

Chaetura

SPRING 2000

Driftwood Wildlife Association

Volume 5 Issue 1



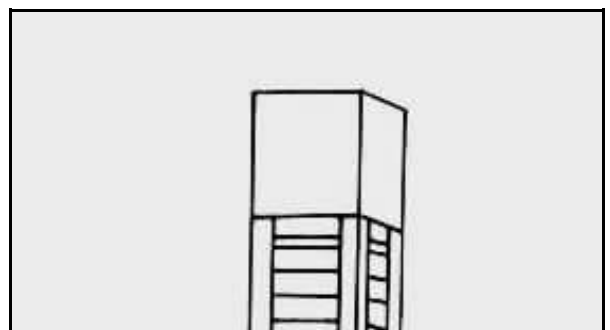
As we answer e-mails, letters and phone calls during the Chimney Swift nesting season, one dilemma persists — to cap or not to cap a chimney. My favorite answer would be to cap all metal chimneys and leave all masonry and flue tile chimneys open for the swifts. However, there are cases when even swift-suitable chimneys should be capped. If a chimney is frequently occupied by squirrels, raccoons and other mammals it should be altered with predator guards such as metal flashing or electric fence wires to exclude everything but Chimney Swifts. If this is not possible or practical, the chimney should be capped.

Some homeowners, regardless of all attempts to persuade them otherwise, simply will not want to listen to hungry baby Chimney Swifts begging for food. If a homeowner is inclined to want swifts evicted, it would certainly be better to exclude the birds prior to their expenditure of time and energy in constructing a nest.

Paul Kyle, Editor

Combining Habitat Construction with Education

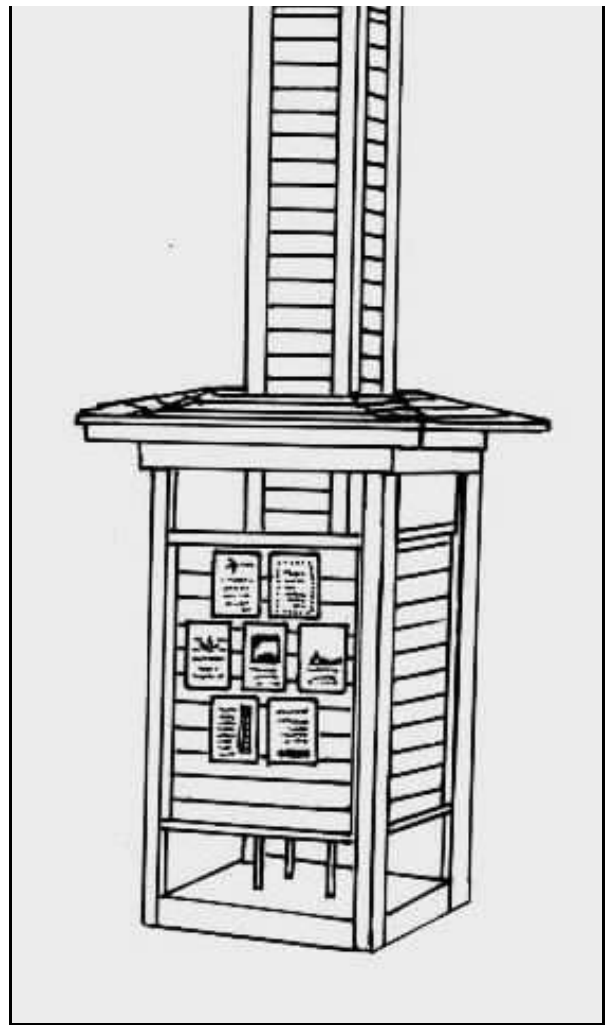
Soon after the first of the year we began construction of 2 new Chimney Swift Towers at the Hornsby Bend Wastewater Treatment Plant near Austin, Texas. With funding from the Travis Audubon Society and cooperation from the Center for Environmental Education and the City of Austin we combined



the Center for Environmental Education and the City of Austin we combined Chimney Swift housing with public education.

The nest chambers were based on our time-tested 12' towers built of Textured 1-11 siding. Both included a space between the inner wall and outer sheathing. In one tower, a 3/4" airspace was left empty. In the other tower, the space was filled with foil-backed rigid foam insulation board. Indoor/outdoor thermometers were mounted on the north side of each tower with the "outdoor" probes inserted into the nest chambers.

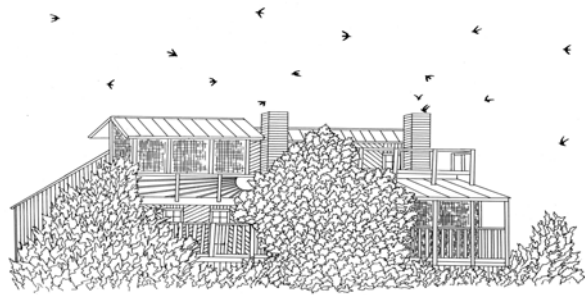
Both towers were fitted with 4' x 4' kiosk panels on all sides. The kiosk panels and the lower half of the towers are sheltered by a roof. The roof and panels provide additional protection from the relentless Central Texas sun. In addition, the panels provide an ideal place to mount educational visual displays.



The location and the unique appearance of the towers make them highly visible to the many birders, school children and conservation groups that visit the facility. This new design lends itself well to placement in state parks and other public locations where an appeal for Chimney Swift conservation may be well received.

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Report From Chaetura Canyon



Chimney Swift research at the Mansfield Dam Station began in earnest in 1989 with the construction of 2 large wooden towers. These towers are constructed with inside walls of Textured 1-11 siding with the grooves running horizontally. They measure approximately 18" x 18" inside, stand 22' tall and are an integral part of our home. They have viewing ports on the second story of the house where we are able to relatively easily monitor the home life of the swifts. We have come to call these the "**Twin Towers**" in past issues of the Chaetura. When detailing our observations they are often referred to as the "**North Tower**" and the "**South Tower**". As the Chimney Swift Nest Site Research Project has progressed, we have constructed additional experimental designs. There are currently 7 towers on the station. Following are brief descriptions of the other 5:

The Castle is a cinder block tower with 8" thick walls. It measures 32" x 32" inside, stands 12' tall and is set on a 5' x 5' x 10" concrete slab. The top opening is reduced down to 16" x 16" and located on the north edge to reduce the amount of sunlight which can reach the inside. It was completed in 1994.

The Garden Tower is a wooden tower with an inside wall of Textured 1-11 siding with the grooves running horizontally. It measures 11" x 11" inside, measures 8' tall and stands on 2' tall angle steel legs set in a 3' x 3' x 6" concrete slab. The top opening is reduced to 11" x 5" and located on the north side. It was originally a single-walled tower. However, due to problems with over-heating, a second skin with an insulated space between is planned.

The Prism is a wooden tower with an inside wall of Textured 1-11 siding with the grooves running horizontally. It is a 3-sided structure measuring 22" x 22" x 22" inside, measures 8' tall and stands on 2' tall pipe legs set in a 3' x 3' x 6" concrete slab. The top opening is reduced to a triangular opening measuring 9" x 9" x 9" in the northwestern corner. It has a 3/4" airspace with 1/8" hardboard skin on the outside.

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The Pool Towers are the newest structures. They will be described for the first time in this issue of Chaetura.

1999 HIGHLIGHTS

NORTH TOWER

The first Chimney Swift was sighted over the canyon on March 28. Two swifts occupied the North Tower on April 22.

One bird of the pair was unable to cling with its left foot. When the nest construction began, the structure took on the appearance of a fan opening from one side of the nest wall to the other as opposed to the standard half-cup shape growing uniformly from the center. This was possibly a phenomena resulting from the inability of the crippled bird to grip with both feet. Posture on the crippled bird always slanted to the left.

By March 23, 3 eggs had been laid in the North Tower nest. A surveillance camera was installed in a small hole directly opposite the nest at this time. A total of 5 eggs were subsequently laid. Unfortunately, one egg was found broken on the tower floor on May 30. One egg hatched on June 13. Despite the adults' very attentive care, the nestling was found dead in the nest 4 days later. No signs of injury were evident in the nestling. However, its development did not correlate with its age. The remaining eggs were removed after candling revealed that that none were fertile.

Breeding activity continued between the mated pair. Observations from the video recordings of the North Tower confirmed that the crippled bird was a male. A second clutch of 3 eggs was laid in the North Tower nest by June 27. As in the first clutch, 1 egg was found broken on the tower floor in mid-morning. Following this incident the crippled bird abandoned the nest site. He was observed "visiting" the nestlings in the South Tower, but was never observed participating in the care of these nestlings. The female continued to return to the North Tower, but did not attempt to brood her remaining eggs.

The North Tower pair were new breeders in that location. The female was banded on May 13, 1996 in the spring roosting flock at the Castle. The male was banded on July 29, 1997 as a nestling. He was the singleton of the second brood in the South Tower that year and has been referred to in previous reports as "The Slug".

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SOUTH TOWER

The South Tower was occupied the night of March 28 – the first day that swifts returned to the canyon. A single bird roosted from March 28 through April 4 before being joined by a companion. At mid morning on the following day, 3 birds were observed in the tower. Two birds were banded on the left leg, the other was banded on the right leg. A single bird was roosting mid-way in the tower while the other 2 were “engaged” on the floor. Both of the birds on the floor of the tower maintained a firm grip on each other while flapping their wings and wrestling. After a full 7 minutes, the struggle came to an end. The birds separated and clung to opposite walls near the bottom of the tower. After a brief intermission, the left leg banded bird flew at the right leg banded bird which then flew up and out of the tower – closely pursued by the aggressor. This was apparently not a friendly encounter.

Following the excitement 2 to 4 swifts roosted nightly in the South Tower with no further conflict. Nest construction began in the South Tower on April 28. Five eggs were in place by May 16. The following day an egg was found on the floor of the South Tower with a single hole pierced in the shell. Another egg was laid, but the breeding pair delayed until May 22 before settling into regular egg brooding.

The first egg hatched on June 4 and by the following morning 4 hatchlings were actively squirming in the nest. The fifth egg did not pip until 48 hours later. This resulted in an unusual disparity in nestling ages and size. Since Chimney Swifts are extremely attentive parents, the “Little Guy” suffered no ill effects from being stuck on the bottom of the pile. It was fascinating to watch as the parents would withhold food from the larger, stronger and insistent nestlings as they deliberately searched out the smallest of their brood.

A light rain began falling on the morning of June 20. Video observations of the South Tower revealed the parents returning to feed the nestlings much more frequently than normal. The adults were feeding their brood every 5 to 7 minutes as opposed to the normal feeding interval of every 20 to 30 minutes. We stepped outside to discover that the air in the canyon was thick with flying insects. In addition to the rain forcing insects down close to the ground, there was a “bloom” of termites emerging from their subterranean nests. The young swifts were literally stuffed to the point of having the wiggling legs of the termites protruding from their mouths.

Under the attentive care of their parents and tutelage of “Uncle Slug”, all 5

Under the attentive care of their parents and tutelage of “Uncle Slug”, all 5 South Tower nestlings successfully fledged. The breeding birds were a new pair for the South Tower. One bird was banded as a nestling in the South Tower on June 14, 1998. Its mate was a North Tower parent in 1998. The pair continued to occupy the South Tower sporadically during the day and were occasionally observed roosting together on their nest. However, they did not attempt a second brood. Consistent with the previous 3 years, the Castle hosted a roost from early spring through the fall. On April 14, 43 swifts entered the concrete cinder block structure. A total of 120 very vocal birds were in residence by May 2. The number of residents fluctuated, but continued to average 60 birds throughout the season. The uncommonly tolerant breeding pair managed to construct a nest and lay 5 eggs. Only 2 eggs hatched, but both babies fledged on July 18. No second brood was attempted.

We were amazed to hear begging calls emanating from the Castle in the morning on August 10. The calls continued throughout the next 3 days. Because we are unable to visually monitor activities inside the Castle without opening the door and possibly causing any flight-capable birds to flush, we could not determine the age of the fledgling swifts that now used the Castle as “home”. We can only speculate that a nearby family of swifts was “evicted” from their chimney and found the Castle to be a suitable substitute. It would be remarkable for swifts that were too young to be self-sufficient to be competent enough in flight to relocate.

In mid August additional swifts began to use the Castle as a roost. By August 17, 150 to 160 swifts were entering the Castle each night. On August 22 we again heard the unmistakable begging calls of 2 juvenile swifts. The calls continued through August 28. Again we could only speculate that yet another family had been evicted from their home with young birds which were old enough to fly but too young to be completely independent. For the second time in the season the Castle was apparently being used as a “half way house”.

Abruptly on September 15 most of the swifts departed from the area. Only 36 birds entered the Castle on that evening. When the Castle flock was captured for banding before sunrise the following morning, only 21 birds remained. Eighteen were unbanded. The 3 others included an HY bird from the South Tower (banded June 22, 1999) and 2 birds that had been hand-reared by us. One hand-reared bird was banded on July 21, 1994. The other hand-reared bird was banded September 5, 1997.

THE PRISM

Two swifts had set up housekeeping in the Prism by April 7. Five eggs were laid and the nestlings successfully fledged. This pair were the only swifts to attempt a second brood on the banding station in 1999. Their second brood consisted of 2 eggs which both hatched, survived the 100 degree weather and sub-

tempt a second brood on the banding station in 1999. Their second brood consisted of 2 eggs which both hatched, survived the 100 degree weather and subsequently fledged.

THE POOL TOWERS

One of the most common questions asked about the construction of Chimney Swift Towers is: "How close can they be to one another and still be used as nesting structures?" We know that the Twin Towers which are 12' apart have consistently attracted nesting swifts. However, we have never had an opportunity to study towers in closer proximity to one another. On May 6 we began construction of a pair of new cinder block towers. They are situated in a north / south orientation on a level down the canyon wall from the recirculating pools. Both stand on a single concrete slab measuring 80" x 24" and 6" thick. The base of each tower is a U-shaped concrete footing measuring 4" thick, 20" x 20" x 8" tall which is open on one side and fitted with a door for clean out. The actual tower construction uses 4" x 16" x 8" blocks. There are 4 blocks per layer with ends overlapping. This created towers measuring 20" on the outside with an 11" inside diameter and stand 10' 2" tall. The towers are only 26" apart.

By May 19, both towers stood 8' 9" tall. The following morning swift droppings were found on the floor of the South Pool Tower. On May 21st droppings were found in both towers. Construction continued daily with the swifts utilizing both towers overnight. A nest stick was discovered on the south wall of the North Pool Tower (NPT) on May 25th. Our detail work continued with emphasis on the NPT which was completed on June 6th. The swifts continued their nest construction and laid the first of 5 eggs on June 8th. One egg fell from the nest, but the remaining 4 hatched and all 4 of the NPT fledglings were flying in the canyon on August 1st. The South Pool Tower (SPT) received its finishing touches on June 14th. The SPT was not occupied after the nest construction was begun on the NPT.

Chimney Swifts were observed on the station for 209 days in 1999.

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CONCLUSIONS, SUPPOSITIONS AND SPECULATIONS



The behavior observed in the North Tower following the loss of an egg in the second nesting attempt is puzzling. Although the crippled male was at a disadvantage, nest construction, mating, brooding and the first few days of care for the single hatchling seemed more than adequate.

With the exception of the Prism, all nests lost at least one egg in 1999 – some to infertility, others to being lost “over the edge”. Several of our Research Associates also reported fallen eggs. With the precarious nature of swifts’ nests, it is surprising that more eggs are not lost in this manner. However, we do suspect foul play by our clandestine resident Canyon Wren in the egg piercing in the South Tower.

Chimney Swifts normally begin continuous brooding when the next to the last egg is laid. The reluctance of the South Tower parents to brood until 72 hours after the last egg was laid is remarkably inconsistent with known behavior.

It has been published and we have confirmed with our own observations that Chimney Swifts exhibit strong nest site fidelity. We found it unusual to have only one return breeding bird to the Twin Towers. We speculate that swift was the only survivor of the 2 pairs that occupied the Twin Towers in 1998. Several of our Research Associates reported a complete lack of swift activity in sites which were occupied in 1998. We cannot help but wonder if Hurricane Mitch was a factor. The human toll of this devastating storm was well documented by the media, but the impact on migrating birds must have also been catastrophic. We received a second hand report of a storm-destroyed building in Central America which contained thousands of dead swifts which had apparently sought refuge from the weather.

Chimney Swifts fledge from the nest chamber at 28 to 30 days of age. It is not unusual for them to return frequently for a few days afterward. Fledglings will also be fed by their obliging parents for those few days before the young are completely independent. However, once a bird becomes independent it no longer

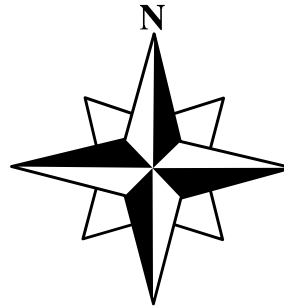
unusual for them to return frequently for a few days afterward. Fledglings will also be fed by their obliging parents for those few days before the young are completely independent. However, once a bird becomes independent it no longer makes the unmistakable begging call. When the begging calls were heard in the Castle 20 days after the young had fledged and again 12 days later, we were at a loss to understand what was happening. We know that fledgling swifts “practice” flying within their nest structures for at least a week before they actually leave the safety of the site. It is possible (although not probable) that birds that are flushed from a chimney by intolerant homeowners might be able to reach another structure at this age. Younger birds would undoubtedly perish. We believe that on both occasions when we heard the begging call, nearby families of swifts were displaced from their chimneys and managed to find their way to the Castle. In fact, we did discover that a traditionally successful nest chimney had been capped on a nearby house that had just been sold.

We were determined to construct 2 new towers in 1999. Unforeseen circumstances delayed the start of construction until early May. We are always hopeful that swifts will accept a new structure, but we were unprepared for the tenacity of the pair claiming the North Pool Tower. Construction could not be delayed once the birds began nest building because it was unsafe for them in the current state. Completion requires additional cinder block stacking and mortaring, capping the blocks, installing a sun baffle, sealing the inside of the tower to stabilize the surface of the cinder block so it would allow the saliva in the nest to hold to the wall, put a smooth stucco on the outside so predators could not climb the towers, and install a door on the clean out to prevent unwanted visitors from entering through the bottom. The swifts were just as determined in their construction. Fortunately, we were all able to coordinate our activities and 4 healthy fledglings were the happy result.

In spite of the small diameter of the Pool Towers, the thermal mass of the cinder blocks prevented the overheating problems we have experienced with wooden towers of the same size. This obvious benefit, along with the permanent nature of concrete, makes cinder block construction ideal for Chimney Swift towers. The only drawbacks are that the inside of the tower must be sealed with a concrete sealer and that masonry work requires an expertise that most homeowners may not have.

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HERE AND THERE



Here are some of the new Chimney Swift Towers that went up in 1999 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!

Carters Lake, GA

Two towers built of recycled wood from picnic tables both hosted swift families in 1999. Nine fledglings were reported by Park Ranger Paul Jastram.

Makanta, IL

A 12' tower erected on May 20 was occupied immediately. Cathie Hutcheson reported that 2 swifts fledged. She plans to build 2 more towers and attach them to a barn and a shed.

Holt, MO

The Rosson family tower successfully fledged 4 nestlings in 1999. Their fireplace chimney also fledged 4. Joyce Rosson is busy editing video recordings she made of the nesting activity in the wooden tower. The final product will be used for educational programs at the local Nature Center and by the U.S. Fish and Wildlife Service.

Charlotte, NC

Bonnie Munday decided on a brick chimney for the fireplace in her new home. She plans to leave the top open for swifts to use.

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Springer, OK

Jack Freeman reported an unnaturally quiet summer since swifts did not return to his towers in 1999.

Columbia, SC

The Department of Natural Resources built a swift tower in May at the Clemson University / DNR "Sandhills Station". Swifts made a few "fly bys" but did not enter the structure. Modifications to the top are planned for this spring.

Austin, TX

The Travis Audubon Society's sanctuary tower again reported successful nesting by swifts. Two birds fledged. Unfortunately, the remains of a 14 day old bird were found on the floor when the tower was cleaned out this winter.

Cedar Creek, TX

In one of the first towers built according to NSRP's specifications, Jim Roecker reported another successful nest in 1999. Four nestlings hatched in mid June.

Elgin, TX

A pair of swifts were attracted to David Brock's site on April 6.

Eagle River, WI

A 12' tower constructed by Ken Damro was "inspected" by a Common Merganser, but has yet to attract any Chimney Swifts.

Johnson City, TX

Swifts arrived late at the Middendorf Ranch. An apparently perfect nest was constructed, however, nesting activity ceased after an egg fell from the nest and broke.

Mason County, TX

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Two wooden towers attached to a cabin were both used by swifts for the first time: one by a nesting pair, the other by a single bird as a roost. A nest was built and eggs were laid. However, the nest was raided by an unknown mammalian predator. There were no predator guards on the towers.

Pine Mountain, GA

LuAnn Craighton with Callaway Gardens reports the following:

“We had birds in one tower this year. The donor who made the towers possible visited with 60 of her family members in November. At one point we had most of the group on their backs one at a time, looking up at the old nest in the tower with a flashlight. It was fun for young and old alike!”

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SLIDE PROGRAM AVAILABLE



The North American Chimney Swift Nest Site Research Project has a slide presentation available. The program consists of 50 slides including close ups of nestling, fledgling and adult Chimney Swifts. There are also slides of several of the tower designs which have proved successful. A brief narrative for each slide is also provided. The program may be rented for only the cost of postage or purchased. For more information contact Paul or Georgean Kyle by phone or fax at (512) 266-3861 or by e-mail at DWA@concentric.net.

EYES TO THE SKIES



For the second year we will be posting and mapping first spring Chimney Swift sightings all across North America. You can follow these sightings as we update the map on the DWA web site. Contact us with your first spring sightings!



Please Report your sightings!
EMAIL US
phone / fax at (512) 266-3861



CHIMNEY SWIFT WEB CAM



CHIMNEY SWIFT WEB CAM

For the past 2 years we have been using surveillance cameras to monitor and record the Chimney Swift activity in the Twin Towers at the Mansfield Dam Bird Banding Station. We have recorded remarkable and previously unknown behavior such as aggressive defense of the nest tower by nesting pairs — against other swifts! This year you can join us in our observations via our new

DWA Chimney Swift Web Cam

The web cam provides a live feed in real time and is active from dawn until dusk (approximately 7:00 am through 8:00 pm CDT). In the event of thunderstorms in our area, it will be shut down.

Pre-roosting Behavior of Chimney Swifts

There are many questions yet to be answered about the behavior of Chimney Swifts. Many of those are posed after watching the antics of swifts as they prepare to go to roost at dusk. Although no answers may be correct, speculation is enjoyable.

Why do they circle?

As a flock of swifts gather at dusk, they will begin to circle around a popular roost. Since swifts feed in family and extended family groups, they may be marking time while other members of their group arrive at the roost. A circling flock may also serve as a “beacon” to swifts which are newly fledged (in the summer) or newly arrived (in the spring and fall).

Why do they hesitate?

As darkness closes in, the circle tightens and many passes are made at the roost site. Often a swift will appear ready to enter only to veer off at the last possible moment. Perhaps as creatures of the sky which fly all day, they are just reluctant to stop. Their remarkable speed and agility in flight leave them safe from all but a few avian predators. However, their vulnerability in the roost from terrestrial predators such as raccoons, ringtails, rat snakes and enterprising owls (not to mention *Homo sapiens*) may contribute to their hesitation to enter a roost.

Why do some individuals enter head-first while others “wiggle in” with their wings held up?

Some swifts will dive straight into a roost at full speed. These individuals may

Some swifts will dive straight into a roost at full speed. These individuals may be older and more experienced – or just younger and more reckless! Those which enter in a more tentative fashion may have previously missed the opening to roost a time or two and bounced off the edge – it happens!

What about that guy?

On occasion, a single bird will circle a roost site after the majority of the flock has entered. This bird may continue to circle as single birds arrive and enter. Only after no other birds appear for several minutes will this “sentinel” also tumble into the roost.

U.S.FISH AND WILDLIFE SERVICE AGENTS COME TO THE AID OF CHIMNEY SWIFTS

*From the WRL RESCUE REPORT,
Falls Church, VA*

“The local and federal wildlife authorities initiated criminal proceedings against local companies who have violated Federal Law by removing migratory birds and their nests. This required many hours of interview with our bird rehabilitators. For years our members ... have sent an annual letter with information to all area chimney sweeps, so we are pleased that this action by FWS may finally reinforce our education efforts. In an out-of-court settlement, one chimney sweep was allowed to pay fines as a donation to Wildlife Rescue League ...”

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