

HOLLIS

8/14/80

Tom

I had at first thought of writing this up as a short note, but decided to hold off for a couple years until I'm more comfortable with the techniques and am convinced my survey of sites is complete. I included what I had for your information, as to how I got my numbers and the sparrow observations. I would appreciate your comments. If you know of any other places in the La Cy Area where I might ~~find~~ have overlooked nests, please let me know.

Thank you

Rick Hollis

Cliff Swallows in Iowa City

This large extended colony was studied from June to mid August 1980. More extensive observations were made from June 13 to July 10. These observations were used to estimate the number of adult birds. ^{perhaps} This clearly was too late to observe the earliest nesters. Petersen and Fawks (1977) give the breeding season as May 10-July 1, while Graber, Graber and Kirk (1972) state that in Illinois the time of egg laying is May 20-June 25. By confining my observations to the latter part of the breeding season I avoid any confusion due to double-brooded birds. Table 1 gives the number of nests at various sites within the Iowa City region. As I do not know how well nests survive from one breeding season to the next, my estimates of total number of adult (breeding) swallows is based on the total number of nests and an occupancy rate based on one intensively studied region (Table 2). This region was the West end of the North side of the Iowa Ave. Bridge.

Using ~~this data~~ ^{this data} my estimate for number of breeding adults was calculated as follows:

$$\text{Adult Birds} = 2 \times (\text{total nests}) \times (\text{occupancy rate}).$$

Using 0.71 and 0.88 as the rates, I arrive at 1469-1821 as the number of adult birds, approximately. This number is clearly conservative as it does not count birds which did not mate, failed to complete nesting, or finished before my study started.

Although there are literature reports of House Sparrows severely disturbing colonies of Cliff Swallows, this does not seem to be a major problem in Iowa City. Sparrows were only observed at 11.6% of the nest I studied carefully. This is probably a very inflated

figure because most of the sparrow activity was concentrated on those nests closest to shore. For reasons of convenience, nests closest to shore were somewhat over-represented in my sample area. Three types of possible sparrow-swallow interactions were observed. 1) Sparrows going into nests or looking into nests. 2) Sparrows actively pulling a swallow from a nest. (This was only observed one time.) In both type 1 and 2 interactions, swallows were observed back at the nests on subsequent days. 3) On two occasions I found Cliff Swallow eggs which appeared to have been ~~taken from nests~~ and the embryo eaten. I suspect House Sparrows as being the cause of this predation, as I observed no ~~other possi~~ sign of other predators.

T A B L E 2

Total nests	Cliff Swallow Activity 2 or more times	Activity only one time	House Sparrow Activity
Number 129	92	114	15
Rate	0.713	0.884	0.116

T A B L E 1

Site	Number of Nests
Iowa Ave. Bridge	500
Burlington St. Bridges	200
Rt. 6 Bridge	150
Park Rd. Bridge	40
Hancher Foot Bridge	140
Union Foot Bridge	0
Rock Island R. R. Bridge	0
Crandic R. R. Bridge	0
Abandoned R. R. Bridge (S of Rt 6)	0
Quarry by Art Bldg.	0
<u>Total</u>	<u>1030</u>