

UBC OKANAGAN PINE BARK BEETLE TRAPPING REPORT – 2011

Lindgren funnel traps were set up this year as a pine beetle control measure to attract and collect Western pine beetles (WPB) rather than have them attack ponderosa pine trees on UBCO Campus property. Traps were previously used in 2006, 2007, 2008 and 2010.

Traps were set up with the purpose of attracting residual beetles in campus trees as well as beetles flying onto UBCO campus from surrounding properties. Since the majority of trees attacked last year were not removed, the traps attracted some of that residual WPB population. The trees had both WPB and Mountain pine beetles (MPB). Mountain pine beetle (MPB) lures were not used this year because of relative ineffectiveness previously. Traps were set up at ten sites which were about the same locations as last year.

TRAP SITES

Ten clusters of three traps totaling 30 traps were set up in various locations with most of the sites being similar to previous locations. Two sites had to be moved a short distance due to Campus development activity. Refer to attached map for locations and site numbers.

LURES USED

WPB lures were used in all traps. The lures attracted large numbers of WPB and some Red turpentine (RTB) beetles but no MPB. The MPB lures previously used were not very effective.

PLACEMENT AND REMOVAL DATES

May 11	Set-up traps at 7 sites (21 traps)
May 15	Set-up traps at 3 sites (9 traps) and placed lures in all traps
October 14	Traps were removed after insects were collected. Traps were placed back in the wooden storage box in the quanset maintenance yard.

Trap stands were installed at four sites while previously placed stands were used at six sites. Traps were set-up later this year due to a late spring.

TRAP MONITORING AND INSECT COLLECTIONS

Traps were checked and insects collected twice this year as was done last year. The collections were made July 27th and October 14th. One trap at Site 1 was the only trap found on the ground during the first collection. It would have been beneficial to check the traps more often. The collected insects were dried if necessary, sorted and pine beetles counted. The attached table displays the sites, collection dates and insects counted.

COLLECTION COMMENTS

The traps continued to be very effective. A total of 48,324 WPB were collected which exceeded the previous highest collection by 7,309 insects. The traps also attracted 11 red turpentine beetles (RTB) which are large pine beetles that attack the base of ponderosa pine trees and often weaken the trees predisposing to other pine beetle attacks. Site 10 in the north west and Site 6 in north central collected the most beetles again this year.

COMPARISON WITH PREVIOUS COLLECTIONS

More beetles were collected this year than previous years. The 10 sites collected 48,313 WPB and 11 RTB compared with 41,004 WPB and 18 RB collected in 2010 with ten trap sites which was the previous largest annual collection. The collection was 38,644 beetles in 2008, 31,499 beetles in 2007 and 28,079 in 2006. There were 13 sites used in 2008 and 2007 while 9 sites were used in 2006 which was the first year of trapping.

SUMMARY

Pine beetle control using traps was a success with 48,313 Western pine beetle collected. The lures continue to work well throughout the period of use. The trapping undoubtedly prevented a large number of pine trees from being attacked by WPB. The increase in collection numbers this year was probably the result of previously identified infested trees not being removed. Trapping has reduced pine tree attack levels from Western pine beetle but trees are still being attacked by Mountain pine beetles for which the traps using MPB lures have not been very effective.

RECOMMENDATIONS

Continue with the trapping program in 2012 using WPB lures at the same ten sites and at additional sites if funding permits. Set up some traps with MPB lures only if there has been a proven improvement in MPB lure effectiveness. Have traps inspected and insects collected more often if possible.

Carry out a pine beetle survey to inspect trees for beetle attack and mark infested trees for removal. Ensure all infested trees are removed prior to April 15, 2011 to prevent insect spread.



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UBCO PINE BEETLE CONTROL
LINDGREN FUNNEL TRAP COLLECTIONS - 2011

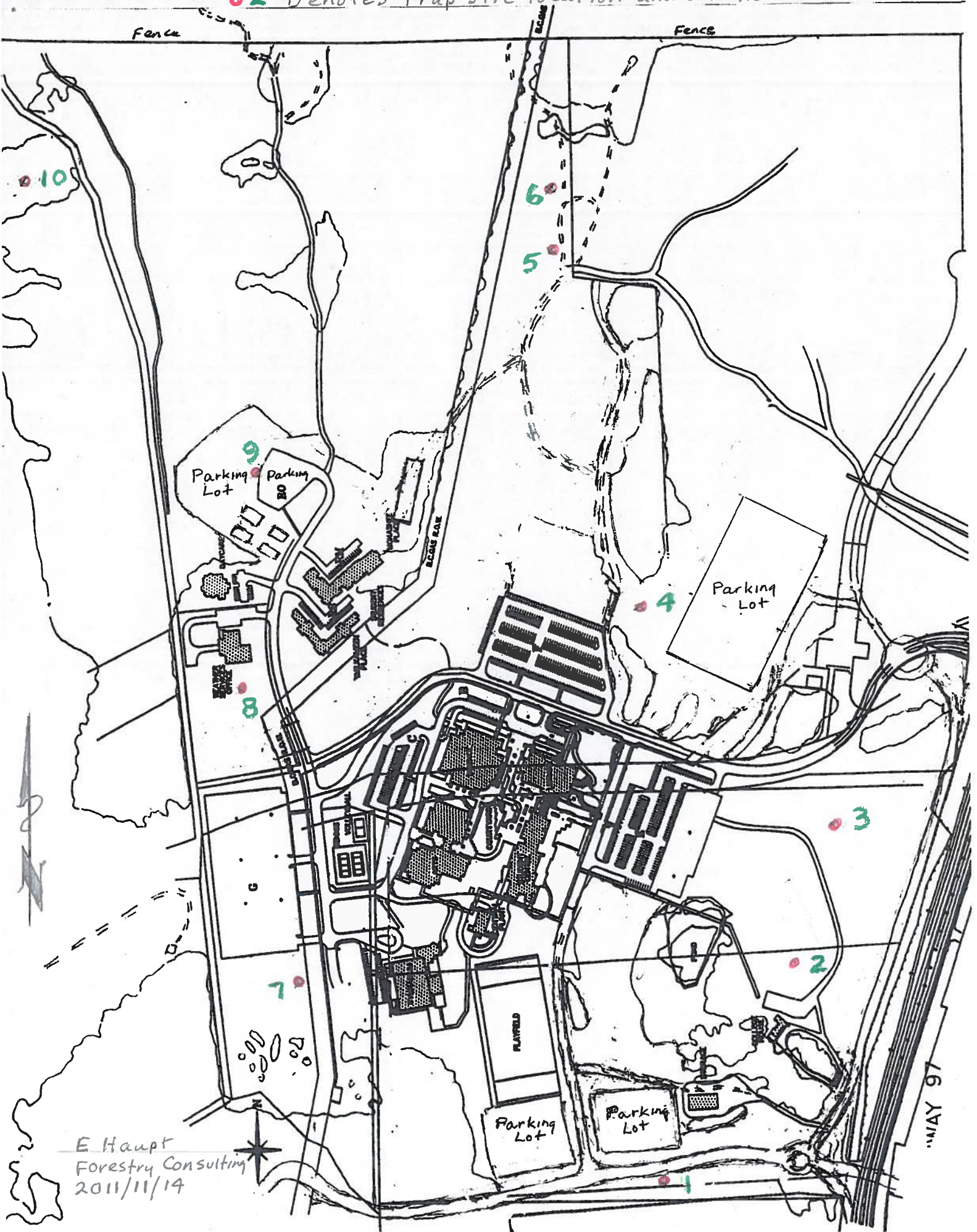
SITE	TRAP COLLECTION DATES				TOTAL	
	JULY 27		OCTOBER 14		WPB	RTB
	WPB	RTB	WPB	RTB		
1	726	4	1,063		1,789	4
2	1,178	1	1,126		2,304	1
3	1,192		1,117		2,309	
4	1,523	1	1,346		2,869	1
5	3,447		3,579		7,026	
6	4,574	2	5,518		10,092	2
7	1,686	2	2,415		4,101	2
8	1,817	1	1,743		3,560	1
9	2,425		1,428		3,853	
10	5,869		4,541		10,410	
TOTALS	24,437	11	23,876	-	48,313	11

2011 Collection Summary	
Western Pine Beetles (WPB)	48,313
Red Turpentine Beetles (RTB)	11
Total	<u>48,324</u>

Collection Comparison	
2011	48,324 (10 sites)
2010	41,022 (10 sites)
2008	38,644 (13 sites)
2007	31,499 (13 sites)
2006	28,079 (9 sites)

MAP OF 2011 UBCO PINE BEETLE TRAP SITES

● 2 - Denotes trap site location and site number



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