

# Prince William Sound Zone: Shoreline Rare Plant Surveys

By: Kate Mohatt, Erin Cooper, and Betty Charnon, Chugach National Forest



Kelly Bandoch stands in one of the few known Yellow Cedar stands in Cedar Bay, Prince William Sound.



Marilyn Barker surveys a delightful Prince William Sound fen for rare plants. Photos by Kate Mohatt.

Prince William Sound (PWS), Alaska is known worldwide for its amazing wildlife and scenery, but the wide varieties of plants that inhabit this area are little understood. Past surveys have documented numerous sensitive and rare plant species on Southcentral Alaskan maritime shorelines. Prior to this survey, little was known of the presence or distribution of several sensitive plant species that are known to occur in similar habitats as found in PWS. The PWS area is managed to maintain its wild character and unique wildlife habitat. Although human access is generally limited to boat or aircraft, recreational and other human uses are continuing to increase.

Through the PWS Framework, the Chugach National Forest is currently working on projects to help understand human uses and their potential impacts to natural resources. This, in combination with a recent revision of the Region 10 sensitive plant list, made an investigation into sensitive plant distributions in PWS timely. The Glacier and Cordova

Ranger Districts on the Chugach National Forest collaborated on this survey, making it the first zone-wide project in PWS. Results from the survey have greatly increased the understanding of the presence and distribution of sensitive plants in PWS and will be useful for a variety of natural resource and human use project assessments.

The primary purpose of this project was to inventory plant species that occur along PWS shorelines while targeting key habitats for Region 10 sensitive plant species. Plots were selected using a stratified random process and a few subjective sites were selected for their unique geologies or habitats. A total of 100 random points were surveyed in July and August of 2009. This project took approximately 4 weeks and documented 364 plant species.

Prior to this project, 181 plants were known in PWS from various surveys and data from vegetation ecology plots. Through this survey we identified an additional 200 distinct plants bringing the total number in PWS to at least 381. Of par-

ticular importance are new sightings of Region 10 sensitive plant species, including four distinct populations of Sessileleaf scurvygrass (*Cochlearia sessifolia*) and a single collection of Unalaska mist-maid (*Romanzoffia unalaschensis*).

Sessileleaf scurvygrass has never been documented before on National Forest System lands and this is only the third documented occurrence of Unalaska mist-maid on the Chugach National Forest, which only has 29 occurrences world-wide. Additionally, we found three species designated as rare by the Alaska Natural Heritage Program, including two orchids (*Malaxis palidosa* and *Platanthera chorisana*), and Pacific buttercup (*Ranunculus pacificus*). Range extensions were also documented for three species including the Pacific buttercup.

Estimates of richness based on our data suggest that our current plant list includes approximately 80% (up from 35%) of plant species that actually occur along PWS shorelines. Because a majority of plots surveyed for this project were

randomly chosen, several locations, specifically those in closed forest habitat types, were species poor.

In 2010, we plan on conducting more targeted surveys in areas with unique geologies or habitats that were under-represented, such as sandy or recently de-glaciated gravelly sites. This will likely add significantly to our known plant list and may potentially add additional Region 10 sensitive species such as Pale poppy (*Papaver alboroseum*) and two Moonwort fern species (*Botrychium tunux*, and *Botrychium yaaxudakeit*). Including additional habitats such as sandy beaches and alpine areas in future surveys will yield an even greater understanding of the plant species and their distribution in PWS.

Participants included Kate Mohatt, Betty Charnon, Erin Cooper, Marilyn Barker, Rob Lipkin, Helen Cortes, Kelly Bandoch, Rob Develice, Mary Stensvold, Sean Meade, Erin Johnson, and Jason Fode.



*Helen Cortes identifies plants in a Prince William Sound wetland. Photo by Erin Johnson.*