

## Icterids to House Sparrow

By Alix d'Entremont

It was a very good season for EVENING GROSBEAK throughout the province; abundance peaked during the second half of November, however, and numbers fell quickly. Perhaps our conifer and deciduous seed crops were too poor to sustain the numbers, so the birds' search for food took most of them elsewhere. Countless photos of grosbeaks visiting feeders were posted on social media, with many people making note of their recent scarcity. Regarding call types, we are now learning that Evening Grosbeaks, like Red Crossbill, have geographically restricted call types. (For more information, see <https://ebird.org/news/evening-grosbeak-call-types-of-north-america>.) The three eBird observations that included identification of call types showed that the grosbeaks were of the expected type 3, our regional breeding population. There was a very light sprinkling of COMMON REDPOLL, and it was a medium year for PINE SISKIN. There was no appreciable influx of either CROSSBILL or PINE GROSBEAK.

The total of 11 **YELLOW-HEADED BLACKBIRDS** this season was about three times the 10-year average. Two were first noted in August, one in September, and the remainder during Oct-Nov. Single **EASTERN MEADOWLARKS** were at Daniels Head, CSI, Nov 10-12 (Mark Dennis, m. obs., ph.), and West Head, Shel, Nov 18 (Bill Crosby, ph.).

The only **ORCHARD ORIOLES** were both found on Aug 23, at BP (Lucinda Zawadzki, ph.) and Cape Forchu, Yar (RDE, ph.), and the latter was re-found the next day (PRG, ph.). Details of the province's first **HOODED ORIOLE** found on Seal I. Aug 26 (Bertin d'Eon, KAM, AAD, ph.) can be read on page 29. **BALTIMORE ORIOLE** numbers were similar to recent years, at about 110 individuals. Densest concentrations were in the entire western half of the province and particularly in *Halifax*, perhaps due at least partly to the relatively high level of observers in that county and the amount of multiflora habitat.

Throughout the province, 36 **RUSTY BLACKBIRDS** were reported, which is slightly higher than the recent average. The story of a **BREWER'S BLACKBIRD** first found at Daniels Head, CSI, Nov 30 (Johnny and Sandra Nickerson; EOL, ph.), and which continued to be seen during early December, will be written up in the next (winter) issue.

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**The monitoring station at Beaver River, Yar. The surrounding habitat is a combination of old fields, coastal spruce, marshes, river, and ocean.**

*Photo by John Kearney*

## Nocturnal Migration at Beaver River, Yarmouth County, Autumn 2018

By John Kearney

For the past ten years I have recorded the night flight calls of nocturnal migrants at twenty different locations in Nova Scotia. This report is about my acoustic monitoring at Beaver River, Yarmouth County, during autumn 2018.

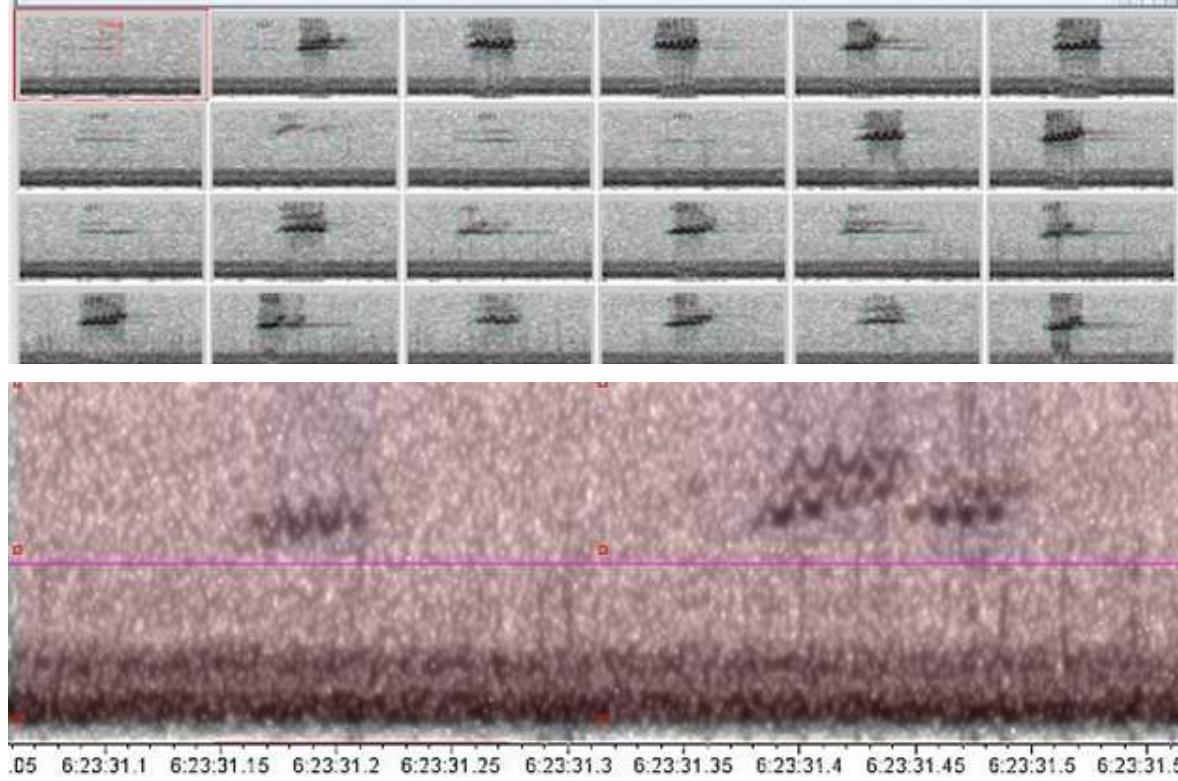
Acoustic monitoring uses specially designed microphones to detect the flight calls of nocturnal migrants at altitudes up to about 300 meters. The microphone can detect bird calls only in the column of air directly above it. The calls are recorded and then analyzed using software to extract the calls from the recording. The flight calls can be identified to the species level in most cases by studying the spectrogram of each call. It is a time-consuming process that can take a half hour to three hours per day; recent advances in machine-learning, however, promise to more fully automate the process in the near future.

It is appropriate to keep the reporting of the occurrence of birds detected by acoustic recordings separate from those obtained by the observations of birders. One reason for this is that my recording station runs all night. This is a very different kind of measurement of bird abundance than that provided by birders visiting a site for several minutes or hours. A second reason is that the recorder is counting the number of calls of unseen birds. Since an individual bird may call more than once when flying over, it is necessary to estimate how many birds the total number of calls represents. Finally, the night flight calls of quite a few species are very similar to each other. Thus, 100% certainty of identification is impossible for these species, and the best one can strive for is a high percentage of probability that the identification is correct. To account for the particularities of the nocturnal acoustic monitoring data,



**The spectrograms of Northern Waterthrush calls recorded over a 19-second period on Sep 9. The darker calls are those close to the microphone and the lighter calls are those farther away.**

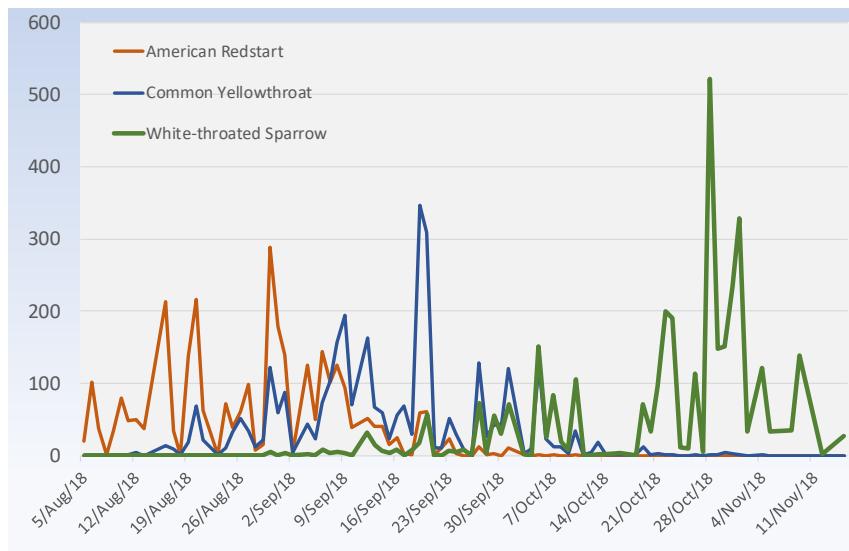
**Three Northern Waterthrush calls recorded within one-third of a second. The call above the middle call may be a fourth call or a second band of the call below it. Given the almost simultaneous nature of the calls, this clip likely represents 3 to 4 birds.**



an eBird protocol named *Nocturnal Flight Call Count* was established and is used for my data.

The total number of flight calls recorded from early August to mid-November in 2018 was 41,804, which represented an estimated 25,658 birds. The three most common birds were Common Yellowthroat (1,955 estimated birds), White-throated Sparrow (1,875 estimated birds), and American Redstart (1,851 estimated birds). The chart on the right shows the timing of the nocturnal migrations of these three species.

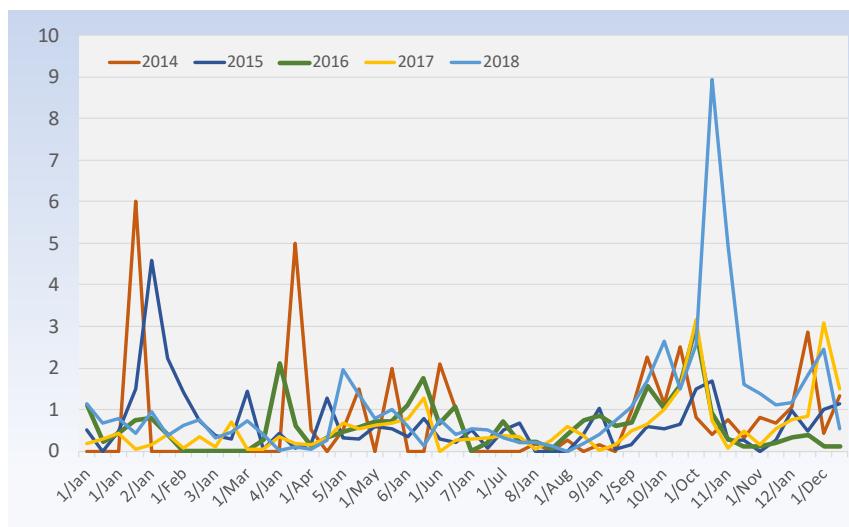
There were many notable occurrences during this migration season, and I will highlight what I think are three of the most interesting. The first was the big flight of Canada Warblers. This species is one of the early migrating warblers, and this year it reached its peak numbers on Aug 16. The flight call of this warbler is one that can be identified with near 100% certainty. The Canada Warbler is a species of conservation concern and is listed by the federal government as threatened and by the Nova Scotia government as endangered. As one might expect of a threatened species, the number of Canada Warblers that I have detected in most other locations in the



**Total calls by date for American Redstart (peak on Aug 30), Common Yellowthroat (peak on Sep 19), and White-throated Sparrow (peak on Oct 28).**

**The peaks in abundance of these three species correspond with the migration timing of early warblers, later warblers, and sparrows, respectively.**

**This chart, taken from eBird, shows the weekly abundance of White-throated Sparrows in Yarmouth County during the 5-year period 2014-2018. Note the obvious peak during late-October 2018.**



**American Redstart at Blanche, Shel, Aug 16.**  
Photo by Sandra Dennis

past was quite low, ranging from only 4 birds a season up to an estimated 100-150 birds. At Beaver River, a total of 517 calls of the Canada Warbler were recorded Aug 5-Sep 29, for an estimated 388 birds. Only at Cape Forchu last year did the number of Canada Warblers I recorded approach those at Beaver River. As the two monitoring stations are only 23 km apart, this could mean that the western portion of Yarmouth County is a concentration point for Canada Warblers crossing the Bay of Fundy and the Gulf of Maine. Alternatively, it might raise the prospect that the population of Canada Warbler is increasing.

Another interesting event was a fallout of Northern Waterthrushes about an hour before sunrise on Sep 9, when a total of 217 flight calls, representing an estimated 76 birds, was recorded in about 15 minutes. Previous to this occurrence I've only had this many waterthrushes once, and that time it was the count for an entire night. For many locations, this number is more than what is recorded during the whole autumn season.

A third remarkable aspect of the nocturnal migration at Beaver River this season was the large number and variety of sparrows. A total of 8,999 sparrow calls, representing an estimated 5,349 sparrows, was recorded. Thirteen sparrow



species were identified (see summary table on the next page), including an unusually high number of White-crowned Sparrows (57 birds estimated). This large migration of sparrows is reflected in the observations of birders as well. According to eBird, the peak count of White-throated Sparrows seen by birders in the last week of October 2018 was over 5 times greater than during any other year in the period 2014-2018.

Acoustic monitoring often reveals a variety of rare birds. The highlights at Beaver River this autumn included Upland Sandpiper and a Blue-winged/Golden-winged Warbler, two warbler species whose flight calls can't be distinguished from each other. Other infrequent species can be seen in the table on the next page, which summarizes the season.

**Wild Bird Seed**  
**Blue Jay Mix**  
**Wild Finch Mix**  
**Raw Peanuts**  
**Corn**  
**Sunflower**  
**Safflower**  
**Millet**



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1397 Cole Harbour Road, Dartmouth Nova Scotia B2V 1N5  
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Species	Total Calls	Estimated Birds	Species	Total Calls	Estimated Birds
Common Yellowthroat	3,134	1,955	Golden-crowned Kinglet	50	31
White-throated Sparrow	3,355	1,875	Solitary Sandpiper	60	27
American Redstart	3,033	1,851	Spotted Sandpiper	66	23
warbler sp.	2,262	1,793	Least Sandpiper	32	19
Yellow-rumped Warbler	3,261	1,788	Indigo Bunting	18	16
Black-and-White Warbler	2,010	1,380	American Tree Sparrow	22	15
Magnolia Warbler	1,742	1,223	Prairie Warbler	15	12
Northern Parula	1,871	1,203	Purple Finch	69	12
Blackpoll Warbler	1,613	1,081	Pine Siskin	22	10
Swainson's Thrush	1,953	981	Sanderling	29	10
Savannah Sparrow	1,273	883	Ruddy Turnstone	40	9
Chestnut-sided Warbler	1,226	808	American Pipit	8	5
Palm Warbler	1,378	804	American Woodcock	13	5
sparrow sp.	1,078	700	House Finch	8	5
Song Sparrow	1,234	675	Vesper Sparrow	5	5
Black-throated Green Warbler	751	555	Gray-cheeked Thrush	6	4
Ovenbird	640	519	Dickcissel	3	3
Yellow Warbler	766	519	Pine Warbler	6	3
Dark-eyed Junco	854	442	Upland Sandpiper	4	3
Northern Waterthrush	676	421	Alder Flycatcher	3	2
passerine sp.	475	408	Black-bellied Plover	3	2
Canada Warbler	517	388	Clay-colored Sparrow	3	2
Chipping Sparrow	552	324	finch sp.	2	2
Wilson's Warbler	476	316	Killdeer	4	2
Lincoln's/Swamp Sparrow	469	311	Orange-crowned Warbler	2	2
Black-throated Blue Warbler	423	310	Wood Thrush	2	2
Bay-breasted Warbler	387	282	American Golden-Plover	1	1
Blackburnian Warbler	280	221	Baltimore Oriole	2	1
Cape May Warbler	328	216	Black-crowned Night-Heron	8	1
Red-breasted Nuthatch	506	195	Cedar Waxwing	2	1
Nashville Warbler	216	157	Field Sparrow	1	1
American Goldfinch	940	106	Gray Catbird	1	1
Veery	179	106	Horned Lark	1	1
Tennessee Warbler	147	105	Nelson's Sparrow	1	1
Hermit Thrush	157	87	Northern Mockingbird	4	1
Greater Yellowlegs	548	75	Pectoral Sandpiper	1	1
Fox Sparrow	82	58	Short-billed Dowitcher	5	1
White-crowned Sparrow	70	57	Scarlet Tanager	1	1
American Robin	96	54	Snow Bunting	1	1
Semipalmated Plover	133	54	unknown sp.	2	1
Mourning Warbler	62	53	Blue-winged/Golden-winged Warbler	1	1
Rose-breasted Grosbeak	65	37	Wilson's Snipe	6	1
Bobolink	52	34	Yellow-bellied Flycatcher	1	1