

Appendix H - Status of Biological Controls in the Pacific Northwest Region

Weed	Control Agent	Agent Type	Status
bull thistle	<i>Urophora stylata</i>	FLY	Widespread in western Oregon with gaps, not successfully established in eastern Oregon
Canada thistle	<i>Aitica carduorum</i>	BEETLE	Not approved
Canada thistle	<i>Cassida rubiginosa</i>	BEETLE	Not approved
Canada thistle	<i>Ceutorhynchus litura</i>	BEETLE	Spotty distribution, not demonstrated effective
Canada thistle	<i>Larinus planus</i>	BEETLE	Not approved, known on <i>Cirsium calolepsis</i> on westside
Canada thistle	<i>Urophora cardui</i>	FLY	Widespread with possible gaps, may move within a few miles, limited effectiveness, prefers high humidity
Canada thistle, Italian thistle	<i>Rhinocyllus conicus</i>	BEETLE	Attacks natives, no longer used, widespread
common mullein	<i>Gymnetron tetrum</i>	BEETLE	Not approved
Dalmatian toadflax	<i>Brachypterolus pulicarius</i>	BEETLE	Not approved, widespread, ineffective
Dalmatian toadflax	<i>Calophasia lunula</i>	MOTH	Widespread near Spokane, ineffective, not successfully established in Oregon
Dalmatian toadflax	<i>Gymnetron antirrhini</i>	BEETLE	Biotype approved. Introduced in Washington and Montana, FS may redistribute.
Dalmatian toadflax	<i>Gymnetron linariae</i>	BEETLE	Recent release, not yet established, FS may redistribute
Dalmatian toadflax	<i>Mecinus janthinus</i>	BEETLE	Recent release, limited distribution, FS may redistribute
Diffuse knapweed	<i>Aceria centaureae</i>	MITE	Not approved
Diffuse knapweed	<i>Sphenoptera jugoslavica</i>	BEETLE	Very widespread, effective
Field bindweed	<i>Aceria malherbae</i>	MITE	Established in isolated sites. Unlikely on USFS forest lands, generally doesn't do well in R6
Field bindweed	<i>Tyta luctuosa</i>	MOTH	Recent releases, not established, unlikely on FS land. Difficult to establish, not recovered
gorse	<i>Agonopterix nervosa</i>	MOTH	Not approved
gorse	<i>Exapion ulicis</i>	BEETLE	Widespread in western Oregon and Washington, all gorse
gorse	<i>Tetranychus lintearius</i>	MITE	Widespread in western Oregon and Washington, now attacked by the accidental release of predatory mites from the nursery/greenhouse industry.
Italian thistle, slenderflower thistle	<i>Cheilosia corydon</i>	FLY	Widespread in southwest Oregon, may impact nontargets
knapweeds	<i>Pythium rostratum</i>	FUNGUS	Not approved
knapweeds	<i>Agapeta zoegana</i>	MOTH	Widespread with possible gaps
Knapweeds	<i>Bangasternus fausti</i>	BEETLE	Widespread, hot & dry is best
Knapweeds	<i>Larinus minutus</i>	BEETLE	Widespread, may need minor redistribution within a few miles
Knapweeds	<i>Larinus obtusus</i>	BEETLE	Limited distribution, priority on meadows in eastern Oregon, FS may redistribute.
Knapweed	<i>Pelochrista medullana</i>	MOTH	Just released, difficult to establish, imminent use unlikely
Knapweeds	<i>Pterolonche dispersa</i>	MOTH	Isolated sites, <i>Larinus</i> extinguished near Mosier
knapweeds	<i>Urophora affinis</i>	FLY	Widespread
knapweeds	<i>Urophora quadrifasciata</i>	FLY	Widespread
leafy spurge	<i>Aphthona abdominalis</i>	BEETLE	Failed, never recovered in US
leafy spurge	<i>Aphthona cyparissiae</i>	BEETLE	Widespread, less effective than <i>A. lacertosa</i>
leafy spurge	<i>Aphthona czwalinae</i>	BEETLE	Widespread, less effective than <i>A. lacertosa</i>
leafy spurge	<i>Aphthona flava</i>	BEETLE	Well distributed, spotty establishment
leafy spurge	<i>Aphthona lacertosa</i>	BEETLE	Widespread, most effective
leafy spurge	<i>Aphthona nigriscutis</i>	BEETLE	Widespread, may need minor redistribution within a few miles
leafy spurge	<i>Chamaesphecia crassicornis</i>	MOTH	Failed introduction into the US. It is unlikely to be reintroduced.
leafy spurge	<i>Chamaesphecia hungarica</i>	MOTH	Possible for future introductions
leafy spurge	<i>Hyles euphorbiae</i>	MOTH	Numerous introductions have failed. It is unlikely to be reintroduced
leafy spurge	<i>Oberea erythrocephala</i>	BEETLE	Limited distribution

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leafy spurge	<i>Spurgia esula</i>	FLY	Introduction failed, ineffective, parasitized
Mediterranean sage	<i>Phrydiuchis spilmani</i>	BEETLE	Introduction in the US failed. It is unlikely to be reintroduced.
Mediterranean sage	<i>Phrydiuchus tau</i>	BEETLE	Widespread. May need minor redistribution if Mediterranean sage becomes established around John Day.
musk thistle	<i>Psylliodes chalconera</i>	BEETLE	Approved. Future introductions are possible
musk thistle	<i>Puccinia carduorum</i>	FUNGUS	Known established in California and Wyoming and several eastern states, probably throughout musk thistle distribution; reduces seed production.
musk thistle	<i>Trichosiocalus horridus</i>	BEETLE	Introduced everywhere. Only established near Klamath River, possible impact on native plants.
musk thistle	<i>Urophora solstitialis</i>	FLY	Recent release, not established in US, difficult to establish, FS may distribute
poison hemlock	<i>Agonopterix alstroemeriana</i>	MOTH	Not approved
puncturevine	<i>Microclarinus lareynii</i>	BEETLE	Established only in isolated sites, too cold in R6, only use is inundative
puncturevine	<i>Microclarinus lypriformis</i>	BEETLE	Introductions failed, too cold in R6
purple loosestrife	<i>Galerucella californiensis</i>	BEETLE	Widespread, effective, spreads well, FS may want to distribute
purple loosestrife	<i>Galerucella pusilla</i>	BEETLE	Widespread, effective, spreads well, FS may want to distribute
purple loosestrife	<i>Hylobius transversovittatus</i>	BEETLE	Spotty establishment, expensive to rear and collect
purple loosestrife	<i>Nanophyes brevis</i>	BEETLE	Not approved, not introduced in US
purple loosestrife	<i>Nanophyes marmoratus</i>	BEETLE	Widespread, effective, thousands per plant
Rush skeletonweed	<i>Bradyrrhoa gilveolella</i>	MOTH	Recent US release, not yet established, not in R6, FS will want to distribute once available
Rush skeletonweed	<i>Cystiphora schmidtii</i>	FLY	Widespread, ineffective due to parasitism
Rush skeletonweed	<i>Eriophyes chondrillae</i>	MITE	Very widespread, found on isolated plants, no need to distribute
Rush skeletonweed	<i>Puccinia chondrillina</i>	FUNGUS	Widespread, little effect on Oregon late-flowering biotype
Russian knapweed	<i>Subangiuna picridis</i>	NEMATODE	Isolated sites, need better dissemination; difficult to establish and ineffective
Russian thistle	<i>Coleophora klimeschiella</i>	MOTH	Widespread, moves on own
Russian thistle	<i>Coleophora parthenica</i>	MOTH	Widespread, moves on own
Scotch broom	<i>Exapion fuscirostre</i>	BEETLE	Widespread in western Oregon and Washington, moderate effect, 50% of seeds damaged
Scotch broom	<i>Leucoptera spartifoliella</i>	MOTH	Widespread
Scotch broom	<i>Selenophoma juncea</i>	FUNGUS	Not approved, widespread, no longer used, non-target effects
Scotch broom, maybe French	<i>Bruchidius villosus</i>	BEETLE	Recently introduced. Very limited availability in western Oregon and Washington. Accidental introduction in the Carolinas. Oregon wrote a petition and tested in Oregon and Washington. FS may distribute.
Spartina anglica	<i>Prokelisia marginata</i>	PLANTHOPPER	Approved. Native to San Francisco Bay. Not necessary on FS lands
spotted knapweed	<i>Chaetorellia acrolophi</i>	FLY	Spotty distribution in Lane and Hood River Counties. FS may redistribute.
spotted knapweed	<i>Cyphocleonus achates</i>	BEETLE	Prefers long stems, monocultured stands, and low, hot, dry, gravel pits. Appears effective, FS may distribute
Spotted knapweed	<i>Metzneria paucipunctella</i>	MOTH	Widespread
spotted knapweed	<i>Terellia virens</i>	FLY	Isolated sites, higher elevation than weevils, FS use likely
St. Johnswort	<i>Agrius hyperici</i>	BEETLE	Spotty in eastern Oregon and Washington, would use on the westside if could be established, FS may want to redistribute

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St. Johnswort	<i>Aplocera plagiata</i>	MOTH	Common in eastern OR and Washington, ineffective, disperses 50 miles
St. Johnswort	<i>Chrysolina hyperici</i>	BEETLE	Widespread in mesic
St. Johnswort	<i>Chrysolina quadrigemina</i>	BEETLE	Widespread in dry
St. Johnswort	<i>Chrysolina variens</i>	BEETLE	Establishment failed 50 years ago. It will not be released
St. Johnswort	<i>Zeuxidiplosis giardi</i>	FLY	Many attempts to introduce in Oregon failed. Established in southern CA but parasitized.
Salt cedar	<i>Diorhabda elongata</i>	BEETLE	Recent release. As of 2004 approved for one site in Malheur County.
tansy ragwort	<i>Botanophila seneciella</i>	FLY	Widespread
tansy ragwort	<i>Longitarsus jacobaeae</i>	BEETLE	Widespread
tansy ragwort	<i>Tyria jacobaeae</i>	MOTH	Widespread. Attacks natives (<i>Packara sedaris</i> and <i>S. triangularis</i>) but no population effects are known
toadflax	<i>Eteobalea intermediella</i>	MOTH	Have been released and recovered in Montana; still unavailable for redistribution
toadflax	<i>Eteobalea serratella</i>	MOTH	Have been released and recovered in Montana. Still unavailable for redistribution. FS will distribute when available.
yellow nutsedge	<i>Puccinia canaliculata</i>	FUNGUS	Not released in US
yellow starthistle	<i>Bangasternus orientalis</i>	BEETLE	Widespread
yellow starthistle	<i>Chaetorellia australis</i>	FLY	Widespread. Rate of spread about 50 miles per year
yellow starthistle	<i>Chaetorellia succinia</i>	FLY	Not yet approved, Accidental.
yellow starthistle	<i>Eustenopus villosus</i>	FLY	Widespread, spreads well, if site w/o, FS should redistribute
yellow starthistle	<i>Larinus curtus</i>	BEETLE	Widespread in eastern Oregon and Washington. Does poorly on the west-side, may need redistribution in spots in the East
yellow starthistle	<i>Urophora sirunaseva</i>	FLY	Widespread southwest Oregon, climate not suitable in northeast Oregon or eastern Washington
yellow starthistle	<i>Puccinia jaceae</i> var. <i>Solstitialis</i>	FUNGUS	Established in California; as of 2003 not yet available for large-scale releases.