

SEPTEMBER SWIFTS

by Eliot Taylor, Sherborn

At dusk on Wednesday, September 3, 1975, I noticed a few swallowlike birds flying over the railyards near the Winter Street railroad bridge in Framingham, Massachusetts. Turning east onto Route 135, I saw about 100 Chimney Swifts circling over the 38-foot-high 5-foot-square brick chimney at the Bonazolli Heating Corporation at 885 Waverly Street. I parked at the curb and saw that from time to time a few birds would leave the circling flock and disappear into the chimney. This circling continued for about 30 minutes until all of the swifts were safely inside.

I was unable to watch the chimney again until Monday, September 8, when I was pleasantly surprised to see that the swifts were still there. I then little realized that I would see my last swifts enter the chimney one month later on October 7 and that on 25 of the next 30 evenings, and on two mornings, I would spend a total of some 18 hours watching the chimney and counting swifts.

On a typical evening, if I arrived early enough, I would look up into an empty sky and wonder if the birds had left for the season. Then about 20 minutes before the streetlights started coming on I would see from one to ten, or more, swifts flying over the neighborhood. They would often disappear again for as long as 5 minutes and then reappear and start flying past the top of the chimney. Sooner or later one or two birds would enter the chimney, and it would usually be many minutes before any more would go in. Often the circling birds would again leave the area and not be seen for many minutes. As it started to get dark, more birds would appear and a few more would flutter into the chimney. Again, I would wonder if I would see any more than the 20 or so birds that were now circling.

At about sunset the street lights would start to come on and the circling flock would suddenly grow to over 100 birds that would, for the most part, form into an elliptical ring about 200 feet long, by 100 feet wide, by 30 feet in height, and fly at typical Chimney-Swift speed counter-clockwise. On calm evenings, or when southwesterly breezes prevailed, the swifts would keep near the chimney at the lower center of the southeast corner of the ellipse and fly into the wind as they entered the chimney. On the few nights having northeasterly winds the birds would shift their pattern and again enter the chimney against the wind.

Most of the time it was easy to count the birds as they entered the chimney. As some of the swifts would round the fourth turn of this clockwise race track, one bird would stop its forward motion, by rapidly flapping its wings a few times, fanning its small tail, and flutter down into the chimney. This rapid stop-and-drop action all takes place in less than a second and usually within two feet of the chimney top. Sometimes you would wonder how a bird flying that fast could stop its forward motion and disappear that quickly. Now you see a few more drop in, so you stop wondering and go back to counting.

At times five or more birds would round the fourth turn and all would stop and drop into the chimney one above the other just in time to clear the way for another echelon, which would in turn disappear just in time for the third group, etc. Once as many as 177 swifts entered the chimney in a single minute. Although this averages out to 3 swifts per second, it is likely that the fall-out rate over short intervals varied from scores to none at all. During these times of rapid entry I would have to count by fives or tens and try my best to estimate the number of birds as they dropped in. I emphasize that these birds give no indication that they are going to enter the chimney until the last split second, and as they drop, many other swifts are simply flying past the chimney within a few feet or even inches.

Fortunately on many nights I had someone with me to keep track of the time and to write down my numbers as I counted out loud. On the nights that I was alone it was difficult to see the sweep second hand on my watch, observe the chimney, count birds, and write down numbers and notes.

Below are my nightly totals. I would allow an error of no more than five percent, for the times when the birds entered the chimney faster than I could accurately count them. It seems that the large differences in the consecutive totals could be due to a progressive migration. That is, as part of one flock would fly south during the day, I would see its remainder plus a new flock of birds fly into the chimney on the next night.

Sept.	Sept.	Sept.	Oct.
8 295	17 223 A.M.	24 18 Rain	4 275
9 360	17 490 P.M.	25 None Drizzle	5 58
11 353	18 Many	26 122 Fog	6 45
13 353	19 494	30 314	7 2
		Oct.	
15 476	21 411	1 327	8 None
16 520 A.M.	22 370	2 273	9 None
16 727 P.M.	23 445	3 218	

It was interesting to note that the birds didn't like loud noises. Each night three large trucks drove out of the yard. At times railroad locomotives would rumble through the nearby rail yard and sometimes loud cars or motorcycles would go by on the street. At these times of noise distraction the swifts would circle at 30 to 60 feet above the chimney rather than from chimney top to 30 feet above. Occasionally their ring formation would become a sort of figure-eight pattern, often taking two minutes before getting re-organized into their lower altitude ellipse.

There is a 10-foot-high radio antenna attached to the west side of the chimney, and although the swifts flew past it thousands of times each night, I never saw it shake from being hit. However, once in a while a swift would pull in a wing or make some other quick dodging maneuver to avoid it, and never once did I see two swifts collide in spite of all of their close-formation flying.

On all but three nights it was one-way traffic into the chimney. On September 16 between 6:36 (EDT) and 6:41 one swift flew in and 11 flew out, which said that there were at least 10 swifts already inside when I arrived. However, from 6:50 to 7:23 a record number of 727 swifts flew into the chimney. It was raining moderately on September 23. Between 6:31 and 6:38 one swift flew in and 3 flew out, then between 6:40 and 6:53 445 flew in, flying in their normal formation and apparently not minding the rain. There was a thick fog on Friday, September 26, with the visibility about 800 feet. Between 6:19 and 6:38 20 birds flew in and 81 flew out, then from 6:39 to 6:50 122 flew in. I talked with the owner of the heating company and he said that the inside of the chimney had been sealed off, therefore nothing could harm the birds and vice versa.

On the morning of September 16 I arrived at 5:35 A.M., while it was still dark. At 6:17 it was very light even though the street lights were still on. At 6:18 I saw over 100 swifts pour out of the chimney, drop a foot or two over the north side, then fly over a 40-foot-high building and out over the railyards. In about 20 seconds 13 birds reappeared and flew into the chimney. In the next minute well over 200 swifts flew out, so fast that I couldn't come close to estimating their number. They looked like smoke coming out on a very windy day, and they followed the same route as the first group. The big surprise came during the next 20 minutes, when I counted 400 swifts flying back into the chimney, and they continued to arrive until a total of 520 had returned by 7:21. Between 7:30 and 7:35 over 200, probably many more, left the chimney and again flew northward toward the tracks. I watched the chimney until 8:00 A.M. and saw no more swifts.

On the morning of September 17 I had similar sightings. Between 6:16 and 6:30 over 400 birds left the chimney and between 6:27 and 7:17 223 flew back in. From 7:20 until 8:53 200 or more flew out while only 10 flew in. This morning out-in-out behavior leads me to wonder if the birds fly out just long enough to excrete and then return to the chimney to wait for their food of flying insects to become air-borne or for some scout birds to locate a good feeding area for the rest of the flock.

On a few days I watched the chimney for ten or fifteen minutes during the mid-afternoon, but I never saw any swifts at these times. It seems that most all of the chimney enterings was done at dusk, except on the dark rainy days of September 24, 25 and 26 when over three inches of rain fell and my twilight counts were low. On some evenings I never did see the last two or three circling swifts enter the chimney, which led me to wonder if they might have roosted elsewhere in the neighborhood. However, on other nights I would watch these last few circle about and finally flutter in.

On the evening of October 7 I arrived at 6:15. At 6:29 2 swifts appeared, circled the area about six times at about 50 feet and at 6:30 both birds disappeared into the chimney. Although I watched for the next two nights, these were the last 2 Chimney Swifts that I was to see in 1975.

RATE OF SWIFTS ENTERING CHIMNEY ON TYPICAL EVENINGS

Time(EDT)	Sept. 8			Sept. 11			Sept. 13			Sept. 15			Sept. 16		
	n	*	%	n	*	%	n	*	%	n	*	%	n	*	%
6:35-40				1	1	0									
6:40-45				1	2	1									
6:45-50				2	4	1	1	1	0	7	7	1			
6:50-55										5	12	3	5	5	1
6:55-00				3	7	2	1	2	1	15	27	6	12	17	2
7:00-05				3	10	3	22	24	7	49	76	16	37	54	7
7:05-10	2	2	1	3	13	4	29	53	15	9	85	18	32	86	12
7:10-15				9	22	6	45	98	28	15	100	21	104	190	26
7:15-20	12	14	5	36	58	16	29	127	36	376	476	100	75	265	36
7:20-25	11	25	8	245	303	86	58	185	52				462	727	100
7:25-30	50	75	25	48	351	99	168	353	100						
7:30-35	220	295	100	2	353	100									
7:35-40															

Time(EDT)	Sept. 17			Sept. 19			Sept. 21			Sept. 22			Sept. 23		
	n	*	%	n	*	%	n	*	%	n	*	%	n	*	%
6:20-25							4	4	1						
6:25-30							1	5	1						
6:30-35				4	4	1									
6:35-40				2	6	1									
6:40-45	3	3	1	2	8	2	1	6	1	2	2	1	20	20	4
6:45-50	4	7	1	112	120	24	7	13	3	2	4	1	180	200	45
6:50-55	3	10	2	24	144	29	7	20	5	156	160	43	245	445	100
6:55-00	89	99	20	24	168	34	4	24	6	210	370	100			
7:00-05	13	112	23	322	490	99	13	37	9						
7:05-10	11	123	25	4	494	100	363	400	97						
7:10-15	367	490	100				11	411	100						
7:15-20															

Time(EDT)	Sept. 30			Oct. 1			Oct. 2			Oct. 3			Oct. 4		
	n	*	%	n	*	%	n	*	%	n	*	%	n	*	%
6:20-25							23	23	8				3	3	1
6:25-30							18	41	15						
6:30-35	3	3	1	5	5	2	30	71	26				9	12	4
6:35-40	5	8	3	15	20	6	33	104	38				15	27	10
6:40-45	9	17	5	31	51	16	3	107	39	31	31	14	30	57	21
6:45-50	10	27	9	18	69	21	100	207	76	187	218	100	216	273	99
6:50-55	235	262	83	258	327	100	66	273	100				2	275	100
6:55-00	52	314	100												
7:00-05															
7:05-10															

Time(EDT)	Oct. 5			Oct. 6		
	n	*	%	n	*	%
6:25-30	8	8	14	1	1	2
6:30-35	45	53	91	2	3	7
6:35-40	5	58	100	39	42	93
6:40-45				3	45	100
6:45-50						
6:50-55						

n = Number of birds that entered chimney during time period.
 * = Total number of birds in chimney at end of time period.
 % = Total percent of night's flock inside chimney at end of time period.