



Wisconsin Entomological Society

Newsletter

Volume 37, Number 1

February 2010

So the critters keep coming. Since the last newsletter we have seen more uninvited guests appear, including first records for the **banded elm bark beetle** (*Scolytus shevyrewi*), which is capable of transmitting Dutch elm disease; the **beech scale** (*Crytococcus fagisuga*), which along with a necrotic fungus causes beech blight disease (Door, Kewaunee and Marinette counties); and my first exposure to **ensign scale** in Wisconsin, when critters were found on a

In This Issue...

News from the Diagnostic Lab
Page 1

Spring Mystery Insect & Spring Meeting Invitation
Page 2

Photo Salon Winners & Fall '09 Mystery Insect
Page 3

2009 Wisconsin Lepidoptera Season Summary
Page 4

Insect Publications and Websites of Interest
Page 8

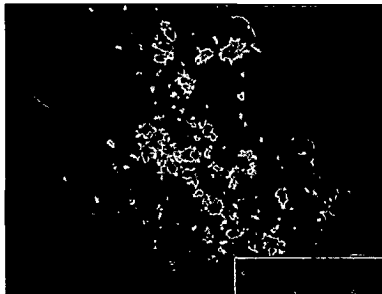
What's Wrong With This Picture?
Page 9

Butterfly Association Field Trips
Page 11

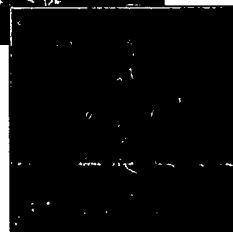
News from the Diagnostic Lab

Article and photos by Phil Pellitteri

coneflower in Madison.
The first samples of **cottony**



Ensign scale
above and right



Cottony grass
scale below



grass scale (*Eriopeltis festucae*) came in from the NW part of the state. There are records of this insect as far back as the early 1900's in Maine, but it seems to have disappeared, and in the

last two years has started causing problems in commercially-mowed lawns in Minnesota. Not sure what to make of this.

I had mentioned in the last newsletter how down overall insect populations were in 2009. The year-end summary of the Wisconsin Department of Agriculture survey has some solid data to support this. **Gypsy moth** adult captures were down by almost 65%, and the number of acres defoliated was 3,620 – down from almost 9,000 in 2008 and 23,000 in 2007. Populations of the **European corn borer** were the lowest we have ever seen since 1942, with less than 1% of the corn having economic problems. It is speculated that the widespread decline is due to all of the transgenic corn being planted. Numbers of **cucumber beetles**, **cabbage loopers**, and **corn rootworms** were also very low. It was so quiet on the outdoor pest front that I never once prayed for an early frost in August.

As for “bug of the year” – this time it really is a true bug. The big player for 2009 was the **four-lined plant bug**, *Poecilocapsus lineatus*. The nymphs cause very characteristic round lesions

Please see **DIAGNOSTIC LAB**, page 2

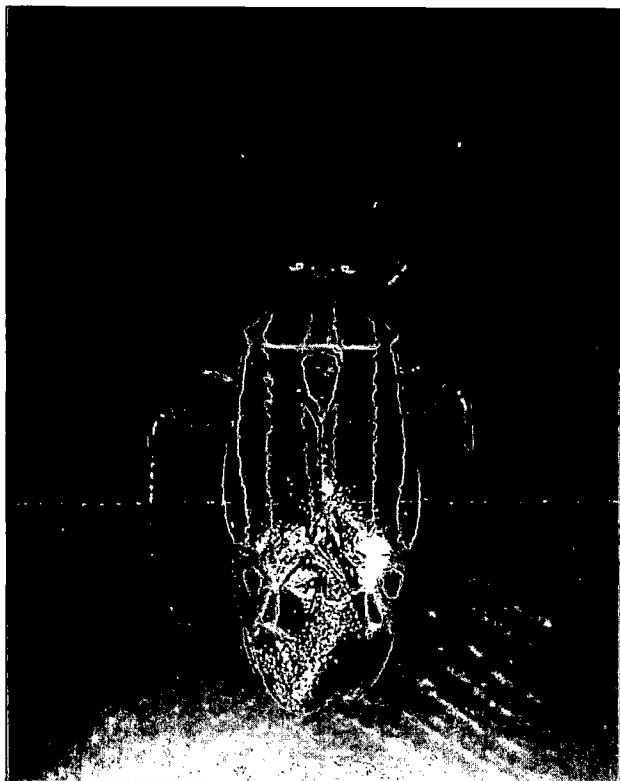
The Wisconsin Entomological Society Newsletter is published three times a year, at irregular intervals. The newsletter is provided to encourage and facilitate the exchange of information by the membership, and to keep the members informed of the activities of the organization. Members are strongly encouraged to contribute items for inclusion in the newsletter. Please send all news items, notes, new or interesting insect records, season summaries, and research requests to the editor by Jan. 15, May 15, or Sept. 1st:

J. Mingari, P.O. Box 105, New Holstein, WI 53061, email: turkeyfeather@tds.net (Put WES in subject line)

NOTE: Please report any address changes to Les Ferge, 7119 Hubbard Ave., Middleton, WI 53562, email: lesferge@gmail.com.

DIAGNOSTIC LAB, from page one

when feeding on plant tissue. This insect has a very broad host range, and I saw damage this year on mums, mint, basil, geraniums, coneflower, cabbage, forsythia, sumac, Russian sage, oregano, alfalfa, ginseng, strawberry, black-eyed Susan and butterfly bush. The damage is cosmetic and easily confused with some plant diseases.



Four-lined plant bug, *Poecilocapsus lineatus*

Prior to the busy field season...

Join a low-key get-together at Russell Laboratories (Room 147), UW Campus. There will be 2-3 informal presentations, and we'll discuss a possible second summer field trip at the meeting. Bring specimens, pictures, or anything else to share.

**Sunday, March 28th
1-4 p.m.**

~ Kyle Evan Johnson



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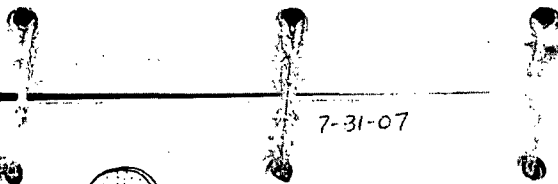
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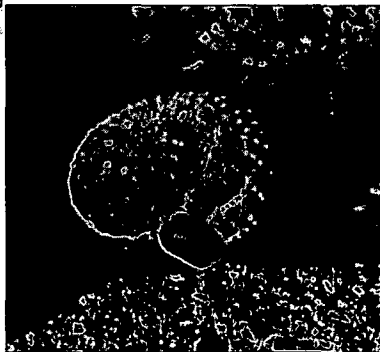
7-31-07 Temp today was 95F & exceedingly humid. Found an unusual cater, in basswood tree.



This is how it rests on leaf & somehow does not fall off. (it holds on w/ all 6 feet)

pale yellow w/ white dotted lines & black dorsal stripe, head large & ivory-yellow

Spring Mystery Insect



Send your IDs to the editor:
P.O. Box 105,
New Holstein, WI 53061
or email with WES in the subject line:
turkeyfeather@tds.net.



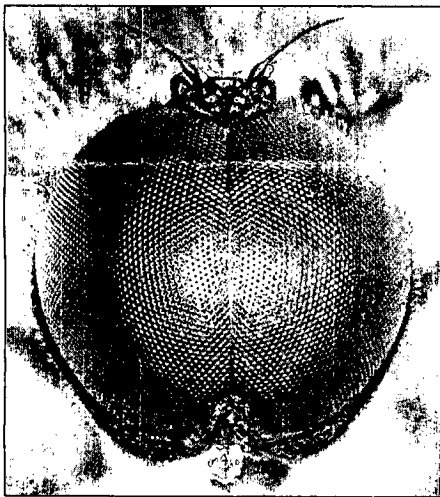
Photo Salon Winners

from the fall meeting

1st place
Karl Legler
Jutta Arctic



2nd place
Andrew Khitsun
Megarhyssa (Ichneumonid)



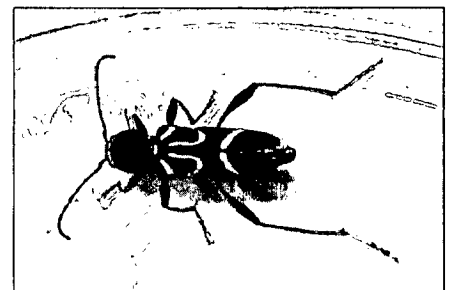
3rd place
Jeff Gruber
Acrocerid fly
Acrocerus bimaculatus

Fall '09 Mystery Insect: Longhorned Wood-Boring Beetle, *Clytus ruricola*

This insect was found in a woodland in Manitowoc County, WI, in mid-June. Jordan Marché, Ilona Loser, Gene Drecktrah, and Ron Huber identified the beetle.

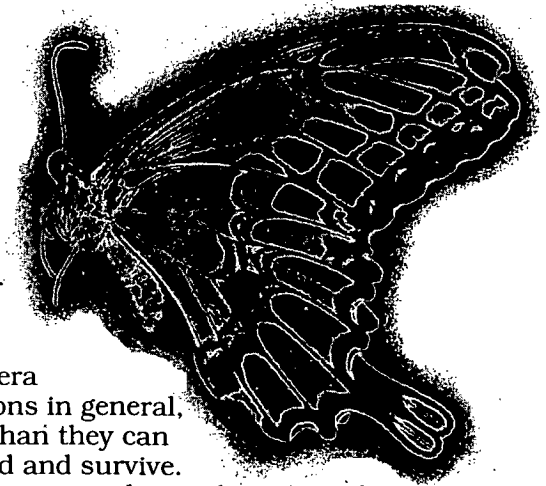
Gene commented on *Clytus ruricola* (Olivier): "I could not find a common name for this species. Some species of *Xylotrechus* have similar elytral bandings; however, the photo is quite good for IDing this species. Our UW Oshkosh insect collection has a single specimen of this species from Iron Co., MI (15.VII.1976). I collected a single specimen in Douglas Co., WI (23.VII.1979). Bayer and Shenefelt (1969) reported that this species had been collected from 10 counties in Wisconsin based on the specimens in the UW Madison Insectarium. Reference: Bayer, L.J. and R.D. Shenefelt. 1969. Wis. Cerambycidae in the UW Insectarium. Research Bulletin 275."

Ron Huber noted that "It is figured in Yanega's 1996 *Field Guide to Northeastern Longhorned Beetles*, where he says that the larvae feed on decaying hardwoods, especially maple. As interest, Olivier was a Frenchman who described a number of American insects in the 1790's, so this beetle was most probably first discovered somewhere along the East Coast."



2009 Wisconsin Lepidoptera Season Summary

Compiled by Les Ferge



Contributors cited: George J. Balogh (GJB), Steven C. Bransky (SCB), Richard D. Breen (RDB), James A. Ebner (JAE), Jerry W. Goth (JWG), Kyle E. Johnson (KEJ), Jordan D. Marché (JDM), Ian Miller (IM), Mike Reese (MR), Joan F. Rickert (JFR), Scott & Ann Swengel (SAS), Les Ferge (LAF).

GENERAL COMMENTS: The disturbing trend of decreasing Lepidoptera numbers noted the past several years continues. Jim Ebner experienced his worst season since 1940, with butterflies--including many usually common species-- found in low numbers. He saw no migrants all season in southeastern Wisconsin. The season started late and stayed cool. September and October were cold and rainy with butterflies almost nonexistent. Kyle Johnson reported that numbers were severely down for virtually all species. Many common species were scarce or not observed at all. Most of the season was unseasonably cool. Night catches in particular were very poor. Few southern strays of any kind were observed. Ann and Scott Swengel reported that spring was cooler than average and July was exceptionally cool, resulting in later emergences for many butterflies. *Hesperia ottoe* has declined precipitously, being seen in only one of its traditional sites, and *Speyeria idalia* numbers were below average. Their declines are clearly associated with excessive burning of their prairie preserve habitat, which in conjunction with

the other factors affecting Lepidoptera populations in general, is more than they can withstand and survive.

Papilio glaucus and *canadensis* numbers were far below average. A few other species are faring better. *Callophrys polios* had a tremendously good year northward and was above average in central Wisconsin, and *Callophrys henrici* was found in unusually high numbers, but fewer than 2008's blowout. The Swengels, in the course of their extensive field surveys, found a few stray and migrant butterfly species, with most occurring as single individuals in the latter part of the season. Introduced moth species continue to invade and spread, with two new state records; *Hyles euphorbiae* has spread eastward into western Wisconsin and *Chloroclystis rectangulata* was discovered in Milwaukee. Established species *Calophasia lunula* has spread into Brown and Lafayette Counties and the crambid *Sitochroa palealis* is becoming quite common statewide.

New county records are indicated by the county name in CAPITAL letters.

MONA #	Family/Species	County	Locality	First Date	Last Date	Collr.
BUTTERFLIES						
Hesperiidae						
3954	<i>Erynnis martialis</i>	Burnett	Namekagon Bog	17-May-09		KEJ
3954	<i>Erynnis martialis</i>	Burnett	Crex Meadows, Namekagon Barrens	23-May-09	30-May-09	SAS
above-average year in Burnett County by recent standards						
3958	<i>Erynnis lucilius</i>	Sauk	Spring Green Preserve	12-Jul-09		KEJ
3959	<i>Erynnis baptisiae</i>	Rock	Avon Bottoms	19-Jul-09		KEJ
associated with crown vetch						
3961	<i>Erynnis persius</i>	Jackson	Bauer-Brockway Barrens	7-May-09		KEJ
noticeably absent from heavily managed areas (with fire/removal of nearly all brush/trees)						
4006	<i>Oarisma powesheik</i>	Waukesha	Kettle Moraine SF	6-Jul-09		JAE
4020	<i>Hesperia comma laurentina</i>	Forest	Kingstone Creek	17-Aug-09		KEJ
4022	<i>Hesperia ottoe</i>	Crawford	Rush Creek Prairie	11-Jul-09		SAS
lowest numbers ever seen here						
4042	<i>Polites origenes</i>	Green	Oliver & Muralt Bluff Prairie	11-Jul-09	19-Jul-09	KEJ
4048	<i>Pompeius verna</i>	Lafayette	Hardscrabble Prairie SNA	11-Jul-09		LAF
4051	<i>Anatrytone logan</i>	Douglas	Gordon Bog	30-Jul-09		KEJ
4052	<i>Problema byssus</i>	Grant	Sandy Hook	11-Jul-09		KEJ
common						

SEASON SUMMARY, from page 4

MONA #	Family/Species	County	Locality	First Date	Last Date	Collr.
4052	Problema byssus	Grant	Dewey Heights Prairie	11-Jul-09		SAS
4052	Problema byssus	Lafayette	Hardscrabble Prairie SNA	11-Jul-09		LAF
4058	Poanes massasoit	Jackson	Dike 17 area, Black River SF	19-Jul-09	29-Jul-09	SAS
4058	Poanes massasoit	RICHLAND	Hub City Bog	12-Jul-09		KEJ
4072	Euphyes dion	Douglas	Gordon Bog	30-Jul-09		KEJ
	associated with Carex lacustris/C. utriculata lagg of raised bog					
4072	Euphyes dion	Marinette	Nadjack Lake Bog	17-Aug-09		KEJ
4072	Euphyes dion	RICHLAND	Hub City Bog	12-Jul-09		KEJ
4075	Euphyes conspicua	DOOR	Sturgeon Bay	31-Jul-09		LAF
4075	Euphyes conspicua	LAFAYETTE	New Diggings	11-Jul-09		LAF
4075	Euphyes conspicua	RICHLAND	Hub City Bog	12-Jul-09		KEJ
4096	Amblyscirtes hegon	Wood	Highway X	25-May-09	30-May-09	SAS
	Papilionidae					
4170	Papilio crespontes	Jackson	Jackson County Forest	4-Jul-09		SAS
4170	Papilio crespontes	Waukesha	Okauchee & Kettle Moraine SF	31-Aug-09	1-Sep-09	JAE
4176.1	Papilio canadensis	Adams	Chicago Rd & 15th Ave.	18-May-09		SCB
	Pieridae					
4195	Pieris oleracea	Douglas	Bear Lake Bog	28-Jul-09		SAS
4195	Pieris oleracea	Walworth	Lulu Lake	13-May-09		JAE
4202	Euchloe olympia	Eau Claire	Augusta SWA	7-May-09		KEJ
4210	Colias eurytheme	Waukesha	Oconomowoc	9-Nov-09		JAE
4220	Colias interior	Lincoln	Swamp Road Bog	2-Sep-09		KEJ
4220	Colias interior	WASHBURN	Little Frog Creek Bog	18-Jun-09		KEJ
4242	Abaeis nicippe	COLUMBIA	Pine Island WA	28-Jul-09		SAS
	Lycaenidae					
4249	Feniseca tarquinius	Florence	SE of Wheeler Lake	17-Aug-09		KEJ
4253	Lycaena dione	Portage	Buena Vista WA	5-Jul-09	15-Aug-09	SAS
	highest numbers on 12 July					
4256	Lycaena hyllus	Portage	Buena Vista WA	26-Jun-09	3-Jul-09	SAS
	3rd straight poor year					
4260	Lycaena epixanthe	Douglas	Gordon Bog	30-Jul-09		KEJ
4260	Lycaena epixanthe	Manitowoc	Vanderbloomen Bog	7-Jul-09		KEJ
	also Ed & Alice Burkel					
4260	Lycaena epixanthe	Marinette	Glocke Lake	28-Jun-09		SAS
4260	Lycaena epixanthe	Washburn	E of Minong	4-Jul-09		SAS
4261	Lycaena dorcas	Lincoln	Highway 8 Bog	26-Jun-09		SAS
4261	Lycaena dorcas	Washburn	E of Minong	4-Jul-09		SAS
4262	Lycaena helloides	Burnett	Crex Meadows WA	23-Jul-09		SAS
4262	Lycaena helloides	Columbia	Pine Island WA	28-Jul-09		SAS
4283	Satyrium caryaevorus	Dane	Swamp Lover's Preserve	18-Jul-09		KEJ
4283	Satyrium caryaevorus	Green	Muralt Bluff Prairie	11-Jul-09		KEJ
4283	Satyrium caryaevorus	Sauk	Devil's Lake SP & Baxter's Hollow	6-Jul-09		SAS
4285	Satyrium liparops	Jackson	Hunters Haven Road	16-Jul-09		SCB
4322	Callophrys augustinus	CLARK	Abbott Ranch Road Peatland	7-May-09		KEJ
4322	Callophrys augustinus	TAYLOR	Kidrick Swamp & Krimslinger Bog	8-May-09		KEJ
4324	Callophrys polios	Burnett	Namekagon Barrens & Burnett CF	23-May-09		SAS
4324	Callophrys polios	Douglas	east-central part of county	23-May-09		SAS
	tremendously good year in N. WI and above average in central WI					
4324	Callophrys polios	Eau Claire	Augusta SWA	7-May-09		KEJ
4325	Callophrys irus	Jackson	Jackson County Forest	3-May-09	4-Jun-09	SAS
	highest numbers seen 8-20 May					
4325	Callophrys irus	Monroe	Fort McCoy	11-May-09		SAS
4326	Callophrys henrici	Burnett	Namekagon Barrens & Burnett CF	23-May-09	24-May-09	SAS

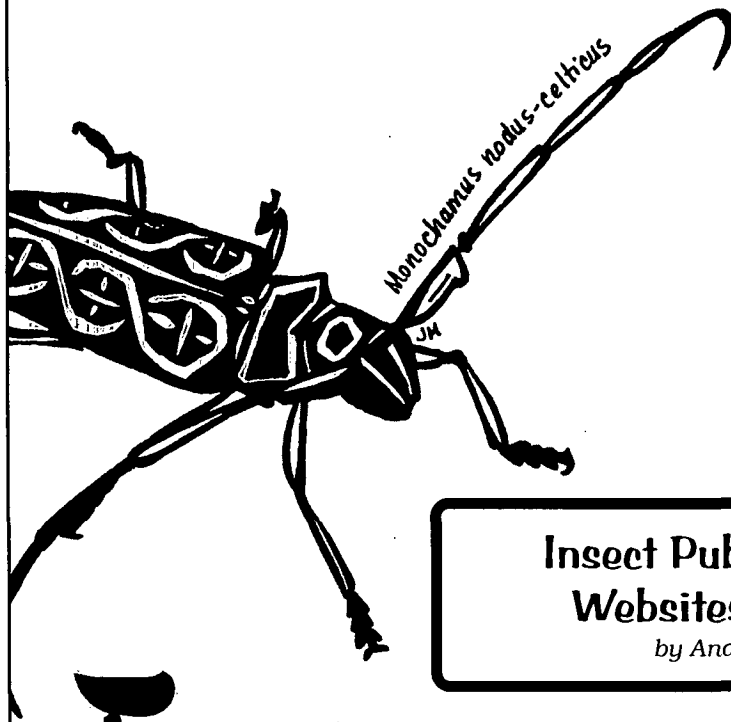
SEASON SUMMARY, from page 5

MONA #	Family/Species	County	Locality	First Date	Last Date	Collr.
4326	<i>Calophrys henrici</i> unusually high numbers, but fewer than 2008's blowout	Jackson	Jackson County Forest	2-May-09	20-May-09	SAS
4336	<i>Strymon melinus</i>	Jackson	Jackson CF & Black River SF	3-May-09	31-May-09	SAS
4372	<i>Glaucoopsyche lygdamus</i>	Washburn	Frog Creek Uplands	17-May-09		KEJ
4372	<i>Glaucoopsyche lygdamus</i>	Waukesha	Okauchee	20-May-09		JAE
Nymphalidae						
4422	<i>Polygonia satyrus</i>	Florence	Grandma Lake	17-Aug-09		KEJ
4422	<i>Polygonia satyrus</i>	Forest	Kingstone Creek	17-Aug-09		KEJ
4423	<i>Polygonia faunus</i>	ASHLAND	Black Creek Uplands	18-May-09		KEJ
4423	<i>Polygonia faunus</i>	Forest	Kingstone Creek	17-Aug-09		KEJ
4423	<i>Polygonia faunus</i>	Sawyer	Black Lake CG Road	14-Sep-09		SAS
4430	<i>Nymphalis vau-album</i> 135 individuals seen	Sauk	Baraboo Hills	6-Jul-09		SAS
4440	<i>Junonia coenia</i>	Portage	Buena Vista WA	19-Jul-09	5-Sep-09	SAS
4447	<i>Euptoieta claudia</i>	Crawford	Hogback Prairie	13-Jul-09		SAS
4447	<i>Euptoieta claudia</i>	Jackson	Jackson County Forest	15-Aug-09		SAS
4447	<i>Euptoieta claudia</i>	Portage	Buena Vista WA	23-Aug-09		SAS
4463	<i>Boloria eunomia dawsoni</i>	Ashland	Clam Lake Bog	18-Jun-09		KEJ
4463	<i>Boloria eunomia dawsoni</i>	Bayfield	Chippewa Lake Bogs	18-Jun-09		KEJ
4463	<i>Boloria eunomia dawsoni</i>	Washburn		12-Jun-09		SAS
4463	<i>Boloria eunomia dawsoni</i>	Washburn	Little Frog Creek Bog	18-Jun-09		KEJ
4464	<i>Boloria selene myrina</i>	LAFAYETTE	New Diggings	11-Jul-09		KEJ
4464	<i>Boloria selene myrina</i>	Richland	Hub City Bog	12-Jul-09		KEJ
4464.1	<i>Boloria selene atrocotalis</i>	Lincoln	Averill Creek	2-Sep-09		KEJ
4466	<i>Boloria frigga saga</i>	Ashland	Glidden	12-Jun-09		SAS
4466	<i>Boloria frigga saga</i>	Forest	Armstrong Creek	14-Jun-09		SAS
4466	<i>Boloria frigga saga</i>	Iron	Turtle-Flambeau Peatland	5-Jun-09		KEJ
4466	<i>Boloria frigga saga</i>	Langlade	Summit Lake Bog	23-May-09		KEJ
4466	<i>Boloria frigga saga</i>	Vilas	Scat Lake Bog	23-May-09		KEJ
4471	<i>Boloria freija</i>	Ashland	Black Creek Bog	18-May-09		KEJ
4471	<i>Boloria freija</i>	Douglas	Bear Lake Bog	10-May-09	12-Jun-09	SAS
4471	<i>Boloria freija</i>	Lincoln	Armstrong Creek Bog	11-May-09		KEJ
4474	<i>Boloria characlea</i>	Douglas	Oakland & Summit Twps.	8-Aug-09		SAS
4489	<i>Chlosyne gorgone</i>	Monroe	Fort McCoy	11-May-09		SAS
4491	<i>Chlosyne harrisii</i>	WASHBURN	Little Frog Creek Bog	18-Jun-09		KEJ
4516	<i>Euphydryas phaeton</i>	RICHLAND	Hub City Bog	12-Jul-09		KEJ
4583	<i>Coenonympha tullia inornata</i>	GREEN LAKE	White River Marsh	12-Jun-09		SAS
4583	<i>Coenonympha tullia inornata</i>	Portage	Buena Vista WA	12-Jun-09		SAS
4596	<i>Erebia disoidalis</i> first vouchered record from county (reported by Jeffrey Nekola in 1996)	Ashland	Black Creek Bog	18-May-09		KEJ
4606	<i>Oeneis chryxus strigulosa</i>	Bayfield	Moquah Barrens	22-May-09		SAS
4606.1	<i>Oeneis chryxus strigulosa</i>	Vilas	Haymeadow Creek Barrens	23-May-09		KEJ
4611	<i>Oeneis jutta ascerta</i>	Chippewa	Long Lake Bog	2-Jun-09		KEJ
4611	<i>Oeneis jutta ascerta</i> numbers severely depressed	Douglas	Empire Swamp	2-Jun-09		KEJ
4611	<i>Oeneis jutta ascerta</i> site on southern extreme of range	Juneau	Kingston Bog	20-May-09		KEJ
4611	<i>Oeneis jutta ascerta</i>	Sawyer	Partridge Crop L. & Ghost L. Bogs	18-Jun-09		KEJ
4614	<i>Danaus plexippus</i>	Waukesha	Okauchee	7-Oct-09		JAE
MOTHS						
Eriocraniidae						
3	<i>Dyseriocrania griseocapitella</i> STATE RECORD family	DANE	UW Arboretum	23-Apr-09	24-Apr-09	KEJ

SEASON SUMMARY, from page 6

MONA #	Family/Species MOTHS	County	Locality	First Date	Last Date	Collr.
3	Dyseriocrania griseocapitella Opostegidae	SAUK	Loddes Mill Bluff	23-Apr-09		KEJ
119	Pseudopostega cretea STATE RECORD family Tischeriidae	DANE	Pasque Flower Hill	9-Jul-09		KEJ
126	Coptotriche citrinipennella STATE RECORD	DANE	UW Arboretum	28-Jul-09		KEJ
144	Tischeria quercitella STATE RECORD Acrolophidae	DANE	New Observatory Woods	1-Jul-09		KEJ
334	Amydria effrentella Tineidae	DANE	New Observatory Woods	1-Jul-09		KEJ
416	Monopis dorsistrigella Psychidae	GREEN	Abraham's Woods SNA	19-Jul-09		KEJ
435	Taleporia walshella	MANITOWOC	Woodland Dunes	7-Jul-09		KEJ
435	Taleporia walshella	PORTAGE	Stevens Point	4-Oct-09		KEJ
435	Taleporia walshella	PRICE	Timm's Hill	20-May-09		KEJ
435	Taleporia walshella	VILAS	Conover	4-Oct-09		KEJ
437	Psyche casta	CRAWFORD	Hogback Prairie	7-Nov-09		KEJ
437	Psyche casta	GREEN	Abraham's Woods SNA	8-Aug-09		KEJ
437	Psyche casta	MANITOWOC	Woodland Dunes	7-Jul-09		KEJ
437	Psyche casta	PORTAGE	Stevens Point	4-Oct-09		KEJ
437	Psyche casta	SAWYER	Flambeau River, near Long Creek	18-May-09		KEJ
437	Psyche casta	VILAS	Scat Lake Uplands	4-Oct-09		KEJ
457	Thyridopteryx ephemeraeformis cocoon attached to Juniperus virginiana	GRANT	Sandy Hook	11-Jul-09		KEJ
457	Thyridopteryx ephemeraeformis record from Nancy Collins, many cocoons attached to juniper	KENOSHA	Pleasant Prairie	10-Apr-09		KEJ
462	Philonome clemensella STATE RECORD Bucculatricidae	GREEN	Abraham's Woods SNA	8-Aug-09		KEJ
600	Caloptilia sp. probably cornusella	RICHLAND	Hub City Bog	20-May-09		KEJ
618	Caloptilia ostryaella	MANITOWOC	Maribel Caves County Park	26-Feb-09		KEJ
627	Povolnya quercinigrella STATE RECORD Gracillariidae	DANE	Pasque Flower Hill	24-Apr-09		KEJ
639	Caloptilia stigmatella	OUTAGAMIE	Maine SWA	25-Feb-09		KEJ
642	Caloptilia sp. near umbratella	CRAWFORD	Hogback Prairie	7-Nov-09		KEJ
642	Caloptilia sp. near umbratella	DANE	Swamp Lover's Preserve	8-Nov-09		KEJ
642	Caloptilia sp. near umbratella	MANITOWOC	Maribel Caves County Park	26-Feb-09		KEJ
642	Caloptilia sp. near umbratella	OUTAGAMIE	Maine SWA	25-Feb-09		KEJ
642	Caloptilia sp. near umbratella	RICHLAND	Hub City	7-Feb-09		KEJ
642	Caloptilia sp. near umbratella	SAUK	Loddes Mill Bluff	23-Apr-09		KEJ
644	Caloptilia violacella STATE RECORD	DANE	UW Arboretum	23-Sep-09		KEJ
742	Phyllonorycter celtifoliella	CRAWFORD	Hogback Prairie	7-Nov-09		KEJ
742	Phyllonorycter celtifoliella	Dane	Swamp Lover's Preserve	8-Nov-09		KEJ
744	Phyllonorycter clemensella (?)	GREEN	Abraham's Woods SNA	19-Jul-09		KEJ
744	Phyllonorycter clemensella (?)	PRICE	Timm's Hill	20-May-09		KEJ
773	Phyllonorycter morrisella	OUTAGAMIE	Maine SWA	25-Feb-09		KEJ
846	Phyllocnistis insignis STATE RECORD; reared ex. Serpentine leaf mines on Erchtites found 18 July 2009	DANE	Swamp Lover's Preserve	29-Jul-09		KEJ

Remaining 291 records of the SEASON SUMMARY will continue in next issue.



Insect Publications and Websites of Interest

by Andrew Khitsun

For those of you who already own a copy, **Encyclopedia of Insects** by V. Resh & R. Carde (second edition) contains 66% new or revised content. Another wonderful work is **Illustrated Key to the Longhorned Woodboring Beetles of the Eastern US** by S. Lingafelter – it's a nice full-colored supplement to a previously mentioned **Field Guide to Northeastern Longhorned Beetles**, the former providing more detailed images of the easy-to-identify exterior features of similar-looking species. For collectors of showy tropical beetles, **For the Love of Rhinoceros and Stag Beetles** in two volumes by J. Lai and K. Shin-ping covers those and some closely-related groups in amazing detail, including immature stages. **Brentidae of the World** by A. Sforzi & L. Bartolozzi is a most comprehensive volume so far on that beetle family, complete with full taxonomy and some photos (there are more than 1500 species, so only some could be displayed). New volume on spiders and relatives **Arachnids** by J. Beccaloni shows not only regular staples of similar books, but also seldom-mentioned groups of spider kin in vivid color detail. **Moths & Caterpillars of the North Woods** by J. Sogaard is yet another colorful volume in that ever-expanding series. There are a few other moth books I think I didn't mention before. **The Owllet Moths of Ohio** by R. Rings & others does a very good job describing Noctuidae of that state, complete with color plates, and can be purchased from Ohio Biological Survey at

<http://www.ohiobiologicalsurvey.org/pubs-newseries.html>. Another wonderful volume that can be bought there is **Olethreutine Moths of the Midwestern U.S.** by T. Gilligan & others. The other source for this book is a new website devoted to that group of moths, **Tortricidae.net**, at <http://www.tortricidae.com/>. On the other hand, **Guide to the Olethreutine Moths of Midland North America (Tortricidae)** by W. Miller is a black-and-white, but still great guide to that group and can be obtained for free by calling Jane McComb (US Forest Service) at (603) 868-7694. In the butterfly department, **Butterfly Landscapes of New Mexico** by Wisconsin native S. Carry takes a different, habitat-based ap-

proach to looking for butterflies in that state. **One Hundred Butterflies** by H. Feinstein is a colorful (albeit very expensive) gift for someone's child

beginning to show interest in insects.

For those who didn't secure free copies of the great volumes published by the US Forest Service a few years back, their online versions are available. Please find **Macromoths of Northwest Forests & Woodlands** at <http://www.npwrc.usgs.gov/resource/insects/macronw/>, **Caterpillars of Pacific Northwest Forests & Woodlands** at <http://www.npwrc.usgs.gov/resource/insects/catnw/index.htm>, **Lepidoptera of the Pacific Northwest: Caterpillars & Adults** at <http://andrewsforest.oregonstate.edu/pubs/webdocs/reports/pub3739.cfm?topnav=55>, **Caterpillars of Eastern Forests** at <http://www.npwrc.usgs.gov/resource/insects/cateast/index.htm>, **Caterpillars on the Foliage of Conifers in the Northeastern United States** at <http://www.forestpests.org/caterpillars/>. Some of those sites have the publications available for download as PDF or ZIP files. On the University of Florida extension's website at http://edis.ifas.ufl.edu/departament_entomology_and_nematology you can download some interesting guides. Most of them deal with that state's fauna, but some cover interesting and rarely publicized groups of insects, like velvet ants or blister beetles.

And, on the plant matters, **Minnesota, Wisconsin & Michigan Wild Berries & Fruits** by T. Marrone is a must-have for any nature lover in Wisconsin.



The soft white body down

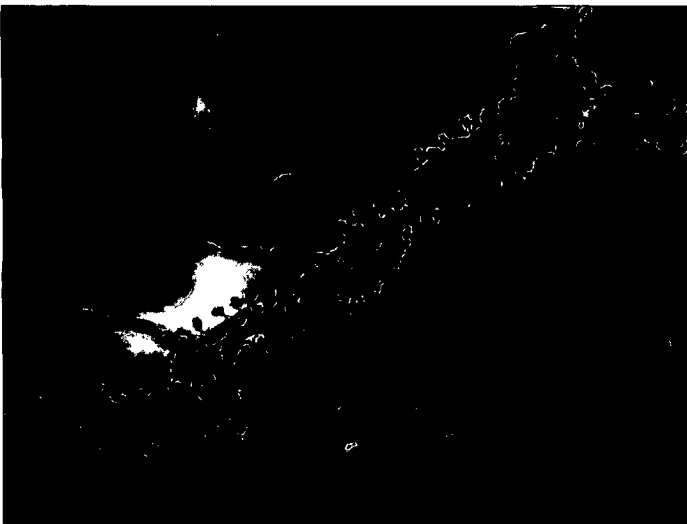
of a red-tailed hawk is inclined to cling in a tentacled way, and each snowy strand is fuzzy. In a calm November day's fallen brown leaves, on bare gray tree trunks, the whiteness is eye-catching, but hawk down does not move rhythmically. That's what made me take a closer look.

It was insects, wagging their butt.

The closer I got, the more they wagged. They seemed to be treating my face like aircraft, waving me in for a landing.

It was one of those cursed moments of total empty-handedness, so all I could bring away were questions—a fluffy white bug? –in November in Wisconsin? –that in appearance and behavior seemed deliberately to attract attention?

In July of the following year I discovered a fuzzy white exoskeleton on the underside of a basswood leaf; and, looking further, three fuzzy white nymphs stuck into the side of an ash leaf's midvein. Remembering the "hawk down" insects, I got a jar and went for a walk in the woods. I found a patch of white fuzz on the slender woody stem of a young red maple. It had three fleecy live nymphs. Elated to so easily find



Woolly Beech Aphids, *Grylloprociphilus imbricator*

the key to solving the fluffy bug mystery, I brushed to sweep the nymphs into my jar.

They went ping-pong in all directions.

("Eureka," I grumbled in enlightened dismay.)

I was next apprised (by horticulture) that fuzzy white "bugs" can be annoyingly common: witness things like mealybugs, fuzzy scales, whiteflies, and some psyllids, etc. But it was a cruel undeception to discover that a previously invisible anomaly was never really invisible nor an anomaly.

As nymphs, *Metcalfa pruinosa* Flatid planthoppers are green but heavily carpeted with a white "wool"—filaments of wax. They leave the wax fleece behind when they climb out of their last juvenile exoskeleton in July or August here, though adults may look powdery with it, rather than fluffy (*pruina* = Latin: "hoarfrost"). They are very common. Besides young red maple, I found them on almost every other kind of plant I saw in July and August. But for wool, they are as nothing compared to woolly beech aphids, *Grylloprociphilus imbricator*.

What's wrong with this picture?

Photos and article by J. Mingari

I found the woolly aphids again in November, so thick that the beech twigs looked snow-covered. When I approached closely, the

snow began a seething movement: all the aphids wagging their long white fluff bustles.

--So the planthoppers would sit still or ping away from perceived danger, but woolly aphids appeared to invite it. What's up with the wax, and why the wag? Does the wax serve the same purpose for both insects?

I was surprised to learn that many of the insects that secrete wax filaments also produce honeydew—including *M. pruinosa* and *G. imbricator*. In none of the *M. pruinosa* or *G. imbricator* groups I saw was any ant present, nor was honeydew obvious, although ants have been observed tending *G. imbricator* in Florida (Smith/Denmark 1984).

Proposals for the purpose of the wax focus on protection—from changes in personal climate and self-contamination with honeydew, to fending off parasites, predators, fungal infection, UV radiation, water, and frost (Smith 1999; Lucchi and Mazzoni 2004).

It is recognized that the woolly wax is not universally efficient at deterring predators or parasites. Lacewings, lady beetles, and syrphid fly larvae are among those that prey on woolly alder aphids, for example (Johnson and Lyon 1976), along with a lepidopteran predator, *Feniseca tarquinius*, (Eisner 2003). When woolly planthoppers are considered, a similar list is cited, along with spiders and larval mites (Wilson/McPherson 1981). Additionally, a *Neodryinus* wasp has repeatedly been reported in members of the Fulgoroidea (Wilson/McPherson 1981; Dean/Bailey 1961; Swezey 1903), and nowadays is even under consideration as a biocontrol (Strauss 2009).

Looking at the insects as a possible prey item for birds leads me to wonder what protective effect the wax might have. Birds are significant predators of planthoppers in Puerto Rico (Borkhataria/Collazo/Groom 2006); and at least two of the birds involved in general insect predation there do migrate though the upper US midwest in (late July through early) August, when

Please see **PICTURE**, page 10

PICTURE, from page 9

planthopper adults are present, and nymphs can also be found: Tennessee Warbler and Black-Throated Blue Warbler.

Wilson and Lucchi (2007) observed that “groups of wax-covered [*M. pruinosa*] nymphs somewhat resemble bird droppings and may serve as visual camouflage and/or be chemically distasteful to predators” (177). Insect-eating birds are persistent investigators of things that could be food, and they learn to recognize well-defined white things like insect larvae or eggs and pupae. A *M. pruinosa* nymph sitting in a splash of white fleece on an upper surface is not well-defined; perhaps it does fool birds as a “dropping.”

Many of the *M. pruinosa* nymphs I found here were along a vein on the undersides of leaves, where bird droppings usually don't fall. However, being white on a shaded undersurface fits a parameter of prey camouflage in nature, aside from the case that leaf undersides seem to be good places to hide from overhead predators, witness the very many insects that feed and rest there.

North American native *M. pruinosa* is now found in Europe, as well, where it makes a nuisance of itself by supplying honeybees with honeydew, among other transgressions. Perhaps part of the insect's success is that its woolly wax can hide the few individuals in a variety of places, in plain sight, aside from other protective purposes.

The white wax and behavior of the legions of *G. imbricator*, however, don't seem to be offering the same effect.

The aphid wag reminds me of the spitting grasshopper: if you only have one tool, that's the tool that



Metcalfa pruinosa nymph

gets used, even if its effectiveness is limited to a particular predator. Grasshopper spit may deter ants; it doesn't stop a human collector. I found that wagging or bucking is one of the defensive behaviors of aphids against predators such as flower bugs and ovipositing hymenoptera.

Many aphid colonies also have “soldiers”—members that actively attack intruders, and *G. imbricator* colonies do, too. Aoki/Kurosu/von Dohlen (2001) report that wing-padded nymphs of this species sting with their stylets, and are capable of producing “minor irritation” on human skin. That study also observed no ants and little honeydew at any of seven colonies they monitored.

Human skin and the study's unidentified experimental tortricid larvae both present a more or less naked surface to minute attackers.

Other defensive behaviors of aphids include “dropping from the plant, kicking, or pulling away if an appendage is grasped, and encumbering attacking predators with substances secreted from the cornicles” (Butler/O'Neil, 2006, p. 319).

In my photos of the disturbed woolly beech aphids, a very few somethings--cornicle exudate? -- shine like drops of burnished copper in the light of the camera's flash. Does wagging or bucking help to pump the exudate?

Eisner (2003), in conjunction with aphids, used the word “contaminated” to describe the woolled mouthparts of ants that bit fleece-camouflaged lacewing larvae: The ants' persecution of aphid predators was hindered by the ants' need to clean their mouthparts.

There are still a few birds in the Wisconsin woods, in November, that are looking for insects to eat. How could they miss the white seething mass? Do they attempt to eat the woolly aphids? Would the soldier aphids' stylets penetrate feathers, or

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Please see PICTURE, page 11

PICTURE, from page 10

even offer a fast enough response to interrupt bird activity? Would a bird's mouthful be so much unrewarding wax and sticky exudate, and so little aphid, that the bird might in future bypass wagging white fleece? (Would somebody with a bird please check this out for me?)

Good sources of information:

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Wilson, S.W. 2005. Keys to the Families of Fulgoromorpha with Emphasis on Planthoppers of Potential Economic Importance in the Southeastern United States (Hemiptera: Auchenorrhyncha). Florida Entomologist. 88 (4): 464-481.

Wilson, S.W., and J.E. McPherson. 1981. Life histories of *Anormenis septentrionalis*, *Metcalfa pruinosa*, and *Ormenoides venusta* with descriptions of immature stages. Annals of the Entomological Society of America 74:299-311.



You are invited...

WES members are invited to join Southern Wisconsin Butterfly Association field trips. These trips are free and open to the general public. Information about the field trips and contact persons can be found on the SWBA website

<http://www.naba.org/chapters/nabawba/>

Trips or counts may be canceled in the case of inclement or even cloudy weather because butterflies can be hard to find in such weather. Please call the field trip leader to make sure trip will meet if weather is questionable.

2010 Field Trips

Mon., May 17, Trip Leader: Mike Reese—Butterflies of Bauer-Brockway Barrens (Jackson County)

Sat., June 19, Trip Leader: Kathy Kirk—Butterflies of Cherokee Marsh

Sat., July 3, Trip Leaders: Karl and Dorothy Legler—Madison Butterfly Count

Mon., July 5, Trip Leaders: Tod Highsmith, Karl and Dorothy Legler—Butterflies, Dragonflies & Picnic at Swamp Lovers

Sat., July 10, Trip Leaders: Rich Henderson & Ann Thering—Flowers, Butterflies and Birds of Schurch-Thomson

Sat. evening, July 10, Trip Leader: Mark Evans—Moths: Denizens of Darkness

Sunday, July 11, Trip Leader: Ron Arnold—Butterflies and Dragonflies of Sandhill Wildlife Area

Sat., July 17, Trip Leader: Edgar Spalding—Pretty Things with Wings (Lakeshore Preserve in Madison)

Sat., Aug. 14, Trip Leader: Mike Reese—Butterflies at Avoca and Lower Wisconsin Riverway

Sat., Aug. 28, Trip Leader: Dreux Watermolen—Butterflies and Blossoms at Pheasant Branch

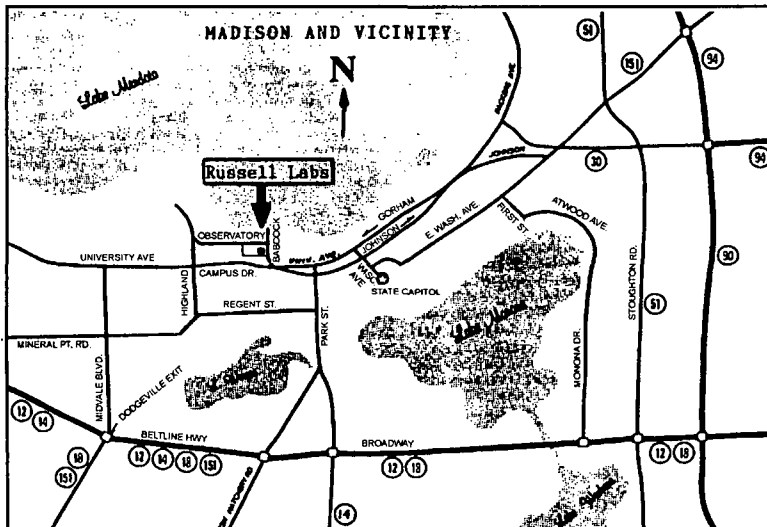
Sat., Sept. 4, Trip Leader: Kathy Kirk—Grasshoppers!

Wisconsin Entomological Society



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From the West:

From U.S. Hwy. 12 or U.S. Hwy. 14, take University Ave. east onto campus. Turn left (north) onto Charter Street. Turn left (west) onto Linden Drive.

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At the third stop sign you will be at the intersection of Linden Drive and Babcock Drive. Russell Lab is the building on the northwest corner of this intersection. The Insect Diagnostics lab is in Room 240. Public parking is available one block farther west at the west end of Babcock Hall (on your left), and on the top level of the parking ramp located on the north side of Russell Labs.

Spring Meeting Sunday, Mar. 28, 1-4 PM

at Russell Laboratories (Rm. 147) on the UW-Madison campus

