

Williamsburg Bird Club
Wednesday, October 16, 2019
W&M Andrews Hall, Room 101, 7:30pm

Attendance: 48

President's Remarks: President Cheryl Jacobson opened the meeting and greeted the assembly. There were four new members: one just moved from Minnesota, two from Maryland and one local. She announced that a wood stork delivered a baby girl to Kevin Ernst and his wife at Wild Birds Unlimited and asked members to congratulate them.

Nominating Committee: Cheryl reported that the annual elections to the Board will be held this upcoming November. She introduced the Nominating Committee: Chairperson Jan Lockwood, Patty Maloney and Jeanette Navia. Jan reported that there were only two positions to be filled. Judy Jones will be stepping down as Vice-President/Programs and Melinda Cousins as Vice-President/Editor of The Flyer. Dean Shostak volunteered for Programs and Lucinda Baker as The Flyer Editor. The rest of the Board who will continue to serve were introduced to the assembly. Cheryl reminded the assembly that we will also be voting in November on whether to raise the annual club dues from \$15 to \$20.

The Flyer: Outgoing editor, Melinda Cousins, was not present. Cheryl noted what an excellent job she'd done but that pursuing her doctorate had become a priority and that Cindy Baker had taken over. The deadline for articles and photos for the November edition is October 25th.

WBC Logo Hats: Cheryl reported that there has been an interest in ordering hats and that Judy Jones had sent an email to the membership regarding availability. Judy reported that there was a sign-up sheet in the back. The hats cost \$20 and the money should be given to her. It will take about 2 weeks for the hats to come in.

2019 Nature Camp Recipients: Judy Jones introduced the four 2019 recipients that our club sponsored. The three recipients of the Bill Williams Nature Camp Scholarships were as follows. Hope Higgins, 6th grader from Matoaka Elementary and first-time camper, was ill and unable to attend and might be giving her presentation in November. Anya Spara, 11th grader from Bruton High School and new camper, was unable to attend as her family is military and recently assigned to Florida but she attached a delightful PowerPoint for her presentation. Lyra Swaddle, 7th grader at Hampton Roads Academy, delivered her presentation. The recipient of the Millin Nature Camp Scholarship was returning camper, 7th grader Sadie Teer at Hornsby Middle School.

Bird Counts/ Bird Walks: Jim Corliss, Chairperson, was absent. Cheryl reported that a lot of new people from the community have been attending the bird walks. Rotating the first bird walk of the month to new places appears to have been successful in attracting more interest. She reported plans to schedule the first combined photography bird club walk this coming May. The one scheduled last May had been canceled due to an auto accident blocking access. She announced the following upcoming bird walks:

- Saturday, October 26th at 8 am at New Quarter Park; leader Jim Corliss
- Saturday, November 9th at 8 am at Powhatan Creek Trail; leader Jan Lockwood

Christmas Bird Count: Shirley Devan, reporting in Jim's absence, requested that we save Sunday, December 15th for our 43rd annual Christmas Bird Count which has covered the same circle with a 15-mile diameter that is split into 6 or 7 wedges with a team in each. Last year there was a count of 120 bird species from 112 participants: 63 people in the field and 49 feeder watchers. Report to Jim Corliss if you want to participate and have not had a team in the past.

2020 VSO Meeting: Cheryl reported that she is having difficulty finding enough vendors for the VSO meeting we are sponsoring in May and asked the assembly to please report to her if they have personal contact with an appropriate vendor.

Program: Judy Jones, VP and Program Chairperson, introduced the guest speaker, Dr. John Swaddle who's been a W&M biology professor since 2001. The focus of his research has been how wildlife and esp. birds cope with human induced changes of the environment. Most recently he's been working on developing technologies that reduce the conflict between economic development and bird preservation. At our October 2018 meeting, Dr. Swaddle had introduced us to the term "Acoustic Lighthouse" which he'd coined to describe a sound system to minimize birds' risk of collision in flight into really tall structures such as wind turbines, energy infrastructures and communication towers which, including windows, may cause the death of up to a billion birds annually in North America. Avoiding collisions is even more critical in view of very recent reports that bird populations are in more rapid and larger decline than previously believed. The acoustic system worked with captive zebra finches in an aviary, but it has since been tested in the field and at this meeting he gave us an update.

Dr. Swaddle reported that the lights on these structures might lure some birds at night, but the focus of his research is getting birds to look up in time to avoid tall obstacles. Birds are vulnerable due to most of them having eyes widely spaced on the sides of the head looking down and to the side as well as flying with head down to minimize aerodynamic drag while looking for cues on the ground like waterways and coastline for migratory navigation. They are unable to see tall structures (which have not been a part of their evolutionary history) directly in front and Dr. Swaddle and his grad students have been searching for a really obvious and novel sound and a means of projecting it in front of a tall structure to warn them as they approach. He added that some large raptors like eagles are particularly vulnerable as they have an actual blind spot in that part of the visual field.

This summer, grad student Tim Boycott set up a powerful speaker system originally developed by the Navy as a ship to ship loud hailing speaker at the base of a communication tower behind Berkeley Middle School and in Matthews County and used a series of synchronized GoPro cameras to record the track of the movement of birds over time to include velocity and acceleration as they approached the tower and sound field. The research also involved a very sophisticated drone which Tim flew in the targeted air space to calibrate the positioning of where the birds will be to be able to accurately measure distance on the GoPro videos. Much of the data collected is still being analyzed but preliminary data has shown that bird activity around the two towers is 35% less when the 'acoustic lighthouse' is on than when it is off. It is expected that the effect is even greater when details are processed. Tim now has speakers and cameras set at two more communication towers in the Kiptopeke area where birds are funneling before crossing the Chesapeake Bay.

To date the field data supports that the 'acoustic lighthouse' does work to get birds to slow down and pay more attention visually to what is in front of them and change their course. The sound being used is a steady blast in the 4-6 and 6-8 high pitched kilohertz band. (Many bird songs have frequency ranges

between 1 and 8 kilohertz and most traffic noise is below 2 kilohertz.) Further research will be done to see what kind of sound design best attracts the attention of birds: ex. sweeping, pulsing or constant. The current speakers direct the sound straight up so there have been no complaints from folks nearby, but this system is generally not suited to suburban localities. It is hoped that over time birds will learn to identify wind turbines and communication towers by the sound of the 'acoustic lighthouse'. There are hopes that in the future the 'lighthouse' can be tailored to specific sites: turning on only during peak activity; spherical projection of sound at off-shore wind turbines; or speakers powered by wind turbines set up at the ends of the California valley turbine wind farms to get birds to avoid the entire area.

Dr. Swaddle concluded by giving us a peek at another exciting research project that is testing window treatments to prevent bird collision. All previous research has not simulated real life situations but have been conducted in dark flight tunnels or in an open field with equal light on both sides of the window.

Dr. Swaddle's team is working under the belief that most window collisions are the result of the difference in lighting conditions between the bright outside daylight and the relatively dark inside of a building creating a reflective effect wherein the bird is likely seeing a reflection of the sky and surface rather than a hard window. To test this, they have built a flight tunnel at the W&M aviary where they can use normal outside conditions (both daylight and nighttime) and can simulate different types and intensities of lighting in a house. A mist net is used to prevent birds from colliding with the test windows. This is the first time window treatments are being tested in real-life conditions from a bird's point of view and a company in Austria has asked them to test their new product. To date, zebra finches have been used but better fliers like cowbirds and European starlings will soon be used.

Dr. Swaddle concluded leaving us looking forward to his return for an update on this project as well. The possibility of the millions of lives that can be saved by both these projects is so exciting.

Field Trips: George Martin, field trip coordinator, reported the following:

- Saturday, October 19th: Matt Anthony will lead a trip on the Eastern Shore. Carpooling will be at the Colony Square Shopping Center with departure at 7:30 am.
- Saturday, November 16th: Dave Youker will be our leader at Grandview Nature Preserve in Hampton. We will meet him at the nature preserve at 7 am.
- Sunday, January 19th: Annual Chesapeake Bay Boat Trip. The assembly was told to look for upcoming email and to sign-up promptly as tickets go quickly.

Programs: Judy Jones, VP (Programs) reported on the following:

- Wednesday, November 20th: Brian Taber who will talk about the 25th anniversary of CVWO and the research they've been conducting esp. on the raptors.

Refreshments: Chairperson Cathy Flanagan was absent. Tonight's refreshments were provided by Jan Lockwood and Shirley Devan.

At the end of the meeting a free raffle was held.

Cheryl adjourned the meeting at 8:15 pm and refreshments were served.

Respectfully submitted,
Cathy Millar, Secretary Williamsburg Bird Club
October 21, 2019

