

ALABAMA BIRDLIFE

HOG WALLOW PONDS HERON COLONY

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Introduction

The two Hog Wallow Ponds are located about two miles (3.33 km) south of Tuskegee, Macon Co., Alabama, just east of U.S. 29, at T 16 N, R 24 E, Sec. 9, on the Tuskegee Quadrangle. I first visited a Little Blue Heron (*Egretta caerulea*) colony on one of the ponds in 1952. At the time they were surrounded by pasture. Presently, they are surrounded by loblolly pine (*Pinus taeda*) plantations and with patches of tag alder (*Alnus serrulata*) at the inlet ends.

Procedure

The Little Blue Heron colony was present from 1952-1957. I flew over these ponds at least once each year after 1957, during the nesting season, to record new colonies if present. I was surprised on 21 September 1991, when a Cattle Egret (*Bubulcus ibis*) colony was seen on the upper pond. The colony was unique in that it was established in rows of dead loblolly pine trees that had been planted in the pond-site, which had been drained and then flooded after the trees had grown for about 10 years.

My first ground visit was on 13 June 1992. Nests were counted in a short segment of the colony, then multiplied by the number of times that segment was contained in the colony, resulting in an estimate of 3,000 Cattle Egret nests. Also seen were seven adult Little Blue Herons, two White Ibis

(*Eudocima albus*) and six Double-crested Cormorants (*Phalacrocorax auritus*). It was raining lightly and the Cattle Egrets were on their nests incubating.

On 17 July 1992, I took my advanced ornithology class to the site and we set up two measured plots and counted nests in them. We returned on 31 July and counted active nests again. We went to the Bradley Unit, Eufaula National Wildlife Refuge (Stewart Co., Georgia) on 24 July and counted nests on two plots in the heron colony there in order to make comparisons with the Hog Wallow colony.

On 23 June 1993, my count was about 100 Cattle Egret nests and 20 Little Blue Heron nests.

On 26 May 1994, there were only 40 nests present and they were in the alders at the head of the pond. On 8 August, 120 Cattle Egret nests were present and one Anhinga (*Anhinga anhinga*) nest.

On 1 May 1995 and 8 June 1996, no nests or Cattle Egrets were present.

Results

The plot areas used for nest counts were as uniform as possible for nest distribution and therefore differed in size. For the Hog Wallow Pond site, Plot 1 = 460 m² and Plot 2 = 1150m². The plots at the Bradley Unit were: Plot 1 - 50m x 10m = 500m² and Plot 2 - 22m x 10m = 220m². Table 1 shows the results of the individual counts, mean and standard deviation and the density of nests per individual, mean and standard deviation, for the counts on 17 and 31 July, for the Hog Wallow Ponds site. Table 2 shows the similar data

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for the Bradley Unit counts on 24 July and 7 August 1992.

Table 1

NEST DENSITY IN PLOTS AT HOG WALLOW PONDS 1992

Nest Counts 17 July 1992				
Counter	Plot 1	Nests/m ²	Plot	Nests/m ²
1	230	0.5	860	0.75
2	233	0.5	650	0.56
3	221	0.48	870	0.75
4	220	0.48	840	0.73
5	272	0.59	904	0.79
6	218	0.47	879	0.76
7	247	0.54	934	0.81
	x = 234.4	x = 0.51	x = 848.14	x = 0.74
	± 19.4	± 0.04	± 92.5	± 0.08
Nest Counts 31 July 1992				
Counter	Plot 1	Nests/m ²	Plot 2	Nests/m ²
1	68	0.3	295	0.34
2	70	0.3	250	0.29
3	57	0.25	246	0.28
4	67	0.29	228	0.26
5	52	0.23	216	0.24
6	78	0.34	277	0.32
7	55	0.24	265	0.31
	x = 63.9	x = 0.28	x = 253	x = 0.29
	± 9.4	± 0.04	± 28.4	± 0.03

Table 2

NEST DENSITY IN PLOTS AT THE BRADLEY UNIT COLONY SITE, EUFAULA NATIONAL WILDLIFE REFUGE, 24 JULY 1992

Counter	Plot 1	Nests/m ²	Counter	Plot 2	Nests/m ²
1	102	0.20	1	55	0.25
2	102	0.20	2	46	0.21
3	90	0.18	3	--	----
4	104	0.21	4	56	0.26
5	112	0.22	5	50	0.22
6	99	0.20	6	48	0.22
7	98	0.20	7	50	0.22
8	101	0.20	8	44	0.20
9	114	0.23	9	40	0.18
	x = 102.3	x = 0.20		x = 48.6	x = 0.20
	± 7.19	± 0.02		± 0.20	± 0.04

Discussion

In 1992, the nests of Plot 1 of the Hog Wallow Ponds colony were about twice as dense as the nests of Plot 1 of the Bradley Unit colony and nests of Plot 2 of the Hog Wallow Ponds colony were about three times as dense as the nests of Plot 2 of the Bradley Unit colony.

The estimated number of nests at the Hog Wallow Ponds colony was about 3,000 in 1992, 120 in 1993, 40 in 1994 and none in 1995. By 1995, practically all of the pine trees used for nesting in 1992 and 1993 had rotted to pond level and offered no nesting substrate. The 1994 nests were all in the

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alders at the head of the pond. The alders were not sufficient to attract nesting in 1995. Loss of the pine trees caused the colony's decline.

Most other colonies studied over a period of years have not shown this dramatic effect of loss of nesting substrate (Dindo 1991, Parsons 1995, Weise 1976). However, in Alabama, Dusi (1977, 1979 and 1983) has shown damage to pines in upland colonies. No other swamp colonies have had a pine nesting substrate. The unusual circumstances of planting pines and later flooding them made possible the predictable demise of the Hog Wallow Pond colony site through the rapid determination and death of its pine trees. **Julian L. Dusi**, Dept. of Zoology and Wildlife Science, Auburn University, Auburn University, AL 36849-5414.

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