

SNCC Spring Field Trip Itinerary- April 28th, 2011

Objective: Visit four sites in the Hebo-Beaver area to learn about different agencies' and companies' approaches to Swiss needle cast management. At each site, invited speakers from Stimson (Jon Wehage), Starker (Mark Gourley), USFS (Michael Reichenberg) and ODF (Kate Skinner) will talk about specific management decisions and recommendations, followed by group discussion.

Notes: Please pack a lunch. Water, juice or soft drinks, and light snacks will be provided. A 12-passenger van will depart from the loading zone on the west side of Richardson Hall at 7:10 AM. If you would like to ride in the van, please contact Robin Mulvey (cell 541 908-2527) or Dave Shaw (cell 541 908-1680). Otherwise, meet in Beaver, OR at 9 AM.

Meeting Location: At **9 AM**, meet in the parking lot of the **Beaver Grocery** (24375 Highway 101 S, Beaver, OR 97108, now closed) located north of the Shell Station and the intersection of Hwy 101 and Blaine Rd.

Schedule:

Time	Description
7:10 AM	12-passenger van leaves from Richardson Hall (OSU campus); contact Robin Mulvey if you'd like a seat in the van.
9:00 AM	Meet in the parking lot of Beaver Grocery; caravan to Stop 1
9:30-10:30 AM	Stop 1: Young mixed-species plantation (Stimson)
10:45-11:45AM	Stop 2: 33 yr old Doug-fir/red alder stand with sub-canopy of 25 yr old mixed - species (Stimson)
12:00-1:05 PM	Stop 3: Lunch at overlook of the Little Foland Drainage (State); views of private, state and federal lands (15 min lunch followed by 50 min presentation/discussion)
1:15-2:15 PM	Stop 4: Thinned and underplanted stand near the "Mount Hebo Plantation" interpretive sign (Federal)
3:00 PM	Return to Beaver Grocery; conclude field trip
4:45 PM	Van returns to OSU campus

Speaker Information:

Kate Skinner Assistant District Forester Tillamook District 503-815-7002 office 503-812-5102 cell	Michael Reichenberg District Silviculturist Hebo Ranger District Siuslaw National Forest 503-392-5131	Jon Wehage Stimson Lumber Company 503-357-2131	Mark Gourley Starker Forests 541-740-4461
--	--	--	--

Check out the new SNCC website: <http://sncc.forestry.oregonstate.edu/>

April 2011 Swiss Needle Cast Coop. Field Trip Route

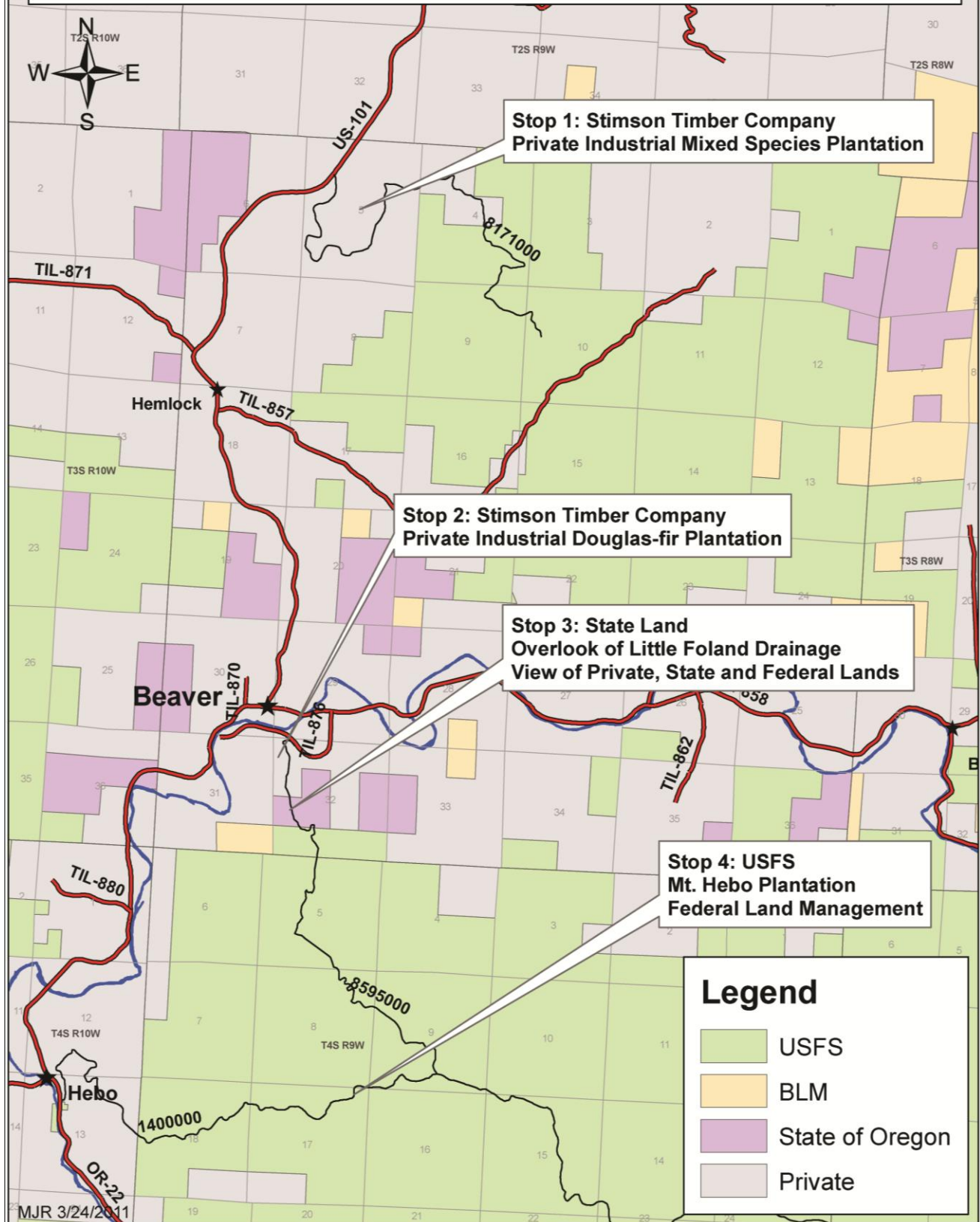


Table of Contents	
Page	Description
1	Itinerary
2	Field Trip Map
4	Stop 1: Tiger Creek Map (Stimson)
5	Stop 1: Tiger Creek Description
6	Stop 2: Bixby Rd Map (Stimson)
7	Stop 2: Bixby Rd Description
8	Stop 3: Overlook of Little Foland Drainage (State)
9	Stop 4: Mt. Hebo Plantation (Federal)
10-11	Additional Field Trip Maps (Terrain & 2010 Aerial Insect and Disease Detection Survey)
12	Swiss Needle Cast Oregon Aerial Survey Maps (2010 & 1996-2010 Cumulative)

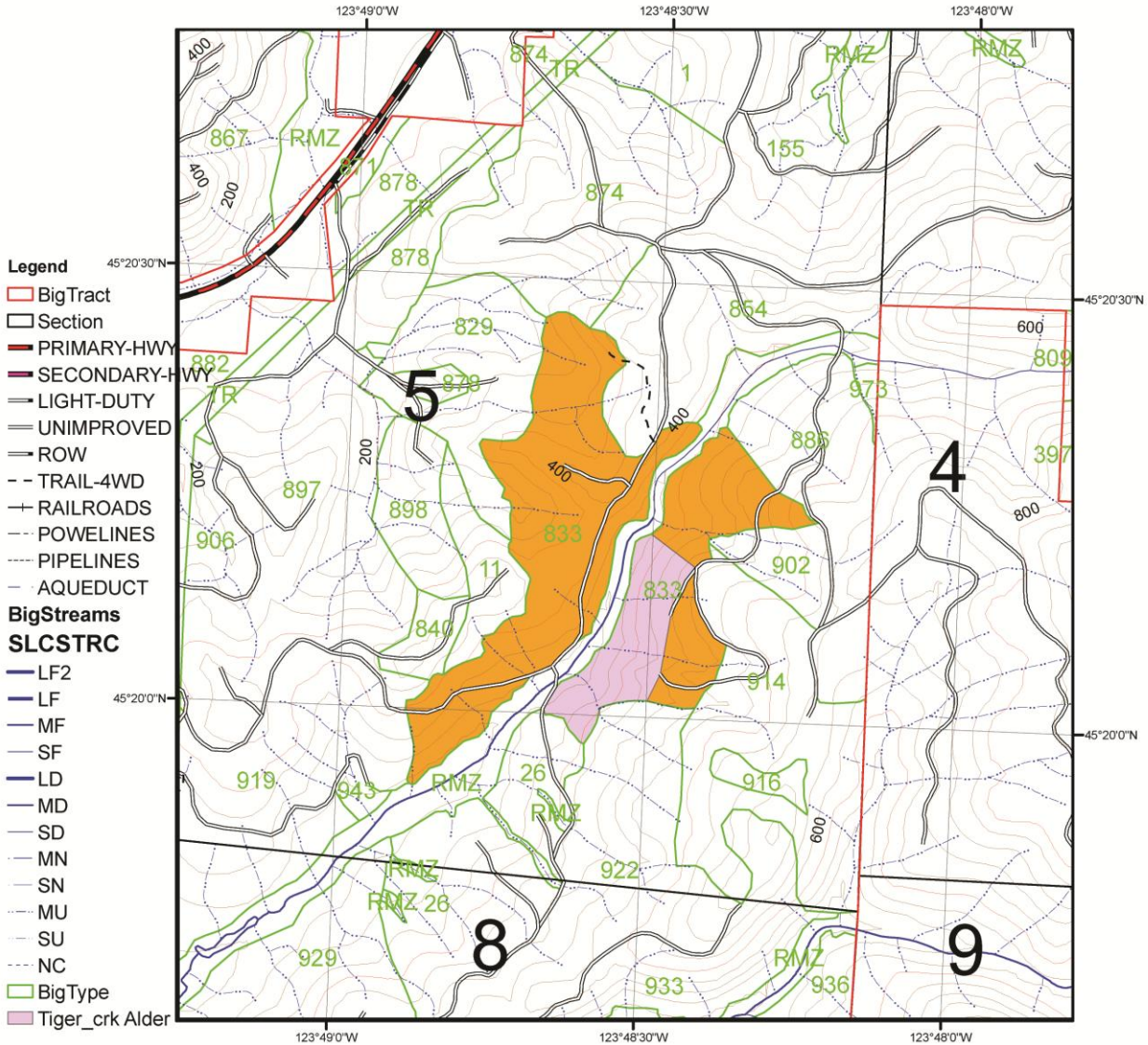
Separate Documents
<p>Managing an Epidemic of Swiss Needle Cast in the Douglas-fir Region of Oregon: The Role of the Swiss Needle Cast Cooperative Journal of Forestry, Volume 109 (2): 109-119 David C. Shaw, Gregory M. Filip, Alan Kanaskie, Douglas A. Maguire & Will A. Littke</p>
<p>Additional Handout for Stop 3 (State): Compiled by Kate Skinner (ODF)</p>

TIGER CREEK

State: OR
County: TILLAMOOK
Project: EMERALD
Tract: MUNSON

Township: 3S
Range: 9W
Section: 5
Date: 4/5/2011

TYPE # 833



1:12,000

Special Concerns:

Conifer Acres 61.86
Red Alder Acres 13.1
Total Net Acres 74.96

	Conifer				
Planted 4/18/06	DF 173	WH 101	RC 157		
Survey 5/5/09	DF 105	WH 121	RC 121	RA 140	

Red Alder
RA 384
RA 325

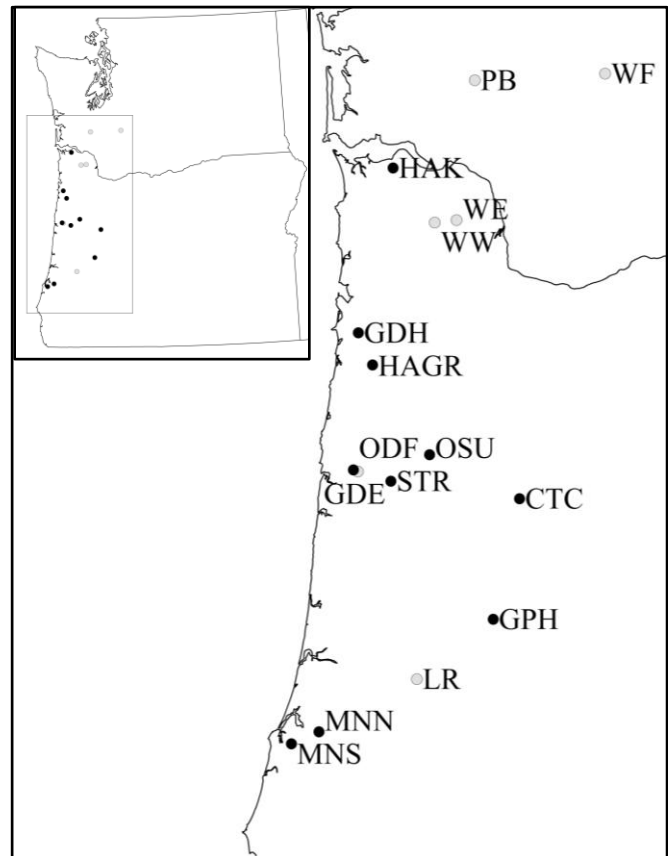


Stop 1: Tiger Creek, Young Mixed-Species Plantation (Stimson)

- The stand covers 75 acres: 62 acres mixed-conifer (orange on map), 13 acres red alder (pink on map); the stand was planted by the previous owner before it was acquired by Stimson
- Conifer acreage:
 - Planted in March 2006 (at age 2): DF 173, WH 101, RC 157
 - Surveyed 2009 (at age 5): DF 105, WH 121, RC 121, RA 140
 - 327 T/Ac in 2009
- Douglas-fir seed source Coquille (not improved seed); may have backfilled behind fall hemlock planting that experienced poor survival (due to frost or elk/deer browse)

On our way from Stop 1 to Stop 2, we will pass a 6-year old red alder stand (right side of road). Two units of 12-13 year old Douglas-fir were felled along windrows and burned (sanitation cut), and the site was planted with alder. Alder is currently experiencing vole damage to root collars and wind/frost damage.

We will also pass a Douglas-fir stand (GDH) that was part of the Swiss Needle Cast Coop *Beyond-N Study*. This site had the lowest foliage retention (1.6 yrs) and highest disease severity ratings of all of the stands examined. The objectives of the study were to evaluate the impacts of fertilization treatment on tree growth, SNC disease severity and needle retention of individual dominant and co-dominant DF trees. 16 study sites spanned western Oregon and SW Washington. Fertilizer treatments included nitrogen, phosphorous, calcium as lime, calcium chloride, and two site-specific blends (Fenn and Kinsey), and treatments were applied at standard industrial rates. Nitrogen influence on ectomycorrhizal communities was evaluated in 7 stands (Dan Luoma). Preliminary results showed no fertilizer influence on disease severity (Robin Mulvey). Overall, positive volume growth increases (~3.5%) were observed with nitrogen and lime applications only, but growth gains were dependent on the initial soil composition (Doug Mainwaring & Doug Maguire).

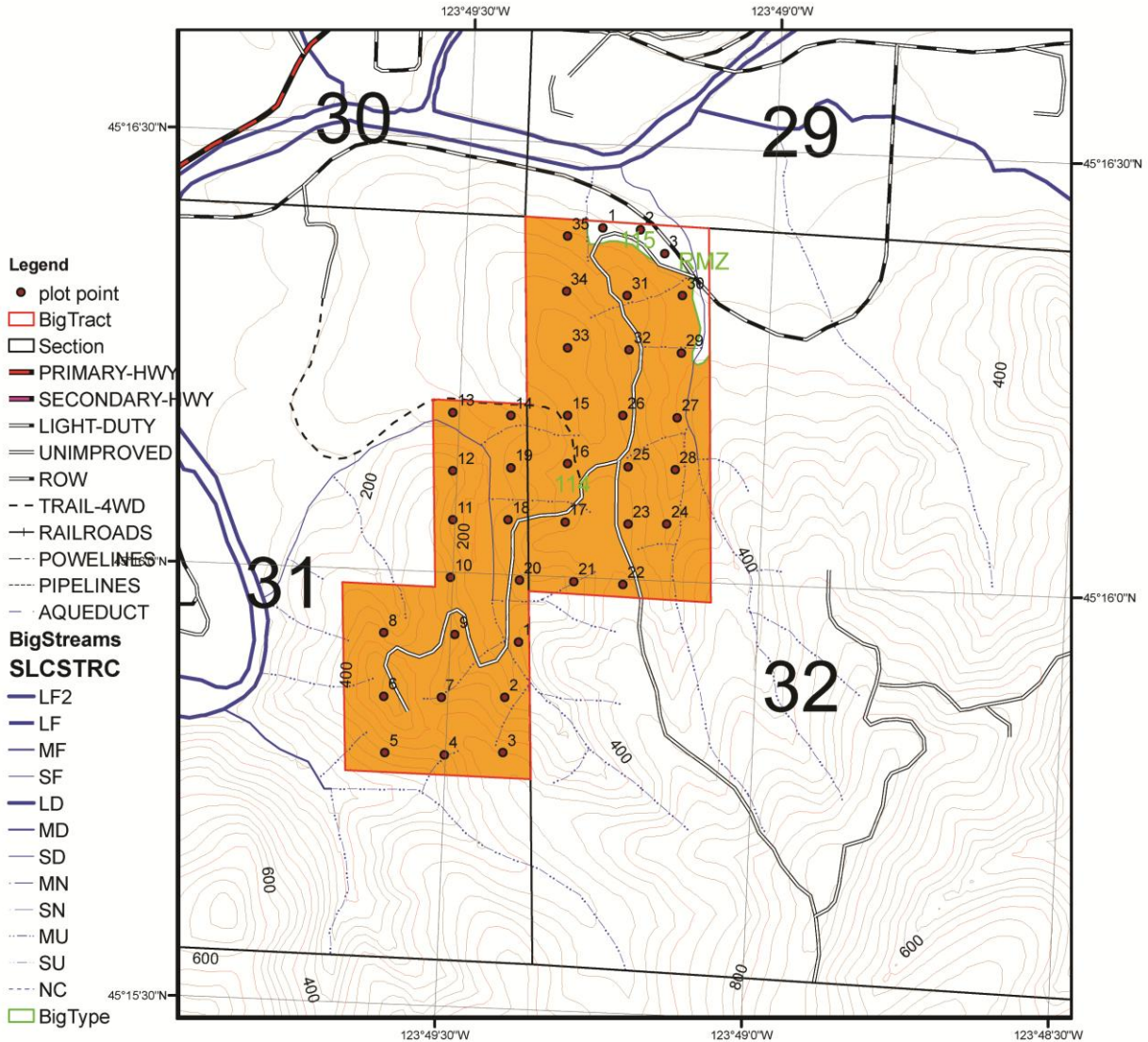


BIXBY

State: OR
County: TILLAMOOK
Project: EMERALD
Tract: BIXBY

Township: 3S
Range: 9W
Section: 31, 32
Date: 4/5/2011

TYPE # 114



1:12,000

Special Concerns:

Net Acres 114.0

TPA 223



Stop 2: Bixby Rd; 33 yr old DF/RA Stand with 25 yr old Mixed-Species Subcanopy (Stimson)

- The stand covers 114 acres, averages 223 TPA and was surveyed April 2011.
- Douglas-fir was planted. All other species have naturally seeded (red alder, cascara, cherry, bigleaf maple and western hemlock).
- Severe SNC impacts are evident when we look up at the canopy and down at the understory. Trees are not responding to the relatively open spacing; crown-closure is not occurring. Ferns and shrubs are abundant in the understory, which we would expect to be shaded out in a stand of this age class and basal area on a site with lower disease severity.
- In addition to providing us with stand data, Jon Wehage has felled a few trees in this stand and cut cookies for us from the upper and lower boles. Thank you, Jon, for going above and beyond and helping to make this a great field trip!

Project:	TCEMERLD																
TWP:	03S	RGE:	09W	SECT:	32	TRACT:	BIXBY										
Type 0114																	
Acres 114																	
Sce TC																	
	Date	Age	Site Index	Spc	DBH	FF	Total Hgt	STK	BA/Ac	Trees/Ac	Logs/Ac	Avg CuFt	Log BdFt	Net Cf/Ac	Net Bf/Ac	Total CUNI TS	Total MBF
	10/9	33	117	DF	10.2	85	55	69	90.8	161	125	12	40	1,547	5,064	1,763	577
		33	95	RA	11.0	86	52	1	0.7	1	1	16	50	16	49	18	6
AGE TOTAL					10.2	85	55	70	91.4	162	126	12	41	1,563	5,113	1,781	583
		25	117	DF	3.8	85	33		0.2	3							
		25	95	RA	5.8	85	40	3	3.3	18	4	6	23	24	89	27	10
		25	90	CA	3.5	84	31	2	2.2	33							
		25	90	CH	4.4	84	34		0.5	5							
		25	90	BM	4.0	83	29		0.3	3							
		25	115	WH	4.0	86	26		0.1	1							
AGE TOTAL					4.4	84	34	5	6.6	62	4	6	23	24	89	27	10
TYPE					9.0	85	49	75	98.0	223	130	12	40	1,586	5,202	1,808	593
114	SECTION SUMMARY				ACRES												
114	TWP RGE SUMMARY				ACRES												
114	PROJECT SUMMARY				ACRES												

Stop 3: Overlook of Little Foland Drainage (State), Views of Private, State & Federal Lands

- On State land on both sides of the road, we see planted western hemlock with western red cedar and natural Sitka spruce regeneration. Many roadside trees have been used for shooting practice.
- Cut hemlock and spruce along the road provide evidence of a recent pre-commercial thinning operation. Examining the cut stumps, we see wide growth rings for alternate species near the epicenter of the SNC epidemic.
- Some spruce leaders have been attacked by the white pine/Sitka spruce weevil (*Pissodes strobi*), which results in multi-topped trees with shrub-like form, crooked stems and reduced height growth. Excavating a leader, we may find last-years larval feeding tubes and shredded wood fiber beneath the bark (“chip cocoons” created by pupae).

In spring, resin flows occur near the top of last-years leader, where female weevils have laid their eggs. Larvae kill current- and previous-year terminal growth as they mine downward through the inner bark and girdle the terminal stem. Attacked leaders turn reddish-brown and droop in late summer or fall. This highlights the need to be familiar with insect and pathogen pests of alternate species.

- On the right (SW) side of the road on a low hill, we see the continuation of the 33-year old Bixby plantation (Stimson) from our previous stop.
- On the left (NE) side of the road, we see an alder stand (ownership unknown, State or Hancock).
- On surrounding hills, we see large Douglas-fir and Sitka spruce trees on Federal land (USFS).



Leader damage to Sitka spruce (left) and larvae (right) of the white pine weevil.

Beth Willhite (USFS) and William Ciesla (Forest Health Mgt. International) from Bugwood Images.

Stop 4: Thinned & Underplanted Mature Stand (Federal Mt. Hebo Plantation)

- The current stand is 26 acres and burned in both the 1845 Nestucca Burn & the 1910 Mt. Hebo Burn.
- In 1912, it was planted with Douglas-fir from a nursery in Roy, WA (assumed to be off-site stock). Because the stand is <110 yrs old, it can be actively managed under the NW Forest Plan. The age limit for active/adaptive management in areas outside of the district is often 80 yrs.
- Trees are exhibiting slow growth and small crowns compared to native stock. This is most likely due to poor adaptation to climate (and SNC) and fire-degraded soils.
- The stand was thinned in 2003 from 155 TPA to 80 TPA, with 10 TPA felled for coarse woody debris (there is no record of thinning prior to 2003). Helicopter yarding was used to remove logs in order to minimize road construction, consistent with interpretation of the Aquatic Conservation Strategy of the NW Forest Plan. The next thinning is scheduled for 2015.
- The stand was underplanted with Sitka spruce and western hemlock on a 25' spacing in 2004 (tubing to reduce deer browse and periodic chainsaw brushing to release competing vegetation).



1910

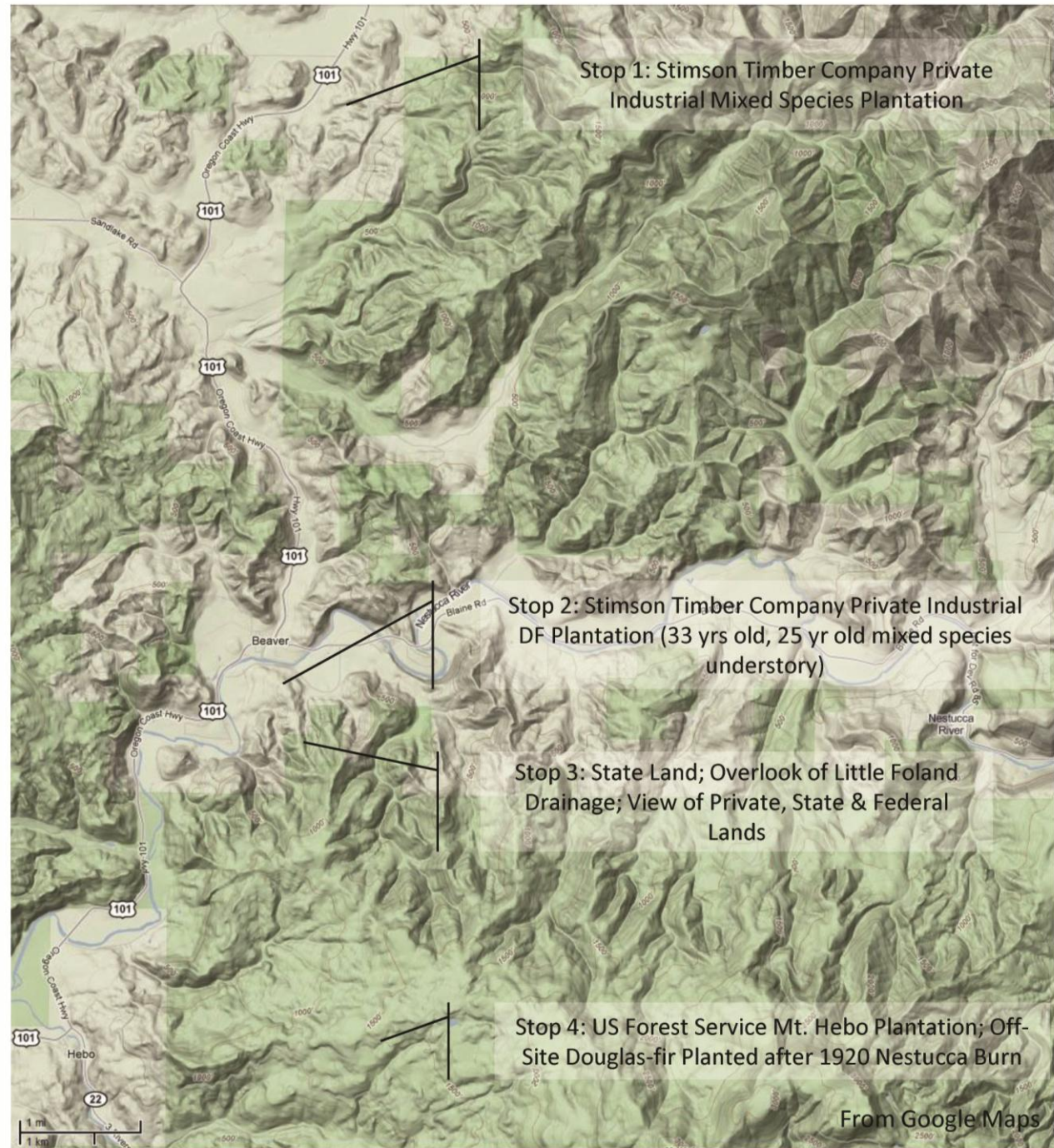


1917



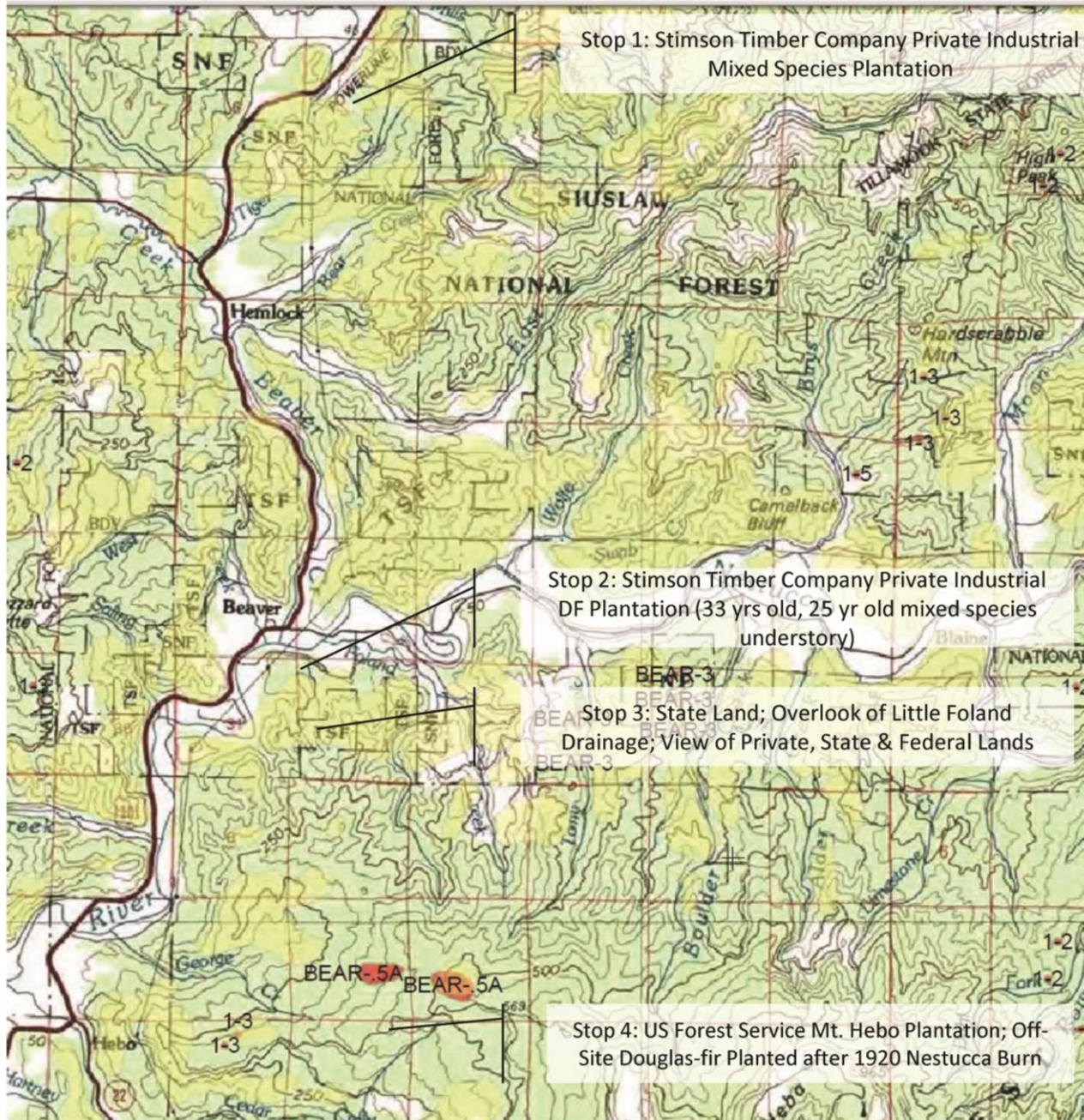
1921

April 2011 SNCC Spring Field Trip: Terrain Map of Field Trip Route



April 2011 SNCC Spring Field Trip: 2010 Aerial Insect and Disease Detection Survey Map

(From USGS 100K Quad Yamhill River- A145123; 2H; Yellow coloration = visible SNC symptoms)



Swiss Needle Cast Aerial Surveys

