University of Nebraska - Lincoln
DigitalCommons@University of Nebraska - Lincoln

Second Eastern Wildlife Damage Control Conference, 1985

Eastern Wildlife Damage Control Conferences

9-22-1985

DISPERSAL OF A HERON-EGRET ROOKERY

Douglas I. Hall
U.S. Fish and Wildlife Service

Follow this and additional works at: http://digitalcommons.unl.edu/ewdcc2

Part of the Environmental Health and Protection Commons

Hall, Douglas I., "DISPERSAL OF A HERON-EGRET ROOKERY" (1985). *Second Eastern Wildlife Damage Control Conference, 1985.* Paper 21.
http://digitalcommons.unl.edu/ewdcc2/21

This Article is brought to you for free and open access by the Eastern Wildlife Damage Control Conferences at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Second Eastern Wildlife Damage Control Conference, 1985 by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

DISPERSAL OF A HERON-EGRET ROOKERY

by Douglas I. Hall*

ABSTRACT

A rookery composed of an estimated 10,000 herons and egrets (family: Ardeidae) located in Van Buren, Crawford County, Arkansas was successfully dispersed in the Spring of 1983. A diversified scaring program was planned and initiated prior to the onset of courtship display and nest building. The roost relocation was subsequently followed by habitat alteration procedures to make the 5-acre stand of primarily Eastern redcedar (Juniperus virginiana) unattractive as a future roosting site. Although no nesting occurred at the site in 1983, the lack of an early scaring program in the Spring of 1984 resulted in the uncleared portion of the area being used as a roost site. Guidelines were established to deal with future rookery problems.

INTRODUCTION

Heron-egret rookeries, not unlike large concentrations of roosting blackbirds (Icteridae), can create social, economic and health problems whenever a rookery is established in a location considered competitive to man's interest. Increasing numbers of problems with heron-egret rookeries are occurring as the birds seek suitable nesting habitats in areas inhabited by man. Such was the case starting in the Spring of 1981 in Van Buren, Arkansas. A nesting grounds was chosen on an approximate 5-acre tract of residential land located in the northeast section of the town of Van Buren, Crawford County, Arkansas.

The rookery was composed of an estimated 10,000 of the following species: Cattle Egret (Bubulcus ibis), Great Egret (Casmerodius albus), Snowy Egret (Leucophoyx thula), Great Blue Heron (Ardea herodias), and Little Blue Heron (Florida caerulea). The predominant species was the Cattle Egret. Nesting habitat was primarily Eastern redcedar with a few scattered deciduous trees adjacent to the small drain transecting the site.

The birds had successfully reared young in this same location for two successive years despite repeated, costly, ineffective dispersal attempts by residents with the assistance of representatives of state, county and local agencies. With the approach of the nesting season in 1983, city officials contacted the U.S. Fish and Wildlife Service, Wildlife Assistance Office, Stuttgart, Arkansas for help in preventing a recurrence of the problem.

I want to extend my appreciation for the outstanding cooperation received by the city and county officials and private citizens of the town of Van Buren who participated in the relocation efforts. Thanks also to Mr. Thurman Booth, State Supervisor, U.S. Fish and Wildlife Service, Little Rock, Arkansas for reviewing this paper.

METHODS

In March 1983 field observations of the roost site revealed roosting activity and courtship displays indicating that the birds were again planning to use the same area as a rookery. Meetings were held with the landowner, Mayor, County Agent, County Sanitarians, and the media to discuss management alternatives. The plan for resolving the problem was three-fold: (1) immediately harass and disperse any birds displaying or attempting to begin nest construction utilizing a diversified scaring program; (2) mark the stand for habitat alteration procedures to begin as soon as possible; and (3) prevent the formation of another rookery in an unfavorable location.

RESULTS

Through an excellent program of inter-agency cooperation, landowner agreement and neighborhood involvement, the birds attempting to roost at the site in April 1983 were dispersed with the following equipment: (1) pyrotechnics (shellcrackers and racket bombs); (2) 4 propane cannons; and (3) one pole-mounted 200 watt broadcast alarm

*Wildlife Biologist - U.S. Fish and Wildlife Service, Wildl. Asst. Office, P.O. Box 570, Stuttgart, AR 72160.

unit. Dispersal involved less than 500 rounds of pyrotechnics. Harassment was spaced out over a three-week period, primarily in the morning and evening hours supplemented with intervals of sound from the broadcast alarm unit and propane cannons during the middle of the day. The technique for dispersal was similar to that described by Mott (1980) for blackbirds and starlings (Sturnus vulgaris).

During this dispersal time, the stand was marked for habitat alteration and arrangements were made for the county-owned bulldozer to be used in the clearing operation. Nearly all cedars were removed from the 5-acre site and piled into the drainage ditch located on the area. Some sycamore (Platanus occidentalis), sweetgum (Liqiudambar styraciflua), post oak (Quercus stellata), and other hardwoods were left along the small drainage.

The herons and egrets made several attempts to establish new roosts in and around the city. However, through good public awareness of the operation and the prompt reports of any new build-up of birds in the area, we were able to prevent another rookery from forming in Van Buren in 1983. However, the colony apparently reestablished approximately 13 miles west in the town of Muldrow, Oklahoma and successfully reared young. In the Spring of 1984, the birds returned again to Muldrow where they were met with an agressive scaring campaign. (Peterson, B. personal communication, 28 April 1984, State Supervisor, U.S. Fish and Wildlife Service, Oklahoma City, OK). The problem in Muldrow was solved but presumably some of this same colony returned to the remaining deciduous trees in the Van Buren roost that were not cleared in the habitat modification procedures of 1983. These birds immediately began nesting, disallowing any harassment or further habitat alteration until the Spring of 1985.

DISCUSSION

Because of the sensitivity involved in the management of an aesthetically pleasing avian species such as herons or egrets, the guidelines in Arkansas, as with other states in the Southeast, has been to recommend habitat modification or a hazing program prior to nesting or after the birds have migrated in the Fall. The nesting-parental instinct is too strong to overcome with a scaring operation if undertaken when eggs or fledglings are present in a rookery. Such was the case in 1982 in Van Buren and hence the operation failed.

The nesting season of 1983 would have been the third consecutive year for the accumulation of bird droppings at the rookery site. Thus, the potential would have increased for the respiratory disease histoplasmosis to occur because of the establishment and proliferation of the fungus (Histoplasma capsulatum) in the feces-enriched soil (Weeks 1984). Other potential human health and safety dangers associated with any bird colony include the aggravation of other respiratory diseases and allergic reactions from the inhalation of dried feces dust and bird dander.

Urban rookeries are also objectionable because of the general noise, filth, and odor accompanied with the accummulation of so many birds, their droppings, dead young, broken eggs, and regurgitated food. The build-up of these by-products attract scavengers and rodents that can cause other problems. Over-nitrification of the soil at a colony normally leads to the vegetation dying. These problems contribute to the rapid decline in property values and in some cases may prohibit potential development of the property unless the area undergoes the costly soil decontamination process to kill fungal spores described by Weeks (1984). Because of the successful Van Buren relocation, the former rookery site is now targeted for residential development.

Economically, it is better to manage an urban rookery before it reaches the critical stages. Cost estimates for the 1983 relocation operation was $2,000.00 and 170 man-hours based upon estimates from city and county officials (Bell, G. May 1983, City Mayor, Van Buren, Arkansas). The cost is minimal compared to what could have resulted with the loss of human health or life, reduced property values, decon-

tamination expenses and/or litigation for an improper relocation effort.

To maximize cost effectiveness and improve the efficacy of any dispersal program, it is desirable to have good inter-agency coordination, public support and involvement. In Arkansas, it is common practice to communicate with our cooperators a minimum of twice a year to remind them of the services provided by the Wildlife Assistance Program. In this manner, it is hoped that early recognition of an attempted establishment of a colonial bird rookery in an unfavorable location will be possible and an effective management plan can be formulated.

In spite of the prior history of rookeries in Van Buren, another urban colony formed in April 1985 at a new location approximately one-half mile south of the former site. The birds began nesting and laying eggs before appropriate action could be taken. Any habitat modification or harassment decision would have resulted in indirect mortality to the juvenile birds and that would have been biologically and politically inappropriate. In 1985, the birds have fledged their young without any disturbance.

In an effort to prevent the heron-egret rookery from establishing at the same location in 1986, a series of guidelines were prepared for the city officials to follow. With little modification, these procedures listed below will make the task of any rookery relocation less time-consuming on public officials, provide more neighborhood involvement, minimize human health and safety hazards and result in a successful dispersal operation:

<u>Recommended Guidelines for Heron-Egret Rookery Relocations</u>

1. Obtain landowner permission

-- City, county and/or U.S. Fish and Wildlife Service personnel (Service) meet with the landowner to explain the problems involved with the roost remaining in the same location (i.e. health and safety aspects).

-- Request permission for habitat alteration to be performed by neighborhood volunteers (chain saw work parties, or larger equipment if necessary).

  -- Eliminate landowner liability problems in the event of an accident.

  -- Assure that the job will be done adequately and that the slash will be piled and burned.

-- Stress increased property values if habitat alteration is undertaken, the roost site is eliminated and the potential health hazard is removed.

2. Habitat alteration

-- Involve the media. You may have more success in reaching interested parties through a newsletter or newspaper article than trying to get citizens to attend a meeting in February or March when the problem has not yet occurred.

-- Obtain volunteers from the owners of surrounding property with emphasis on all citizens that have voiced complaints in the past.

-- Ask for a volunteer to head the neighborhood watch team. This individual should be an interested person that can coordinate the activities of the group through the officials in charge of the operation.

-- Establish work days for thinning, piling the cut trees and burning the debris.

-- Service personnel should assist in marking and thinning the stand.

3. Roost relocation

-- Emphasize the need to report evidence of the first birds to return to the area.

-- Begin the scaring operation when the first birds arrive. This may only entail one propane cannon initially.

-- If birds persist at the target area or any other area that is undesirable as a rookery site, set up one or more pole-mounted broadcast alarm units to play recorded distress calls at timed intervals. The use of electronic equipment will require responsible citizen coordination.

-- If necessary, implement a diversified dispersal operation. For this to be successful, it must be performed prior to nest building.

-- The scaring program should be a joint effort of interested citizens, the Mayor, the County Sanitarian, the County Extension Service, the City Police, the State Wildlife Agency, the Fish and Wildlife Service, and other appropriate agencies.

-- A necessary portion of the dispersal process is preventing the birds from relocating at another undesirable location.

-- Be sure to involve the media so the citizens will be aware of what is happening.

The successful dispersal of the Van Buren heron-egret rookery in 1983 was a product of excellent cooperator and community involvement. No one department or agency could have accomplished the operation as effectively. Because the colony relocated in subsequent years, it has strengthened the awareness of the expanding nature of this type of migratory bird problem and precipitated the formulation of rookery relocation guidelines for future use. Operations of this nature help to enhance the public awareness of the Fish and Wildlife Service.

LITERATURE CITED

MOTT, D.F. 1980. Dispersing blackbirds and starlings from objectionable roost sites. Proc. 9th Vert. Pest. Conf. 9:38-42.

WEEKS, R.J. 1984. Histoplasmosis. Sources of infection and methods of control. U.S. Dept. Health and Human Serv. Public Health Serv. CDC. Atlanta, Georgia.