



Camas lily monitoring

Nez Perce National Historical Park

Camas lily at Weippe Prairie

Why is camas lily important?

Camas lily (*Camassia quamash*) is a perennial bulb-producing plant that was and remains one of the most widely utilized traditional plant foods of the Nez Perce people. Camas lily was a focal resource at many of the significant historical events memorialized today by Nez Perce National Historical Park (NEPE) and Big Hole National Battlefield. Large expanses of camas in bloom were noted by numerous explorers and botanists that entered the Pacific Northwest in the 19th century, including the Lewis and Clark expedition, and were frequently described as “blue lakes” when viewed from a distance. The extent of the wet prairie ecosystem type has been drastically reduced in the Columbia Basin and northern Rocky Mountains as a result of agricultural conversion, irrigation and flood control development, and other land use practices. Camas populations today are well below historic levels in many locations, including those at Weippe Prairie and along the Big Hole River.

Why do we monitor camas lily?

- To provide status and trends of established plants and flowering plants in camas populations
- To determine trends in the frequency of occurrence of targeted invasive plants
- To determine the magnitude and direction of camas density response to measurable explanatory variables (i.e., winter precipitation, specific management activities)

How do we use the monitoring data?

- To assess park ecological condition
- To provide feedback on the timing and success of park management and restoration activities
- To support park management in their efforts to preserve the historic landscapes of which camas is a central component

What have we found?

Camas density estimates were down from 2013 estimates for all 5 zones monitored at Weippe Prairie. Conversely, flowering camas density estimates were higher than recent years for all zones and the ratio of flowering plants to established plants were the highest recorded since monitoring began. Invasive species, such as Oxeye daisy (*Leucanthemum vulgare*) increased from 14% of plots in 2013 to 22% of plots in 2014. Orange hawkweed (*Hieracium aurantiacum*) decreased from 8.6% of plots in 2013 to 7.7% of plots in 2014. A trend report is forthcoming and will analyze the influence of temperature and precipitation on camas densities, as well as the frequency of occurrence of invasive weeds.



NEPE staff and citizen scientists collect camas data



Volunteer citizen scientists record data on a handheld device



Group of students from a local high school who assisted with data collection in 2014