



## 2021 Spring Workshop Agenda & Abstracts

### Tuesday, April 13, 2021

- 1:00pm Introduction & Welcome**  
Katherine Schake, KP-CISMA Coordinator (Homer Soil & Water Conservation District)
- 1:10pm Flight Plan for the Future: Floatplane Pilots and Researchers Team up to Predict Invasive Species Introductions in Alaska**  
Tobias Schwoerer, University of Alaska Fairbanks International Arctic Research Center
- 1:40pm Identifying Non-native Grasses of Alaska**  
Karin Sonnen, Natural Resources Conservation Service
- 2:10pm Kachemak Bay Marine Invasive Species Monitoring Program Overview**  
Jasmine Maurer, Kachemak Bay National Estuarine Research Reserve
- 2:40pm Building the Alaska First Detector Network**  
Gooseberry Peter, University of Alaska Fairbanks Cooperative Extension Service
- 3:10pm Invasive Species K-12 Education and Outreach: Getting Content into Classrooms**  
Jennifer Chauvet, Homer Soil and Water Conservation District
- 3:40 - 4pm KP-CISMA Partnership Q&A and Discussions**

### Wednesday, April 14, 2021

- 1:00pm Introduction & Welcome**  
Katherine Schake, KP-CISMA Coordinator (Homer Soil & Water Conservation District)
- 1:10pm Rotating Herbicide Modes of Action**  
Timothy Miller, Professor Emeritus, Washington State University
- 2:20pm Controlling Invasive Chokecherry in Alaska**  
Gino Graziano, University of Alaska Fairbanks Cooperative Extension Service
- 2:50pm Spruce Aphids on the Kenai Peninsula**  
Jessie Moan, U.S. Forest Service
- 3:20pm Overview of Kenai Peninsula Non-native Fish Management**  
Rob Massengill, Alaska Department of Fish and Game
- 3:40 - 4pm KP-CISMA Partnership Q&A and Discussions**

Videos catered for invasive species professionals and technicians will be showed between presentations.

## Presenter Abstracts & Biographies

### Tuesday, April 13, 2021

#### ***Flight Plan for the Future: Floatplane Pilots and Researchers Team up to Predict Invasive Species Introductions in Alaska***

Tobias Schwoerer, University of Alaska Fairbanks International Arctic Research Center (UAF IARC)

**Bio:** Toby Schwoerer is a Research Assistant Professor at the International Arctic Research Center at the University of Alaska Fairbanks. Toby's research focuses on human dimensions of sustainable systems. Most of his recent research projects use applied economic analysis to inform invasive species management and the response to climate change.

**Abstract:** Floatplanes can transport aquatic invasive species (AIS) from urban source lakes to remote waterbodies, yet little is known about this long-distance pathway. In North America and especially Alaska, floatplanes are used for recreation access to remote, often road-less wilderness destinations, and other transportation. The long-distance introduction of AIS is particularly concerning for the conservation of pristine wildlands in North America's Subarctic and Arctic. Alaska's first known AIS, *Elodea* spp. (*Elodea*) and its floatplane-related dispersal serves as a case study. Here, we surveyed floatplane pilots to determine statewide flight patterns and applied a Bayesian hierarchical model to predict the chance of AIS introduction to 682 identified freshwater locations. For each location, we present uncertainty bounds surrounding the median chance of introduction. The highest AIS risk originates from floatplane bases with known AIS occurrence near Alaska's population centers. Model predictions show at least one waterbody in each of eight Alaska regions will be infested, except for the North Slope, Alaska's Arctic region. This result underlines the window of opportunity for Arctic conservation strategies targeting an AIS free Arctic. We recommend conservation strategies that account for long-distance connectivity, keeping floatplane bases free of AIS. Model predictions also show the potential for a more widespread invasion of *Elodea* across other regions where *Elodea* is currently not known to occur. Our study contributes to improved understanding of long-range AIS dispersal and shows that stakeholder engagement is key for overcoming management challenges at the Arctic invasion front.

---

#### ***Identifying Non-native Grasses of Alaska***

Karin Sonnen, Natural Resources Conservation Service (NRCS)

**Bio:** Karin Sonnen is the Rangeland Conservationist for the Natural Resources Conservation Service here in Alaska and has worked in this role for over 25 years. Her clients include graziers from all around the state, including reindeer herders on the Bering sea islands and the Seward Peninsula, as well as those who graze cattle, sheep, and bison. She is particularly interested in the grazing ecology of the many varied ecological sites and ecosystems Alaska has, from the beach sand dunes of the Aleutian Islands to the lichen tundra in north-western Alaska.

**Abstract:** We will review the most common non-native grasses in Southcentral Alaska and discuss some of the ways to distinguish them from common native species.

---

### ***Kachemak Bay Marine Invasive Species Monitoring Program Overview***

Jasmine Maurer, Kachemak Bay National Estuarine Research Reserve (KBNERR)

**Bio:** Jasmine has a Master's degree in Marine Science from Moss Landing Marine Laboratories in California. She has worked on various life history projects for fishes and sharks of the North Pacific, zooplankton surveys around the South Shetland Islands, juvenile salmon habitat studies on the Kenai Peninsula, and guided visitors to Kachemak Bay on kayak excursions. Since 2019 Jasmine has worked in the Harmful Species Program at KBNERR monitoring for harmful algal blooms and marine invasive species in Kachemak Bay. One of Jasmine's life passions is learning about the marine ecosystem and sharing the wonders of the marine world with others. On the weekends you can find her outside tide pooling, skiing, hiking, or gardening with her husband and their two young daughters.

**Abstract:** The Kachemak Bay National Estuarine Research Reserve (KBNERR) is part of a national network of 29 reserves that are supported through the National Oceanic and Atmospheric Administration (NOAA) and a state partner. In the national network of National Estuarine Research Reserve System (NERRS), Kachemak Bay represents a high latitude, fjord estuary type. KBNERR's state partner is the Alaska Center for Conservation Science (ACCS) at the University of Alaska, Anchorage (UAA). We also work closely with the KBNERR Community Council, a committed group of residents and agency partners who meet quarterly to connect with KBNERR programs.

KBNERR began monitoring for Marine Invasive Species in Kachemak Bay in 2006. The main goal of our marine invasive species monitoring is to determine which species are the most likely to come into our area, and where they are most likely to settle. Surveying those target areas on a regular basis will hopefully result in early detection and better odds of eradication before the invaders are firmly established. Fouling invertebrates have proven to be some of the worst saltwater invaders all around the world. One of the most notorious marine fouling creatures is the tunicate. KBNERR partners with the Smithsonian Environmental Research Center (SERC) Plate Watch program to survey for targeted species and measure changes in their population. In addition, we survey beaches on low tides, anchor lines in Cook Inlet near the Nikiski terminal, and heavily encrusted boats or infrastructure as they come into the area or before they are moved to new locations. Community monitors also survey multiple beaches throughout the summer looking for European Green Crabs, an aggressive invader working their way up the West Coast toward Alaska. These voracious predators are known to disrupt natural habitats, posing a serious threat to native crab, fish, bird, and bivalve populations.

---

### ***Building the Alaska First Detector Network***

Gooseberry Peter, University of Alaska Fairbanks Cooperative Extension Service (UAF CES)

**Bio:** Mr. Peter works for University of Alaska Fairbanks Cooperative Extension Service. He is a program assistant with the Tanana District Office and a member of the integrated pest management team. Mr. Peter also serves on the Alaska Invasive Species Partnership outreach and education committee and is one of the people working to create Alaska's first invasive species reporting network.



## 2021 Spring Workshop Agenda & Abstracts

**Abstract:** The UAF Cooperative Extension Service, working in partnership, is in the process of creating a First Detector Network for Alaska. The network will offer training, reporting platforms, and organization to help facilitate accurate and timely invasive species reporting. We will model the First Detector Network after similar successful programs in Canada and the lower 48, and address the geographically distinct regions of Alaska and their species of concern. This effort seeks to engage a diverse audience and encompass all taxa of invasive species. This presentation shares a preview of this exciting project while soliciting input and inviting feedback from workshop attendees.

---

### ***Invasive Species K-12 Education and Outreach: Getting Content into Classrooms***

Jennifer Chauvet, Homer Soil and Water Conservation District (HSWCD)

**Bio:** Jen Chauvet joined Homer Soil and Water this past winter as a seasonal invasive species outreach specialist. Currently spending her summers as a seasonal ranger for Alaska Maritime National Wildlife Refuge, she has worked as a naturalist, interpreter, and environmental educator since 2001. Her passion is promoting conservation by helping people discover their unique, personal connections to the natural world.

**Abstract:** Outreach and education are important in the efforts to keep Alaska wild and free from invasive species. While the KP-CISMA has successfully engaged in outreach and education with adult audiences, there is a gap in efforts to engage K-12 students and teachers in the conversation about invasive species. This project aims to expand the KP-CISMA's engagement with K-12 students and teachers on the Kenai Peninsula through the creation of a classroom-based, teacher-led, mini-curriculum that introduces middle school students to invasive species concepts. A series of video- and activity-based lessons address the essential questions: 1) What is an invasive species? 2) Why are invasive species a problem? 3) How do invasive species spread? and 4) What can we do about invasive species? In addition to the mini-curriculum, a catalog of existing resources has been compiled to assist KP-CISMA partners in guiding teachers to lessons, organizations, online tools, and other resources to support them in teaching invasive species concepts in the classroom.

---

## **Wednesday, April 14, 2021**

### ***Rotating Herbicide Modes of Action***

Timothy Miller, Professor Emeritus, Washington State University (WSU)

**Bio:** Tim Miller is an emeritus professor of weed science with Washington State University, formerly stationed at the WSU Northwestern Washington Research and Extension Center. Tim earned his Ph.D. in plant science from the University of Idaho. His program included weed control research in western Washington crops, as well as studying control of non-native vegetation on agricultural, range, and forest lands.

**Abstract:** This presentation will cover herbicide modes of action, focused on products available for noncropland sites. Specific issues to be addressed include rotating Milestone (aminopyralid) with other herbicides; the best product for treating orange hawkweed in residential areas; alternating between glyphosate, aminopyralid, and other products; and the best products to rotate for control of reed canarygrass. Additionally, the presentation will cover herbicides that are not approved for use in Alaska but perhaps should be under consideration.

---

### ***Controlling Invasive Chokecherry in Alaska***

Gino Graziano, University of Alaska Fairbanks Cooperative Extension Service (UAF CES)

**Bio:** Gino works with UAF Cooperative Extension Service on invasive plant and forest health outreach, survey, and research. Some highlights of his work are hosting mobile apps and other online programs to aid in collection of invasive species locations from the public, and research on using persistent herbicides to control invasive plants at high latitudes.

**Abstract:** Documented invasive chokecherry (*Prunus padus* and *virginiana*) invasions in the boreal forest of Alaska are increasing annually and are no longer isolated to Anchorage and Fairbanks. There are many species of *Prunus* planted ornamentally in Alaska, yet only two that are considered invasive. We will discuss the history of invasive chokecherry in Alaska, impacts of the species to ecosystems, and what control experience and research is telling us about tactics and restoration needs. Briefly we will also discuss the exotic defoliating moth program objectives in Alaska.

---

### ***Spruce Aphids on the Kenai Peninsula***

Jessie Moan, U.S. Forest Service (USFS)

**Bio:** Jessie is an entomologist with the US Forest Service's State and Private Forestry program. Based in Anchorage, Jessie works with landowners and land managers on a variety of forest insect related issues, participates in monitoring forest insect damage in Southcentral Alaska, and provides technical assistance on forest insects to partner agencies and the public.

**Abstract:** Spruce aphids are a non-native aphid originally from Europe. They have been present in Southeast Alaska for decades and have occasionally been detected along Prince William Sound and Kodiak Island. In 2015, spruce aphids were detected around Kachemak Bay, primarily around Homer and Halibut Cove. Since that detection, aphid populations on the Kenai Peninsula have been monitored annually. This presentation will cover what spruce aphids are, their current status on the Kenai, and options for management. We will focus on different types of controls effective against spruce aphids, including chemical control methods, pesticide active ingredients, and how and when to utilize them for effective spruce aphid control.

---



## 2021 Spring Workshop Agenda & Abstracts

---

### ***Overview of Kenai Peninsula Non-native Fish Management***

Rob Massengill, Alaska Department of Fish and Game (ADF&G)

**Bio:** Rob Massengill is a Fisheries Biologist with ADF&G Sport Fish Division in Soldotna. He has been involved with invasive fish control in southcentral AK since 2006. Rob is a member of the American Fisheries Society's Fish Management Chemical Committee that works to provide information to those involved with using rotenone (a fish pesticide). To date, Rob has worked on 28 waterbodies in Alaska to successfully remove non-native fish populations, most of the time this was accomplished by using rotenone.

**Abstract:** Introductions of non-native fish to Kenai Peninsula waters has caused dramatic ecological consequences. This presentation provides an overview of the history, management and future of non-native fish control on the Kenai Peninsula. There will be an emphasis on describing the utilization of rotenone to control northern pike and the key messages that are useful for communicating with the public about invasive fish and rotenone.

---