

PINE BARK BEETLE

TRAPPING REPORT

UBC OKANAGAN CAMPUS GROUNDS

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November 15, 2017

UBC OKANAGAN PINE BEETLE TRAPPING REPORT – 2017

Lindgren funnel traps were set up again this year as a pine bark 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, 2010, 2011, 2012, 2013, 2014, 2015 and 2016.

Traps were set up with the purpose of attracting residual WPB in Campus trees as well as beetles flying onto UBCO Campus from surrounding properties. This report provides details and results of this years trapping program.

Trap Sites

Ten clusters of three Lindgren funnel traps totaling thirty traps were set up at the same locations as the previous year. Refer to the attached map for site locations and site numbers.

Lures Used

WPB lures were used in all thirty Lindgren funnel traps. Mountain pine beetle lures were previously tried but were ineffective so their use has been discontinued.

Placement and Removal Dates

- May 10 Traps were set up and lures placed at four sites..
- May 11 Traps were set up and lures placed at remaining six sites.
- October 16 Traps were removed and placed in wooden storage boxes in the Quonset Maintenance Yard after the insects were collected.

Trap Monitoring and Insect Collections

Traps were checked and insects collected on July 25th and October 16th. It would have been beneficial to check the traps more often because of other insects and debris getting into the traps. The collected insects were dried, sorted and pine beetles counted. The attached table shows the sites, collection dates and the number of pine beetles counted.

Collection Comments

The traps continue to be very effective. A total of 17,433 WPB were collected. The numbers collected were less than the previous year but above the 2015 collection of 12,567 beetles which was the previous lowest collection since the trapping commenced. The July 25th collection was 15,337 and October 16th collection was 2,096 beetles. The October collection of 2,096 was much lower than the fall 2016 collection of 12,972 beetles. Site 6 traps continue to collect the most beetles. Comparison of the 2017 collection with previous years is shown on the attached table.

Summary

Pine beetle control using traps with WPB lures continues to be effective resulting in 17,433 western pine beetles being trapped which prevented a significant number of pine trees from being attacked. There were 7,039 less beetles caught this year compared with

2016 numbers. This years collection is the second lowest since trapping commenced in 2006. Year 2015 had the lowest collection at 12,567 beetles.

Most of the beetles were trapped prior to the July collection and only 2,096 beetles were collected in the fall. Last years fall collection was more than the summer collection. The lower fall collection numbers indicate a declining population especially since we had a very long hot dry summer.

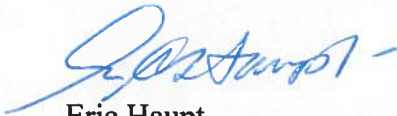
No obviously attacked trees were observed while making the trap inspections and collections.

Recommendations

The pine beetle measures using traps and verbenone repellents could be discontinued but may depend on the results of the campus beetle survey.

The pine beetle survey scheduled during January 2018 will identify the trees with current beetle populations. The survey results will help to determine the control measures that should be taken in 2018.

My observations and surveys in other areas indicate that the pine beetle populations now appear to be almost at an endemic level.



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November 15, 2017

**UBCO PINE BEETLE CONTROL
LINDGREN FUNNEL TRAP COLLECTIONS – 2017**

SITE	TRAP COLLECTION DATES				TOTAL	
	JULY 25		OCTOBER 16		WPB	RTB
	WPB	RTB	WPB	RTB		
1	39		46		85	
2	726		18		744	
3	406		5		411	
4	794		118		912	
5	2,183		576		2,759	
6	3,135		410		3,545	
7	2,831		316		3,147	
8	1,026		127		1,153	
9	1,545		436		1,981	
10	2,652		44		2,696	
TOTALS	15,337	0	2,096	0	17,433	0

2015 Collection Summary

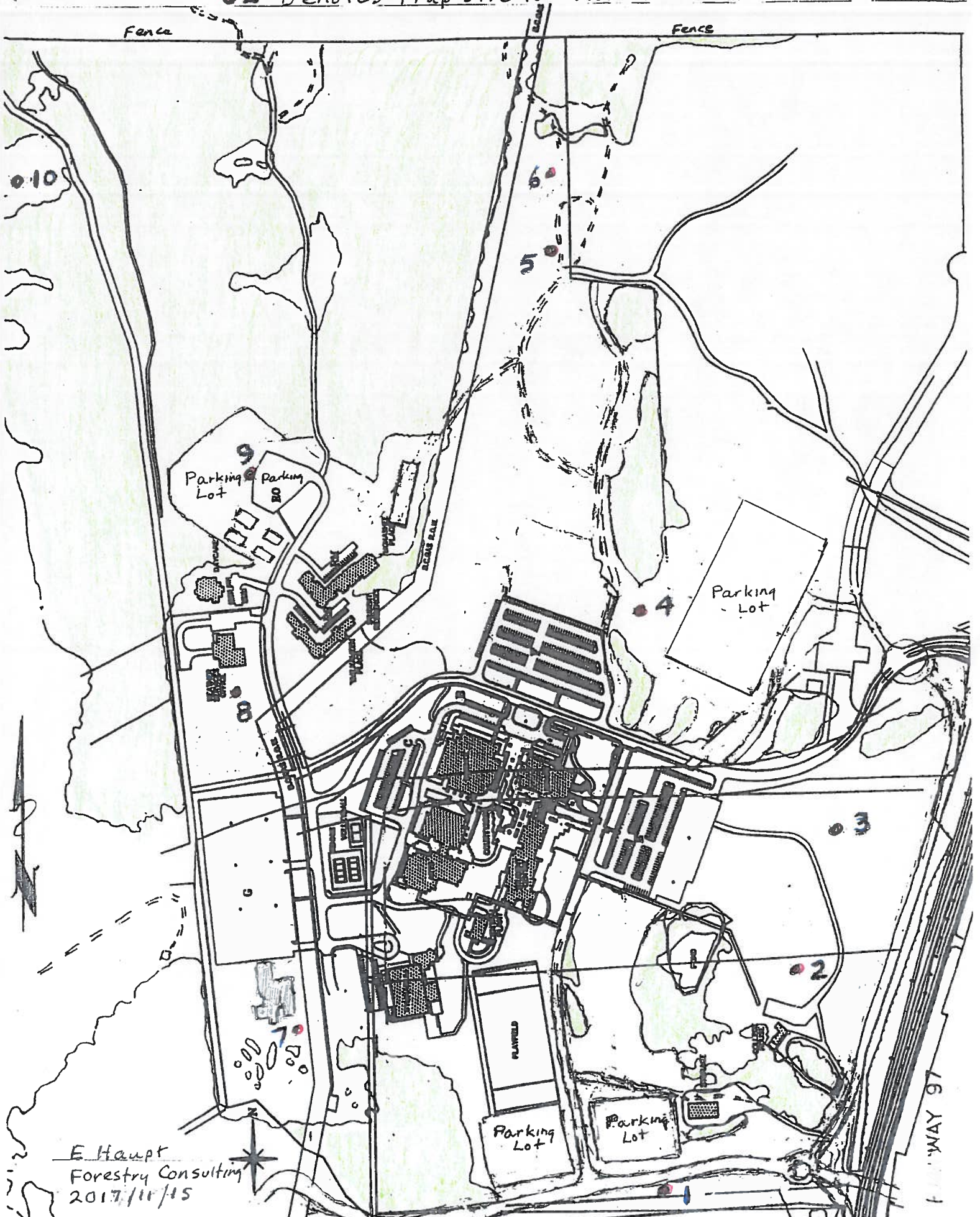
Western Pine Beetles (WPB)	17,433
Red Turpentine Beetles (RTB)	0
Total	17,433

Collection Comparisons

2017	17,433 (10 sites)
2016	24,472 (10 sites)
2015	12,568 (10 sites)
2014	23,231 (10 sites)
2013	42,912 (10 sites)
2012	75,560 (10 sites)
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 2017 UBCO PINE BEETLE TRAP SITES

● 2 - Denotes trap site location and site number



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UBCO FUNNEL TRAP COLLECTION HISTORY

YEAR	BARK BEETLE NUMBERS		
	SUMMER	FALL	TOTAL
2006	21,231	6,745	27,976
2007	18,986	12,372	31,358
2008	21,553	17,026	38,579
2010	30,543	10,461	41,004
2011	24,437	23,876	48,813
2012	46,941	28,602	75,543
2013	39,208	3,702	42,911
2014	20,466	2,765	23,231
2015	10,574	1,993	12,567
2016	11,500	12,972	24,472
2017	15,337	2,096	17,433