

THE STONE BRIDGE COMMON NIGHTHAWK WATCH: THREE YEARS OF DATA

Patrice Domeischel

25 Bluetop Road, Setauket, NY 11733
patrice5421@hotmail.com

John L. Turner

19 Main Street, Setauket, NY 11733
redknot@optonline.net

For the past three years (2017, 2018, and 2019) the Four Harbors Audubon Society has conducted an annual census involving the Common Nighthawk (*Chordeiles minor*) at a site in Setauket, Suffolk County, New York. Known as the “Stone Bridge Nighthawk Watch,” it takes place at the southern end of Frank Melville Memorial Park where a stone bridge traverses a waterway, the dominant feature in the park. It runs from 27 August to 6 October each year. In 2017, 2018, and 2019 we counted 2,046, 2,018, and 2,757 nighthawks, respectively (Table 1, Fig. 1). One of the authors (JT) described the first year of the Nighthawk Watch in the September 2018 issue of *The Kingbird* (Turner 2018). In 2017 observers counted the aforementioned 2,046 nighthawks in 4,022 minutes of observation, an average of 0.51 birds per minute in that first count.

In 2018 the count largely mirrored the prior year’s count both in terms of the total number of birds as well as the pace at which they moved through. Similarly, by 11 September we had 1,363 in 2017 and 1,326 nighthawks in 2018 and by 25 September 1,985 and 1,968 nighthawks passed by in 2017 and 2018, respectively. The 2019 census started off at nearly an identical rate with 1,372 nighthawks being seen through 11 September. However, on 17, 18, and 19 September, days with clear weather, no nighthawks passed through the Watch, leading us to believe the season may be ending early; it was the first time in the three-year history of the watch we had a three-day consecutive drought in the peak month of September.

By 19 September, nighthawks totaled about 400 fewer birds than the totals up to that date in each of the previous two years, and we surmised it might indicate an early conclusion to the count year. Then, on 20 September, the skies opened. The first of over 1,300 birds coursed through, and nighthawk numbers steadily increased. Soon, numbers had reached and surpassed the 2017 and 2018 totals of 2,046 and 2,018, respectively, and our fears of a premature end to the season were allayed. The total number of nighthawks nearly doubled during the final seventeen days of the Watch, ending on 6 October with 2,757 nighthawks counted for the season, the highest annual total recorded in the three-year census history. This total is 711 and 739 more birds than tallied in 2017 and 2018, respectively. Surprisingly, we tallied 237 nighthawks on 1 October, a somewhat late date for the season, this daily total being the second highest of the 2019 season (in contrast,

	2017				2018				2019			
Date	Count	Min.	BPM	Cum.	Count	Min.	BPM	Cum.	Count	Min.	BPM	Cum.
8/27	7	105	0.07	7	68	141	0.48	68	20	141	0.14	20
8/28	5	115	0.04	12	71	131	0.54	139	0	90	0.00	20
8/29	0	0	0.00	12	74	139	0.53	213	12	139	0.09	32
8/30	26	119	0.22	38	28	137	0.20	241	148	131	1.13	180
8/31	5	115	0.04	43	18	128	0.14	259	30	138	0.22	210
9/1	21	115	0.18	64	211	133	1.59	470	88	132	0.67	298
9/2	13	93	0.14	77	106	118	0.90	576	23	133	0.17	321
9/3	64	128	0.50	141	141	130	1.08	717	281	134	2.10	602
9/4	164	127	1.29	305	56	130	0.43	773	69	128	0.54	671
9/5	101	124	0.81	406	178	126	1.41	951	179	128	1.40	850
9/6	3	60	0.05	409	5	37	0.14	956	3	86	0.03	853
9/7	302	124	2.44	711	23	108	0.21	979	91	127	0.72	944
9/8	573	122	4.70	1284	23	106	0.22	1002	43	123	0.35	987
9/9	36	120	0.30	1320	18	100	0.18	1020	139	120	1.16	1126
9/10	17	120	0.14	1337	1	65	0.02	1021	151	112	1.35	1277
9/11	26	115	0.23	1363	306	105	2.91	1327	95	112	0.85	1372
9/12	27	119	0.23	1390	57	98	0.58	1384	2	100	0.02	1374
9/13	135	110	1.23	1525	35	106	0.33	1419	5	115	0.04	1379
9/14	83	112	0.74	1608	16	105	0.15	1435	15	117	0.13	1394
9/15	107	113	0.95	1715	71	71	1.00	1506	27	109	0.25	1421
9/16	35	131	0.27	1750	77	109	0.71	1583	14	105	0.13	1435
9/17	74	115	0.64	1824	65	94	0.69	1648	0	104	0.00	1435
9/18	9	105	0.09	1833	114	100	1.14	1762	0	100	0.00	1435
9/19	0	41	0.00	1833	80	97	0.82	1842	0	101	0.00	1435
9/20	25	96	0.26	1858	97	85	1.14	1939	66	107	0.62	1501
9/21	10	88	0.11	1868	19	97	0.20	1958	104	101	1.03	1605
9/22	15	90	0.17	1883	5	100	0.05	1963	154	92	1.67	1759
9/23	14	98	0.14	1897	5	97	0.05	1968	155	112	1.38	1914
9/24	16	101	0.16	1913	0	88	0.00	1968	154	110	1.40	2068
9/25	72	90	0.80	1985	0	25	0.00	1968	92	97	0.95	2160
9/26	28	98	0.29	2013	19	78	0.24	1987	15	87	0.17	2175
9/27	16	87	0.18	2029	10	90	0.11	1997	172	95	1.81	2347
9/28	1	83	0.01	2030	0	90	0.00	1997	90	92	0.98	2437
9/29	0	90	0.00	2030	16	90	0.18	2013	14	90	0.16	2451
9/30	0	83	0.00	2030	0	85	0.00	2013	31	75	0.41	2482
10/1	0	88	0.00	2030	3	84	0.04	2016	237	114	2.08	2719
10/2	3	81	0.04	2033	0	69	0.00	2016	29	83	0.35	2748
10/3	0	80	0.00	2033	2	80	0.03	2018	0	60	0.00	2748
10/4	3	70	0.04	2036	0	64	0.00	2018	9	80	0.11	2757
10/5	4	71	0.06	2040	0	75	0.00	2018	0	85	0.00	2757
10/6	6	80	0.08	2046	0	75	0.00	2018	0	68	0.00	2757

Table 1. Summary data from the Stone Bridge Common Nighthawk Watch, Setauket, Suffolk, NY 2017-2019: Daily counts, minutes of effort (Min.), birds per minute (BPM), and cumulative totals to date (Cum.).

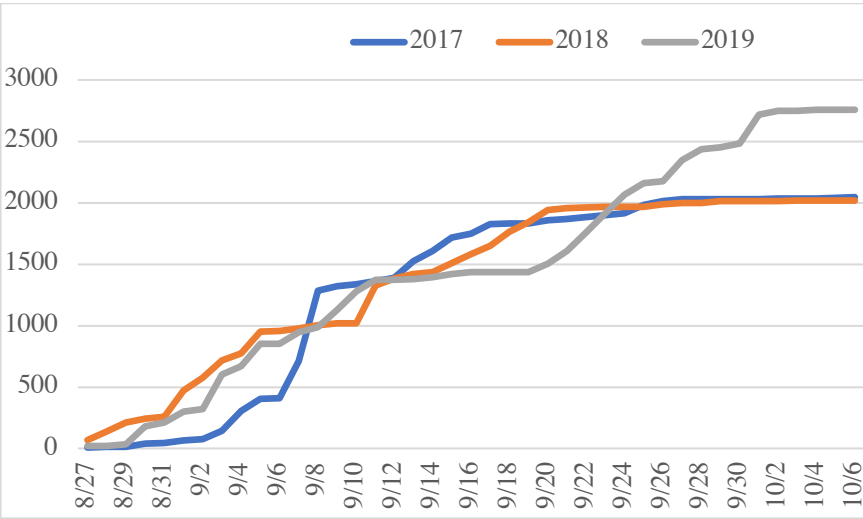


Figure 1. Cumulative counts at the Stone Bridge Common Nighthawk Watch, Setauket, Suffolk, NY 2017-2019.

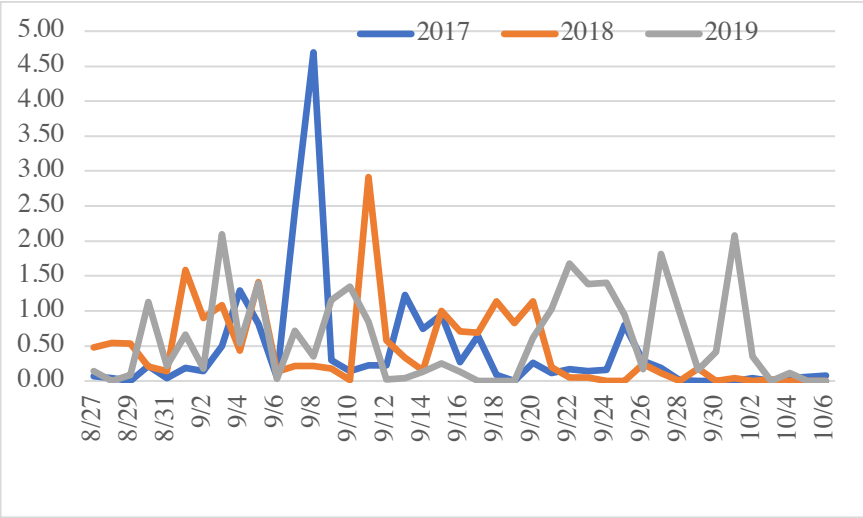


Figure 2. Birds per minute at the Stone Bridge Common Nighthawk Watch, Setauket, Suffolk, NY 2017-2019.

in 2017 we saw no nighthawks on this date and in 2018 tallied only three). We hypothesized that a mass delayed migration, possibly weather related, had taken place.

Nighthawk movement during the 2019 count period was steady and spread out with occasional larger flocks streaming through. There were very few memorable banner days, though, and many evenings migrating nighthawks were frustratingly distant, allowing only long-range views.

The highest single daily total for the three years remains the 573 nighthawks we saw on 8 September 2017, followed by 306 birds on 11 September 2018 and 302 birds on 7 September 2017 (see bolded values in Table 1).

A key statistic that we have tracked is the number of “birds-per-minute” or bpm (Table 1, Fig. 2). This “per-unit-effort” statistic can help ensure that results aren’t affected or distorted by the number of minutes logged by observers. It is simply a fraction of the number of total birds seen divided by the total minutes tallied. In 2019 we had 0.63 bpm, while the bpm in 2018 was 0.51 and, as mentioned above, was 0.51 in 2017.

This year, 2019, we continued to observe other bird and wildlife species at the Nighthawk Watch. Our resident Belted Kingfisher continued to steal our breath when he flew dangerously low back and forth over Old Field Road most evenings. Mixed blackbird flocks involving hundreds, sometimes thousands, of Common Grackles, Red-winged Blackbirds, European Starlings, and Brown-headed Cowbirds continued to return each evening to their roost in the stands of phragmites north of the spillway to the pond. Blue Jays carrying acorns were seen during the latter part of the Watch. As the season progressed, we began to see the first winter ducks including a female Northern Pintail and the expected collection of “puddle ducks”—Gadwall and American Widgeon. Resident and migrating raptors flew overhead, some harassing the murmurations of Starlings. Typically the Nighthawk Watch closed for the evening when one or more bats emerged at dusk, a Red Bat (*Lasiurus borealis*) being the only species we could conclusively identify.

One of the more interesting aspects of the Watch has been the occasional appearance of “tailless” nighthawks. In both 2017 and 2018 we saw a few tailless birds which led us to pay more attention to the number of tailless birds we saw in 2019. Four were seen in 2019 with two encountered on the same evening. This prompted some interesting questions. Are tailless nighthawks the result of an encounter with an avian predator? Are they immature or molting birds?

Previous account descriptions on molting in this species indicate the definitive basic molt “rarely begins or proceeds to any significant extent on the breeding grounds, but rather occurs largely or entirely on the wintering grounds after fall migration” (Selander 1954). However, one bird was photographed (see photo p. 152) by one of the authors (PD), illustrating a tailless individual, which showed the beginnings of a tail emerging that could denote a molt in progress. This bird lacked the white throat of an adult male (normally we would see a white subterminal tail band as well but obviously could not because of a lack of a tail),

instead showing the buffy or dark throat of a female or immature bird. The wing blazes looked substantial enough to be an adult, but we suspect this bird is probably a juvenile. Getting a clear photo of each of the tailless birds would have been optimal, providing an interesting comparison, which we will endeavor to do at future Watches.

Studies like the Nighthawk Watch create more interesting and intriguing questions which we and other researchers will try to answer. Can we use the Watch to better understand the process of molting in Common Nighthawks? Does the pattern of nighthawk movement at the Watch provide details on the extent to which weather, both locally and further north, affects fall nighthawk migration and perhaps the movement of other migrating birds?

To all who have visited the Stone Bridge Nighthawk Watch over the past three years and counted alongside us (and occasionally filled in for us), we are grateful for your help, and we hope you will all join us again next year at the Frank Melville Stone Bridge for census year four!

LITERATURE CITED

- Selander, R.K. 1954. A systematic review of the booming nighthawks of western North America. *Condor* 56:57-82.
- Turner, J. L. 2018. The Stone Bridge Nighthawk Watch 2017 season. *The Kingbird* 68:179-181.





“Tailless” Common Nighthawk, Stone Bridge Common Nighthawk Watch, Setauket, Suffolk, 22 Sep 2019, © Patrice Domeischel. See article pp. 120-124.