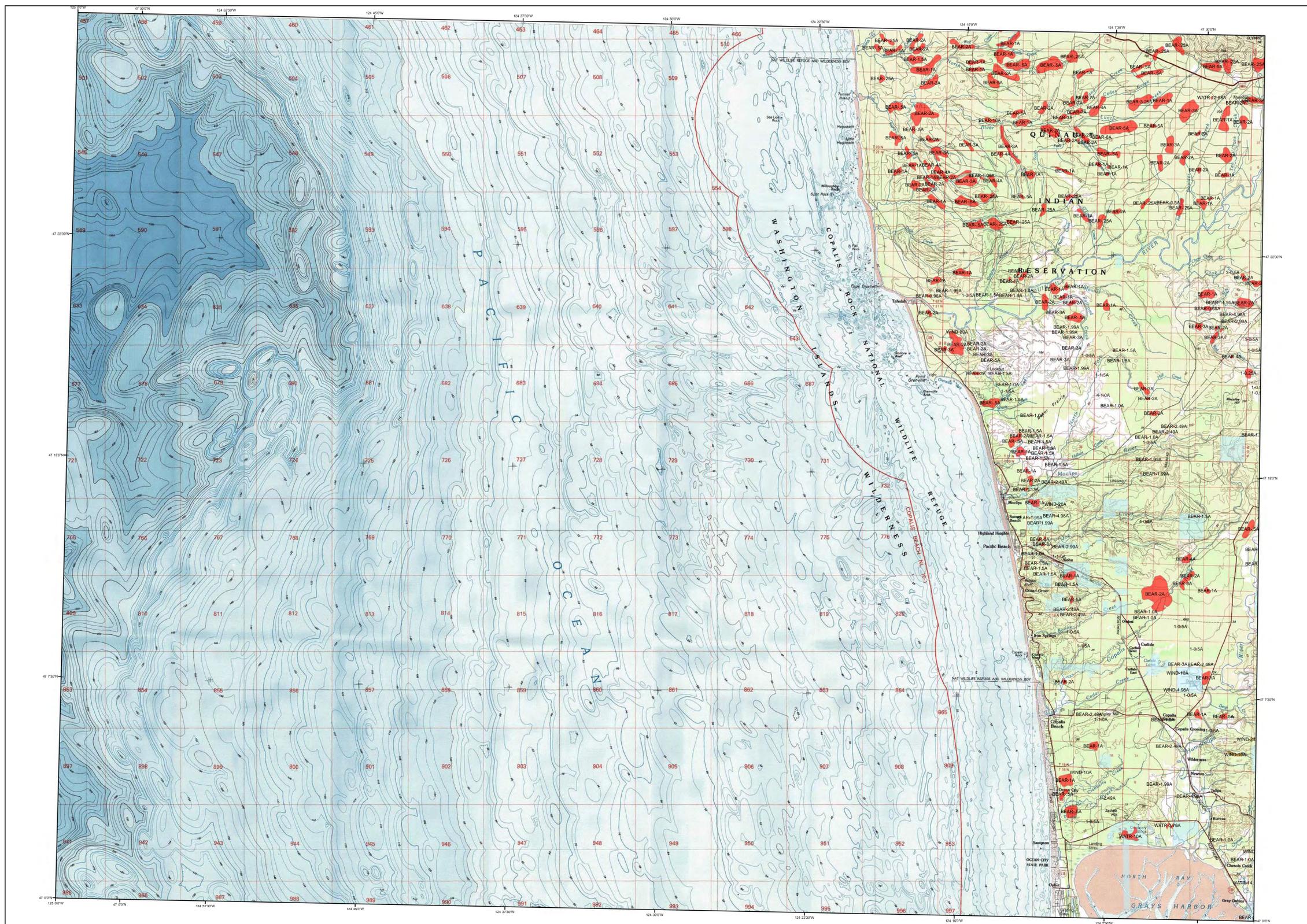


2010 Aerial Insect and Disease Survey

USGS 100K Quad: Copalis Beach - A147124; 1D



Defoliators		Mortality Agents	
Code	Primary Host	Code	Primary Host
AS	Sitka spruce	1	Douglas-fir beetle
BB	Western blackheaded budworm	2	Douglas-fir engraver
BM	Modoc budworm	3	Sitka spruce
BP	Sugar pine tortrix	4	White fir
BS	Western spruce budworm	5	True fir
BY	Bynum's blight/lophodermella	6	Western balsam bark beetle
CH	Green spruce sawyer	7	Mountain pine beetle
HL	Western hemlock looper	8	Mountain pine beetle
LG	Green spruce sawyer	9	Mountain pine beetle
LL	Larch looper	10	Mountain pine beetle
LS	Black pine leaf scale	11	Mountain pine beetle
MD	Douglas-fir budmoth	12	Mountain pine beetle
NL	Larch budmoth	13	Mountain pine beetle
NI	Douglas-fir needle midge	14	Mountain pine beetle
NS	Sitka spruce budworm	15	Mountain pine beetle
NW	Needle miner	16	Mountain pine beetle
NU	Needle miner	17	Mountain pine beetle
NV	Needle miner	18	Mountain pine beetle
NW	Needle miner	19	Mountain pine beetle
NY	Needle miner	20	Mountain pine beetle
NZ	Needle miner	21	Mountain pine beetle
OA	Needle miner	22	Mountain pine beetle
OB	Needle miner	23	Mountain pine beetle
OC	Needle miner	24	Mountain pine beetle
OD	Needle miner	25	Mountain pine beetle
OE	Needle miner	26	Mountain pine beetle
OF	Needle miner	27	Mountain pine beetle
OG	Needle miner	28	Mountain pine beetle
OH	Needle miner	29	Mountain pine beetle
OI	Needle miner	30	Mountain pine beetle
OJ	Needle miner	31	Mountain pine beetle
OK	Needle miner	32	Mountain pine beetle
OL	Needle miner	33	Mountain pine beetle
OM	Needle miner	34	Mountain pine beetle
ON	Needle miner	35	Mountain pine beetle
OO	Needle miner	36	Mountain pine beetle
OP	Needle miner	37	Mountain pine beetle
OQ	Needle miner	38	Mountain pine beetle
OR	Needle miner	39	Mountain pine beetle
OS	Needle miner	40	Mountain pine beetle
OT	Needle miner	41	Mountain pine beetle
OU	Needle miner	42	Mountain pine beetle
OV	Needle miner	43	Mountain pine beetle
OW	Needle miner	44	Mountain pine beetle
OX	Needle miner	45	Mountain pine beetle
OY	Needle miner	46	Mountain pine beetle
OZ	Needle miner	47	Mountain pine beetle
PA	Needle miner	48	Mountain pine beetle
PB	Needle miner	49	Mountain pine beetle
PC	Needle miner	50	Mountain pine beetle
PD	Needle miner	51	Mountain pine beetle
PE	Needle miner	52	Mountain pine beetle
PF	Needle miner	53	Mountain pine beetle
PG	Needle miner	54	Mountain pine beetle
PH	Needle miner	55	Mountain pine beetle
PI	Needle miner	56	Mountain pine beetle
PJ	Needle miner	57	Mountain pine beetle
PK	Needle miner	58	Mountain pine beetle
PL	Needle miner	59	Mountain pine beetle
PM	Needle miner	60	Mountain pine beetle
PN	Needle miner	61	Mountain pine beetle
PO	Needle miner	62	Mountain pine beetle
PP	Needle miner	63	Mountain pine beetle
PQ	Needle miner	64	Mountain pine beetle
PR	Needle miner	65	Mountain pine beetle
PS	Needle miner	66	Mountain pine beetle
PT	Needle miner	67	Mountain pine beetle
PV	Needle miner	68	Mountain pine beetle
PW	Needle miner	69	Mountain pine beetle
PX	Needle miner	70	Mountain pine beetle
PY	Needle miner	71	Mountain pine beetle
PZ	Needle miner	72	Mountain pine beetle
QA	Needle miner	73	Mountain pine beetle
QB	Needle miner	74	Mountain pine beetle
QC	Needle miner	75	Mountain pine beetle
QD	Needle miner	76	Mountain pine beetle
QE	Needle miner	77	Mountain pine beetle
QF	Needle miner	78	Mountain pine beetle
QG	Needle miner	79	Mountain pine beetle
QH	Needle miner	80	Mountain pine beetle
QI	Needle miner	81	Mountain pine beetle
QJ	Needle miner	82	Mountain pine beetle
QK	Needle miner	83	Mountain pine beetle
QL	Needle miner	84	Mountain pine beetle
QM	Needle miner	85	Mountain pine beetle
QN	Needle miner	86	Mountain pine beetle
QO	Needle miner	87	Mountain pine beetle
QP	Needle miner	88	Mountain pine beetle
QQ	Needle miner	89	Mountain pine beetle
QR	Needle miner	90	Mountain pine beetle
QS	Needle miner	91	Mountain pine beetle
QT	Needle miner	92	Mountain pine beetle
QU	Needle miner	93	Mountain pine beetle
QV	Needle miner	94	Mountain pine beetle
QW	Needle miner	95	Mountain pine beetle
QX	Needle miner	96	Mountain pine beetle
QY	Needle miner	97	Mountain pine beetle
QZ	Needle miner	98	Mountain pine beetle
RA	Needle miner	99	Mountain pine beetle
RB	Needle miner	100	Mountain pine beetle

USGS 100K Quad: Copalis Beach - A147124; 1D
2010 Aerial Insect and Disease Detection Survey
Mapscale: 1:100,000
Date: January 12, 2011

Legend

- Defoliating Agents
- Mortality Agents
- Other Damage
- WaDNR Managed Lands

The map base was created with TOPOI (Copyright 2001, National Geographic); available online at: www.ngmapstore.com

A data dictionary, digital copies of this map and ArcGIS insect and disease data are available at: www.fs.fed.us/r/nr/id/data.shtml

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 and the Washington Department of Natural Resources. 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 activity. 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
Olympia, WA 98504

-- OR --

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

DISCLAIMER: Forest Health Protection (FHP) and Washington Department of Natural Resources (WDNR) strive to maintain an accurate Aerial Detection Survey (ADS) Dataset, but due to the conditions under which the data are collected, FHP and WDNR 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.fed.us/foresthealth/ads/accuracyassessment.shtml>. Maps and data may be updated without notice. Please cite: "USDA Forest Service, Forest Health Protection and Washington Department of Natural Resources, Resource Protection Division, Forest Health, as the source of this data in maps and publications."