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Rothamsted Experimental Station Report for 1971 Part 2

ROTHAMSTED
EXPERIMENTAL STATION
REPORT FOR 1971
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Rothamsted Insect Survey

L. R. Taylor and R. A. French

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Rothamsted Insect Survey

L. R. TAYLOR and R. A. FRENCH

Suction traps

Weekly bulletins were issued from the week commencing 13 April until the week ending 4 November and the 33 aphid species or groups of species listed were the same as in 1970, with the addition of *Pentatrichopus fragaefolii*.

The 13 sites that appeared in the 1970 bulletins also resumed working in 1971 with one additional site, called Elgin, at the North of Scotland Agricultural Experimental Farm, Aldroughty, Elgin, Inverness-shire. Unfortunately the Zeeland trap, in Holland, ceased to operate on 18 July and its future is not certain. The East Craigs trap, near Edinburgh, burned down on 3 October and will be replaced for 1972.

Samples were collected throughout the year from traps at the Building Research Station, Garston, Hertfordshire, and at Rothamsted Farm. New traps began to work at Den kgl. Veterinaer-og Landbohøjskole, Zoologisk Institut, Copenhagen, Denmark, on 1 July, at the Rosemaund Experimental Husbandry Farm (MAFF), Preston Wynne, Hereford, on 12 July, and a third trap, for standardising the sample, at Rothamsted Farm on 6 September. None of these sites are listed for 1971. A new site will begin to operate at the ADAS Centre at Shardlow Hall, Shardlow, nr, Derby, in 1972 and this, together with those at Copenhagen and Rosemaund, will appear in the 1972 bulletins and tables.

The two midland sites will increase the inland replication necessary to assess the early warning effectiveness of the traps. Results from the ADAS survey of aphid immigration into cereal crops show that the suction traps continue to detect cereal aphids about three weeks before practicable crop sampling (see *Rothamsted Report for 1971*, Part 1).

The extension of the survey into Denmark introduces a new scale of geographical barrier into the area sampled, a sea passage of 500–600 km (300–400 miles) compared with the 100–150 km crossing to Zeeland. It may be that the size and species composition of the aphid sample at the new site will differ considerably from those listed here; there are no data available on which to base expectation.

Sample volumes were halved at Broom's Barn, Rothamsted Tower, Silwood Park and Wye from 25 June to 5 August (weeks 26–31 inclusive) and at all sites from 24 September to 22 October (weeks 39–42 inclusive). Bulletin and Annual Report tables are corrected to full sample volume.

Table 1a–h lists the same 31 aphid taxa as the weekly bulletins, in standard four-week periods beginning at weeks 13–16, 26 March–22 April (Table 1a); first arrivals were about four weeks earlier than in 1970. Traps are arranged in a north to south sequence. Blanks in the table are zero catches. Zeeland is missing from Table 1e onward and Edinburgh from Table 1h; there are no other missing records but the sample from Edinburgh on Table 1g, weeks 37–40, is five days short, i.e. from 10 September to 2 October only.

Light traps

Tables 2a–d give total annual catches during 1969–70 of the same 31 pest or migratory Lepidoptera as in *Rothamsted Report for 1970*, Part 2. Of the 62 sites with a full year's

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sample in 1969, 37 also completed 1970; 31 new sites makes a total of 68 sites in the table. At the end of 1971, 128 traps are operating.

Sites are again arranged in a north to south sequence and the species in the same sequence as before. Zero catches are recorded as 0 and dashes indicate missing records.

Voluntary workers again operated most of the traps and identified many of the insects; for this we are most grateful.

Table 2

The Rothamsted Insect Survey—Light Traps: two years' records of the moths of economic interest (1969 and 1970)

See pages 192–199

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TABLE 1(a)

The Rothamsted Insect Survey—Suction Traps: 4-weekly total catches of aphids of economic interest reported in the Weekly Bulletin

Week Nos 13–16: 26 March–22 April

Sites	Elgin	Dundee	Edinburgh	Newcastle	High Mowthorpe	Aberystwyth	Brooms Barn	Rothamsted Tower	Long Ashton	Silwood Park	Zealand	Wye, Kent	Starcross	Rosewarne
Species														
<i>Acyrtosiphon pisum</i>														
<i>Aphis fabae</i> group														
<i>Aphis</i> spp.														
<i>Amphorophora</i> spp.														
<i>Aulacorthum solani</i>														
<i>Brachycaudus helichrysi</i>														
<i>Brevicoryne brassicae</i>														
<i>Cavariella aegopodii</i>														
<i>Cinara</i> spp.														
<i>Drepanosiphum platanoidis</i>														
<i>Dysaphis plantaginea</i>														
<i>Elatobium abietinum</i>														
<i>Eriosoma ulmi</i>														
<i>Hyalopterus pruni</i>														
<i>Hyperomyzus lactucae</i>														
<i>Macrosiphum euphorbiae</i>														
<i>Megoura viciae</i>														
<i>Metapolophium dirhodum</i>														
<i>Metapolophium festucae</i>														
<i>Myzus ascalonicus</i>														
<i>Myzus ornatus</i>														
<i>Myzus persicae</i>														
<i>Nasonovia ribis nigri</i>														
<i>Penphigus</i> spp. }														
<i>Prociphilus</i> }														
<i>Pentatrichopus fragaefolii</i>														
<i>Phyllaphis fagi</i>														
<i>Phorodon humuli</i>														
<i>Rhopalosiphum insertum</i>														
<i>Rhopalosiphum maidis</i>														
<i>Rhopalosiphum padi</i>														
<i>Sitobion avenae</i>														
<i>Sitobion fragariae</i>														
First aphid caught		Apr. 8			Apr. 14	Apr. 15	Apr. 15	Apr. 8	Apr. 15	Apr. 22	Apr. 19	Apr. 8	Apr. 19	

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TABLE 1(b)

The Rothamsted Insect Survey—Suction Traps: 4-weekly total catches of aphids of economic interest reported in the Weekly Bulletin

Week Nos 17–20: 23 April–20 May

Species	Sites													
	Elgin	Dundee	Edinburgh	Newcastle	High Mowthorpe	Aberystwyth	Brooms Barn	Rothamsted Tower	Long Ashton	Silwood Park	Zeeland	Wye, Kent	Starcross	Rosewarne
<i>Acyrtosiphon pisum</i>		1				1	18	2	4	10	26	2	6	
<i>Aphis fabae</i> group			2						4	9	1		3	
<i>Aphis</i> spp.								1	6	17			2	2
<i>Amphorophora</i> spp.														
<i>Aulacorthum solani</i>	2													
<i>Brachycaudus helichrysi</i>	3		3	1	2	11	9	2	9	8	1	1	13	2
<i>Brevicoryne brassicae</i>									80	169	3	1	58	1
<i>Cavariella aegopodii</i>							22	5	18	172	2	5	32	
<i>Cinara</i> spp.														
<i>Drepanosiphum platanoidis</i>	468	41	18	1	29	234	989	26	786	336		40	194	4
<i>Dysaphis plantaginea</i>														
<i>Elatobium abietinum</i>	235	41	6	14	13	776	22	17	32	683	2	65	174	6
<i>Eriosoma ulmi</i>														
<i>Hyalopterus pruni</i>											2			
<i>Hyperomyzus lactucae</i>									5	2			7	
<i>Macrosiphum euphorbiae</i>	1	4	1			5		2	8	10		3	5	
<i>Megoura viciae</i>														
<i>Metapolophium dirhodum</i>						2	3	3	11	11	1		6	2
<i>Metapolophium festucae</i>	2	12	4	1	1	4		3	50	79	5	7	42	2
<i>Myzus ascalonicus</i>	31	2	5	4	3	5	23	77	58	70	56	29	40	4
<i>Myzus ornatus</i>	2		4		1	1		7	26	4			3	
<i>Myzus persicae</i>						1			19	20		1	13	1
<i>Nasonovia ribis nigri</i>							2	3	3	11	1		9	
<i>Pemphigus</i> spp. }											1			1
<i>Prociphilines</i> }														
<i>Pentatrichopus fragaefolii</i>													1	
<i>Phyllaphis fagi</i>							3		1	4		1		
<i>Phorodon humuli</i>										4				
<i>Rhopalosiphum insertum</i>										4	16			1
<i>Rhopalosiphum maidis</i>														
<i>Rhopalosiphum padi</i>	2					13	4	22	65	99	3	7	77	4
<i>Sitobion avenae</i>	1		1				2	5	20	49	1	13	26	
<i>Sitobion fragariae</i>	1					1			2	2			7	
First aphid caught	May 2	May 3		May 7	May 10									

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TABLE 1(c)

The Rothamsted Insect Survey—Suction Traps: 4-weekly total catches of aphids of economic interest reported in the Weekly Bulletin

Week Nos 21–24: 21 May–17 June

Sites	Elgin	Dundee	Edinburgh	Newcastle	High Mowthorpe	Aberystwyth	Rothamsted Tower	Brooms Barn	Long Ashton	Silwood Park	Zeeland	Wye, Kent	Starcross	Rosewarne
Species														
<i>Acyrthosiphon pisum</i>	1				2	2	27	10	22	37	49	11	5	4
<i>Aphis fabae</i> group	4		4			2	4	4	16	68	2	3	16	14
<i>Aphis</i> spp.	1		2			3	4	5	40	80	3	4	14	7
<i>Amphorophora</i> spp.						11	2		11	14		2	11	3
<i>Aulacorthum solani</i>	4	2	9	1		11	5		17	6	2	5	14	12
<i>Brachycaudus helichrysi</i>	38	11	48	23	50	380	530	964	1783	1450	39	488	576	780
<i>Brevicoryne brassicae</i>						1		1	5			2	16	5
<i>Cavariella aegopodii</i>	22	2	25	9	15	31	792	566	919	3068	98	438	279	301
<i>Cinara</i> spp.	3		1			2	2	5	3	24	2	2	2	
<i>Drepanosiphum platanoidis</i>	738	21	1004	466	805	273	242	68	97	267	1	131	48	136
<i>Dysaphis plantaginea</i>							8	4	4	7				
<i>Elatobium abietinum</i>	1434	200	746	197	252	1070	33	37	72	235	3	251	54	11
<i>Eriosoma ulmi</i>						1	5	3	19	28	6			
<i>Hyalopterus pruni</i>							1	1	15	18	37	9	5	3
<i>Hyperomyzus lactucae</i>	3	2	4			5	7	15	60	65	2	12	25	6
<i>Macrosiphum euphorbiae</i>		3	4	3		25		2	24	22	3	11	13	4
<i>Megoura viciae</i>										1			1	
<i>Metapolophium dirhodum</i>	1	1	1			4	2	4	23	11	3	10	16	2
<i>Metapolophium festucae</i>	19	21	54	155	12	20	94	39	40	164	7	100	22	16
<i>Myzus ascalonicus</i>	56	8	47	45	38	13	47	130	110	105	29	59	16	19
<i>Myzus ornatus</i>	1	3	5					7	13	11		4	3	1
<i>Myzus persicae</i>						7	10	23	55	45		15	13	4
<i>Nasonovia ribis nigra</i>	3	2	3	3	1	2	3	14	35	24		6	14	9
<i>Pemphigus</i> spp.						2					2		1	
<i>Prociphilines</i>														
<i>Pentatrichopus fragaefolii</i>		1	1							4				
<i>Phyllaphis fagi</i>	39	2	35	3	5	2	8	5	11	82		7	12	
<i>Phorodon humuli</i>						24	68	111	185	509	5	215	33	
<i>Rhopalosiphum insertum</i>						12		2	6	18	4			4
<i>Rhopalosiphum maidis</i>											3	1	7	1
<i>Rhopalosiphum padi</i>	8	13	33	27	10	107	25	110	142	185	10	54	390	206
<i>Sitobion avenae</i>	2	2		5	1	13	53	48	86	337	3	563	55	28
<i>Sitobion fragariae</i>	38	3	9	1	2	10	15	10	126	158	16	167	69	

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TABLE 1(d)

The Rothamsted Insect Survey—Suction Traps: 4-weekly total catches of aphids of economic interest reported in the Weekly Bulletin

Week Nos 25–28: 18 June–15 July

Species	Sites													
	Elgin	Dundee	Edinburgh	Newcastle	High Mowthorpe	Aberystwyth	Brooms Barn	Rothamsted Tower	Long Ashton	Silwood Park	Zeeland	Wye, Kent	Starcross	Rosewarne
<i>Acyrtosiphon pisum</i>	2	29	13	9	33	7	315	140	20	52	69	54	10	4
<i>Aphis fabae</i> group	8	2	9	3	1	2	29	19	154	529	491	41	143	40
<i>Aphis</i> spp.	28	16	827	7	5	8	39	52	118	178	22	16	31	19
<i>Amphorophora</i> spp.	1	12	9	4	2	8	9	7	10	14		3	11	
<i>Aulacorthum solani</i>	1	4	5	2	3	7	5	2	5		3	12	2	2
<i>Brachycaudus helichrysi</i>	29	61	138	86	157	15	378	383	146	203	393	74	62	26
<i>Brevicoryne brassicae</i>						30	178	8	6	13	1	9	1	
<i>Cavariella aegopodii</i>	15	19	82	112	149	14	383	405	209	405	588	74	47	15
<i>Cinara</i> spp.	21	7	14	12	3	21	19	14	24	13	4	17	6	2
<i>Drepanosiphum platanoidis</i>	79	18	47	112	104	51	40	33	28	46		2	16	80
<i>Dysaphis plantaginea</i>	1	1	1	1	1	4	13	9	40	15	10	5	3	
<i>Elatobium abietinum</i>	43	56	80	133	25	37		1	1				4	1
<i>Eriosoma ulmi</i>	32	20	66	43	64	1	22	25	26	17	3	15	6	3
<i>Hyalopterus pruni</i>	6	12	25	18	126	12	413	410	579	798	764	276	236	37
<i>Hyperomyzus lactucae</i>	2	13	12	4	1	5	50	46	21	15	30	14	7	2
<i>Macrosiphum euphorbiae</i>						62	31	7	1	10	15	16	52	18
<i>Megoura viciae</i>	5		2	1			5			13	6		1	1
<i>Metapolophium dirhodum</i>	1	87	39	19	90	6	2818	1480	26	334	4053	215	25	10
<i>Metapolophium festucae</i>	9	54	48	65	167	2	352	163	7	60	60	27	6	6
<i>Myzus ascalonicus</i>	9	4	21	7	9		5	3		2	4		2	1
<i>Myzus ornatus</i>	2	2	5	2			2	10	5	1		1	4	
<i>Myzus persicae</i>	3	8	6	1	9	9	46	24	17	11	176	28	3	1
<i>Nasonovia ribis nigri</i>	2	5	6	2	1	8	3	8	8	7	7	8	8	2
<i>Pemphigus</i> spp. }	1	1	5	7	9	14	4	37	70	29	44	8	12	1
<i>Prociphilines</i> }														
<i>Pentatrichopus fragaefolii</i>		1					2	1					1	2
<i>Phyllaphis fagi</i>	126	11	54	123	32	6	25	63	22	291		1	34	7
<i>Phorodon humuli</i>		4	18	1	16	70	444	364	259	500	30	409	75	2
<i>Rhopalosiphum insertum</i>	1	9	9	14	7	31	50	96	138	165	58	12	134	78
<i>Rhopalosiphum maidis</i>	1	3		8	3	4	10	5	1		24	6	3	7
<i>Rhopalosiphum padi</i>	10	19	27	14	52	50	2862	785	207	1086	6798	1928	7560	622
<i>Sitobion avenae</i>						34	5284	2258	300	1393	449	1054	484	166
<i>Sitobion fragariae</i>	11	2	3	5	3	6	53	44	15	45	38	18	27	8

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TABLE 1(e)

The Rothamsted Insect Survey—Suction Traps: 4-weekly total catches of aphids of economic interest reported in the Weekly Bulletin

Week Nos 29–32: 16 July–12 August

Sites	Elgin	Dundee	Edinburgh	Copenhagen	Newcastle	High Mowthorpe	Aberystwyth	Brooms Barn	Hereford	Rothamsted Tower	Long Ashton	Silwood Park	Wye, Kent	Starcross	Rosewarne
Species															
<i>Acyrthosiphon pisum</i>	2	42	8	156	7	52	7	118	36	1	16	16	1	1	1
<i>Aphis fabae</i> group	17	29	116	2648	28	25	1	636	66	89	49	32	38	2	2
<i>Aphis</i> spp.	5	14	218	921	23	20	1	63	25	42	25	41	39	5	2
<i>Amphorophora</i> spp.	2	1	1	1		1			2				2		
<i>Aulacorthum solani</i>	5	1													
<i>Brachycaudus helichrysi</i>	3	33	19	469	14	20	3	54	6	18	3	8	30	7	4
<i>Brevicoryne brassicae</i>				44	1	2	6	262	2	14	4	10	10	2	1
<i>Caveriella aegopodii</i>	4	2	5	26	13	41		16	2	8		3	16	2	2
<i>Cinara</i> spp.	1	1	4	3	7	5	4					2	8		
<i>Drepanosiphum platanoidis</i>	21	6	8	3	61	6	19	23	10	9	9	19	13	12	
<i>Dysaphis plantaginea</i>				7						2	1	2	2		
<i>Elatobium abietinum</i>															
<i>Eriosoma ulmi</i>		1	3		1	10		4	6		1				1
<i>Hyalopterus pruni</i>	5	64	53	932	39	259	6	1157	203	797	367	479	1807	130	24
<i>Hyperomyzus lactucae</i>		2	1	37	2	5		20		12	1		6	1	
<i>Macrosiphum euphorbiae</i>	3	93	20	16	6	5		6		6	1	8	2		
<i>Megoura viciae</i>	1		4		1	3			2			2			
<i>Metapolophium dirhodum</i>	4	268	52	1578	106	387	3	1052	6	154	9	110	78	22	12
<i>Metapolophium festucae</i>		5	2	5	46	158		8		8	6	12	16		2
<i>Myzus ascalonicus</i>					1	2									
<i>Myzus ornatus</i>		3									1			1	1
<i>Myzus persicae</i>	17	17	199	4			2	26	1	22	2	2	8		1
<i>Nasonovia ribis nigri</i>	3	3		12		1	1	2	4	6		2			1
<i>Pemphigus</i> spp. }	1	6	20	15	9	8	4	25	12	8	8	10	18	7	3
<i>Prociphilines</i>				3		1									
<i>Pentatrichopus fragaefolii</i>															
<i>Phylloxaphis fagi</i>		4	1	1	10	3		8		6	1	10	2		
<i>Phorodon humuli</i>		2	11	65	8	17	1	308	20	106	4	65	218	9	
<i>Rhopalosiphum insertum</i>	23	93	62	135	50	48	77	79	496	350	359	290	74	205	196
<i>Rhopalosiphum maidis</i>	2	1	1	12	1	3		2				17	4		
<i>Rhopalosiphum padi</i>	82	1072	370	10067	416	916	41	2973	123	618	129	420	731	995	406
<i>Sitobion avenae</i>	12	306	71	2342	219	649	24	2975	151	878	149	1050	1489	358	87
<i>Sitobion fragariae</i>	3	39	39	8	24	39	5	75	16	30	7	22	26	11	6

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TABLE 1(f)

The Rothamsted Insect Survey—Suction Traps: 4-weekly total catches of aphids of economic interest reported in the Weekly Bulletin

Week Nos 33–36: 13 August–9 September

Sites	Elgin	Dundee	Edinburgh	Copenhagen	Newcastle	High Mowthorpe	Aberystwyth	Brooms Barn	Hereford	Rothamsted Tower	Long Ashton	Silwood Park	Wye, Kent	Starcross	Rosewarne
<i>Species</i>															
<i>Acyrtosiphon pisum</i>	1				2				3			4			1
<i>Aphis fabae</i> group	37	33	50	1	53	2		1	2	1	3	1	4	1	1
<i>Aphis</i> spp.	12	3	5	7	3	4	1			2	6	12	5	1	1
<i>Amphorophora</i> spp.												2			
<i>Aulacorthum solani</i>															
<i>Brachycaudus helichrysi</i>	48	16	77	5	17	8	21	5	104	7	5	1	26	12	2
<i>Brevicoryne brassicae</i>				6			2	1	4	3	1	19	4	11	1
<i>Cavariella aegopodii</i>	1		1		1			1			1				1
<i>Cinara</i> spp.	2	1													
<i>Drepanosiphum platanoidis</i>	7	12	1	2	26	13	70	18	4	8	9	23	8	5	4
<i>Dysaphis plantaginea</i>							3	2			1			1	
<i>Elatobium abietinum</i>															
<i>Eriosoma ulmi</i>															
<i>Hyalopterus pruni</i>	6	295	1	32	11	19		4	28	36	23	19	57	18	7
<i>Hyperomyzus lactucae</i>													1		
<i>Macrosiphum euphorbiae</i>	13	1													
<i>Megoura viciae</i>													1		
<i>Metapolophium dirhodum</i>	1												1		
<i>Metapolophium festucae</i>															
<i>Myzus ascalonicus</i>															
<i>Myzus ornatus</i>															
<i>Myzus persicae</i>	4	1		2	1	1	5	1	3	5	3		1		
<i>Nasonovia ribis nigri</i>	8		1				1				1		1	1	
<i>Pemphigus</i> spp. }															
<i>Prociphilines</i> }	73	5	419	15	20	1	177	1	6	6	16	16	12	7	1
<i>Pentatrichophorus fragaefolii</i>															
<i>Phyllaphis fagi</i>		2	1												
<i>Phorodon humuli</i>															
<i>Rhopalosiphum insertum</i>	245	103	108	16	16	17	52	11	144	38	53	50	8	44	17
<i>Rhopalosiphum maidis</i>	1			2			1				2			1	2
<i>Rhopalosiphum padi</i>	1786	1129	1350	112	537	120	159	42	149	102	93	84	30	125	85
<i>Sitobion avenae</i>	14	45	12	9	22	16	19	7	29	10	17	16	8	10	5
<i>Sitotropis fragariae</i>	3	8	1		6	2	3	5	1	2			2		1

ROTHAMSTED INSECT SURVEY

TABLE 1(g)

The Rothamsted Insect Survey—Suction Traps: 4-weekly total catches of aphids of economic interest reported in the Weekly Bulletin

Week Nos 37–40: 10 September–7 October

Sites	Elgin	Dundee	Edinburgh*	Copenhagen	Newcastle	High Mowthorpe	Aberystwyth	Brooms Barn	Hereford	Rothamsted Tower	Long Ashton	Silwood Park	Wye, Kent	Starcross	Rosewarne
Species															
<i>Acyrtosiphon pisum</i>	6	2	1												
<i>Aphis fabae</i> group		4		1	14	9	65	1	30	2	11	4	4	2	2
<i>Aphis</i> spp.	1	5	3	2	5	1	6	6	36	5	22	5	7	9	5
<i>Amphorophora</i> spp.							1								8
<i>Aulacorthum solani</i>	3	48	89	5	16	63	73	59	140	363	41	88	378	161	17
<i>Brachycaudus helichrysi</i>	79	2		9	2	2	22	60	32	39	4	13	19	667	29
<i>Brevicoryne brassicae</i>				4		2	3	8			6		4	3	1
<i>Cavariella aegopodii</i>	39	3					3	1	1				1		1
<i>Cinara</i> spp.															
<i>Drepanosiphum platanoidis</i>	15	82	40		29	9	52	19	7	6	40	9	13	19	191
<i>Dysaphis plantaginis</i>					2	2	1	8	29	7	42	50	10	35	2
<i>Elatobium abietinum</i>															
<i>Eriosoma ulmi</i>		12	2	2			1	12			6		67		
<i>Hyalopterus pruni</i>	12	491	5	1	2	17	6	5		5	4	33	15	24	1
<i>Hyperomyzus lactucae</i>						3	5		39	2	23	4	8	14	1
<i>Macrosiphum euphorbiae</i>	2	4				4		1	1		2				
<i>Megoura viciae</i>															
<i>Metapolophium dirhodum</i>	14	1	1			1	4		14	1	2		4		
<i>Metapolophium festucae</i>	6				2		3		3		3	2			
<i>Myzus ascalonicus</i>							4								
<i>Myzus ornatus</i>	2	2									2				
<i>Myzus persicae</i>	21	18	4		34	6	57	1	122	56	39	10	32	170	9
<i>Nasonovia ribis nigri</i>	17		1		2		38		8	4	2	2	6	4	1
<i>Pemphigus</i> spp.															
<i>Prociphilines</i>	253	105	1906	18	122	20	3251	215	391	94	3015	149	122	650	37
<i>Pentatrichopus fragaefolii</i>															
<i>Phyllaphis fagi</i>					8	2									
<i>Phorodon humuli</i>															
<i>Rhopalosiphum insertum</i>	4823	3430	2080	24	1473	388	4009	791	2463	537	996	450	546	640	661
<i>Rhopalosiphum maidis</i>					1		11				3		520	1	1
<i>Rhopalosiphum padi</i>	7510	4218	6120	148	5374	1912	9664	2647	12585	1036	8687	1397	3709	2691	995
<i>Sitobion avenae</i>	2	15	6	1	6	3	23	1	40	3	18	7	16	12	4
<i>Sitobion fragariae</i>	14	5	1		14		27	1	31		4				

* Sample from 10 September to 2 October; see text.

ROTHAMSTED REPORT FOR 1971, PART 2

TABLE 1(h)

The Rothamsted Insect Survey—Suction Traps: 4-weekly total catches of aphids of economic interest reported in the Weekly Bulletin

Week Nos 41–44: 8 October–4 November

Species	Sites										Rosewarne	
	Elgin	Dundee	Copenhagen	Newcastle	High Mowthorpe	Aberystwyth	Brooms Barn	Hereford	Rothamsted Tower	Long Ashton	Silwood Park	
<i>Acrythosiphon pisum</i>				2				2	1			2
<i>Aphis fabae</i> group				2				2	1			4
<i>Aphis</i> spp.					6	2	2	18		15	22	29
<i>Amphorophora</i> spp.												4
<i>Aulacorthum solani</i>						2					2	1
<i>Brachycaudus helichrysi</i>	4	1			3		7	10	12	5	18	59
<i>Brevicoryne brassicae</i>						2		27	7	25	18	5
<i>Cavariella aegopodii</i>	11		1	2			102			1	2	2003
<i>Cinara</i> spp.				1						1	8	39
<i>Drepanosiphum platanoidis</i>	1	1		16	25		1		3	21	24	31
<i>Dysaphis plantaginea</i>					4			18	7	9	24	33
<i>Elatobium abietinum</i>												64
<i>Eriosoma ulmi</i>	1	5	1	2	2			2		5	3	
<i>Hyalopterus pruni</i>		4			2		2		2	11	4	10
<i>Hyperomyzus lactucae</i>				2	3	5	4	49	6	9	4	11
<i>Macrosiphum euphorbiae</i>	1							4			1	9
<i>Megoura viciae</i>											2	
<i>Metapolophium dirhodum</i>	1	1		5				38		14	1	1
<i>Metapolophium festucae</i>						6		5		5		1
<i>Myzus ascalonicus</i>				7		2	1	1				2
<i>Myzus ornatus</i>										3		1
<i>Myzus persicae</i>	43	12		17	7	38	8	82	64	91	16	36
<i>Nasonovia ribis nigri</i>			1			9	2	12	3	5	1	4
<i>Pemphigus</i> spp. }	20	5	4	30	2	384	108	244	51	1282	292	177
<i>Prociphilines</i> }											343	40
<i>Pentatrichopus fragaefolii</i>												
<i>Phyllaphis fagi</i>	5	8							1		1	1
<i>Phorodon humuli</i>					24			2651		1	1	46
<i>Rhopalosiphum insertum</i>	1131	739	10	410	81	5007	462	1584	387	485	431	294
<i>Rhopalosiphum maidis</i>						5				3		1451
<i>Rhopalosiphum padi</i>	318	376	50	770	197	2536	993	14549	865	8403	1833	4225
<i>Sitobion avenae</i>						5	2	16	2	11	3	18
<i>Sitobion fragariae</i>	4	6		18	3	67		139	1	59	23	14
											41	18

Table 2

*The Rothamsted Insect Survey—Light Traps: two years' records of the moths
of economic interest (1969 and 1970)*

See pages 192–199

ROTHAMSTED REPORT FOR 1971, PART 2

TABLE

The Rothamsted Insect Survey—Light Traps: two years'

ROTHAMSTED INSECT SURVEY

2(a)

records of the moths of economic interest (1969 and 1970)

ROTHAMSTED REPORT FOR 1971, PART 2

TABLE

The Rothamsted Insect Survey—Light Traps: two years'

Pest Species	Year	142 Oundle	94 Monks Wood	23 St. Ives	129 Wellingborough	88 Broom's Barn	125 Sandy	148 Cleeve Prior	158 Ipswich	139 The Gwenffrwd	143 Stony Stratford	147 Simpson	42	145 Shenley Brook End	7	144 Bletchley Park	1 Rothamsted (Barnfield)	5	43	5	14	144	
<i>Gortyna micacea</i> Rosy Rustic	1969	—	171	0	—	4	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	1970	13	167	0	3	3	3	17	4	59	1	62	42	42	7	7	9	5	43	5	14	144	—
<i>Bupalus piniaria</i> Bordered White	1969	—	0	0	—	5	8	—	—	—	—	—	—	—	—	—	0	0	0	0	0	0	0
	1970	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Panolis flammea</i> Pine Beauty	1969	—	0	0	—	0	8	—	—	—	—	—	—	—	—	—	0	0	0	0	0	0	0
	1970	0	0	0	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cerapteryx graminis</i> Antler Moth	1969	—	0	0	—	0	29	—	—	—	—	—	—	—	—	—	1	0	0	0	0	0	0
	1970	0	0	0	0	0	13	0	0	206	0	10	1	0	0	0	0	1	0	1	0	0	0
<i>Erannis aurantaria</i> Scarce Umber	1969	—	0	0	—	1	2	—	—	—	—	—	—	—	—	—	0	0	0	0	24	—	—
	1970	0	0	0	0	0	8	0	0	17	0	3	3	0	0	0	0	0	0	0	0	21	5
<i>Operophtera fagata</i> Northern Winter Moth	1969	—	0	0	—	0	2	—	—	—	—	—	—	—	—	—	0	0	0	0	0	0	0
	1970	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	5	0	0
<i>Apamea sordens</i> Rustic Shoulder-knot	1969	—	0	0	—	0	2	—	—	—	—	—	—	—	—	—	1	0	0	0	0	0	—
	1970	2	0	5	1	0	1	4	0	0	6	2	0	10	0	0	0	2	2	2	4	—	—
<i>Gortyna flavago</i> Frosted Orange	1969	—	8	2	—	4	3	—	—	—	—	—	—	—	—	—	3	2	2	2	—	—	—
	1970	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
<i>Mamestra brassicae</i> Cabbage Moth	1969	—	1	8	—	10	1	—	—	—	—	—	—	—	—	—	2	0	0	3	—	—	—
	1970	5	0	28	8	2	3	0	4	0	14	7	0	13	0	0	0	0	2	2	7	—	—
<i>Noctua pronuba</i> Large Yellow Underwing	1969	—	3	4	—	3	2	—	—	—	—	—	—	—	—	—	1	1	86	—	—	—	—
	1970	3	11	9	4	1	7	8	2	7	6	9	9	9	—	8	8	8	131	7	—	—	—
<i>Diataraxia oleracea</i> Bright-line Brown-eye	1969	—	1	4	—	7	11	—	—	—	—	—	—	—	—	—	3	5	2	—	—	—	—
	1970	1	3	13	12	2	13	15	5	13	36	14	10	21	—	2	16	6	13	—	—	—	—
<i>Euxoa nigricans</i> Garden Dart	1969	—	0	0	—	0	0	—	—	—	—	—	—	—	—	—	0	0	0	0	0	0	—
	1970	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	—
<i>Apamea secalis</i> Common Rustic	1969	—	11	4	—	8	6	—	—	—	—	—	—	—	—	—	17	9	23	—	—	—	—
	1970	3	1	1	24	8	12	93	3	8	29	29	12	15	—	22	14	83	6	—	—	—	—
<i>Melanchra persicariae</i> Dot Moth	1969	—	5	2	—	23	4	—	—	—	—	—	—	—	—	—	6	0	2	—	—	—	—
	1970	18	2	3	1	3	1	7	1	39	13	2	19	2	—	0	1	0	0	1	0	18	—
<i>Operophtera brumata</i> Winter Moth	1969	—	1	0	—	0	2	—	—	—	—	—	—	—	—	—	2	1	153	—	—	—	—
	1970	0	0	0	9	4	18	26	0	25	22	10	7	20	—	1	1	252	15	—	—	—	—

ROTHAMSTED INSECT SURVEY

2(b)

records of the moths of economic interest (1969 and 1970)

CENSUS OF PESTS AND DISEASES															Year	Pest Species					
Number		Number		Number		Number		Number		Number		Number		Number							
11	87	Writtle	11	5	17	Dale Fort	11	5	1	121	Port Talbot	90	Isleworth	130	Bath	16	Mortimer				
3	3		4	4	0		0	1	2	2	2	26	22	8	92	Nettlecombe Court					
0	0		0	0	0		0	0	1	0	1	0	0	0	46	Alice Holt					
0	0		0	0	0		0	0	3	0	0	0	0	0	74	Cullompton					
0	0		0	0	0		0	0	1	0	0	0	0	0	104	Wellington					
0	0		0	0	0		0	0	0	0	0	0	0	0	2	78 Ringwood					
0	0		0	0	0		0	0	1	0	0	0	0	0	16	153 Wimborne					
0	0		0	0	0		0	0	11	0	0	0	0	0	—	149 Starcross					
0	0		4	0	0		0	0	1	11	0	0	0	0	0	23	67 Slapton Ley				
0	0		0	0	0		0	0	9	4	0	0	0	0	0	17	114 Rosewarne				
0	0		0	0	0		0	0	0	0	0	0	0	0	—	15	146 Jersey				
0	0		0	0	0		0	0	0	0	0	0	0	0	0	0	1969	<i>Gortyna micacea</i>			
0	0		0	0	0		0	0	0	0	0	0	0	0	0	0	1970	Rosy Rustic			
0	0		0	0	0		0	0	2	1	0	0	0	0	0	0	0	1969	<i>Bupalus piniaria</i>		
0	0		0	0	0		0	0	3	0	0	0	0	0	0	0	0	1970	Bordered White		
0	0		0	0	0		0	0	1	0	0	0	0	0	0	0	0	1969	<i>Panolis flammea</i>		
0	0		0	0	0		0	0	0	0	0	0	0	0	0	0	0	1970	Pine Beauty		
0	0		0	1	0		0	0	0	7	0	0	0	0	0	0	0	1969	<i>Cerapteryx graminis</i>		
0	0		4	0	0		0	0	1	11	0	0	0	0	0	0	0	1970	Antler Moth		
0	0		0	0	0		0	0	0	2	0	0	0	0	0	0	0	1969	<i>Erannis aurantia</i>		
0	0		0	0	0		0	0	9	4	0	0	0	0	0	0	0	1970	Scarce Umber		
0	0		0	0	0		0	0	0	7	0	0	0	0	0	0	0	1969	<i>Operophtera fagata</i>		
0	0		0	0	0		0	0	5	1	0	0	0	0	0	0	0	1970	Northern Winter Moth		
0	0		0	1	0		0	0	2	1	0	0	0	0	0	0	0	1969	<i>Apamea sordens</i>		
0	0		2	0	4		0	0	8	2	0	0	0	0	0	0	0	1970	Rustic Shoulder-knot		
4	8	0	0	0	0		3	4	0	0	4	0	0	0	3	—	2	0	1969	<i>Gortyna flavago</i>	
0	1	0	0	0	0		0	0	0	1	0	1	0	0	0	0	1	0	1970	Frosted Orange	
7	0	3	0	4	0		5	0	0	0	0	0	0	0	0	—	7	4	—	1969	<i>Mamestra brassicae</i>
14	1	3	0	22	1	0	1	1	0	2	0	7	1	4	3	15	15	1970	Cabbage Moth		
6	18	1	0	6	3	15	9	13	5	10	3	—	—	3	7	—	1969	<i>Noctua pronuba</i>			
31	10	0	0	29	35	6	22	4	9	3	4	45	1	5	3	6	6	1970	Large Yellow Underwing		
20	31	16	1	12	2	3	0	7	3	17	2	—	—	14	14	—	1969	<i>Diataraxia oleracea</i>			
59	14	8	1	15	4	4	1	9	3	13	1	24	1	10	7	11	11	1970	Bright-line Brown-eye		
0	0	11	0	4	0	0	0	0	0	0	0	0	0	0	0	2	0	1969	<i>Euxoa nigricans</i>		
1	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	1970	Garden Dart		
0	24	10	2	45	2	49	13	87	6	23	17	—	—	31	14	—	1969	<i>Apamea secalis</i>			
33	50	8	0	37	18	8	26	27	14	32	9	228	10	33	21	5	5	1970	Common Rustic		
3	15	4	0	13	1	0	2	6	2	5	0	—	—	93	7	—	1969	<i>Melanchra persicariae</i>			
16	2	0	0	9	3	0	2	2	0	4	1	4	1	28	4	1	1	1970	Dot Moth		
1	5	1	2	3	60	17	2	20	0	6	2	—	—	4	1	—	1969	<i>Operophtera brumata</i>			
10	4	1	12	18	55	34	18	1	0	5	1	0	0	0	2	3	3	1970	Winter Moth		

ROTHAMSTED REPORT FOR 1971, PART 2

TABLE

The Rothamsted Insect Survey—Light Traps: two years

Pest Species	Year	57 Ardross	58 Newton, Elgin	49 Fort Augustus	29 Rannoch	48 Kindrogan	47 Dundee	140 Vane Farm	97 Rowdenman	98 Auchincruive	127 Kielder	39 Chester le Street	70 Egremont	72 Castletown, I.O.M.	133 Leighton Moss	45 Malham Tarn	137 Harrogate (Kingsley)	68 Harrogate (Fulwith)
<i>Abraxas grossulariata</i> Magpie Moth	1969	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Agrotis segetum</i> Turnip Moth	1969	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Erannis defoliaria</i> Mottled Umber	1969	1	3	5	0	0	0	0	24	0	0	0	0	8	—	6	—	5
<i>Phlogophora meticulosa</i> Angle Shades	1969	0	0	1	0	0	0	0	—	0	0	0	0	3	—	0	—	0
<i>Alsophila aescularia</i> March Moth	1969	12	4	4	0	0	0	0	19	0	0	0	0	0	—	0	—	10
<i>Hepialus humuli</i> Ghost Swift	1969	0	1	0	3	0	0	—	0	4	—	0	0	0	—	0	—	0
<i>Hepialus lupulina</i> Common Swift	1969	0	0	0	15	0	0	—	3	2	—	0	1	3	—	0	—	9
<i>Agrotis ipsilon</i> Dark Sword Grass	1969	0	0	1	0	0	0	—	0	0	—	0	0	4	—	0	—	0
<i>Euproctis chrysorrhoea</i> Brown-tail	1969	0	0	0	0	0	0	—	0	0	—	0	0	0	—	0	—	0
<i>Agrotis exclamationis</i> Heart and Dart	1969	0	24	0	0	0	1	—	16	—	4	14	115	—	0	—	11	—
<i>Plusia gamma</i> Silver Y	1969	6	6	49	0	3	1	—	3	3	—	122	27	66	—	34	—	45
<i>Laphyrgma exigua</i> Small Mottled Willow	1969	0	0	0	0	0	0	—	0	0	—	0	0	0	—	0	—	0
<i>Nycterosea obstipata</i> The Gem	1969	0	0	0	0	0	0	—	0	0	—	0	0	0	—	0	—	0
<i>Nomophila noctuella</i> Rush Veneer Pearl	1969	0	0	0	—	0	0	—	1	—	0	0	—	—	—	0	—	—
<i>Plutella maculipennis</i> Diamond-back Moth	1969	0	0	49	—	44	—	—	30	—	0	—	—	—	0	—	—	—
<i>Udea ferrugalis</i> Rusty Dot Pearl	1969	0	0	0	—	0	0	—	0	0	—	0	0	—	—	0	—	—
	1970	0	0	0	—	0	0	0	0	0	—	0	0	—	—	0	—	—

ROTHAMSTED INSECT SURVEY

2(c)

records of the moths of economic interest (1969 and 1970)

ROTHAMSTED REPORT FOR 1971, PART 2

TABLE

The Rothamsted Insect Survey—Light Traps: two years'

Pest Species	Year	142 Oundle	94 Monks Wood	23 St. Ives	129 Wellingborough	88 Brooms Barn	125 Sandy	148 Cleeve Prior	158 Ipswich	139 The Gwenffrwd	143 Stony Stratford	147 Simpson	145 Shenley Brook End	144 Bletchley Park	1 Rothamsted (Barnfield)	34 Rothamsted (Allotments)	22 Rothamsted (Geescroft)	120 Wickham Bishops
<i>Abraxas grossulariata</i>	1969	8	2	—	—	—	1	—	—	—	—	—	—	—	11	3	104	55
Magpie Moth	1970	3	6	4	7	1	0	80	4	0	12	16	25	—	8	0	51	55
<i>Agrotis segetum</i>	1969	—	0	0	—	1	4	—	—	—	—	—	—	—	0	0	2	—
Turnip Moth	1970	0	1	2	0	0	5	2	3	0	7	0	2	7	0	1	7	0
<i>Erannis defoliaria</i>	1969	—	0	0	—	0	7	—	—	—	—	—	—	—	1	0	20	—
Mottled Umber	1970	0	0	0	0	0	31	4	0	10	0	5	2	0	1	0	56	5
<i>Phlogophora meticulosa</i>	1969	—	17	9	—	13	7	—	—	—	—	—	—	—	2	1	9	—
Angle Shades	1970	0	1	3	1	0	0	1	0	0	1	0	0	0	0	0	1	0
<i>Alsophilia aescularia</i>	1969	—	0	0	—	2	5	—	—	—	—	—	—	—	0	1	39	—
March Moth	1970	0	2	0	0	0	5	10	3	2	2	3	1	0	2	0	16	15
<i>Hepialus humuli</i>	1969	—	5	0	—	0	0	—	—	—	—	—	—	—	1	0	6	—
Ghost Swift	1970	1	3	0	2	0	0	0	0	0	23	1	0	0	0	6	2	1
<i>Hepialus lupulina</i>	1969	—	0	3	—	0	1	—	—	—	—	—	—	—	5	4	4	—
Common Swift	1970	2	4	26	8	7	4	10	45	0	20	37	18	5	8	19	24	90
<i>Agrotis ipsilon</i>	1969	—	0	0	—	2	0	—	—	—	—	—	—	—	0	0	1	—
Dark Sword Grass	1970	0	0	0	0	1	1	1	0	0	0	0	2	2	0	0	5	2
<i>Euproctis chrysorrhoea</i>	1969	—	0	0	—	0	0	—	—	—	—	—	—	—	0	0	0	—
Brown-tail	1970	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4
<i>Agrotis exclamationis</i>	1969	—	12	14	—	18	10	—	—	—	—	—	—	—	31	4	8	—
Heart and Dart	1970	59	65	55	40	24	72	225	38	60	231	180	170	322	50	34	131	48
<i>Plusia gamma</i>	1969	—	30	49	—	49	20	—	—	—	—	—	—	—	35	23	38	—
Silver Y	1970	22	3	26	10	3	16	18	6	2	12	10	8	5	5	4	11	20
<i>Laphygma exigua</i>	1969	—	0	0	—	0	0	—	—	—	—	—	—	—	0	0	0	—
Small Mottled Willow	1970	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Nycterosea obstipata</i>	1969	—	1	1	—	2	6	—	—	—	—	—	—	—	4	0	1	—
The Gem	1970	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Nomophila noctuella</i>	1969	—	17	—	—	8	29	—	—	—	—	—	—	—	18	0	3	—
Rush Veneer Pearl	1970	0	0	—	0	1	6	0	0	2	0	0	0	0	1	0	1	0
<i>Plutella maculipennis</i>	1969	—	8	—	—	272	115	—	—	—	—	—	—	—	729	382	9	—
Diamond-back Moth	1970	1	0	—	0	73	92	193	88	10	27	1	23	14	744	798	34	58
<i>Udea ferrugalis</i>	1969	—	0	—	—	5	20	—	—	—	—	—	—	—	7	6	9	—
Rusty Dot Pearl	1970	0	0	—	0	0	1	0	0	0	0	0	0	0	0	0	0	0

ROTHAMSTED INSECT SURVEY

2(d)

records of the moths of economic interest (1969 and 1970)

Census of Pest Species																	Year	Pest Species						
87	Writtle	17	Dale Fort	121	Port Talbot	7	48	5	90	Isleworth	6	10	7	0	4	81	2	11	92	Nettlecombe Court				
7	48	5	90	Isleworth							7	10	7	0	4	51	0	0	8	24	0	1969	<i>Abraxas grossulariata</i>	
6											6							7	24	4	1970	Magpie Moth		
0	0	0	0	0	1	0	0	2	0	0	0	0	1	1	0	0	0	0	0	—	1969	<i>Agrotis segetum</i>		
0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	5	—	1970	Turnip Moth			
0	0	0	0	0	0	7	10	9	15	0	0	4	0	0	27	29	26	5	0	1	1969	<i>Erannis defoliaria</i>		
4	0	0	0	0	2	27	29	26	5	0	0	0	0	0	0	0	0	0	0	0	1970	Mottled Umber		
3	6	0	1	1	2	1	0	10	0	7	2	2	0	0	1	0	1	2	0	—	1969	<i>Phlogophora meticulosa</i>		
0	1	0	0	3	4	0	1	1	1	2	0	3	0	0	0	3	0	0	0	1	1970	Angle Shades		
1	3	2	0	3	7	7	17	17	0	1	6	—	—	0	1	0	12	4	6	—	1969	<i>Alsophila aescularia</i>		
1	1	0	0	2	3	12	4	6	0	1	1	1	0	0	0	0	8	0	9	0	1970	March Moth		
0	0	0	0	0	0	1	3	0	0	0	1	—	—	0	0	0	5	4	3	—	1969	<i>Hepialus humuli</i>		
0	0	0	0	0	0	5	1	2	0	0	0	0	0	0	0	0	4	3	0	0	1970	Ghost Swift		
10	8	0	1	2	4	0	0	0	0	0	0	0	0	0	1	5	0	14	4	3	0	1969	<i>Hepialus lupulina</i>	
12	29	1	5	0	14	4	3	2	0	3	1	7	2	0	0	1	0	1	7	2	0	1970	Common Swift	
0	10	0	0	0	0	3	0	1	0	1	0	—	—	0	1	12	0	0	0	2	2	—	1969	<i>Agrotis ipsilon</i>
1	12	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1970	Dark Sword Grass	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	—	1969	<i>Euproctis chrysorrhoea</i>	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1970	Brown-tail	
48	39	8	0	6	19	48	18	34	15	19	9	—	—	41	61	—	—	—	—	—	1969	<i>Agrotis exclamationis</i>		
233	113	20	1	221	104	92	104	180	105	107	51	332	49	273	232	133	—	—	—	—	—	1970	Heart and Dart	
140	102	121	1	21	36	171	17	179	1	128	5	—	—	120	101	—	—	—	—	—	1969	<i>Plusia gamma</i>		
18	50	37	0	4	3	12	7	24	9	15	0	15	7	16	25	35	—	—	—	—	—	1970	Silver Y	
0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	—	1969	<i>Laphygma exigua</i>	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	—	1970	Small Mottled Willow	
0	0	0	2	0	1	2	0	2	0	12	2	—	—	13	10	0	0	0	0	0	—	1969	<i>Nycterosea obstipata</i>	
0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	—	1970	The Gem	
—	0	0	0	—	—	0	0	32	—	79	—	—	—	65	71	—	—	—	—	—	1969	<i>Nomophila noctuella</i>		
0	71	0	1	—	—	0	0	5	—	16	—	0	19	45	24	26	—	—	—	—	—	1970	Rush Veneer Pearl	
—	0	39	—	—	34	28	7	—	60	—	—	—	36	304	—	—	—	—	—	—	—	1969	<i>Plutella maculipennis</i>	
4	17	0	87	—	—	1	48	0	—	62	1	0	165	119	352	203	—	—	—	—	—	1970	Diamond-back Moth	
—	—	274	3	—	—	15	0	127	—	330	—	—	—	341	623	—	—	—	—	—	1969	<i>Udea ferrugalis</i>		
0	19	0	0	—	—	0	0	0	—	1	—	2	2	1	4	2	—	—	—	—	—	1970	Rusty Dot Pearl	