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WISCONSIN PEST BULLETIN

Timely crop pest news, forecasts, and growing season conditions for Wisconsin

Wisconsin Department of Agriculture, Trade and Consumer Protection
Division of Agricultural Resource Management | Bureau of Plant Industry
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WEATHER & PESTS

Record-breaking cold weather with multiple widespread freezes threatened Wisconsin crops during the week. Below-normal temperatures prevailed and a hard freeze extended across the entire state May 8-11 as overnight lows plummeted to the 20s from Kenosha to Superior. The subzero temperatures damaged some seedling corn, fruit trees, garden plants and cold-sensitive ornamentals, although the slow rate of plant development and emergence this spring helped mitigate the potentially disastrous impact of the cold snap. Brisk conditions persisted through mid-week before milder weather returned, allowing fieldwork to resume at the fastest pace in over five years. After a period of rapid planting in late April and earlier this month, more than 59% of this year's intended corn acres have been sown, 47 percentage points or 24 days ahead of last year and 20 points or one week ahead of the long-term average. However, consistent warmth will be needed this month to promote germination of newly planted crops.

LOOKING AHEAD

BLACK CUTWORM: Development of black cutworm larvae has been slowed by abnormally low May temperatures. Very few growing degree days (modified base 50°F) have accumulated in the five weeks since the earliest moths were captured, and the peak corn-cutting window is unlikely to open until June 3 for south-central and southwestern Wisconsin. An early start to the corn planting season and the relatively small moth migration documented since mid-April indicate a low threat of damage to vegetative corn this spring.

ALFALFA WEEVIL: Larvae should begin emerging in advanced alfalfa fields in the week ahead. Regular scouting is advised starting at 300 degree days (sine base 48°F), or by May 21 in the southern counties. Scouting can begin around May 27 in the central counties.

CODLING MOTH: Apple growers in the DATCP trapping network are reminded to begin daily pheromone trap checks to determine the date of the first sustained capture of moths on consecutive nights, referred to as the biofix. This event could occur during the week of May 17-23 in southern Wisconsin.

VIBURNUM LEAF BEETLE: Gardeners, landscapers, nursery stock growers and retailers in southeastern Wisconsin should be on alert for the distinctive skeletonization of viburnum leaves caused by this insect. Newly-hatched larvae usually appear at this time of year, particularly on arrowwood viburnum, American cranberrybush viburnum, and European cranberrybush viburnum. Viburnum leaf beetle was first detected in the state in 2009 and populations have been confirmed in Dane, Iron, Kenosha,

Milwaukee, Ozaukee, Racine, Walworth, Washington, Waukesha and Winnebago counties.

Viburnum leaf beetle defoliation *Marcia Wensing DATCP*

PLUM CURCULIO: Degree day accumulations in the warmest southern areas of the state will soon be favorable for weevil activity. A mean daily temperature of 60°F or more for 3-4 days prompts the spring emergence and migration of overwintered weevils into apple orchard perimeter trees.

GYPSY MOTH: The first aerial treatments of the season are tentatively planned for May 20 in southwestern Wisconsin. Approximately 14,657 acres are scheduled to receive applications of *Bacillus thuringiensis* var. *kurstaki,* or Btk. Aerial spraying is weather-dependent. Conditions such as high winds, rain predicted within four hours, fog, or high humidity can delay or cause cancellation of spray plans.

FORAGES & GRAINS

TARNISHED PLANT BUG: Alfalfa sampled in Colum-- bia, Dodge, Jefferson, Racine, Richland, Sauk, Vernon, Walworth, and Waukesha counties had low counts of 1-18 per 100 sweeps. Plant bug abundance in first-crop alfalfa is an indicator of potential high populations in apples, strawberries and other fruits and vegetables.

PEA APHID: Surveys this week found very low counts of 1-22 aphids per 100 sweeps. The average was six per 100 sweeps. Pea aphid development is favored by moderate, dry weather, with populations increasing most rapidly at temperatures around 65°F. Heavy early-season aphid pressure is rare but can occasionally cause stunting of the first crop. Spring populations usually peak by the first week of June.

DEGREE DAYS JANUARY 1 - MAY 13

LOCATION	50°F	2019	NORM	40°F
Dubuque, IA	244	236	340	600
Lone Rock	212	237	—	535
Beloit	216	222	351	555
Sullivan	172	201	303	474
Madison	199	212	326	518
Juneau	146	173	—	414
Racine	129	150	—	408
Waukesha	151	185	—	438
Milwaukee	133	159	255	415
Hartford	133	175	—	395
Appleton	123	135	—	371
Green Bay	106	121	247	334
Big Flats	159	174	—	427
Hancock	133	156	314	379
Port Edwards	146	159	306	391
La Crosse	198	196	361	504
Eau Claire	189	171	309	473
Cumberland	110	120	260	313
Bayfield	55	74	—	223
Wausau	93	114	258	295
Medford	90	109	226	292
Crivitz	106	116	—	315
Crandon	74	104	208	252

Method: Modified B50; Modified B40 as of January 1, 2020. NORMALS based on 30-year average daily temps, 1981-2010.

ALFALFA WEEVIL: Adults continue to appear in very low numbers in alfalfa, and spring egg deposition is expected to intensify with the warmer weather ahead. The first small larvae should be detectable in advanced fields by May 21.

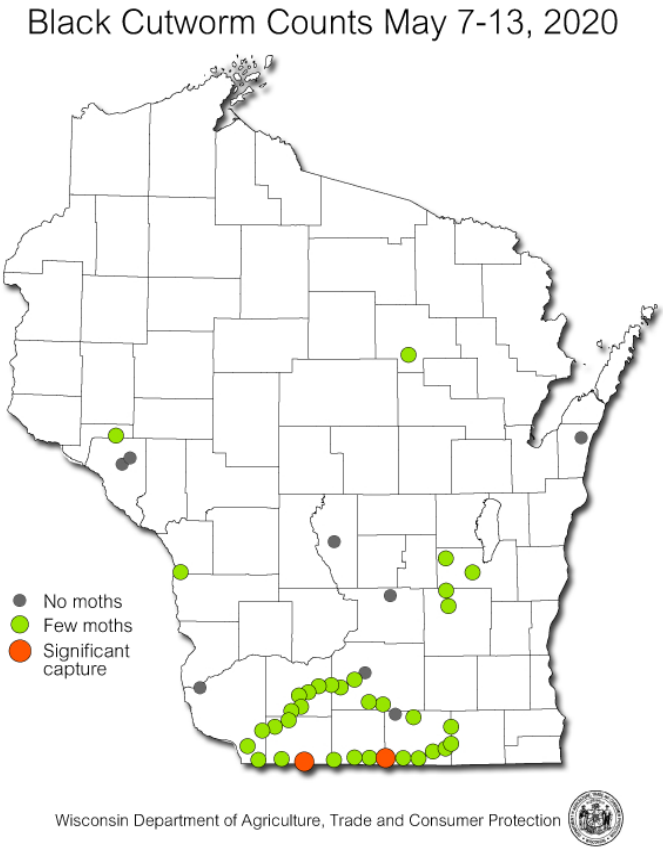
INDUSTRIAL HEMP

EURASIAN HEMP BORER: A report from the UW Lafayette County Agriculture Educator confirms the winter survival of a late-stage larva in an Iowa County hemp field. The photo below, taken on April 25 by an agronomist, shows a full-grown caterpillar that passed the winter in a residual stalk in the field. Pupation of overwintered EHB larvae is beginning and the first emergence of spring EHB moths is anticipated by the end of the month. Last year, the earliest EHB moths were observed on May 26 in Walworth County.

Overwintered Eurasian hemp borer larva UWEX Lafayette County

CORN

BLACK CUTWORM: A moderate weekly capture of 170 moths in 44 survey traps was documented during the May 7-13 reporting period, signaling that egg laying on winter annual weeds such as common chickweed, peppergrass and yellow rocket should increase as temperatures warm next week.



The spring trapping survey, which started with the first moth capture on April 8, has to date yielded a cumulative total of 477 moths. Approximately 867 moths had been collected by this time last year. Based on the substantial amount of early corn planting this season and the comparatively small April-May moth migration, most of the state's corn acreage is considered to be at low risk of black cutworm infestation this spring.

EUROPEAN CORN BORER: Pupation of second-generation carryover larvae from last season is beginning in south-central and southwestern Wisconsin. According to the results of 2019 ECB abundance survey, the fall larval population was 0.01 borer per plant, the lowest state average recorded in 78 years. A very small spring moth flight is expected next month.

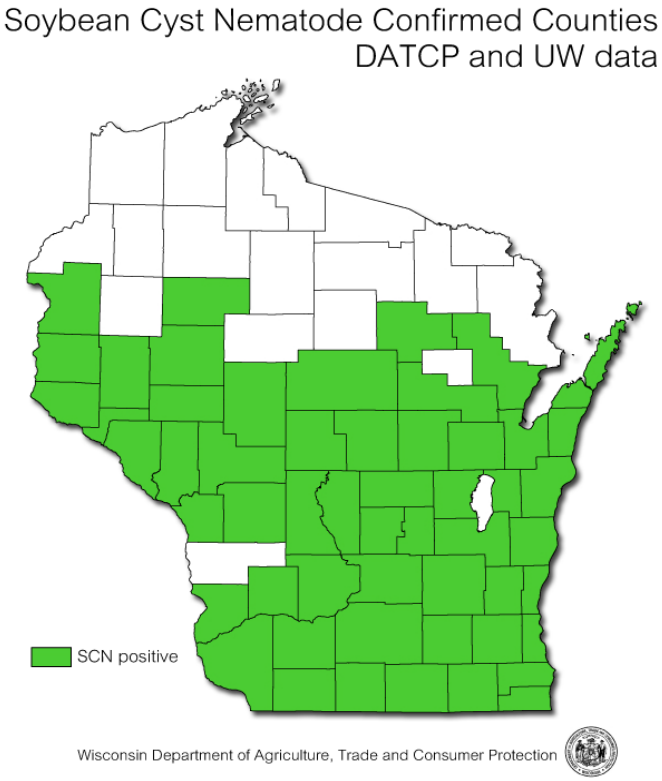
European corn borer pupa Krista Hamilton DATCP

SOYBEANS

BEAN LEAF BEETLE: A single overwintered beetle was collected from Vernon County alfalfa on May 6, but none were found in the 57 fields surveyed in the past week. Emergence of beetles from winter hibernation sites will likely increase with next week's predicted warmer weather. Routine scouting for beetles and for feeding injury to cotyledons, stems, and unifoliate leaves should begin at soybean emergence.

SOYBEAN CYST NEMATODE: The map below shows Wisconsin counties with known infestations of this yield-reducing soybean pest, from the first detection in Racine County in 1981 to the most recent in Kewaunee County in 2019. The total number of counties with at least one SCN-infested field is now 53. DATCP continues to

provide SCN testing for phytosanitary certification but no longer conducts annual surveys. For information on SCN testing and management practices, or to request a free sample test kit, please email freescntest@mailplus.wisc.edu or call 608-262-1390.



FRUITS

SPRING CATERPILLARS: Development of resident orchard caterpillars will accelerate as temperatures improve next week. Species commonly found on growing terminals and in blossoms at this time of year include the green fruitworm, obliquebanded leafroller (OBLR), redbanded leafroller (RBLR), spring cankerworm, and variegated leafroller. Bt products such as Agree, Deliver or Dipel may be applied for control only if the weather is sufficiently warm for caterpillar feeding and blossoms are open. Because Bt must be consumed by the larvae to be effective, warm temperatures are required in the three-day post-spray period to achieve satisfactory mortality. Preferred conditions for Bt applications are when the weather is consistently warm (~60°F) and sunny.

CODLING MOTH: The spring moth flight is likely to begin during the week of May 17-23 in orchards where temperatures at dusk exceed 62°F. Frequent trap monitoring will be required to document the "biofix" or sustained capture of moths. Apple growers in northern Wisconsin may not see their first moths of the season until the final week of May.

Codling moths in pheromone trap *Steve Schoof NCSU*

PLUM CURCULIO: Adult emergence and oviposition are forecast to begin in southern Wisconsin in the week ahead. This weevil usually emerges around 250 degree days (base 50°F), and migrates into the orchard perimeter when temperatures consistently exceed 60°F. Central and northern orchards are still 100-170 degree days or about 11-19 calendar days from first emergence of plum curculio.

Plum curculio *www.extension.umn.edu*

SPOTTED TENTIFORM LEAFMINER: Moth flights have been underway since early April and peak emergence is approaching for southern and central orchards. The recommended scouting window for sapfeeder larvae is two weeks after a peak catch in pheromone traps. Counts during the week ending May 14 ranged from

0-811 moths per trap, with the highest number reported from Marquette County.

Spotted tentiform leafminer mines Tomasz Binkiewicz www.lepidoptera.eu

ROSY APPLE APHID: Early colonies should become apparent next week. Rosy apple aphids are cultivar-specific, therefore scouting efforts should focus on blocks or varieties with a history of aphid damage. Do not treat for aphids if trees are in bloom.

Rosy apple aphids Steve Schoof NCSU

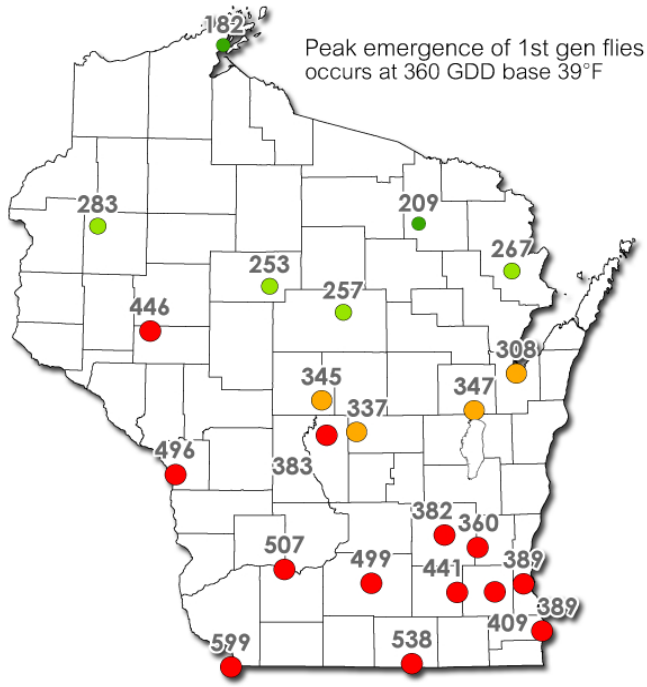
REDBANDED LEAFROLLER: Larvae are appearing in southern and central orchards where 228 degree days (simple base 45°F) have been surpassed. The cooperator at Hill Point in Sauk County confirmed that small larvae were observed feeding on new foliage May 7. The first RBLR caterpillars generally appear around petal fall, which is when scouting is suggested.

EUROPEAN RED MITE: The first hatch of European red mite (ERM) is expected soon. For orchards with past mite problems, scouting previous hotspots for young mites on spur leaves and eggs at the base of fruiting spurs is suggested. Apple trees with early ERM activity should be flagged and resampled in early June to determine if levels are above-threshold and a miticide treatment is warranted.

VEGETABLES

SEEDCORN MAGGOT: First-generation fly emergence has peaked throughout the southern half of the state. Emergence should peak next week in areas north of Hancock in Waushara County, where 360 degree days (sine base 39°F) will be surpassed. Advanced southern locations such as Beloit will reach the “fly-free” pupal stage between generations around 846 degree days, or approximately June 3.

Seedcorn Maggot Degree Days May 13, 2020



LATE BLIGHT: Potato growers are reminded that Wisconsin Administrative Code (ATCP 21.15(2)) requires potato cull piles to be fed, disked in, or otherwise removed by May 20 to prevent late blight from developing on volunteer plants. This disease was significantly more prevalent last season than in 2018. Eighteen counties had confirmed cases in 2019 compared to four counties the year before.

ONION MAGGOT: Flies of the first and most damaging generation will likely begin emerging next week in southern Wisconsin. Preventive measures, including crop rotation and removal of onion cull piles, are particularly important for minimizing risk of infestation. Granular furrow treatments offer good control, provided the rate is correct and the insecticide is properly applied in the furrow at seeding. Chemical control may be appropriate if maggot damage to the last season's crop exceeded 5-10%. For home gardeners, rotating this year's onion plantings as far as possible from last year's location is suggested to reduce the threat of maggot damage.

Onion maggots on leek stalk Rasbak

WIREWORM: The cool, wet soils prevalent in some areas of the state this spring are favorable for wireworms, subterranean pests with a broad host range that includes beans, beets, cabbage, carrots, corn, lettuce, onion, peas, potatoes, radishes, sorghum, soybeans, as well as herbaceous ornamentals.

Wireworms forestryimages.org

Wireworm larvae feed on seeds and on the roots of plants, impairing germination and causing plants to wilt. An indicator of wireworm activity is dead spots scattered throughout a planting. In situations where wireworm feeding is suspected, growers should dig up several ungerminated seeds or wilted plants from affected areas to verify wireworm larvae as the cause.

NURSERY & FOREST

VIBURNUM LEAF BEETLE: Nursery inspectors report that eggs are visible on viburnum twigs in Milwaukee County and hatch is likely to begin over the weekend of May 16-17. This invasive defoliator has been found in 10 counties since 2009, including Dane, Iron, Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington, Waukesha and Winnebago. Viburnum leaf beetle is particularly damaging because successive feeding by larvae and adults prevents shrubs from refoliating and can kill healthy plants after 2-3 years of heavy infestation.

Viburnum leaf beetle damage John Gall Wachtel Tree Science

COLD INJURY: Frost and freeze injury to annual and perennial vegetable and ornamental plants has become apparent at nurseries throughout the state after the recent surge of abnormally cold weather. In some cases, the damage is severe enough to render plants unsaleable. The average last frost date is May 15 for much of southern Wisconsin, and bringing plants outdoors earlier in spring always poses risk. The UW-Extension advises gardeners to wait at least until May 20 to plant cold-sensitive vegetables such as tomatoes and peppers, and until Memorial Day for annual flowers such as geraniums from a greenhouse.

COLUMBINE SAWFLY: Larvae were observed feeding on columbine plants at a nursery in Washington County. This sawfly species is common on ornamental columbine foliage in May and June. Left unchecked, the green caterpillar-like larvae can defoliate entire plants, leaving only the leaf midveins. Columbine sawfly has just one generation per year, and scouting beyond June is not necessary. Manual removal of the larvae is the preferred control.

Columbine sawfly larvae goshmom 2008 davesgarden.com

HONEYLOCUST PLANT BUG: Nymphs are emerging in Dane County and beginning to feed on honeylocust leaves. Early-season feeding by these immature plant bugs causes leaf distortion, discoloration and stunting, and is usually more severe than damage caused by the adults later in June and July.

Honeylocust plant bug damage Konnie Jerabek DATCP

The optimal window for treatment of this most damaging life stage is 7-10 days after budbreak. Yellow-leaved cultivars, such as 'Sunburst', are more susceptible to injury than some of the green-leaved strains like 'Sunset' or 'Shademaster'.

APHIDS ON GRASSES: Aphids were found on the perennial ornamental grasses feather reed grass 'Karl Forester' and maiden grass 'Cosmopolitan' (*Miscanthus sinensis var. condensatus*) at nurseries in Washington and Racine counties. These insects can directly damage grass hosts, causing chlorosis or yellowing of foliage when densities are high, but in most instances the aphids themselves are an aesthetic problem. Of larger concern is the secondary growth of sooty mold which results from aphid honeydew production. Insecticidal control is usually not required as there are many natural enemies that regulate aphid populations.

Aphids on 'Karl Forester' feather reed grass Marcia Wensing DATCP

APPLE INSECT & BLACK LIGHT TRAP COUNTS MAY 7 - 13

COUNTY	SITE	STLM[1]	RBLR[2]	CM[3]	OBLR[4]	DWB[5]	LPTB[6]	BMSB[7]	AM RED[8]	YELLOW[9]
Bayfield	Keystone	0	0							
Bayfield	Orienta	—	—							
Brown	Oneida	39	70							
Columbia	Rio	53	24							
Crawford	Gays Mills	—	—							
Dane	Mt. Horeb	20	12							
Dane	McFarland	8	10							
Dane	Stoughton	14	52	0						
Fond du Lac	Campbellsport	3	17	0						
Fond du Lac	Malone	1	16	0						
Fond du Lac	Rosendale	14	6	0						
Green	Brodhead	13	43							
Iowa	Mineral Point	24	17							
Jackson	Hixton	60	39	0						
Kenosha	Burlington	60	23	0						
Lafayette	Belmont	2	6							
Marathon	Edgar	17	10							
Marinette	Niagara	0	0							
Marquette	Montello	811	44	0						
Ozaukee	Mequon	10	19	0						
Pierce	Beldenville	310	250	0						
Pierce	Spring Valley	7	53							
Racine	Raymond	19	0							
Racine	Rochester	82	54							
Richland	Hill Point	31	95							
Sheboygan	Plymouth	—	—							
Walworth	East Troy	16	32	0						
Walworth	Elkhorn	26	48	0						
Waukesha	New Berlin	—	—							
Wood	Rudolph	—	—							

[1]Spotted tentiform leafminer; [2]Redbanded leafroller; [3]Codling moth; [4]Obliquebanded leafroller; [5]Lesser peachtree borer; [6]Dogwood borer; [7]Brown marmorated stink bug; [8]Apple maggot red ball; *Unbaited; **Baited; [9]Apple maggot yellow board.

COUNTY	SITE	BCW[1]	CEL[2]	CE[3]	DCW[4]	ECB[5]	FORL[6]	SCW[7]	TA[8]	VCW[9]	WBC[10]
Columbia	Arlington	0	0	0	0	0	0	0	0	0	0
Columbia	Pardeeville	0	0	0	0	0	0	0	0	0	0
Dodge	Beaver Dam	0	0	0	0	0	0	0	1	0	0
Fond du Lac	Ripon	0	0	0	0	0	0	0	0	0	0
Grant	Prairie du Chien	0	0	0	0	0	0	0	0	0	0
Langlade	Antigo	0	0	0	0	0	0	0	1	0	0
Manitowoc	Manitowoc	0	0	0	0	0	0	0	0	0	0
Marathon	Wausau	—	—	—	—	—	—	—	—	—	—
Monroe	Sparta	—	—	—	—	—	—	—	—	—	—
Rock	Janesville	0	0	0	0	0	0	0	3	0	0
Walworth	East Troy	0	0	0	0	0	0	0	0	0	0
Waushara	Hancock	—	—	—	—	—	—	—	—	—	—
Wood	Marshfield	0	0	0	0	0	0	0	1	0	0

[1]Black cutworm; [2]Celery looper; [3]Corn earworm; [4]Dingy cutworm; [5]European corn borer; [6]Forage looper; [7]Spotted cutworm; [8]True armyworm; [9]Variegated cutworm; [10]Western bean cutworm.

BLACK CUTWORM PHEROMONE TRAP COUNTS 2020

COUNTY	SITE	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8
Adams	Adams	0	0	0	0	0	0		
Buffalo	Alma	0	0	0	0	2	0		
Buffalo	Gilmanton	0	0	0	1	1	0		
Columbia	Pardeeville	0	0	0	2	0	0		
Dane	Blue Mounds	—	—	0	1	4	2		
Dane	Cross Plains	—	—	0	0	5	2		
Dane	Middleton	—	—	0	0	1	0		
Dane	Montrose	—	—	1	0	1	4		
Dane	Oregon	—	—	0	0	4	6		
Dodge	Beaver Dam	0	1	2	0	1	2		
Dodge	Waupun	0	0	0	0	0	2		
Fond du Lac	Lamartine	0	0	0	0	0	1		
Fond du Lac	Ripon	0	1	0	2	0	2		
Grant	Dickeyville	—	—	0	9	20*	10		
Grant	Hazel Green	—	—	3	7	7	11		
Grant	Platteville	—	—	0	2	9	9		
Grant	Prairie du Chien	0	0	0	0	0	0		
Green	Cadiz	—	—	0	6	6	3		
Green	Clarno	—	—	0	9	15*	9		
Green	Jefferson	—	—	1	1	7	5		
Iowa	Brigham E	—	—	0	0	1	1		
Iowa	Brigham W	—	—	0	0	5	1		
Iowa	Dodgeville E	—	—	1	0	9	4		
Iowa	Dodgeville W	—	—	1	4	7	3		
Iowa	Mineral Point E	—	—	0	1	1	1		
Iowa	Mineral Point W	—	—	0	2	7	2		
Kewaunee	Algoma	0	0	0	0	1	0		
La Crosse	La Crosse	—	0	11	6	12	9		
Lafayette	Belmont	—	—	0	3	19*	6		
Lafayette	Kendall	—	—	1	0	2	4		
Lafayette	Monticello	—	—	1	2	11	17*		
Lafayette	Shullsburg	—	—	0	2	12	2		
Langlade	Antigo	0	0	0	0	0	2		
Pepin	Durand	3	0	0	0	0	1		
Rock	Avon	—	—	1	6	6	18*		
Rock	Beloit	—	—	0	2	1	7		
Rock	Bradford W	—	—	5	1	7	8		
Rock	Bradford E	—	—	0	1	2	2		
Rock	Fulton	—	—	0	0	1	2		
Rock	Johnstown	—	—	0	2	1	5		
Rock	Newark	—	—	0	0	5	1		
Rock	Turtle	—	—	0	2	3	6		
Rock	Union	—	—	1	1	2	0		
Waushara	Hancock	0	0	0	0	0	—		

* Intense capture occurs when 9 or more moths are caught in a 2-night period. Week 1 (April 2-8), Week 2 (April 9-15), Week 3 (April 16-22), Week 4 (April 23-29), Week 5 (April 30-May 6), Week 6 (May 7-13), Week 7 (May 14-20), Week 8 (May 21-27).