

Wisconsin Entomological Society

Newsletter

Volume 32, Number 1

March 2005

WES SPRING MEETING

Saturday, April 9, 2005, 11:00 A.M.

Russell Labs

UW-Madison Campus

(Map on Page 10)

AGENDA

11:00 A.M.

Discussion, Identification, Questions

12:00 Noon

Insect Research Collection with Steve Krauth
Bring a bag lunch. Snacks will be available.

1:00 P.M.

Election of Officers

SPEAKER TOPICS

THE INVASIONS NEVER STOP!

What's new in the arthropod world?
Presenter: Phil Pellitteri

NEW WISCONSIN MOTH RECORDS

Over 15 newly-recorded (and a few overlooked) moth species have been documented since the *Checklist of Wisconsin Moths* came out in 2000. Speaker will speculate on their status, as well as the spread of several introduced European Noctuids.

Presenter: Les Ferge

NAME THAT CATERPILLAR CONTEST

How many caterpillars will you be able to identify?
A prize will awarded to the winner.

Presenter: Janice Stiefel

Dear WES Members,

I know that some of you were less than satisfied with our November meeting and I am sorry. Our Spring meeting has been planned to make up for that. Phil, Les, Janice, and I all plan to attend and we need you as well. Bring your photos, specimens, questions, and a bag lunch and be prepared to visit. See you there!

Megan Kyslop, President

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The Wisconsin Entomological Society Newsletter is published three times a year, at irregular intervals. It 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:

Janice Stiefel, 2125 Grove Road, Bailey's Harbor, WI 54202, (920) 839-9796, e-mail: jstiefel@itol.com

NOTE: Please report any address changes to Les Ferge, 7119 Hubbard Ave., Middleton, WI 53562. e-mail: ferge@chorus.net

Readers' Answers to October 2004 MYSTERY INSECT

To refresh your memory, see
photo at the bottom right

RON HUBER

Bloomington, MN

"The October Mystery Insect appears to be the *Ailanthus* Webworm moth, *Atteva punctella* (Cramer) (formerly *Atteva aurea* Fitch in Holland's moth book), family Yponomeutidae. It is interesting that this native moth lays eggs primarily on an introduced tree species! The five native tree species of the Quassia family Simaroubaceae are all deep south and southwest. Perhaps if the *Ailanthus* (Tree of Heaven) hadn't been introduced here, we wouldn't have the moth in Minnesota. Of interest, my wife caught one *A. punctella* in western Kansas out on the prairie in the "middle of nowhere" We looked around, and sure enough, there was a huge *Ailanthus* towering over us. Must have been an old homestead once upon a time (no sign of it now) where they planted the tree. Way out there, but the little moth found it! (Or maybe came in with the tree 70 years ago)."

GENE DRECKTRAH

Oshkosh, WI

"It's the *Ailanthus* Webworm *Atteva punctella* (Cramer) adult. Order: Lepidoptera. Family: Yponomeutidae. "I have four specimens in the university collection and three specimens in my personal collection (if that means anything)."

RICHARD BREEN

Wisconsin Rapids, WI

"The October Mystery Insect looks like an *Ailanthus* Webworm Moth to me. That would be:
Family: Yponomeutidae
Genus: *Atteva*
Species: *punctella*



Hobomok Skipper male
(*Poanes hobomok*)

Mingled with the butterfly population in Wisconsin, are the seemingly insignificant skippers. Many people think they are moths because of their chunkier bodies but they are butterflies that belong to the Hesperilidae (hes-pli-RY-i-dee) family.

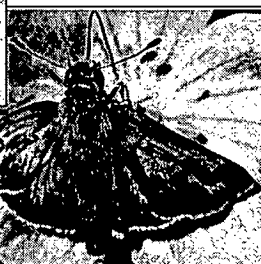
Between the years of 1860 and 1870, three American lepidopterists by the name of Moses Harris, Samuel Scudder and W.H. Edwards, found themselves with the honor of naming the Skippers. Because the Indian tribes, along with their chiefs and leaders were being slaughtered at such an alarming rate and because they felt their names would be lost forever, these three men decided to name some of the Skippers after Native Americans.

Of the three dozen or so Skippers found in Wisconsin, four with the most interesting past are:

Indian Skipper (*Hesperia sassacus*). The species name, *sassacus*, was named for the last important chief of the Pequot tribe which dominated land from

What's In A Name? The Naming of the Skippers

Text and Photos by Janice Stiefel



Indian Skipper male
(*Hesperia sassacus*)



Delaware Skipper female
(*Atrytone delaware*)



Arctic Skipper
(*Carterocephalus palaemon mandan*)

Narragansett Bay to most of Long Island. *Sassacus* had great hatred for the colonists...probably because they killed his father. In 1836 the colonists waged war against his people, defeating them. *Sassacus* escaped into Mohawk territory with a small band of his men. The Mohawks had no pity or use for them, so they killed *Sassacus*, sending his scalp and those of six of his followers to the governor of Massachusetts.

Delaware Skipper (*Atrytone delaware*) is named for the Delaware tribe which inhabited New York, New Jersey, and Pennsylvania.

The Hobomok Skipper (*Poanes hobomok*) was named for Wampanoag Chief Hobomok, who lived in southeastern New England at the time of the Pilgrim's landing.

Long Dash

Skipper (*Polites mystic*) [photo not shown] was named for Mystic, Connecticut where the Pequot tribe was defeated in 1636.

Arctic Skipper (*Carterocephalus palaemon mandan*) was named after a group of Sioux Indians who spoke the Mandan language and inhabited North Dakota in the area between the Heart and Little Missouri Rivers.

Besides adding to the diversity of Wisconsin insects, the heritage of the Skippers offers a history lesson. We can thank Moses Harris, Samuel Scudder and W.H. Edward for having the foresight to preserve Indian legacy. ❁

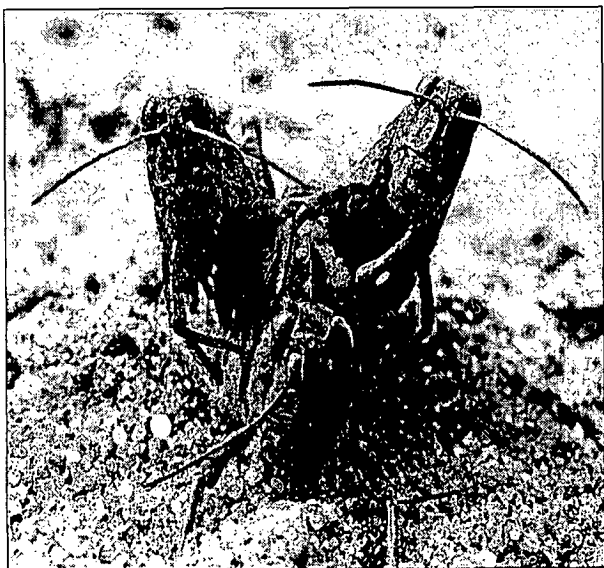


Ailanthus Webworm Moth
Photo: Carroll Rudy

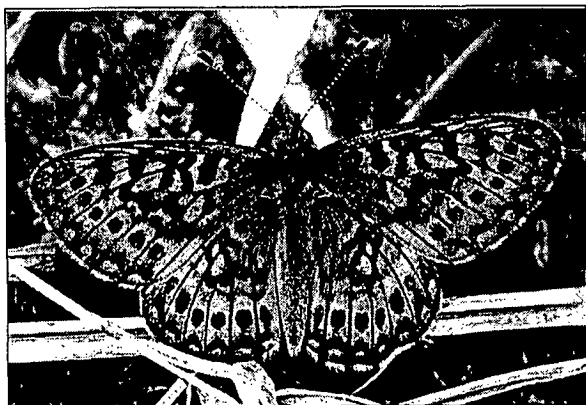
2004 PHOTO SALON WINNERS



Sidewalk Tiger Beetles (*Cicindela punctulata*)
FIRST PLACE - MIKE REESE



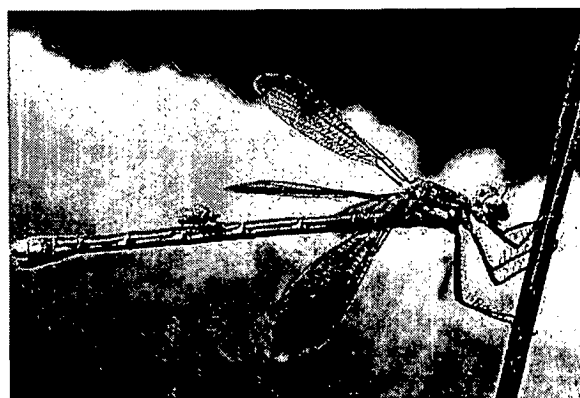
Carolina Locusts (*Dissostelra carolina*)
SECOND PLACE - MIKE REESE



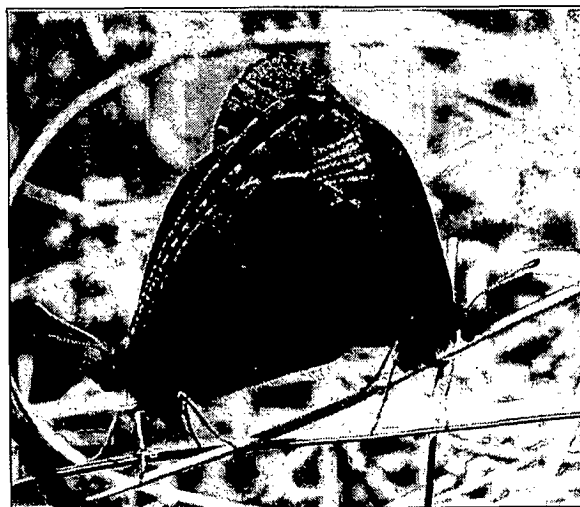
Bog Fritillary Butterfly (*Boloria eunomia dawsoni*)
McFarland Bog, Marquette Co., MI
THIRD PLACE - KYLE JOHNSON



Spiny Baskettail Dragonfly (*Eptthea spinigera*)
See article on page 4
FIRST PLACE - ANITA CARPENTER



Amber-Winged Spreadwing (*Lestes eurinus*)
SECOND PLACE - MIKE REESE



Red-disked Alpine Butterfly (*Erebia discoidalis*)
McFarland Bog, Marquette Co., MI
FOURTH PLACE - KYLE JOHNSON

One of the joyous thrills of nature-watching is the unexpected, once-in-a-lifetime encounter. I know the moment is really special when it makes me stop in my tracks and stand there wide-eyed, and all I can say is, WOW! One such moment occurred on May 10, 1998.

Lund's Swamp is my affectionate name for a wonderful wetland mix of wet meadow, shallow marshy lake, cattail marsh, swamp woods, forested upland on sandy soil and forested ponds. On the map, this place is known as McDonald's Flowage, part of the Navarino State Wildlife Area in Shawano County. This wildlife refuge provides habitat for wood ducks, bald eagles, muskrats, woodcocks, painted turtles, wood frogs, mustard white butterflies, blackberries, winterberry, wood ticks, and dragonflies.

Picture the moment: about three o'clock on a sunny, warm (78°F) May afternoon. My husband, Jerry, and I slowly motor along the swamp road listening for spring sounds and watching for critters. A car approaches us and instantly a big black "cloud" appears over the road ahead of us. As soon as the car passes, the cloud disappears. Another car approaches us and the same thing happens. The black cloud reminds me of Alfred Hitchcock's, *The Birds*. The cloud looks like a giant flock of starlings flying in close formation: swirling, dipping, turning, rising as one except the individuals do not look like birds. This cloud also instantly disappears.

Now we approach the spot. As we drive slowly, the cloud instantly reappears and we are engulfed in the biggest swarm of darting, turning, zipping, flipping dragonflies I have ever witnessed. I yell "Dragonflies" and Jerry quickly stops the car. By the time I jump out of the car, the dragonflies are gone. Where are they?

I look around and notice a few transparent wings glistening in the sunlight. I step off the road to investigate and discover about 30 dragonflies clinging to the bare branches of a shrub. A few individuals rest with wings open, but most perch with wings closed up

THE DRAGONFLY DANCE

by Anita Carpenter



Spiny Baskettail Dragonfly
(*Epiptera spinigera*)

May 10, 1998

Navarino State Wildlife Area
Shawano County, WI

over their bodies, looking like giant Mayflies. They are all lined up, resting at oblique angles, one right after another. Looking around and up, I discover other branches, both leaved and unleaved, bedecked with dragonflies. I expand my field of view and see more dragonflies. Motionless dragonflies are everywhere. I am surrounded by hundreds and hundreds of perching dragonflies, resting in the warmth of spring.

Just then another car passes, going about 45 MPH. The dragonflies erupt into flight, I hear the chorus of stiff membrane wings fluttering at they effortlessly lift the insects. The startled dragonflies dart up, out and over the road. The black cloud swirls over my head. Amazingly, hundreds of dragonflies flying in very tight formation and there are no mid-air collisions. As soon as the car

passes, the dragonflies drop from the cloud to resettle on the vegetation. Most quickly land, equidistant from their neighbors, with no jockeying for position. Some lite on others, but quickly flit off to find an open spot. In just a few moments, all is quiet, hundreds of dragonflies resting, once again, motionless in the sunlight.

I just stood there and said, "WOW!" Knowing that no one picture could capture the total scene, the sounds, or the feeling of being surround by all these incredible dragonflies as they take flight and then resettle. I hoped for another car to pass.

These dragonflies are Spiny Baskettails (*Epiptera spinigera*), inhabitants of marshy lakes. Lund's Swamp is an ideal home. These individuals had recently emerged as their wings had not yet hardened into their permanent horizontal positions. Swarming is something this species may do upon emergence. Why and how long they swarm, I do not know.

I hated to leave for I knew the swarm would soon dissipate with individuals staking out their ideal spot in Lund's Swamp. That warm May day, I had been in the right place at the right time. More importantly, I was aware that something unusual was happening and I took the time to investigate. I still get excited when I think of how lucky I was to experience this phenomenon. WOW! ❀

WES member Anita Carpenter is a pharmacist by profession and a naturalist by passion. Her nature articles regularly appear inside the front cover of *Wisconsin Natural Resources Magazine*.

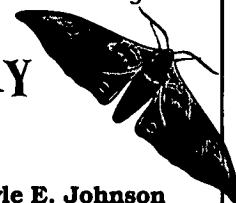
Spiny Baskettails have dull metallic green eyes. They are medium-sized and dark, with orange spots on the sides of their abdomen. They sometimes feed in swarms and inhabit marshes, borders of lakes and slow streams.

From *Dragonflies of Wisconsin*
Edition 4.0 2003
by Karl & Dorothy Legler
with Dave Westover



2004 WISCONSIN LEPIDOPTERA SEASON SUMMARY

Coordinator: Leslie A. Ferge



Contributors Cited: James A. Ebner (JAE), George J. Balogh (GJB), Leslie A. Ferge (LAF), Kyle E. Johnson (KEJ), Waldemar E. Kmentt (WEK), Janice J. Stiefel (JJS), Ann & Scott Swengel (SAS).

Temperatures were below average for most of the season, with frequent and often heavy rain prevalent. Spring conditions were cool and wet, with May being one of the wettest in recent memory. Dismal conditions hampered field work and delayed emergences of many spring species. Summer was erratic, with August temperatures being far below average but September above average. Numbers of most butterfly species continue to be significantly depressed, and moth numbers seemed less than usual as well. It was not a particularly good season for migratory butterflies. *Pyrgus communis* and *Euptoleta claudia* were recorded northward early in the season, but few other species were seen in August and September. Interestingly, JAE found very late season arrivals of several species in SE Wisconsin in October. Monarchs arrived later than average, but numbers remained very low throughout the season.

The records are arranged systematically by checklist number, following the *Checklist of the Lepidoptera of America North of Mexico* (Hodges et al., 1983). **New county records are indicated by county names appearing in CAPITAL letters.** Abbreviations used in the data include: CF = County Forest, SF = State Forest, SNA = State Natural Area.

BUTTERFLIES

Hesperiidae

3966	<i>Pyrgus communis</i>	ONEIDA	Minocqua Twp.	15 Jun 2004	LAF
	collected by Daniel Balogh				
4006	<i>Oarisma powesheik</i>	Waukesha	Kettle Moraine SF	11 Jul 2004	JAE
4022	<i>Hesperia ottoe</i>	Crawford	Hogback Prairie	14 Jul 2004	SAS
4022	<i>Hesperia ottoe</i>	Grant	Dewey Heights Prairie SNA	14 Jul 2004	SAS
4023	<i>Hesperia leonardus</i>	Brown	NEW Zoo Reforestation Camp	18 Aug 2004	KEJ
4027	<i>Hesperia metea</i>	Jackson	Jackson County Forest	9-26 May 2004	SAS
4049	<i>Atalopedes campestris</i>	Waukesha	Okauchee	9-25 Oct 2004	JAE
4072	<i>Euphyes dion</i>	BROWN	East River Trail	14 Jul 2004	KEJ
4072	<i>Euphyes dion</i>	Waukesha	Vernon Swamp	12 Jul 2004	JAE
4075	<i>Euphyes conspicua</i>	BROWN	East River Trail	15 Jul 2004	KEJ
4080	<i>Atrytonopsis hianna</i>	Sauk	Mirror Lake SP	2 Jun 2004	SAS

Papilionidae

4170	<i>Papilio cressphontes</i>	Waukesha	Kettle Moraine SF	12 May 2004	JAE
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Pieridae

4195	<i>Pieris oleracea</i>	Walworth	Lulu Lake	26 Jun 2004	JAE
4237	<i>Eurema lisa</i>	Crawford	Hogback Prairie	23 Jul 2004	SAS
4237	<i>Eurema lisa</i>	Crawford	Prairie du Chien	29 Aug 2004	LAF
4237	<i>Eurema lisa</i>	Dane	Madison: L. Mendota lakeshore	2 Sep 2004	KEJ
4237	<i>Eurema lisa</i>	Grant	Cassville	29 Aug 2004	LAF
4237	<i>Eurema lisa</i>	Grant	Jamestown Twp.	29 Aug 2004	LAF
4237	<i>Eurema lisa</i>	Sauk	Mirror Lake SP	11 Jul 2004	SAS

Lycaenidae

4249	<i>Feneseca tarquinius</i>	Waukesha	Lannon Swamp	10 May 2004	JAE
4253	<i>Lycaena dione</i>	Waukesha	Lannon Swamp	17 Jun-12 Jul 2004	JAE
	two new colonies discovered				
4261	<i>Lycaena dorcas</i>	Douglas	Summit Twp.	1 Aug 2004	KEJ
4326	<i>Callophrys henrici</i>	Price	Fifield Twp.	6 Jun 2004	SAS
4336	<i>Strymon melinus</i>	Waukesha	Okauchee	29 Oct 2004	JAE
4374	<i>Lycaeides idas nabokovi</i>	Marinette	Shrine Rd.	3-17 Jul 2004	SAS

Rhodinidae

4391	<i>Calephelis muticum</i>	Fond du Lac	Dundee	22 Jul 2004	JAE
	only one fresh male seen				

Libytheidae

4410	<i>Libytheana carinenta</i>	WAUKESHA	near Merton	23 Jul 2004	JAE
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Nymphalidae

4440	<i>Junonia coenia</i>	Crawford	Prairie du Chien	29 Aug 2004	LAF
4440	<i>Junonia coenia</i>	Dane	Madison: L. Mendota lakeshore	29-24 Oct 2004	KEJ
4440	<i>Junonia coenia</i>	Jackson	Dike 17	12 Jul 2004	SAS
4440	<i>Junonia coenia</i>	Milwaukee	Oak Creek	29 Sep 2004	JAE
4440	<i>Junonia coenia</i>	Waukesha	Kettle Moraine SF	11 Jul-30 Sep 2004	JAE
4447	<i>Euptoleta claudia</i>	Burnett	Crex Meadows	13 Jun 2004	SAS
4447	<i>Euptoleta claudia</i>	Jackson	Black River SF	1-6 Aug 2004	SAS
4447	<i>Euptoleta claudia</i>	ONEIDA	Minocqua Twp.	15 Jun 2004	LAF
4450	<i>Speyeria cybele</i>	WAUPACA	Wolf River between Hwy 54 & X	18 Jul 2004	KEJ
4452	<i>Speyeria idalia</i>	Portage	Buena Vista	2 Jul-11 Sep 2004	SAS
4466	<i>Boloria frigga saga</i>	FLORENCE	E of Long Lake	3 Jun 2004	LAF
4466	<i>Boloria frigga saga</i>	Forest	Armstrong Creek	3 Jun 2004	LAF
4471	<i>Boloria freija</i>	Price	Fifield Twp.	15 May 2004	LAF
4474	<i>Boloria characlea grandis</i>	Douglas	Summit Twp.	1 Aug 2004	KEJ
4481	<i>Phyciodes tharos</i>	Brown	Fonferek Glen County Park	7 Oct 2004	KEJ
4489	<i>Chlosyne gorgone carlota</i>	Burnett	Crex Meadows, Burnett CF	13 Jun-31 Jul 2004	SAS
4489	<i>Chlosyne gorgone carlota</i>	Jackson	Jackson County Forest	16 May-24 Jul 2004	SAS
4568.3	<i>Satyroides eurydice</i>	Brown	East River Trail	14 Jul 2004	KEJ
4568.3	<i>Satyroides eurydice</i>	Douglas	Summit Twp.	1 Aug 2004	KEJ
4568.3	<i>Satyroides eurydice</i>	WAUPACA	Wolf River between Hwy 54 & X	18 Jul 2004	KEJ
4569	<i>Satyroides appalachia</i>	Brown	NEW Zoo Reforestation Camp	18 Aug 2004	KEJ
4569	<i>Satyroides appalachia</i>	Waukesha	Lannon Swamp	9-12 Jul 2004	JAE
4583	<i>Coenonympha tullia inornata</i>	Douglas	Summit Twp.	31 Jul -1 Aug 2004	KEJ
4583	<i>Coenonympha tullia inornata</i>	MARATHON	Norrie	27 Jun 2004	LAF
4596	<i>Erebia discoidalis</i>	Price	Fifield Twp.	15 May 2004	LAF
4611	<i>Oeneis jutta ascerta</i>	Price	Fifield Twp.	15 Jun 2004	LAF
4614	<i>Danaus plexippus</i>	Brown	East River Trail	14 Jun -7 Oct 2004	KEJ
4614	<i>Danaus plexippus</i>	Dane	Madison: L. Mendota lakeshore	28 Oct 2004	KEJ
4614	<i>Danaus plexippus</i>	Waukesha	Okauchee	28 May-30 Sep 2004	JAE

MOTHS

Geometridae

6362	<i>Digrammia continuata</i>	OCONTO	Oconto	18 Jul 2004	LAF
6898	<i>Cingilia catenaria</i>	Door	Bailey's Harbor	11 Sep 2004	JJS
7216	<i>Plemyria georgii</i>	DOOR	Bailey's Harbor	14 Aug 2004	JJS

Saturniidae

7704	<i>Eacles imperialis</i>	CRAWFORD	Marietta Twp.	21 Jul 2004	LAF
7709	<i>Sphingicampa bicolor</i>	Crawford	Marietta Twp.	21 Jul 2004	LAF

Sphingidae

7775	<i>Manduca sexta</i>	Dane	Middleton	5 Sep 2004	LAF
7796	<i>Sphinx eremitus</i>	DOOR	Liberty Grove Twp.	28 Jun 2004	JJS

Collected by Sara Larsen, larva found 10 October 2003

7854	<i>Hemaris gracilis</i>	Oneida	Minocqua Twp.	15 Jun 2004	LAF
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Arctiidae

8146	<i>Ecpantheria scribonia</i>	ROCK	Turtle Twp.	17-25 Jun 2004	WEK
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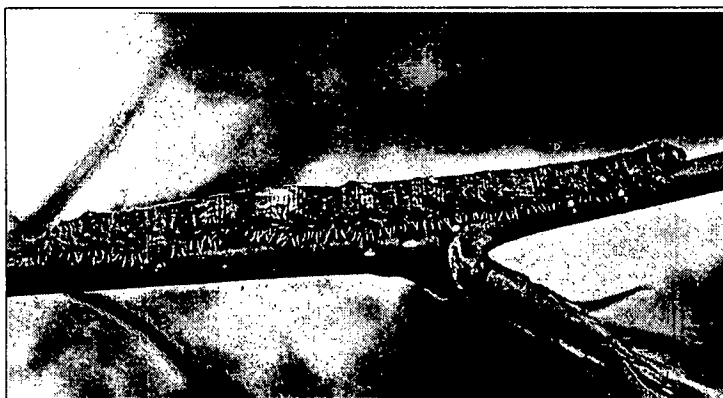
Noctuidae

8359	<i>Macrophila bivittata</i>	Oconto	Oconto	18 Jul 2004	LAF
8362	<i>Phalaenostola metonalis</i>	DOOR	Bailey's Harbor	14 Aug 2004	JJS
8368	<i>Tetanolita floridana</i>	DANE	Middleton	12 Sep 2004	LAF
8490	<i>Pangrapta decoralis</i>	DOOR	Bailey's Harbor	16 Jul 2004	JJS
8588	<i>Panopoda carneicosta</i>	CRAWFORD	Marietta Twp.	21 Jul 2004	LAF
8698	<i>Zale phaeocapna</i>	Marinette	Dunbar	6 Jun 2004	LAF
8770	<i>Catocala innubens</i>	CRAWFORD	Marietta Twp.	21 Jul 2004	LAF
8776	<i>Catocala coelebs</i>	Door	Bailey's Harbor	20 Sep 2004	JJS
8821	<i>Catocala semirelicta</i>	Door	Bailey's Harbor	21 Aug 2004	JJS
8822	<i>Catocala meskei</i>	CRAWFORD	Marietta Twp.	21 Jul 2004	LAF
8927	<i>Syngrapha epigaea</i>	Door	Bailey's Harbor	5 Sep 2004	JJS
8929	<i>Syngrapha viridisigma</i>	Door	Bailey's Harbor	4 Sep 2004	JJS

8946	Syngrapha microgamma	Price	Fifield Twp.	15 Jun 2004	LAF
9055.2	Maliattha concinnimacula	MARINETTE	Dunbar	6 Jun 2004	LAF
9055.2	Maliattha concinnimacula	ONEIDA	Minocqua Twp.	15 Jun 2004	GJB
9061	Cerma cora	Marinette	Dunbar	6 Jun 2004	LAF
9343	Apamea apamiformis	DOOR	Bailey's Harbor	27 Jul 2004	JJS
9362.1	Apamea unanims	ONEIDA	Minocqua Twp.	15 Jun 2004	GJB
STATE RECORD, introduced European species					
9362.1	Apamea unanims	SHAWANO	Jung Hemlock-Beech Forest SNA	26 Jun 2004	LAF
9398	Eremobina jocasta	DOOR	Bailey's Harbor	12 Sep 2004	JJS
9427	Meropleon diversicolor	Douglas	Solon Springs	7 Sep 2004	LAF
9429	Lemmeria digitalis	DOUGLAS	Solon Springs	7 Sep 2004	LAF
9436	Spartiniphaga panatela	Oconto	Oconto	18 Jul 2004	LAF
9443	Chortodes defecta	OCONTO	Oconto	18 Jul 2004	LAF
9483	Papaipema inquaesita	DOUGLAS	Solon Springs	7 Sep 2004	LAF
9485	Papaipema baptisiae	DOOR	Bailey's Harbor	22 Sep 2004	JJS
9486	Papaipema birdi	DOUGLAS	Solon Springs	7 Sep 2004	LAF
9524	Bellura brehmei	SHAWANO	Jung Hemlock-Beech Forest SNA	26 Jun 2004	LAF
9876	Xylena cineritia	DOOR	Bailey's Harbor	18 Apr 2004	JJS
9881	Homoglaea hircina	Door	Bailey's Harbor	24 Mar 2004	JJS
9888	Lithophane innominata	DOOR	Bailey's Harbor	3 Oct 2004	JJS
9915	Lithophane grotel	DOOR	Bailey's Harbor	27 Sep 2004	JJS
10200	Cucullia asteroides	Door	Bailey's Harbor	28 Jun 2004	JJS
10878	Richia albicosta	DANE	Middleton	19 Jul 2004	LAF
STATE RECORD, one fresh specimen at UV light					
10917	Diarsia rubifera	DOOR	Bailey's Harbor	9 Aug 2004	JJS
11063	Pyrrhia adela	DOOR	Bailey's Harbor	26 May 2004	JJS
Collected by Kay Stiefel, ex larva from garden beans					
11095	Schinia indiana	Burnett	Crex Meadows, Burnett CF	13 Jun 2004	SAS
11095	Schinia indiana	Jackson	Jackson County Forest	12 Jun 2004	SAS
11105	Schinia bina	ONEIDA	Minocqua Twp.	15 Jun 2004	LAF
Collected by Daniel Balogh					
11174	Schinia lucens	Green	Muralt Bluff Prairie	23 Jul 2004	SAS

MYSTERY INSECT

Can you identify it?



This caterpillar stands out from the rest because it has an extra set of prolegs at A5 and fringe-like, pale hairs running along the length of the lower abdomen. The ground color varies from gray to brick red, or less commonly, smoky green. Each of the tan spiracles is ringed with black. Generally the mature larva is said to be about 1-1/2 in. long, but this individual was 2 in. Send common and scientific name to the editor. Individuals with correct answers will be announced in the next issue of the WES Newsletter. 🐛



WES Membership Dues

Individual Membership
\$5.00 per year

Family Membership
\$10.00 per year

Sustaining Membership
\$15.00 per year

Patron Membership
\$25.00 per year

Please make check payable to WES and send to Les Ferge, 7119 Hubbard Ave., Middleton, WI 53562-3231.

The caddisfly (*Agapetus hessl*), a state "Special Concern" species, is the only member of its genus documented from Wisconsin. Dr. Hilsenhoff⁽¹⁾ indicates that two other species, *A. rossi* and *A. tomus*, also likely occur in the state. Records in the files of the Wisconsin Department of Natural Resources (DNR) suggest that a fourth species, *A. illini*, might also be added to the state's fauna.

While preparing a water quality management plan for the Upper Green Bay Basin, I examined a series of data sheets with the results of a northern Wisconsin field study conducted in May 1980. The DNR investigator collected aquatic insects from the Pike River and its major tributaries in Marinette County. He found larval caddisflies of the family Glossosomatidae at six of eleven sampled sites. Members of the widely distributed genus *Glossosoma* occurred at four sites. In addition, the investigator identified specimens collected at two sites (North Branch Pike River at Lily Lake Road and Little South Branch Pike River at Nutt Road) on 15 May as *A. illini*, a possible new state record.

One can easily recognize larvae of the family Glossosomatidae by their small anal claws and saddle-shaped or turtle-like cases (see accompanying figures). Identification of *Agapetus* species, however, poses a challenge; only adult males can be identified to species level with certainty⁽²⁾.⁽⁶⁾ The DNR data sheets, unfortunately, indicate neither the

THE CADDISFLY (*Agapetus illini*) in Wisconsin?

Dreux J. Watermolen

sex nor the identifying characteristics used by the investigator, and voucher specimens are no longer available to confirm his identification.

The genus *Agapetus* occurs rarely in northern Wisconsin⁽¹⁾, and *A. illini* has previously been reported only from Arkansas, Kansas, Missouri, Oklahoma, Illinois, Indiana (where the state considers it a threatened species), Kentucky, and the Great Smoky Mountains National Park^(2,8,9). Nevertheless, Hilsenhoff and his colleagues⁽³⁾ reported collecting unidentified *Agapetus* from the nearby Pine-Popple River system. The possibility that these were *A. illini* should not be dismissed without further investigation. *Agapetus* has a very low tolerance for organic pollution^(4, 5) and occupies only cool or cold streams^(6, 7). The field data sheets indicate the investigator noted excellent water quality at both collection sites and biotic index values⁽⁴⁾ confirm that perception.

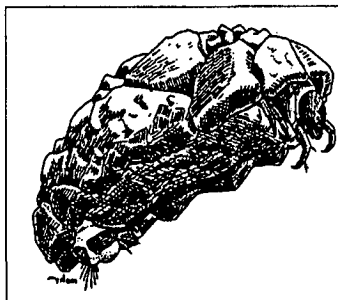
Even though the investigator was a competent field biologist, the possibility of misidentification cannot be overlooked, especially

since the identifications were based on larvae. Therefore, we should not consider *A. illini* a component of Wisconsin's fauna at this time. Investigators working in northern Wisconsin streams with excellent water quality, nonetheless, should be on the look out for additional *Agapetus* specimens. Such collections could help further delineate the Wisconsin distribution of this genus and might shed light on this interesting, but questionable, occurrence. ❀

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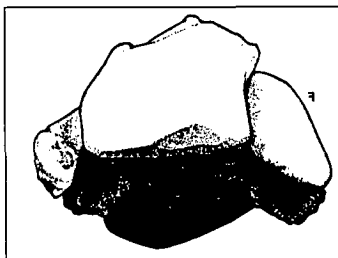
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Glossosoma intermedium, a widespread member of the family Glossosomatidae (from Ross, 1944)



Glossosomatid larva, lateral view (from Wiggins 1996)



Larval case of *Agapetus* sp., lateral view (from Wiggins 1996)

The European Corn Borer (*Ostrinia nubilalis*) came to America in 1917, in an unusual way, not hitch-hiking in corn at all. Instead this small moth came in brooms made in Hungary and Italy. How is that possible? Brooms are made from broomcorn sorghum, a relative of corn and one of the borers' many foods. The pupae of the moths were hidden in the straws of the brooms. Apparently, the boat ride to the US was pleasant.

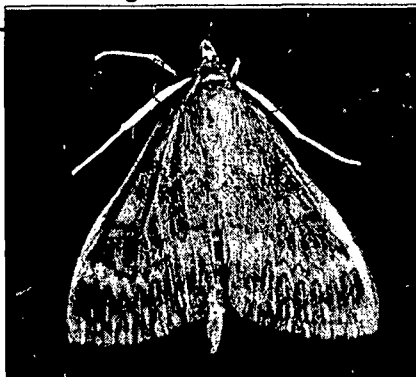
The moths emerge from their over-wintering pupae in May and June and fly to a nearby field to lay about twenty eggs in a quarter-inch white mass per leaf. In about a week, the eggs turn dark and the hatchlings move out as first instar larvae or borers. About every two weeks a larvae sheds its skin and passes through second, third, and fourth instar stages. The borer is fully grown by the fifth instar stage and pupates in the stalks and leaves. The second brood moths emerge from the pupae in July and August and they flit and flirt in the weeds along the cornfields.

These summer moths mate and then the females lay eggs that become the second generation. Even a third generation is possible if the weather is favorable for a longer growing season. These larvae can over-winter as borers that do not pupate until spring. So you see, a few adult moths can cause a large population of borers since each female can lay over 500 eggs in her short lifetime.

Borers get around, with all those legs, and can bore into the tassels, the ears, the ear shanks, and the stalks. The plant is weakened and produces fewer ears of corn with smaller kernels. However, cooler-than-normal temperatures can chill any ovipositor in the first brood. In the second generation, if the weather is hotter-and-drier than usual, a *Beauveria* fungus often dines on and in the

THE MOTH THAT EATS CORN

by Linda Curtis



European Corn Borer adult
(*Ostrinia nubilalis*)

Photo: Janice Stiefel, 7/20/04

larvae, covering it with a cottony white mass. It's not easy being a moth-er of a borer. The female lays her eggs, but now scouts (people) walk the cornrows and look for the egg masses. With a formula based on the number of eggs per plant, the scouts estimate the amount of insecticide the farmer could apply to the corn field. "Could apply" is a key phrase here, because pesticides are expensive and cost-benefit analysis is studied before making that decision to spray.

If the eggs have already hatched, scouts look for tiny but shiny "windows" in the leaves created when the first instars feed on



European Corn Borer Larva
inside cornstalk
Forestry Images Website

just the epidermis and mesophyll layer, but can't eat all the way through the leaf yet. After that breakfast, they have enough strength to chew into a leaf, tunnel down a vein, then eat their way down the stem. If they make it. A good rainstorm can knock them off, as will stiff

winds. Hot weather can dry them up if they don't squirm on down the leaf whorl soon enough. Yes, life is tough in the borers struggle of life. But still, population-wise, borers are successful because they can eat over 230 species, including cotton, some vegetables, and weeds alongside the fields. But corn of all kinds are their favorites, popcorn, seedcorn, sweet-

corn, as well as sorghum raised for bird food and brooms. So the scouts are checking other crops as well, looking for other clues of the borers presence.

One is "Shotholes," which are small holes eaten entirely through the middle of a leaf, but not toward the tips. The middle of the leaf is a bad place for borer tunnels because the leaf will break easily in the wind or rain. A scout may slit the corn midrib and find the borer, easily identified by their black head and light-colored body. The other sign that trained scouts and entomologists can spot before any one else is frass...the tiny particles of excrement. Ahah!

Good news is the borers do not feed on seedling plants. The bad news for farmers is: there are a lot of other insects that do. So, is it borers: 10 and humans: 0 in the game card of life? Not in our generation. The humans have struck back in an unprecedented manner. Instead of applying insecticide to the plants, the plants are genetically modified with a gene from Bt, the bacterium that kills the borer stage. So borer eats, and borer dies. No next generation. The process of gene-transfer in the making of Bt corn is called biotechnology. The transgenic crop or GMO is a genetically modified organism that is patented and carefully controlled so farmers will not save the seed for the next season of planting. The concern over GMO's may be outpaced by farmers in the US, Canada, China and Argentina who are increasingly planting the new corn hoping to raise yields yet reduce pesticide costs. While cultural controls, such as burning the stalks or plowing them under, does reduce local over-wintering corn borer populations, the moths still can fly in from other fields. Our native lady beetle, *Coleomegilla maculata*, is a natural predator on the egg masses. In some areas, wasps such as *Eriborus terebrans* and *Macrocentrus granti* parasitize the 2nd to 4th instar larvae. 🌻

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Wisconsin Entomological Society

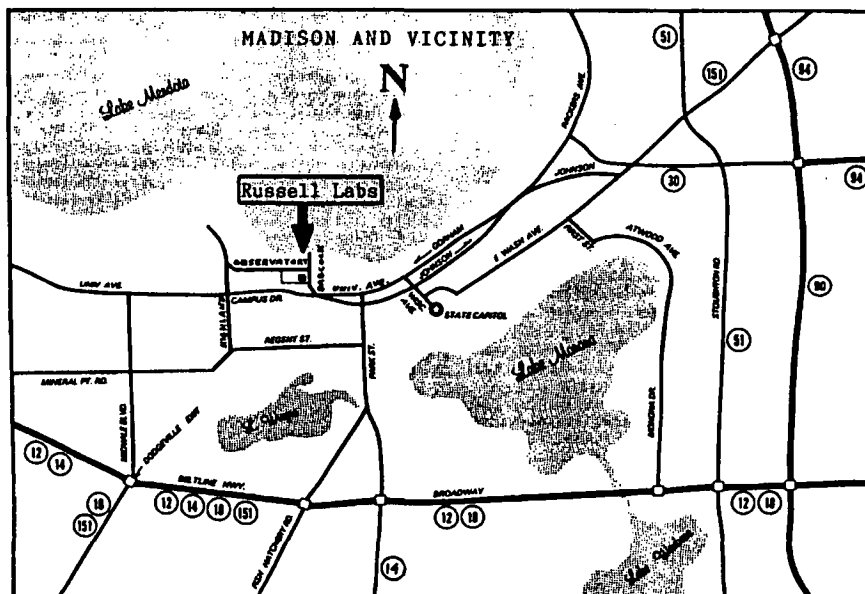


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Address Correction Requested

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**DIRECTIONS TO RUSSELL LABS
MADISON, WISCONSIN**



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