

Scientists find some clues to climate change in plants

By Kyle Spurr The Daily Astorian Published Jan 31, 2016 at 12:03AM

ASTORIA — The National Parks Service is partnering with citizen scientists to track when plant species flower, leaf out or set seed. The way plants grow gives clues to changes in the environment and the impact of climate change.

“Plants, as we know, have the most sensitive biological responses to climate change,” said Nancy Fernandez, a climate change intern with Lewis and Clark National Historical Park. “They are sensitive to temperature change and precipitation.”

Fernandez discussed plant responses to climate change during a talk last week at Fort George Lovell Showroom in Astoria.

As a native of California’s Central Valley, Fernandez said, she has seen firsthand drought conditions and plants blooming earlier each spring.

“Plants have been seeing this for a long time, longer than we have,” she said.

Using data gathered by volunteer monitors, Fernandez showed how the start of spring has been coming earlier across the country than in centuries before.

“All of this is problematic because it’s causing mismatches between pollinators, plants, insects,” she said.

Lewis and Clark National Historical Park has partnered with San Juan Island National Historical Park to study the impacts of climate change.

At San Juan Island, Fernandez and others are studying the endangered island marble butterfly. Only about 100 of the butterflies are left on the island. Researchers are finding that when the butterfly larva comes out of its egg, it is expecting to eat a certain flower. However, the flower is blooming earlier than before, making it difficult for the butterflies to eat.

“How many are we losing that could potentially survive?” Fernandez said.

Project BudBurst

Lewis and Clark National Historical Park is inviting the public to help monitor and report plant activity at the park and around Clatsop County. Data collected will help the park learn how plants are responding to changes in the environment.

Specifically, the park is asking people to keep watch on 10 plant species. The species include red alder, Oregon crabapple, Sitka spruce, edible thistle, salal, evergreen huckleberry, salmonberry, wapato, Pacific silverweed and skunk cabbage.

Carla Cole, natural resource program manager at the park, said the 10 plants are culturally and naturally significant to the park. Lewis and Clark described and journaled about the same plants two centuries ago.

Tracking plants at the park is part of a national effort called Project BudBurst. The project encourages people to get outside and observe how plants change with the seasons. Observations can be shared online at www.budburst.org, (<http://www.budburst.org>) where the data will become a part of an ecological record.

“Project BudBurst is a wonderful way to carry on the tradition of scientific observation and discovery handed down to us by America’s first great naturalists, Lewis and Clark,” Cole said. “It is exciting that we will be observing the same plants they recorded for the first time here over 200 years ago in their elk skin journals, but we will be using smartphones and the Internet.”

BioBlitz 2016

Later this spring, Lewis and Clark National Historical Park plans to, again, call on citizen scientists for BioBlitz 2016, a national event where volunteers at various national parks work together to identify as many species of plants and animals as possible.

Over two days on May 20 and May 21, local volunteers and students will go out around Netul Landing and identify every living thing they come across, with a focus on pollinators such as birds, bats, insects and plants. Lewis and Clark National Historical Park previously hosted a BioBlitz event in 2012 out in the Clatsop Plains.

A Jumbotron will be set up at the National Mall in Washington, D.C., during the two-day BioBlitz to showcase each national park’s findings. What is found in Astoria may be broadcast on the Jumbotron at the nation’s capital.

Collecting the data of plants and other species is an initial step in understanding the long-term changes to the environment. It’s a piece of the puzzle to know how climate change is occurring, Cole said.

Another goal of the Project BudBurst and BioBlitz is simply to get people outside and in their national parks.

“The mission is to get people outdoors,” Fernandez said. “We want to connect you to a place. It doesn’t matter if it’s a national park or if it’s a park down the street or in your backyard.”



Joshua Bessex / The Daily Astorian via The Associated Press Nancy Fernandez, a climate change intern with the Lewis and Clark National Historical Park, discusses plant responses to climate change during the “Nature Matters” talk at the Fort George Brewery in Astoria.