

## MANITOBA CHIMNEY SWIFT INITIATIVE (MCSI) – ST. ADOLPHE 2011 SUMMARY

The monitoring of nest sites in 2011 was the fifth consecutive season of collecting information about the breeding behaviour of chimney swifts in St. Adolphe. Public awareness of this Threatened species (listed on Schedule 1 of the Federal Species At Risk Act) has been growing as we learn about the biology of nesting at the northern edge of the chimney swift's range. We thank the avian landlords, community residents, RM of Ritchot, and MCSI monitors for their continued assistance and support: H. Brodeur; S. and A. Leclerc; members of Le Club Amical; parishioners of the St. Adolphe Parish Church; A. Lagasse; L. Verhaeghe; B. Stefaniuk; F. May; R. Austin; L. Cocks; F. Machovec; J. Machovec; R. Stewart.

Many challenges took place in 2011, starting with a major spring flood of the Red River and ending, ironically, with a record drought and extremely low numbers of mosquitoes. The first chimney swifts arrived in St. Adolphe on May 13, a week before the monitors stopped boating and wading through floodwaters to access a vehicle! Cool, wet weather persisted into June but conditions changed dramatically by July. Continued extreme heat, strong winds, record low rainfall, and record low mosquito trap counts characterized July. The low food supply appeared to negatively impact nesting success and extremely high rates of nest failure occurred.

Unfortunately, the overall nesting success was 20% (1 of 5 nesting attempts) for 2011 (Table 1). The "success" was limited to one juvenile that fledged from the NE Club Amical chimney on Aug. 6. This is the lowest rate of successful nesting attempts, and the lowest number of fledglings produced, in the five years of monitoring St. Adolphe nest sites. The details of the monitoring season follow.

### SUMMARY OF THE 2011 MONITORING SEASON.

St. Adolphe may be regarded as the "chimney swift nesting capital of Manitoba" as the highest known concentration of active nest sites occurs in this town. For the third year in a row, breeding pairs of adults occupied all 5 known nest sites. These sites include the Southeast (SE) and Northeast (NE) chimneys on Le Club Amical, and the chimneys in the former Brodeur Bros. dealership (closed Dec. 2009), the Paroisse St. Adolphe Catholic Church, and a private Main St. residence.

Chimney observations followed the same protocol whether made during the day or at the roosting hour. Recording the entry or exit time of a chimney swift yields two intervals: a) between-visit interval (exit to entry) and b) duration in the chimney (entry to exit), also known as the turnaround time. Additional observations included: direction of flight toward/away from the chimney; the characteristics of entry: speed, orientation, number of attempts required to enter; whether the chimney swifts were vocal or quiet; and the group size of approaching or departing chimney swifts. Trailing wing edges were observed on some occasions and notches/discontinuities indicated moulting in adults. Juvenile swifts had wing edges that were complete/continuous.

Cleanout traps in the Brodeur Bros. and the Main St. chimneys can be checked to verify nesting attempts; all other chimney cleanout traps are inaccessible. NOTE: In April, 2011, a nest and an unhatched egg were found in the Main St. cleanout. These are the residual items from the 2010 season that had not fallen from the chimney wall by Oct. 2010. So correcting for these items, the total clutch size for Main St. 2010 = 6.

In 2011, 136 hours of observations were made at the 5 nest chimneys (Table 1). Observations were primarily multi-site daytime monitoring events. This provides the best opportunity for comparing nesting stages between sites and for understanding the dynamics or interaction of the birds within the community. Observations spanned all phases of the chimney swifts' time spent in St. Adolphe: arrival; nest building; incubation of eggs (18-21 days); feeding and brooding juveniles from hatching to 6-7 days of age; feeding non-brooded juveniles aged 6-7 to 28-30 days old; fledging of juveniles from the chimney; pre-migratory grouping; end of season southern migration. Nesting time-line information is based on studies in Texas (Kyle, G. Z., and P. D. Kyle. 2005. Chimney Swifts. America's Mysterious Birds Above the Fireplace. Texas A & M University, College Station. ISBN 1-58544-371-9) and Manitoba (Stewart, B. E., and R. E. A. Stewart. 2010. Nest site use and breeding success of chimney swifts in St. Adolphe, MB, 2007-2009. Blue Jay 68(3): 124-132.)

The Chimney Swifts were first seen around the Church on Friday, May 13 (S. Leclerc, pers. comm.) and two birds were observed entering the Church during the day on Sunday, May 15. By early June, pairs of breeding chimney swifts were established in each of the five nest sites (Table 1).

After the arrival phase, the 2011 season did not follow general trends seen in previous years. Overall, the onset of nest building appeared to lag from the chimney swift's arrival time and nest building proceeded slowly. In the case of the Main St. pair, the nest was completed after four weeks then incubation started on July 1. This date already predicted timing issues for successful fledging relative to typical migration dates.

A secondary group of chimney swifts (late-arriving migrants or dispersing birds from the region) appeared to arrive in early July. Ten local chimney swifts were well established at the incubation stage – a pair per nest site. The additional group of 4-5 chimney swifts was observed flying over sites and entries were made into two sites at least. A hostile interaction appeared to occur as 2 chimney swifts entered the NE Club Amical chimney and within a minute exited, followed quickly by a third, vocalizing bird (the incubating parent). After several minutes, a bird returned to the chimney and then a typical incubating change-up took place. Normal exchanges followed over the remaining incubation stage. At the Brodeur Bros. chimney, many entries by a third chimney swift took place over four days and the incubation schedule became unstable until the ultimate abandonment of the nest site took place.

The next occurrences of nest failure were at Main St. and SE Club Amical on the same day (Table 1). Behaviour observations of the Main St. chimney swifts did not detect changes of activity pattern to suggest hatching and feeding of young had taken place. Two dead hatchlings were observed in the cleanout trap, however. Similarly, daytime abandonment of the SE Club Amical chimney was abrupt but likely at the incubation stage as the pair had started incubating several days after the Main St. pair.

The fourth nest failure was linked strongly to food shortages. Unfortunately, on Day 25 of feeding non-brooded young in the Church chimney, the parents abandoned the nest site during the day (Table 1) – three days prior to the predicted fledging day. On the same date, the feeding rate at the NE Club Amical chimney declined to 1 time per hour, down from the previous days feeding rate of 4 times per hour. It appeared that the lack of available insects to feed juveniles contributed to the nest failure at the Church.

The only successful nesting attempt occurred at the NE Club Amical site when one juvenile fledged on Sat. Aug. 6 (Table 1). From previous years data, we can assume that some mortality likely took place at this site also e.g., unhatched or broken eggs or death of a juvenile prior to fledging.

Roosting of adult chimney swifts continued at nest sites that were unsuccessful until shortly after the fledging at the NE Club Amical chimney. Then quick withdrawal/dispersal from the unsuccessful nest sites occurred within 2–4 days. The Church, Main St., and SE Club chimneys were empty between Aug. 8-10. No congregations of local and migrants occurred at the Church as was seen in 2008-2010; this situation was similar to 2007 when there was not a successful nesting attempt.

Indeed, no major local aggregations for roosting occurred in 2011. During the post-fledging phase, when flight proficiency is developed, the residual population of chimney swifts roosted at the NE Club Amical natal site and the Brodeur Bros. chimney. These local birds appeared to migrate by Aug. 16. This was an early withdrawal from the community compared to previous years, likely associated with poor food supplies.

A small number of migrants appeared to pass through St. Adolphe after the local birds dispersed. The last chimney swifts seen in St. Adolphe, on August 17, were 2 migrants that appeared over Le Club Amical late in the roosting hour. After repeatedly circling the chimney tops the slow, low flying swifts were chased by a pair of hawks (Coopers or Sharp Shinned). There were avoidance maneuvers made as the chimney swifts dodged the hawk's attack – the predators and would-be prey moved out of sight; after 15 minutes, one chimney swift returned to circle the NE Club Amical chimney, then left the area to the east. No chimney swifts roosted in the building that night. No further sightings of chimney swifts in St. Adolphe were made.

## COMMUNITY NEWS

After the Ferry Site Tower was relocated to the new pad on the Church grounds on Oct. 20, 2010, unseasonably warm weather continued. This allowed mason Bill Anderson to put a recycled, brick veneer on the tower. The final modification to the tower was made when a rain shield designed and built by Rob Stewart was installed on May 26, 2011, assisted by Ryan Stewart, Auguste Lagasse, Leon Verhaeghe, Frank Machovec, and Jacquie Machovec. We thank Sage Garden Herbs and Blue Grass Sod Producers, and The Lady Gray'l Trust for supporting landscaping and signage for the tower site. Chimney Swifts were seen repeatedly flying over the tower in a follow-the-leader parade in June. This is encouraging and we hope to have entries in the tower next spring as migrants arrive.

Another exciting development this year was the commitment provided by the Niverville Corp. to reclaim and reuse bricks from the future demolition of the St. Adolphe Nursing Home. A new structure for chimney swifts will be built on the existing site. With a rich history of use as a nun's residence, the site of the Miracle Room, a school, and presently as a nursing home, the building's legacy will endure as the bricks support a natural history project which creates new habitat for St. Adolphe's chimney swifts.

Grant Burr, a photojournalist from The Carillon in Steinbach, joined birding enthusiasts at the Church on Aug. 8<sup>th</sup>. The only evening rain event of the summer occurred that night and the chimney swifts had started to migrate early. Despite limited sightings, Grant captured the essence of swift watches in his article published on Aug. 25.

Our coordinator, Frank Machovec, was invited to St. Adolphe's first annual community festival "Mudfest". Many interested people showed up at the MCSI booth to see a chimney swift nest and talk about the bird's presence in the community.

Frank has created a new MCSI website: [www.mbchimneyswift.ca](http://www.mbchimneyswift.ca) Check the site for general links e.g., MCSI brochure, monitoring guides and for specific St. Adolphe information e.g., nesting data for 2010 contained in the yearly report.

In 2012, we hope to welcome pairs of chimney swifts back to each nest site and to the tower for the first time! At the risk of being unpopular, we would also like to welcome some mosquitoes back too...

TABLE 1. SUMMARY OF CHIMNEY SWIFT USE OF 5 NEST SITES IN ST. ADOLPHE, MB, 2011.  
THE INFORMATION IS BASED ON 136 HOURS OF OBSERVATION.

CHIMNEY	FIRST DATE USED	LAST DATE USED	OUTCOME OF NESTING ATTEMPT	MAX. NO. OF SWIFTS	NO. DAY OBS. MADE	NO. ROOST OBS. MADE
SE CLUB AMICAL	a. Arrival unknown; May 25 – June 1 to June 6 nest building by single bird b. June 11-19 nest building by single bird; June 21 = pair at site	a. June 6 day; unknown roost  b. July 18 day; Aug. 9 roost	a. not a long-term nesting attempt by pair  b. nest failed July 19 – Day 12 of Incubation; no indication of hatching	2  2	61	9
NE CLUB AMICAL	June 1-4 nest building by pair	Aug. 14 day; Aug. 15-16 roost	One juvenile fledged Aug. 6	4; during pre-migration	61	9
BRODEUR BROS.	May 25-26 arrive; May 26 nest building by pair	July 15 day; Aug. 11-12 roost	Nest failed July 16 = Day 22 of Incubation; no indication of hatching; cleanout = 4 unhatched eggs + 3 empty eggs, no bodies, no nest	3	23	5
CHURCH	May 13 arrive; May 15 nest building by pair	Aug. 1 – Day; Aug. 7-8 roost	Nest failed Aug. 2 = Day 25 of feeding non-brooded juveniles	3	36	4
MAIN ST	May arrival unknown; May 24 nest building by pair	July 18 day; roost unknown; Aug. 10 = 0 roost	Nest failed July 19; cleanout = 2 juv. ~ 1-2 days old + 7 half egg shells, no nest	2	18	1