

Berries in Decline

Project Title: Berry Risk Mapping & Modeling of Native & Exotic Defoliators in Alaska

Brief Summary (Abstract):

A recent (2008-2012) outbreak of Geometrid moths decimated subsistence berry harvest in South Central Alaska; this was the first time a Geometrid outbreak had been observed in Alaska. This project will develop a risk model to predict where subsistence berry plants will be most resistant to Geometrid attack. This model will be used to 1) identify areas where berry improvement treatments are most likely to be successful, 2) develop a sustainable supply of subsistence berry resources for tribes and 3) integrate planning for fuel wood production for energy projects with berry production.

Project Location: South Central Alaska

Partners: USDA Forest Service, Colorado State University

Background:

The Chugachmiut tribal consortium rely heavily on subsistence gathered food for sustenance and nourishment. Studies by the Alaska Department of Fish and Game show that a significant portion of the total foods consumed, 375 pounds per person per year, are from subsistence hunting and gathering. In the traditional Native diet, berries were the only sweet food, making them culturally and nutritionally important. Tribal elders express that the tribe has no memory of any loss of the culturally important berry resource. This is consistent with the western scientific records that show no moth outbreaks affecting berries since record keeping began roughly 50 years ago, leading to the hypothesis that climate change could play a role in the moth outbreak.

Project Goals:

1. Develop methods to assess the vulnerability of subsistence berries to damaging insects, and tools to help prepare for future impacts.
2. Develop risk maps and models for prediction of moth defoliation on berry resources in the Port Graham and Nanwalek area.

Strategy Goals Implemented: 2.2, 5.3

Climate Impacts Addressed: Species population changes

Status of Project Implementation (Timeline, Milestones, Next Steps): In progress with an end date of December 31, 2014

Expected Project Outcomes:

1. Produce risk maps and model predictions of moth defoliation to berry resources.
2. Target forest management operations to increase berry production in areas most likely to be protected from future and current moth outbreaks

Funding Sources: North Pacific LCC, Alaska Climate Science Center, and Chugachmiut

Contact Info: Nathan Lojewski, Chugachmiut, Nathan@chugachmiut.org, 907-562-4155