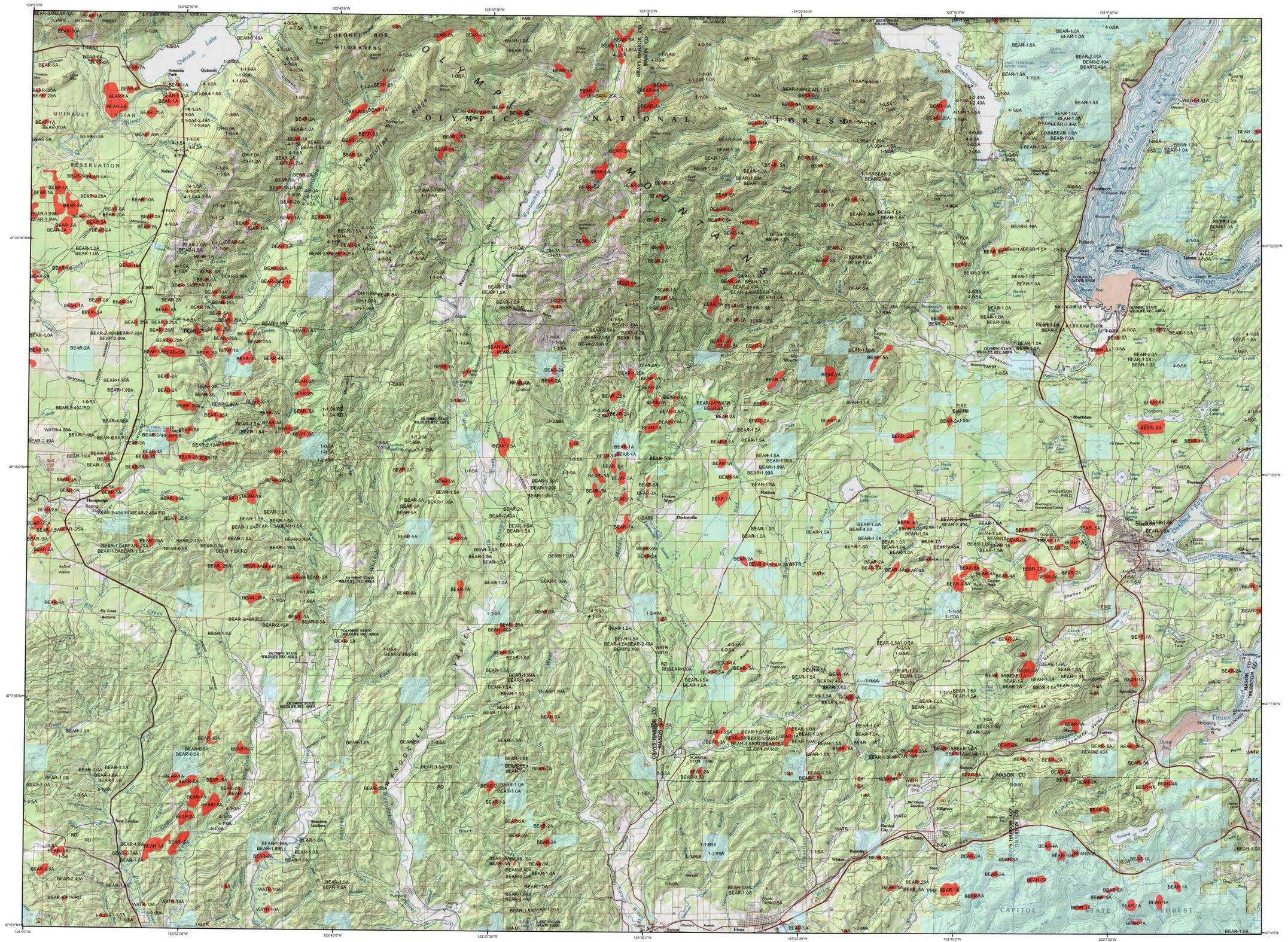


2011 Aerial Insect and Disease Survey

USGS 100K Quad: SHELTON - A147123; 2D



Mortality Agents			Other Damaging Agents		
Code	Damaging Agent	Primary Host	Code	Damaging Agent	Primary Host
1	Douglas fir beetle	Douglas fir	AB	Balsam woolly adelgid	True fir
2	Douglas fir engraver	Douglas fir	AC	Cooley spruce gall adelgid	Spruce, Douglas fir
3	Spineless sawfly	True fir	AM	Leaf discoloration	Maple
4	Pine engraver	True fir	AN	Leaf miner	Maple, Douglas fir
5	Western balsam bark beetle	Whitebark pine	AR	Brister rust	True fir
6B	Mountain pine beetle	Lodgepole pine	CC	Campylocotyle canker	Maple
6L	Mountain pine beetle	Lodgepole pine	CD	Dying hemlock	Hemlock
6P	Mountain pine beetle	Sugar pine	DE	Fire	All species
6W	Mountain pine beetle	Western white pine	HD	Hardwood decline	Hardwoods
7	Western white pine beetle	Ponderosa pine	HDA	Hardwood decline	Hardwoods
8	Western white pine beetle	Pine-fir	HDC	Hardwood decline	Aspen
9	Western white pine beetle	Pine-fir	HDD	Hardwood decline	Oak
10	Western white pine beetle	Pine-fir	MA	Armadillo	All species
11	Western white pine beetle	Pine-fir	MB	Bark beetle	All species
12	Western white pine beetle	Pine-fir	MC	Conifer scale	All species
13	Western white pine beetle	Pine-fir	MD	Conifer scale	All species
14	Western white pine beetle	Pine-fir	ME	Conifer scale	All species
15	Western white pine beetle	Pine-fir	MF	Conifer scale	All species
16	Western white pine beetle	Pine-fir	MG	Conifer scale	All species
17	Western white pine beetle	Pine-fir	MH	Conifer scale	All species
18	Western white pine beetle	Pine-fir	MI	Conifer scale	All species
19	Western white pine beetle	Pine-fir	MJ	Conifer scale	All species
20	Western white pine beetle	Pine-fir	MK	Conifer scale	All species
21	Western white pine beetle	Pine-fir	ML	Conifer scale	All species
22	Western white pine beetle	Pine-fir	MM	Conifer scale	All species
23	Western white pine beetle	Pine-fir	MN	Conifer scale	All species
24	Western white pine beetle	Pine-fir	MO	Conifer scale	All species
25	Western white pine beetle	Pine-fir	MP	Conifer scale	All species
26	Western white pine beetle	Pine-fir	MQ	Conifer scale	All species
27	Western white pine beetle	Pine-fir	MR	Conifer scale	All species
28	Western white pine beetle	Pine-fir	MS	Conifer scale	All species
29	Western white pine beetle	Pine-fir	MT	Conifer scale	All species
30	Western white pine beetle	Pine-fir	MU	Conifer scale	All species
31	Western white pine beetle	Pine-fir	MV	Conifer scale	All species
32	Western white pine beetle	Pine-fir	MW	Conifer scale	All species
33	Western white pine beetle	Pine-fir	MX	Conifer scale	All species
34	Western white pine beetle	Pine-fir	MY	Conifer scale	All species
35	Western white pine beetle	Pine-fir	MZ	Conifer scale	All species
36	Western white pine beetle	Pine-fir	NA	Conifer scale	All species
37	Western white pine beetle	Pine-fir	NB	Conifer scale	All species
38	Western white pine beetle	Pine-fir	NC	Conifer scale	All species
39	Western white pine beetle	Pine-fir	ND	Conifer scale	All species
40	Western white pine beetle	Pine-fir	NE	Conifer scale	All species
41	Western white pine beetle	Pine-fir	NF	Conifer scale	All species
42	Western white pine beetle	Pine-fir	NG	Conifer scale	All species
43	Western white pine beetle	Pine-fir	NH	Conifer scale	All species
44	Western white pine beetle	Pine-fir	NI	Conifer scale	All species
45	Western white pine beetle	Pine-fir	NJ	Conifer scale	All species
46	Western white pine beetle	Pine-fir	NK	Conifer scale	All species
47	Western white pine beetle	Pine-fir	NL	Conifer scale	All species
48	Western white pine beetle	Pine-fir	NM	Conifer scale	All species
49	Western white pine beetle	Pine-fir	NO	Conifer scale	All species
50	Western white pine beetle	Pine-fir	NP	Conifer scale	All species
51	Western white pine beetle	Pine-fir	NQ	Conifer scale	All species
52	Western white pine beetle	Pine-fir	NR	Conifer scale	All species
53	Western white pine beetle	Pine-fir	NS	Conifer scale	All species
54	Western white pine beetle	Pine-fir	NT	Conifer scale	All species
55	Western white pine beetle	Pine-fir	NU	Conifer scale	All species
56	Western white pine beetle	Pine-fir	NV	Conifer scale	All species
57	Western white pine beetle	Pine-fir	NW	Conifer scale	All species
58	Western white pine beetle	Pine-fir	NX	Conifer scale	All species
59	Western white pine beetle	Pine-fir	NY	Conifer scale	All species
60	Western white pine beetle	Pine-fir	NZ	Conifer scale	All species
61	Western white pine beetle	Pine-fir	OA	Conifer scale	All species
62	Western white pine beetle	Pine-fir	OB	Conifer scale	All species
63	Western white pine beetle	Pine-fir	OC	Conifer scale	All species
64	Western white pine beetle	Pine-fir	OD	Conifer scale	All species
65	Western white pine beetle	Pine-fir	OE	Conifer scale	All species
66	Western white pine beetle	Pine-fir	OF	Conifer scale	All species
67	Western white pine beetle	Pine-fir	OG	Conifer scale	All species
68	Western white pine beetle	Pine-fir	OH	Conifer scale	All species
69	Western white pine beetle	Pine-fir	OI	Conifer scale	All species
70	Western white pine beetle	Pine-fir	OJ	Conifer scale	All species
71	Western white pine beetle	Pine-fir	OK	Conifer scale	All species
72	Western white pine beetle	Pine-fir	OL	Conifer scale	All species
73	Western white pine beetle	Pine-fir	OM	Conifer scale	All species
74	Western white pine beetle	Pine-fir	ON	Conifer scale	All species
75	Western white pine beetle	Pine-fir	OO	Conifer scale	All species
76	Western white pine beetle	Pine-fir	OP	Conifer scale	All species
77	Western white pine beetle	Pine-fir	OQ	Conifer scale	All species
78	Western white pine beetle	Pine-fir	OR	Conifer scale	All species
79	Western white pine beetle	Pine-fir	OS	Conifer scale	All species
80	Western white pine beetle	Pine-fir	OT	Conifer scale	All species
81	Western white pine beetle	Pine-fir	OU	Conifer scale	All species
82	Western white pine beetle	Pine-fir	OV	Conifer scale	All species
83	Western white pine beetle	Pine-fir	OW	Conifer scale	All species
84	Western white pine beetle	Pine-fir	OX	Conifer scale	All species
85	Western white pine beetle	Pine-fir	OY	Conifer scale	All species
86	Western white pine beetle	Pine-fir	OZ	Conifer scale	All species
87	Western white pine beetle	Pine-fir	PA	Conifer scale	All species
88	Western white pine beetle	Pine-fir	PB	Conifer scale	All species
89	Western white pine beetle	Pine-fir	PC	Conifer scale	All species
90	Western white pine beetle	Pine-fir	PD	Conifer scale	All species
91	Western white pine beetle	Pine-fir	PE	Conifer scale	All species
92	Western white pine beetle	Pine-fir	PF	Conifer scale	All species
93	Western white pine beetle	Pine-fir	PG	Conifer scale	All species
94	Western white pine beetle	Pine-fir	PH	Conifer scale	All species
95	Western white pine beetle	Pine-fir	PI	Conifer scale	All species
96	Western white pine beetle	Pine-fir	PJ	Conifer scale	All species
97	Western white pine beetle	Pine-fir	PK	Conifer scale	All species
98	Western white pine beetle	Pine-fir	PL	Conifer scale	All species
99	Western white pine beetle	Pine-fir	PM	Conifer scale	All species
100	Western white pine beetle	Pine-fir	PN	Conifer scale	All species

USGS 100K Quad: SHELTON - A147123; 2D
2011 Aerial Insect and Disease Survey
Map Scale: 1:100,000
Date: 14 December 2011

Legend

- Defoliating Agents
- Mortality Agents
- Other Damage
- WaDNR Managed Lands
- Areas Not Flown
- 2011 Large Fires

Source: Northwest Interagency Coordination Center

The cause of damage is described by a symbol above and is followed by: number of trees affected; number of trees (example: 5A/1 or 10M/2).

The TOPOI maps are seamless, scanned images of United States Geological Survey (USGS) paper topographic maps. For more information on this map, visit us online at http://gto.arcgis.com/maps/usa/Topo_Maps

A data dictionary, digital copies of this map and ArcGIS insect and disease data are available at www.fs.usda.gov/gto/r6/rfp/ads

How the Aerial Surveys Are Conducted

Data represented on this map are based on trees visibly affected by forest insects and diseases detected and recorded during aerial survey flights conducted by the USDA Forest Service, the Washington Department of Natural Resources and the Oregon Department of Forestry. Observers have just a few seconds to recognize the color difference between healthy and damaged trees of different species; diagnose causal agents correctly; estimate intensity; delineate the extent of damage; and precisely record this information on a georeferenced, digital map. Air turbulence, cloud shadows, distance from aircraft, haze, smoke and observer experience can all affect the quality of the survey. These data summaries provide an estimate of conditions on the ground and may differ from estimates derived by other methods.

The aerial survey provides information on the current status for many causal agents, and is important when examining insect activity trends by comparing historical and current survey data over large areas.

Overview surveys are a 'snap shot' in time and therefore may not be timed to accurately capture the true extent or severity of a particular disturbance agent. Specially designed surveys with modified flight patterns and timing may be conducted to more accurately delineate the extent and severity of a particular disturbance agent. Special surveys, such as Swiss needle cast surveys, are conducted when resources are available to address situations of sufficient economic, political or environmental importance.

DIRECT ALL INQUIRIES TO:

Washington State Department of Natural Resources
Resource Protection Division
Forest Health
1111 Washington St. SE
MS 47037
Olympia, WA 98504-7037

-- OR --

USDA Forest Service, Region 6
Natural Resources
Forest Health Protection
PO Box 3623
Portland, Oregon 97208

DISCLAIMER
Forest Health Protection (FHP), Washington Department of Natural Resources (WDNR) and Oregon Department of Forestry (ODF) strive to maintain an accurate Aerial Detection Survey (ADS) Dataset, but due to the conditions under which the data are collected FHP, WDNR and ODF shall not be held responsible for missing or inaccurate data. ADS are not intended to replace more specific information. An accuracy assessment has not been done for this dataset; however, ground checks are completed in accordance with local and national guidelines. <http://www.fs.usda.gov/foresthealth/ads/>

Quality assurance sheet: Maps and data may be updated without notice. Please cite: "USDA Forest Service, Forest Health Protection, Washington Department of Natural Resources, Resource Protection Division, and Oregon Department of Forestry, Forest Health Management" as the source of this data.