



# West Fargo BioBlitz Highlights

*May 6, 2016 – Elmwood Park – West Fargo, ND*

A BioBlitz was held from 9 a.m. until 2:30 p.m. at Elmwood Park in West Fargo, ND, on May 6. 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 focuses on finding and identifying as many species as possible in a specific geographic 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 100<sup>th</sup> anniversary, National Geographic created an initiative to support Alliances in each state in carrying out BioBlitz events in a national park, state park, community park, or even a schoolyard. An essential skill for all 21<sup>st</sup> century citizens is an understanding of Earth’s interconnected human and environmental systems and the ability to apply that understanding for planning and problem-solving. A BioBlitz is usually an event in which teams of volunteer scientists, families, students, educators, and community members work together.

Sara Forness, West Fargo High School science teacher, was awarded \$1,400 in grant funds from the ND Geographic Alliance and matched those funds with in-kind contributions from her school and a variety of natural resource agencies. The West Fargo BioBlitz goal was to inspire the young people to explore their local geography, learn new skills, and become stewards of their community’s natural environments.



Forness recruited forty West Fargo High School students in the STEM (science, technology, engineering and math) biology class to work with one hundred Cheney Middle School students. The students were grouped into teams of three with one STEM student as a trail guide. The trail guides carried a pack of resources for the teams, made sure the teams stayed together, and got to all the training stations in a timely fashion prior to their BioBlitz search. Nine teachers and nine natural resource environmental scientists set up stations that included forestry, soils, water chemistry, macroinvertebrates, and invasive species.



Bonita Roswick, education specialist and environmental scientist at the Prairie Waters Education and Research Center run by Valley City State University, coordinated the training station on the identification of macroinvertebrates found in North Dakota. The training is useful for those who want to implement a biomonitoring program or for those just interested in what little creatures live in our aquatic habitats.



other pests), herbicides (chemicals that kill unwanted plants), and many other sources. The filtering action of aquatic plants results in cleaner lakes and river water. Clean water means healthy drinking water for people and livestock (farm animals). It also provides good habitat for fish to survive year-round.



Dr. Todd West, forestry professor at North Dakota State University (NDSU), took the students through the steps of tree identification. Tree species can be identified by looking at several different features: leaves, bark, twigs, flowers, fruit, and seeds. Even the overall shape of a tree can give clues to the tree's identify. The students learned how to use a dichotomous key. Then, they toured the park comparing the different features of a variety of trees.



Dr. Joseph Zeleznik, NDSU Extension Service forester, utilized a *Project Learning Tree* activity on Tree Cookies. One way to learn about tree growth is to look at annual rings. Tree rings show patterns of change in the tree's life as well as changes in the area where it grows. Students traced environmental and historical changes using a cross section of the



tree or "tree cookie." The session concluded by taking a core sample out of a tree with a borer and comparing the rings to those on the tree cookie.

Following a noon break for lunch, Dr. West treated everyone to a tree climbing demonstration. One lucky student got to try his skill at climbing the tree using the ropes...with some assistance.



Keith Anderson and Ashley Fisk of the Natural Resources Conservation Service set up stations where the students could learn about soil horizons and types, and what those differences mean to people and to plants. Soil, the foundation for life on Earth, is a mixture of mineral particles mixed with living and non-living organic matter, water, and air. Different soils are classified by their main parent material and by the size of the mineral particles – sand, silt, or clay.



Following training, students set off to explore the park with the guidance and assistance of the natural resource volunteers and scientists to find and accurately identify as many species of plants, animals and other organisms as possible in the park.



The completed inventory on iNaturalist 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.



To add a little fun to the day, teams were provided with BINGO cards listing a variety of natural items – mostly trees – as it is still very early in the spring in North Dakota and the bugs aren't even out yet! If a team had a BINGO, they took it to the review station (Information/First Aid Table) and were rewarded with a tattoo if they were correct. Yvette Gehrke, West Fargo forester, had the honors of rewarding the students.



The afternoon concluded with a “test” to see what the students had learned during the day. BioBlitz T-shirts were awarded to the team with the most correct answers. The team of Sheyenne Deplazes, Taylor Lee, Abby Carlson, and Hailey Alm (team captain) were the winners of the day!



The students left the park to walk back to school, but were inspired at the end of the day to get out and explore more of the world!



The BioBlitz event was sponsored by National Geographic, ND Geographic Alliance, ND Forest Service-Project Learning Tree, City of West Fargo Forestry Department, North Dakota State University, NDSU Extension Service, Valley City State University-Prairie Waters Education Center, and the Natural Resources Conservation Service. Thank you everyone for making this event such a success!

Submitted by

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