What Have We Found?

Alaska Exotic Plant Management Team 2003 – 2009

National Park Service
U.S. Department of the Interior

Alaska Region

Cape Krusenstern

Unit Size: 0.65 million acres
Inventoried Area: 215.656 acres
Infested Area: <0.001 acres or 0% of inventoried land
Treated Area: 0 acres
Eradicated Area: 0 acres
Total Number of Species: 3 (all in Kotzebue)

Noatak

Kobuk Valley

Gates of the Arctic

Unit Size: 8.47 million acres
Inventoried Area: 637.806 acres
Infested Area: 0 acres or 0% of inventoried land
Treated Area: 0 acres
Eradicated Area: 0 acres
Total Number of Invasive Species: 1

Bering Land Bridge

Unit Size: 2.70 million acres
Inventoried Area: 4.296 acres
Infested Area: 0 acres or 0% of inventoried land
Treated Area: 0 acres
Eradicated Area: 0 acres
Total Number of Species: 0

An active partnership with the Southeast Alaska Guidance Association allows the Alaska EPMT conduct large scale manual treatments while educating youth on the dangers of invasive species and the importance of healthy, intact ecosystems.

Invasive weed education & outreach is one of the top priorities of the Alaska EPMT. With most of the state being in the early stages of infestation, every member of the public can make a difference. Crew members take the time to reach out to local communities, school groups, and park visitors as well as participate in regional festivals with informational booths.

Yukon-Charley

Unit Size: 2.53 million acres
Inventoried Area: 113.369 acres
Infested Area: 52.783 acres or 46.6% of inventoried land
Treated Area: 0.471 acres or 0.9% of infested land
Eradicated Area: 0 acres or 0% of infested land
Total Number of Invasive Species: 14
Most Prevalent Invasive Species:
1) common plantain 52.603 acres
2) pineapple weed 19.955 acres
3) common dandelion 17.436 acres
4) alsike clover 7.753 acres
5) common lambsquarters 4.799 acres
Highest Ranked Invasive Species:
1) smooth brome grass 0.056 acres
2) quackgrass 0.012 acres
3) common dandelion 17.436 acres
4) alsike clover 7.753 acres
5) narrowleaf hawksbeard 0.056 acres

Program Summary

Since its formation in 2003, the Alaska Exotic Plant Management Team (EPMT) has been mapping and treating invasive plant infestations in and around National Park Service (NPS) units. Within the vast landscapes of Alaska's 16 NPS units, over **5,600** acres have been inventoried and mapped. Over 1/3 of this acreage supports at least one non-native species. Levels of infestation among park units is highly variable. No non-native species have been observed within the boundaries of Bering Land Bridge, Cape Krusenstern, or Gates of the Arctic. By contrast, Sitka and Wrangell- Saint Elias each have at least one non-native species infesting over 2/3 of the inventoried land area. The three parks on the road system and the three parks in Southeast Alaska have more non-native species and greater distributions than the ten less visited parks. Because of this the Alaska EPMT invasive weed management efforts are focused on these six parks.

The greatest challenges facing the Alaska EPMT are:

1) spreading a limited number of employees and volunteers over the 54 million acres managed by the NPS in Alaska.
2) addressing all components of an effective invasive plant program: planning, education, research, collaboration, prevention, inventory, control, monitoring, and restoration.

Nevertheless, preventing the introduction and spread of invasive species is critical to preserving the ecological integrity of Alaska's NPS units.

Alaska Region

Inventoried Area: 8653.575 acres
Infested Area: 3713.163 acres
or 42.9% of inventoried
Treated Area: 232.594 acres
or 6.3% of infested land
Eradicated Area: 78.436 acres
or 2.1% of infested land
Total Number of Invasive Species: 106
Most Prevalent Invasive Species:
1) white sweetclover 1579.519 acres
2) common dandelion 1435.111
3) common plantain 780.031 acres
4) pineapple weed 442.468 acres
5) white clover 392.271 acres
Highest Ranked Invasive Species:
1) Japanese knotweed 0.894 acres
2) reed canarygrass 28.645 acres
3) ornamental jewelweed 0.071 acres
4) white sweetclover 1579.519 acres
5) orange hawkweed 0.276 acres

The Alaska EPMT has been using a standard data collection protocol since 2005 to ensure that the information collected is accurate across the parks.

Denali

Unit Size: 6.08 million acres
Inventoried Area: 849.121 acres
Infested Area: 116.945 acres or 13.8% of inventoried land
Treated Area: 66.665 acres or 57.0% of infested land
Eradicated Area: 0.27 acres or 0.2% of infested land
Total Number of Invasive Species: 36
Most Prevalent Invasive Species:
1) common dandelion 106.69 acres
2) narrowleaf hawksbeard 16.247 acres
3) common plantain 10.91 acres
4) white sweetclover 5.461 acres
5) pineapple weed 4.573 acres
Highest Ranked Invasive Species:
1) white sweetclover 5.651 acres
2) bird vetch 0.102 acres
3) yellow toadflax 1.092 acres
4) yellow sweetclover 0.394 acres
5) foxtail barley 3.303 acres

Wrangell-St. Elias

Unit Size: 13.18 million acres
Inventoried Area: 3160.381 acres
Infested Area: 2202.66 acres or 69.7% of inventoried land
Treated Area: 74.119 acres or 3.4% of infested land
Eradicated Area: 0.222 acres or 0.01% of infested land
Total Number of Invasive Species: 38
Most Prevalent Invasive Species:
1) white sweetclover 1558.42 acres
2) common plantain 374.910 acres
3) pineapple weed 351.492 acres
4) common dandelion 287.426 acres
5) alsike clover 223.375 acres
Highest Ranked Invasive Species:
1) white sweetclover 1558.42 acres
2) bird vetch 2.861 acres
3) yellow sweetclover 0.045 acres
4) Siberian peashrub 0.030 acres
5) foxtail barley 74.101 acres

Lake Clark

Unit Size: 4.03 million acres
Inventoried Area: 71.632 acres
Infested Area: 22.355 acres or 31.2% of inventoried land
Treated Area: 1.118 acres or 5.0% of infested land
Eradicated Area: 0 acres or 0.0% of infested land
Total Number of Invasive Species: 14
Most Prevalent Invasive Species:
1) pineappleweed 17.555 acres
2) common lambsquarters 11.158 acres
3) common dandelion 10.447 acres
4) common plantain 7.144 acres
5) common chickweed 5.540 acres
Highest Ranked Invasive Species:
1) smooth brome grass 0.081 acres
2) oxeye daisy 0.175 acres
3) white clover 1.392 acres
4) common dandelion 10.447 acres
5) common timothy 0.078 acres

Alaska EPMT crew members protecting backcountry areas from invasive weeds in Wrangell-St. Elias National Park & Preserve.

Kenai Fjords

Unit Size: 0.67 million acres
Inventoried Area: 74.370 acres
Infested Area: 15.447 acres or 20.8% of inventoried land
Treated Area: 12.293 acres or 79.6% of infested land
Eradicated Area: 0.295 acres or 1.9% of infested land
Total Number of Invasive Species: 18
Most Prevalent Invasive Species:
1) common dandelion 14.757 acres
2) common plantain 1.09 acres
3) yellow sweetclover 0.480 acres
4) white clover 0.315 acres
5) alsike clover 0.199 acres
Highest Ranked Invasive Species:
1) yellow sweetclover 0.480 acres
2) foxtail barley 0.001 acres
3) yellow toadflax 0.108 acres
4) oxeye daisy 0.027 acres
5) white clover 0.315 acres

Alagnak

Katmai

Unit Size: 4.09 million acres
Inventoried Area: 199.161 acres
Infested Area: 12.552 acres or 6.3% of inventoried land
Treated Area: 6.287 acres or 50.1% of infested land
Eradicated Area: 0.000 acres or 0% of infested land
Total Number of Invasive Species: 10
Most Prevalent Invasive Species:
1) pineapple weed 11.896 acres
2) common dandelion 6.100 acres
3) shepherd's purse 4.167 acres
4) common plantain 1.728 acres
5) common sheep sorrel 1.431 acres
Highest Ranked Invasive Species:
1) bird vetch 0.007 acres
2) oxeye daisy 0.020 acres
3) white clover 0.001 acres
4) common dandelion 6.100 acres
5) narrowleaf hawksbeard 0.003 acres

Aniakchak

Access is always an issue in Alaska. The EPMT crews often use unconventional means – including kayaks, rafts, or fixed wing aircraft – to reach some of our more remote infestations near backcountry cabins and airstrips.

Glacier Bay

Unit Size: 3.28 million acres
Inventoried Area: 3057.865 acres
Infested Area: 1170.586 acres or 38.3% of inventoried
Treated Area: 44.957 acres or 3.8% of infested land
Eradicated Area: 24.868 acres or 2.1% of infested
Total Number of Invasive Species: 56
Most Prevalent Invasive Species:
1) common dandelion 908.307 acres
2) bigleaf lupine 388.337 acres
3) mouse-ear chickweed 345.334 acres
4) common plantain 320.793 acres
5) white clover 144.662 acres
Highest Ranked Invasive Species:
1) reed canarygrass 27.311 acres
2) orange hawkweed 0.276 acres
3) Canada thistle 0.822 acres
4) perennial sowthistle 2.421 acres
5) foxtail barley 0.113 acres

Volunteers are a key part of the EPMT. This group volunteers regularly at the Denali Need for Seed event to collect native plant seeds for use in the park's restoration program.

Klondike Gold Rush

Unit Size: 13,191 acres
Inventoried Area: 242.853 acres
Infested Area: 97.837 acres
or 40.3% of inventoried
Treated Area: 21.302 acres
or 21.8% of infested land
Eradicated Area: 0.566 acres
or 0.6% of infested land
Total Number of Invasive Species: 46
Most Prevalent Invasive Species:
1) common dandelion 70.329 acres
2) white clover 24.192 acres
3) narrowleaf hawksbeard 18.723 acres
4) common sheep sorrel 17.102 acres
5) white sweetclover 15.638 acres
Highest Ranked Invasive Species:
1) reed canarygrass 0.041 acres
2) ornamental jewelweed 0.071 acres
3) white sweetclover 15.638 acres
4) Canada thistle 0.588 acres
5) bird vetch 0.037 acres

Sitka

Unit Size: 112 acres
Inventoried Area: 27.065 acres
Infested Area: 21.998 acres
or 81.3% of inventoried
Treated Area: 5.382 acres
or 24.5% of infested
Eradicated Area: 0 acres
or 0% of infested land
Total Number of Invasive Species: 27
Most Prevalent Invasive Species:
1) creeping buttercup 18.563 acres
2) common dandelion 13.619 acres
3) European mountain-ash 12.377 acres
4) white clover 7.879 acres
5) mouse-ear chickweed 6.434 acres
Highest Ranked Invasive Species:
1) Japanese knotweed 0.893 acres
2) reed canarygrass 1.293 acres
3) yellow toadflax 0.488 acres
4) oxeye daisy 1.648 acres
5) European mountain-ash 12.377 acres

Summary of all AK-EPMT GPS mapping in acres through 2009

Taxon	Common_name	Rank	BELA	CAKR	DENA	GAAR	GLBA	KATM	KEFJ	KLGO	LACL	SITK	WRST	YUCH
Achillea ptarmica	sneezeweed	46					0.014							
Aegopodium podagraria	bishop's goutweed	-----			0.159		0.783							
Agrostis gigantea	red top	-----							X					
Alchemilla mollis	ladies mantle	-----					0.014							
Allium schoenoprasum	wild chive	-----					39.975				1.176			
Alopecurus geniculatus	marsh meadow-foxtail	-----									X			
Alopecurus pratensis	meadow foxtail	-----					0.028			X				
Amaranthus retroflexus	pigweed	-----									0.078			
Anthemis arvensis	corn chamomile	-----								0.003				
Anthemis cotula	stinking chamomile	41								0.001				
Aquilegia	columbine	-----							0.001					
Arabis glabra	tower rockcress	-----											0.001	
Arctium minus	common burdock	-----					0.001							
Beckmannia syzigacene	slough-grass	-----											X	
Brassica rapa	field mustard	-----			0.466				0.001		X			
Bromus inermis	smooth brome grass	62			0.590		13.027	X	X	1.482	0.081		196.103	0.056
Campanula medium	Canterberry bells	-----					0.017							
Capsella bursa-pastoris	shepherd's purse	40			1.579		0.785	4.167		0.692	0.078	X	0.337	3.426
Caragana arborescens	Siberian peashrub	66											0.030	
Centaurea montana	perennial cornflower	-----					2.469					0.226		
Cerastium fontanum	mouse-ear chickweed	36					345.334	X	X	1.639		6.434	13.336	
Cerastium tomentosum	snow in summer	-----					0.007					0.110		
Chenopodium album	common lambsquarters	37			3.671					1.223	11.158	0.456	4.252	4.799
Cirsium arvense	Canada thistle	76					0.822			0.588				
Convolvulus arvensis	field bindweed	56								0.001				
Crepis tectorum	narrowleaf hawksbeard	54			16.247			0.003	0.029	18.723	X		4.819	0.056
Dactylis glomerata	orchard grass	54					21.297		X					
Descurainia sophia	flixweed	41	X	0.000	0.272								1.171	
Digitalis purpurea	foxglove	51										0.592		
Elymus repens	quackgrass	59			X		3.696		X	0.822			193.992	0.012
Erysimum cheiranthoides	wormseed mustard	-----			3.130			X		0.143			0.001	
Euphrasia nemorosa	common eyebright	-----								1.521				
Galeopsis bifida/tetrahit	hempnettle	40					0.001		X	0.268			0.004	
Geranium robertianum	herb robert	-----					0.014							
Hieracium aurantiacum	orange hawkweed	79			X		0.276		X		X			
Hieracium umbellatum	narrowleaf hawkweed	54			0.077									
Hordeum jubatum	foxtail barley	63			3.303		0.113		0.001	1.190			74.101	
Hypochaeris radicata	hairy cat's ear	-----					4.945							
Impatiens glandulifera	ornamental jewelweed	82								0.071			X	
Lamium album	white deadnettle	-----					0.010							
Lappula squarrosa	European stickseed	44			0.049								2.315	
Lepidium densiflorum	common pepperweed	25			0.532								0.081	1.901
Leontodon autumnalis	fall dandelion	-----							X					
Leucanthemum vulgare	oxeye daisy	61			0.379		53.003	0.020	0.027	0.972	0.175	1.648	194.833	
Linaria vulgaris	yellow toadflax	61			1.092		0.760		0.108	6.437		0.488	193.948	
Lolium perenne	perennial ryegrass	41					78.109		X		X		X	
Lupinus polyphyllus	bigleaf lupine	55			0.024		388.337		X	0.056				
Lychnis chalcedonica	maltesecross	-----					0.001							
Malus pumila	apple	-----										X		
Matricaria discoidea	pineapple weed	32	X	0.000	4.573		33.215	11.896	0.148	3.065	17.555	0.569	351.492	19.955
Medicago lupulina	black medic	48							X				0.034	
Melilotus alba	white sweetclover	81			5.461		X		X	15.638			1558.420	
Melilotus officinalis	yellow sweetclover	69			0.394				0.480				0.045	
Mentha	mint	-----					0.003							
Myosotis asiatica	alpine forget-me-not	-----					0.021					0.022		
Myosotis scorpioides	true forget-me-not	-----					0.151					0.301		
Neslia paniculata	ball mustard	-----							X					
Papaver nudicale	Icelandic poppy	-----							0.080	0.001				
Papaver rhoes	corn poppy	-----											X	
Papaver somniferum	opium poppy	-----											0.001	
Persicaria lapathifolia	curlytop knotweed	-----						X			X			
Phalaris arundinacea	reed canarygrass	83					27.311			0.041	X	1.293		
Phleum pratense	common timothy	56			0.484		59.655		0.130	2.159	0.078	1.226	0.583	
Plantago major	common plantain	44			10.910		320.793	1.728	1.090	6.622	7.144	4.230	374.910	52.603
Poa annua	annual bluegrass	46					6.077	X	0.023		X	0.117		0.985
Poa palustris	fowl bluegrass	-----					X							
Poa pratensis	Kentucky bluegrass	52					0.007	X	X	0.129	X	0.021	6.902	
Polygonum aviculare	prostrate knotweed	45			0.537		0.032	0.040		2.056	0.078		194.107	4.171
Polygonum convolvulus	black bindweed	50			0.466					0.001		X	0.003	
Polygonum cuspidatum	Japanese knotweed	87			0.001							0.893		
Prunus avium	sweet cherry	-----										0.268		
Ranunculus acris	tall buttercup	54					0.149		0.001	2.124		2.825		
Ranunculus repens	creeping buttercup	54			0.001		2.697			0.542		18.563		
Rheum rhabarbarum	rhubarb	-----					0.778						0.029	
Rosa rugosa	rugosa rose	-----					0.261					0.028		
Rubus idaeus	red raspberry	-----					3.605							
Rumex acetosella	common sheep sorrel	51					0.696	1.431	0.021	17.102	0.081	0.318		0.359
Rumex crispus	curled dock	48					0.001		0.003	0.143		1.138		
Rumex obtusifolius	bitter dock	-----										X		
Sagina procumbens	birdseye pearlwort	-----										0.216		
Secale cerale	wild rye	-----											X	
Senecio sylvaticus	woodland ragwort	-----								0.000				
Senecio viscosus	sticky ragwort	-----								X				
Senecio vulgaris	common groundsel	35								0.198				
Silene latifolia	bladder campion	42											0.001	
Silene noctiflora	night-blooming cockle	42			0.466					0.198			0.078	
Silene vulgaris	bladder campion	42								0.143				
Sonchus arvensis	perennial sowthistle	72					2.421			3.162		X		
Sonchus oleraceus	annual sowthistle	-----			0.001									
Sorbus aucuparia	European mountain-ash	59					2.930					12.377		
Spergula arvensis	corn spurry	32			0.466				X		X			
Stellaria media	common chickweed	42			0.727		1.967			0.341	5.540		0.066	2.353
Symphytum officinale	common comfrey	-----					2.033							
Tanacetum vulgare	common tansy	57					0.044			0.003	X		0.013	
Taraxacum officinale	common dandelion	58	X	0.000	106.690	X	908.307	6.100	14.757	70.329	10.447	13.619	287.426	17.436
Thlaspi arvense	field pennycress	-----								0.000			0.004	
Trifolium hybridum	alsike clover	57			0.724		0.001		0.199	0.154	X	X	233.375	7.753
Trifolium pratense	red clover	53			0.538		14.193		0.001	2.709		1.348	0.521	
Trifolium repens	white clover	59			3.890		144.662	0.001	0.315	24.192	1.392	7.879	209.940	
Tripleurospermum maritima	false mayweed	-----			0.001									
Tripleurospermum perforata	scentless false mayweed	48			3.214				X				0.014	X
Triticum aestivum	common wheat	-----			0.043		77.083		X					
Veronica serpyllifolia	thyme-leaf speedwell	-----					0.013				X			
Veronica spicata	spiked speedwell	-----					0.007							
Vicia cracca	bird vetch	73			0.102				X	0.037			2.861	X
Viola tricolor	Johnny-jump-up violet	-----					1.729			0.001				
	Total Acres		0.000	0.000	171.259	0.000	2564.680	25.386	17.334	186.923	55.061	77.207	4100.149	115.866
	Total Species		(3)	3	36 (38)	(1)	56 (58)	10 (15)	18 (37)	45 (47)	14 (27)	27 (33)	38 (43)	14 (16)
	# mapped (# mapped + #reported)													

X = Species reports but the location not GPSed
All known occurrences eradicated
Observed within NPS boundaries
Only observed outside NPS boundaries

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Created: 3/2010 from AKEPMT NPS Permanent GIS Dataset
Albers Equal Area Projects; NAD83
Acreages represent a gross coverage of the area and include areas inside & outside NPS boundaries

0 25 50 100 Miles

Mapped Areas

= Invasive Species

= No Invasive Species

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