

stated that birds of many species build better nests as they grow older. Hormonal states (Hind in Welty 1975) may control several different behavior activities such as material gathering. This may stimulate carrying, and carrying material may lead to placing and weaving. In the case of the observed sparrows, the sequence of behavior events started with material gathering, placing and then weaving. These nests soon lost balance, leaned over and slowly fell to the ground. The behavioral cue to stop adding material to the already oversized nest may not of have been learned at this time.

This behavior may be common for unexperienced bird nesters who have not learned from their previous nesting seasons mistakes. Nesting house sparrows were observed in less precarious structures such as barn eaves and ventilation openings of a poultry house. The first eggs (5) were found in one nest on 9 April 1982.

#### LITERATURE CITED

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Daniel Drennen  
2408 Regent Lane  
Birmingham, AL 35226

#### CATTLE EGRET MANAGMENT IN ALABAMA

Julian L. Dusi

#### INTRODUCTION

Since the Cattle Egret, Bubulcus ibis, immigrated and dispersed in Alabama, it has mainly been accepted as a desirable addition to the avifauna. Now that it has

become the most abundant egret in North America, there are complaints regarding its nesting in undesirable areas.

## RESULTS AND DISCUSSION

The first problem results from the egrets nesting too close to houses. Dusi (1979) reported the history of the heron and Cattle Egret colony at Tuskegee and the 13 July 1979 shooting of over 1,000 Cattle Egrets in the late summer attempt to cause the colony to desert and leave the area and how the remaining 10,000 egrets did not leave. In that report, Dusi also recommended that out-of-place colonies could be caused to leave before young were present in the nests, by harassing the birds at roosting time, by removing nests, tying colored plastic streamers in the trees, and using other noise scare devices. After the young had hatched, it was noted, it was practically impossible to cause the birds to desert and leave their nests with young.

The summer of 1981, Tuskegee again was the site of an unwanted Cattle Egret colony that was being established near houses. This time the city officials took action immediately. Police fired shotguns to disturb the birds, for several afternoons before dark. Unfortunately, the noise was not continued after dark. As a result, the birds waited until the noise was stopped and then came back to the area to roost.

The Tuskegee officials then contacted Dusi, who suggested that Bobby Trammel, the Fish and Wildlife Service control agent, be brought in for consultation and on 4 June, they met with the city officials at the site and then made recommendations: 1) that the birds be harassed with the shotgun shells called "shellcrackers," for several nights until after dark; that the nests probably would have to be pulled down; and that some of the trees possibly be removed to thin out the area and make it less attractive. Apparently the "shellcracker"

harassment caused the birds to leave without necessitating other measures. By quick, early action the birds were removed with little mortality.

On 24 July 1981, a call from the Alabama State Department of Health showed a similar problem with the colony at Millbrook, just north of Montgomery. The colony there had been a minor nuisance to residents since 1976 but now it was judged acute. The Health Department was concerned with the possibility of histoplasmosis affecting the students at the adjacent school.

The colony was in a wooded area on the east side of the city, bounded on the east by a gravel pit and on the west by several houses and a school. The colony had been there for a year, then it moved several hundred yards away for two years and finally back to the original site in 1979. After its use in 1980, many of the trees in the center of the wooded area were killed. The birds nested in peripheral trees in 1981 and this is what brought them close to the houses and the school.

Since it was late in the season and many young were nearly ready to leave the nests, nothing could be done that season except to clean up the dead birds, which are always present on the ground, and to spread hydrated lime on the ground to control some of the odor and the flies. Killing 15,000 egrets was not warranted, since no actual health hazard was present. It was recommended that the trees near the houses and the school be cut down so that the problem would not occur again the following year. Recommendations were not followed and the problem was again present in late 1982. This time the trees were bulldozed down and the area near the school cleared.

The second problem is concerned with the destruction of trees in the nesting colonies. The birds nest very closely together so that 12,000 may nest in less than a hectare. Their droppings are so concentrated that they greatly increase the fertility and pH, which kill the

trees. Willows, Salix nigra, supporting a nesting colony in a slough at the Eufaula National Wildlife Refuge were killed in one nesting season but sprouted back from the roots the next year. Pines, Pinus sp., especially those in upland plantations, are also usually killed in one season. The colony reported near the Holiday Inn at Tuskegee destroyed about 1.5 ha of pine trees in a plantation (Dusi, 1977). The loss was accepted by the Tuskegee Institute, the owner, but this probably would not be acceptable to most land owners.

#### CONCLUSIONS

To prevent egrets from nesting near homes, or in valuable trees, the birds should be harassed and cause to leave by using noise, colored streamers fastened in the trees, by pulling down the existing nests, and if necessary, cutting down the trees. This should be done shortly after the birds arrive and before any young are present in the nests. After the young hatch, it is practically impossible to force the birds to leave without killing all of them.

These management principles should be applied to prevent egrets from becoming undesirable problems.

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Julian L. Dusi  
Department of Zoology-Entomology  
Auburn University, AL 36849