

Mohme 28, Number I

# UPDATE ON THE REGAL FRITILLARY IN WISCONSIN

spectacular Regal he Fritillary (Speyeria idalia) was listed in Wisconsin as threatened in 1989 and endangered in 1997. My husband, Scott Swengel, and I have surveyed Regal populations here each year since 1990. We also conducted a companion study in five other states (Illinois, Iowa, Minnesota, Missouri, and North Dakota) from 1990 through 1999. In the latter three states, many large Regal populations occurred, allowing us to learn more quickly (or at all) many interesting relationships to habitat character-

istics and management that would be very difficult to demonstrate only with the few populations in Wisconsin.

From our surveys, others' reports (published in this newsletter), informal tips, and the DNR's statewide status survey in 1993 and 1994, the Regal Fritillary was known to exist

during the 1990s as a population (multiple individuals seen in the site on multiple dates) at only six sites or clusters of sites: Buena Vista (Portage County), Hogback (Crawford), Muralt/Oliver\* by Ann Swengel

(Green), Pine Island\* (Columbia), Thomson/Barneveld (Iowa), and Waterfowl Production Area(s)\* (St. Croix). Only the three starred areas have records known from before the 1990s, and the three largest known populations today do not have records from before the 1990s. It's all but impossible to piece together the very long-term picture of the Regal's distribution and trend in Wisconsin. If even half the effort in the 1990s to find and publish Regal records had occurred in earlier decades. how many more populations would have been found

then? We'll never know. But we can use what we know now to help improve the future outlook for this species in our state.

We started surveys at Muralt and Oliver in 1990, as well as at the first tract acquired at the Thomson preserve ("site 1"), where we discovered the first Regal for this area. Unfortunately, another initial research finding was

the disappearance of the population at Spring Green. In 1992, we started surveys at Hogback and the later land acquisition at Thomson ("site 2"), after others discovered Regal



NEXTON

Regal Fritillary (Speyeria idalia) Photo: Ann Swengel, 6/17/97

populations in these places. We started surveys at Pine Island in 1993 but found no Regals until 1995, when we recorded populations at two sites.

In 1997, Scott was determined to search for Regals at Buena Vista. It has the factors most strongly associated with higher Regal numbers in our multi-state study (very large grassland size, presence of wetter and drier grassland types, and unintensive management by light grazing and/or having, with any burning in small, scattered, and infrequent fires). My ornithologist husband also noticed that sites with larger Regal populations also had better bird-watching, and Buena Vista has an outstanding avian community. Still, I thought he was crazy to expect Regals there, because Regals are prairie butterflies. should have trusted my own analyses! Poetically, I found the first Regal-a feeling I will treasure for the rest of my life. Apparently, Regals Please see, Regals, Page 2

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, 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



**Regal Fritillary** (closed position) Photo: Ann Swengel, 6/18/92

#### <u>Wisconsin Entomological Society Newsletter — March 2001</u>

# 2001 Dues Notice!

**Th** collection envelope is Aenclosed with this newsletter, for the convenience of members who haven't paid their dues for 2001, No envelope is provided if you are paid up for 2001 or beyond. Please check the address label on this newsletter for your current dues status. Send check to our treasurer, Tom Rocheleau, 3100 Buena Vista St., Madison, WI 53704. Also appearing after your name will be your membership category (Individual, Family, Sustaining, or Patron). Be sure to notify us of any address changes when you send in your check or you may notify Les Ferge (address given at the bottom of page 1). V

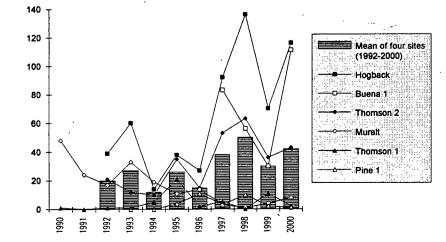
#### Regals, from Page 1

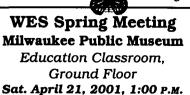
define prairie somewhat differently than humans do. Meanwhile, Jim Margenau and his students re-discovered Regals in St. Croix County at large but certainly not pristine grasslands. The figure shows the highest survey counts of Regals at each site still supporting a Regal population that we've monitored for at least four years. We used the same survey route each year (except we expanded the route at Pine Island when we found Regals there). All surveys occurred with no rain, and either a minimum temperature of 68°F or a minimum of 20% sunshine with a minimum temperature of 60°F. We surveyed sites several times each flight period, but couldn't do weekly surveys at each site (which would ensure hitting near peak numbers) because we had other things to do (like work) and too many sites to check, at least in minimally acceptable weather. So we aimed to survey each site in the main flight period, not specifically peak, since it's hard to know exactly when peak is until after it's passed.

But we've mostly come fairly close to peak anyway. For 90% of the populations in the figure (i.e., each site in each year), a survey occurred within seven days before or after the date on which we observed the most Regals anywhere in the state (i.e., our observed peak date). In the other 10%, surveys occurred within 11 days before to 15 days after the peak date. Since about 3 weeks (or more) typically pass between first Regal adult and peak week, and then usually about 4-5 (or more) weeks after that to last adult, Numbers are high for a fairly broad period of 1-2 weeks before and after peak week.

The most obvious thing about the graph is how tangled and erratic the lines are. Some of this is due to the vagaries of when we got our highest count relative to weather and flight period timing at a given site. But a lot of this looks like the abundance fluctuations discussed so much by the British, from their widespread long-term butterfly surveying. The bar graph imbedded amongst the lines for individual sites shows the average number of Regals recorded at the four sites surveyed each year from 1992 to 2000.

Unfortunately, considerable population decline occurred at Muralt, where the entire habitat has been rotationally burned since the 1970s, with about 10-40% burned



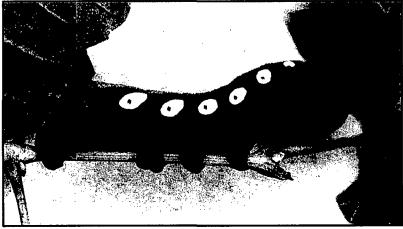


Please check in at the information desk on the main concourse. Anyone who wishes to visit the collections or borrow material should contact the appropriate curator in advance: Lepidoptera-Carla Penz: email flea@mpm.edu, 414-278-6936; Other Insects-Gary Noonan: email carabid@mpm. edu, 414-278-2758; Non-insect Invertebrates-Joan Jass: email jass@mpm.edu, 414-278-2761. The meeting will include an overview and tour of the Puelicher Butterfly Garden, as well as election of officers. Please forward nominations to Phil Pellitteri: email pellitte@ entomology.wisc.edu, 608-262-6510. 📽

per year during our study period, except for no fires in 1990, 1993, 1998, and 2000. Our highest survey totals occurred in 1990 and 1993, with very low numbers from 1997 to 1999, but an encouraging (if small) increase in 2000. I didn't graph Oliver, where Bob Borth reported a consistent population in this newsletter in 1992, because we found 1-4 individuals on five dates in 1991. 1993, and 1994, and none since (1995-2000). This tiny prairie near Muralt was entirely burned in 1989, 1992, 1997, and 2000. I also left out Pine Island (site 2), where we recorded a population in 1995 and 1996 but no Regals in summer 1997-2000, following fires that burned this entire habitat in spring 1997 and again in 1998. A population still occurs, but is small and precarious, at Pine Island (site 1), which has recently been entirely burned over with partial fires in 1995, 1997, and 1999. Over the years, we have communicated with the owning agencies and managers of these sites, and remain hopeful for wider implementation of the excellent Regal management information Please see. Regals, Page 5



## **2000 PHOTO SALON WINNERS**



Pandorus Sphinx Moth Larva (Eumorpha pandorus) FIRST PLACE Janice Stiefel, Bailey's Harbor, WI—Photographed 8/31/00 Found on Wild Grape by Scott Randall in Glenbeulah, WI



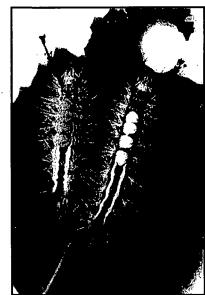
Unidentified Cupmoth Larva <u>SECOND PLACE</u> Gene Drecktrah, Oshkosh, WI Photographed: 1980 Montrose, Australia



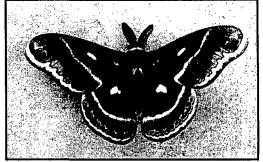
Pygmy Snaketail (Ophiogomphus howei) HONORABLE MENTION Karl Legler, Sauk City, WI Photographed: 6/00 Burnett Co. Threatened Species in Wisconsin



The Herald Moth (Scollopteryx libatrix) <u>HONORABLE MENTION</u> Janice Stiefel, Bailey's Harbor, WI Photographed: 7/31/00 Door Co.



White-Marked Tussock Larvae (Orgyia leucostigma) <u>THIRD PLACE</u> Janice Stiefel, Bailey's Harbor, WI Photographed: 8/9/00; 36 days old



Columbia Silkmoth (Hyalophora columbia) FOURTH PLACE Janice Stiefel, Photographed: 6/6/00 Door Co. (First time recorded from Door County)

#### **Photo Notes:**

The White-Marked Tussock Moth Larvae were raised from an egg mass that was found in Elkhart Lake, WI 10/20/99. The eggs were thought to be those of the Gypsy Moth. Eggs were over-wintered in a refrigerator, brought out in early June 2000 and hatched on 7/4/00. The four tufts on the left larva are bright yellow, whereas the tufts on the right are bright white. Obviously their coloration is variable, even if they are siblings.

The Pandorus Sphinx larva was transported from Glenbeulah (Sheboygan Co.) to Bailey's Harbor (Door Co.) by WES members, Therese & Scott Randall. They felt it was worth a 3 hr. trip, just to be photographed. The color is a brilliant rust-orange. Note how the small black spiracles (breathing holes) are ringed by cream-colored circles; except for the one at the rear.  $\Im$ 

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# **One Day in May**

by Anita Carpenter

Finally, a sunny day in May coincided with a day off work so I coaxed my husband, Jerry, into making our annual pilgrimage to the Necedah National Wildlife Refuge in Central Wisconsin. I wanted to renew my acquaintance with spring in the central sands region and to see what butterflies were flying.

We arrived about 10:30 A.M. While Jerry stayed near the car, I walked along the road. Blue spikes of Wild Lupine were in full bloom, as were the lavender blossoms of the earth-hugging Bird's-Foot Violet. The easily-overlooked Rock Cress, with its diminutive, four-petaled white flowers, were everywhere. Scattered clumps of Yellow Puccoons punctuated the greening landscape. A little flock of Black-Capped Chickadees flitted and chitted about the oaks. But where were the butterflies? I strolled for half a mile. Not a butterfly, not an insect, was to be found. I thought: "This is really strange. I've always observed butterflies here. Perhaps we should travel to some other place to try to find some."

Then the atmosphere began to take on a weird feeling. The light began to fade. A solar eclipse was underway! I had forgotten all about it. I grabbed two pieces of paper and poked a pinhole in one to let the fading sunlight shine through onto the second sheet so that the image of the moon crossing the sun was visible. I looked around and realized that I didn't need paper. Thousands upon thousands of identical images were projected through minute holes in tree leaves onto the road, tree trunks, other leaves, and the car.

As the moon cast its darkening shadow upon the earth, the remaining daylight became more eerie and surreal. It was now twilight at noon. One could understand how ancient peoples might think the world was coming to an end. Nothing stirred-not a bird, not a tree leaf, not a whisper of wind. We ate lunch in a strange half-light.

After about 11/2 hours, the moon reached its maximum coverage of the sun and moved off to the right. The Photos: Anita Carpenter, Necedah National Wildlife Refuge, 5/10/94



daylight grew brighter. By now, we decided that it was too late to go some-

where else. If

**Eastern Pine Elfin** (Callophrys niphon)

nothing else happened, we had enjoyed the eclipse, scenery and solitude.

I walked along the road again. Although daylight seemed back to normal, still nothing moved. Then, as if on cue, nature's music makers broke the silence. Northern Leopard

Frogs croaked, trying to out-duel trilling American Toads. Rose-Breasted Grosbeaks broke into song as did the Robins. Bluebirds bubbled, Yellow Warblers lilted, Baltimore Orioles chortled. Least Flycatchers "che-becked,' Downy Wood peckers chipped, Song Sparrows warbled, and

Henry's Elfin (Callophrys henrici)

Chickadees "chick-a-dee-deed." Song surrounded me. I was listening to dawn's avian chorus at 1:30 P.M.! I had never heard so much joyous bird sound in the early afternoon before. It lasted about fifteen minutes, then tapered off.

A slithering Eastern Garter Snake stirred the dry oak leaves. Instantly, as if the theory of



Brown Elfin (Callophrys augustinus)

spontaneous generation was for real, butterflies were everywhere basking on the sandy, dirt road. They were so abundant I didn't know which one to look at or photograph first. Identifying the tattered American Ladies was easy but, oh, those Duskywings. Several male and female Juvenal Duskywings basked, as did a

smaller male Persius Duskywing. A few Spring Azures laterally basked, soaking up the warmth as did three Elfin species. I had seen Eastern Pine Elfins here before, so they weren't unexpected but today the Brown Elfin was a surprise. And to top that, a short time later, I saw my

> first and, to date, my only Henry's Elfin. It was so cooperative it even perched on my index finger and posed for a picture. Several white with green-veined Olympia Marbles nectared on Rock Cress as did one Mustard White. Butterfly activity was intense for about an hour. I was running back

and forth on this fifty meter stretch of road, chasing butterflies. I was in heaven. This was glorious.

Dragonflies darted about. One landed nearby. I took its picture. Time flew. I did not want to leave the refuge that day. I felt that I had experienced something special. If I hadn't witnessed it for myself, I Please see, One Day in May, Page 5

2000 WISCONSIN LEPIDOPTERA SEASON SUMMARY Coordinator: Leslie A. Ferge

s in the previous two years, the 2000 season began early RJB following a mild winter, JAE phenologically not as early as 1998 but CBF earlier than 1999. Ferge documented LAF early records of several species of JCP hibernating Noctuidae (Eupsilia and TR Lithophane species) on 25 February in MS Rock County, found spring emerging Noctuidae and Geometridae in early SAS March in Jackson County, but experienced a slowdown due to cold

conditions in May. Summer temperatures were unremarkable, but rainy conditions were prevalent in some areas. The season lasted well into fall, with mild periods allowing moth activity to persist into early November. Sabourin noted a generally mild season in northwestern Wisconsin, but not as humid as the past three years. The Swengels reported a good season for migrants, but not as good as 1999. They reported *Junonia coenia* in many sites, with the first sighting in Sauk County on 7 May. *Euptoieta claudia* was seen in Burnett, Crawford, Jackson, Portage and Sauk Counties, from early June through August. *Strymon melinus* and

## One Day in May, from Page 4

never would have imagined the profound effect a solar eclipse has on nature. The "false night" with its eerie stillness had triggered the "false dawn" with its incredible burst of song and activity. From its quiet, inauspicious beginning to its unbelievable conclusion, this one day in May was extraordinary. It has been the most memorable day I've spent in the field.

But the excitement of "the day of the solar eclipse" was to resurface four years later. Remember the picture of that dragonfly? I was just beginning to study and identify dragonflies, so just by pure serendipity, I had taken this one's picture. I couldn't identify the individual and cataloged the slide as "unidentified." I had no idea that that photograph would eventually become the first recorded documentation for a newly discovered, early-flying dragonfly species in Wisconsin. The species, which was subsequently discovered and identified by Karl Legler, was the Ringed Bog Haunter (Williamsonia lintneri). I couldn't believe my luck. I had been in the right place, at the right time, under the right conditions. What a day! ඊ

Anita, a WES member, is a pharmacist in Oshkosh, WI. But her real passion is nature. She explores, photographs, writes, and speaks on the subject. For 20 years she has written her "Badger Tracks" nature column in the local Audubon chapter newsletter is a regular contributor to Wisconsin Natural Resources Magazine---writing on everything from atmospheric optical phenomena to insects.

#### Regals, from Page 2

described in the Bureau of Endangered Resources' June 1999 report (PUB-ER-085-99), "The Endangered and Threatened Invertebrates of Wisconsin." The DNR has shown increased interest in developing management protocols appropriate for rare butterflies, which will be good news for butterflies where implemented.

Results are hopeful at the larger populations. At Thomson 2, half the site was burned in spring 1992, with steadily decreasing areas burned in 1995 and 1997, and the smallest fire in 1996. While the 1995 fire reduced the never-burned area to about 30% of the habitat, this area (where we record most of the Regals) has not decreased further since. Increased Regal numbers at this site also appear

Eurema lisa were also reported from several localities, extending into central Wisconsin. Monarchs were seen from 15 May through 1 November, arriving as early as last year but persisting a bit later. A significant number of stray or migrant moth species were collected, including Tetanolita mynesalis, Anticarsia gemmatalis, Ctenoplusia oxygramma, Magusa orbifera, Euxoa auxiliaris, Condica sutor and Agrotis subterranea, the latter two being new

state records taken at bait in early November. 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

Forest NWR=National Wildlife Refuge orest SFA=State Fishery Area SNA=State Natural Area

SUMMARY begins on Page 6

associated with areas of brush clearance, done by dedicated volunteers. Hogback has had a relatively large population both when it was private farmland with light cattle grazing and after grazing removal upon becoming a Nature Conservancy preserve. Brush cutting but no burning has since occurred (through summer 2000). In recent years, the Nature Conservancy has invested considerable resources in Regal surveys and an evolving approach to habitat management. Most heartening is the widespread distribution and areas of localized abundance of Regals at Buena Vista. Since 1992, only about 5% of this site was burned per year in scattered patches, while about 7% per year was cattle grazed, and lesser amounts subject to having and brush control. The patterns of Regal numbers relative to site management in our Wisconsin surveys are consistent with our studies elsewhere and with the BER report. T

Ann is vice-president of the North American Butterfly Association (NABA) and a member of WES. She and her husband, Scott, enthusiastically survey butterflies and have published a number of scientific papers on their observations.



2000 SUMMARY							
MONA No.	Species Name	County	Locailty	Date 1	Date 2	Contr.	
	BUTTERFLIES						
3954	Erynnis martialis (Scudder, 1869)	Burnett	Burnett CF & Crex Meadows	25 May 2000	27 Jul 2000	SAS	
3954	Erynnis martialis (Scudder, 1869)	Burnett	Namekagon Barrens	11 Aug 2000		JCP	
3958	Erynnis lucilius (Scudder & Burgess, 1870)	Grant	Cassville	23 Jul 2000		JCP	
4006	Oarisma powesheik (Parker, 1870)	Waukesha	Kettle Moraine SF	5 Jul 2000		JAE	
4013	Hylephila phyleus (Drury, [1773])	Grant	Jamestown Twp.	3 Sep 2000		LAF	
4013	Hylephila phyleus (Drury, [1773])	JACKSON	Black River SF/Jackson CF	20 Jul 2000		SAS	
4013	Hylephila phyleus (Drury, [1773])	Waukesha	Llachaels Desirie	5 Sep 2000	19 Oct 2000	JAE	
4022 4023	Hesperia ottoe W. H. Edwards, 1866 Hesperia leonardus leonardus Harris, 1862	Crawford	Hogback Prairie	4 Jul 2000		SAS	
4023	Hesperia leonardus leonardus Harris, 1862	Burnett Douglas	Namekagon Barrens Solon Springs Barrens SNA	11 Aug 2000 11 Aug 2000		JCP	
4023	Hesperia leonardus leonardus Harris, 1002	Jackson	Black River SF/Jackson CF	8 Aug 2000		SAS	
4023	Hesperia leonardus leonardus Harris, 1862	Portage	Buena Vista Marsh	22 Aug 2000		SAS	
4023	Hesperia leonardus leonardus Harris, 1862	Wood	Highway X	23 Aug 2000		SAS	
4027	Hesperia metea Scudder, 1864	Jackson	Bauer Brockway Barrens	2 May 2000		SAS	
4042	Polites origenes (Fabricius, 1793)	Waukesha	Kettle Moraine ŚF	15 Jul 2000		JAE	
4058	Poanes massasoit (Scudder, 1864)	COLUMBIA	French Creek Wildlife Area	15 Jul 2000		LAF	
4064	Poanes viator (W. H. Edwards, 1865)	COLUMBIA	French Creek Wildlife Area	15 Jul 2000		LAF	
4072	Euphyes dion (W. H. Edwards, 1879)	Douglas	Summit Twp.	2 Aug 2000		LAF	
4075	Euphyes conspicua (W. H. Edwards, 1863)	COLUMBIA	French Creek Wildlife Area	15 Jul 2000	·	LAF	
4075	Euphyes conspicua (W. H. Edwards, 1863)	Waukesha	Kettle Moraine SF	9 Jul 2000		JAE	
4080 4080	Atrytonopsis hianna (Scudder, 1868)	Burnett	Burnett CF, Crex, Danbury	25 May 2000	0.1.0000	SAS	
4080	Atrytonopsis hianna (Scudder, 1868) Amblyscirtes hegon (Scudder, 1864)	Jackson	Black River SF/Jackson CF	15 May 2000	6 Jun 2000		
4184	Eurytides marcellus (Cramer, 1777)	Douglas WAUKESHA	Oakland Twp. Okauchee	8 Jun 2000 9 Jun 2000		JCP JAE	
4195	Pieris oleracea Harris, 1929	Douglas	Summit Twp.	2 Aug 2000		LAF	
4195	Pieris oleracea Harris, 1929	Marathon	Norrie	20 May 2000			
4195	Pieris oleracea Harris, 1929	Waukesha	S of Eagle	27 Apr 2000		JAE	
4237	Eurema lisa (Boisduval & LeConte, 1829)	Crawford	Prairie du Chien	24 Jul 2000		JCP	
4237	Eurema lisa (Boisduval & LeConte, 1829)	Grant	Jamestown Twp.	3 Sep 2000		LAF	
4237	Eurema lisa (Boisduval & LeConte, 1829)	Jackson	Black River SF/Jackson CF	18 Jul 2000		SAS	
4237	Eurema lisa (Boisduval & LeConte, 1829)	Portage	Buena Vista Marsh	7 Jun 2000	22 Aug 2000	SAS	
4237	Eurema lisa (Boisduval & LeConte, 1829)	Sauk	International Crane Foundation	26 Aug 2000		SAS	
4237	Eurema lisa (Boisduval & LeConte, 1829)	Waukesha	Okauchee	11 Jul 2000		JAE	
4248 4249	Nathalis iole Boisduval, 1836	Crawford	Prairie du Chien	23 Jun 2000	24 Jul 2000	JCP, LAF	
4249	Feniseca tarquinius (Fabricius, 1793) Feniseca tarquinius (Fabricius, 1793)		Foster Twp.	7 Aug 2000			
4249	Feniseca tarquinius (Fabricius, 1793)	Douglas Jackson	Summit Twp. Jackson County Forest	2 Aug 2000 7 Aug 2000		LAF LAF	
4261	Lycaena dorcas (W. Kirby, 1837)	Iron	Oma Twp.	3 Jul 2000		LAF	
4261	Lycaena dorcas (W. Kirby, 1837)	Lincoln	Harrison Twp.	1 Jul 2000		LAF	
4318	Mitoura grynea (Hubner, [1819])	Grant	Cassville	23 Jul 2000		JCP	
4318	Mitoura grynea (Hubner, [1819])	WAUKESHA	Kettle Moraine SF	3 Jun 2000		JAE	
4325	Incisalia irus (Godart, 1824)	Jackson	Black River SF/Jackson CF	2 May 2000		SAS	
4325	Incisalia irus (Godart, 1824)	Wood	Highway X	26 Apr 2000	23 May 2000	SAS	
4326	Incisalia henrici (Grote & Robinson, 1867)	Jackson	Black River SF/Jackson CF	2 May 2000		SAS	
4326	Incisalia henrici (Grote & Robinson, 1867)	Wood	Highway X	3 May 2000		SAS	
4336 4336	Strymon melinus Hubner, [1818]	Dane	UW-Madison Campus	2 Nov 2000		LAF	
4336	Strymon melinus Hubner, [1818] Strymon melinus Hubner, [1818]	Grant Jackson	Jamestown Twp. Black Birgs SE Jackson CE	3 Sep 2000	9 410 2000		
-550	one individual on each date	Jackson	Black River SF/Jackson CF	23 May 2000	8 Aug 2000	SAS	
4336	Strymon melinus Hubner, [1818]	Sauk	International Crane Foundation	6 Jul 2000		SAS	
4336	Strymon melinus Hubner, [1818]	Waukesha	Oconomowoc	12 Oct 2000	18 Oct 2000	JAE	
4360	Hemiargus isola (Reakirt, 1866)	Burnett	Burnett County Forest	27 Jul 2000		SAS	
4372	Glaucopsyche lygdamus couperi Grt., 1873	Bayfield	Moquah Barrens	8 Jun 2000		JCP	
4372	Glaucopsyche lygdamus couperi Grt., 1873	Waukesha	Kettle Moraine SF	27 Apr 2000	6 May 2000	JAE	
4375	Lycaeides melissa samuelis Nabokov, 1944	Adams	Lake Arrowhead	22 Jul 2000		JCP	
4375	Lycaeides melissa samuelis Nabokov, 1944 earliest date recorded for summer brood in WI	Juneau	Necedah NWR	9 Jul 2000		SAS	
4375	Lycaeides melissa samuelis Nabokov, 1944	Marquette	Observatory Hill SNA	2 Aug 2000		JAE	
4375	Lycaeides melissa samuelis Nabokov, 1944	Wood	Highway X	16 May 2000	23 Aug 2000	SAS	
4376	Plebejus saepiolus (Boisduval, 1852)	Bayfield	Comucopia	30 Jun 2000	20 mg 2000	JCP	
4391	Calephelis muticum McAlpine, 1937	Marquette	Chaffee Creek	2 Aug 2000		SAS	
4422	one individual photographed, not found on 17 Jul Polygonia satyrus (W. H. Edwards, 1869)			10 Aug 2000			
4422 4423	Polygonia satyrus (W. H. Edwards, 1009) Polygonia faunus (W. H. Edwards, 1862)	Oneida Douglas	Minocqua Twp. Oakland Twp.	10 Aug 2000		LAF JCP	
4435	Vanessa cardui (Linnaeus, 1758)	Portage	Buena Vista Marsh	8 Jun 2000 5 Jul 2000		SAS	
.4435	Vanessa cardui (Linnaeus, 1756)	Waukesha	Ducha Visla IVIAISII	24 Aug 2000	30 Sep 2000	JAE	
4440	Junonia coenia Hubner, [1822]	Adams	Big Flats	18 Jun 2000	JU JAP 2000	LAF	
	· • •		<b>•</b>			u	

STATE RECORD, eastern range extension       3114       Eucosma landana Kearfott, 1907       BURNETT       Crex Meadows       29 Apr 1999       MS         3114       Eucosma landana Kearfott, 1907       BURNETT       Crex Meadows       29 Apr 1999       MS         3445       Acleris minuta (Robinson, 1869)       Douglas       23 Sep 2000       MS         3445       Acleris minuta (Robinson, 1869)       Douglas       23 Sep 2000       MS         reared from late instar larvae collected 4 Sept. on bog rosemary (Pyralidæ)       6041       Coenchroa bipunctella (B. & McD., 1913)       BURNETT       Grantsburg       25 Jun 2000       MS         STATE RECORD, possibly first interior US record of this Atlantic & Gulf Coastal Plain species (Geometridæ)       6256       Archiearis infans (Moschler, 1862)       DOOR       Bailey's Harbor       2 Apr 2000       LAF         6256       Archiearis infans (Moschler, 1862)       Oneida       Minocqua Twp.       25 Mar 2000       LAF         6321       Miacaria truncataria (Walker, 1862)       Marathon       Norrie       20 May 2000       CBF         6449       Glena cribrataria (Guenee, 1858)       JACKSON       Jackson County Forest       3 Jun 2000       LAF         6639       Eufidonia discospilata (Walker, 1862)       Marathon       Norrie       20 May 2000	Mona No.	Species Name	County	Locailty	Date 1	Date 2	Contr.
Autoria cosina Hubbrer, [1822]         Crawford         Praise ou Crien         23 Jun 2000         JCP (AF           4440         Junchia cosina Hubbrer, [1822]         Grant         Jamesticown Tropo,         3 Sap 2000         Junchia cosina Hubbrer, [1822]         Sak K           4440         Junchia cosina Hubbrer, [1822]         Sak Croix         Winkeemin         7 Jun 2000         22 Aug 2000         SAS           4440         Junchia cosini Hubbrer, [1723]         Burnett         Croix Wol Roberts         7 Jun 2000         24 Oci 2000         SAS           4440         Junchia cosini Hubbrer, [1773]         Grant         Hamaticown Trop         3 Sag 2000         SAS           4441         Explanda Hubbrer, [1775]         Grant         Hamaticown Trop         3 Sag 2000         SAS           4447         Explanda Hubbrer, [1775]         Grant         Hamaticown Trop         3 Sag 2000         SAS           4447         Explanda Hubbrer, [1775]         Grant         Hamaticown Trop         3 Sag 2000         SAS           4447         Explanda Hubbrer, [1775]	AAA0	Junonia coonia Hubner (1822)	Columbia	Pine Island Wildlife Area	23 Jul 2000		SAS
4440         Juncis acosti Hubrer, [1822]         Grant         Juncis acosti Hubrer, [1822]         Grant         Juncis acosti Hubrer, [1822]         Partupe         Burer Autos Marsh         7, Juncis acosti Hubrer, [1822]         Walkers         Yuncis acosti Hubrer, [1822]         Suncis acosti Hubrer, [1822]         Walkers         Yuncis acosti Hubrer, [1822]         Yuncis acosti Hubrer, [1822]         Yuncis acosti Hubrer, [173]		· • •				•	
4440         Juncit costs Hubner, 1822]         Jasson         Black River SF/Jackson CF         13 Jul 2000         SAS           4440         Juncinis costs Hubner, 1822]         Portage         Blueral Vista Mersh         22 Jul 2000         SAS           4440         Juncinis costs Hubner, 1822]         Portage         Blueral Vista Mersh         22 Jul 2000         SAS           4440         Juncinis costs Hubner, 1822]         Su Care Number         7 Jul 2000         ASS           4440         Juncinis costs Hubner, 1822]         Su Care Number         7 Jul 2000         SAS           4440         Juncinis costs Hubner, 1822]         WCOD         Highway X         19 Jul 2000         SAS           4441         Exptotes claudia (Creme, 1775)         Burnett         Crew Mastows         27 Jul 2000         SAS           4447         Exptotes claudia (Creme, 1775)         Grant         Juncetomation         3 Jun 2000         22 Aug 2000         SAS           4447         Exptotes claudia (Creme, 1775)         Saku         Hernational Craw Foundation         3 Jun 2000         SAS           4452         Speprini dials (Dury, 1773)         Calurbia         Printe 4 Jul 2000         SAS           4452         Speprini dials (Dury, 1773)         Calurbia         Printer 4 Jul 2000 </td <td></td> <td></td> <td></td> <td>•</td> <td>•</td> <td></td> <td>SAS</td>				•	•		SAS
Juncia cosa itubrar: [1522]         Marathon         Wassau         16 Sep 2000         JUP           4440         Juncia cosa itubrar: [1522]         Sauk         International Crane Foundation         7 May 2000         2.4 Qct 2000         SAS           4440         Juncia cosa itubrar: [1522]         Sauk         W of Roberts         13 JU 2000         24 Oct 2000         SAS           4440         Juncia cosa itubrar: [1522]         Wio Roberts         13 JU 2000         24 Oct 2000         SAS           4441         Juncia cosa itubrar: [1775]         Bursati (Savova         27 JU 2000         SAS           4447         Explorate claudia (Crane; [1775])         Crawford         Hoga Kher SFJackon C B Aug 2000         SAS           4447         Explorate claudia (Crane; [1775])         Grawford         Hoga Kher SFJackon C B Aug 2000         SAS           4447         Explorate claudia (Crane; [1775])         Jackon Black Kher SFJackon C B Aug 2000         SAS           4447         Explorate claudia (Crane; [1775])         Calumbia         Marat Blath Praine         21 Ju 2000         SAS           4452         Speprie kidia (Dury; [1773])         Calumbia         Marat Blath Praine         21 Ju 2000         SAS           4462         Speprie kidia (Rury; [1773])         Grawford         Hoga 2							SAS
4440         Juncia const Huber, [162]         Portage         Buana Vista Marsh         22. Jun 2000         22. Aug 2000         SAS           4440         Junchia const Huber, [162]         Stak International Carse Foundation         7 Jun 2000         24 Oct 2000         SAS           4440         Junchia const Huber, [162]         St. Creck.         Vol Roberts         17 Jun 2000         24 Oct 2000         JAS           4440         Junchia const Huber, [172]         Wolcobe         Highway X         17 Jun 2000         24 Oct 2000         JAS           4447         Eupdoted claudia (Carrer, [1775])         Grant         Jamastown Twp.         3 Sag 2000         LAS           4447         Eupdoted claudia (Carrer, [1775])         Grant         Jamastown Twp.         3 Aug 2000         SAS           4447         Eupdoted claudia (Carrer, [1775])         Volkakesta         Hernon Marsh         3 Jun 2000         SAS           4447         Eupdoted claudia (Carrer, [1775])         Volkakesta         Hernon Marsh         3 Jun 2000         SAS           4447         Eupdoted claudia (Carrer, [1775])         Volkakesta         Hernon Marsh         3 Jun 2000         Jun 2000         SAS           4448         Sperier Idaia (Drun, [1773])         Correr         Huapt BMr Fraine         2 Ju		· • •					JCP
Luncine constant hubber, [1622]         Sauk         International Crane Foundation         7 May 2000         6 Aug 2000         SAS           4440         Juncine constant Hubber, [1622]         Watkesha         7 Jun 2000         24 Oct 2000         JAK           4440         Juncine constant Hubber, [1622]         Watkesha         7 Jun 2000         24 Oct 2000         JAK           4441         Luncine constant Hubber, [1622]         Watkesha         7 Jun 2000         24 Oct 2000         JAK           4447         Explorate dataic (Cramer, [1775])         Burnett         Craw Mactione         3 Jay 2000         LAK           4447         Explorate dataic (Cramer, [1775])         Portage         Buren Varia Marsh         5 Jul 2000         22 Aug 2000         SAS           4447         Explorate dataic (Cramer, [1775])         Watkesha         Venon Marsh         3 Aug 2000         LAK           4452         Speyeris kials (Drur, [1773])         Cauthobia         Prine talend Widtlife Araine         4 Jul 2000         SAS           4452         Speyeris kials (Drur, [1773])         Crawfinder Araine         2 Jun 2000         16 Jul 2000         SAS           4452         Speyeris kials (Drur, [1773])         Crawfinder Araine         2 Jun 2000         16 Jul 2000         SAS			-		•	22 Aug 2000	SAS
4440         Juncina consin Hubme, [152]         St. Crock         W of Roberts         13.44200         SA           4440         Juncina consin Hubme, [152]         Wuckerba         7. Jun 2000         24 Oct 2000         SAS           4444         Juncina consin Hubme, [152]         WOCO         Highway X         19.44000         SAS           4447         Euplocita dualic (Crame, [1778)         Crawford         Hagback Frainie         4.312000         SAS           4447         Euplocita dualic (Crame, [1779)         Grant         Juncestion         3.3 app 2000         SAS           4447         Euplocita dualic (Crame, [1779)         Portage         Buena Vita Marah         5. Jun 2000         SAS           4447         Euplocita dualic (Crame, [1779)         Waukesha         Vernon Marah         3.14 2000         SAS           4442         Experient data (Drury, [1773)         Crawford         Hogback Frainie         2.1 Ju 2000         SAS           4452         Speperie data (Drury, [1773)         Crawford         Hogback Frainie         2.1 Ju 2000         SAS           4452         Speperie data (Drury, [1773)         Crawford         Hogback Frainie         2.1 Ju 2000         SAS           4452         Speperie data (Drury, [1773)         Crawford         <			-		7 May 2000	6 Aug 2000	SAS
4440         Juncia cosai Hubber, [1822]         Wakesha         7, Jun 2000         24 Oct 2000         JAS           4440         Juncia cosai Hubber, [1822]         WOOD         Highway X         19, Jul 2000         SAS           4447         Exploited duals (Cremer, [1773)         Burnett         Crew Meadows         27, Jul 2000         SAS           4447         Exploited duals (Cremer, [1773)         Crawford         Hogtaskan CF         3, Jul 2000         22, Aug 2000         SAS           4447         Exploited duals (Cramer, [1773)         Crawford         Homashan         5, Jul 2000         22, Aug 2000         SAS           4447         Exploited duals (Cramer, [1773)         Crawford         Homashan         3, Jul 2000         JAE           4452         Speyers Idals (Drur, [1773)         Crawford         Hogtaskan         4, Jul 2000         SAS           4452         Speyers Idals (Drur, [1773)         Crawford         Hogtaskan         27, Jun 2000         IAE           4452         Speyers Idals (Drur, [1773)         Crawford         Hogtaskan         2, Jun 2000         SAS           4452         Speyers Idals (Drur, [1773)         Craw Meadow         Sand         Jul 2000         SAS           4454         Botoris Itma grands (R. & McD., 1916)				W of Roberts		•	SAS
4440         Juncinia central Hubner, [1622]         WOOD         Highway X         19.Ju 2000         SAS           4447         Euptoteia claudis (Cramer, [1775))         Crawford         Hogback Prainin         3.Sep 2000         SAS           4447         Euptoteia claudis (Cramer, [1775))         Crawford         Hogback Prainin         3.Sep 2000         SAS           4447         Euptoteia claudis (Cramer, [1775))         Jackson         Black River SF/Lackson CF         B/W 2000         SAS           4447         Euptoteia claudis (Cramer, [1775))         Lackson         Black River SF/Lackson CF         B/W 2000         SAS           4447         Euptoteia claudis (Cramer, [1775))         Columbia         Prine Island WildfA Acta         B/U 2000         SAS           4422         Speyreira idalia (Druv, [1773))         Crawford         Hogback Prainie         2.Ju 2000         SAS           4432         Speyreira idalia (Druv, [1773))         Crawford         Hogback Prainie         2.Ju 2000         SAS           4443         Botona eunomia devectin (B & MoL), 1916)         Docugias         Davias         Prines         2.Ju 2000         SAS           4443         Botona eunomia devectin (B & MoL), 1916)         Docugias         Davias         Docugias         Davias         Docugias			Waukesha		7 Jun 2000	24 Oct 2000	JAE
mark         Euclosite Journel (1775)         Crawford         Hogback Praine         4.02000         SAS           4447         Euclosite Journel (Corrent; [1775)         Grant Jamestown Two,         3 Sep 2000         LAF           4447         Euclosite Journel (Corrent; [1775)         Jackson         Black River SF/Jackson CF         8 Jug 2000         SAS           4447         Euclosite Journel (Corrent; [1775)         Sauk         Thermational Crame Foundation         3 Jug 2000         RAS           4442         Euploteit Journel (Corrent; [1775))         Clauthible         Prine Island Wildfife Area         3 Jug 2000         RAS           4452         Speyrein Jolde (Druv; [1773))         Clauthible         Prine Island Wildfife Area         4 Jul 2000         RAS           4452         Speyrein Jolde (Druv; [1773))         Claw Thomas         Theraine Thai         4 Jul 2000         RAS           4452         Speyrein Jolde (Druv; [1773))         Low at Theraine Thai         LAF         A Jul 2000         LAF           4452         Speyrein Jolde (Druv; [1773))         Low at Theraine Thai         A Jul 2000         LAF           4452         Speyrein Jolde (Druv; [1773))         Low at Theraine Thai         A Jul 2000         LAF           4464         Bolorin titainis grandis (B, & McD, 1916)			WOOD	Highway X	19 Jul 2000		SAS
market         Eugenetatic aduatic (Corrent; (1773))         Grant         Jamestown Twp,         58, 58, 2000         UAF           447         Eugenetatic aduatic (Corrent; (1773))         Jackson         Black Nerror S/Lackson C F         8 Aug 2000         SAS           447         Eugenetatic aduatic (Corrent; (1773))         Sak k         International Corre Foundation         3 Jun 2000         JAK           447         Eugenetatic aduatic (Corrent; (1773))         Columbic Print Istand Wildlife Area         3 Jun 2000         JAK           4422         Speyeria addia (Druy, (1773))         Crewford         Hogback Prainie         2 Jun 2000         IS Jul 2000         SAS           4422         Speyeria addia (Druy, (1773))         Crewford         Hogback Prainie         2 Jun 2000         IS Jul 2000         SAS           4423         Speyeria addia (Druy, (1773))         Crewford         Hogback Prainie         2 Jun 2000         SAS           4443         Boloria seniora adroxostals (Huart, 1927)         Douglas         Douglas         Douglas         Jun 2000         LAS           4474         Boloria seniora adroxostals (Huart, 1927)         Douglas         Crewford March         2 Jun 2000         LAF           4474         Boloria seniora adroxostals (Huart, 1927)         Douglas         Crewford March	4447	Euptoieta claudia (Cramer, [1775])	Burnett	Crex Meadows	27 Jul 2000		
mark         Euporetes clausite (Cormer, [1775)]         Jeckson         Black Theor 57/Jackson CC         6 Aug 2000         SAS           447         Euporteds clausite (Cormer, [1775)]         Portage         Burna Nicksita Marsh         5 Jul 2000         SAS           4472         Euptroted clausite (Cormer, [1775)]         Sauk         Unternational Crane Foundation         31 Aug 2000         SAS           4432         Speyeria data (Drury, [1773)]         Catumbia         Prine Island Wildfer Area         8 Jul 2000         18 Jul 2000         SAS           4432         Speyeria idata (Drury, [1773)]         Catumbia         Thorano Prainte         4 Jul 2000         SAS           4432         Speyeria idata (Drury, [1773)]         Green         Murat Bluf Frainte         4 Jul 2000         SAS           4432         Speyeria idata (Drury, [1773)]         Iowa         Thorano Prainte         4 Jul 2000         SAS           4433         Speyeria idata (Drury, [173)]         Iowa         Thorano Prainte         4 Jul 2000         SAS           4444         Biolofia tealeria entrocosolia (Murd, 1927)         Docipies         Construct Two         S Jul 2000         Jul	. 4447	Euptoieta claudia (Cramer, [1775])	Crawford	Hogback Prairie			
4447         Eurotes actuals (Cramer, 1775)         Portage         Buena Vista Marsh         5.Jul 2000         22 Aug 2020         SAS           447         Eurotes actuals (Cramer, 1775)         Sauk         International Crane Foundation         3.Jul 2000         SAS           4425         Speyrini adtail (Dury, 11773)         Columbia         Prine Istand Wildliffe Ara         8.Jul 2000         SAS           4425         Speyrini adtail (Dury, 11773)         Crawford         Hogback Prainie         4.Jul 2000         SAS           4426         Speyrini adtail (Dury, 11773)         Crawford         Hogback Prainie         4.Jul 2000         SAS           4426         Speyrini adtail (Dury, 11773)         Droma Vista Marsh         28.Jul 2000         JCP           4431         Boticni a sterne atrico.stalis (Huar, 1277)         Douglas         Column         20.Dug         SAS           4444         Boticni a sterne atrico.stalis (Huar, 1566)         Bouglas         Summar Tury         Jun 2000         JCP           4447         Boticni a terne atrico.stalis (Huar, 1566)         Bouglas         Crass Meedons         C 7.Jul 2000         SAS           4447         Boticni a terne atrico.stalis (Huar, 1566)         Jun 2000         JCP         Aug 2000         SAS           4447	4447	Euptoieta claudia (Cramer, [1775])	Grant	•			
447         Euprotes aduals (Crame, 1175)         Sauk         International Crane Foundation         3 Jun 2000         SAS           447         Euprotes aduals (Crame, 1175)         Waukesha         Pine Island Wikatife Area         8 Jul 2000         JAE           4462         Speyneia kila (Dury, 11773)         Crawford         Hoptack Praine         27 Jun 2000         IS Jul 2000         SAS           4452         Speyneia kila (Dury, 11773)         Crawford         Hoptack Praine         4 Jul 2000         SAS           4452         Speyneia kila (Dury, 11773)         Lowa         Thorson Praine         4 Jul 2000         SAS           4452         Speyneia kila (Dury, 11773)         Lowa         Thorson Praine         4 Jul 2000         SAS           4453         Botria seunoria dawano (T8 & McD., 1916)         Douglas         Prane         Buna Vota March         2 Jul 2000         LAF           4474         Botria stania grandis (B. & McD., 1916)         Douglas         Calkand Twp.         10 Aug 2000         LAF           4747         Botria stania grandis (B. & McD., 1916)         Douglas         Calkand Twp.         10 Aug 2000         LAF           4748         Botria stania grandis (Bekit, 1686)         Jackson         Blak Kiter SFJJackston CF         3 Jun 2000         LCP	4447	Euptoieta claudia (Cramer, [1775])					
Lipitoties claudis (Cramer, 11773)         Waukesha         Vermon March         31 Aug 2000         JAE           4452         Speynie datia (Druy, 11773)         Crawford         Hoppack Prairie         8 Jul 2000         SAS           4452         Speynie datia (Druy, 11773)         Crawford         Hoppack Prairie         4 Jul 2000         SAS           4452         Speynie datia (Druy, 11773)         Oreen         Mural BLiff Prairie         4 Jul 2000         SAS           4452         Speynie datia (Druy, 11773)         Portage         Burner Vista March         2 Aug 2000         JAF           4452         Speynie datia (Druy, 11773)         Portage         Burner Vista March         2 Aug 2000         JAF           4453         Botonie selnee artocostils (Huad, 11977)         Douglas         Oraen raydetrow (Jarva, Jac Py Wetker, Infewed, Systems, common Minkered and thistile flowers along dege of Dig         and 2 Aug 2000         JAF           4474         Botorit titral grandis (B. & McD, 1916)         Douglas         Oraen raydetrow (Jarva, Jac Py Wetker, Iffweed, Systems, common Minkered and thistile flowers along dege of Dig         and 2 Aug 2000         JAF           4474         Botorit titral grandis (B. & McD, 1916)         Douglas         Oakland Twp.         3 Jul 2000         JAF           4474         Botorit titral grandis (B. & McD, 19	4447		-			22 Aug 2000	
4452         Spegnet addai (Dhuy, [1773])         Columbia         Pine Island Wildlife Area         B Juli 2000         SAS           4452         Spegnet addai (Dhuy, [1773])         Crawford         Hogback Prairie         27 Jun 2000         ISJU 2000         SAS           4452         Spegnet addai (Dhuy, [1773])         Crawford         Hogback Prairie         4 Jul 2000         SAS           4452         Spegneti addai (Dhuy, [1773])         Lowa         Thomson Prairie         4 Jul 2000         SAS           4453         Botoria eunonic dawoni (B & McD., 1916)         Douglas         Portage         Buena Vista Marsh         28 Jun 2000         LAF           4747         Botoria tathai grantis (B & McD., 1916)         Douglas         Ponest and thistle flowers and grad dawoni         Aug 2000         LAF           4748         Botoria tathai grantis (B & McD., 1916)         Douglas         Cakland Twp.         1 Aug 2000         SAS           4749         Botoria tathai grantis (B & McD., 1916)         Douglas         Cakland Twp.         3 Jul 2000         SAS           4748         Chosyne grogne carlota (Reakiri, 1866)         Jackson         Bauer-Brookway Barens         3 Jul 2000         SAS           4749         Chosyne grogne carlota (Reakiri, 1866)         Jackson         Bauer-Brookway Barens							
4452         Spejens idiai (Dni); [1773]         Crawford         Hogbest Praine         27 Jun 2000         18 Jul 2000         SAS           4452         Spejens idiai (Dni); [1773]         Ioreen         Mulana Bluff Praine         4 Jul 2000         SAS           4452         Spejens idiai (Dni); [1773]         Ioreen         Mulana Bluff Praine         4 Jul 2000         SAS           4452         Spejens idiai (Dni); [1773]         Portage         Buana Vista Marsh         28 Jun 2000         SAS           4453         Bolcria seiner atrocostalis (Huard, 1927)         Douglas         Oneer Trail Welland         2 Aug 2000         LAF           4474         Bolcria timi agrandis (B. & McD., 1916)         Douglas         Summit Typ.         2 Aug 2000         LAF           4474         Bolcria timi agrandis (B. & McD., 1916)         Douglas         Celvian Typ.         10 Aug 2000         SAS           4489         Chlosyne gorgone cartida (Reakiri, 1866)         Jackson         Black River SF/Jackson CF         8 Aug 2000         LAF           4583         Ceenorympha tulia inornata W. H. Edw., 1861         Brick River SF/Jackson CF         8 Aug 2000         LAF           4583         Ceenorympha tulia inornata W. H. Edw., 1861         Brick River SF/Jackson CF         8 Aug 2000         LAF							
************************************						40.1.1.0000	
4422         Spejeti skial (Dru); [1773]         Inva         Thomson Prainie         4 Jul 2000         SAS           4452         Spejeti skial (Dru); [1773]         Portage         Buana Vista Marsh         28 Jun 2000         JAF           4441         Bodinia schenz toroxitals (Huart 1927)         Douglas         Onear Tail Warsh         2 Aug 2000         LAF           4474         Bodinia schenz toroxitals (Huart 1927)         Douglas         Summit Typ,         2 Aug 2000         LAF           4474         Bodinia schenz toroxita (Headit, 1927)         Douglas         Summit Typ,         2 Aug 2000         LAF           4474         Bodinia titrain grandis (B & McD., 1916)         Douglas         Summit Typ,         10 Aug 2000         JAP           4474         Bodinia titrain grandis (B & McD., 1916)         Douglas         Summit Typ,         10 Aug 2000         JAP           4474         Bodinia titrain grandis (B & McD., 1916)         Jackson         Black River SF/Jackson CF         5 Aug 2000         SAS           4489         Chicksyne grapher cardia (Readiti, 1986)         Jackson         Black River SF/Jackson CF         8 Aug 2000         JAP           4483         Chicksyne grapher cardia (Readiti, 1986)         Jackson         Black River SF/Jackson CF         8 Aug 2000         JAP				•		18 Jul 2000	
***42       Spejers tallai (Dury, [1773])       Portage       Burnet Vista Marsh       28 Jun 2000       SAS         ***463       Bodria succinit das servent (B. & McD., 1916)       Douglas       Pioneer Trail Wetland       2 Aug 2000       LAF         ****474       Bodria succinit dania grandi (B. & McD., 1916)       Douglas       Summit Tvp.       2 Aug 2000       LAF         *****474       Bodria tuncing arondi (B. & McD., 1916)       Douglas       Contain the grandi (B. & McD., 1916)       Douglas       Othor provide (B. & McD., 1916)       Douglas       Contain the grandi (B. & McD., 1916)       Douglas       Othor provide (B. & McD., 1916)       Douglas       Douglas<							
4463     Bodria seuromia dawsoni (B*, McD., 1916)     Douglas     Oakland Twp.     B Jun 2000     JOP       4464.1     Bodria selene atronatis (Huard, 1927)     Douglas     Surreat, 199     A Mg 2000     LAF       4474     Bodria steine atronatis (Huard, 1927)     Douglas     Surreat, 199     A Mg 2000     LAF       4474     Bodria traine grandie (B, & McD, 1916)     Douglas     Surreat, 199     A Mg 2000     JOP       449     Chlosyne gorgone carlda (Reakir, 1866)     Burnett     Crex Messions     27 Jul 2000     SAS       4499     Chlosyne gorgone carlda (Reakir, 1866)     Jackson     Black River SF/Jackson CF     8 Aug 2000     JOP       4499     Chlosyne gorgone carlda (Reakir, 1866)     Jackson     Black River SF/Jackson CF     8 Aug 2000     JOP       4490     Chlosyne gorgone carlda (Reakir, 1866)     Jackson     Black River SF/Jackson CF     8 Aug 2000     JOP       4531     Cenonympha Lulia inomata W, H. Edw., 1861     Price     Fileid Twp.     3 Jul 2000     JOP       4611     Oeneis jutta ascerta Masters & Sorenson, 1898     Douglas     Oakland Twp.     8 Jun 2000     JOP       4611     Oeneis jutta ascerta Masters & Sorenson, 1898     Lincxin     Tomahawk     29 Meg 2000     JAF       4611     Oeneis jutta ascerta Masters & Sorenson, 1898 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
Head 1     Bodris selene atrocotatis (Huard, 1927)     Douglies     Pioneer Trail Wetland     2 Aug 2000     LAF       4474     Bodris titunia grandis (B. & Nico., 1916)     Dougles     Common Twithwead and thistle flowers along edge of bog     JOP       4474     Bodris titunia grandis (B. & Nico., 1916)     Dougles     Oaktand Twp.     27 Aug 2000     JOP       4474     Bodris titunia grandis (B. & Nico., 1916)     Dougles     Oaktand Twp.     10 Aug 2000     JOP       4474     Bodris titunia grandis (B. & Nico., 1916)     Dougles     Oaktand Twp.     10 Aug 2000     JOP       4483     Chiosyne gorgone carlota (Reakirt, 1866)     Jackson     Black River SF/Jackson CF     15 May 2000     JAP       4489     Chiosyne gorgone carlota (Reakirt, 1866)     Jackson     Black River SF/Jackson CF     8 Aug 2000     JAP       4583     Ceenorympha Lillia inomata W. H. Edw., 1861     Beryfield     Cormucopia     3 Jun 2000     JAP       4611     Oenesi jutta ascorta Nasters & Sorenson, 1988     Iron     Mantowish     29 May 2000     LAF       4611     Oenesi jutta ascorta Nasters & Sorenson, 1988     Iron     Mantowish     29 May 2000     LAF       4611     Oenesi jutta ascorta Nasters & Sorenson, 1988     Iron     Mantowish     29 May 2000     LAF       4611     Oenesi jutta ascorta			•				
4474         Botoria titania grandis (B. & McD., 1916)         Douglas         Summit Twp.         2 Aug 2000         LAF           4474         Botoria titania grandis (B. & McD., 1916)         Douglas         Oakland Typ.         10 Aug 2000         JCP           4474         Botoria titania grandis (B. & McD., 1916)         Douglas         Oakland Typ.         17 Jul 2000         SAS           4489         Chtosyne gorgone caritot (Reakint, 1966)         Jackson         Black River SF/Jackson CF         5 May 2000         SAS           4489         Chtosyne gorgone caritot (Reakint, 1966)         Jackson         Black River SF/Jackson CF         6 Aug 2000         SAS           4489         Chtosyne gorgone caritot (Reakint, 1966)         Jackson         Black River SF/Jackson CF         6 Aug 2000         SAS           4583         Ccenonrympha tullia inornata W. H. Edw., 1861         Bryfield         Comucopia         3 Jul 2000         LAF           4611         Oeneis jutta ascerta Masters & Sorenson, 1988         Iron         Manitowish         29 May 2000         LAF           4611         Oeneis jutta ascerta Masters & Sorenson, 1986         Lincoln         Tornahawk         26 May 2000         LAF           4611         Oeneis jutta ascerta Masters & Sorenson, 1986         Lincoln         Tornahawk         26 May 20		• • • •					
an gedeenid, yarrev, Lee Pie Weed, fireweed. Spirsa, common milweed and thistel forwers along odge of bog       JCP         4474       Bokina titania granis (B & MCD, 1916)       Douglas       Carkan Twp.       10 Aug 2000       JCP         4489       Chlosyne gorgona carlota (Reakin, 1866)       Jumtte       Carka Meadows       27 Jul 2000       SAS         4489       Chlosyne gorgona carlota (Reakin, 1866)       Jackson       Black River SF/Jackson CF       15 May 2000       SAS         4480       Chlosyne gorgona carlota (Reakin, 1866)       Jackson       Black River SF/Jackson CF       8 Aug 2000       SAS         4481       Chlosyne gorgona carlota (Reakin, 1866)       Jackson       Bauer-Brockwey Barnens       30 Jun 2000       JCP         4583       Ceenonympha tulia inornata W. H. Edw., 1861       Price       Filled Twp.       3 Jul 2000       LAF         4611       Oeneis juita ascerta Masters & Sorenson, 1958       Iono       Mantowish       29 May 2000       LAF         4611       Oeneis juita ascerta Masters & Sorenson, 1958       Lincoln       Tornahawk       28 May 2000       LAF         4611       Oeneis juita ascerta Masters & Sorenson, 1958       Lincoln       Tornahawk       29 May 2000       LAF         4611       Oeneis juita ascerta Masters & Sorenson, 1958       Kinrathon			•				
4474       Boloria titania grandis (B. 8 McD., 1916)       Douglas       Oakland Twp.       10 Aug 2000       JCP         4489       Chosyne gorgone carlota (Reakiri, 1866)       Jackson       Black River SF/Jackson CF       15 May 2000       SAS         4489       Chosyne gorgone carlota (Reakiri, 1866)       Jackson       Black River SF/Jackson CF       8 Aug 2000       SAS         4489       Chosyne gorgone carlota (Reakiri, 1866)       Jackson       Black River SF/Jackson CF       8 Aug 2000       SAS         4583       Ccencrympha tulia inomata W, H. Edw., 1861       Price       Fifield Twp.       3 Jul 2000       LAF         4611       Oenes jutta ascerta Masters & Storenson, 1958       Incoin       Maintowish       28 May 2000       LAF         4611       Oenes jutta ascerta Masters & Storenson, 1958       Incoin       Tornshewk       26 May 2000       LAF         4611       Oenes jutta ascerta Masters & Storenson, 1958       Incoin       Tornshewk       26 May 2000       LAF         4611       Oenes jutta ascerta Masters & Storenson, 1958       Incoin       Tornshewk       26 May 2000       LAF         4611       Oenes jutta ascerta Masters & Storenson, 1958       Incoin       Tornshew       20 May 2000       LAF         714 Eucosona landana (Kaafrott, 1907)       BUR	44/4						5.
4489       Chlosyne gorgone carta [Reakir, 1986)       Burrett       Crex Meadows       27 JU 2000       SAS         4489       Chlosyne gorgone carta [Reakir, 1986)       Jackson       Black River SF/Jackson CF       15 May 2000       SAS         4489       Chlosyne gorgone carta [Reakir, 1986)       Jackson       Black River SF/Jackson CF       8 Aug 2000       SAS         4489       Chlosyne gorgone carta [Reakir, 1986)       Jackson       Black River SF/Jackson CF       8 Aug 2000       SAS         4583       Coenorympha tullia inornata W. H. Edw., 1861       Bryfield       Cornucopia       3 Jul 2000       JCP         4611       Oeneis jutta ascerta Masters & Sorenson, 1958       Douglas       Oakland Twp.       8 Jul 2000       JAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1958       Lincoin       Torn Mantowish       29 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1958       Lincoin       Torn Mantowish       20 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1958       Lincoin       Torn Mantowish       20 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1958       Lincoin       Torn Mantowish       20 May 2000       MS         51ATE RECORDR       Starter E	AA7A				10 Aug 2000		JCP
4485       Chosyne gorgone cartola (Reakirt, 1886)       Jackson       Black River SF/Jackson CF       15 May 2000       SAS         4489       Chiosyne gorgone cartola (Reakirt, 1886)       Jackson       Black River SF/Jackson CF       8 Aug 2000       SAS         4489       Chiosyne gorgone cartola (Reakirt, 1866)       Jackson       Black River SF/Jackson CF       8 Aug 2000       SAS         4483       Coenonympha tullis inornata W, H. Edw., 1861       Berglield       Cornucopia       30 Jun 2000       LAF         4533       Coenonympha tullis inornata W, H. Edw., 1861       Berglield       Cornucopia       3 Jun 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1958       Iron       Mantowish       28 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1958       Kinroin       Tomahawk       26 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1958       Kinroin       Tomahawk       26 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1958       Kinroin       Tomahawk       26 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1958       Kinroin       Tomahawk       20 May 2000       MS         75950       Phaneta infinitrinaria candid			_ •	· · · ·			
4489       Chics/me gorgone carida (Reakint, 1866)       Jackson       Bauer-Brockway Barens       3 Jun 2000       JCP         4489       Chics/me gorgone carida (Reakint, 1866)       Jackson       Biack River SF/Jackson CF       8 Aug 2000       JCR         4583       Ccenonympha tullia inomata W. H. Edw., 1861       Bryfield       Comucopia       30 Jun 2000       JCP         4611       Conels jutta ascerta Masters & Sorenson, 1958       Iron       Manitowish       29 Nay 2000       LAF         4611       Ceneis jutta ascerta Masters & Sorenson, 1958       Iron       Manitowish       29 Nay 2000       LAF         4611       Ceneis jutta ascerta Masters & Sorenson, 1958       Lincoln       Tomahawk       26 May 2000       LAF         4611       Ceneis jutta ascerta Masters & Sorenson, 1958       Marathon       Norrie       20 May 2000       LAF         4611       Ceneis jutta ascerta Masters & Sorenson, 1958       Marathon       Norrie       20 May 2000       LAF         6411       Ceneis jutta ascerta Masters & Sorenson, 1958       Marathon       Norrie       20 May 2000       LAF         7       (Tortricidae)       (Tortricidae)       Marathon       Norrie       20 May 2000       MS         7       STATE RECORD (?)       BURNETT       Grantsburg							SAS
4489       Chics/me gorgone cartota (Reskint, 1965)       Jackson       Black River SF/Jackson CF       8 Aug 2000       SAS         4583       Coenonympha tullia inornata W. H. Edw., 1861       Bryfield       Cornorupha tullia inornata W. H. Edw., 1861       Price       Fifield Twp.       3 Jul 2000       LAF         4583       Coenonympha tullia inornata W. H. Edw., 1861       Price       Fifield Twp.       8 Jun 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1958       Lincoln       Maintowish       29 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1958       Lincoln       Tomahawk       26 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1958       Warathon       Norrie       20 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1958       Warathon       Norrie       20 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1958       BURNETT       Grantsburg       1 Oct 2000       MS         5114       Eucosna landana Kearfott, 1907       BURNETT       Grantsburg       20 Apr 1999       MS         5114       Eucosna landana Kearfott, 1907       BURNETT       Crex Meadows       29 Apr 1999       MS         5144       <							JCP
4583       Coesnorymphatullia inornata W. H. Edw., 1861       Bayfield       Cornuccpia       30.Jui 2000       LAF         4583       Coesnorymphatullia inornata W. H. Edw., 1861       Price       Fifield Twp.       3.Jui 2000       LAF         4611       Oreneis jutta ascerta Masters & Sorenson, 1988       Incoln       Mantowish       29 May 2000       LAF         4611       Oreneis jutta ascerta Masters & Sorenson, 1988       Incoln       Tomahawk       26 May 2000       LAF         4611       Oreneis jutta ascerta Masters & Sorenson, 1988       Incoln       Tomahawk       26 May 2000       LAF         4611       Oreneis jutta ascerta Masters & Sorenson, 1988       Incoln       Tomahawk       26 May 2000       LAF         4611       Oreneis jutta ascerta Masters & Sorenson, 1988       Incoln       Tomahawk       26 May 2000       LAF         4520       Phaneta kokana (Kearfott, 1907)       BURNETT       Grantsburg       1 Oct 2000       MS         51ATE RECORD (estern range extension       STATE RECORD (estern range extension       Surgers and 1990       MOS         3114       Eucosma landana Kearfott, 1907       BURNETT       Crex Meadows       29 Apr 1999       MS         anteristic larvae calected 4 Sept. on bog rosemary       (Pyralidae)       Coenchroa bipunctella (B. & McD.,					8 Aug 2000		SAS
<ul> <li>4611 Oeneis jutta ascerta Masters &amp; Sorenson, 1988 Douglas Oakland Twp. 8 Jun 2000 JCP</li> <li>4611 Oeneis jutta ascerta Masters &amp; Sorenson, 1988 Incoh Manitowish 29 May 2000 LAF</li> <li>4611 Oeneis jutta ascerta Masters &amp; Sorenson, 1988 Lincoh Tornahawk 26 May 2000 LAF</li> <li>4611 Oeneis jutta ascerta Masters &amp; Sorenson, 1988 Lincoh Norrie 20 May 2000 LAF</li> <li>4611 Oeneis jutta ascerta Masters &amp; Sorenson, 1988 Lincoh Norrie 20 May 2000 LAF</li> <li>4611 Oeneis jutta ascerta Masters &amp; Sorenson, 1988 Marathon Norrie 20 May 2000 LAF</li> <li>4611 Orensi Jutta ascerta Masters &amp; Sorenson, 1988 URNETT Grantsburg 1 Oct 2000 MS</li> <li>5TATE RECORD (?)</li> <li>2985 Phaneta infimbriana candidula (Heinrich, 1924) BURNETT T39N, R19W, Sec 23 11 Aug 2000 MS</li> <li>5TATE RECORD (astern range extension</li> <li>3114 Eucosma landana Kaartott, 1907 BURNETT Crex Meadows 29 Apr 1999 MS</li> <li>misidentified as E. simplex in the 1999 Season Summary</li> <li>445 Acleris minuta (Robinson, 1969) Douglas 23 Sep 2000 MS</li> <li>reared from late instar larvas collected 4 Sept. on bog rosenary (Pyralidae)</li> <li>6041 Coenochroa bipunctella (B. &amp; McD., 1913) BURNETT Grantsburg 25 Jun 2000 MS</li> <li>sTATE RECORD, possibly first interior US record of this Atlantic &amp; Gulf Coastal Plain species (Geometridae)</li> <li>6256 Archiears infrans (Moschler, 1862) Doeneid Minocqua Twp. 25 Mar 2000 LAF</li> <li>6256 Archiears infrans (Moschler, 1862) Marathon Norrie 20 May 2000 CEF</li> <li>6339 Eufdonia discospilata (Walker, 1862) Marathon Norrie 20 May 2000 CFF</li> <li>6449 Glena orbitaria (Guene, 1653) JACKSON Jackson County Forest 3 Jun 2000 LAF</li> <li>6639 Paleacrita mericata Dyar, 1903 Jackson Jackson County Forest 3 Jun 2000 LAF</li> <li>6639 Paleacrita mericata Dyar, 1903 Jackson Jackson County Forest 3 Jun 2000 LAF</li> <li>6639 Paleacrita mericata Dyar, 1903 Jackson Jackson County Forest 3 Jun 2000 LAF</li> <li>6639</li></ul>			Bayfield	Comucopia			
4511       Oeneis jutta ascerta Masters & Sorenson, 1988       Iron       Manitowish       29 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1988       Lincoln       Tornahawk       26 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1988       Lincoln       Tornahawk       26 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1988       Marathon       Norrie       20 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1988       Marathon       Norrie       20 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1988       Marathon       Norrie       20 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1988       Marathon       Norrie       20 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1988       Marathon       Norrie       20 May 2000       MS         5959       Phaneta infimitina candidua (Keinrich, 1924)       BURNETT       Crantsburg       1 Oct 2000       MS         3114       Eucosma landana Kaarfott, 1907       BURNETT       Crax Maedows       29 Apr 1999       MS         misiderified as E. simplex in the 1999 Season Summary       Paratia fimmenta (Rochene, 1999 <td>4583</td> <td>Coenonympha tullia inornata W. H. Edw., 1861</td> <td>Price</td> <td>Fifield Twp.</td> <td>3 Jul 2000</td> <td></td> <td></td>	4583	Coenonympha tullia inornata W. H. Edw., 1861	Price	Fifield Twp.	3 Jul 2000		
4611       Oeneis juita ascerta Masters & Sorenson, 1988       Lincoln       Tornahawk       26 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1988       Lincoln       Tornahawk       20 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1988       Miarathon       Norrie       20 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1988       Miarathon       Norrie       20 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1988       Minth Mark       BURNETT       Tornahawk       26 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1988       BURNETT       Grantsburg       1 Oct 2000       MS         57ATE RECORD (7)       BURNETT       Grantsburg       29 Apr 1999       MS         3114       Eucosma landana Kearfott, 1907       BURNETT       Crex Maedows       29 Apr 1999       MS         reared from late instar larvae collected 4 Sept. on bog rosenary (Pyraildae)       Douglas       23 Sep 2000       MS         sTATE RECORD, possibly first interior US record of this Atlantic & Gulf Coastal Plain species (Geometridae)       Geometridae)       Geometridae)       Geometridae)       Geometridae)       Geometridae)       Geometridae)       Geometridae)       Geom	4611	Oeneis jutta ascerta Masters & Sorenson, 1968	Douglas	Oakland Twp.			
4611       Oeneis jutta ascerta Masters & Sorenson, 1958       Marathon       Norrie       20 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1958       Marathon       Norrie       20 May 2000       LAF         4611       Oeneis jutta ascerta Masters & Sorenson, 1958       Marathon       Norrie       20 May 2000       LAF         2950       Phaneta Infibriana candidula (Heinrich, 1924)       BURNETT       Grantsburg       1 Oct 2000       MS         3114       Eucosma landana Kaarfott, 1907       BURNETT       Crex Meadows       29 Apr 1999       MS         3114       Eucosma landana Kaarfott, 1907       BURNETT       Crex Meadows       29 Apr 1999       MS         misidentrified as E. simplex in the 1999 Season Summary       Douglas       23 Sep 2000       MS         3445       Acleris minuta (Robinson, 1869)       Douglas       23 Sep 2000       MS         stratter RECORD, possibly first interior US record of this Atlantic & Gulf Coastal Plain species (Geometridae)       25 And 2000       LAF         6041       Coenochrea bipunctella (B. & McD., 1913)       BURNETT       Grantsburg       25 Mar 2000       LAF         6256       Archiearis infans (Moschler, 1862)       Oneida       Minocqua Twp.       25 Mar 2000       LAF         6256<	4611	Oeneis jutta ascerta Masters & Sorenson, 1968	Iron	Manitowish			
WOTHS       (Tortricidae)         2950       Phaneta kokana (Kearfott, 1907)       BURNETT       Grantsburg       1 Oct 2000       MS         STATE RECORD (?)       STATE RECORD (?)       BURNETT       T39N, R19W, Sec 23       11 Aug 2000       MS         3114       Eucosma landana Kearfott, 1907       BURNETT       Crex Meadows       29 Apr 1999       MS         3114       Eucosma landana Kearfott, 1907       BURNETT       Crex Meadows       29 Apr 1999       MS         3445       Acleris minute (Robinson, 1869)       Douglas       23 Sep 2000       MS         reared from late instar larvae collected 4 Sept. on bog rosemary (Pyralidae)       Cenochroa bipunctella (B. & McD., 1913)       BURNETT       Grantsburg       25 Jun 2000       MS         6041       Cenochroa bipunctella (B. & McD., 1913)       BURNETT       Grantsburg       25 Jun 2000       MS         6256       Archiearis infans (Moschler, 1862)       DOOR       Bailey's Harbor       2 Apr 2000       LAF         6321       Wacraft turncataria (Walker, 1862)       Mearathon       Norrie       20 May 2000       CBF         6439       Generchroataria (Guernee, 1858)       JACKSON       Jackson County Forest       3 Jun 2000       LAF         6631       Paleacrita merricata Dyar, 1903				Tomahawk			
(Tortricidae)       2950       Phaneta kokana (Kearfott, 1907)       BURNETT       Grantsburg       1 Oct 2000       MS         2950       Phaneta infimibriana candidula (Heinrich, 1924)       BURNETT       T39N, R19W, Sec 23       11 Aug 2000       MS         3114       Eucosma landana Kearfott, 1907       BURNETT       Crex Meadows       29 Apr 1999       MS         3144       Eucosma landana Kearfott, 1907       BURNETT       Crex Meadows       29 Apr 1999       MS         3445       Acleris minuta (Robinson, 1869)       Douglas       23 Sep 2000       MS         reared from late instar larvae collected 4 Sept. on bog rosemany (Pyraildae)       Douglas       23 Sep 2000       MS         6041       Coenochroa bipunctella (B. & McD., 1913)       BURNETT       Grantsburg       2 Apr 2000       MS         STATE RECORD, possibly first interior US record of this Atlanic & Guif Coastal Plain species (Geometridae)       2 Apr 2000       MS         6041       Coenochroa bipunctella (B. & McD., 1913)       BURNETT       Grantsburg       2 Apr 2000       MS         6256       Archiearis infans (Moschler, 1862)       DOOR       Bailey's Harbor       2 Apr 2000       LAF         6321       Wiacaria truncataria (Walker, 1862)       Walartinon       Norrie       20 May 2000       CBF <th>4611</th> <th>Oeneis jutta ascerta Masters &amp; Sorenson, 1968</th> <th>Marathon</th> <th>Norrie</th> <th>20 Way 2000</th> <th></th> <th>LAF</th>	4611	Oeneis jutta ascerta Masters & Sorenson, 1968	Marathon	Norrie	20 Way 2000		LAF
2950       Phaneta kokana (Kearfott, 1907)       BURNETT       Grantsburg       1 Oct 2000       MS         2985       Phaneta infimbriana candidula (Heinrich, 1924)       BURNETT       T39N, R19W, Sec 23       11 Aug 2000       MS         3114       Eucosma landana Kearfott, 1907       BURNETT       Crex Meadows       29 Apr 1999       MS         3445       Acleris minuta (Robinson, 1869)       Douglas       23 Sep 2000       MS         reared from late instar larvae collected 4 Sept. on bog rosemary (Pyralidae)       DOUGlas       25 Jun 2000       MS         6041       Coencothroa bipunctella (B. & McD., 1913)       BURNETT       Grantsburg       25 Jun 2000       MS         STATE RECORD, possibly first interior US record of this Atlantic & Gulf Coastal Plain species (Geometridae)       26 Apr 2000       LAF         6256       Archiearis infans (Moschler, 1862)       DOOR       Bailey's Harbor       2 Apr 2000       LAF         6321       Miacaria truncataria (Walker, 1862)       Marathon       Norrie       20 May 2000       CBF         663       Paleacrita merricata Dyra, 1903       Jackson County Forest       3 Jun 2000       LAF         6663       Paleacrita merricata Dyra, 1903       Trempealeau       Perk State Park       5 Mar 2000       LAF         6663 <t< td=""><td></td><td>MOTHS</td><td></td><td></td><td></td><td></td><td></td></t<>		MOTHS					
STATE RECORD (?)       BURNETT       T39N, R19W, Sec 23       11 Aug 2000       WS         STATE RECORD, eastern range extension       STATE RECORD, eastern range extension       WS       STATE RECORD, eastern range extension       WS         3114       Eucosma landana Kearfott, 1907       BURNETT       Crex Meadows       29 Apr 1999       MS         3445       Acleris minuta (Robinson, 1869)       Douglas       23 Sep 2000       MS         reared from late instar larvaze collected 4 Sept. on bog rosemary (Pyralidae)       Caenochrone bipunctella (B. & McD., 1913)       BURNETT       Grantsburg       25 Jun 2000       MS         6041       Caenochrone bipunctella (B. & McD., 1962)       DOOR       Bailey's Harbor       2 Apr 2000       LAF         6256       Archiearis infans (Moschler, 1862)       DOOR       Bailey's Harbor       2 May 2000       CBF         6321       Macaria truncataria (Walker, 1862)       Oneida       Minocqua Twp.       25 Mar 2000       LAF         6439       Eufdonia discospilata (Walker, 1862)       Marathon       Norrie       20 May 2000       CBF         6633       Paleacrita merricata Dyar, 1903       Trempealeau       Perrot State Park       5 Mar 2000       LAF         6663       Paleacrita merricata Dyar, 1903       Trempealeau       Perrot State Park </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
2985       Phaneta infimbriana candidula (Heinrich, 1924)       BURNETT       T39N, R19W, Sec 23       11 Aug 2000       MS         3114       Eucosma landana Karfott, 1907       BURNETT       Crex Meadows       29 Apr 1999       MS         3144       Eucosma landana Karfott, 1907       BURNETT       Crex Meadows       29 Apr 1999       MS         3445       Acleris minuta (Robinson, 1869)       Douglas       23 Sep 2000       MS         reared from late instar larvae collected 4 Sept. on bog rosemary (Pyraildae)       Example August 1       Grantsburg       25 Jun 2000       MS         6041       Coenochroa bipunctella (B, & McD., 1913)       BURNETT       Grantsburg       25 Jun 2000       MS         STATE RECORD, possibly first interior US record of this Attantic & Gulf Coastal Plain species (Geometridae)       26 Mar 2000       LAF         6256       Archiearis infans (Moschler, 1862)       DOOR       Bailey's Harbor       2 Apr 2000       LAF         6321       Macarat truncataria (Walker, 1862)       Marathon       Norrie       20 May 2000       CBF         6449       Glena cribrataria (Guenee, 1858)       JACKSON       Jackson County Forest       3 Jun 2000       LAF         6633       Eufdonia discospilata (Walker, 1862)       Marathon       Norrie       20 May 2000       CBF<	2950		BURNETT	Grantsburg	1 Oct 2000		MS
3114       Eucosma landana Kearfott, 1907       BURNETT       Crex Meadows       29 Apr 1999       MS         3445       Acleris minuta (Robinson, 1869)       Douglas       23 Sep 2000       MS         3445       Acleris minuta (Robinson, 1869)       Douglas       23 Sep 2000       MS         reared from late instar larvaz collected 4 Sept. on bog rosemary (Pyralidae)       For an and the instar larvaz collected 4 Sept. on bog rosemary (Pyralidae)       25 Jun 2000       MS         6041       Coenochroa bipunctella (B. & McD., 1913)       BURNETT       Grantsburg       25 Jun 2000       MS         STATE RECORD, possibly first interior US record of this Atlantic & Gulf Coastal Plain species (Geometridae)       26 Mar 2000       LAF         6256       Archiearis infans (Moschler, 1862)       DOOR       Bailey's Harbor       2 Apr 2000       CBF         6321       Wazaria truncataria (Walker, 1862)       Wiarathon       Norrie       20 May 2000       CBF         6449       Glena cribrataria (Guenee, 1858)       JACKSON       Jackson County Forest       3 Jun 2000       LAF         6663       Paleacrita mericata Dyar, 1903       Trempealeau       Perrot State Park       5 Mar 2000       29 Jul 2000       LAF         6663       Paleacrita mericata Dyar, 1903       Trempealeau       Perrot State Park       5	2985	Phaneta infimbriana candidula (Heinrich, 1924)	BURNETT	T39N, R19W, Sec 23	11 Aug 2000		MS
3445       Acleris minuta (Robinson, 1869)       Douglas       23 Sep 2000       MS         reared from late instar larvae collected 4 Sept. on bog rosemary (Pyralidae)       (Pyralidae)       STATE RECORD, possibly first interior US record of this Atlantic & Gulf Coastal Plain species (Geometridae)       25 Jun 2000       MS         6041       Coenochroa bipunctella (B. & McD., 1913)       BURNETT       Grantsburg       25 Jun 2000       MS         6256       Archiearis infans (Moschler, 1862)       DOOR       Bailey's Harbor       2 Apr 2000       LAF         6321       Macaria truncataria (Walker, 1862)       Oneida       Minocqua Twp.       25 Mar 2000       LAF         6339       Eufidonia discospilata (Walker, 1862)       Warathon       Norrie       20 May 2000       CBF         6663       Paleacrita merricata Dyar, 1903       JackSon       Jackson County Forest       3 Jun 2000       LAF         6663       Paleacrita merricata Dyar, 1903       Trempealeau       Perrot State Park       5 Mar 2000       LAF         6663       Paleacrita merricata Dyar, 1903       Trempealeau       Perrot State Park       5 Mar 2000       LAF         6663       Paleacrita merricata Dyar, 1903       Trempealeau       Perrot State Park       5 Mar 2000       LAF         6663       Paleacrita merricata Dyar,	3114	Eucosma landana Kearfott, 1907		Crex Meadows	29 Apr 1999		MS
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MONA No.	Species Name	County	Locailty	Date 1	Date 2	Contr.
7662	(Mimallonidae) Cicinnus melsheimeri (Harris, 1841)	Douglas	Wascott	7 Jun 2000		JCP
7685	(Lasiocampidae) Heteropacha riteyana Harvey, 1874	Grant	Cassville	23 Jul 2000		JCP
	(Saturniidae)					
7709	Sphingicampa bicolor (Harris, 1841)	Grant	Cassville	23 Jul 2000		JCP LAF
7716	Anisota stigma (Fabricius, 1775)		Jackson County Forest	9 Jul 1900 8 Jun 2000		JCP
7723 7723	Anisota virginiensis (Drury, 1773)	BAYFIELD	Moquah Barrens Wascott	7 Jun 2000		JCP
7730	Anisota virginiensis (Drury, 1773) Hemileuca maia (Drury, 1773) complex	Douglas Jackson	Bear Bluff Twp.	29 Sep 2000		JCP
7730	Hemileuca maia (Drury, 1773) complex Hemileuca maia (Drury, 1773) complex	Monroe	Meadow Valley	29 Sep 2000		JCP
7768	Hyalophora columbia columbia (S. I. Smith, 1865) (Sphingidae)	DOOR	Bailey's Harbor	8 Jun 2000		JJS
7810	Sphinx gordius Cramer, 1780	Jackson	Black River Falls	3 Jun 2000		JCP
7859	Eumorpha pandorus (Hubner, 1821) (Notodontidae)	RICHLAND	Lone Rock	3 Jul 2000		JCP
7900	Clostera brucei (Hy. Edwards, 1885)	BAYFIELD	Port Wing Boreal Forest SNA	9 Aug 2000		JCP
7926	Notodonta scitipennis Walker, 1862	DOOR	Bailey's Harbor	31 Jul 2000		JJS LAF
7957	Dasylophia anguina (J. E. Smith, 1797)	Burnett	Kohler-Peet Barrens SNA	2 Aug 2000 7 Jun 2000		JCP
8022 8022	Hyparpax aurora (J. E. Smith, 1797) Hyparpax aurora (J. E. Smith, 1797) (Arctiidae)	Burnett Douglas	Namekagon Barens Dairyland Twp.	7 Jun 2000 7 Jun 2000		JCP
8120	Holomelina lamae (Freeman, 1941)	IRON	Manitowish	3 Jul 2000		LAF
8120	Holomelina lamae (Freeman, 1941)	LINCOLN	Harrison Twp.	1 Jul 2000		LAF
8120	Holomelina lamae (Freeman, 1941)	Marathon	Norrie	30 Jun 2000		LAF
8120	Holomelina lamae (Freeman, 1941)	PRICE	Fifield Twp.	3 Jul 2000		LAF
8146	Ecpantheria scribonia (Stoll, 1790)	JACKSON	Black River Falls	3 Jun 2000		JCP
8162	Platarctia parthenos (Harris, 1850)	Marathon	Mud Lake	17 Jun 2000		JCP
8166	Arctia caja americana Harris, 1841	Bayfield	Port Wing Boreal Forest SNA	9 Aug 2000		JCP
8175.1	Grammia speciosa (Moschler, 1864)-	Bayfield	Port Wing Boreal Forest SNA	9 Aug 2000		JCP JJS
8199 8254	Grammia arge (Drury, 1773) Pygarctia spraguei (Grote, 1875) (Noctuidae)	DOOR Jackson	Bailey's Harbor Black River Falls	5 Aug 2000 28 Jul 2000		JCP
8366	Tetanolita mynesalis (Walker, 1859)	Dane	Middleton	20 Oct 2000		LAF
8366	Tetanolita mynesalis (Walker, 1859)	ONEIDA	Minocqua Twp.	30 Sep 2000		LAF
8413	Mycterophora inexplicata (Walker, 1862)	DOUGLAS	Oakland Twp	30 Jul 2000		RJB
8491	Ledaea perditalis (Walker, 1859)	Grant	Woodman	23 Jun 2000		LAF
8574	Anticarsia gemmatalis Hubner, 1818 two fresh specimens at sugar bait	MANIŢOWOC	Two Rivers	1 Nov 2000		LAF
8587	Panopoda rufimargo (Hubner, 1818)	DOOR	Bailey's Harbor	27 Jul 2000		JJS JCP
8588	Panopoda carneicosta Guenee, 1852	RICHLAND Ashland	Gotham Stockton Island	3 Jul 2000 8 Jun 2000	5 Jul 2000	LAF
8618 8776	Drasteria graphica atlantica B. & McD., 1918 Catocala coelebs Grote, 1874	ASHLAND	Stockton Island	24 Aug 2000	5 501 2000	LAF
8776	Catocala coelebs Grote, 1874	Door	Bailey's Harbor	18 Aug 2000		JJS
8797	Catocala subnata Grote, 1864	Grant	Cassville	23 Jul 2000		JCP
8834	Catocala amatrix (Hubner, 1809-13)	Door	Bailey's Harbor	7 Sep 2000		JJS
8840	Catocala illecta Walker, 1858	Richland	Gotham	3 Jul 2000		JCP
8843	Catocala whitneyi Dodge, 1874	Burnett	Kohler-Peet Barrens SNA	11 Aug 2000		JCP
8844	Catocala amestris Strecker, 1874	Grant	Cassville	23 Jul 2000		JCP
8865	Catocala praeclara Grote & Robinson, 1866	JACKSON	Spaulding Lake	28 Jul 2000		JCP
8872	Catocala clintoni Grote, 1864	BURNETT	Kohler-Peet Barrens SNA	6 Jul 2000		LAF LAF
8877	Catocala connubialis Guenee, 1852	Waushara	Cedar Creek SFA	24 Jul 2000 31 Aug 2000		LAF
8889 8911	Ctenoplusia oxygramma (Geyer, 1832) Autographa bimaculata (Stephens, 1830)	MARATHON IRON	Norrie Oma Twp.	10 Aug 2000		LAF
8916	Autographa flagellum (Walker, 1858)	IRON	Manitowish	3 Jul 2000		LAF
8929	Syngrapha viridisigma (Grote, 1874)	ASHLAND	Stockton Island	24 Aug 2000		LAF
8929	Syngrapha viridisigma (Grote, 1874)	Bayfield	Port Wing Boreal Forest SNA	9 Aug 2000		JCP
9061	Cerma cora Hubner, 1818	BAYFIELD	Moquah Barrens	8 Jun 2000		JCP
9169	Bagisara rectifascia (Grote, 1874)	Burnett	Kohler-Peet Barrens SNA	6 Jul 2000		LAF
9214	Acronicta falcula (Grote, 1877)	BURNETT	Kohler-Peet Barrens SNA	2 Aug 2000		
9224	Acronicta quadrata Grote, 1874	Douglas	Solon Springs Barrens SNA	7 Jun 2000		JCP JCP
9254	Acronicta afflicta Grote, 1864	Bayfield	Port Wing Boreal Forest SNA	9 Aug 2000		JCP
9264	Acronicta longa Guenee, 1852	Jackson	Black River Falls Namekagon Barrens	3 Jun 2000 28 Jul 2000		RJB
9344 9369	Apamea plutonia (Grote, 1883) Apamea inficita (Walker)	BURNETT	Outer Island & Rocky Island	31 Jul 2000	24 Aug 2000	LAF
	STATE RECORD, verified by M. C. Nielsen		-	26 Aug 2000		LAF
9380	Apamea relicina (Morrison, 1875)	adams Wood	Big Flats Saratoga Twp.	26 Aug 2000 26 Aug 2000		LAF
9380 9396	Apamea relicina (Morrison, 1875) Eremohina claudens (Walker, 1857)	IRON	Oma Twp.	10 Aug 2000		LAF
9396	Eremobina claudens (Walker, 1857)			10 Muy 2000		, <del>,</del> , ,

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MONA No.	Species Name	County	Locailty	Date 1	Date 2	Contr.
9428	Meropleon ambifuscum (Newman, 1948)	WOOD	Saratoga Twp.	26 Aug 2000		LAF
9430	Selicanis cinereola J. B. Smith, 1900	Jackson	Black River Falls	29 Sep 2000		JCP
9434	Spartiniphaga includens (Walker, 1858)	Grant	Woodman	23 Jun 2000		LAF
9436	Spartiniphaga panatela (J. B. Smith, 1904)	IRON	Oma Twp.	3 Jul 2000		LAF
9464	Papaiperna cerina (Grote, 1874)	CLARK	Foster Twp.	29 Sep 2000		JCP
9493	Papaipema appassionata (Harvey, 1876)	ASHLAND	Stockton Island	24 Aug 2000		LAF
9497	Papaiperna necopina (Grote, 1876)	CLARK	Foster Twp.	29 Sep 2000		JCP
9503	Papaipema rigida (Grote, 1877)	Clark	Foster Twp.	29 Sep 2000		JCP JCP
9506 9514	Papaipema sciata Bird, 1908	Clark Bayfield	Foster Twp. Port Wing Boreal Forest SNA	29 Sep 2000 9 Aug 2000		JCP
9514	Hydraecia micacea (Esper, 1789) Achatodes zeae (Harris, 1841)	BAYFIELD	Port Wing Boreal Forest SNA	9 Aug 2000		JCP
9637	Magusa orbifera (Walker, 1857)	CLARK	Foster Twp.	29 Sep 2000		JCP
9637	Magusa orbifera (Walker, 1857)	Jackson	Black River Falls	29 Sep 2000		JCP
9637	Magusa orbifera (Walker, 1857)	MARINETTE	Dunbar Barrens	29 Sep 2000		RJB
9654	Caradrina meralis (Morrison, 1975)	ADAMS	Big Flats	26 Aug 2000		LAF
9657	Caradrina multifera (Walker, 1857)	Ashland	Stockton Island	24 Aug 2000		LAF
9657	Caradrina multifera (Walker, 1857)	BAYFIELD	Raspberry Island	24 Aug 2000		LAF
9699	Condica sutor (Guenee, 1852) STATE RECORD, one specimen at sugar bait	MANITOWOC	Two Rivers	1 Nov 2000		LAF
9886	Lithophane patefacta (Walker, 1858)	IRON	Oma Twp.	1 Oct 2000		LAF
9886	Lithophane patefacta (Walker, 1858)	JACKSON	Jackson County Forest	6 Mar 2000		
9888	Lithophane innominata (J. B. Smith, 1893)	IRON	Oma Twp. Toft Point SNA	1 Oct 2000 1 Apr 2000		LAF LAF
9891 9892	Lithophane amanda (J. B. Smith, 1900)	Door Trempealeau	Trempealeau	5 Mar 2000		JCP
9899.1	Lithophane disposita Morrison, 1874 Lithophane thujae Webster & Thomas, 1999	FOREST	Armstrong Creek	30 Sep 2000		RJB
9902	Lithophane baileyi Grote, 1877	IRON	Moose Lake Road	1 Oct 2000		LAF
9917	Lithophane fagina Morrison, 1874	DOOR	W of Bailey's Harbor	2 Apr 2000		LAF
9922	Lithophane pexata Grote, 1874	IRON	Oma Twp.	1 Oct 2000		LAF
9925	Lithophane lepida Grote, 1874 STATE RECORD, one specimen at MV light, de	MARINETTE at. L. A. Ferge	Dunbar Barrens	29 Sep 2000		RJB
9939	Eupsilia devia (Grote, 1875)	Marinette	Dunbar Barrens	30 Sep 2000		RJB
9939	Eupsilia devia (Grote, 1875)	TREMPEALEAU	Trempealeau	5 Mar 2000		JCP
9944	Metaxaglaea viatica (Grote, 1874) STATE RECORD, one specimen at sugar bait	MANITOWOC	Two Rivers	5 Nov 2000		LAF
9948	Chaetaglaea cerata Franclemont, 1943	Marinette	Dunbar Barrens	30 Sep 2000		RJB
9950	Chaetaglaea sericea (Morrison, 1874)	Marinette	Dunbar Barrens	29 Sep 2000		RJB
10020	Psaphida thaxteriana (Grote, 1874)	Jackson	Pray Kebles Best Berrane SNA	5 Mar 2000		JCP LAF
10059 10108	Homohadena badistriga (Grote, 1872) Oncocnemis viriditincta J. B. Smith, 1894	Burnett ADAMS	Kohler-Peet Barrens SNA Big Flats	6 Jul 2000 26 Aug 2000		LAF
10108	Oncochemis riparia Morrison, 1875	BURNETT	Namekagon Barrens	28 Jul 2000		RJB
10166	Sideridis congermana (Morrison, 1874)	Douglas	Dairyland Twp.	7 Jun 2000		JCP
10266	Sideridis congermana (Morrison, 1874)	Jackson	Black River Falls	3 Jun 2000		JCP
10294	Melanchra pulverulenta (J. B. Smith, 1888)	IRON	Manitowish	3 Jul 2000		LAF
10296	Lacanobia nevadae (Grote, 1876)	ASHLAND	Outer Island	5 Jul 2000		LAF
10296	Lacanobia nevadae (Grote, 1876)	Forest	Armstrong Creek Bog	30 May 2000		RJB
10302	Trichordestra rugosa (Morrison, 1875)	DOUGLAS	Wascott & Oakland Twp.	7 Jun 2000	30 Jun 2000	JCP
10302	Trichordestra rugosa (Morrison, 1875)	Jackson	Jackson County Forest	3 Jun 2000		JCP, LAF
10664	Agrotis subterranea (Fabricius, 1794) STATE RECORD, one specimen at sugar bait	MANITOWOC	Two Rivers	1 Nov 2000		LAF
10714	Euxoa quebecensis (J. B. Smith, 1900)	Bayfield Bayfield	Port Wing Boreal Forest SNA	29 Jun 2000		JCP LAF
10714 10727	Euxoa quebecensis (J. B. Smith, 1900)	Bayfield Ashland	Raspberry Island Rocky Island	5 Jul 2000 31 Jul 2000	24 Aug 2000	LAF
10727	Euxoa pleuritica (Grote, 1876) Euxoa lidia thanatologia (Dyar, 1904)	Oneida	Sugar Camp	1 Jul 2000	24 Aug 2000	LAF
10730	Euxoa auxiliaris (Grote, 1873)	Bayfield	Port Wing Boreal Forest SNA	9 Aug 2000		JCP
10731	Euxoa auxiliaris (Grote, 1873)	DANE	Middleton	19 Oct 2000		LAF
10731	Euxoa auxiliaris (Grote, 1873)	GRANT	Cassville	23 Jul 2000		JCP
10738	Euxoa mimallonis (Grote, 1873)	BAYFIELD	Rocky Island	31 Jul 2000	24 Aug 2000	LAF
10831	Euxoa niveilinea (Grote, 1882)	WOOD	Saratoga Twp.	26 Aug 2000	-	LAF
10863	Euxoa manitobana McDunnough, 1925	BURNETT	Namekagon Barrens	28 Jul 2000		RJB
10865	Euxoa perpolita (Morrison, 1876)	Ashland	Stockton Island	24 Aug 2000		LAF
10947	Xestia oblata (Morrison, 1875)	Bayfield	Port Wing Boreal Forest SNA	29 Jun 2000		JCP
10997	Cerastis fishii (Grote, 1878)	VILAS	Land O' Lakes Twp.	3 May 2000		JCP
11095	Schinia indiana (J. B. Smith, 1908)	Burnett	Danbury & Crex Meadows	25 May 2000	20 14-0000	SAS
11095	Schinia indiana (J. B. Smith, 1908) not seen 6 June 2000	Jackson	Jackson CF & Black River SF	23 May 2000	30 May 2000	SAS
11141	Schinia thoreaui (Grote & Robinson, 1870)		Wedde Creek SFA	24 Jul 2000		
11164 11174	Schinia florida (Guenee, 1852) Schinia lucens (Morrison, 1875)	ASHLAND	Stockton & Outer Islands Muralt Prairie & Oliver Prairie	31 Jul 2000 4 Jul 2000		LAF SAS
11174 11174	Schinia lucens (Morrison, 1875) Schinia lucens (Morrison, 1875)	Green Iowa	Thomson Prairie	4 Jul 2000 18 Jul 2000		SAS
111/4		10110		10 Jul 2000		

## **Wisconsin Entomological Society**



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Address Correction Requested

#### Wisconsin Entomological Society Newsletter — March 2001

## The SECRET of the Color RED

by Janice Stiefel

When Cortes enter into Mexico In the year of fifteen nineteen, He noticed something that, heretofore, Had never, ever been seen.

It was an exquisite shade of color They called it "brilliant red." T'was used on the soldiers' shields And in their fabric thread.

Cortes asked many questions, Searching for their secret dye. Then he discovered bags of powder, Soon after he became a spy.

Sending the bags on a boat to Spain Was his eventual and sneaky plan. Ladies would want it for their clothes, As well as each and every man.

Catholic Cardinals sought the color, too; For the long robes they wore. Michelangelo used it in paintings Everyone wanted it more and more. In seventeen hundred, a Dutch scientist Observed with his new microscope That the powdered substance in the bags Contained tiny LEGS—there was hope!

Since the dye was always exported From a "secret Mexican farm," It would take some tricky adventurers Using their wily ways and charm.

They found fields of large cacti, Called "*Prickly Pear*," to be exact, Each was covered with tiny insects Like mealybugs, as a matter-of-fact.

The insects were black, red and wingless About the size of a match's head. <u>THEY</u> were the long-sought secret— The marvelous news then spread.

Making the dye was quite tedious; Insects had to be captured and dried. Only the females contained the pigment, So the males were tossed aside.



Rollers were used by the women. Each bug was actually stone-ground. It took seventy-thousand insect bodies Just to make a single pound.

For more than three centuries This tiny insect was in demand, Using it for sausage, medicine and food, Anything red—throughout every land.

With eighteen hundred came synthetics To ease the demand a small bit. Today, it's used in make-up and paint, And for photography it has always fit.

Thanks to those tiny insects with legs And the Mexican Prickly Pear Our lives are illumined with color— "Brilliant" red for us to use with flair!

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According to the Wisconsin Plant Checklist, there are three species of Prickly Pear Cacti found in Wisconsin, while the tropics play host to many more. The species used for dye purposes was probably the Cochineal Insect Cactus (Opuntia cochinellifera), which is a native of Mexico, now cultivated in the West Indies and other places, as well.