UBC OKANAGAN PINE BARK BEETLE TRAPPING REPORT – 2010

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 not used in 2009 but were previously used in 2006, 2007, and 2008.

Traps were set up primarily to absorb residual WPB following removal of 336 beetle infested trees in early 2010 as well as to collect the beetles flying onto UBCO Campus from surrounding properties. Mountain pine beetle (MPB) lures were not used in any traps this year because they have been relatively ineffective when used previously. The trees removed had been infested with MPB and WPB from 2009 beetle flights.

The trap numbers this year were reduced to ten sites from the thirteen sites previously set up and trap monitoring reduced as well due to funding constraints.

TRAP SITES

Ten clusters of three traps totaling 30 traps were set up in various locations with most of the sites being similar to those used in the past. A few sites had to be altered 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 beetles (RTB) but no MPB. The MPB lures previously used were not very effective.

PLACEMENT AND REMOVAL DATES

May 6	Four sites were set up with three traps each
May 7	Six sites were set up with three traps each
October 20	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 this year while previously placed stands were used at six sites. The trap stands installed this year were also removed and stored adjacent to trap storage box.

TRAP MONITORING AND INSECT COLLECTIONS

Traps were checked and insects collected only twice this year compared with monthly checks and collections in the past. The collections were made July 19th and October 20th. One trap was found on the ground during the first inspection and another trap was found on the ground on the second collection. It would have been better to check the traps more often. The insects collected were dried if necessary, sorted and pine beetles counted. The attached table displays the sites, collection dates and insect counts.

COLLECTION COMMENTS

The traps were very effective. A total of 41,004 WPB were collected which was more than previous years even though there were only 10 sites compared to numbers collected

in previous years when more traps were used. The traps also attracted 18 red turpentine beetles (RTB) which are large pine beetles that attack the base of ponderosa pine trees and often weaken the trees predisposing them to other pine beetle attacks. Site 10 in the northwest and site 6 in north central collected the most beetles again this year.

COMPARISON WITH PREVIOUS COLLECTION

The ten sites collected 41,004 WPB and 18 RTB this year compared with 38,579 WPB and 65 RTB collected in 2008 at thirteen trap sites which was the previous largest annual collection. Collection in 2007 was 31,499 beetles and 28,079 in 2006. Even more beetles would have been collected if thirteen sites were set up as in other years.

SUMMARY

Pine beetle control using traps was a success with 41,004 western pine beetles collected. The lures in the traps worked well. The trapping undoubtedly prevented a large number of pine trees from being attacked and killed by WPB. As few as a couple dozen beetles attacking a stressed tree could result in tree mortality. Trees are generally somewhat stressed due to the relatively light precipitation in the area. Trapping has reduced pine tree attack levels from western pine beetles 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 2011 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 to MPB lure effectiveness.

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

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UBCO PINE BEETLE CONTROL
LINDGREN FUNNEL TRAP COLLECTIONS - 2010

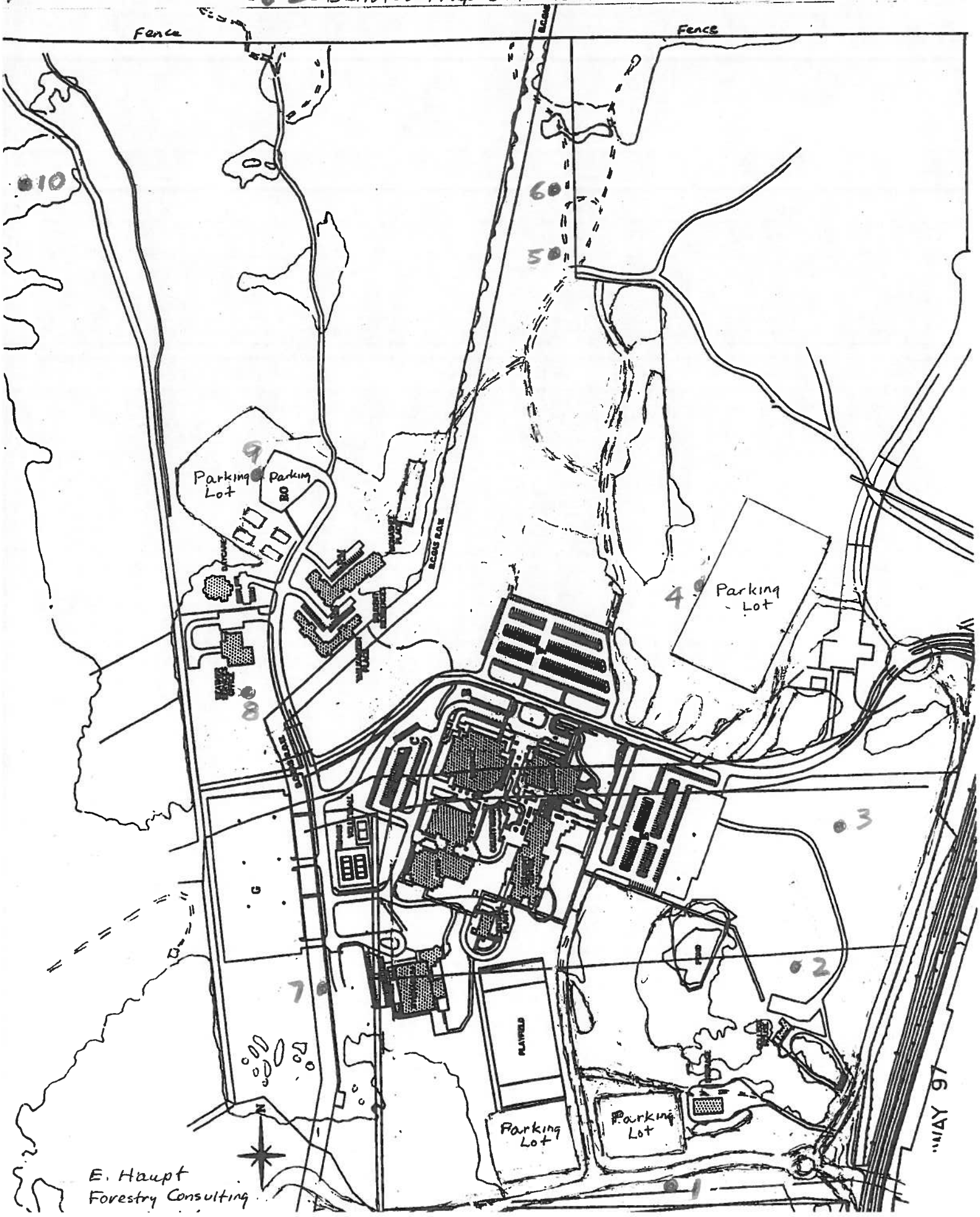
SITE	TRAP COLLECTION DATES					
	JULY 19		OCTOBER 20		TOTAL	
	WPB	RTB	WPB	RTB	WPB	RTB
1	1,168	2	657		1,825	2
2	1,595	1	674		2,269	1
3	1,326		695		2,021	
4	1,246		620		1,866	
5	3,685	3	1,528		5,213	3
6	6,683	5	1,424		8,107	5
7	1,394		1,679		3,073	
8	1,978	4	1,396	1	3,374	5
9	2,658	2	1,050		3,708	2
10	8,810		738		9,548	
TOTALS	30,543	17	10,461	1	41,004	18

2010 Collection Summary	
Western Pine Beetles (WPB)	41,004
Red Turpentine Beetles (RTB)	18
Total	41,022

Collection Comparison		
2008	38,644	(13 sites)
2007	31,499	(13 sites)
2006	28,079	(9 sites)

MAP OF 2010 UBCO PINE BEETLE TRAP SITES

- 2 - Denotes trap site location and site number



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