

# The Invasive Plant Situation on the Chugach National Forest



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Invasive plants pose a growing threat to ecosystem function, biological diversity, and sustainability. Compared to the contiguous United States and Hawaii, Alaska currently has *fewer* and *less abundant* invasive plant species.

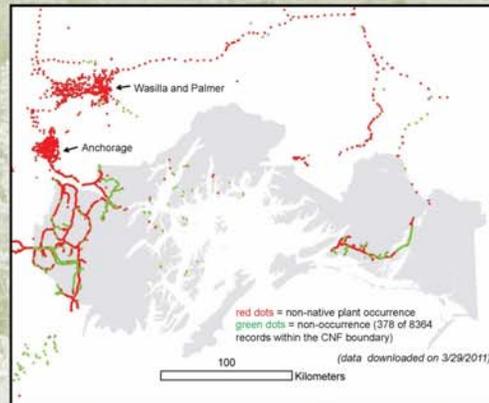
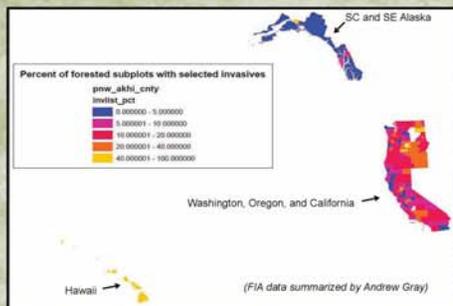
**1** Existing surveys on the Chugach National Forest have found that most areas of invasive plant occurrence on the Forest are presently in areas of intensive human-caused disturbance. Invasive plants are presently rare within natural communities on the Forest (which is about 99% roadless). Owing to this relative rarity, land managers of the Chugach are in a unique position to prevent invasive plant problems before they occur. However, effects of changing climate, increasing levels of disturbance (both natural and human caused) and increasing tourism and population growth make the Forest vulnerable to expansion of invasive plant populations in the future.

**2** Within the boundary of the Forest, there are documented occurrences of over 90 plant species non-native to Alaska. To the end of 2005, about 3500 sites across the Forest had been examined for non-native plant occurrence. Such plants were present on 94% of 700 sites distributed along roads, trails, and other locations of human caused disturbance. In contrast, of 2654 backcountry sites (361 FIA, 2293 Chugach ecology plots) less than 1 percent featured non-native plant species. By geographic area, non-native plant richness and abundance is highest on the Kenai Peninsula, lowest in Prince William Sound, and intermediate on the Copper River Delta.

**4** Of the 92 non-native plant species currently documented within the Chugach only seven are currently ranked as highly invasive (i.e., rank  $\geq 70$  on a 0 to 100 scale) and are regarded as being potentially more deleterious to ecological sustainability than species of lower rank.

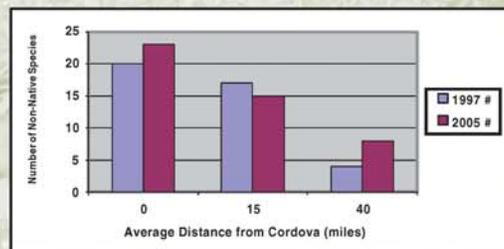
Scientific Name	Common Name	Rank	#*	Area
<i>Cirsium arvense</i>	Canada thistle	76	5	Kenai (Girdwood)
<i>Hieracium aurantiacum</i>	orange hawkweed	79	11	Kenai and Delta (Cordova)
<i>Mellilotus alba</i>	white sweetclover	81	18	Kenai and PWS (Whittier)
<i>Phalaris arundinacea</i>	reed canarygrass	83	12	Kenai and Delta (Cordova/Eyak Lk.)
<i>Polygonum x bohemicum</i>	Bohemian knotweed	87	0	Delta (Cordova)
<i>Sochus arvensis</i>	perennial sowthistle	73	0	Kenai (Hope Wye)
<i>Vicia cracca</i>	bird vetch	73	23	Kenai and PWS (Whittier)

\*number of population records in NRIS TESP-Invasive Species out of 7986 non-native plant population records within the boundaries of the Chugach National Forest.



NRIS TESP-Invasive Species records in and around the Chugach National Forest.

**3** Additional summary findings are: a) the number and abundance of non-native plant species decline with distance from areas of human caused disturbance, b) non-native plants are generally absent in areas of dense shade and in the alpine tundra, and c) many non-native plant species are adapted to areas of sustained moderate natural disturbance (such as along glacial rivers).



Bohemian knotweed in Cordova



white sweetclover



reed canarygrass along Eyak Lake

**5** Management treatments are ongoing to prevent spread of existing infestations. Non-native plant control efforts on the Forest have varied from 15 to 100 acres per year from 2003 to 2010.



Invasive plant control near Spencer Glacier

