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Summary Report

2006

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Washington State Department of
Agriculture
Plant Protection Division



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Asian Gypsy Moth (AGM) Survey:

Detection

A waterway survey was conducted with traps stretching from the B.C. border, down into Puget Sound, along the Pacific Coast and up the Columbia River thru Klickitat County at four traps per linear mile. In addition, port surveys were conducted using a density of nine traps per square mile for a radius of one mile, and four traps per square mile for an additional two-mile radius. Two exceptions were the high-risk Ports of Tacoma and Seattle, which were trapped at a density of twenty-five traps per square mile for a two-mile radius, and sixteen traps per square mile for an additional three-mile radius. In 2006, a total of 6,097 AGM detection port and waterway traps were placed.

Delimiting

There have not been any Asian gypsy moths trapped in Washington State since the summer of 1999. A single Asian gypsy moth was trapped in Idaho the summer of 2004 approximately 1.5 miles from the Washington State border about 10 miles east of Spokane. Approximately 1/3 of the normal 5-mile radius delimiting response grid fell in Washington State. A response grid was placed in Spokane County during the summers of 2005 and 2006. The Spokane grid in 2006 contained 1,406 gypsy moth traps placed at a density of twenty-five traps per square mile. An additional 647 gypsy moth traps were placed along the major railroads in eastern Washington at a density of four traps per linear mile.

European Gypsy Moth (EGM) Survey:

Detection

Washington State was surveyed at the density of one trap per square mile to detect European gypsy moth (EGM) introductions. A total of 10,986 traps were placed during the 2006 survey season.

Delimiting

Delimiting survey grids were placed in thirty-two catch areas from 2004 and 2005 with thirteen new catch sites added during 2006. Prior year single moth catch sites received twenty-five traps per square mile for a radius of one mile. Prior year multiple moth catch sites received sixty-four traps per square mile for a radius of one mile. A total of 7,112 EGM delimiting traps were placed.

Traps

A total of 26,248 gypsy moth traps were placed in Washington State during the summer of 2006. Of these 26,248 traps, 16,374 were for detection, 9,165 were for delimiting and 709 were for mass trapping (see Table 7).

Moths

Seventy-five gypsy moths were caught in 2006 and all were of the European variety. All moths were caught in western Washington and none in eastern Washington.

Eighteen catch areas were recorded in 2006 (see Table 1).

Eleven of the 2006 catch areas were single-moth sites.

Twelve of the fifteen 2005 catch areas did not repeat in 2006.

History

Table 1. GM 12 Year Catch History

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Total Catch Areas	40	26	26	17	15	12	15	15	17	24	15	18
New Catch Areas	20	18	16	9	12	8	11	11	11	18	7	13
Moths	149	91	69	53	42	92	33	17	59	68	31	75
Moths/Area	3.7	3.5	2.6	3.1	2.8	7.7	2.2	1.1	3.5	2.8	2.1	4.2
Traps	36,166	31,668	25,185	20,230	21,498	21,834	22,046	18,698	21,633	21,764	24,199	26,248

Catch Areas

Thirteen new catch areas were recorded in 2006 with the following number of moth catches in each:

- Cowlitz Co. Kalama (1)
- King Co. Auburn (1), BitterLake (1), Carnation (1), Federal Way (4), and Village Park (1)
- Kitsap Bangor (4), Bremerton (1), Seabeck (2), and Sherman Hill (1)
- Mason Tahuya (1)
- Snohomish Monroe (2)
- Thurston Olympia (7)

Eradication

2002

The Crown Hill eradication site was treated three times with Btk (Foray 48B). The Crown Hill site was treated using ground based equipment. A declaration of eradication requires two consecutive years of negative trap data. During the summer of 2002 there were no gypsy moths trapped in Crown hill site. During the summer of 2003 there was one gypsy moth trapped near the Crown Hill site. During the summer of 2004 there were no gypsy moth trapped in the Crown Hill site. During the summer of 2005 there were eight gypsy moths trapped. During the summer of 2006, 709 mass traps were placed at a density of approximately 11 traps/acre with no gypsy moths being trapped.

2003

WSDA did not have any gypsy moth eradication sites in 2003.

2004

During the spring of 2004 the Port Ludlow, Bellevue, and Mayfield sites were treated three times with Btk (Foray 48B). All treatments were conducted by WSDA using ground based equipment. During the summer of 2004 there was one gypsy moth trapped near the Mayfield site. For acreage treated see Table 2.

Table 2. 2004 Gypsy Moth Eradication Sites

County	Site	Acres	Method	Treatment
Jefferson	Port Ludlow	12	H	Btk
King	Bellevue	11	H	Btk
Lewis	Mayfield	7.5	H	Btk
	Total Acreage	30.5		

Method: A-aerial, H-hydraulic, R-rotomist, M-mass trapping
 Treatment: Btk-*Bacillus thuringiensis kurstaki*

2005

During the spring of 2005 the Eastlake and Evergreen sites were treated three times with Btk (Foray 48B). The Eastlake treatments were conducted by WSDA using ground-based equipment. The Evergreen Ridge treatments were conducted aerially. During the summer 2004 and 2005 summer surveys no gypsy moths were trapped in Bellevue and Port Ludlow, therefore, both sites are declared eradicated. During the summer of 2005 there was one gypsy moth trapped near the Eastlake site. For acreage treated see Table 2.

Table 3. 2005 Gypsy Moth Eradication Sites

County	Site	Acres	Method	Treatment
King	Eastlake	12	H	Btk
Kitsap	Evergreen Ridge	160	A & H	Btk
	Total Acreage	172		

Method: A-aerial, H-hydraulic, R-rotomist, M-mass trapping
 Treatment: Btk-*Bacillus thuringiensis kurstaki*

2006

During the spring of 2006 the Madison and Rosemont sites were treated three times with Btk (Foray 48B and Foray XG, respectively). The Madison treatments were conducted aerially. The Rosemont treatments were conducted by WSDA using ground-based equipment. During the summer 2005 and 2006 summer surveys no gypsy moths were trapped in Mayfield and Evergreen Ridge, therefore, both sites are declared eradicated.

Table 4. 2006 Gypsy Moth Eradication Sites

County	Site	Acres	Method	Treatment
King	Madison	60	A	Btk
King	Rosemont	5.5	H	Btk
	Total Acreage	65.5		

Method: A-aerial, H-hydraulic, R-rotomist, M-mass trapping
 Treatment: Btk-*Bacillus thuringiensis kurstaki*

2007

WSDA is proposing an eradication project for one EGM area in 2007 (see table 4).

Table 5. 2007 gypsy Moth Eradication Sites

County	Site	Acres
King	Kent	25

Table 6. 2004 - 2006 W.S.D.A Gypsy Moth Survey Results

County	Catch Area	2004		2005		2006		Control Actions
		Total Catch	No. Trap Sites	Total Catch	No. Trap Sites	Total Catch	No. Trap Sites	
CLARK	Fort Vancouver	---	---	1	1	0	0	
COWLITZ	✠ Kalama	---	---	---	---	1	1	
"	✠ Three Rivers	---	---	1	1	0	0	
ISLAND	Keystone	---	---	1	1	0	0	
KING	✠ Auburn	---	---	---	---	1	1	
"	Bellevue Square	---	---	2	1	0	0	
"	✠ Bitter Lake	---	---	---	---	1	1	
"	✠ Carnation	---	---	---	---	1	1	
"	“ Crown Hill	0	0	8	6	0	0	'02 (\$) '06 (mt)
"	✠ Federal Way	---	---	---	---	4	3	
"	Kent Commons	---	---	4	3	43	33	
"	Madrona Park	6	4	5	4	0	0	'06 (#) Madison
"	Roanoke	5	4	1	1	0	0	'05 (\$) Eastlake
"	Rosemont	0	0	2	1	0	0	'06 (\$) Rosemont
"	Roxbury	---	---	1	1	0	0	
"	“ Samamish	1	1	1	1	1	1	
"	Shoreline	---	---	1	1	0	0	
"	✠ Village Park	---	---	---	---	1	1	
KITSAP	✠ Bangor	---	---	---	---	4	3	
"	✠ Bremerton	---	---	---	---	1	1	
"	Fairview	2	2	1	1	0	0	
"	✠ Seabeck	---	---	---	---	2	2	
"	✠ Sherman Hill	---	---	---	---	1	1	
MASON	✠ Tahuya	---	---	---	---	1	1	
PIERCE	Pioneer	2	2	1	1	1	1	
SAN JUAN	San Juan Island	1	1	0	0	1	1	
"	Shaw Island	9	2	1	1	0	0	
SNOHOMISH	Marysville	2	2	0	0	2	2	
"	✠ Monroe	---	---	---	---	2	1	
THURSTON	✠ Olympia	---	---	---	---	7	6	
Totals		68	42	31	25	75	61	

(#) Bt (Aerial)
 (\$) Bt (Ground Spray)
 (mt) Mass Trap

(---) Pre-catch
 ✠ New Site 2006

Table 7. 2006 Washington State Gypsy Moth Program Trap Deployment

County	4/lin mi	4/sq mi	9/sq mi	16/sq mi	25/sq mi	9/acre	AGM Total
Adams	8						8
Asotin	9						9
Benton	21						21
Chelan	49						49
Clallam	341	87	36				464
Clark	113	53	52				218
Columbia	1						1
Cowlitz	70	90	113				273
Douglas	32						32
Ferry	42						42
Franklin	8						8
Garfield	3						3
Grant	66						66
Grays Harbor	256	65	51				372
Island	58						58
Jefferson	195	77	44				316
King	309			447	476	709	1,941
Kitsap	278						278
Kittitas	9						9
Klickitat	164						164
Lewis							0
Lincoln	17						17
Mason							0
Okanogan	87						87
Pacific	389						389
Pend Oreille	25						25
Pierce	21			338	546		905
San Juan							0
Skagit		71	32				103
Skamania	101						101
Snohomish		58	73				131
Spokane				1,406			1,406
Stevens	33						33
Thurston	122		45				167
Wahkiakum	86						86
Walla Walla	7						7
Whatcom	87	87	39				213
Whitman	17						17
Yakima	131						131
Totals	3,155	588	485	785	2,428	709	8,150

1/sq mi	25/sq mi	50/sq mi	64/sq mi	EGM Total
17				17
17				17
42				42
99				99
364				364
451	130			581
3				3
295	76			371
64				64
85				85
16				16
5				5
132				132
424				424
302	108			410
251				251
867	2,812	161	1,324	5,164
393	419	28	193	1,033
18				18
323				323
835			77	912
33				33
535	60			595
173				173
147				147
50				50
796	264		158	1,218
21	575		126	722
524				524
320				320
1,160	131		91	1,382
500				500
67				67
592	67	223		882
247				247
13				13
510	89			599
33				33
262				262
10,986	4,731	412	1,969	18,098

G. Total
25
26
63
148
828
799
4
644
96
127
24
8
198
796
468
567
7,105
1,311
27
487
912
50
595
260
536
75
2,123
722
627
421
1,513
1,906
100
1,049
333
20
812
50
393
26,248

2006 STATEWIDE GYPSY MOTH CATCH LOCATIONS

