

## **Chaetura**

### **Newsletter of the North American Chimney Swift Nest Site Research Project SPRING 1997 Volume 2, Issue 1**

Thanks to everyone for being so supportive of our “fledgling” project. Comments, suggestions and anecdotes have poured in since our first issue of Chaetura. We appreciate every response! A number of individuals have expressed an interest in participating, but do not feel that they have the financial resources or the technical expertise to construct even a small Chimney Swift tower. Some of these same folks already have chimneys which are suitable for swifts, but they are capped. The solution? Open 'em up! In many cases existing chimneys are superior to anything we can build, and the price is certainly right. But remember: metal chimneys can be death traps for all wildlife and should always be capped.

Paul Kyle, Editor

#### **NEST SITE RESEARCH PROJECT SOARS AHEAD**

The North American Chimney Swift Nest Site Research Project is now 2 years old and growing fast. Our mailing list has doubled and so has the number of experimental Chimney Swift structures.

Several more medium-sized towers (15” x 15” x 12' tall) were erected in high-visibility areas last year. One at the Texas Parks and Wildlife Department headquarters in Austin, Texas, another adjacent to the interpretive center at Huntsville State Park north of Houston and a third at the facility of Alabama Wildlife Rescue Service located in Oak Mountain State Park near Birmingham, Alabama. All of these towers are complemented by visual displays which include a brief life history of Chimney Swifts, a migration map, color photos of baby swifts on a nest and a circling flock complete with captions. Public awareness is the key to the conservation of any species, and we hope these displays will peak the interest of those who see them. Additional visual displays are available, at cost, from the Driftwood Wildlife Association.

As our number of Research Associates has grown, a number of interesting designs have been discussed and explored. Several of our contributors have committed to using only recycled materials in the construction of Chimney Swift housing. Perhaps the most innovative was a tower built by Raymond Usener of Fredericksburg, Texas. Mr. Usener used the casings of old water heaters. The tanks were removed, the insulation covered with burlap and chicken wire and replaced in the metal jackets. Two of these were joined, legs were added, and the tower was stood upright. Other contributors visited salvage yards such as Habitat for Humanity to purchase their building materials.

Aesthetics were also addressed. Associates had ideas of towers shaped like light houses and totem poles. Another idea was to make masonry driveway entrance columns and fence columns hollow and open on top to accommodate swifts.

Other associates reported traditional and not so traditional nesting and roosting sites. Some of

those included broken water cisterns, abandoned buildings, tall columnar shopping center signs and even a masonry bar-b-que pit! We are always interested in any sites which are used by Chimney Swifts, so please let us know of your observations.

We do still have some funding available for the construction of prototype structures. To qualify, the design must be relatively small ( we already know the large ones work!) and something which has not already been tried. Just send us a rough sketch, a materials list, and the approximate cost of those materials.

As always, we have plenty of site report forms and educational brochures for distribution including a Home Owner's Guide and Environment Tips for Professional Chimney Cleaning Companies. These publications are designed to be copied and distributed. If you don't already have copies of these useful conservation tools, let us know and we'll be sure you get a copy of each.

### **TWIN TOWERS UPDATE: ...YOU CAN'T ALWAYS GET WHAT YOU WANT...**

The first Chimney Swifts of the 1996 season were sited on April 2nd at 6:30 PM. Twenty minutes later, 2 swifts entered the south tower. The "pair" roosted nightly with no additional swifts sighted until the evening of April 7th.

It was April 11th before any other evidence of roosting was noted. On that morning, swift droppings were discovered in the north tower and the Castle. By April 27th, nest construction was started in all 3 structures. The Twin Towers housed 2 birds south and 3 birds north while the Castle hosted a roost of 51 individuals.

The first egg of the season was laid in the south tower nest on May 6th. The next site to hold an egg was the north tower on May 19th. The swifts in the Twin Towers went on to lay 6 and 5 eggs, respectively.

On May 13th, the roosting flock in the Castle was captured. One individual declined to participate in the project, and left without being weighed, measured or banded. The remaining 52 participants included 12 returns -- previously banded birds which had migrated to and from their wintering grounds in South America -- and 40 unbanded swifts. The returns included 1 wild bird which was first banded at our station in the fall of 1991, and 3 which had been hand-reared in our rehabilitation facility.

That evening only 2 birds returned to the Castle: presumably the pair which had begun building the nest. The construction progressed normally. Interestingly, the nest was built entirely of dead juniper tips. It started out very soft and flexible, but copious amounts of saliva transformed it into a very rigid and durable platform. The Castle pair was incubating 4 eggs by June 26th.

The south tower family progressed without incident until June 8th, when Chimney Swift bugs and fire ants were observed in their tower. Four of the 6 eggs had hatched by this time, and we were concerned for the nestlings. The young were carefully removed from the nest and placed in

an incubator. The nest was covered, and the bottom section of the tower was dusted with 5% Sevin (Brand) dust. As soon as the dust settled, the babies were returned to their nest. Prior to dusting, one banded adult swift (1361-88856) was captured. It was one of the 1991 south tower babies. It was impossible to determine if it was one of the parents or a "helper". The bird was placed on the wall next to the nest after the babies were in place. The entire process took less than 10 minutes. Within a short time, the young were being brooded by an adult which spread its wings to completely block them from view.

One week later, the same problem occurred in the north tower. However, the 4 nestlings were very pale and weak. The brooding adult and young were removed and their tower dusted. Several of the Chimney Swift bugs were removed from the babies before they were returned to the nest. Within 2 days, there were no further signs of the parasites, and all 4 of the young swifts were very pink and active.

During a routine inspection of the Castle on the morning of July 4th, we found a fallen nest on the floor along with 3 broken eggs and 1 tiny but uninjured hatchling. The nest was reattached to the wall with strapping tape just as had been done the previous year. The surviving baby was returned to the nest, and the parents soon returned. Two days later, we were presented with a couple of 4 - 5 day old nestlings which had fallen with their nest in an Austin chimney. As is usually the case, it was impossible to replace the chimney nest. The age of the new acquisitions was very close to that of the Castle baby, and they were apparently healthy and uninjured. After some deliberation, we decided to place the 2 babies in the Castle nest with the singleton. That evening there were 8 swifts roosting in the Castle, and we could hear the ruckus as the babies were being fed.

The next morning we were sickened to find that the strapping tape had come loose. The Castle nest had fallen again. All 3 nestlings were alive, but just barely. We rushed them to an incubator, but 2 of the tiny babies died within a few hours. The survivor was nursed back to health, hand-reared and ultimately released.

In 1995, we thought the fall of the Castle nest was due to early exposure to direct sunlight and the large size of the feathered nestlings. However, after this year's fallen nest, we are concerned that the untreated cinder block may be partly responsible. We are experimenting with a water-based masonry sealer. It is advertised to stabilize the rather crusty surface of the cinder block without affecting the necessary texture. We are hopeful that this will provide a better surface for a permanent bond of the saliva used in Chimney Swift nest construction.

The last of the 4 south tower babies fledged around July 3rd. Three of the 4 north tower babies fledged about 1 week later. The 4th never fledged despite encouragement from an increasing roosting flock. The lagging swift continued to beg from the others which would huddle close around it. The troubled bird was normal in appearance, animated and continued to call throughout our observations. However, on August 1st, it was observed near the bottom of the tower in obvious distress. Once retrieved, it died within minutes. When examined, it was emaciated, but apparently uninjured. Whatever prevented the bird from fledging remains a sad mystery.

The late summer flocks built up slowly until the Castle housed 59 and the north tower housed 45 swifts by late September. On September 26, the Castle flock's numbers plummeted to 4 birds. That same evening, 2 Eastern Screech Owls were perched in a Live Oak near the north tower. They periodically flew out in an attempted to catch the circling swifts.

On September 28th, a frontal passage gave us several days of cold, damp weather. On October 3rd, there were 125 swifts roosting in the north tower. Five days later the roost had dropped to 49 birds. We captured and banded the remnant flock on October 11th which included 2 hand-reared returns, 5 hand-reared recaptures (released in 1996), 3 wild recaptures and 24 unbanded birds.

The last swift to be seen on the station was a single individual which entered the north tower at dusk. It may or may not have stayed the night. In 1996, Chimney Swifts were known to be on the station for 224 days.

### **EXPERIMENTAL TOWERS AT MANSFIELD DAM**

In 1996, 2 additional potential Chimney Swift nest sites were erected at the Mansfield Dam Bird-banding Station as part of the North American Chimney Swift Nest Site Research Project: one measuring 11" x 11" x 8' and another in the shape of a vertical prism measuring 24" x 24" x 24" x 8' tall. Along with the original "Twin Towers" (erected in 1989) and the cinder block "Castle" (erected in 1994), this brought our total number of sites to 5.

The smallest of the test structures (11" x 11" x 8') was installed on a lower terrace of the canyon approximately 40' below and 200' from the Twin Towers. The prism test tower was installed mid-way between the Castle and the Twin Towers. By late May, nests were constructed and eggs laid in both of these new designs. Initially we were very encouraged, but as the incubation period began to stretch beyond the standard 21 days, our optimism began to sour. The adults in both of the small towers continued to incubate their clutches more than a week beyond the normal period to no avail. Eventually both towers and the unhatched eggs were abandoned.

The nest failure in the 2 test towers was a disappointment, but a learning experience as well. The nests in both structures were constructed on the northern walls and not low enough to avoid direct sunlight in the middle of the day. The swifts do not begin their incubation until the next to last egg is laid. Consequently the first eggs when exposed to direct sun were literally cooked. An identical test tower at the Driftwood Station was successful and fledged 4 young. The nest in this tower was located on the southern wall where it was never exposed to direct sun. We believe that direct sun -- and not internal tower temperature -- was responsible for the failure.

We had assumed that instinct would guide the swifts in optimum nest placement. Perhaps this is a learned skill. In an attempt to prevent future nest failure due to direct sun exposure, 2 of the test structures have been fitted with a sun-shade on the top, south side. The successful mini-tower at Driftwood will not be altered.

## **MODIFICATIONS, IMPROVEMENTS AND NEW DESIGNS**

Although one of the original “mini-towers” (11” x 11” x 8’) was used successfully by swifts in 1996, we are recommending several modifications to any of these or similar structures which are already in place.

The shorter the structure, the less dark it is likely to be, and darkness is a consideration for swifts when they select a nest site. The original mini-towers had only a wire-mesh bottom. A solid bottom with several 1/2” ventilation holes is now believed to be an improvement to the design. It has also been recommended that the interior walls also be darkened since the textured 1-11 plywood is light in color. Because paint might cause out-gassing which could be harmful to the birds and also smooth some of the texture required, a propane torch might be used to lightly char the wood. A sun shade on the top southern edge may darken the interior and reduce heat build-up as well.

A home video from Jerry Koch in Monnett, MO. suggests an even more radical approach. He observed swifts entering a small side opening on a chimney. This particular chimney was completely protected from the sun and rain.

Another solution to darkness and protection from the elements may be a chambered structure. That is, a small, short column (4' or so) on a larger, offset bottom. Two different versions of this design were installed in 1996, but too late in the season to be used by swifts.

All of our large towers have been built with a 1 1/2” air space between the inner and outer walls. Most early small models have all been single-walled. Several more seasons may be needed to determine if the insulating air space is necessary to hold internal temperatures at acceptable levels.

Although concrete and cinder block make an extremely permanent structure, our experience with the Castle nests would suggest that untreated masonry may be less than ideal. Hopefully the water-based sealer we are experimenting with will solve this problem. If it does, concrete culvert pipes may provide a ready-made option for Chimney Swift housing. They are pre-cast, reinforced and available in a variety of sizes ranging from 12” to several feet in diameter. Their obvious limiting factor is their considerable weight. Also, some type of drainage would have to be provided in the bottom, or they would fill with water.

Finally, Jack Freeman (see more about Jack below) suggests making texture on smooth surfaces by applying some material with a toothed trowel. Once dry, the ridges would provide an excellent foot hold and nest anchor for Chimney Swifts.

## **INNOVATIVE FINE TUNING**

We thought the Twin Towers and the Castle were the fanciest Chimney Swift houses since Althea Sherman's tower until we heard from Jack Freeman in Springer, Oklahoma. Mr. Freeman has apparently been catering to the needs of swifts in ways we had not imagined. During the

intense heat of this past summer, he installed a small fan in the bottom of his tower to help cool the birds. He is currently working on a rain deflector to be installed inside the tower just above the nest location. He notes that it should be large enough to channel water on the wall away from the nest without being too large for the young to be able to climb over.

Jack is one of those rare folks who enjoys the sounds made by his swifts. So much so, that he has installed an intercom in the tower so that he can monitor every note.

### **HELP RESTORE THE ORIGINAL CHIMNEY SWIFT TOWER**

The Johnson County Songbird Project has overseen the printing of a new edition of Althea Sherman's *Birds of an Iowa Dooryard*. This paperback edition has some of Ms. Sherman's beautiful artwork which was not in the original, and is a great addition to any personal or community library. Proceeds from the sale of this enlightening and entertaining ornithological study will be used to restore the original 1915 Chimney Swift Tower. At the modest cost of \$15.95 (postage included), it also makes a great gift. To place your order, contact the Johnson County Songbird Project, 2511 HWY 1 SW, Iowa City, IA 52240. For more information contact Barbara Boyle at 319-628-4824.

### **FREQUENTLY ASKED QUESTIONS ABOUT CHIMNEY SWIFTS**

**I hear a lot of birds in my chimney. How many nests are in there?**

Probably only one! Although Chimney Swifts will congregate in large flocks (sometimes hundreds or even thousands), they are solitary nesters. A pair will vigorously defend a nest site. However, they do allow a few “helpers” to join them after the nesting has begun. These extra birds are most commonly birds which were hatched there the previous year. Three or four hungry baby Chimney Swifts can sound like a dozen. It is dark in a chimney, and the young birds rely on their impressive voices to “remind” their parents where they are.

**Are the nests likely to stop up my chimney and cause a fire hazard?**

Not at all. Since only one Chimney Swift nest is built in a chimney each year and each is only about 3” across, it would take dozens of years of neglect for any build up to occur. Chimney Swift nests are not the bulky, soft nests like those of the House Sparrow which many people are used to seeing. They are built of tiny twigs which swifts glue together with their own glue-like saliva. In fact, some tests had indicated that the saliva acts as a fire retardant. An annual chimney cleaning is important for home safety whether or not there are swifts in residence.

**If birds live in my chimney, how can I use my fireplace in the winter?**

Chimney Swifts are not in North America during our winter months, so there is no conflict in sharing our chimneys with them.

## **Where do Chimney Swifts go in the Winter?**

It was learned earlier this century that some Chimney Swifts winter in the Amazon Basin of Peru.

## **When do the Chimney Swifts come back?**

In Central Texas, the swifts return in late March. In your area? You tell us! When is your first sighting? Contact us at: [DWA@austin.rr.com](mailto:DWA@austin.rr.com)

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We wish to express our thanks to the following organizations for publishing information and articles about the Nest Site Research Project in 1996:

Texas Parks and Wildlife Magazine, North American Bluebird Society, Johnson County Songbird Project, The Austin American Statesman, The Humane Society of the United States, Alabama Ornithological Society, Travis Audubon Society, the Missouri Conservationist, and the Pensacola News Journal