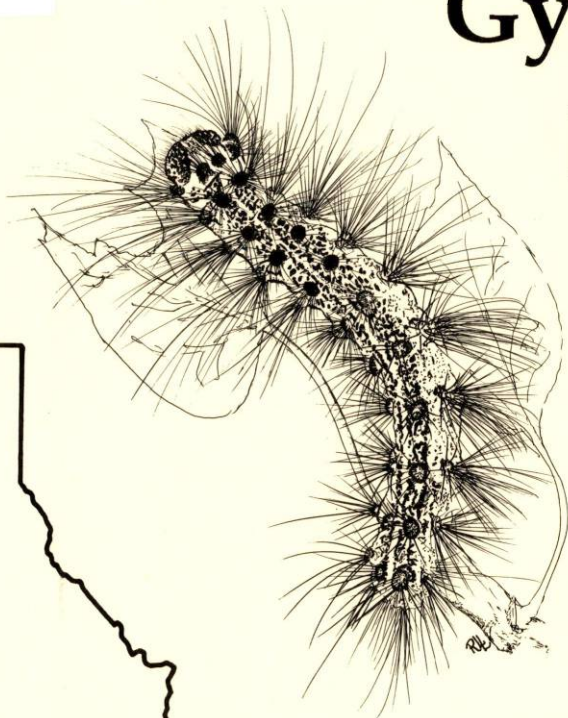


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STATE OF IDAHO
GYPSY MOTH SURVEY TRAPPING PROGRAM
SUMMARY REPORT

2002



by
Gretchen Casey
R. Ladd Livingston

Idaho Department of Lands
3780 Industrial Avenue South
Coeur d'Alene, Idaho

Report No. IDL 02-5
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ABSTRACT

In 2002, no gypsy moths were captured in Idaho. In addition to our regular detection trapping, delimitation traps were placed at both capture sites from 2001. A total of 19 delimitation traps were placed around the Blanchard capture site, north of Spirit Lake in Bonner County, where one male gypsy moth was captured in 2001. In addition, 16 delimitation traps were placed around the Thornton capture site, between Rexburg and Rigby in Madison County, where one male gypsy moth was captured in 2001.

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. Ground treatments were done in 1988 and aggressive aerial spray eradication programs followed 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 through 1995. 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, 5 at one site. The other 2 were at widely separated locations of the state (Mason and Livingston 1998). An aerial spray eradication program was conducted in 1999 using B.t.k. No gypsy moths were caught in 1999 or 2000 (Mason and Livingston 1999 & 2000). Two gypsy moths were caught in 2001 (Casey and Livingston), one each at widely separated locations of the state.

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 vehicle registrations in Idaho from states that are generally infested with gypsy moths.

A summary of the number of traps placed in the 2002 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					
2000	5398	36		5434					
2001	5346			5346	2			2	2
2002	5024	35		5059					

¹Trapping did occur in Idaho in these years, and no moths were 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.

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Table 2 - Number of gypsy moth traps placed, by agency, in Idaho in 2002.

AGENCY	DETECTION TRAPS	DELIMITING TRAPS	MASS TRAPS	TOTAL TRAPS
Idaho Dept. of Lands	2905	19	0	2924
Idaho Dept. of Agriculture	1605	0	0	1605
USFS - Region 4	409	16	0	425
USFS - Region 1	105	0	0	105
TOTALS	5024	35	0	5059

2002 SURVEY PROGRAM

Detection Trapping - In 2002, the cooperating agencies in the Idaho gypsy moth detection program placed 5024 detection traps throughout the state (Table 2). Trapping costs for the 2002 gypsy moth survey program 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, towns, surrounding urban areas, and rural communities in accordance with a predetermined rotation schedule (see appendix A). 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 on a monthly basis 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 2001 and April 2002, there were 5188 move-ins to the state in areas to be trapped, an 8.2% 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 2002. These traps were placed at a density of 16 traps/mi². At Blanchard, north of Spirit Lake in Bonner County, 19 delimitation traps were placed surrounding the capture site where a single male gypsy moth was captured in 2001. At Thornton, between Rexburg and Rigby in Madison County, 16 delimitation traps were placed surrounding the capture site of a single male gypsy moth in 2001. Both sites will have delimitation traps placed in the 2003 season as well.

Mass Trapping - No mass trapping was done in Idaho in 2002.

No gypsy moths were captured during the 2002 trapping season.

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Table 3 - Costs of the 2002 gypsy moth survey program.

AGENCY	COST
Idaho Department of Lands	\$41,857.00
Idaho Department of Agriculture	\$16,230.00
US Forest Service - Region 1	\$4,050.00
US Forest Service - Region 4	\$10,000.00
USDA - APHIS Direct costs for traps, baits and travel.	\$1,200.00
USDA - APHIS Cooperative grants.	\$16,506.00
TOTAL	\$89,843.00

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Table 4 - 2002 Trap placement by counties.

COUNTY NAME	NO.	DETECTION 4/MILE ²	DELIMITATION 16/MILE ²	MASS 9/ACRE	TOTAL TRAPS
Ada	1	435	0	0	435
Adams	2	0	0	0	0
Bannock	3	102	0	0	102
Bear Lake	4	4	0	0	4
Benewah	5	100	0	0	100
Bingham	6	28	0	0	28
Blaine	7	167	0	0	167
Boise	8	40	0	0	40
Bonner	9	1069	19	0	1088
Bonneville	10	106	0	0	106
Boundary	11	132	0	0	132
Butte	12	0	0	0	0
Camas	13	0	0	0	0
Canyon	14	207	0	0	207
Caribou	15	10	0	0	10
Cassia	16	19	0	0	19
Clark	17	2	0	0	2
Clearwater	18	91	0	0	91
Custer	19	24	0	0	24
Elmore	20	62	0	0	62
Franklin	21	8	0	0	8
Fremont	22	19	0	0	19
Gem	23	45	0	0	45
Gooding	24	86	0	0	86
Idaho	25	123	0	0	123
Jefferson	26	6	0	0	6
Jerome	27	27	0	0	27
Kootenai	28	907	0	0	907
Latah	29	242	0	0	242
Lemhi	30	24	0	0	24
Lewis	31	9	0	0	9
Lincoln	32	4	0	0	4
Madison	33	15	16	0	31
Minidoka	34	12	0	0	12
Nez Perce	35	124	0	0	124
Oneida	36	6	0	0	6
Owyhee	37	26	0	0	26
Pavette	38	50	0	0	50
Power	39	10	0	0	10
Shoshone	40	213	0	0	213
Teton	41	8	0	0	8
Twin Falls	42	215	0	0	215
Valley	43	202	0	0	202
Washington	44	45	0	0	45
TOTALS		5024	35	0	5059

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GYPSY MOTH DECISION CRITERIA FOR AREAS TO TRAP

Original decision criteria as to what areas (zones) or cities to do detection trapping for gypsy moth in and on what schedule to trap were developed by the Gypsy Moth Technical Advisory Committee in 1989. Some revisions have been made in succeeding years. The cities, towns, communities and rural areas of the state are categorized as follows.

Category 1. Detection Surveys conducted annually. This category includes larger cities and towns where numerous people or families moving into the area (move-ins) each year cause a substantial risk of gypsy moth infestation and dictate annual detection trapping. Consideration was also given to cities with colleges, industry, a military base, or tourism that would influence the risk of infestation or that otherwise made annual detection trapping advisable. There are currently 48 category 1 zones in Idaho.

Category 2. This category includes smaller cities and towns with populations greater than 2000 but which normally have fewer move-ins. Detection trapping will normally be done every second year. There are currently 16 category 2 zones in Idaho.

Category 3. This category includes communities and other areas with populations generally less than 2000. Detection trapping is normally done every third year. There are currently 196 category 3 zones in Idaho.

Category 4. This category includes small isolated towns or communities where limited or non-contiguous host interrupts the natural or unaided spread of the insect. These zones will be trapped only every third year, without regard to move-ins. There are currently 39 category 4 zones in Idaho.

Category 5. This category was developed for rural communities or areas where little or no risk of introduction exists due to lack of host or limited population. These areas are not trapped unless something occurs that would increase the risk of introduction in a particular year. There are currently 5 category 5 zones in Idaho.

A large percentage of the gypsy moth movement around the nation is brought about by families moving into a community and bringing gypsy moths in various life stages (particularly egg masses) with them, usually on outdoor household articles. For this reason, it was determined by the Technical Advisory Committee that if more than 20 move-ins occurred in a category 1, 2 or 3 zone in a one year period, that zone would be trapped that year, regardless of where it was in the normal schedule. This additional trapping will not interrupt or alter the regular 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 provided to the program by the Idaho Department of Transportation.

The following pages comprise a list of Idaho cities and towns and the category into which they fall.

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GYPSY MOTH TRAP ZONE CATEGORIES

CITY	COUNTY	CATEGORY	CITY	COUNTY	CATEGORY
American Falls	Power	1	Priest River	Bonner	1
Athol	Kootenai	1	Rathdrum	Kootenai	1
Bellevue	Blaine	1	Rexburg	Madison	1
Blackfoot	Bingham	1	Rigby	Jefferson	1
Boise/ Garden City	Ada	1	Rupert	Minidoka	1
Bonnars Ferry	Boundary	1	Salmon	Lemhi	1
Burley	Cassia	1	Sandpoint	Bonner	1
Caldwell	Canyon	1	Shelley	Bingham	1
Cascade	Valley	1	Soda Springs	Caribou	1
Coeur D'Alene	Kootenai	1	St. Anthony	Fremont	1
Driggs	Teton	1	Sun Valley	Blaine	1
Eagle	Ada	1	Twin Falls	Twin Falls	1
Elk City	Idaho	1	Victor	Teton	1
Emmett	Gem	1	Weiser	Washington	1
Farragut	Kootenai	1	Buhl	Twin Falls	2
Fruitland	Payette	1	Filer	Twin Falls	2
Hailey	Blaine	1	Gooding	Gooding	2
Idaho Falls	Bonneville	1	Grangeville	Idaho	2
Jerome	Jerome	1	Heyburn	Minidoka	2
Ketchum	Blaine	1	Kellogg/Pinehurst	Shoshone	2
Kimberly	Twin Falls	1	Malad City	Oneida	2
Kuna	Ada	1	Montpelier	Bear Lake	2
Lewistown	Nez Perce	1	Orofino	Clearwater	2
McCall	Valley	1	Osborn	Shoshone	2
Meridian	Ada	1	Parma	Canyon	2
Middleton	Canyon	1	Sagle	Bonner	2
Moscow	Latah	1	Silver City	Owyhee	2
Mountain Home	Elmore	1	St. Maries	Benewah	2
Mountain Home AF	Elmore	1	Wolf Lodge	Kootenai	2
Nampa	Canyon	1	Aberdeen	Bingham	3
Payette	Payette	1	Ahsahka	Clearwater	3
Pocatello	Bannock	1	Ashton	Fremont	3
Post Falls	Kootenai	1	Atlanta	Elmore	3
Preston	Franklin	1	Bancroft	Caribou	3

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CITY	COUNTY	CATEGORY	CITY	COUNTY	CATEGORY
Banida	Franklin	3	Donnelly	Valley	3
Banks	Boise	3	Downey	Bannock	3
Basalt	Bingham	3	Eastport	Boundary	3
Beauty Bay	Kootenai	3	Eden	Jerome	3
Benewah	Benewah	3	Elk River	Clearwater	3
Bliss	Gooding	3	Elkhorn Village	Blaine	3
Bloomington	Bear Lake	3	Elmira	Bonner	3
Bovill	Latah	3	Emida	Benewah	3
Bowmont	Canyon	3	Fairfield	Camas	3
Bruneau	Owyhee	3	Featherville	Elmore	3
Calder	Shoshone	3	Ferdinand	Idaho	3
Cambridge	Washington	3	Fernwood	Benewah	3
Cameron	Nez Perce	3	Firth	Bingham	3
Cardiff	Clearwater	3	Fish Haven	Bear Lake	3
Carey	Blaine	3	Fort Hall	Bingham	3
Careywood	Bonner	3	Franklin	Franklin	3
Castleford	Twin Falls	3	Fraser	Clearwater	3
Cavendish	Clearwater	3	Fruitvale	Adams	3
Centerville	Boise	3	Gannett	Blaine	3
Challis	Custer	3	Garden Valley	Boise	3
Chatcolet	Benewah	3	Gardena	Boise	3
Clark Fork	Bonner	3	Genesee	Latah	3
Clarkia	Shoshone	3	Georgetown	Bear Lake	3
Clayton	Custer	3	Gleason Meadows	Bonner	3
Clearwater	Idaho	3	Glenns Ferry	Elmore	3
Clifton	Franklin	3	Glenwood	Idaho	3
Coolin	Bonner	3	Gold Hill	Latah	3
Corral	Camas	3	Grace	Caribou	3
Cottonwood	Idaho	3	Grandview	Owyhee	3
Council	Adams	3	Grangemont	Clearwater	3
Craigmont	Lewis	3	Greenleaf	Canyon	3
Crouch	Boise	3	Hagerman	Gooding	3
Culdesac	Nez Perce	3	Hammett	Elmore	3
Dayton	Franklin	3	Hansen	Twin Falls	3
Deary	Latah	3	Harris Ridge	Idaho	3
Deep Creek	Latah	3	Harrisburg	Idaho	3
Desmet	Benewah	3	Harrison	Kootenai	3
Dietrich	Lincoln	3	Hazelton	Jerome	3

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CITY	COUNTY	CATEGORY	CITY	COUNTY	CATEGORY
Headquarters	Clearwater	3	Mesa	Adams	3
Helmer	Latah	3	Mica Bay	Kootenai	3
Hill City	Camas	3	Midvale	Washington	3
Homedale	Owyhee	3	Moyie Springs	Boundary	3
Hope	Bonner	3	Murphy	Owyhee	3
Horseshoe Bend	Boise	3	Murray	Shoshone	3
Idaho City	Boise	3	Murtaugh	Twin Falls	3
Indian Valley	Adams	3	Naples	Boundary	3
Inkom	Bannock	3	New Meadows	Adams	3
Iona	Bonneville	3	New Plymouth	Payette	3
Island Park	Fremont	3	Nordman	Bonner	3
Jaype	Clearwater	3	North Fork	Lemhi	3
Juliaetta	Latah	3	Notus	Canyon	3
Kamiah	Lewis	3	Oakley	Cassia	3
Kendrick	Latah	3	Ola	Gem	3
Kimama	Lincoln	3	Oreana	Owyhee	3
King Hill	Elmore	3	Orofino SE	Clearwater	3
Kooskia	Idaho	3	Oxford	Franklin	3
Kreiger Creek	Bonner	3	Pack River	Bonner	3
Laclede	Bonner	3	Paris	Bear Lake	3
Lake Fork	Valley	3	Paul	Minidoka	3
Lamb Creek	Bonner	3	Pearl	Gem	3
Lapwai	Nez Perce	3	Peck	Nez Perce	3
Larson	Clearwater	3	Picabo	Blaine	3
Lava Hot Spring	Bannock	3	Pierce	Clearwater	3
Leland	Nez Perce	3	Pine	Elmore	3
Lenore	Nez Perce	3	Pioneerville	Boise	3
Letha	Gem	3	Placerville	Boise	3
Lewisville	Jefferson	3	Plummer	Benewah	3
Lowell	Idaho	3	Pollock	Idaho	3
Lowman	Boise	3	Porthill	Boundary	3
Lucile	Idaho	3	Potlatch	Latah	3
Mackay	Custer	3	Reubens	Lewis	3
Marsing	Owyhee	3	Reynolds	Owyhee	3
McAbee Falls	Bonner	3	Richfield	Lincoln	3
McCammon	Bannock	3	Riddle	Owyhee	3
Melba	Canyon	3	Riggins	Idaho	3
Menan	Jefferson	3	Ririe	Bonneville	3

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CITY	COUNTY	CATEGORY	CITY	COUNTY	CATEGORY
Roberts	Jefferson	3	Yellow Pine	Valley	3
Rock Creek	Twin Falls	3	Acequia	Minidoka	4
Rockford Bay	Kootenai	3	Albion	Cassia	4
Rogerson	Twin Falls	3	Almo	Cassia	4
Rose Lake	Kootenai	3	Arco	Butte	4
Roswell	Canyon	3	Arimo	Bannock	4
Samaria	Oneida	3	Bennington	Bear Lake	4
Shoshone	Lincoln	3	Bern	Bear Lake	4
Slickpoo Mission	Nez Perce	3	Chester	Freemont	4
Smiths Ferry	Valley	3	Declo	Cassia	4
Southwick	Nez Perce	3	Dingle	Bear Lake	4
Spalding	Nez Perce	3	Dubois	Clark	4
Spirit Lake	Kootenai	3	Hamer	Jefferson	4
St. Charles	Bear Lake	3	Heise	Madison	4
Stanley	Custer	3	Holbrook	Oneida	4
Star	Elmore	3	Howe	Butte	4
Starkey	Adams	3	Huston	Canyon	4
Stites	Idaho	3	Leadore	Lemhi	4
Sugar City	Madison	3	Malta	Cassia	4
Sweet	Gem	3	May	Lemhi	4
Syringa	Idaho	3	Minidoka	Minidoka	4
Tahoe Ridge	Idaho	3	Montevieu	Jefferson	4
Tamarack	Adams	3	Moore	Butte	4
Teton	Madison	3	Moreland	Bingham	4
Tetonia	Teton	3	Mud Lake	Jefferson	4
Tuttle	Gooding	3	Newdale	Fremont	4
Ucon	Bonneville	3	Ovid	Bear Lake	4
Wallace	Shoshone	3	Parker	Fremont	4
Warm Lake	Valley	3	Pingree	Bingham	4
Warren	Idaho	3	Riverside	Bingham	4
Weippe	Clearwater	3	Robin	Bannock	4
Wendell	Gooding	3	Rockford	Bingham	4
Weston	Franklin	3	Rockland	Power	4
White Bird	Idaho	3	Springfield	Bingham	4
Wilder	Canyon	3	Stibnite	Valley	4
Winchester	Lewis	3	Stone	Oneida	4
Worley	Kootenai	3	Swan Valley/Irwin	Bonneville	4
Wrenco	Bonner	3	Tendoy	Lemhi	4

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Terreton	Jefferson	4
Thornton	Madison	4
Cobalt	Lemhi	5
Lolo	Idaho	5
Powell	Idaho	5
Sunbeam	Custer	5
Triangle	Owyhee	5

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