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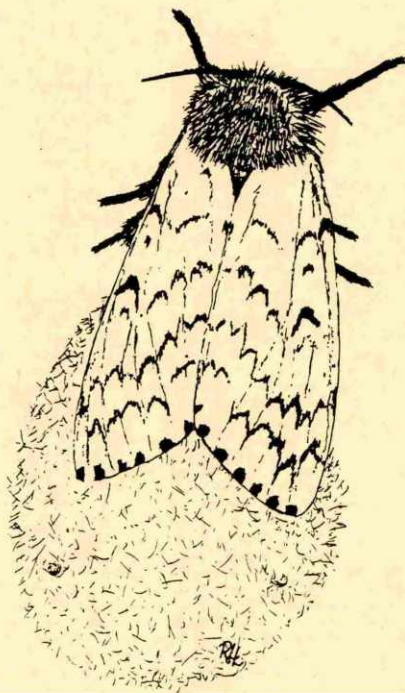
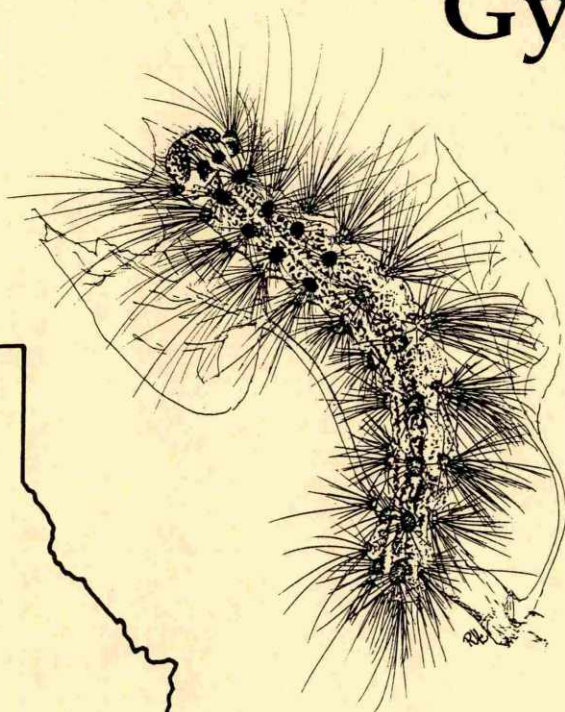


Gypsy Moth Report 1999

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STATE OF IDAHO

GYPSY MOTH SURVEY TRAPPING PROGRAM
And
ERADICATION PROJECT

SUMMARY REPORT

1999

by
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Report No. IDL 99-1
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ABSTRACT

In 1999 no gypsy moths were caught in Idaho. In addition to our regular detection trapping surveys delimitation trapping was done at Huetter, between Coeur d'Alene and Post Falls in Kootenai County where 5 gypsy moths were caught in 1998 and at Weitas Campground in Clearwater County where 1 gypsy moth was caught, also in 1998. One gypsy moth was also caught in Arco, Butte County in 1998, but due to scarceness of host the city was trapped at the regular detection trap density in 1999.

A 35 acre block surrounding the 1998 catch site at Huetter was treated with 3 aerial applications of *Bacillus thuringiensis var.kurstaki* (B.t.k) in May. Extensive trapping in this area and the surrounding 4 square miles produced no gypsy moths in 1999.

INTRODUCTION

Surveys to detect the introduction of the gypsy moth, *Lymantria dispar* L., have been conducted in Idaho each year since 1974 (Table 1). The first gypsy moth was discovered in 1986 at Sandpoint in Bonner County. The following year numerous additional moths were caught in Sandpoint and Coeur d'Alene. This stimulated ground treatments in 1988 and aggressive aerial spray eradication programs in 1989 and 1990 using a naturally occurring bacterium, *Bacillus thuringiensis var.kurstaki* (B.t.k) as the pesticide (Tisdale and Livingston 1990, Livingston 1990). No gypsy moths have been caught in the treated areas since 1989. Gypsy moths have been caught in various areas throughout the state in the annual detection surveys every year from 1986 until 1996. No gypsy moths were caught in 1996 or 1997 (Mason and Livingston 1991, 1992, 1993, 1994, 1995, 1996, 1997). Seven gypsy moths were caught in 1998 in 3 widely separated locations of the state (Mason and Livingston 1998).

Cooperating agencies, with accompanying responsibilities in the Idaho gypsy moth program, include the following:

- Idaho Department of Lands - Overall program coordination and trapping in northern Idaho, except in Forest Service campgrounds.
- Idaho Department of Agriculture - Trapping in southwestern Idaho and submission of data to the National Agricultural Pest Information System (NAPIS) data library.
- USDA, APHIS - Provides cost share funding, traps, baits, and technical expertise.
- USDA Forest Service, Region 4 - Trapping in southeastern Idaho.
- USDA Forest Service, Region 1 - Trapping in Forest Service campgrounds in northern Idaho.
- Idaho Department of Transportation - Provides monthly reports of move-ins to Idaho from states that are generally infested with gypsy moths.

A summary of the 1999 survey is shown in Table 2.

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Table 1 - Gypsy moth trapping history in Idaho.

YEAR	NUMBER OF TRAPS SET				NUMBER OF MOTHS CAUGHT				NO. POS. TRAPS
	DET. ²	DEL. ³	MASS ⁴	TOTAL	DET. ²	DEL. ³	MASS ⁴	TOTAL	
1974 ¹									
1975	45			45					
1976	254			254					
1977	232			232					
1978	248			248					
1979 ¹									
1980	121			121					
1981	95			95					
1982	35			35					
1983 ¹									
1984 ¹									
1985 ¹									
1986	208			208	1			1	1
1987	420			420	35			35	9
1988	1558	1457		3015	8	414		422	210
1989	2248		7303	9551	17		51	68	54
1990	5640	358	3268	9266	4	2		6	3
1991 ⁵	4641	121		4762	4			4	4
1992	4823	130		4953	2	1		3	3
1993	4314	115		4429	2			2	1
1994	4239	96		4335	1	2		3	3
1995	4522	136		4658	1			1	1
1996	4290	117		4407					
1997	5085	20		5105					
1998	4904			4904	7			7	3
1999	4837	155	90	5082					

¹Trapping did occur in Idaho in these years, and there were no moths found. However, records are not complete as to the exact number of traps placed.

²Detection.

³Delimitation.

⁴Mass trapping for control at approximately 9 traps/acre.

⁵Number of traps set in 1991 revised after receipt of final data.

Table 2 - Number of gypsy moth traps placed, by agency, in Idaho in 1999.

AGENCY	DETECTION TRAPS	DELIMITING TRAPS	MASS TRAPS	TOTAL TRAPS
Idaho Dept. of Lands	3065	141	90	3296
Idaho Dept. of Agriculture	1255			1255
USFS - Region 4	419			419
USFS - Region 1	98	14		112
TOTALS	4837	155	90	5082

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1999 SURVEY PROGRAM

Detection Trapping - In 1999 the cooperating agencies in the Idaho gypsy moth detection program placed 4837 detection traps throughout the state (Table 2). Trapping costs for the 1999 gypsy moth surveys in Idaho are shown in Table 3. Table 4 shows trap placement by county. Pheromone-baited traps were placed on a grid basis at a density of four traps per square mile. Traps were placed throughout the state in cities and towns and the surrounding urban areas and rural communities in accordance with a predetermined rotation schedule. Cities and communities where 20 or more move-ins occur are trapped irrespective of their place in the schedule. A move-in is defined as an individual or family moving to Idaho from a state that is generally infested with gypsy moths. This information is derived from vehicle registration information supplied by the Idaho Department of Transportation. Most infestations are initiated when an egg mass or other life stage of the gypsy moth arrives on an outdoor household article brought by someone moving into the area. Between May 1998 and April 1999, there were 4989 move-ins to the state, a 1.5% increase over the previous year. Campgrounds, tourist attractions, and other high-risk locations were also trapped.

Delimitation Trapping - Delimitation traps were placed at 2 locations in 1999. At Huetter, between Coeur d'Alene and Post Falls in Kootenai County 141 traps were placed in the 4 square miles surrounding the site where 5 gypsy moths were caught in 1998. At Weitas Campground in Clearwater County 14 delimitation traps were placed in the area where a single gypsy moth was caught in 1998. Due to the lack of significant contiguous host trees no delimitation traps were placed at Arco in Butte County where a single gypsy moth was caught in 1998. Instead the Arco area was trapped at the regular detection density again this year.

Mass Trapping - In the 10 acres immediately surrounding the catch site at Huetter traps were placed at a density of 9 traps per acre.

No gypsy moths were caught in Idaho in 1999.

Table 3 - Costs of the 1999 gypsy moth survey program.

AGENCY	COST
Idaho Department of Lands	\$21,438.72
Idaho Department of Agriculture	\$8,299.39
US Forest Service - Region 1	\$6,000.00
US Forest Service - Region 4	\$8,500.00
USDA - APHIS Direct costs for traps, baits and travel.	\$1,576.00
USDA - APHIS Cooperative grants.	\$16,506.00
TOTAL	\$62,320.11

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Table 4 - 1999 Trap placement by counties.

COUNTY NAME	NO.	DETECTION 4/MILE ²	DELIMITATION 36/MILE ²	MASS 9/ACRE	TOTAL TRAPS
Ada	1	367	0	0	367
Adams	2	0	0	0	0
Bannock	3	102	0	0	102
Bear Lake	4	4	0	0	4
Benewah	5	97	0	0	97
Bingham	6	28	0	0	28
Blaine	7	161	0	0	161
Boise	8	2	0	0	2
Bonner	9	1277	0	0	1277
Bonneville	10	106	0	0	106
Boundary	11	118	0	0	118
Butte	12	4	0	0	4
Camas	13	0	0	0	0
Canyon	14	173	0	0	173
Caribou	15	10	0	0	10
Cassia	16	19	0	0	19
Clark	17	6	0	0	6
Clearwater	18	26	14	0	40
Custer	19	22	0	0	22
Elmore	20	54	0	0	54
Franklin	21	8	0	0	8
Fremont	22	19	0	0	19
Gem	23	36	0	0	36
Gooding	24	0	0	0	0
Idaho	25	80	0	0	80
Jefferson	26	6	0	0	6
Jerome	27	0	0	0	0
Kootenai	28	1044	141	90	1275
Latah	29	240	0	0	240
Lemhi	30	20	0	0	20
Lewis	31	0	0	0	0
Lincoln	32	0	0	0	0
Madison	33	15	0	0	15
Minidoka	34	22	0	0	22
Nez Perce	35	124	0	0	124
Oneida	36	6	0	0	6
Owyhee	37	0	0	0	0
Payette	38	35	0	0	35
Power	39	10	0	0	10
Shoshone	40	157	0	0	157
Teton	41	8	0	0	8
Twin Falls	42	193	0	0	193
Valley	43	206	0	0	206
Washington	44	32	0	0	32
TOTALS		4837	155	90	5082

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HUETTER ERADICATION PROJECT

In 1998 our detection survey caught 5 male gypsy moths in a single trap near Huetter, Id between the cities of Coeur d'Alene and Post Falls in Kootenai County. Inspection of the adjacent property turned up 1 viable egg mass, and several other older life stages from the previous year. It was determined that the insects came to the area as viable egg masses which had been laid in an ornamental birdhouse. The birdhouses were subsequently brought to North Idaho as part of an inheritance. The timing allowed the eggs to hatch and produce a new generation of moths in 1998. Due to the character of the property it was impossible to determine with sufficient confidence that additional viable egg masses were not present. Because of this uncertainty, an aerial spray eradication project was initiated, to take place in the spring of 1999.

On May 13, May 20 and May 27, 1999 applications of *Bacillus thuringiensis var. kurstaki* (B.t.k) were applied to a 35 acre area surrounding the introduction site. Application was done by fixed wing aircraft. Coverage was measured with spray deposit cards and determined to be satisfactory. The spraying was completed with wind speeds at or lower than the standard that had been set.

Notices for each of the three anticipated treatments were posted in the local newspapers and filed with radio and TV stations. Calls were made to those families that had required special notification prior to each spray.

In the 10 acres immediately surrounding the introduction site pheromone baited traps were placed at a density of 9 traps per acre. The remainder of the 4 square mile area surrounding the introduction site was trapped at a density of 36 traps per square mile. No gypsy moths were caught in any of these traps.

The total cost of the eradication project was \$21,325.

Follow-up trapping will be done in this area each of the next 2 years to assure that eradication is complete.

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