

Pelee Island Bird Observatory: Education Program Annual Report 2018

By: Sarah Keating, Education Coordinator

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Executive Summary

2018 was an amazing year for the PIBO education program. We continued to engage students across Windsor- Essex with our hands on programming, while also expanding the initiative in a variety of ways. From our first Music and Migration night raising funds for the program, to the addition of a multi-lingual educator, the PIBO education program has brought on welcomed changes that we look forward to implementing in 2019 and beyond.

This year, we were able to reach approximately 6000 students with our messaging, attend a variety of public and community events and retrofit 10 classrooms across our region to be bird safe and reduce bird collisions. We partnered with many organizations to help us along the way with materials, equipment, and even reviewing our strategic engagement. We completed, and submitted results of the TDFEF grant “Classroom Bird Collision Prevention Initiative” as well as worked on many other grant proposals, including requests for funds from Dowler-Karn Corporation, the AVIVA community fund, and the Windsor-Essex Community Foundation. We also received funding from LUSH cosmetics to add an additional educator that is fluent in English, French and Arabic.

Throughout the year, continued advertisement for our online lessons with advertisements and infographics designed by the EC and distributed by national partners helped us in completing our online lessons week with the highest participation on record. Thanks in part from the new technology of ZOOM, we completed lessons with more than one classroom at a time- sometimes connecting classrooms from across the province!

We are excited to use the many improvements and lesson learned to continue our education program in spring 2019. With the addition of our new mutli-lingual educator we are hoping to capture the imagination and passion of many more students in our community.



A senior kindergarten at D.M Eagle Public School identifying plush birds using a pocket guide



Grade ones at Coronation Public School learning about “what makes a bird, a bird”

Spring season 2018

Spring Summary

The spring 2018 season was another phenomenal success for PIBO's Education Program. We implemented new lessons, and started our Classroom Bird Collision Prevention Initiative. Highlights also included putting on a well-attended "Music & Migration" event, and having our very first education intern from the University of Windsor. We are very happy with all that we have accomplished and how the PIBO Education Program has continued to grow.

The season has been full of finding areas for improvement within our lesson and working towards making changes to enhance our programs. We listened to feedback from educators in fall of 2017, and fulfilled these modifications during our visits in spring. We worked hard to further develop and support classrooms before and after our visit with pre-visit, and post visit activities.

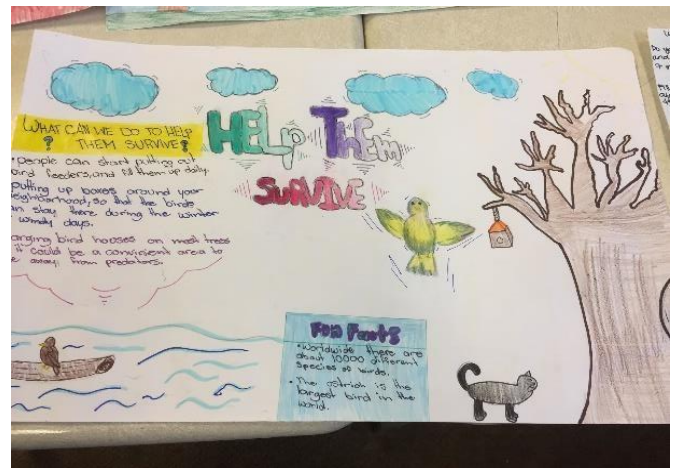
We were able to engage students from early years to grade twelve in our lessons within a variety of academic institutions and settings. We were able to reach new students this year in different streams of learning including Homeschooled students and Montessori schools.



EC talking about how eggs come in different Shapes and sizes



Grade twos at Sandwich Public School displaying their "Wing span Math"



A grade seven poster outlining ways to help birds as part of our pre-visit package activity

Our hands-on approach and curriculum linked lessons as well as pre-visit, and post visit lessons were delivered to approximately 3000 students with special projects and opportunities added in throughout the season.

Outreach made to educators

As in previous years, teachers were notified about our programs electronically. We were able to utilize our contacts at both the Catholic and Public-School Board's head office to distribute our information directly to principals. Emails were also sent to each school's general email. Many teachers who had previously invited us into their classrooms during the spring 2017 season were directly contacted by the Education Coordinator (EC) to set up another visit. Schools that were not a part of these two major school boards were contacted directly by the EC.

This year our outreach to educators was successful in engaging 2 additional groups of students not previously exposed to our programs. We were able to connect with Windsor's home-school coop and conduct a lesson with the primary students at the central branch of Windsor's Public Library. Additionally, we were able to partake in lessons with Lakeview Montessori School, which was our first entrance into a Montessori-style school. The teachers were thrilled with our program designed for their young students (three years to six years of age).



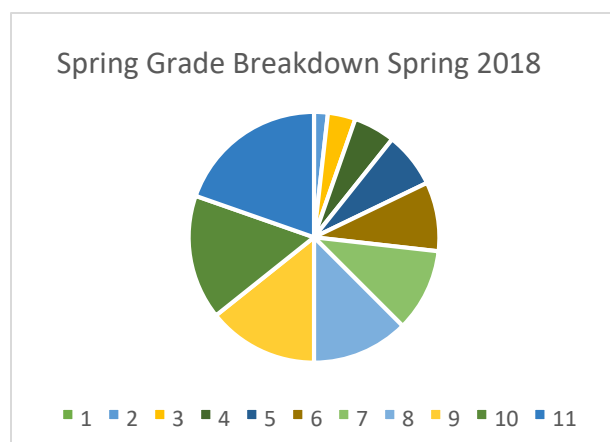
Grade twos at LaSalle Public School measuring "Wing span Math"



Kindergartens at St. Andre trying out binoculars

In-Class visit statistics

Beginning in January, most of the schools in both the Public and Catholic School Board switched the daily schedule from a traditional schedule, to a 2-nutrition break schedule. This impacted our overall student reach as daily, we could only conduct three workshops, rather than four



which was possible on the old schedule. Despite this, we were still able to reach approximately 3000 students during our regular school programming and public outreach. We were able to enter 5 Secondary Schools, 21 Primary Schools, 1 Home- School Coop and 1 Montessori School this spring season. The school visit chart can be found in Appendix A. of this document. The entry of our program into the homeschool coop and the Montessori

school was particularly exciting for us as we are always looking at ways to expand our programs to students who may not always have access to this kind of experience. Our overall grade breakdown is average for spring season with high participation in Early Years, grade one and grade two. We had a noticeable spike in interest from early year's classes after implementing our "Bird Discovery Stations" lesson. The play-based inquiry was noted as perfect for this age level. This lesson includes 5 stations that engage students by having them create nests using various materials, use binoculars, identify birds and even work with utensils to explore differences in beaks styles and how they can eat different types of food.

This season we planted approximately 80 native plant in pots with grade three for our birds and blooms lesson. We were able to incorporate 5 grade four and five classes with cutting out their own bird decals to put on the windows of their classrooms. We used our set of binoculars on almost every class visit and hope to get more of those for fall as they were always popular with students.

New in-class materials and P.O Products

In spring, we added even more materials that are new to our Education Program. The following chart outlines the items we have added, and where they are used within the Education Program and in Public Outreach opportunities.

Item	Purpose
[Bino]cular BINGO	Used when outside with binoculars- used in both early years and life skills classes
On- Island Laminated feathers	Feathers found by Sachi on the island, laminated so we can bring into school without health concerns
CBCPI Window Demo	Used to demonstrate reflection and collision issues during our CBCPI lessons, and in other lessons as well
International Dark Sky Association Pamphlet	"Lights at night can harm wildlife" pamphlet outlining issues of light pollution

Ontario nature Posters	“pollinator pals native plant poster” Given away as part of our birds and blooms lesson
Jr. Birder Books	Given to many of our teachers after our lessons, and used in life skills classes

Special Projects

Classroom Bird Collision Prevention Initiative (CBCPI)

Our CBCPI project hit the ground running in February. We were able to find 5 classes willing to be some of the first to add these collision prevention methods to their windows. We conducted site visits to each school and designated a primary facade that showed indicators of high collision hazards and discussed each deterrent method with school administration.

Of the five schools, we had 2 schools choose the 3M DIY Bird Safe Tape, 2 schools chose the Bird Safe UV bird detectors, and 1 school chose the Arts Escape Etched Bird Detectors. Prior to ordering the UV bird detectors, we became aware that this method had to be changed every 4 months, which would not work for our purpose and as a result, had to find an alternative to this method, which was chosen in part due to its attractiveness on the window. As an alternate, it was decided to move forward with a frosted vinyl, like the UV bird detector without the UV quality. To account that these frosted vinyl decals would not show UV reflection, we placed them with the FLAP suggestion, 2-inch apart from each other, which resulted in a very dense and easy to spot set of decals. Besides this small oversight, all 3 methods were installed this season. Two schools were postponed due to weather (3M DIY bird safe tape and the frosted vinyl decals) must be applied on the outside of the windows so rain and high heat were issues that postponed these installs. These installations were been pushed to early fall. Surveys were distributed to all students in the class before and after the install lesson to gauge any changes in understanding of the issue. Surveys from all 10 Classes will be reviewed in the fall to identify knowledge gaps. We hope to use this information to also identify areas where we can continue to educate students in our lessons.



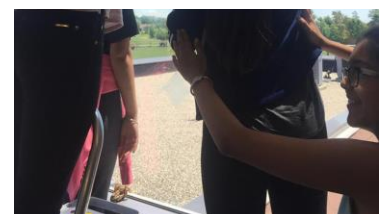
Talbot Trail Public School's Installation



Grade sevens at St. John the Baptist installing 3M DIY Bird Safe Tape on their windows



Grade sevens at St. John the Baptist installing 3M DIY Bird Safe Tape on their windows



Our University of Windsor intern Madison McKnight was tasked with creating a CBCPI Teacher handbook if the teacher in the classroom, administration, or caretakers change hands. This will be reviewed over summer and distributed once edited in fall to all schools involved.

Finally, over the summer we plan to finalize the design and production of the interpretive plaque for this demonstrative project.

*Students installing ArtScape Etched
Bird detectors at Talbot Trail P.S*

Designed to be installed near the window decals to explain to students, teachers and residents the purpose of this project. We are hoping that an interpretive sign will offer explanations for the project and share possible remedies that can be done at home. The choice to have this part of the grant completed over the summer and all of these plaques distributed to schools in the fall came down to a space and storage issues as well as time availability of the EC.

Project Nest Box

In spring we were able to connect local schools with Bird Studies Canada's Project Nest box program with *both* a primary school and additional secondary school. We were able to complete the construction of the nest boxes with Talbot Trail Public School's grade seven class. St. Anne's Secondary School received their nest boxes, however due to scheduling issues, construction was postponed to fall with installation planned for spring 2019.

Sandwich Secondary School who installed project nest box last year reported one box being used for a nest this spring. We were also updated in the fall when they cleaned their nest boxes and found no complete nests from the previous year. Their findings were submitted to Bird Studies Canada database.

We hope to continue to facilitate this project in more schools next spring, as it is a unique project that is free and is supported by many different organizations making the work on the part of the EC minimal with a very large impact on both the students and schoolyard habitat.



*Students at Talbot Trail
constructing Nest Boxes*

University of Windsor Service Learning Course



*PIBO's UWindsor Intern, Madison McKnight
at City of Windsor's Earth Day*

This spring we were able to connect with the University of Windsor to hire a volunteer intern who received school credit for their work with us. This opportunity came about after connecting with Michelle Bondy at a professional development day in fall of 2017 that the EC presented at, outlining our program offerings.

Madison McKnight, a fourth-year environmental studies student was hired from January 22- April 22, 2018. She helped produce two teacher maintenance guides for Project Nest box and for CBCPI in case of teacher turnover or reorganizations of lead teachers.

Additionally, Madison was tasked with creating an interactive game aligned with this year's Earth Day theme of "plastics" for our 2 spring public outreach events. She constructed a "Birds and Plastics Trivia Game" which was well used at the both our public outreach events of the season. Madison did also accompany the EC to both events.

Working with the University of Windsor in this capacity accomplished 3 goals. First, engaging students from the University strengthened our relationship with this postsecondary institution. Second, having another pair of hands was extremely helpful to our EC, especially when there was extra help at events allowing the EC to connect more meaningfully with contacts. Finally, because the nature of the internship was to learn various professional skills it expands our program in a sense to teaching about conservation in the workplace and various skills that are desired in these careers.

Music and Migration

On March 24th, 2018 PIBO held its first Night of Music and Migration at the Capitol Theatre in Downtown Windsor. This was the first event with the Windsor Symphony Orchestra and it was a successful evening that had a variety of residents, students, and families in the audience.

The lead up to the event involved a lot of advertising and despite a short amount of time to do so, we were able to let people know about our event through radio announcements, newspaper articles, posters, and even an on-air TV segment on CTV all donated in-kind. The following outlined the press that was set up by the EC for this event:



PIBO's Music and Migration Advertisement

Advertisement	Press type
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Windsor Star, Essex Free Press, Southpoint Sun	Print Newspaper
Daily News, Eyes on Windsor, Snap'd	Online Newspaper
AM800, AM 580, 93.9 The River, 89X, Mix 97.7, Country 95.9, Cool 95.1 Community Calendar segment CBC Shift and the Drive Shout out	On-air Radio
CTV Community Calendar TV Segment	CTV on-air 6 o'clock news
AM800 Interview with April Anderson	On-air radio interview



Music and Migration Crowd at Capitol Theatre



PIBO's Education Coordinator Addressing crowd at Music and Migration

Tickets were sold on Eventbrite, but we did have a significant number of residents pay at the door on the night of the event. Overall, 153 residents joined us for the 1-hour performance and we raised about \$1500.00 for the Education Program. Much of the advertising for the event was dual purpose as it served as public outreach to residents in our community and made people aware of the Pelee Island Bird Observatory. It was also great to have an event that was made accessible to families and residents at a lower ticket price point.

We are looking forward to the return of this event in 2019. The second Music and Migration will happen on Sunday April 28 2019. We hope to see many new and returning faces. This year, the ticket price is set at \$15.00.

Teacher Feed Back

Following each visit, we distribute a survey to collect feedback, suggestions, and successes from the teachers of the classrooms we visited. The following were some suggestions made by teachers on how to continue and improve our program.

- We would love to have Sarah here couple of times, fall and spring
- longer visit in each class
- For Grade 6, maybe include some information on flight pertaining to birds, as that is also a strand that Grade 6 students study.
- I feel like we could have had a little bit more time together. It wasn't overly rushed but I felt like there were so many ways to extend it and the students were really enjoying the content.
- I can't think of anything other than was a bit long, but it was very engaging and fun so it wasn't really a problem at all.

The following outlined some of the positive aspects of our programs that the teachers shared:

- the [strengths of the program were the]engaging centers (building nests, using binoculars, using tools/beaks to lift bird food, and using bird books to identify species)
- The enthusiasm of the presenter and the ability of the students to have hands on activities with relevant, real-life data
- -The Coordinator is very organized
- Sarah was a great presenter. You could tell she was passionate and knowledgeable, the students could tell and completely bought in. The materials brought in were excellent visuals as well as the materials we were given after the presentation.
- Photos and materials were engaging, and fun outdoor activity was excellent
- Perfect for inquiry at this age level
- The hands-on segments of the lesson engaged all the students
- Strong connection to biodiversity and the presenter was engaging. The model of the wing/ feathers was good, and the game was hands-on
- Active engaging and relevant to students and the curriculum

- Connections to curriculum and hands on and active portions of the lesson. Everything flowed well.
- Sarah did an amazing job! She was super engaging and enthusiastic, which kept the kids' interests. The centers were very fun and informative. Would recommend any day!
- I was honestly blown away with Sarah's professionalism and quality of presentation. My students were totally engaged and interested the entire time and did not want her to leave. I would totally recommend this presentation to any teacher. Thank you so much!
- She was great, and I would definitely book this again with another class
- I want to thank PIBO for this student opportunity. Our students loved it!
- Very well done, so happy we had the opportunity for the presenter to come to our class.
- It was very engaging, the students were all involved and got to see and touch manipulatives, play outside, run around. The instructor was charismatic, enthusiastic and very knowledgeable. She even brought some fun stickers and posters for the children, so we can debrief in the following days. It was local information, and students felt they could really make a difference in our area.

Public Outreach and Engagement efforts



*PIBO's UWindsor Intern playing
Trivia with at Earth Day Celebration*

As with last spring, we were able to take part in 2 public outreach events in spring. These events are great opportunity for us to connect with our community and show residents of the Windsor-Essex county PIBO's Education Program and research. We attended Jack Miner Wildlife Weekend, and the City of Windsor's Earth Day Celebration. We decided against attending the Devonshire "Staycation" event as last year it proved not as successful as these other 2 events. This year, we were able to take along our University of Windsor Intern, Madison and it was extremely helpful to have another set of hands on location especially with set up, take down and moving of equipment. While Madison conducted our trivia game often with students and

children this gave the EC a chance to discuss our programs and research with parents and other family members.

Budget

The following outlines the current up-to-date budget for the Education Program.

	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	Oct 18	Nov 18	Dec 18	Jan - Dec 18
Education Project													
EC Transportation	0.00	0.00	129.00	414.00	231.00	300.00	300.00	200.00	300.00	400.00	400.00	171.00	2,845.00
Educational Coordinator	687.00	2,412.00	2,759.00	2,759.00	3,599.00	2,759.00	1,380.00	1,380.00	2,759.00	2,759.00	2,579.00	4,314.00	30,146.00
Educational Supplies	0.00	330.00	139.00	166.00	64.00	200.00	200.00	200.00	200.00	150.00	150.00	127.00	1,926.00
Health Insurance EC	188.00	188.00	188.00	188.00	376.00	188.00	188.00	188.00	188.00	188.00	188.00	188.00	2,444.00
Total Education Project	875.00	2,930.00	3,215.00	3,527.00	4,270.00	3,447.00	2,068.00	1,968.00	3,447.00	3,497.00	3,317.00	4,800.00	37,361.00

Relationship Building, Grants, and Awards

Relationship Building

This season we were approached by 2 separate organizations to discuss the possibility of collaborating more closely together. Stu Mackenzie, from Bird Studies Canada approached the Education Program in early spring with the possibility of becoming a partner in a “Bird Education Network” of sorts stemmed from grant funds. We have not yet heard back from this proposal yet but look forward to hearing what came of this over the summer or in the fall.



Jill Sturdy from Nature Canada approached the EC wondering how Nature Canada and PIBO's Education Program could work towards a more mutually beneficial relationship. In spring it was discussed that as we use many of their resources included their *Naturehood* brochures, and the Jr. Birder books their *Naturehood* campaign would be willing to share with their nation-wide network our program offerings, particularly our online education component that can be conducted cross-country.

Finally, we are still working with ECO schools Ontario to determine if we are eligible for an *ECOschoools* endorsement. We are also working with *ECOschoools* Ontario to figure out where our CBCPI project can be counted towards certification.

It is both encouraging and exciting that the PIBO Education Program is being approached by 2 national organizations based on our programs success. We look forward to the possibility of partnership moving forward.

Grants

This season there were several grants that were applied for, to enhance the education program's reach and content including adding equipment and integrating a more inclusive program that accommodates new English learners and French speaking students. The following chart outlines the grants that were applied for this season to expand our program.

Granting Organization	Value of potential Grant	Purpose of grant	Date Submitted
Windsor Spitfires Foundation	\$2,000.00	Class set of 30 binoculars, field guides and GPS Units	June 18, 2018
Lush Cosmetics	\$25,000.00	Hire Multi-lingual educator; expand program into Arabic & French speaking schools; new website	July 9, 2018
Solcz Family Foundation	\$72,635.30	Hire additional part time educator and increase E. C's hours for first year	July 9, 2018



Students at David Suzuki Public School Graphing their Wingspan Measurements



LD students at Cardinal Carter Learning about Nests and Bird Identification



Grade seven student's PSA posters about hazards to birds



EC explaining types of feathers

Fall Season 2018
Fall 2018 Summary

Fall 2018 was another fantastic season of learning and expansion. The Education program was able to increase the outreach of students, while completing and beginning two very unique projects. This season, we completed the “Classroom Bird Collision Prevention Initiative” which was funded by the TD Friends of the Environment Foundation. We also hired a multi-lingual educator and received an overwhelming amount of support from our community on this new addition from funds from LUSH cosmetics.

With additional advertisements, for our online lesson this year and enhanced capabilities through a new online platform we conducted the largest on-line week on record and had amazing luck with catching birds for students to view.

The PIBO team worked hard to source new funds for the continuation of education program and organized many campaigns to help us get there. Media coverage from our new hire, as well as our new monthly meetup “green drinks” helped spread the word of the Pelee Island Bird Observatory and our mission.

Our teacher engagement with both inquires for classes, and feedback on our lessons, was the best on record using google forms. We also partnered with local and national organization to enhance our programs equipment, participation rate, and public engagement.

Outreach made to Educators

This fall, educators were made aware of program offerings via email, through our contacts at both the public and catholic board. As well, a Mail Chimp campaign was distributed to all of our teacher contacts that we have previously visited. This season, our google form for visit inquiries had its highest usage rate with more than 25 inquiries made this way.

For online programs, we created a unique info-graphic in attempt to draw more attention to this unique aspect of our program. The infographic was distributed via email to all of our teacher recipients as well as distributed on our social media. We found that this graphic drastically helped with participation of our online programs. It clearly explained to educators what was required of them, and how easy it can be to have a great experience!

We also focused on how we could make our outreach to educators more efficient once the interest of the teacher resulted in an invite for a visit. Currently, we are utilizing the google forms but this process still requires the EC to complete a fair amount of work communicating and scheduling with teachers. A variety of suggestions were made as to how we could make this process more efficient and we look forward to reviewing the many options and employing these in spring 2019 season.

Infographic created by EC to advertise online programs

Pelee Island Bird Observatory
Online Lessons
OCTOBER 15-19, 2018

What is PIBO?
The Pelee Island Bird Observatory is a not-for-profit charitable organization that is devoted to the long-term study and research of birds. Located on Pelee Island, our banding station conducts intensive field research, monitoring and breeding bird surveys annually in fall and spring.
PIBO also has an education program that offers free hands-on workshops to all students in Windsor-Essex, taking all things birds and creating student avian allies!

What are Online lessons?
Online lessons are 30 minute workshops that are conducted through a video conferencing tool. Classes connect with our Education Coordinator and an on-island ornithologist where they can ask questions, and experience a bird banded in real time!

What do I need to Participate?
Computer and Projector
Working internet connection
A scheduled morning time slot
A class ready to learn and interact!

How do I sign up?
Simply email our Education Coordinator to sign up for your FREE online lesson.
You will then be given a time-slot and information on how to connect with us on the web!

CONNECT With us for an in-class lesson!
If you want to learn more about the Pelee Island Bird Observatory or our FREE education programs connect with us!

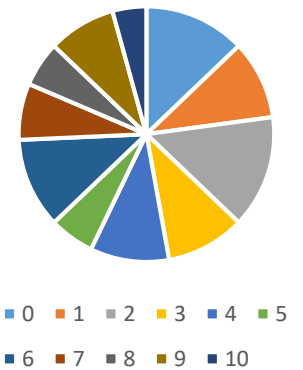
www.pibo.ca @peleelandbird ipeleelandbird info@pibo.ca

In-Class visit statistics

Fall 2018 season brought on many new faces to the education program with new participation from many first-time schools. We were able to increase our outreach and delivery to schools despite working on our CBCPI project and our online week. This season, we were able to spread our message to 28 primary schools and 6 High schools and reached a total of approximately 2960 students with our regular programming, CBCPI project, and our online initiative.

As in previous years, our program took us across the region to a variety of places including Windsor, Tecumseh, Belle River, Amherstburg, LaSalle, Kingsville, Harrow, and Leamington. We were able to enter both the Windsor Essex Country District School Board, as well as the Windsor-Essex Catholic District School board. We were also able to reach students in private schools, as well as homeschool co-ops.

Grade Breakdown
Fall 2018



Students at Coronation Public School learning to use Binoculars



Kindergarten students at Coronation public School learning about Bird Anatomy



Students at Sacred Heart Catholic School identifying birds for "what's trending" activity



Students at Cardinal Carter learning about nests



Students at D.M Eagle learning about nests



EC explaining the important role birds play in the food web



Students answering biodiversity and food web questions

2018 Online video sessions

This year's online lesson summary was completed by Sachi Schott.

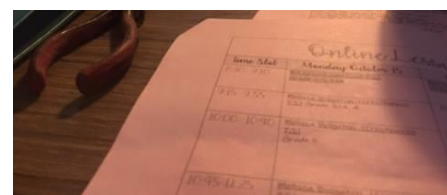
PIBO conducted its annual round of school video sessions from October 15 to 17th. These sessions are where PIBO's assistant bird bander and education coordinator connect with school classes on the mainland through an online video conferencing platform like Skype or Zoom. Mist nets are set up around the PIBO cottage and (with luck!) students have the chance to watch

birds being banded, and ask questions about bird anatomy, migration, the environment, and conservation work.

This year, PIBO reached 13 classes in 7 schools located in Windsor, London and Toronto. The students ranged from Junior and senior kindergarten classes to Grade 8, and personal videos were recorded for classes that had previously been visited by PIBO's education coordinator, Sarah Keating. In spite of strong winds and some light rain on October 15th, 37 birds of 11 species were banded over the three mornings of video sessions. Students were able to see fall migrants such as Myrtle Warblers, Ruby-crowned and Golden-crowned Kinglets, and Western Palm Warblers, as well as common 'backyard birds' like Red-breasted Nuthatches, Blue Jays, and American Robins. Owing to the limits imposed by working at the PIBO cottage instead of in the netting area at Fish Point, fourteen additional birds of six species were captured and released unbanded.



The view of our online set up from the PIBO cottage



Because of the logistical difficulties involved in organizing school trips to Pelee Island, these online video sessions are a valuable tool for reaching students in Windsor-Essex County and beyond. They have been used by PIBO since 2012, and are just one of the many ways that Sarah and PIBO's previous education coordinators and Species at Risk interns have to connect with students and teach them more about the natural world, and how PIBO helps to monitor and protect it.

Table # - On-line Video Conferences			
Observers	Sarah Keating, Sachi Schott		
# of Coverage Days	3 (October 15, 16, 17)		
Birds banded	31	Species banded	11
Birds captured	14	Species captured	6
Net hours	25.125	Birds/net hour	1.791
Notes	Coverage was provided by five mist nets set up around the PIBO cottage on Stone Road		



Our Lesson on-screen at Crest haven Public School

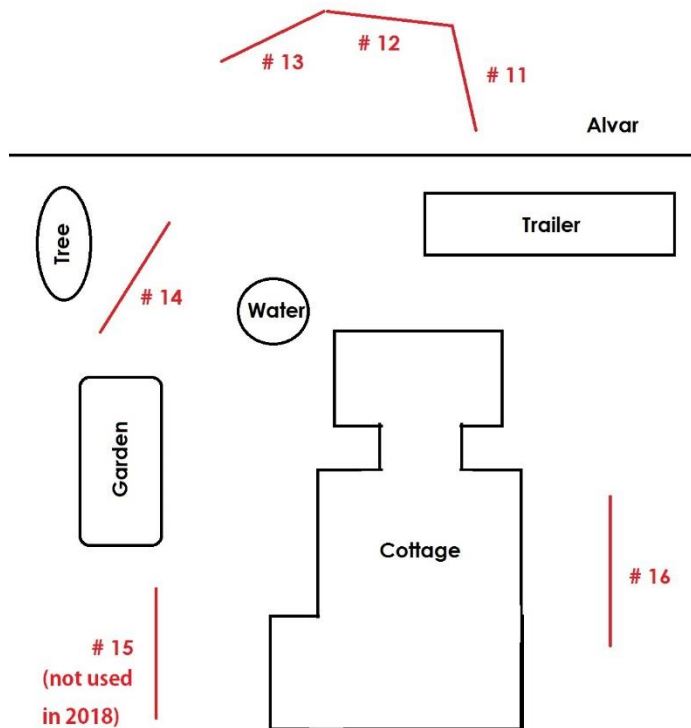


Figure # - diagram showing the placement and numbering of the additional mist nets set up at the PIBO cottage on Stone Road for online school video sessions in 2018. Net #16 did not catch any birds, and it is recommended that it not be used in the future.

Some small changes were made to the equipment set-up for the online school video sessions in 2018. Net #15 was not set up, and enough birds were captured in nets #11 to 14 that net #16 was frequently left closed. It was also particularly prone to becoming filled with leaves from the trees in front of the cottage, and it is recommended that it not be used in the future.



E.C Sarah Keating and Sachi Schott teaching students in London at West Oaks Elementary School about banding birds

This year, the laptop and banding equipment were set up inside the sunroom in the PIBO cottage rather than outside, as has been the usual custom. This setting, while slightly less picturesque, has the advantage of being protected from the strong winds that frequently gust around the cottage, and being sheltered in the case of sudden rainstorms. The lighting is also more easily controlled, for better picture quality.

On the recommendation of Sarah, PIBO switched to using the online video conferencing platform Zoom (www.zoom.us) instead of Skype. Zoom allows users to connect with more than one computer at a time, allowing PIBO to reach multiple classrooms in a single session and maximizing our efficiency during the short time available for the online school video sessions. The basic Zoom platform is free to use and is very simple to operate. A link is e-mailed to each of the participants, and clicking it connects them to the session at the agree-upon time. A few small technical glitches on the school end of the system meant that PIBO staff frequently could not see or hear the classes they were presenting to, but the Zoom chat box allowed them to answer questions and connect with students regardless. Overall, our experience with Zoom this year was extremely positive, and we will continue to explore its potential in future years.



Students at Gore Hill Public School in Leamington Connecting with PIBO

New in-class materials and P.O Products

This season, we added some new materials to our Education Program. The following chart outlines the items we have added and where they are used within the Education Program and in Public Outreach opportunities.

Item	Purpose
Bird Discovery station explanations and prompts	Used to help guide educational assistants and teachers during supervision at each station, to make connections with students if the EC is engaging with another station
Migration map	Great visual for all students to see the different “flyways” and birds that use these routes
3D printed Skulls	Used to discuss beak size and shape
3D printed owl pellet kits	To be implemented in grade 4 owl pellet discovery lesson in spring 2019

Laminated coordinate booklets	Replacement of Paper Coordinate brochures, these laminated cards should last much longer
Trilingual name tags	Made and translated by Fatima these name tags will have PIBO's logo on it and a greeting in different languages with our name
Translated "What makes and bird, a bird?" Cards Biodiversity Cards	Created to be utilized in any classroom
English/Arabic Nature hood Graphics	Obtained from nature Canada as something to send home to families whose first language is Arabic

Special Projects

Completion of CBCPI

This season we completed the CBCPI project, funded by the TD friends of the Environment Fund. We were able to help 7 classrooms this season retrofit their classroom windows with a variety of deterrent methods to help prevent window collisions. With the 3 classrooms retrofitted in the spring season, by October we were able to successfully complete the grant requirements of 10 completed installations, with participants from 6 elementary schools, and 4 secondary schools.



Grade five students at Queen Elizabeth Installing their Windsor Deterrents



As this was a pilot project, there were a few unforeseen challenges that were dealt with accordingly along the way. First, when applying for the grant, we established how many deterrents we “may” need without really knowing the exact measurements of the windows we would be making bird safe. This presented a problem in only one instance where we needed to use a different approach than planned as we did not have enough deterrents to cover the space. In addition to this challenge, two out of the three deterrent methods had to be applied on the outside of the window, in ideal weather conditions. We were set back a number of times in the falls season due to inclement weather. As a result, the days planned for install that were deemed unusable because of the poor weather also impacted our overall numbers because these particular days could have been used for in-class lessons. Questionnaires were handed out to students who were of reading and comprehension age before our install and lesson to gauge their previous knowledge of the issue of bird collisions. Although these questionnaires were relatively short, it was telling as to the general understanding of the issue. Of students surveyed, 58% of participants drastically underestimated the severity of the issue and thought that only 50-100 thousand birds were affected by window collisions, when the statistics show it is actually 16-42 million birds annually. In addition to this knowledge gap, majority of students did not know that bird collisions can happen at any time of the day, or that by applying bird decals 2 inches apart they can drastically reduce the potential for window collisions. These results will be helpful in knowing what to include in future lessons so that students can gain a better understanding of the issue.

The completed interpretive sign, designed by the EC



Talbot Trails Installed deterrents and interpretive sign

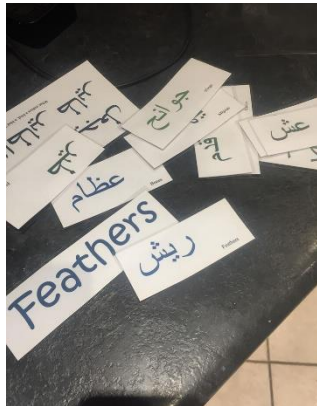
Once we had finished the installs, we completed the design of our CBCPI interpretive signs. Each classroom received a high-quality sign that was designed in house. Educators were encouraged to put the sign in a high traffic area where students, parents and faculty could see the sign and learn about the issue. Signs were made of a sturdy, weather resistant aluminum that can be hung outdoors, or indoors all depending on the site location.

LUSH Cosmetics grant

Over the last two seasons, the increased diversity within the schools and classrooms has become more noticeable, specifically when it comes to language skills. Windsor is the 3rd most diverse city in Canada, and besides English, Arabic is the most commonly language spoken at home. In

addition, the Windsor-Essex region is home to a variety of schools that offer full French, full Arabic, and immersion settings. We felt that in order to create a truly inclusive education program, PIBO would have to look towards how we could include the diverse languages that many students in our region speak.

Once the idea was established, we approached LUSH cosmetics with the proposal of hiring a multilingual educator. With proceeds coming from LUSH's charity pot program, LUSH cosmetics rewards the PIBO Education program with funds to hire a multi-lingual educator.



*In-class materials in English
and Arabic*

At the end of November, Fatima Serhan was hired as PIBO's first ever mutli-lingual educator. Fatima speaks English, French, and Arabic. She is already working hard to translate many of our correspondence with teachers in French and Arabic, as well as lesson plans and equipment we use in lessons. We plan to utilize her skills in the classroom as a facilitator of our programs in classrooms that speak French and Arabic. We also have 3 teacher sessions planned to discuss the needs of teachers in mutli-lingual streams and how PIBO can help in addressing them. Fatima will also use her skills to aid in documents on our newly design website that will be completed through funds also acquired from LUSH.

The news of hiring a mutli-lingual educator was well received by our community. We sent out a press release to many news outlets who picked up the story and the EC was interviewed on-air by AM800. We are looking forward to the addition of Fatima in-class for the spring season so we can expand our program to every school in Windsor-Essex!

Teacher Feed Back

Following each visit, we distribute a survey to collect feedback, suggestions, and successes from the teachers of the classrooms we visited. The following were some suggestions made by teachers on how to continue and improve our program.

- Please add teacher/classroom resources to your website in pdf or other format.
- [More updated videos](#)
- Longer session because there was SO much great information packed into a short time
- [Maybe providing a template for making bird houses or bird feeders out of everyday items](#)

The following outlined some of the positive aspects of our programs that the teachers shared:

- My students are ELL's and are very new to the country. Sarah's lesson appealed to my students because it was engaging, it allowed my students to explore many hands on activities while at the same time improve their vocabulary. Sarah is an enthusiastic teacher and loves what she does.
- The addition of the stuffed animal birds that the kids could classify by song, color, feet, beak and compare in the bird guides--they loved it!
- Student involvement with activities and items brought into the class.
- Sarah, and her enthusiasm and knowledge, combined with the hands on portion and interactive game
- A variety of interactive activities and the enthusiasm of the presenter, the interesting content, and the hands on activities!
- Instructor was professional and engaging. All information was age appropriate and delivered with enthusiasm to spark students' interest. Good pacing. All students were given the opportunity to visit every activity center. Length of time at each centre was short (age appropriate).
- Sarah was wonderful and presented the information in an engaging manner which kept students attention.
- The Speaker! The hands on portion where the students actually had a chance to work at different centers.
- Sarah was energetic and engaging. The students were totally focused.
- My class loved the bird nest building, the beak test, the game, binoculars, all of the hands on elements were amazing- hands on activities-- great presenter-lively and interesting
- The presenter was enthusiastic, prepared, inclusive, and calm and she went beyond our expectations.
- Sarah's passion and enthusiasm. The hands on activities are engaging and interactive.
- It engages the students and they gain a clearer understanding of the roles and the importance of birds in our environment.
- I'm appreciative of Sarah's patience, knowledge (expertise) and that PIBO shares this information for FREE! And that it connects to our curriculum.
- Wish we could participate in the program annually
- Thanks - Sarah was great!
- Once again, the presentation was excellent! Sarah does an outstanding job! Her knowledge and enthusiasm really draws the students in and keeps their interest!
- Thank you Sarah. The students loved it!
- Great job! Kids are still talking about the lesson

- Thank you for sharing your knowledge and expertise!
- This was a great presentation and Miss Sarah did an amazing job keeping the students attention. Thank you!!
- The presentation exceeded my expectations. It was excellent.
- Love, love, love this program...thanks for coming in!
- This presentation was incredibly engaging and she was a professional from start to finish.
- Thank you Sarah for all you do!
- Thank you, Sarah! Once again, you did an amazing job- we really appreciate your energy, your knowledge, and your visit!

Public Outreach and Engagement efforts

This fall, we were able to partake in 2 separate community events to promote the work of the bird observatory, as well as the education program. This season we attended VegFest Windsor, and Ontario Field Ornithologist conference. Both events had great turn outs and our display attracted a lot of attention. VegFest, being a more family-friendly event brought more parents and students to our booth. Many folks learned about the education program and how we could come to visit their child's classroom at no cost. We were able to secure 2 visits as a result of interactions from this event.



PIBO's Table set up at the OFO conference

We were also invited to the Ontario Field Ornithologist conference taking place in Leamington. This event brought along a more knowledgeable birding crowd, however many people who attended the conference lived outside Windsor-Essex. In turn, it was a great opportunity to draw attention to the bird observatory to established birders who may have interest in visiting the banding lab, or perhaps taking part in birding on the island.

Overall these two events were beneficial in attracting attention to our mission and mandate as well as our activities on, and off the island. Although we did not make it this year's festival of hawks that we usually attend we were able to replace that outing with the OFO conference. Since next year's OFO conference is at a different location in Ontario, we will then attend the Festival of Hawks.



Green Drinks Advertisement Poster design by EC

continue these in 2019.

Green Drinks

Starting in August, the PIBO mainland team wanted to create a monthly event that would engage local residents and help spread the awareness of PIBO. The team decided to work with a national, established meet-up called “Green Drinks” that had an inactive chapter in Windsor-Essex. Taking place in a casual venue such as a café or brewery, Green Drinks is designed to attract environmentally conscious individuals and to promote discussions and partnerships. Initiating this had two main goals; first to establish a better understanding of what PIBO is and does to Windsor residents, secondly, to open up the discussion and opportunities with residents and organizations to potentially work with. We have had success with these meetups that occur on the last Wednesday of every month with participant numbers ranging from 3-20. We hope to



Green Drinks Turnout for November at Taloola's Café in Windsor



Media Coverage from PIBO's First Green Drinks event

Relationship Building, Grants, and Awards

This season we continued to work with other organizations to build these beneficial relationships. This season we worked with a variety of organizations who took notice of our work, and in some cases wanted to work with our organization in some capacity.

Nature Canada Internal Review

Nature Canada offered an opportunity to take part internal review of PIBO to assess how we could better engage volunteers and the public as a whole. The review was conducted through a series of interviews. After these interviews were completed, recommendations were proposed for PIBO to better engage the public and volunteers. These recommendations are currently

being reviewed by staff at PIBO, in hopes we can utilize some of the suggestions, with the potential for funds from Nature Canada to do so.

Window Deterrent Manufacturers

Throughout our CBCPI project, many of the manufacturers that produce the window deterrent methods (3M and Artscape) took notice of our initiative, and were very interested in the project. These two companies both offered us discounts on the products and wanted to hear about the success of the project. We sent a project summary to 3M who will hopefully share our story to their audience!

Bird Studies Canada Education Program

Throughout this year Birds Studies Canada's Education program has made an intentional effort to support our education program on Social Media. This season the EC connected with BSC as they took notice of our various ongoing projects. BSC committed to supporting our efforts as much as they could on social media by sharing our successes and projects to their larger audience. We hope that this partnership allows our Education Program and PIBO to be exposed to a wider, national audience.

Grants

This season, we took time to work towards applying for funds for the education program. Although none of these granting opportunities were awarded, it is important to note that there was some time spent on proposals.

Granting Organization	Value of potential Grant	Purpose of grant	Date Submitted
AVIVA community Foundation	\$10,00	"Bird Protection Passport" series	Sept 25, 2018
Dowler-Karn Corp	\$10,000	Bird Discovery Kits- Post visit rental materials	August 15, 2018
Windsor-Essex Community Foundation- Community Impact Grant	\$25,000	Bird Buddies- Connecting secondary students with senior residents in the W-E region through project feeder watch	Not-Submitted* potential project for next year's round of grants

Awards

This season the PIBO education program was nominated of the Essex Region Conservation Authority's Education Conservation Award. We will know in January 2019 weather we are recipients of this award.

Media Coverage

This year for a variety of reasons, we were able to receive an increase in media coverage. We hope that this media coverage helps to advertise PIBO and the education program to our large community. From our first green drinks event, to the hiring of our mutli-lingual educator PIBO has been in the news, on radio stations, newspapers, online publications and even the television. We hope to continue to use our established contacts next season to promote various events and the progress of our work.

Media Outlet	Theme	Link
Snap'd Windsor	Green Drinks	<u>https://windsorapi.snapd.com/event/1183337#/</u>
Southpoint Sun	Online Programs	<u>http://www.southpointsun.ca/images/sun_web_oct.31(1).pdf</u>
Windsorite	Music and Migration	<u>http://eyesonwindsor.com/entertainment-news/wso-entertained-bird-enthusiasts-for-pelee-island-bird-observatory-awareness/</u>
Country 95.9	Music and Migration	<u>http://country959.com/events/music-migration-w-windsor-symphony-orchestra/</u>
Mix 96.7	Music and Migration	<u>http://mix967.ca/events/music-migration-w-windsor-symphony-orchestra/</u>
University of Windsor	Music and Migration	<u>http://www1.uwindsor.ca/ees/pelee-bird-observatory-with-windsor-symphony-orchestra-presents-a-night-of-music-and-migration</u>
Windsor Star	Music and Migration	<u>https://windsorstar.com/news/local-news/pelee-island-bird-observatory-windsor-symphony-orchestra-put-on-concert-for-the-birds</u>
Eyes on Windsor	Music and Migration	<u>http://eyesonwindsor.com/event/night-of-music-and-migration/</u>
AM800	Multi-lingual Educator	<u>http://www.iheartradio.ca/am800/news/shifting-population-triggers-new-hire-of-multi-lingual-bird-educator-1.8600850</u>
Windsorite	Multi-lingual Educator	<u>https://windsorite.ca/2018/12/pelee-island-bird-observatory-hires-multi-lingual-educator/</u>

Looking ahead at spring 2019

The spring 2019 season is looking very bright for the PIBO Education Program. With requests already being received by both the education coordinator and multi-lingual educator for visits as early as January we anticipate a very busy season!

We are excited to host our second Music and Migration evening in hopes of raising funds for additional equipment to make our programs even more engaging. We are anticipating that the addition of Fatima will aid in the expansion of our program to a new cohort of students not previously accessed. With help from partners, the addition of another University of Windsor Intern, we hope to work towards implementing an updated and even more engaging Public Outreach strategy.

We are happy to work within the requirements of the LUSH cosmetics grant to organize 3 teacher workshops encouraging educators to get outside with their classroom and become avian allies. We anticipate continuing the monthly “Green Drinks” meetup to connect and educate community members who have are outside of the traditional classroom we conduct our programs in.

Appendix A

School Visit Spring 2018			
School	Location	Grades	Number of Students
WPL Home School Coop	Windsor	EY,1,2	30
Cardinal Carter Catholic Secondary School	Leamington	9	30
St. Mary’s Catholic School	Maidstone	1,2,3,4,5,6,7,8,	250
Essex District High School	Essex	9,11	90
Giles Campus Early Years	Windsor	EY	120
Giles Campus	Windsor	4,5	40
Jack Miner Public School	Kingsville	EY	120
W.J Langlois Public School	Windsor	7,8	35

Queen Elizabeth Public School	Leamington	3,4,5,6,	130
Our Lady of Annunciation Catholic School	Stoney Point	1,2,3,4,5,6,7,8	260
St. Anne's Catholic High School	Belle River	9,11	40
St. Theresa of Calcutta Catholic School	Windsor	5,6	30
St. John the Baptist Catholic School	Belle River	7,8	35
Leamington District Secondary School	Leamington	9,11	140
Prince Edward Public School	Windsor	EY	80
Western Secondary School	Amherstburg	9,11	60
M.S Hetherington Public School	Windsor	2,3	80
Talbot Trail Public School	Windsor	7,8	90
Frank W. Begley Public School	Lasalle	EY	90
Lasalle Public School	Lasalle	1,2,3,4,5,6,7,8	360
Anderdon Public School	Amherstburg	EY	120
David Suzuki Public School	Windsor	2,3,4	90
East Mersea Public School	Leamington	2,3	30
St. Andre Catholic French Immersion	Tecumseh	1,2,3	40
Central Public School	Windsor	4,5	30
Sandwich West Public School	Lasalle	1,2,3,4,5	120
Lakeview Montessori	Tecumseh	EY	120
Queen Victoria Public School	Windsor	2,3,4,5	100
Jack Miner Wildlife Weekend	Kingsville		80
City of Windsor's Earth Day	Windsor		200
			3040

Appendix B

School Visit FALL 2018			
School	Location	Grades	Number of Students
St. Theresa of Calcutta	Windsor	6	90
Cardinal Carter Catholic High School	Leamington	9,10	40
LaSalle Public School	Lasalle	K,1,8	90
St. John the Baptist	Belle River	7,8	30
St. Joseph's Catholic High School	Tecumseh	9	80

Maranatha Christian Academy	Windsor	Jk,sk,1,10	60
Central Public School	Windsor	5,6,7	60
St. Rose Catholic Elementary School	Windsor	1,2	90
Queen Victoria Public School	Leamington	4,5,6	240
Lassaline Public School	Lasalle	2,3,4	120
D.M Eagle public School	Tecumseh	Jk,sk	90
St. John de Brebeauf Catholic Elementary School	Kingsville	1,2	80
Queen Elizabeth Public School	Leamington	6	120
Stella Maris Catholic School	Lasalle	Jk,sk,4	90
Our Lady Mount Carmel Catholic school	Lasalle	2,3,4	90
Marlborough Public School	Tecumseh	Jk,sk	90
St. Anthony Catholic School	Amherstburg	Jk,sk	70
St. John Vianney Public School	Windsor	2,3,4	120
Coronation Public School	Harrow	Jk,sk	120
Sandwich West Public School	Lasalle	1,2,3	120
Sacred Heart Catholic School	Lasalle	7	40
Leamington District Secondary School	Leamington	9	120
Holy Name Catholic High School	Windsor	9	30
Talbot Trail Public School	Windsor	7,8	40
St. John the Baptist Catholic School	Belle River	6	30
Windsor Public Home School Coop	Windsor	Pre-k,sk,2,3	10
Catholic Central High School	Windsor	9,10	120
Gore Hill Public School	Leamington	1,2,3,4,5,6,7,8	288
Dutton Dunwhich Public School	Dutton	6	30
CrestHaven Public School	Markham	2,3,4	90
West Oaks French Immersion Public School	London	2	60
Ponsonby Public School	Guelph	6	30
Stathroy Public School	Strathroy	9	70
			2960