



International Peace Garden Bottineau BioBlitz Highlights

May 18, 2016 – Debra Nelson – Bottineau Public School, Bottineau, ND



The International Peace Garden hosted a BioBlitz for the seventh graders at Bottineau Public School from 9 a.m. until 2 p.m. on Wednesday, May 18, 2016. What is a BioBlitz? Bio, as in biology, or the study of living organisms, and Blitz! Which means a sudden, energetic, and focused endeavor. A BioBlitz is an event that focuses on finding and identifying as many species as possible in a specific area over a short period of time. The species list can be used to generate an inventory of species or later to conduct research or communicate about local ecological conditions.

In celebration of the National Park Service’s 100th anniversary in 2016, National Geographic created an initiative to support State Geographic Alliances, and their partners, in each state in carrying out BioBlitz events in a national park, state park, community park, or even a schoolyard. The ND Geographic Alliance passed through grant funds to the ND Forest Service Project Learning Tree (PLT) program to coordinate the Peace Garden event. PLT provides environmental education for PreK-12 students and fosters stewardship. An essential skill for all 21st century citizens is an understanding of Earth’s interconnected human and environmental systems. A BioBlitz is usually an event in which teams of volunteer scientists, families, students, educators, and community members work together to apply that understanding.

The 2,300-acre International Peace Garden is an “Affiliated Area” of the National Park System designated as a national historic site with half in the US and half in Canada. The park commemorates the peaceful relations between the two countries. The Garden plants over 150,000 flowers each year and includes an 18-foot floral clock display, Vitko Cacti Collection (largest in the world), fountains, a chime, wildlife museum, and twin towers that straddle the border with a peace chapel at their base. Some building remains of the World Trade Center attacks of September 11, 2001, have been placed in the garden. The park lies in the Turtle Mountains, whose climate, topography, wildlife, and natural vegetation differ considerably from the surrounding prairies.





Debra Nelson, Bottineau Public School science teacher, was awarded \$1,400 in grant funds through the ND Geographic Alliance and matched those funds with in-kind contributions from her school. The funds were used to purchase Global Positioning Systems (GPS units) that could be used by many instructors in the school. GPS is a space-based navigation system that provides location and time information anywhere on the Earth. Nelson's BioBlitz goals were to inspire the young people to explore their local geography, learn new skills, and become stewards of their community's natural environments.

Natural resource biologists/scientists and specialists were brought into the class in advance to help the students learn STEM (science, technology, engineering and math) skills in identification and GPS. Several also accompanied the students to the Garden and helped with identification. The students were asked to search for insects, birds, animals, and trees and shrubs. They were divided into teams of three students; one student had a camera and took photos, one student had the GPS unit, and one student recorded the information on a survey sheet. Nelson recruited high school students to accompany them to the Garden and work with the seventh grade students. The high school students served as trail guides. The trail guides made sure the teams stayed together and adhered to the schedule in their BioBlitz search. The professionals who assisted the students included Diann Beckman, Larry Brooks, and Dr. Chuck Lura from Dakota College at Bottineau; Jonathan Tofteland of North Dakota Game and Fish; Cindy Roth, retired district conservationist from the Natural Resources Conservation Service; Karla Mattson, NDSU Extension Service; Connie Lagerquist, Johannes Olwage and Garry Enns, International Peace Garden; and Glenda Fauske, NDSU-ND Forest Service.



Kasey Wall prepares to take a picture as Whitney Peck documents information and Paige Wall takes a GPS reading as Connie Lagerquist, IPG horticulturalist, watches. Photo: Scott Wagar, Courant

After an official welcome by Peace Garden Director Garry Enns, short orientation, distribution of supplies, and overview of the day, the trail guides took the teams off to the east and west sides of the formal sunken garden to explore the park with the guidance and assistance of the natural resource volunteers and scientists.

Connie Lagerquist (left photo), International Peace Garden horticulturalist, ensured the students confirmed the identity of the flowering almond shrub by looking at several different features: shape, leaves, bark, twigs, flowers, fruit, and seeds. The students learned how to use a dichotomous key to identify native and non-native trees and shrubs throughout the school year in class. Now, they were putting that skill to use!

Following a noon break for lunch, Johannes Olwage, International Peace Garden Horticulture Supervisor, treated everyone to a tour of the Vitko Collection that holds over 6,000 succulents and cacti from all over the world. Olwage, who has a degree in ecology with a minor in botany, is married to a North Dakotan and recently moved here from Namibia. The opportunity to work with the cactus collection at the Peace Garden was an added incentive to move.

The north and south sides of the sunken formal garden were to be covered after lunch. When asked if the students were going to head out on the road or through the forest...the choice was always the forest!



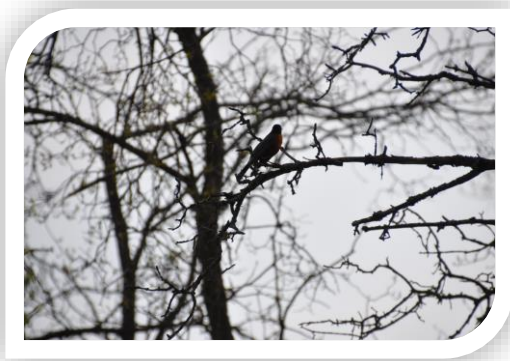
Photo: Scott Wagar, Courant



Photo: Glenda Fauske, ND Forest Service



Photo: Scott Wagar, Courant



The robin on the left was spotted in a tree. The killdeer on the right was barely spotted on the ground. Lots of waterfowl were on the lakes.



Besides birds that flew, students documented creatures that crawled, bees with a bite, beetles that toddled, and wildlife tracks near some cracks.



All the information collected was taken back to school to compile into an inventory for the Garden and to upload to the iNaturalist website for the International Peace Garden BioBlitz project. The partial inventory will highlight the biodiversity of the area, demonstrate the importance of exploration and conservation, and generate data that can be used by scientists and citizens alike. Many students plan to return to the Garden in the future as citizen scientists and add to the inventory.



The next generation of young explorers are preparing to carry on the tradition of exploration and discovery. This BioBlitz experience may change everything for one who is inspired to get out and see more of the world!

The BioBlitz event was sponsored by National Geographic, ND Geographic Alliance, ND Forest Service-Project Learning Tree, Bottineau Public School, Dakota College at Bottineau, International Peace Garden, North Dakota Game and Fish Department, North Dakota State University, NDSU Extension Service, and the Natural Resources Conservation Service. Thank you everyone for making this event such a success!

Submitted by

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