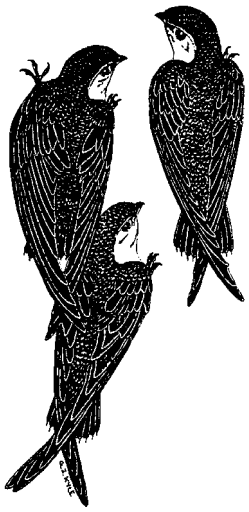
Chaetura

SPRING 1999 Driftwood Wildlife Association Volume 4 Issue 1



There has been a misconception by some that the purpose of our project is to provide replacement housing for Chimney Swifts so that "we can get those noisy birds out of our chimney". However, what swifts need is **additional housing** — not replacement housing. The most consistent findings to date indicate that chimneys continue to be the best location for Chimney Swift nesting. Chimneys provide the best conditions to protect from overheating, direct sunlight penetration and protection from predators. Even our best designs for Chimney Swift towers fall short of the success of common masonry chimneys. So, don't build a tower and cap your chimney — build a tower and **uncap** your chimney. But remember to have your chimney cleaned every year in mid-March just before the swifts return.

Paul Kyle, Editor

Vaux's Swifts Use Nest Boxes

by Evelyn L. Bull, Research Wildlife Biologist
Pacific Northwest Research Station, La Grande, OR

In 1995, we began an experiment to determine if Vaux's Swifts (*Chaetura vauxii*) would use nest boxes. Over the last decade, the western spruce budworm has killed thousands of grand fir in eastern Oregon. Grand fir is the tree species that Vaux's Swifts typically nest in because the older trees (usually larger than 24 inches in diameter at breast height) have extensive decay that leaves a hollow chamber inside the tree that the birds nest in. They enter the tree either through a broken top or through a Pileated Woodpecker hole; pileateds roost in these hollow trees at night. Because so many of the nest trees were killed by the spruce budworm, they would eventually fall and leave a void of nest trees. We believed nest boxes might

many of the nest trees were killed by the spruce budworm, they would eventually fall and leave a void of nest trees. We believed nest boxes might provide alternative nest sites for the swifts.

We put up 12 nest boxes in 1995. The boxes were made from solid boards 1 x 12 inches, so the boxes were about a foot square, but the depth varied. We made boxes 4, 8, and 12 feet deep to determine how deep a nest box the swifts preferred. The boxes were then put 35 feet above the ground in trees.

In the spring of 1998 we climbed the trees and checked the nest boxes for nest remains. We found twigs from past swift nests in two 12-foot boxes, lichen nests from Flying Squirrels in three boxes, feathers from roosting Northern Flickers in ten boxes, and feathers from roosting Pileated Woodpeckers in three boxes. This summer we watched the boxes and observed swifts nesting in a 12-foot and an 8-foot box. We banded two adults at each of these two nests. In August we checked these two boxes and found that the nests were already disintegrated but had been attached about 19 inches from the bottom of the box. The amount of droppings and the lack of dead nestlings suggested that young fledged from both nests.

As a result of these findings, we have put up another 50 nest boxes (12-foot depth) in old-growth grand fir stands, in logged stands lacking nest trees, and in stands of ponderosa pine that would never have had nest trees. We want to determine if we can entice swifts to use habitat that would normally not have had nest sites, as well as provide additional nest sites in habitat where they are currently nesting. In many stands with severe tree mortality, the nest boxes will provide the only available nest sites for the next 100 to 200 years.

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Dr. Evelyn Bull is one of our first Research Associates, and was a recipient of a grant from the Nest Site Research Project in 1996. Her results are very encouraging, and we look forward to additional reports in the future.

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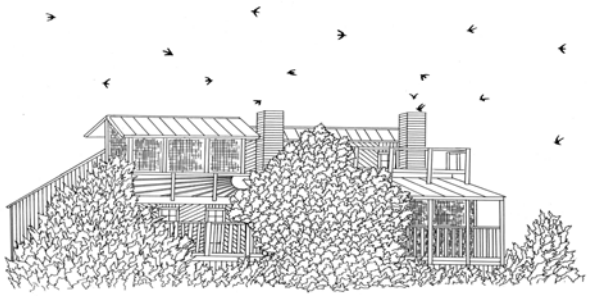
Twin Towers Update



Chimney Swifts arrived a few days later than usual in 1998. Our first sighting was mid-morning on April 1st with 6 birds flying overhead. Droppings indicated that both the North and South Towers were occupied overnight on April 2nd. On April 3rd, one bird was seen roosting in the North Tower while two individuals were observed in the South Tower. The Castle was first occupied on April 4th. By April 12th, there was a flock of 30 swifts roosting in this concrete tower. A pair of swifts returned to the Prism Tower on April 28th, and the Garden Mini-tower was occupied on May 2nd.

On April 21st, the first nest stick was attached in the South Tower. Initial construction was observed in the Castle on April 25th and in the North Tower the following day. By May 11th, nest construction was underway in the Garden Tower and the Prism.
Both the North and South Tower pairs produced 6 eggs, as did the Garden. The Castle had 5 eggs and the Prism had 3. All 12 eggs hatched in the Twin Towers (North and South). Four of 5 hatched in the Castle and all three in the Prism. None of the Garden Tower eggs hatched – probably due to the extreme heat.

Three banded adult swifts were captured on June 14th in the South Tower. Two were identified as the breeding pair which successfully double-brooded in 1997. The pair showed obvious swelling of the saliva glands, indicating that they were a breeding pair again in 1998. The third bird was the single offspring of the pair's second 1997 brood – referred to as "The Slug" in Volume 3. The North Tower family was captured on June 16th. Five banded adults were roosting at the time. The pair which successfully bred in 1997 were present – both with active saliva glands. The other banded adult swifts included one banded as a nestling in the North Tower in 1993 (now 5 years old), a hand-reared return from our facility which was released in 1997 and ... "The Slug". We were surprised to find this bird switching roost towers. In order to be able to visually monitor The Slug's activities, we marked a single head feather with white typewriter correction fluid. In subsequent weeks, we observed this bird feeding the nestlings in both the North and South Towers.

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The progress of the nestlings in the Prism were monitored visually and auditorily. However, with no access door in this experimental structure (a serious design flaw for bird banders), we were unable to band them.

By July 4th, 17 new swifts had fledged from the 5 structures on the Mansfield Dam Station. On July 6th, the first of 3 eggs of a second brood was laid in the South Tower. All three hatched and The Slug was observed feeding this brood also.

A Canyon Wren was observed investigating the inside of the South Tower on August 5th. The bird appeared to be hunting for live food in the corners and grooves of the tower. We were attentive to this intruder since Canyon Wrens have been observed piercing the eggs of other cavity-nesting birds within their territory. The wren seemed curious about the unguarded nestling swifts and approached to within 12" of the nest. However, it showed no aggression toward the baby swifts.

The 3 South Tower nestlings all fledged on August 31st.

A roosting flock began to build in the North Tower shortly after the babies fledged in June. The size of the flock fluctuated between 39 and 102 birds until it reached a high of 133 individuals on September 9th. The flock began to diminish rather than increase from that point. Based on our experience, this is unusual for a fall roosting flock of Chimney Swifts. On September 23rd, we discovered that a Ringtail had taken up residence in a space just below the floor of the tower. By October 7th, there were no more swifts roosting in the North Tower. We speculate that the activity of the Ringtail caused the swifts to abandon the site.

A flock of 40 to 50 swifts roosted in the Castle with the nesting pair and their young from early May until late August. The flock continued to fluctuate in numbers until October 21st when the last 7 swifts departed. Chimney Swifts were observed on the station for 203 days in 1998.

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CONCLUSIONS, SUPPOSITIONS AND SPECULATIONS

Weather conditions in 1998 were extremely hot and dry. The drought proved advantageous to the breeding swifts by eliminating the moisture which often causes their nests to peel away from the nest site wall. However, the excessive heat took a toll on nestlings in 2 of our experimental towers.

During June, temperature rose steadily from the mid 90's to a record high of 108° F on June 14th. From that date until August 15th, there were only 4 days on which the high temperature was less than 97° F. Of those 63 days, 30 registered 100° F or higher.

The eggs which were laid in the uninstalled Garden Tower literally cooked in spite of the sun shade which had made the mini-tower successful in 1997.

In March of 1998 a protective "second skin" was installed on the Prism. This modification made the experimental tower successful for the first time since it was erected in 1996. However, when the pair of swifts nesting in the Prism attempted a second brood, the young succumbed to the relentless heat during a stretch of 100° F + days.

In stark contrast to our negative results with small, single-walled towers at the Mansfield Dam Bird Banding Station, the Driftwood Bird Banding Station had a successful Chimney Swift nest in their uninstalled mini-tower for the 3rd year in a row. This tower is mounted on a deck approximately 3 stories high where the constant breeze apparently keeps the structure cool enough to compensate for even the most brutal of Central Texas summers.

Although the small mini-tower has been consistently successful at Driftwood, we must caution that this style of diminutive Chimney Swift house is very susceptible to overheating. Based on several years of testing, we must recommend against single-walled, uninstalled towers -- at least in the South.

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In 1998, a miniature security camera was installed in the viewing port of the South Tower. It measures only about ½" in diameter and is about 3" long. Some of the fledglings were curious about the camera and climbed up to peer directly into the lens – making for interesting and humorous viewing. For the most part, the swifts seemed oblivious to the camera. The resulting video tapes of activity in the tower provided new insight into the swifts' behavior at the nest as well as interaction with "intruders" which happened into the tower. We have plans to install a camera in the North Tower in 1999. Comparisons of the behavior of birds in the 2 towers and observations of roosting flocks should prove interesting.

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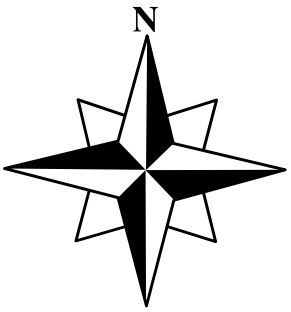
HERE AND THERE



Here are some of the new Chimney Swift Towers that went up in 1998 as well as some follow ups on older structures. When you erect your Chimney Swift housing, be sure to let us know so we can share your results!

Austin, Texas

The Travis Audubon Society installed a tower (16" x 16" x 12') at the rural Audubon Sanctuary north of Austin in the spring of 1998. When it was examined in February of this year, three hatched egg shells and a nest were discovered, indicating a successful nest the first year the tower was in place. TAS plans the construction of two additional towers: one in an urban setting at Blair Woods and a second at the Hornsby Bend wastewater treatment plant — a remarkably good birding site.

Carter Lake, Georgia

Park Ranger Paul Jastram constructed 2 Chimney Swift Towers using recycled materials. Although both were used by nesting swifts, neither produced a successful brood. Unusually heavy rains were blamed.

Lafayette, Louisiana

In April 1996, Dave Patton constructed a single-walled tower using 1/4" exterior plywood with 2" x 2"s in the corners. He used 2" x 6" around the base, middle and top to tie the structure together. It is mounted next to an old Purple Martin house pole, which helps support the tower. The really neat thing about Dave's tower is that it is mounted on a hinged base. Because it is so light weight, he can raise and lower the tower to repaint the outside. He also paints the top of the inside to prevent rot. He has had successful nests in 1996, 1997 and 1998.

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Pine Mountain, Georgia

LuAnn Craighton is an NSRP Research Associate, and the Conservation Studies Manager at Callaway Gardens. She reports that thanks to the generosity of a donor, the Gardens have two new Chimney Swift nesting towers in place. Both were built using 5/8' T1-11 plywood and measure 16" x 16" x 12' tall with an air space between the inside and outside walls. On the outside the siding was installed with the grooves running vertically to better shed the rain and discourage climbing by potential predators. As an additional deterrent to predators, recycled Plexiglas wind shields from golf carts were used around the top of the towers.

Callaway Gardens receives thousands of visitors each year. The towers should generate considerable interest in Chimney Swifts and the Nest Site Research Project.

Nashville, Arkansas

J.K. Steen had three 55 gallon drums welded together and fashioned a metal roof which covered the top at an angle which left an 8" opening on the north side for the swifts to enter. 52 3/8" ventilation holes were drilled at the bottom. The inside was lined with 8' strips of rough wood and the outside was painted with aluminum paint to reflect the heat. The entire structure will be mounted on a single concrete pier. J.K.'s tower measures about 9' tall with a diameter of 22 1/2". 1999 will be his first test year.

Holt, Missouri

The Rosson family completed construction of a tower attached to their barn. In addition to a predator guard at the top, a fence was built around the base to prevent their goats from using the tower as a scratching post. They have plans to install a video camera for remote monitoring

Austin, Texas

The Texas Parks and Wildlife Department's 16" x 16" x 12' wooden tower had some complications when the bottom fell off. The un-treated screws rusted through. However, as soon as it was repaired, the swifts continued with their nesting. A rope fence was erected around the tower to ward off over-curious

through. However, as soon as it was repaired, the swifts continued with their nesting. A rope fence was erected around the tower to ward off over-curious office workers, and the swifts had another successful season. This tower is located just 20 feet from the south side of a 2 story office building.

Tomball, Texas

The Wildlife Center of Harris County, Precinct 4 had a wooden tower installed as an Eagle Scout Project. It measures 18” x 18” x 13.6’ tall and is lined with T1-11 plywood siding. The tower is located in a somewhat wooded area north of Houston.

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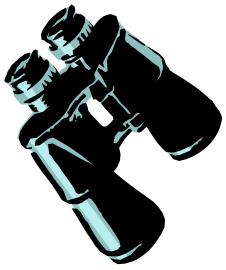
SLIDE PROGRAM AVAILABLE

Since the Chimney Swift Nest Site Research Project was established several years ago, we have made as many presentations as possible to interested groups. However, geography and limited time have prevented us from personally reaching as many parts of the country as we would like.

The Project now has available a slide presentation for interested parties. The program consists of about 50 slides including close ups of nestling, fledgling and adult Chimney Swifts as well as several of the tower designs which have proved successful. A brief narrative for each slide is also provided. The program is available for rent or sale. For more information about the program contact us: by phone or fax: (512) 266-3861 or by email DWA@concentric.net

EYES TO THE SKIES



For the first time, we have tracked and reported first Chimney Swift sightings on a North American range map. The map is broken into 10 day periods begining March 1st and continuing through May. Click on the map icon to take a look.

Please Report your sightings!
email at DWA @ concentric.net
phone / fax at (512) 266-3861

REVISED HOMEOWNER'S GUIDE

Our sincere thanks go out to Cliff Shackleford of the Texas Partners In Flight program and the graphics design staff of the Texas Parks and Wildlife Department. Due to their combined efforts, an outstanding update of the **Home Owner's Guide to Providing and Maintaining Nesting Habitat for Chimney Swifts** is now available. If you would like a free copy of this excellent educational brochure, send a SASE to Driftwood Wildlife Association, 1206 West 38th, Suite 1105, Austin, TX 78705. It reproduces well on most copy machines, and is an excellent hand-out for nature centers and other wildlife groups. For an electrinic version, CLICK HERE

BIRDS AND BLOOMS

Thanks to a subscriber's note to **Birds and Blooms** magazine, we answered more than 200 requests for information about the Chimney Swift Nest Site Research Project. We added many new Research Associates to our project as a result.

SPRING HERALDS

Former Big Bend National Park Superintendent Roland Wauer's latest book is entitled **Heralds of Spring in Texas**. In a compelling collection of anecdotes, Ro relates the arrival of spring according to naturalists across the Lone Star State. One chapter is devoted entirely to Chimney Swifts. Even if you do not live in Texas, this delightful book will strike a cord.

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CORPORATE CONSERVATION

In 1998, Chimney Swifts gained an important ally: the **National Chimney Sweep Guild (NCSG)**. Paul Hempel, who maintains the Guild's web site put us in contact with Calli Schmidt. Calli is the editor of **Sweeping** , the Guild's official publication. The result was a fine article in the June issue of the magazine entitled **Saving the Swift**.

The combined goal of the North American Chimney Swift Nest Site Research Project and the National Chimney Sweep Guild is to stem the tide of Chimney Swift decline through education of the public, the professional sweeping community and promoting carefully timed chimney maintenance.

Paul Hempel has also appealed to professional sweeps across the country to report their first seasonal sighting of swifts to the Nest Site Research project. Their reports have helped us begin to map the spring arrival of Chimney Swifts in North America.

Chimney Swifts, their eggs and young are protected, by law, under the Migratory Bird Treaty Act. However, there are still many unscrupulous chimney sweeps who will ignore their legal responsibilities in order to make a quick buck at the expense of nesting Chimney Swifts. When having your chimney cleaned, look first for a member of the NCSG, but make certain that they do not advertise "bird removal" as part of their services.

EMAIL TO THE EDITOR

The following question was recently posed to the chimney professionals discussion list:

Paul,

“Where did swifts live before about 1850 when America started building lots of masonry stacks, chimneys, etc.”

We were hoping that you might have an answer. We’re beginning to generate some REAL interest in saving/enhancing/replacing these birds' habitat!

Sincerely,
A. Bart Ogden, Owner
Home Safe Chimney Services

Bart,

Chimney Swifts were originally limited to the eastern part of the North American continent. They nested and roosted in large hollow trees. As recently as the 1930's, Chimney Swifts were a rare site west of the Mississippi River.

As the American settlers moved westward, they cleared the forests for agriculture -- eliminating most of the swifts' natural habitat. However, the settlers' chimneys, silos and out buildings provided suitable for the desperate and adaptable Chimney Swifts. Today, Chimney Swifts can be found as far westward as the foot of the Rocky Mountains.

Chimney Swifts were able to adapt to changes in the environment made by man in a way that few species have been able to do. However, as they have been denied access to their new, man-made habitat, their numbers have begun to decline dramatically.

Those of us involved in conservation of this remarkable species are grateful for the upsurge in interest and support from the professional chimney cleaning community.

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CORPORATE CONSERVATION

Sam Houston Park, Houston's oldest park, is adjacent to downtown Houston. The Park contains eight historic structures. Some of these structures have associated buildings (e.g., detached kitchen building) that are not historic which also have chimneys. The total number of chimneys in all structures is 19. Fourteen of the 19 chimneys were considered potentially suitable for swifts and were modified. Modifications consisted of:

- Screening was removed that had prevented entry.
- Of five that had rain caps, four were raised to increase the entry opening size.
- All had metal inserts placed inside the chimney throat to prevent entry by rats, squirrels, and raccoons and all inserts were painted black. The inserts extended about one foot into the chimney. To understand the insert, visualize a box with an open top and bottom opened up by folding open the four flaps on each end. Then in your mind turn the box upside down. The top flaps (which were once made up the bottom of the box) were folded out to lay on top of the four top surfaces of the chimney (i.e., laid on top of the bricks). This top flaps prevented the insert from falling into the chimney.
- For the chimneys that either did not have flue dampers or were frozen, foam rubber was placed to prevent birds from flying into the structures through the fireplace.

These modifications were largely designed to address concerns on the part of The Heritage Society, which maintains and provides tours of the structures.

Before undertaking modifications, Paul and Georgean Kyle inspected each chimney on January 5, 1998. They also provided considerable advice on designing the insert. An internal insert was used instead of external flashing (although it would have accomplished the same goal) because of aesthetic concerns on the part of The Heritage Society.

The previous year (1997) no swifts were ever noted in the vicinity of Sam

The previous year (1997) no swifts were ever noted in the vicinity of Sam Houston Park. In early spring of 1998, six chimney swifts arrived and stayed in the area all season. Two chimneys are known to have been used for nesting. The largest and tallest chimney on any of the structures (and it also has no trees even close in height to it) was used; this was in the Stati House (which also has two other shorter chimneys with smaller openings that were not used). Also, what I would have considered the least suitable chimney was used. This was in what they call The Old Place (the oldest structure in Harris County, probably built in the 1820s by one of Austin's colonists). It is surrounded by trees and is very short in height. Swifts were often seen around and going into and out of the Stati House chimney. Swifts were never seen in The Old Place chimney. This nest was discovered by The Heritage Society tour docents that noticed the noise from the young swifts. One of our wildlife team members confirmed that there was some kind of nest in the chimney, but the actual nest was never seen.

Unfortunately, since all of the chimneys were modified, The Heritage Society decided to totally cover four of them. These four may never have been used anyway due to rain covers. Two other chimneys that we could not get to because the metal roof was too steep and slippery, have now been completely covered. Otherwise they would have likely been suitable to swifts.

Joe Kolb

Joe is the Senior Environmental Specialist with Enron Corp's "Wild at Work" Program. He reports that Chimney Swifts have been sighted at Sam Houston Park in 1999 as well.

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Chaetura is a publication of the **Driftwood Wildlife Association**, a non-profit all volunteer organization supported by tax-deductible contributions. DWA is dedicated to promoting research and providing community education in the areas of wildlife rehabilitation and avian natural history.

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