

NEW COUNTY RECORDS FOR THE CEDAR GLADE ENDEMIC

Viola egglestonii

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ABSTRACT

New county distribution records for Cannon, Marshall, Sumner, and Smith Counties, Tennessee are reported for the cedar glade endemic *Viola egglestonii* Brainerd. The total distribution of this species is now known to include nine counties in central Tennessee.

Viola egglestonii Brainerd (Violaceae) is a stemless blue violet apparently restricted in distribution to the cedar glades of middle Tennessee. Although it has been reported from Warren (Bowling Green) (Brainerd 1921) and Hart (Braun 1943) Counties, Kentucky, Russell (1965) could not find specimens to verify its occurrence in Kentucky. Furthermore, in his studies of the genus *Viola* (Russell 1958, 1965), he shows *V. egglestonii* as occurring in only four counties in Tennessee (Davidson, Rutherford, Maury, and Bedford) on his distribution maps. From these maps it is difficult to determine whether or not he also is reporting the species from Williamson County. He does not cite the specimens that he examined, and it is hard to determine whether or not he intends for the dot representing Rutherford County to overlap into Williamson County. Why he did not include Wilson County on his distribution map is not known. There is a specimen of *V. egglestonii* in the herbarium of Southern Methodist University (SMU) from Wilson County, Tennessee annotated in 1959 as *V. egglestonii* by Russell (L. H. Shinnars, personal communication). In addition, there is also a specimen from Wilson County in the University of Tennessee herbarium (TENN) determined by Russell (H. R. DeSelm, personal communication). We have seen many plants of this species growing in the Cedars of Lebanon State Park (Wilson Co.).

The purpose of this note is to report the occurrence also of *Viola egglestonii* in Cannon, Marshall, Smith and Sumner Counties, Tennessee, counties from which this species apparently has not been reported. During the spring of 1969 specimens of *V. egglestonii* were collected by the authors in Cannon, Marshall, and Sumner Counties, while specimens from Smith County were collected by Donald Caplenor of Tennessee Technological University. The locations of these populations are

as follows: CANNON COUNTY, Bradyville Road, 3.6 miles south of 70S, April 21, 1969 (Baskin and Baskin 742); MARSHALL COUNTY, St. Rd. 99, 1.0 mile east of U.S. 431, April 20, 1969 (Baskin and Baskin 739); SMITH COUNTY, Carmack Wright farm, about 3 miles east of Smith-Wilson Co. line and 1 mile south of U.S. 70N, June 8, 1969 (Donald Caplenor); and SUMNER COUNTY, Gallatin Steam Plant Road, 1.8 miles east of St. Rd. 109, April 13, 1969 (Baskin and Baskin 709). Voucher specimens from each of these populations are being deposited in the herbaria of the University of Kentucky (KY) and Vanderbilt University (VDB). At each of the three locations, plants of *V. egglestonii* were growing in cedar glades.

According to Russell (1965), *Viola egglestonii* "... is not at all common" in the cedar glades of Central Tennessee. However, in some glades, in which we have seen this species, *V. egglestonii* is quite abundant (Baskin, Quarterman, and Caudle 1968) and populations may cover relatively large areas. The most extensive population of *V. egglestonii* that we have seen is in the cedar glade area located at the junction of Couchville Pike and Anderson Road (Davidson County), an area in close proximity to the new Percy Priest Lake. This population consists of thousands of individual plants and is scattered over several hundred square meters. Due to human activity around the lake, however, part of this population already has been destroyed.

The authors wish to acknowledge the furnishing of the specimens of *Viola egglestonii* by Donald Caplenor of Tennessee Technological University and travel funds provided by a grant from the University of Kentucky Research Foundation.

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SOD WEBWORM (LEPIDOPTERA: PYRALIDAE: CRAMBINAE)
 MOTHS COLLECTED IN LIGHT TRAPS

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ABSTRACT

Thirteen species of sod webworm moths were collected during 1968. Distinct differences in flight dates occurred among the species. Trap data indicated that seven species were univoltine while six were most likely multivoltine.

Sod webworm larvae are pests of lawn and pasture grasses. With the increase in urbanization and the consequent increase in the importance of ornamental

lawns the sod webworm has caused considerable concern the past several years. The larvae can be found in the thatch area just above the surface of the soil where they web and feed on the grass. Adult moths are attracted to light and can often be seen in great numbers around lighted areas during summer evenings. Moths can be recognized by their long snoutlike labial palpi and by their habit of folding their wings around their abdomen.

Ainslie (1917) stated that at least 14 Crambid species occurred at Nashville. Very little is known about

Table 1.—Time of flight of species of Crambinae in the Knoxville area, 1968.

Species	Week					
	May	June	July	August	September	October
<i>P. trisecta</i>	* * *	* * *	* * *	* * *	* * *	* * *
<i>P. mutabilis</i>	* * *	* * *	* * *	* * *	* * *	* * *
<i>C. teterrellus</i>	* * *	* * *	* * *	* * *	* * *	* * *
<i>C. laqueatellus</i>	* * *	* *				
<i>C. praefectellus</i>	* *		* * *	* * *	* * *	*
<i>C. satrapellus</i>	*					
<i>M. elegans</i>		* * *	* * *	* * *	* * *	* * *
<i>A. nivalis</i>		* * *	* * *	* * *	* * *	* * *
<i>C. alboclavellus</i>		* * *	* * *	* *		
<i>C. topiaria</i>			* * *			
<i>C. leachellus</i>					* * *	* * *
<i>A. vulgivagella</i>						* * *
<i>A. ruricolella</i>						* * *

the species composition of the group in the Knoxville area. In view of the economic importance of this group and the importance of proper identification and some knowledge concerning the life history of an insect prior to control, this study was begun.

MATERIALS AND METHODS

Fifteen watt black light traps were placed at three locations: University of Tennessee College of Agriculture Campus, Knoxville; University of Tennessee Plant Science Farm about three miles from the campus; and Green Meadow Country Club golf course near Alcoa. The campus trap was a modification of the trap used by Stanley and Bennett (1965), to which baffles were added. The others were Ellisco traps. Potassium cyanide was used as the killing agent. The campus trap was placed next to a greenhouse and was near bluegrass and Kentucky-31 fescue lawns. The Plant Science Farm trap was placed in Kentucky-31 fescue adjoining an orchard. A large bluegrass area was located about 300 yards from the trap. The golf course trap was surrounded by bluegrass. Traps were emptied daily from May 1 to October 29, 1968. Sod webworm moths were

identified and counted. Those which we could not identify were sent to Dr. A. B. Klots of the American Museum of Natural History in New York for species determination.

RESULTS AND DISCUSSION

Thirteen species were collected: *Pediasia trisecta* (Walker), *Pediasia mutabilis* (Clemens), *Crambus teterrellus* (Zincken), *Chrysoteuchia topiaria* (Zeller), *Agriphila vulgivagella* (Clemens), *Agriphila ruricolella* (Zeller), *Microcrambus elegans* (Clemens), *Argyria nivalis* (Drury), *Crambus alboclavellus* (Zeller), *Crambus praefectellus* (Zincken), *Crambus laqueatellus* (Clemens), *Crambus leachellus* (Zincken), *Crambus satrapellus* (Zincken).

The use of the black light trap appears to be a useful survey tool in determining the presence of sod webworm species. It is a more efficient method than hand collecting. Two species, *C. leachellus* and *C. satrapellus*, never have been collected by hand in two years collecting whereas both of these species appeared in trap collections.

There was considerable variation in the flight dates

Table 2.-Number of moths collected at each location for the weekly periods indicated.

Period	Species																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	<i>P. trisecta</i>			<i>P. mutabilis</i>			<i>C. teterrellus</i>			<i>C. topiaria</i>																																																																																																																																																																																																																																																																																																																																																																																																																																															
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1-7	4	11	-	1	0	-	1	0	-	0	0	0	8-14	4	22	-	0	0	-	1	2	-	0	0	0	15-21	19	57	4	9	4	7	20	32	267	0	0	0	22-28	8	142	1	5	24	4	20	90	180	0	0	0	June													29-4	18	91	6	3	4	0	17	46	161	0	0	0	5-11	8	112	10	0	1	0	6	48	109	0	0	0	12-18	2	46	1	1	0	0	6	29	0	0	0	0	19-25	8	6	1	0	0	0	3	5	7	0	0	0	July													26-2	4	-	5	1	-	0	14	-	42	0	0	0	3-9	34	218	28	6	1	2	31	91	412	1	5	11	10-16	26	802	25	11	7	0	31	222	417	0	4	1	17-23	35	731	23	9	36	9	42	277	731	0	2	2	24-30	29	699	20	8	92	9	22	349	618	0	0	2	August													31-6	23	396	7	13	78	14	37	216	408	0	0	0	7-13	46	303	60	1	30	5	41	202	740	0	0	0	14-20	55	576	209	4	13	2	114	191	4331	0	0	0	21-27	44	1292	101	14	21	7	137	649	7224	0	0	0	September													28-3	81	1285	42	40	22	17	256	150	1148	0	0	0	4-10	142	2076	69	61	76	70	168	561	1284	0	0	0	11-17	189	3452	42	69	99	5	124	435	414	0	0	0	18-24	217	5488	39	40	152	13	138	538	707	0	0	0	October													25-1	343	4983	31	21	69	1	104	247	384	0	0	0	2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29													
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22-28	8	142	1	5	24	4	20	90	180	0	0	0	June													29-4	18	91	6	3	4	0	17	46	161	0	0	0	5-11	8	112	10	0	1	0	6	48	109	0	0	0	12-18	2	46	1	1	0	0	6	29	0	0	0	0	19-25	8	6	1	0	0	0	3	5	7	0	0	0	July													26-2	4	-	5	1	-	0	14	-	42	0	0	0	3-9	34	218	28	6	1	2	31	91	412	1	5	11	10-16	26	802	25	11	7	0	31	222	417	0	4	1	17-23	35	731	23	9	36	9	42	277	731	0	2	2	24-30	29	699	20	8	92	9	22	349	618	0	0	2	August													31-6	23	396	7	13	78	14	37	216	408	0	0	0	7-13	46	303	60	1	30	5	41	202	740	0	0	0	14-20	55	576	209	4	13	2	114	191	4331	0	0	0	21-27	44	1292	101	14	21	7	137	649	7224	0	0	0	September													28-3	81	1285	42	40	22	17	256	150	1148	0	0	0	4-10	142	2076	69	61	76	70	168	561	1284	0	0	0	11-17	189	3452	42	69	99	5	124	435	414	0	0	0	18-24	217	5488	39	40	152	13	138	538	707	0	0	0	October													25-1	343	4983	31	21	69	1	104	247	384	0	0	0	2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																				
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12-18	2	46	1	1	0	0	6	29	0	0	0	0	19-25	8	6	1	0	0	0	3	5	7	0	0	0	July													26-2	4	-	5	1	-	0	14	-	42	0	0	0	3-9	34	218	28	6	1	2	31	91	412	1	5	11	10-16	26	802	25	11	7	0	31	222	417	0	4	1	17-23	35	731	23	9	36	9	42	277	731	0	2	2	24-30	29	699	20	8	92	9	22	349	618	0	0	2	August													31-6	23	396	7	13	78	14	37	216	408	0	0	0	7-13	46	303	60	1	30	5	41	202	740	0	0	0	14-20	55	576	209	4	13	2	114	191	4331	0	0	0	21-27	44	1292	101	14	21	7	137	649	7224	0	0	0	September													28-3	81	1285	42	40	22	17	256	150	1148	0	0	0	4-10	142	2076	69	61	76	70	168	561	1284	0	0	0	11-17	189	3452	42	69	99	5	124	435	414	0	0	0	18-24	217	5488	39	40	152	13	138	538	707	0	0	0	October													25-1	343	4983	31	21	69	1	104	247	384	0	0	0	2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																								
19-25	8	6	1	0	0	0	3	5	7	0	0	0	July													26-2	4	-	5	1	-	0	14	-	42	0	0	0	3-9	34	218	28	6	1	2	31	91	412	1	5	11	10-16	26	802	25	11	7	0	31	222	417	0	4	1	17-23	35	731	23	9	36	9	42	277	731	0	2	2	24-30	29	699	20	8	92	9	22	349	618	0	0	2	August													31-6	23	396	7	13	78	14	37	216	408	0	0	0	7-13	46	303	60	1	30	5	41	202	740	0	0	0	14-20	55	576	209	4	13	2	114	191	4331	0	0	0	21-27	44	1292	101	14	21	7	137	649	7224	0	0	0	September													28-3	81	1285	42	40	22	17	256	150	1148	0	0	0	4-10	142	2076	69	61	76	70	168	561	1284	0	0	0	11-17	189	3452	42	69	99	5	124	435	414	0	0	0	18-24	217	5488	39	40	152	13	138	538	707	0	0	0	October													25-1	343	4983	31	21	69	1	104	247	384	0	0	0	2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																					
July													26-2	4	-	5	1	-	0	14	-	42	0	0	0	3-9	34	218	28	6	1	2	31	91	412	1	5	11	10-16	26	802	25	11	7	0	31	222	417	0	4	1	17-23	35	731	23	9	36	9	42	277	731	0	2	2	24-30	29	699	20	8	92	9	22	349	618	0	0	2	August													31-6	23	396	7	13	78	14	37	216	408	0	0	0	7-13	46	303	60	1	30	5	41	202	740	0	0	0	14-20	55	576	209	4	13	2	114	191	4331	0	0	0	21-27	44	1292	101	14	21	7	137	649	7224	0	0	0	September													28-3	81	1285	42	40	22	17	256	150	1148	0	0	0	4-10	142	2076	69	61	76	70	168	561	1284	0	0	0	11-17	189	3452	42	69	99	5	124	435	414	0	0	0	18-24	217	5488	39	40	152	13	138	538	707	0	0	0	October													25-1	343	4983	31	21	69	1	104	247	384	0	0	0	2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																		
26-2	4	-	5	1	-	0	14	-	42	0	0	0	3-9	34	218	28	6	1	2	31	91	412	1	5	11	10-16	26	802	25	11	7	0	31	222	417	0	4	1	17-23	35	731	23	9	36	9	42	277	731	0	2	2	24-30	29	699	20	8	92	9	22	349	618	0	0	2	August													31-6	23	396	7	13	78	14	37	216	408	0	0	0	7-13	46	303	60	1	30	5	41	202	740	0	0	0	14-20	55	576	209	4	13	2	114	191	4331	0	0	0	21-27	44	1292	101	14	21	7	137	649	7224	0	0	0	September													28-3	81	1285	42	40	22	17	256	150	1148	0	0	0	4-10	142	2076	69	61	76	70	168	561	1284	0	0	0	11-17	189	3452	42	69	99	5	124	435	414	0	0	0	18-24	217	5488	39	40	152	13	138	538	707	0	0	0	October													25-1	343	4983	31	21	69	1	104	247	384	0	0	0	2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																															
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17-23	35	731	23	9	36	9	42	277	731	0	2	2	24-30	29	699	20	8	92	9	22	349	618	0	0	2	August													31-6	23	396	7	13	78	14	37	216	408	0	0	0	7-13	46	303	60	1	30	5	41	202	740	0	0	0	14-20	55	576	209	4	13	2	114	191	4331	0	0	0	21-27	44	1292	101	14	21	7	137	649	7224	0	0	0	September													28-3	81	1285	42	40	22	17	256	150	1148	0	0	0	4-10	142	2076	69	61	76	70	168	561	1284	0	0	0	11-17	189	3452	42	69	99	5	124	435	414	0	0	0	18-24	217	5488	39	40	152	13	138	538	707	0	0	0	October													25-1	343	4983	31	21	69	1	104	247	384	0	0	0	2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																																																																						
24-30	29	699	20	8	92	9	22	349	618	0	0	2	August													31-6	23	396	7	13	78	14	37	216	408	0	0	0	7-13	46	303	60	1	30	5	41	202	740	0	0	0	14-20	55	576	209	4	13	2	114	191	4331	0	0	0	21-27	44	1292	101	14	21	7	137	649	7224	0	0	0	September													28-3	81	1285	42	40	22	17	256	150	1148	0	0	0	4-10	142	2076	69	61	76	70	168	561	1284	0	0	0	11-17	189	3452	42	69	99	5	124	435	414	0	0	0	18-24	217	5488	39	40	152	13	138	538	707	0	0	0	October													25-1	343	4983	31	21	69	1	104	247	384	0	0	0	2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																																																																																			
August													31-6	23	396	7	13	78	14	37	216	408	0	0	0	7-13	46	303	60	1	30	5	41	202	740	0	0	0	14-20	55	576	209	4	13	2	114	191	4331	0	0	0	21-27	44	1292	101	14	21	7	137	649	7224	0	0	0	September													28-3	81	1285	42	40	22	17	256	150	1148	0	0	0	4-10	142	2076	69	61	76	70	168	561	1284	0	0	0	11-17	189	3452	42	69	99	5	124	435	414	0	0	0	18-24	217	5488	39	40	152	13	138	538	707	0	0	0	October													25-1	343	4983	31	21	69	1	104	247	384	0	0	0	2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																																																																																																
31-6	23	396	7	13	78	14	37	216	408	0	0	0	7-13	46	303	60	1	30	5	41	202	740	0	0	0	14-20	55	576	209	4	13	2	114	191	4331	0	0	0	21-27	44	1292	101	14	21	7	137	649	7224	0	0	0	September													28-3	81	1285	42	40	22	17	256	150	1148	0	0	0	4-10	142	2076	69	61	76	70	168	561	1284	0	0	0	11-17	189	3452	42	69	99	5	124	435	414	0	0	0	18-24	217	5488	39	40	152	13	138	538	707	0	0	0	October													25-1	343	4983	31	21	69	1	104	247	384	0	0	0	2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																																																																																																													
7-13	46	303	60	1	30	5	41	202	740	0	0	0	14-20	55	576	209	4	13	2	114	191	4331	0	0	0	21-27	44	1292	101	14	21	7	137	649	7224	0	0	0	September													28-3	81	1285	42	40	22	17	256	150	1148	0	0	0	4-10	142	2076	69	61	76	70	168	561	1284	0	0	0	11-17	189	3452	42	69	99	5	124	435	414	0	0	0	18-24	217	5488	39	40	152	13	138	538	707	0	0	0	October													25-1	343	4983	31	21	69	1	104	247	384	0	0	0	2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																																																																																																																										
14-20	55	576	209	4	13	2	114	191	4331	0	0	0	21-27	44	1292	101	14	21	7	137	649	7224	0	0	0	September													28-3	81	1285	42	40	22	17	256	150	1148	0	0	0	4-10	142	2076	69	61	76	70	168	561	1284	0	0	0	11-17	189	3452	42	69	99	5	124	435	414	0	0	0	18-24	217	5488	39	40	152	13	138	538	707	0	0	0	October													25-1	343	4983	31	21	69	1	104	247	384	0	0	0	2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																																																																																																																																							
21-27	44	1292	101	14	21	7	137	649	7224	0	0	0	September													28-3	81	1285	42	40	22	17	256	150	1148	0	0	0	4-10	142	2076	69	61	76	70	168	561	1284	0	0	0	11-17	189	3452	42	69	99	5	124	435	414	0	0	0	18-24	217	5488	39	40	152	13	138	538	707	0	0	0	October													25-1	343	4983	31	21	69	1	104	247	384	0	0	0	2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																																																																																																																																																				
September													28-3	81	1285	42	40	22	17	256	150	1148	0	0	0	4-10	142	2076	69	61	76	70	168	561	1284	0	0	0	11-17	189	3452	42	69	99	5	124	435	414	0	0	0	18-24	217	5488	39	40	152	13	138	538	707	0	0	0	October													25-1	343	4983	31	21	69	1	104	247	384	0	0	0	2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																																																																																																																																																																	
28-3	81	1285	42	40	22	17	256	150	1148	0	0	0	4-10	142	2076	69	61	76	70	168	561	1284	0	0	0	11-17	189	3452	42	69	99	5	124	435	414	0	0	0	18-24	217	5488	39	40	152	13	138	538	707	0	0	0	October													25-1	343	4983	31	21	69	1	104	247	384	0	0	0	2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																																																																																																																																																																														
4-10	142	2076	69	61	76	70	168	561	1284	0	0	0	11-17	189	3452	42	69	99	5	124	435	414	0	0	0	18-24	217	5488	39	40	152	13	138	538	707	0	0	0	October													25-1	343	4983	31	21	69	1	104	247	384	0	0	0	2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																																																																																																																																																																																											
11-17	189	3452	42	69	99	5	124	435	414	0	0	0	18-24	217	5488	39	40	152	13	138	538	707	0	0	0	October													25-1	343	4983	31	21	69	1	104	247	384	0	0	0	2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																																																																																																																																																																																																								
18-24	217	5488	39	40	152	13	138	538	707	0	0	0	October													25-1	343	4983	31	21	69	1	104	247	384	0	0	0	2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																																																																																																																																																																																																																					
October													25-1	343	4983	31	21	69	1	104	247	384	0	0	0	2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																																																																																																																																																																																																																																		
25-1	343	4983	31	21	69	1	104	247	384	0	0	0	2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																																																																																																																																																																																																																																															
2-8	152	1406	25	4	8	35	6	17	193	0	0	0	9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																																																																																																																																																																																																																																																												
9-15	33	676	11	1	4	1	2	8	23	0	0	0	16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																																																																																																																																																																																																																																																																									
16-22	35	277	3	0	3	0	0	2	1	0	0	0	23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																																																																																																																																																																																																																																																																																						
23-29	10	12	0	0	0	0	1	0	1	0	0	0	Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																																																																																																																																																																																																																																																																																																			
Total	1569	25,159	763	322	744	192	1342	4407	19,802	1	11	16	Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																																																																																																																																																																																																																																																																																																																
Weekly mean	6.04	1,006.36	3.18	1.24	2.98	2.74	5.16	176.28	825.08	.14	1.57	2.29																																																																																																																																																																																																																																																																																																																																																																																																																																													

^aNumbers 1-3 refer to trap locations; 1 = Agriculture Campus, 2 = Plant Science Farm, and 3 = Green Meadow Country Club.

Table 3.-Number of moths collected at each location for the weekly periods indicated.

Period	Species																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	<i>A. vulgivagella</i>			<i>A. ruricolella</i>			<i>M. elegans</i>			<i>A. nivalis</i>																																																																																																																																																																																																																																																																																																																																																																																																																																															
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May													1-7	0	0	-	0	0	-	0	0	-	0	0	-	8-14	0	0	-	0	0	-	0	0	-	0	0	-	15-21	0	0	0	0	0	0	0	0	0	0	0	0	22-28	0	0	0	0	0	0	0	0	0	0	0	0	June													29-4	0	0	0	0	0	0	0	3	0	0	17	0	5-11	0	0	0	0	0	0	3	7	0	1	13	11	12-18	0	0	0	0	0	0	22	19	11	1	16	13	19-25	0	0	0	0	0	0	16	7	7	0	7	6	July													26-2	0	-	0	0	-	0	6	-	5	0	-	0	3-9	0	0	0	0	0	0	3	7	5	0	0	0	10-16	0	0	0	0	0	0	2	1	3	0	1	0	17-23	0	0	0	0	0	0	4	5	0	0	2	0	24-30	0	0	0	0	0	0	0	8	2	0	30	11	August													31-6	0	0	0	0	0	0	15	16	6	4	22	27	7-13	0	0	0	0	0	0	88	83	27	2	15	24	14-20	0	0	0	0	0	0	49	23	36	1	12	11	21-27	0	0	0	0	0	0	14	112	51	0	7	4	September													28-3	0	0	0	0	0	0	14	24	11	0	1	1	4-10	0	0	0	0	0	0	6	24	12	0	4	0	11-17	0	0	0	0	0	0	10	5	1	3	10	0	18-24	2	1	0	3	0	0	9	9	4	2	14	2	October													25-1	15	34	24	4	16	2	5	4	5	6	9	0	2-8	59	35	95	1	0	2	2	1	2	1	1	4	9-15	24	79	58	0	1	0	2	0	1	0	0	1	16-22	5	18	16	0	0	0	0	1	1	0	0	1	23-29	0	1	0	0	0	0	0	0	0	0	0	0	Total	103	168	193	8	17	4	275	385	208	21	187	125	Weekly mean	3.96	6.72	8.04	.31	.68	.17	10.58	15.40	8.67	.81	7.48	5.21
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22-28	0	0	0	0	0	0	0	0	0	0	0	0	June													29-4	0	0	0	0	0	0	0	3	0	0	17	0	5-11	0	0	0	0	0	0	3	7	0	1	13	11	12-18	0	0	0	0	0	0	22	19	11	1	16	13	19-25	0	0	0	0	0	0	16	7	7	0	7	6	July													26-2	0	-	0	0	-	0	6	-	5	0	-	0	3-9	0	0	0	0	0	0	3	7	5	0	0	0	10-16	0	0	0	0	0	0	2	1	3	0	1	0	17-23	0	0	0	0	0	0	4	5	0	0	2	0	24-30	0	0	0	0	0	0	0	8	2	0	30	11	August													31-6	0	0	0	0	0	0	15	16	6	4	22	27	7-13	0	0	0	0	0	0	88	83	27	2	15	24	14-20	0	0	0	0	0	0	49	23	36	1	12	11	21-27	0	0	0	0	0	0	14	112	51	0	7	4	September													28-3	0	0	0	0	0	0	14	24	11	0	1	1	4-10	0	0	0	0	0	0	6	24	12	0	4	0	11-17	0	0	0	0	0	0	10	5	1	3	10	0	18-24	2	1	0	3	0	0	9	9	4	2	14	2	October													25-1	15	34	24	4	16	2	5	4	5	6	9	0	2-8	59	35	95	1	0	2	2	1	2	1	1	4	9-15	24	79	58	0	1	0	2	0	1	0	0	1	16-22	5	18	16	0	0	0	0	1	1	0	0	1	23-29	0	1	0	0	0	0	0	0	0	0	0	0	Total	103	168	193	8	17	4	275	385	208	21	187	125	Weekly mean	3.96	6.72	8.04	.31	.68	.17	10.58	15.40	8.67	.81	7.48	5.21																																																				
June													29-4	0	0	0	0	0	0	0	3	0	0	17	0	5-11	0	0	0	0	0	0	3	7	0	1	13	11	12-18	0	0	0	0	0	0	22	19	11	1	16	13	19-25	0	0	0	0	0	0	16	7	7	0	7	6	July													26-2	0	-	0	0	-	0	6	-	5	0	-	0	3-9	0	0	0	0	0	0	3	7	5	0	0	0	10-16	0	0	0	0	0	0	2	1	3	0	1	0	17-23	0	0	0	0	0	0	4	5	0	0	2	0	24-30	0	0	0	0	0	0	0	8	2	0	30	11	August													31-6	0	0	0	0	0	0	15	16	6	4	22	27	7-13	0	0	0	0	0	0	88	83	27	2	15	24	14-20	0	0	0	0	0	0	49	23	36	1	12	11	21-27	0	0	0	0	0	0	14	112	51	0	7	4	September													28-3	0	0	0	0	0	0	14	24	11	0	1	1	4-10	0	0	0	0	0	0	6	24	12	0	4	0	11-17	0	0	0	0	0	0	10	5	1	3	10	0	18-24	2	1	0	3	0	0	9	9	4	2	14	2	October													25-1	15	34	24	4	16	2	5	4	5	6	9	0	2-8	59	35	95	1	0	2	2	1	2	1	1	4	9-15	24	79	58	0	1	0	2	0	1	0	0	1	16-22	5	18	16	0	0	0	0	1	1	0	0	1	23-29	0	1	0	0	0	0	0	0	0	0	0	0	Total	103	168	193	8	17	4	275	385	208	21	187	125	Weekly mean	3.96	6.72	8.04	.31	.68	.17	10.58	15.40	8.67	.81	7.48	5.21																																																																	
29-4	0	0	0	0	0	0	0	3	0	0	17	0	5-11	0	0	0	0	0	0	3	7	0	1	13	11	12-18	0	0	0	0	0	0	22	19	11	1	16	13	19-25	0	0	0	0	0	0	16	7	7	0	7	6	July													26-2	0	-	0	0	-	0	6	-	5	0	-	0	3-9	0	0	0	0	0	0	3	7	5	0	0	0	10-16	0	0	0	0	0	0	2	1	3	0	1	0	17-23	0	0	0	0	0	0	4	5	0	0	2	0	24-30	0	0	0	0	0	0	0	8	2	0	30	11	August													31-6	0	0	0	0	0	0	15	16	6	4	22	27	7-13	0	0	0	0	0	0	88	83	27	2	15	24	14-20	0	0	0	0	0	0	49	23	36	1	12	11	21-27	0	0	0	0	0	0	14	112	51	0	7	4	September													28-3	0	0	0	0	0	0	14	24	11	0	1	1	4-10	0	0	0	0	0	0	6	24	12	0	4	0	11-17	0	0	0	0	0	0	10	5	1	3	10	0	18-24	2	1	0	3	0	0	9	9	4	2	14	2	October													25-1	15	34	24	4	16	2	5	4	5	6	9	0	2-8	59	35	95	1	0	2	2	1	2	1	1	4	9-15	24	79	58	0	1	0	2	0	1	0	0	1	16-22	5	18	16	0	0	0	0	1	1	0	0	1	23-29	0	1	0	0	0	0	0	0	0	0	0	0	Total	103	168	193	8	17	4	275	385	208	21	187	125	Weekly mean	3.96	6.72	8.04	.31	.68	.17	10.58	15.40	8.67	.81	7.48	5.21																																																																														
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July													26-2	0	-	0	0	-	0	6	-	5	0	-	0	3-9	0	0	0	0	0	0	3	7	5	0	0	0	10-16	0	0	0	0	0	0	2	1	3	0	1	0	17-23	0	0	0	0	0	0	4	5	0	0	2	0	24-30	0	0	0	0	0	0	0	8	2	0	30	11	August													31-6	0	0	0	0	0	0	15	16	6	4	22	27	7-13	0	0	0	0	0	0	88	83	27	2	15	24	14-20	0	0	0	0	0	0	49	23	36	1	12	11	21-27	0	0	0	0	0	0	14	112	51	0	7	4	September													28-3	0	0	0	0	0	0	14	24	11	0	1	1	4-10	0	0	0	0	0	0	6	24	12	0	4	0	11-17	0	0	0	0	0	0	10	5	1	3	10	0	18-24	2	1	0	3	0	0	9	9	4	2	14	2	October													25-1	15	34	24	4	16	2	5	4	5	6	9	0	2-8	59	35	95	1	0	2	2	1	2	1	1	4	9-15	24	79	58	0	1	0	2	0	1	0	0	1	16-22	5	18	16	0	0	0	0	1	1	0	0	1	23-29	0	1	0	0	0	0	0	0	0	0	0	0	Total	103	168	193	8	17	4	275	385	208	21	187	125	Weekly mean	3.96	6.72	8.04	.31	.68	.17	10.58	15.40	8.67	.81	7.48	5.21																																																																																																																																		
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24-30	0	0	0	0	0	0	0	8	2	0	30	11	August													31-6	0	0	0	0	0	0	15	16	6	4	22	27	7-13	0	0	0	0	0	0	88	83	27	2	15	24	14-20	0	0	0	0	0	0	49	23	36	1	12	11	21-27	0	0	0	0	0	0	14	112	51	0	7	4	September													28-3	0	0	0	0	0	0	14	24	11	0	1	1	4-10	0	0	0	0	0	0	6	24	12	0	4	0	11-17	0	0	0	0	0	0	10	5	1	3	10	0	18-24	2	1	0	3	0	0	9	9	4	2	14	2	October													25-1	15	34	24	4	16	2	5	4	5	6	9	0	2-8	59	35	95	1	0	2	2	1	2	1	1	4	9-15	24	79	58	0	1	0	2	0	1	0	0	1	16-22	5	18	16	0	0	0	0	1	1	0	0	1	23-29	0	1	0	0	0	0	0	0	0	0	0	0	Total	103	168	193	8	17	4	275	385	208	21	187	125	Weekly mean	3.96	6.72	8.04	.31	.68	.17	10.58	15.40	8.67	.81	7.48	5.21																																																																																																																																																																																																			
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31-6	0	0	0	0	0	0	15	16	6	4	22	27	7-13	0	0	0	0	0	0	88	83	27	2	15	24	14-20	0	0	0	0	0	0	49	23	36	1	12	11	21-27	0	0	0	0	0	0	14	112	51	0	7	4	September													28-3	0	0	0	0	0	0	14	24	11	0	1	1	4-10	0	0	0	0	0	0	6	24	12	0	4	0	11-17	0	0	0	0	0	0	10	5	1	3	10	0	18-24	2	1	0	3	0	0	9	9	4	2	14	2	October													25-1	15	34	24	4	16	2	5	4	5	6	9	0	2-8	59	35	95	1	0	2	2	1	2	1	1	4	9-15	24	79	58	0	1	0	2	0	1	0	0	1	16-22	5	18	16	0	0	0	0	1	1	0	0	1	23-29	0	1	0	0	0	0	0	0	0	0	0	0	Total	103	168	193	8	17	4	275	385	208	21	187	125	Weekly mean	3.96	6.72	8.04	.31	.68	.17	10.58	15.40	8.67	.81	7.48	5.21																																																																																																																																																																																																																													
7-13	0	0	0	0	0	0	88	83	27	2	15	24	14-20	0	0	0	0	0	0	49	23	36	1	12	11	21-27	0	0	0	0	0	0	14	112	51	0	7	4	September													28-3	0	0	0	0	0	0	14	24	11	0	1	1	4-10	0	0	0	0	0	0	6	24	12	0	4	0	11-17	0	0	0	0	0	0	10	5	1	3	10	0	18-24	2	1	0	3	0	0	9	9	4	2	14	2	October													25-1	15	34	24	4	16	2	5	4	5	6	9	0	2-8	59	35	95	1	0	2	2	1	2	1	1	4	9-15	24	79	58	0	1	0	2	0	1	0	0	1	16-22	5	18	16	0	0	0	0	1	1	0	0	1	23-29	0	1	0	0	0	0	0	0	0	0	0	0	Total	103	168	193	8	17	4	275	385	208	21	187	125	Weekly mean	3.96	6.72	8.04	.31	.68	.17	10.58	15.40	8.67	.81	7.48	5.21																																																																																																																																																																																																																																										
14-20	0	0	0	0	0	0	49	23	36	1	12	11	21-27	0	0	0	0	0	0	14	112	51	0	7	4	September													28-3	0	0	0	0	0	0	14	24	11	0	1	1	4-10	0	0	0	0	0	0	6	24	12	0	4	0	11-17	0	0	0	0	0	0	10	5	1	3	10	0	18-24	2	1	0	3	0	0	9	9	4	2	14	2	October													25-1	15	34	24	4	16	2	5	4	5	6	9	0	2-8	59	35	95	1	0	2	2	1	2	1	1	4	9-15	24	79	58	0	1	0	2	0	1	0	0	1	16-22	5	18	16	0	0	0	0	1	1	0	0	1	23-29	0	1	0	0	0	0	0	0	0	0	0	0	Total	103	168	193	8	17	4	275	385	208	21	187	125	Weekly mean	3.96	6.72	8.04	.31	.68	.17	10.58	15.40	8.67	.81	7.48	5.21																																																																																																																																																																																																																																																							
21-27	0	0	0	0	0	0	14	112	51	0	7	4	September													28-3	0	0	0	0	0	0	14	24	11	0	1	1	4-10	0	0	0	0	0	0	6	24	12	0	4	0	11-17	0	0	0	0	0	0	10	5	1	3	10	0	18-24	2	1	0	3	0	0	9	9	4	2	14	2	October													25-1	15	34	24	4	16	2	5	4	5	6	9	0	2-8	59	35	95	1	0	2	2	1	2	1	1	4	9-15	24	79	58	0	1	0	2	0	1	0	0	1	16-22	5	18	16	0	0	0	0	1	1	0	0	1	23-29	0	1	0	0	0	0	0	0	0	0	0	0	Total	103	168	193	8	17	4	275	385	208	21	187	125	Weekly mean	3.96	6.72	8.04	.31	.68	.17	10.58	15.40	8.67	.81	7.48	5.21																																																																																																																																																																																																																																																																				
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28-3	0	0	0	0	0	0	14	24	11	0	1	1	4-10	0	0	0	0	0	0	6	24	12	0	4	0	11-17	0	0	0	0	0	0	10	5	1	3	10	0	18-24	2	1	0	3	0	0	9	9	4	2	14	2	October													25-1	15	34	24	4	16	2	5	4	5	6	9	0	2-8	59	35	95	1	0	2	2	1	2	1	1	4	9-15	24	79	58	0	1	0	2	0	1	0	0	1	16-22	5	18	16	0	0	0	0	1	1	0	0	1	23-29	0	1	0	0	0	0	0	0	0	0	0	0	Total	103	168	193	8	17	4	275	385	208	21	187	125	Weekly mean	3.96	6.72	8.04	.31	.68	.17	10.58	15.40	8.67	.81	7.48	5.21																																																																																																																																																																																																																																																																																														
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11-17	0	0	0	0	0	0	10	5	1	3	10	0	18-24	2	1	0	3	0	0	9	9	4	2	14	2	October													25-1	15	34	24	4	16	2	5	4	5	6	9	0	2-8	59	35	95	1	0	2	2	1	2	1	1	4	9-15	24	79	58	0	1	0	2	0	1	0	0	1	16-22	5	18	16	0	0	0	0	1	1	0	0	1	23-29	0	1	0	0	0	0	0	0	0	0	0	0	Total	103	168	193	8	17	4	275	385	208	21	187	125	Weekly mean	3.96	6.72	8.04	.31	.68	.17	10.58	15.40	8.67	.81	7.48	5.21																																																																																																																																																																																																																																																																																																																								
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^aNumbers 1-3 refer to trap locations; 1 = Agriculture Campus, 2 = Plant Science Farm, and 3 = Green Meadow Country Club.

of various species. *P. trisecta*, *P. mutabilis*, *C. teterrellus*, and *C. laqueatellus* were flying the first week in May (Table 1). *Crambus praefectellus* and *C. satrapellus* began flight the second week in May followed by *M. elegans* and *A. nivalis* during the last week of May. *Crambus alboclavellus* appeared in early June followed by *C. topiaria* in July. Three species, *C. leachellus*, *A. vulgivagella*, and *A. ruricolella*, did not appear until the latter part of September.

Six of the thirteen species, *P. trisecta*, *P. mutabilis*, *C. teterrellus*, *C. praefectellus*, *M. elegans*, and *A. nivalis*, were present throughout most of the trapping season (Table 1). These species appear to be multivoltine according to the peak numbers indicated (Tables 2-4). The rest appear to have only one generation per season.

Pediasia trisecta and *C. teterrellus* were the most abundant webworm moths collected. It is interesting to note that in six years collecting in Knoxville, Ainslie (1927) never collected *P. trisecta*. Now, as evidenced

by the trap collections, hand collections, and observations around lights, this species seems to be one of the most abundant sod webworms occurring here.

There was considerable variation in number of *P. trisecta* and *C. teterrellus* collected at the various locations. At the Plant Science Farm where Kentucky-31 fescue was the dominant grass near the trap, *P. trisecta* was much more abundant than *C. teterrellus* (Table 2) while at the Green Meadow Country Club where bluegrass was most abundant, *C. teterrellus* was most abundant. Ainslie (1930) states that Kentucky bluegrass is one of the most common grasses fed upon by *C. teterrellus*; it is, therefore, commonly called the bluegrass webworm.

CONCLUSION

Black light traps provide a satisfactory means for surveying sod webworm species. They also provide a means of determining the period that the moths are

Table 4.-Number of moths collected at each location for the weekly periods indicated.

Period	Species															
	<i>C. alboclavellus</i>			<i>C. praefectellus</i>			<i>C. laqueatellus</i>			<i>C. leachellus</i>			<i>C. satrapellus</i>			
	1 ^a	2 ^a	3 ^a	1	2	3	1	2	3	1	2	3	1	2	3	
May	1-7	0	0	-	0	0	-	0	5	-	0	0	-	0	0	0
	8-14	0	0	-	1	1	-	2	6	-	0	0	-	0	1	0
	15-21	0	0	0	2	1	0	2	7	2	0	0	0	0	0	0
	22-28	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
June	29-4	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0
	5-11	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0
	12-18	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0
	19-25	5	62	8	0	0	2	0	0	0	0	0	0	0	0	0
July	26-2	0	-	0	0	-	1	0	-	0	0	-	0	0	-	0
	3-9	2	10	4	2	2	9	0	0	0	0	0	0	0	0	0
	10-16	3	12	3	0	5	3	0	0	0	0	0	0	0	0	0
	17-23	0	16	3	2	3	6	0	0	0	0	0	0	0	0	0
	24-30	1	15	6	0	1	3	0	0	0	0	0	0	0	0	0
August	31-6	0	2	5	0	0	1	0	0	0	0	0	0	0	0	0
	7-13	0	2	0	1	1	2	0	0	0	0	0	0	0	0	0
	14-20	0	0	0	2	0	6	0	0	0	0	0	0	0	0	0
	21-27	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0
September	28-3	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0
	4-10	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0
	11-17	0	0	0	0	2	4	0	0	0	0	0	0	0	0	0
	18-24	0	0	0	0	2	1	0	0	0	0	7	0	0	0	0
October	25-1	0	0	0	12	0	2	0	0	0	0	3	2	0	0	0
	2-8	0	0	0	0	0	0	0	0	0	2	4	0	0	0	0
	9-15	0	0	0	1	0	1	0	0	0	0	1	1	0	0	0
	16-22	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
	23-29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	11	132	30	27	21	46	4	21	5	2	16	4	0	1	0	
Weekly mean	.42	5.28	1.25	1.04	.84	1.92	.15	.84	.21	.77	.64	.17	0	.04	0	

^aNumbers 1-3 refer to trap locations; 1 = Agriculture Campus, 2 = Plant Science Farm, and 3 = Green Meadow Country Club.

in flight. The traps are not quantitative as some species may not be attracted as much as others and weather affects the catch (Banerjee, 1967). However, they provide some indication as to relative abundance of various species; hand collecting yielded similar information.

This was a preliminary study of the distribution of sod webworms in Tennessee. A study with traps located at various points across Tennessee is planned.

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