.

Inquiries concerning back issues of THE ORIOLE or OCCASIONAL PAPERS OF THE G.O.S. should be directed to the Business Manager: T. McRae Williams, 755 Ellsworth Drive, N.W., Atlanta, Georgia 30318.

## CONTENTS

### CURRENT STATUS AND REINTRODUCTION OF THE BALD EAGLE IN GEORGIA

Ron R. Odom ..... 1

### OCCURRENCE OF CINNAMON TEAL IN GEORGIA

Anne and Vernon Waters ..... 15

### EARED GREBES AT PENDERGRASS: A NEW GEORGIA RECORD

John M. Paget ..... 18

GENERAL NOTES ..... 20

NEWS AND COMMENTS ..... 23

## GEORGIA ORNITHOLOGICAL SOCIETY

Founded December 13, 1936

Franklin McCamey, President

Lee Gibbs, 1st Vice-President

Jeannine Angerman, 2nd Vice-President

Jonny Howell, Secretary

John M. Swiderski, Treasurer

# THE ORIOLE

A Quarterly Journal of Georgia Ornithology; Official Organ of the Georgia Ornithological Society

VOL. 45

MARCH 1980

NO. 1

## CURRENT STATUS AND REINTRODUCTION OF THE BALD EAGLE IN GEORGIA

Ron R. Odom

Historically the Southern Bald Eagle (*Haliaeetus leucocephalus leucocephalus*) occurred as a fairly common summer resident along the Georgia coast, nesting regularly on the barrier islands (Hoxie 1910; Green et al. 1945; Burleigh 1958). Actual nesting in Georgia begins in December (Burleigh 1958) although eggs have reportedly been collected as early as mid-November (Hoxie 1910). Mated pairs usually arrive at nest sites in late September or October to begin work on the nests (Evans, pers. comm. 1979). Hoxie (1910) reported that there were fifteen known nests in Chatham County alone. Burleigh (1958) refers to twenty-six sets of eggs collected for "scientific purposes" from the Savannah area between 1906 and 1922. As late as 1936 data indicate that competent birders could usually see an eagle on any outing. By the late 1950's Bald Eagles were no longer considered common, with areas that formerly supported fair numbers of nests showing serious declines (Tompkins 1958; Teal 1959). Denton (1977) classified the Bald Eagle as a rare transient and winter resident over most of the state. The last known successful Bald Eagle nest occurred on St. Catherines Island in 1970 (Johnson et al. 1974).

Bald Eagles were officially recognized as an endangered species by the federal government in 1967. The state of Georgia listed the bird on its official "protected species list" as an endangered species in 1974. The Department of Natural Resources (DNR), Game and Fish Division has been charged with the responsibility of monitoring and managing Georgia's endangered wildlife resources. An endangered species program emerged from 1973 state legislation with the ultimate objective of restoring those wildlife species classified as endangered or threatened. Of utmost concern to DNR are those species suffering unnatural population declines due to man's impact on the environment. Most of the Bald Eagle's problems are a direct result of uncontrolled and often haphazard progress or development by man (Oberholser 1974; Prouty et al 1977; Coon et al 1970). The Game and Fish Division is committed to management and/or restoration efforts that will once again restore Georgia Bald Eagle populations to a self-sustaining level.



## CURRENT STATUS

Initial status investigations by DNR's Game and Fish Division consisted of contacts by telephone or questionnaire with various experts and other resource-oriented individuals throughout the state. Their cooperation was solicited in reporting sightings of Bald Eagles and other select species in Georgia. Whenever possible, sightings were verified in the field by Game and Fish staff or amateur ornithologists. After general screening the remaining reports were checked out by telephone. Only those reports received from what was considered to be qualified wildlife-related professionals or select amateur ornithologists were used. A similar questionnaire was distributed in 1975.

Beginning in 1975 annual aerial observations were made of the coast by Game and Fish personnel while flying heronry and Osprey surveys. Efforts were made to locate Bald Eagles during these flights, particularly in areas where nesting historically occurred.

In 1979 and 1980, Game and Fish coordinated mid-winter Bald Eagle surveys in Georgia in cooperation with the National Wildlife Federation's national survey. This effort involved participation by numerous government and private organizations in a coordinated effort to determine the mid-winter population of Bald Eagles in Georgia. It should be noted that while the national survey is designed to locate wintering Bald Eagles, Georgia birds at this time are well into the nesting season. Efforts were concentrated on the coast, major reservoirs, and major river systems in the coastal plain. These surveys were conducted primarily on foot or by car, except for the coastal area which was flown by fixed-wing aircraft and helicopter by Game and Fish. In January 1979, Game and Fish also flew Lake Seminole, Lake Walter F. George, and Lake Tobesofkee areas. Nine Bald Eagles were observed during the 1979 mid-winter survey, five on the coast and four in the Lake Seminole area. Data from the 1980 survey have not been compiled yet.

The U.S. Fish and Wildlife Service reported the following numbers of Bald Eagles during annual, aerial, winter waterfowl surveys: 1969, 0; 1970, 0; 1971, 0; 1972, 0; 1973, 0; 1974, 0; 1975, 0; 1976, 1; 1977, 3; 1978, 3; 1979, 4. (Orr, pers. comm. 1980).

Four Georgia Bald Eagles found dead or moribund in the field were necropsied by the U.S. Fish and Wildlife Service Labs in Madison, Wisconsin (Locke, pers. comm. 1980) and Patuxent, Maryland (Stickle, pers. comm. 1980) from 1974 to 1980. Origins of the necropsied birds are presented in Fig. 1. One bird was killed by a collision with an automobile. The cause of death of the other three birds was undetermined.

The status information presented in this report reflects data accumulated by the Endangered Wildlife Program through various methods since 1974. Bald Eagle observations accumulated by the Endangered Wildlife Program from 1974-79 and considered valid are presented in Fig. 1. Observations are arbitrarily divided into nesting (October through May) and non-nesting (June through September) seasons.



- Sightings made during months of June-September
- Sightings made during nesting season (October-May)
- ★ Known (old and inactive) nests
- ▲ Locations of eagles found dead or moribund.

Fig. 1. Southern Bald Eagle sightings from 1974-January 1980.



Most observations in the interior of the state appear to be birds migrating through during the winter months, although some birds are known to winter there. Early literature seldom mentions observations of Bald Eagles in the interior of the state. The large number of sightings occurring throughout the state in recent years probably is related to habitat alterations brought about by the advent of the Soil Conservation Service's farm pond program, watershed lakes, and hydroelectric power reservoirs. Similar habitat alterations in other areas have altered Bald Eagle distribution during the winter months (Steenhof 1978). Some exceptions, however, are noteworthy. In recent years, pairs have been observed regularly during the nesting season on the coast, Lake Seminole, and from Lake Tobesofkee near Macon.

There is presently only one known active pair of nesting Bald Eagles in Georgia. A breeding pair has returned to St. Catherine's Island for the past three years, but they have not produced any young and do not appear to be producing eggs (Evans, pers. comm. 1979). Single, unmated birds are observed each year along the coast during the nesting season. For the past three years individual adult birds have been seen regularly near the mouth of the Satilla River and on Ossabaw Island. The bird on Ossabaw has maintained a nest in a large pine tree on the west side of the island for at least three years. No mate ever has been observed. A pair of adult eagles was observed regularly on Lake Tobesofkee in Bibb County from 13 November 1978 to 25 February 1979.

A report of a nesting pair of mature Bald Eagles on Grassy Pond in Lowndes County was investigated by Game and Fish personnel in 1978. The nest was located in a wooded area adjacent to the pond but was not active. The nest appeared to be in good condition and may have been used in recent years. A pair of birds was seen at the site in 1978 but no nesting was reported. A pair of adult birds is present at the pond as of this writing (Evans, pers. comm. 1979). A pair of adult birds is seen regularly during the nesting season on the Altamaha Waterfowl Refuge near Darien, Georgia. A pair of adult birds was observed several times on Butler Island in early 1980 (Edwards, pers. comm. 1980). Although eagles are known to have nested on Generals Island, which is nearby, no active nests could be located during aerial surveys. The Generals Island nest was active in 1970, but produced no young. It has not been used since 1971 when I-95 was constructed within sight of the nest (Love, pers. comm. 1979).

An immature Bald Eagle, emaciated and unable to fly, was captured on Altama Plantation in Glynn County by Game and Fish personnel in August 1979. The eagle was kept in captivity at Sapelo Island for several days until it died. The bird was then packed in dry ice and shipped to the U.S. Fish and Wildlife Lab in Madison, Wisconsin for necropsy and pesticide analysis, which have not been completed yet. Findings will be reported in a later note.

It is clear that Georgia Bald Eagle populations have experienced

drastic declines since the first part of this century. Although there appears to be an increase in the number of sightings during the past several years, it is impossible to determine whether this is a real increase or simply more efficient reporting by the public, due to increased educational efforts.

#### REASONS FOR DECLINE

The drastic declines in North American Bald Eagle populations over the past thirty years can be attributed to habitat loss (Oberholser 1974), pollution (Prouty et al. 1977; Newton 1979) and shooting (Coon et al. 1970). It is likely that Georgia populations have been affected by these same problems. Habitat losses have occurred on the mainland due to recent emphasis on short-term pulpwood production by major paper companies supplying their paper mills (Clement 1971). Good nesting habitat still occurs on the barrier islands because of their inaccessibility and patterns of ownership which stress resource conservation (Johnson et al. 1974). Disturbance has caused abandonment of nest sites on the mainland (Love, pers. comm. 1979) and probably will continue to be a problem as the coast is developed. Even in areas of suitable habitat human presence alone can render an area unattractive to Bald Eagles (Newton 1979). Pollution, primarily from pulp and paper and chemical industries, is known to be a serious problem on the Georgia coast (Johnson et al. 1974). Extremely high levels of mercury have been detected in wading birds and other wildlife from the Brunswick and Savannah estuaries (Odom 1974; Gardner et al. 1978).

Although the shooting problem is not as serious as it once was, it still remains a problem. Reports of Bald Eagles, Golden Eagles (*Aquila chrysaetos*) and other large raptors being shot or shot at are fairly common (Frazier, pers. comm. 1979). In spite of recent education efforts by state and federal agencies, the predatory role of raptors in natural communities is still misunderstood. Many farmers still consider them to be a threat to their domestic animals. In addition, support from the courts has sometimes been lacking. In 1976, a federal judge in Columbus, Georgia fined a man a mere \$15 for shooting a Golden Eagle (Frazier, pers. comm. 1979).

Bald Eagles are known to accumulate high levels of DDT in their systems which ultimately can prevent them from properly utilizing or storing calcium. This in turn can result in the production of thin-shelled eggs which seldom survive incubation (Hickey and Anderson 1968) and/or increased mortality of embryos in unbroken eggs (Newton 1979). Since eagles range over large areas, contamination sites are difficult to pinpoint. Because of the dispersal of organo-chlorines through air and water currents and in the bodies of migrant animals, populations can be affected that are far removed from the source of pollution (Newton 1979). The effects pollution may have had on eagle food supplies is less well understood.



## REINTRODUCTION

Recognizing the apparent extirpation of the Bald Eagle as a nesting species in Georgia, the Game and Fish Division proposed a long-term restoration project. In Georgia suitable nesting habitat still exists, particularly on the barrier islands. Lower pesticide levels since the ban on DDT in 1973 have resulted in increases in certain local eagle populations (Newton 1979). Surveys indicated that southern Osprey populations, which have also been adversely affected by contamination problems, seem to be doing much better in recent years (Edwards 1978). The problem of shooting could be further reduced with proper information-education efforts. Even with decreases in environmental contamination and blatant shooting, and knowing that suitable nesting habitat exists, the recovery of nesting Bald Eagle populations will still be a very gradual process (Temple 1977). A program was initiated to introduce young eaglets to the wild through hacking, with the objective of accelerating this recovery. Although the hacking method is time consuming, it has been successful in reestablishing wild populations of White-tailed Eagles (*Haliaeetus albicilla*), Bald Eagles, Peregrine Falcons (*Falco peregrinus*) and Prairie Falcons (*Falco mexicanus*) (Newton 1979; Cade 1976). Releasing captive born birds to the wild through hacking hopefully will complement or accelerate an expected natural population recovery. Assuming the successful reintroduction of these eaglets through hacking, several questions remain unanswered:

- 1) Would they be able to successfully adapt to the wild, independent of man?
- 2) Would they "imprint" to the Georgia coast and return to the area in subsequent years? Several hacked eagles released in New York State are known to have returned in subsequent years (Nye, pers. comm. 1979).
- 3) Would these captive-reared birds reproduce normally as wild free-flying Bald Eagles?
- 4) When and if these birds reach sexual maturity (4-6 years), would pesticide levels in the environment be low enough to allow successful reproduction?

## STUDY AREA

Sapelo Island, a 4410 ha (10,892 a) barrier island located approximately 50 km (30 mi) northeast of Brunswick, Georgia was chosen for the reintroduction site (Fig. 2). Records indicate there were four Bald Eagle nests on Sapelo as recent as 1959 (Teal). The island is owned by the State of Georgia and is operated as a Wildlife Management Area by DNR.

Although Sapelo has a small resident human population, the residents all live on the south end of the island away from the eagle hacking area. Human disturbance on the north end is minimal. Closing the roads and trails in the nest vicinity further reduced human disturbance.

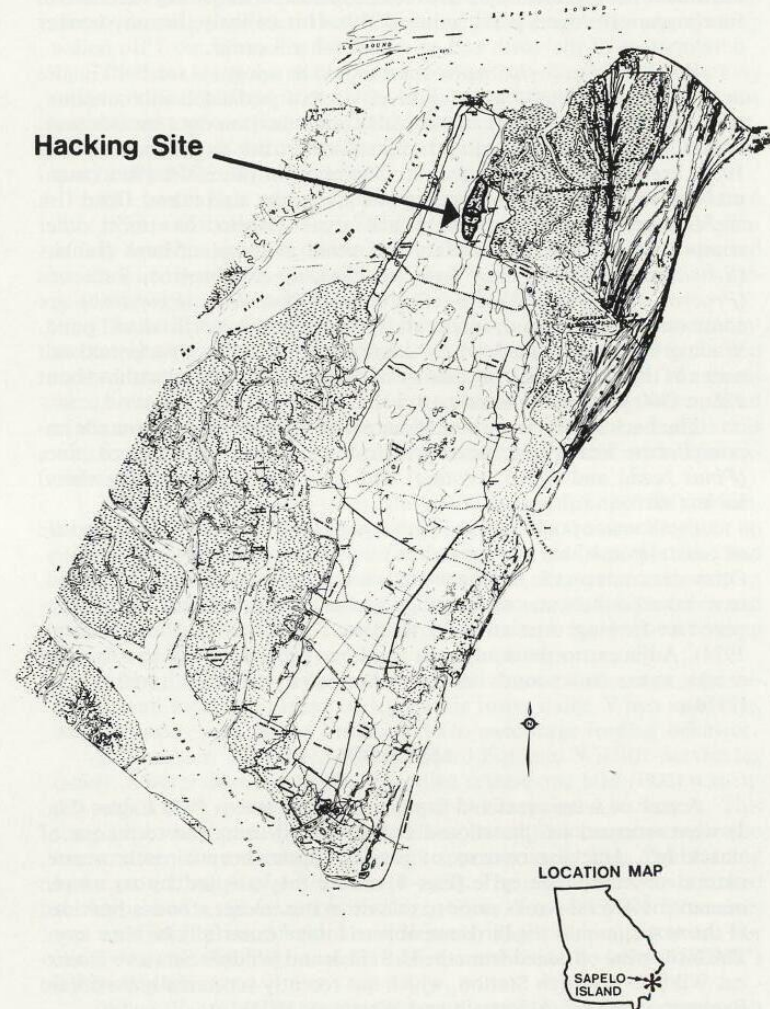


Fig. 2. Study area on Sapelo Island



Suitable nest trees are available in several locations on the island and the timber management plan calls for the preservation of key nest trees in future years (Belcher, pers. comm. 1979). It is unlikely that any further development of the north end of the island will occur.

Food supplies in the Sapelo area should be adequate for Bald Eagles and the area is thought to be relatively free of pesticide contamination, although there is a paucity of pesticide contamination data for this area. Additional pesticide sampling is scheduled in the Sapelo area during 1980. Fresh and salt water fish are abundant in the 36 ha (90 a) man-made duck pond and surrounding marsh, creeks, and inlets. Dead fish are frequently observed along beach areas. Sapelo, like most other coastal islands, has an abundance of small mammals. Marsh Rabbits (*Sylvilagus palustris*), Gray Squirrels (*Sciurus carolinensis*), Raccoons (*Procyon lotor*), and White-tailed Deer (*Odocoileus virginianus*) are common on the island, particularly around the north duck pond. Wading birds and waterfowl are common on both fresh water and salt water in the area. A nesting colony of wading birds occurs within about 275 m (300 yds) of the hacking tower.

The hacking site was situated on a dike between two man-made impoundments heavily vegetated with cattails (*Typha* sp.). Mixed pines (*Pinus taeda* and *Pinus serotina*) and Live Oak (*Quercus virginiana*) forests surround the pond.

Fresh water ponds choked with aquatic vegetation are characteristic of coastal ponds that are dependent on artesian wells for water supplies. Other demands on the underground water supply, particularly industrial, have lowered the water table along the coast to levels which seldom support free-flowing artesian wells (Hillestad et al. 1975; Johnson et al. 1974). Adjacent to the study area is a large expanse of salt marsh, tidal creeks, rivers, and sounds which is described in detail by Johnson et al. (1974).

#### METHODS

A pair of seven week old captive-reared Southern Bald Eagles (Fig. 3) were returned to the wild on Sapelo Island using the technique of "hacking". Hacking consists of placing captive-born birds in a safe, natural or man-made eyrie (Fig. 4) where they are fed by an unseen human for several weeks prior to release. After release, food is provided at the nest site until the birds are able to hunt successfully on their own. The birds were obtained from the U.S. Fish and Wildlife Service's Patuxent Wildlife Research Station, which has recently successfully bred Bald Eagles in captivity (Maestrelli and Weimeyer 1975).

Several locations along the Georgia coast were evaluated for their potential as Southern Bald Eagle nesting habitat. Factors considered included historical nesting records, degree of disturbance, presence of suitable nest trees, stability of habitat, food supply, level of contamination, and logistics.

In early June 1979, materials were barged to Sapelo Island and construction was begun on a Bald Eagle hacking tower. A secluded site on the north end of the island was selected which was near water and easily sealed off from human activities.

The hacking tower was patterned after New York States' hacking tower and is described in detail by Milburn (1979). A video camera was installed on a power pole 4.6 m (15 ft) in front of the tower to enable constant monitoring of the eaglets from the base camp located 180 m (200 yds.) away behind a screening treeline.

The two eaglets were shipped by air to Atlanta from Maryland on 6 July 1979 in individual 0.9 x 1.2 m (3x4 ft) crates. Upon arrival in Atlanta they were immediately picked up by a DNR helicopter and transported to Charlie Brown Airport where they were transferred to an air-conditioned airplane and transported to Sapelo Island.

The birds were photographed by the press while being banded immediately after their arrival on Sapelo. After banding they were returned to their crates and transported to the hacking tower by jeep. The crates were hoisted to the top of the hacking tower and the eaglets were placed in the cages. All personnel immediately left the area. All roads and trails within sight of the tower were gated, locked, and posted with signs explaining the project.

Prior to arrival of the birds, about 100 kg (approx. 220 lbs) of fish, mostly carp (*Cyprinus carpio*), were collected by electro-shocking, cut up and frozen in plastic containers for twice daily feedings. Rabbits and squirrels were also collected and when available, deer carcasses were cut up, frozen and fed to the eaglets. A technician cared for the birds and made observations via the closed circuit television monitor on feeding habits, sibling aggression, and wing exercise patterns.

After the eaglets fledged, the top and front of the cage were removed and food was placed on top of the tower daily. When available, deer carcasses were placed on the dikes to encourage feeding behavior.

Both eaglets were fitted with standard Fish and Wildlife Service leg bands. Several days before the scheduled release one bird (E02) was fitted with a dark green patagial tag with white painted-on letters. This same bird was fitted with a small tail-mounted, lithium-powered radio transmitter. The transmitter weighed approximately 25 g (0.9 oz) and had a ground range of 4.8-6.5 km (3-4 mi). The transmitter was attached to the base of a tail feather with Krazy-Glue. A model TRX-24 receiver was used with a hand-held, three element, yagi tracking antenna. For aerial searches the yagi antenna was mounted on the belly of DNR's fixed-wing aircraft.

When flights by the birds were unsuccessful and ended in the marsh or woods, they were located with telemetry equipment and returned to the tower. They were allowed to rest before attempting another flight. Rest periods varied from one hour to three days. After the birds reached flight stage, efforts were made to monitor their activities through telemetry and ground and aerial observation.





Fig. 3. Eight week old eaglets. DNR photo.

#### RESULTS AND DISCUSSION

The eaglets were shipped by air freight from Maryland the morning of 6 July 1979 and introduced to their new hacking tower on Sapelo Island later that afternoon (Fig. 3). They were cared for in their artificial nest for six weeks until they appeared ready to fledge. Two days prior to the scheduled release one of the eaglets (E01) escaped. Although the bird was banded, biologists had not yet attached the colored wing tag and radio transmitter. E01 flew well and was observed in the duck pond area for two weeks after its escape. On several occasions the bird was seen soaring with a group of Turkey Vultures (*Cathartes aura*) or observed perched in a dead snag near the duck pond. Although food was immediately placed on the top of the hacking tower after E01's escape, the bird never returned to the tower to feed. The bird appeared to be in excellent condition when last seen on 15 August 1979.

The second eaglet (E02) was not as precocious as the first. Although appearing to be strong and ready to fly, the bird was incapable of sustained flight. While in the cage E02 was clearly dominated by the more aggressive eaglet E01.

The day after the escape of E01, E02 was removed from the cage and fitted with a green patagial tag with white numbers and a miniature tail-mount radio transmitter. The bird was then placed back in the cage for two days until its scheduled release. At first E02 reacted frantically to the escape of E01, however, by the time of release the eaglet had calmed down. On 4 August 1979, E02 was released from the cage. The bird ap-

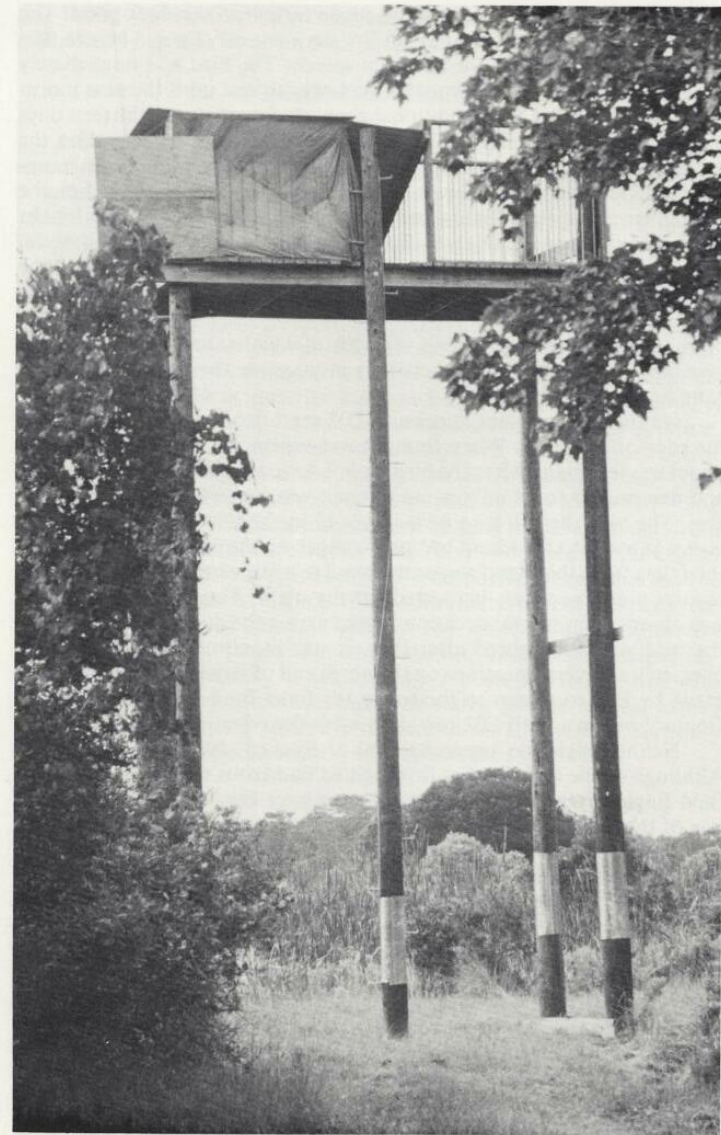


Fig. 4. Bald Eagle hacking tower, Sapelo Island. DNR photo.



peared to fly well but went down in dense cattails in the duck pond. The marsh was searched unsuccessfully for several hours before the helicopter was called in for an aerial search. The bird was immediately located, retrieved, and returned to the tower to rest until the next morning. It was released four additional times during the next thirteen days only to fly approximately 180 m (200 yds) each time, then land on the ground under the live oaks. When located on the ground it was recaptured and returned to the tower. Eaglets have been known to land on the ground on their first flights and remain there while being fed by the parents until strong enough to fly (Harper 1974). It was felt, however, that the eaglet would have a better chance of survival if returned to the tower where it could be protected from predators. Of particular concern were the large numbers of alligators (*Alligator mississippiensis*) that occur in and around the pond. It is doubtful whether an eaglet could survive long if it went down either in open water or the cattail marsh surrounding the pond.

On the sixth attempt at release, E02 crash landed in a dead snag on the edge of the pond. When found it was wedged in a crotch of the tree about ten feet high. After the bird was observed for about thirty minutes and determined to be unhurt, an attempt was made to flush it from the tree. The bird then flew to a small island in the middle of the pond. A visit was made to the island by boat to check on the bird's condition. E02 then flew from the island across the pond to a large branch in the top of a mature pine tree where it roosted for the night. The next morning E02 was observed on several occasions flying across the duck pond. Although the bird was not sighted after that, it was monitored occasionally by telemetry at several locations on the north end of Sapelo. No attempt was made by E02 to return to the tower for fresh food placed on the top. Contact was lost with E02 two days after the release.

Neither eagle has been observed or tracked since 17 August 1979. Although Game and Fish has investigated numerous reports of immature Bald Eagles in the Brunswick area, none have been confirmed as being one of the hacked eaglets, nor has anyone reported seeing the green and white wing tag.

The real success of any reintroduction program cannot be determined after one year. Results of this initial hacking attempt were encouraging enough that DNR will attempt to hack several more eaglets this summer at the same location. Reintroduction attempts are by no means the total solution to the recovery of Georgia's Bald Eagle population. The Department feels however that reintroduction through hacking can assist or accelerate a natural population recovery, assuming a general improvement in limiting factors.

The key to a Bald Eagle population recovery of any kind, even assuming a successful reintroduction program through hacking, is reducing pesticide levels in the environment to a level that will allow successful natural reproduction. Assuming that Georgia populations experience a natural recovery such as has occurred in other areas since the 1973 ban

on DDT (Newton 1979), noticeable population increases might realistically begin to occur in 5-10 years.

#### ACKNOWLEDGEMENTS

Numerous individuals have contributed time and/or data throughout this project. The many public and private citizens and organizations which have cooperated in our surveys can only be thanked collectively because of the large number involved. The U.S. Fish and Wildlife Service provided Bald Eagle observations made by their personnel during annual, aerial waterfowl surveys from 1969-1979, and necropsy records from Georgia birds. Special appreciation is expressed to Peter Nye, New York State Department of Environmental Conservation, for his assistance in project planning. DNR pilots Barry Vaughn, John Hill, and Bill Bulger were invaluable to both survey and reintroduction efforts. Reviews of the manuscript were made by Joe Kurz, John Rappole, Kent Kammermeyer, Tip Hon, Laura Odom, and William Guthrie. Power poles for construction of the hacking tower were provided by the Georgia Power Company and climbing spikes by Southern Bell Company. The University of Georgia Marine Institute provided scaffolding for tower construction and assistance with barging materials to and from the island. Special thanks are due Charles Ford who cared for the eaglets on Sapelo Island. The Department of Transportation transported the eaglets from Atlanta to Sapelo. Fish collections were made with the assistance of DNR's Fisheries Section. The spirit of cooperation exhibited by the Sapelo Island Game Management Staff was especially appreciated. I wish especially to acknowledge the late J. Fred Denton who prodded me for some time to initiate the status portion of this paper. This project was partially funded with grant-in-aid funds under Section 6 of the Endangered Species Act of 1973 (PL93-205).

#### LITERATURE CITED

- Burleigh, T. D. 1958. Georgia birds. Univ. of Okla. Press, Norman.
- Cade, T. J. 1976. The peregrine fund newsletter. No. 4. Cornell Lab. of Ornithol., Ithaca, N.Y.
- Coon, N.C., L. N. Locke, E. Cromartie, and W. L. Reichel. 1970. Causes of Bald Eagle mortality, 1960-65. J. Wildl. Diseases 6:72-76.
- Clement, C. D. 1971. The Georgia coast. Univ. of Ga. 1971.
- Denton, J. F. 1977. Annotated checklist of Georgia birds. Georgia Ornithol. Soc. Occas. Publ. No. 6.
- Edwards, M. G. Raptor management. In Proceedings of the Workshop Management of Southern Forests for Non-game Birds. 1978.
- Gardner, W. S., D. R. Kendall, R. R. Odom, H. L. Windom, and J. A. Stephens. 1978. The distribution of methyl mercury in a contaminated salt marsh ecosystem. Environ. Pollut. (15)243-251.
- Green, E. R., W. E. Griffin, E. P. Odum, H. L. Stoddard, and I. R. Tompkins. 1945. A preliminary checklist and bibliography of Georgia ornithology. Univ. of Ga. Press, Athens.
- Harper, J. F. 1974. Activities of fledgling Bald Eagles in north central Minnesota. M.S. Thesis. Western Ill. Univ.



- Hickey, J. J. and D. W. Anderson. 1968. Chlorinated hydrocarbons and eggshell changes in raptorial and fish-eating birds. *Science* 162:271-273.
- Hillestad, H. O., J. R. Bozeman, A. S. Johnson, C. W. Berisford, and J. I. Richardson. 1975. The ecology of the Cumberland Island National Seashore. Ga. Marine Sci. Center. Tech. Rep. 75-7, Univ. of Ga., Skidaway Island.
- Hoxie, W. J. 1910. Notes on the Bald Eagle in Georgia. *Auk* 27(4):454.
- Johnson, A. J., H. O. Hillestad, S. F. Shanholtzer, and G. T. Shanholtzer. 1974. An ecological survey of the coastal region of Georgia. Natl. Park Ser. Sci. Mon. Series No. 3, Washington, D.C.
- Maestrelli, J. R. and S. N. Weimeyer. 1975. Breeding Bald Eagles in captivity. *Wilson Bull.* 87:45-53.
- Milburn, E. H. 1979. An evaluation of the hacking technique for establishing Bald Eagles (*Haliaeetus leucocephalus*). M.S. Thesis. Cornell Univ.
- Newton, I. 1979. Population ecology of raptors. Buteo Books, Vermillion, S.D.
- Oberholser, H. C. 1974. The bird life of Texas. Univ. of Texas Press, Austin.
- Odom, R. R. 1974. Mercury contamination in Georgia rails. *Proc. Ann. Conf. Southeastern Assoc. Game and Fish Comm.* 28:649-658.
- Prouty, R. M., W. K. Reichel, L. N. Locke, A. A. Belisle, E. Cromartie, T. E. Kaiser, T. G. Lamont, B. M. Mulhern, and D. M. Swinford. 1977. Residues of organochlorine pesticides and polychlorinated biphenyls and autopsy data for Bald Eagles, 1973-74. *Pest. Mon. J.* 11:134-137.
- Steenhof, Karen. 1978. Management of wintering Bald Eagles. USDI, Fish & Wildl. Ser. Washington, D.C. FWS/OBS-78-79, Sept. 1978.
- Teal, J. M. 1959. Birds of Sapelo Island. *Oriole* 24(1):1-14, 17-20.
- Temple, S. A. 1977. Reintroducing birds of prey to the wild. 355-363. In S.A. Temple, ed. *Endangered Birds*, Univ. of Wisc. Press, Madison.
- Tompkins, I. R. 1958. The bird life of the Savannah River delta. Georgia Ornithol. Soc., Occas. Publ. No. 4.

*Department of Natural Resources, Game and Fish Division, Endangered Wildlife Program, Route 2, Social Circle, Georgia 30279.*

Editor's Note: Sightings of tagged eagles, or any eagle, should be reported immediately to DNR at the above address.

## OCCURRENCE OF CINNAMON TEAL IN GEORGIA

Anne and Vernon Waters

The Cinnamon Teal (*Anas cyanoptera*) is a western duck rarely seen in the East and according to the official checklist of Georgia birds (Denton et al. 1977, Georgia Ornithological Society, Occasional Publication No. 6) has never been recorded in Georgia. However, according to Bellrose (1976, p. 288, *Ducks, Geese, and Swans of North America*, Stackpole Books, Harrisburg, Pa.): "... migration corridors for the cinnamon teal are not well delineated. Teal from breeding grounds in the Northwest appear to funnel through the Central Valley of California to Mexico. Occasionally a cinnamon teal appears in the Midwest or farther east, usually in the company of blue-winged teal, and most often in the spring. No doubt these strays become attached to flocks of blue-winged teal on their mutual winter grounds and become, at least temporarily, a part of the blue-wings' traditional migration pattern."

On 22 January 1977, it became apparent to us that such an occurrence had taken place in Georgia. In a quote taken from our field notes for that date, we described this sighting. "Scanning the lake (in Merry Brothers' Ponds, Augusta) we found a small group of 7 female teal, then saw a bright cinnamon duck swim in towards them. They were near a small island approximately 75-100 yards from shore. Soon a male Blue-winged Teal (*Anas discors*) joined the group. They were in excellent sun. The entire breast and head of the Cinnamon Teal was brilliant cinnamon. He was approximately the size of the male Blue-wing. As we watched, he preened, then flapped his wings revealing pale blue wing-patches on the forward edge, as found in the Blue-winged Teal. When he turned a certain way in the sun, we could see the light cream-colored streaking on the back of the wings as they were folded over his back, and also the very dark tail underneath. The bill looked dark. We studied him for approximately 30 minutes or so with 7X binoculars and also with 20X sport binoculars." When we walked down toward the shore to try to get a photograph, the entire group swam away into the brush.

We reported this sighting to the members of the Augusta Audubon Society and discussed the occurrence of Cinnamon Teal in Georgia with Dr. J. Fred Denton. Denton advised us that it was probably a Blue-winged x Cinnamon Teal hybrid and that further verification would be needed.

During the next two months, glimpses of a cinnamon colored duck were seen by a number of the Audubon members, but he remained illusive.

On 12 March 1977, we thought we had found the Cinnamon Teal again in a group of 9 teal, but this duck appeared to be a hybrid. It definitely was not the same male Cinnamon Teal observed on 22 January. He climbed out on a sandbar and stood beside a female teal. Again quoting from our field notes for that date: "He was slightly larger



than the Blue-winged Teal (we assumed the female teal to be a Blue-winged) and the slope of the forehead was slightly different. His head was a cinnamon color with a dark mark where the crescent on the Blue-wing's face would be. The body was a lighter cinnamon than the one we saw in January, with curly-cue designs in the feathers. The black tail came to a definite point. When the group flew, he had large, pale-blue wing markings like a Blue-winged in flight."

At this time, this hybrid teal was seen by several other members of the Augusta Audubon Society and closely observed through a 20X scope. This tended to support Dr. Denton's hypothesis that our Cinnamon Teal was a hybrid. Yet we were sure this was not the same duck that we had observed on 22 January. The hybrid remained in the area for several weeks and was further observed by other Augusta Audubon members, including Clarence Belger and Gerald Knighton. The Cinnamon Teal that we saw on 22 January 1977, unfortunately, was not observed again that winter.

The following winter on 12 December 1977, we again observed the male Cinnamon Teal. This was our only positive sighting this winter. Glimpses were made by us and others of cinnamon type ducks at various times during the winter, but positive identification was impossible.

The next positive identification of one of the teals occurred on 11 November 1978, but unfortunately it proved to be the hybrid. He was seen again on 1 January 1979. It was not until 10 March 1979, that we again observed the male Cinnamon Teal. This time we received one of the verifications that we needed to prove that it was, in fact, a male Cinnamon Teal. This sighting occurred on an Augusta Audubon Society field trip. The Cinnamon Teal was seen and identified as such, by Clarence Belger, Jeannine Angerman, David Ferry, and by us. David Ferry, who is an experienced birder from California, had prior experience with Cinnamon Teals. He agreed with our identification that it was, in fact, a Cinnamon Teal and not a hybrid.

During the 1979-80 winter season, the Cinnamon Teal was seen on five different occasions by us and other members of Augusta Audubon. The most important sighting occurred on 23 November 1979, when we finally were able to take a photograph. Although not a close-up, the slide does show the duck in bright sunlight, making a clear distinction from the Blue-winged Teals possible. A copy of the slide has been filed with the Museum of Natural History at the University of Georgia in Athens.

During the 4 years that we have watched the Cinnamon Teals, we wondered at times whether we actually had a hybrid teal or simply a male in eclipse plumage. The possibility of eclipse plumage rather than hybridization was ruled out, however, because the hybrid was observed in January and March. According to Bellrose, (*op. cit.*, p. 286) "drakes retain their eclipse plumage throughout the fall." Under no conditions could March be considered fall.

It is our conclusion, from the evidence accumulated over the last 4 years, that Cinnamon Teals do occur in Georgia. Since the Cinnamon

Teal, to our knowledge, had not been recorded prior to 1977, and the one in Augusta appears to be established in its migration pattern, any offspring should tend to follow the pattern of the parents. We would appreciate receiving details of any sightings of cinnamon colored ducks.

*1621 Apple Valley Drive, Augusta, Georgia 30906.*



**EARED GREBES AT PENDERGRASS: A NEW GEORGIA RECORD**

John M. Paget

On 25 September 1979 at 1215 hours, I was birding at Wayne Poultry, Pendergrass, Jackson County, Georgia when I discovered an Eared Grebe (*Podiceps nigricollis*) on one of the ponds. The bird was in winter plumage. The ear patch was very indistinct but the small head, thin, slightly upturned bill, dark neck contrasting with the light throat, and its small size left no doubt as to its identity. The bird could be approached to within 50 feet and seemed almost close enough to touch through a 40X scope.

On 26 September the bird was observed by Caroline Lane and Terrill Soules. I returned on 28 September and there were two birds present. On the 29th there were six Eared Grebes present and several birders were present to observe and photograph them. On the 30th, four were observed by Joe Greenberg and photographed by Dan and Ann Forster (Fig. 1). On 1 October two remained, and on 2, 3, and 4 October one was still present. I did not check the ponds on 5, 6, and 7 October, but returned the 8th to find the birds had gone.

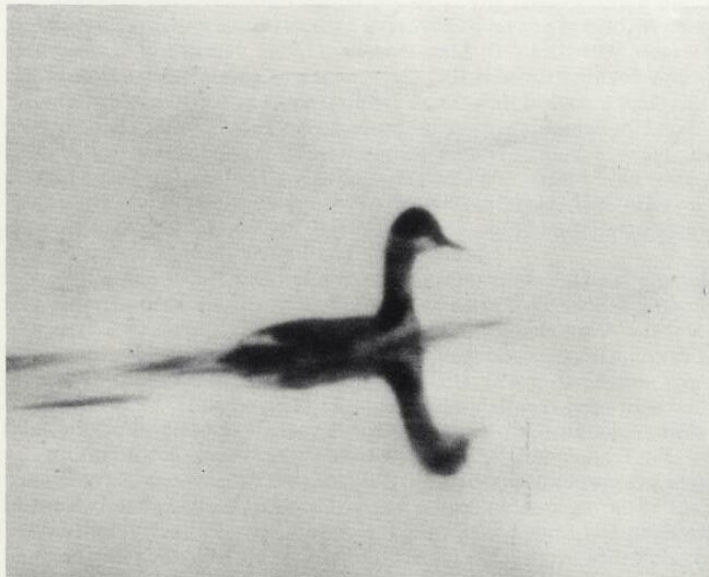


Fig. 1. Eared Grebe at Pendergrass, Jackson County, Georgia. Photographed on 30 September 1979 by Dan and Ann Forster.

Others who observed the grebes during the period discussed above included, Terry Moore, Jack Carusos, Bob Manns, Vince Jackson, Trina Jackson, Eileen Hutcheson, Ann Wyand, Bob Wyand, Judy Swiderski, Jerry Bruner, and Mary Ann Vernocy.

A sight record for Georgia of an Eared Grebe was reported from Eufaula National Wildlife Refuge (Ortego 1979, *Oriole* 44:47-49) on 22 March 1979. The Pendergrass birds however, seem to be the first substantiated record. A copy of the photograph has been filed with the Museum of Natural History at the University of Georgia in Athens.

1503 Vine Street, Gainesville, Georgia 30501.



## GENERAL NOTES

CLAY-COLORED SPARROW BANDED ON JEKYLL ISLAND — On 14 October 1979 at approximately 1245, a rather interesting small sparrow was found by Don Cohrs and Peggy Fletcher in one of the mist nets used by our banding party on Jekyll Island. After consulting with all available field guides, we identified the bird as a Clay-colored Sparrow (*Spizella pallida*). The bird was banded with U.S. Fish and Wildlife band No. 121-56359, measured, photographed and then released.

The field marks we observed were the small size, the distinct brown rump as compared to the gray rump of a Chipping Sparrow, and a noticeable median stripe through the streaked crown. Other field marks noted were a white throat with a dark moustache mark running from the bill down through the edge of the white throat, and the gray collar extending completely around the head through the nape. The bill was dusky above and at the tip but light otherwise. The bird's measurements were: wingchord 57 mm, tail 57 mm, and culmen 6 mm. Since the breast was unstreaked, the bird could not be classified as to age and sex according to *A Bird-Bander's Guide to Determination of Age and Sex of Selected Species* (Merrill Wood 1969, Penn. State University).

Because of the rarity of the species and the hypothetical status of the bird in Georgia, photographs have been sent to the Georgia Ornithological Society Checklist Committee so that the species can be included on the official state list. Five previous sight records of the species in Georgia are mentioned in the *Annotated Checklist of Georgia Birds* (1977, Georgia Ornithological Society, Occasional Publication No. 6).

Over the past twenty years the Clay-colored Sparrow has been established as a rare but regular fall migrant along the East coast with many records from Massachusetts to Florida. Therefore, it was not surprising that an individual of this species should show up on Jekyll Island at this time. A cold front which came through the area on the night of 13-14 October that brought with it a heavy influx of migrants, mostly Palm Warblers (*Dendroica palmarum*) and Yellow-rumped Warblers (*Dendroica coronata*), undoubtedly had some bearing on its being there.

The banding site was located on the extreme southwest end of Jekyll Island near St. Andrews Drive. The nets were situated along the outer fringes of vegetation just back from the sand dunes. Predominant vegetation consisted of Southern Bayberry (*Myrica cerifera*), Red Bay (*Persea borbonia*), Buckthorn (*Bumelia tenax*), Southern Red Cedar (*Juniperus silicicola*), Beautybush (*Callicarpa americana*), along with Hercules-Club (*Zanthoxylum clava-herculis*), Prickly Pear Cactus (*Opuntia drummondii*) and Catbrier (*Smilax bona-nox*).

The banding party consisted of Don and Doris Cohrs, Peggy Fletcher, and the author. Special thanks go to Jeannine Angerman who provided us with a list of the predominant plant species at the banding site.

Terry S. Moore, 2699 Twiggs Circle, Marietta, Georgia 30067.

WINTER RECORD FOR TENNESSEE WARBLER IN COBB COUNTY — On 2 December 1979 a Tennessee Warbler (*Vermivora peregrina*) was observed by Peggy Fletcher and Terry Moore in southeast Cobb County near Smyrna. This is apparently the first winter record of this species in Georgia. The latest previous date in the *Annotated Checklist of Georgia Birds* (1977, Georgia Ornithological Society, Occasional Publication No. 6) is 9 November 1969 with no locality mentioned. The usual winter range of the species is southern Mexico to Columbia and Venezuela.

The bird was observed in a group of willows bordering a small stream in the backyard of the author. It was actively moving through what foliage was left on the willows, evidently in search of food. The general greenish color, light eyeline, warbler-shaped bill, and white under tail coverts were all observed over a five minute period. It paid particular attention to, and seemed to be feeding at, several recently drilled holes in the willows made by a Yellow-bellied Sapsucker (*Sphyrapicus varius*). Whether the bird was feeding on the sap directly, or was eating insects trapped in the sap, could not be determined.

The warm weather in early December was the probable cause of the bird's staying so far north this late in the year. It was also observed on 9 and 16 December. Everytime the bird was seen, the day was warm with the sun shining brightly on the willows it frequented.

Terry S. Moore, 2699 Twiggs Circle, Marietta, Georgia 30067.

SURF SCOTERS AND CANVASBACK IN SCREVEN COUNTY — On 4 November 1979 six Surf Scoters (*Aythya valisineria*) and one male Canvasback (*Melanitta perspicillata*) were seen with 14 Ring-necked Ducks (*Aythya collaris*) on a newly filled 95-acre lake in Screven County, near the Highway 301 bridge over the Savannah River.

The male Canvasback was identified by the unmistakable long sloping profile of its reddish head and its white sides and back. The Surf Scoters appeared as large, dark-bodied ducks with two light patches on each side of their thick-billed heads and no white in their wings. All six appeared to be females. Among the 24 observers were Grace Boddiford, Peggy Waters, and Bill Lovejoy.

According to Sprunt and Chamberlain (1970, *South Carolina Bird Life*), the Surf Scoter is the rarest scoter along coastal South Carolina during the winter. In the *Annotated Checklist of Georgia Birds* (1977, Georgia Ornithological Society, Occasional Publication No. 6), it is listed as an uncommon winter resident along coastal Georgia, 10 October (1937) to 6 May (1921).

The Canvasback is listed as an uncommon and irregular transient and winter resident in interior Georgia, 9 November (1935) to 16 May (1950); but is a regular winter resident locally along the coast.

Whit Mead, Route 1, Box 166, Sylvania, Georgia 30467.



**BELTED KINGFISHER NESTING IN A SAWDUST PILE** — A variety of nesting holes of the Belted Kingfisher (*Megasceryle alcyon*) in various natural situations have been reported by A. C. Bent (1940, *Life Histories of North American Goatsuckers, Hummingbirds, and their Allies*, Bull. 176, U.S. National Museum, p. 244). However, no mention of the species utilizing sawdust piles could be found.

A sawdust pile 2.25 km southwest of Osierfield, Irwin County is approximately 9 m high. The sawdust, left in 1952 by a temporary sawmill operation, is well compacted, damp, and consists mostly of sawdust from Slash Pine (*Pinus elliottii*).

On 9 May 1979, as Eugene Colson was loading a truck of sawdust from the pile, he noted a Gray Rat Snake (*Elaphe obsoleta spiloides*) in a hole in the pile. The hole was approximately 125 mm in diameter and was about 3 m above ground-level. He reported the fact to me a few minutes later, and Robert Humphries and I dug into the hole approximately 1.75 m in order to catch the snake. The cavity tunnel extended on a level plane to this depth into the pile. The snake was taken from the hole and measured to be 175 cm. As I held the snake, it regurgitated a single young Belted Kingfisher. All the while one of the adult kingfishers was "rattling" in a nearby Slash Pine.

The live snake was relocated about a kilometer away from the pile, and on subsequent days the adult kingfishers were seen going to and from the pile to a pond about 600 m away. Apparently the snake did not get all of the brood.

Milton N. Hopkins, Jr., Route 5, Fitzgerald, Georgia 31750.

#### NEWS AND COMMENTS

William W. Griffin, Atlanta attorney, donated his collection of 841 bird skins to the Museum of Natural History at the University of Georgia on 27 December 1977. The specimens were taken, and the skins prepared, by Mr. Griffin, a Charter and Life Member of the Georgia Ornithological Society, during the period 1939-1962. The specimens are all from various counties in Georgia, except for one each from Mississippi and North Carolina and five taken in Somoa during the collector's military service there. Mr. Griffin has published reports of many of the specimens in previous issues of *The Oriole*. The specimens constitute a valuable addition to the avian collection at the University of Georgia.

H. Branch Howe, Jr., Department of Microbiology, University of Georgia, Athens, Georgia 30602.



### *A Statement of Policy*

Application for membership may be made to the Treasurer. *THE ORIOLE* is sent without charge to all classes of members not in arrears for dues. Send changes of address, claims for undelivered or defective copies and requests for information relative to advertising, subscriptions and back numbers to the business manager.

All articles and notes submitted for publication and all books and publications intended for review should be sent to the editor.

Original papers in the field of Ornithology are published in *THE ORIOLE*. Papers are judged on their contribution of original data, ideas, or interpretations and on their conciseness, scientific accuracy, and clarity.

**COPY** — Type manuscripts *double spaced* throughout. Underscore scientific names only. Number pages in the upper right hand corner. Arrange contents in sequence: title page, text, reference, tables, figure legends, and figures. Type your complete address and date of submitting manuscript.

**STYLE** — The guide for preparation of copy is the **STYLE MANUAL FOR BIOLOGICAL JOURNALS** available from American Institute of Biological Sciences, 1401 Wilson Blvd., Arlington, Va. 22209.

**TITLE** — The title should be concise, descriptive, and not more than 10 words in length. Avoid use of scientific names in titles if possible.

**FOOTNOTES** — Avoid footnotes by incorporating such material in the text.

**NOMENCLATURE** — Vernacular names should be capitalized in text. They are to be accompanied by appropriate scientific names the first time each species is mentioned. Show reference for long lists of scientific names (i.e., A.O.U. Checklist 5th ed., 1957).

**REFERENCES** — When there are fewer than 3 references insert them in parentheses where needed in the text by author, journal, volume, pagination, and year of publication. Three or more references are grouped alphabetically by authors' last names under "literature cited."

**TABLES** — Prepare tables in keeping with size of *THE ORIOLE*. A good table should be understandable without reference to the text.

**ILLUSTRATIONS** — Illustrations should be suitable for photographic reproduction without retouching. Colored plates will be charged to the author.

**REPRINTS** — Request for reprints must be sent with original manuscript and are to be paid for by the author.

The *author* is responsible for putting his manuscript in final form for production. Authors should consult colleagues and specialists for review of papers before submission, and check all literature available to them that might have a bearing on their papers.