

## Williamsburg Bird Club

January 19, 2022

Conducted via Zoom; invited by Ann Carpenter and presided by Nancy Barnhart; 7 pm

**Attendance:** 78

**President's Remarks:** President Nancy Barnhart welcomed the attendees to the first WBC meeting of the new year to which the Cape Henry Audubon Society, Hampton Roads Bird Club and Piedmont Bird Club had also been invited. Nancy thanked the outgoing members of the WBC Board, Cheryl Jacobson, Tory Gussman, Dean Shostak and Bill Williams for their services and welcomed Patty Maloney, our new Vice President, Programs.

**Program – Dan Cristol:** Nancy Barnhart introduced our speaker, Dan Cristol, who talked about his 25 years of research at W&M. He dedicated his presentation to his father, not surprisingly a birder, who died September 2021. Dan joined our club when he arrived at W&M to teach biology and has been a generous friend, advisor and supporter since then.

His research began as basic academic research on the evolution of bird behavior and has shifted over the years to applied research. He's published a hundred scientific articles and mentored over 200 students including about 40 graduate students whose research was supported by our club's grants. Dan has written 240 consecutive monthly columns on birding for the Virginia Gazette.

The bird that first inspired Dan's passion for birds was the American Woodcock that he spied in his backyard only because at age 4, he'd been suspended from preschool for a week for inciting arson by encouraging two other schoolmates to start a fire.

Birding is Dan's avocation as well as vocation and every morning he takes an hour's walk in his neighborhood noting the subtle changes in the bird community. He also enjoys chasing rare birds and had just come back from Maine where he'd seen the stunning Steller's Sea Eagle.

His first six years at W&M involved basic research studying whether evolution was shaping avian prey dropping behavior. His subjects were Herring Gulls that dropped clams onto hard surfaces to open them. He and his students collected data determining the optimum height of the drop (involved dropping hundreds of clams from a campus building onto the bricks below) and the best size clam that would provide the greatest yield for the least amount of energy.

The next 8 years of research addressed the question of whether golf courses are healthy places for birds despite human disturbance and the use of pesticides, herbicides and fertilizer. Working with Eastern Bluebirds, he was surprised to find that the number and health of youngsters in nest boxes appeared to be unaffected but found by radio-tracking fledglings that they immediately left for the surrounding woodlands. This was his first experience in applied research as the results led to articles recommending the importance of the design of golf courses having woodlands preserved around them in which birds can find safety versus golf courses being surrounded by the open yards of homes.

Other research projects include exploring whether birds that migrate have a larger hippocampus for spatial memory (migratory juncos are better at solving memory problems than non-migratory ones); assessing whether wetlands created in exchange for wetlands destroyed by developers provide adequate bird habitat (songbirds are not returning in a comparable manner as the lands are too wet); finding how birds protect themselves from feather-degrading bacillus that are found all over birds and can completely destroy a feather (two major factors being the antibiotic properties of the protective oil

from their preen gland that birds distribute on their feathers and the killing property of ultraviolet radiation when they sunbathe); and investigating the reason for differential bird migration wherein birds within the same species migrate different distances to their wintering grounds depending on their sex or age (female White-throated Sparrows tend to migrate further south whereas males are found further north perhaps to stay closer to breeding grounds to reclaim territory).

Since 2005, most of his research and 50 published papers have been about every aspect of the relationship between the toxic effect of the quadrupled amount of mercury in the food web from what naturally occurs and bird health. His most surprising finding was that birds exposed to mercury only as babies but had no further mercury in their diet as adults, had fewer or no babies at all. His research proving mercury's toxicity to songbirds provided data that was used as part of a lawsuit against DuPont for a \$50 million settlement to create habitat for birds and other wildlife. Since that research, Dan has been involved in providing data for other lawsuits regarding polluted rivers, including one on the Penobscot River that led toward the offending company being required to provide \$187 – 267 million toward improving bird habitat. He currently is participating in the investigation of the effect of PCB's released in the Hudson River by General Electric as part of a \$20.5 million settlement to pay for study. He is also collecting data on another river contaminated by dioxin for which the offending company is being held responsible. He'll be working this coming summer on the Mississippi.

Besides the above research furthering our understanding of ecology and birds and holding industry accountable, Dan stressed the importance of the life changing experiences the research gives his students that frequently leads them into their career and how helpful the three or four scholarships our club annually grants are toward their field work. He also noted that any monies donated to the Ruth Beck fund at W&M or the Ruth Beck fund at our bird club goes directly toward funding bird research.

### **Announcements:**

**The Flyer:** Nancy Barnhart reported that Mary Ellen Hodges, Editor, has set the deadline for submissions to our newsletter for Wednesday, January 26<sup>th</sup>.

### **Field Trips – George Martin, Field Trip Coordinator:**

**Sunday, February 13:** The annual boat trip scheduled for last Sunday was cancelled due to unfavorable weather and has been rescheduled for Feb 13<sup>th</sup>. There are still a couple of spaces available.

**Saturday, February 19:** Dutch Gap led by Rose Ryan. We will be meeting there at 8am. Further details will be emailed to the membership.

**Bird Walks:** Nancy reported that we do have a New Quarter Park bird walk scheduled at 8 am this coming Saturday but the forecast of ice and snow may cancel it. She will email the membership the day before about the status of that walk.

**Upcoming Meetings:** Nancy announced that the Board of Directors will be meeting the end of January and the top topic will be how future meetings will be conducted. There had been plans to hold a hybrid meeting in February at the Williamsburg Library with Zoom as an option but the in-person part may be cancelled due to the ongoing pandemic. We do have the library auditorium reserved but have the right to cancel.

**Programs:** Nancy reported the following:

**Wednesday, February 16:** Bill Williams is slated to present a program about the birds on Craney Island. If the meeting is held via Zoom only, Shirley Devan will talk about Prothonotary Warblers.

**Interesting Bird Sightings:** Nancy reported that a Western Grebe has been sighted on the Yorktown Parkway.

Nancy again thanked Dan Cristol for his presentation and new members and guests for attending. The meeting was adjourned at 8:12 pm.

Respectfully submitted  
Cathy Millar, Secretary Williamsburg Bird Club  
January 21, 2022