

SURVEY OF SELECT PRAIRIE INSECTS ON PROTECTED PRAIRIES
IN THE SOUTHERN TILL PLAIN

Final Report for the 1996-97 fiscal year to the
Illinois Department of Natural Resources

ILLINOIS NATURAL HISTORY SURVEY

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INTRODUCTION

During July and August of 1995, the author of this report (John K. Bouseman) and his associate, Douglas Yanega, visited fourteen protected prairie sites in the Southern Till Plain of Illinois. Eight trips were made (7, 12, 19, 26 July; 2, 10, 17, 24 August). The purpose of the visits was to survey for selected groups of insects in the prairie sites. Particular attention was given to butterflies and skippers, native bees, and to other insects known to the author to be of rare or restricted occurrence in the state.

The results of the surveys are presented herein. All determinations (identifications) were made by either the author or Yanega. Voucher specimens have been deposited in the collection of the Illinois Natural History Survey

BUTTERFLIES AND SKIPPERS.

Nineteen species of butterflies and seventeen species of skippers were observed at the protected prairie sites. The butterflies and skippers of Effingham, Fayette, Marion and Jasper Counties are poorly known (see Irwin and Downey (1973) for records from those counties. The butterflies and skippers found at the Route 37 sites are listed in Table 1, and those from the prairie chicken sites and Ramsey prairie are presented in Table 2. To facilitate comparison between the two suites of sites all species are listed in the two tables. Thus, a row will be empty when a species was not observed in one or the other of the combined sites.

NOTABLE SPECIES.

Lycaena dione, Dione Copper. This species is known mainly from the northern one-half of the state. The Effingham and Marion county records seem to be new southeastern limital records for the overall distribution of the species.

Euphyes bimacula, Two-Spotted Skipper. The Marion County records are well to the south of the records presented in Irwin and Downey (1973).

Table 1. List of species of butterflies and skippers observed at 12 Mile Prairie during July-August 1995. Scientific and common names follow Opler and Malikul (1992). Order of treatment follows Irwin and Downey (1973), but with skippers following butterflies. Sites: #1 = 1.5 mi NE Mason, Rt. 37, Effingham Co.; Site #2 = 1.2 mi SW Mason, Rt. 37, Effingham Co.; Site #3 = 0.7 mi SW LaCledde, Rt. 37, Fayette Co.; Site #4 = 0.5 mi NE Farina, Rt. 37, Fayette Co.; Site #5 = 1.5 mi SW Farina, Rt. 37, Marion Co.; Site #6 = 0.5 mi NE Kinmundy, Rt. 37, Marion Co. Documentation: X = vouchered record; S = sight record.

Table 1.

	Site #					
	1	2	3	4	5	6
Black Swallowtail						
<i>Papilio polyxenes</i>	S	S	S	S		
Tiger Swallowtail						
<i>Papilio glaucus</i>		S				
Spicebush Swallowtail						
<i>Papilio troilus</i>		S				X
Cabbage Butterfly						
<i>Pieris rapae</i>		S	S			
Alfalfa Butterfly						
<i>Colias eurytheme</i>		S				X
Cloudless Sulphur						
<i>Phoebis sennae</i>		X				
Little Sulphur						
<i>Eurema lisa</i>		S				
Gray Hairstreak						
<i>Strymon melinus</i>	S	X		X		
Bronze Copper						
<i>Lycaena hyllus</i>			X	S		
Dione Copper						
<i>Lycaena dione</i>	X					
Eastern Tailed Blue						
<i>Everes comyntas</i>	S	X	S			
Viceroy						
<i>Liminitis archippus</i>		S				
American Painted Lady						
<i>Vanessa virginiensis</i>						
Painted Lady						
<i>Vanessa cardui</i>		S	S	S		X
Buckeye						
<i>Junonia coenia</i>	X	S	S			
Pearl Crescent						
<i>Phyciodes tharos</i>	X	S	S			
Monarch						
<i>Danaus plexippus</i>	S	S	S			
Little Wood Satyr						
<i>Megisto cymela</i>		X				
Common Wood Nymph						
<i>Cercyonis pegala</i>	X	S	S			

	1	2	Site # 3	4	5	6
Two-Spotted Skipper <i>Euphyes bimacula</i>			X			X
Dun Skipper <i>Euphyes vestris</i>		X	X			
Byssus Skipper <i>Problema byssus</i>		X				
Delaware Skipper <i>Atrytone delaware</i>	X	X	S	S	X	X
Sachem <i>Atalaphodes campestris</i>	X	X	S			
Northern Broken Dash <i>Wallengrenia egerement</i>		S	.			
Peck's Skipper <i>Polites peckius</i>	S		X	S		
Tawney-Edged Skipper <i>Polites themistocles</i>			X	X		
Crossline Skipper <i>Polites origenes</i>		X	X			X
Least Skipper <i>Ancyloxypha numitor</i>	X	S	S			
Common Sooty Wing <i>Pholisora catullus</i>		X	X			
Swarthy Skipper <i>Nastra therminier</i>		X	X	S	X	
Wild Indigo Dusky Wing <i>Erynnis baptisiae</i>		X				
Horace's Dusky Wing <i>Erynnis horatius</i>		X				
Scalloped Sooty Wing <i>Staphylus hayhursti</i>				X		
Southern Cloudy Wing <i>Thorybes bathyllus</i>		X				
Silver-Spotted Skipper <i>Epargyreus clarus</i>	S	X	S			

Table 2. List of species of butterflies and skippers observed at prairie chicken preserves and at Ramsey Prairie during July-August 1995. Names and order of treatment as in Table 1. Sites: NH = Illinois Natural History Survey preserve, 1.7 mi S Kinmundy, Marion Co.; SL = Soldner preserve, 2 mi E Kinmundy, Marion Co.; GL = Galbreath preserve, 3.1 mi S Newton, Jasper Co.; WL = Walters preserve, 3.2 mi SSW Newton, Jasper Co.; DN = Donnelly preserve, 3.3 mi SSW Newton, Jasper Co.; YT = Yeatter preserve, 3.5 mi SW Newton, Jasper Co.; HQ = Headquarters site, 4.7 mi SSW Newton, Jasper Co.; RM = Ramsey Prairie, 0.5 mi N Ramsey, Fayette Co. Documentation: X = vouchered record; S = sight record.

Table 2.

	Site							
	NH	SL	GL	WL	DN	YT	HQ	RM
Black Swallowtail								
<i>Papilio polyxenes</i>	S			S				S
Tiger Swallowtail								
<i>Papilio glaucus</i>				S				S
Spicebush Swallowtail								
<i>Papilio troilus</i>			S	S				
Cabbage Butterfly								
<i>Pieris rapae</i>	S	S		S				S
Alfalfa Butterfly								
<i>Colias eurytheme</i>	S	S		S			S	
Cloudless Sulphur								
<i>Phoebis sennae</i>		X						
Little Sulphur								
<i>Eurema lisa</i>		X						
Gray Hairstreak								
<i>Strymon melinus</i>	S							
Bronze Copper								
<i>Lycaena hyllus</i>				S			X	
Dione Copper								
<i>Lycaena dione</i>	X							
Eastern Tailed Blue								
<i>Everes comyntas</i>		S		X	S		S	
Viceroy								
<i>Liminitis archippus</i>							S	
American Painted Lady								
<i>Vanessa virginiensis</i>	S			S				
Painted Lady								
<i>Vanessa cardui</i>				S				
Buckeye								
<i>Junonia coenia</i>				S			S	
Pearl Crescent								
<i>Phyciodes tharos</i>		S						
Monarch								
<i>Danaus plexippus</i>				S			S	
Little Wood Satyr								
<i>Megisto cymela</i>								
Common Wood Nymph								
<i>Cercyonis pegala</i>	S		X	S				

NATIVE BEES.

Fifty species of native bees were collected from the protected prairie sites. The species from the Route 37 prairie sites are presented in Table 3, and those from the prairie chicken preserves and Ramsey prairie are listed in Table 4. Table 5 gives a complete list of the bees observed at all sites along with the nectar and pollen sources from which the bees were taken. Table 6 provides a list of the plants and their bee visitors.

NOTABLE SPECIES.

Andrena rudbeckiae. This species is an oligolege of the Compositae. It has been reported from only 4 other localities in Illinois, viz. Carlinville, Galena Junction, McHenry and Urbana (LaBerge, 1967).

Melissodes boltoniae. This species is an oligolege of the Compositae. It has been reported from only 3 other localities in Illinois, viz. Carlinville, Manito and Urbana (LaBerge, 1961).

Melissodes coloradensis. This species is an oligolege of the Compositae. It has been recorded from only 4 other localities in Illinois, viz. Ashburn, Carlinville, Chicago and Peoria (LaBerge, 1961).

Melissodes comptoides. This species is polylectic. It has been recorded from only 3 other localities in Illinois, viz. Carlinville, Covington and Urbana (LaBerge, 1956).

Melissodes dentiventris. This species is an oligolege of the Compositae. It has been recorded from only 4 other specific localities in Illinois, viz. Bluffs, Carlinville, Elsay and Peoria (LaBerge, 1961).

Melissodes wheeleri. This species is an oligolege of the Compositae. There are no previous records of this species in Illinois

Table 3. List of species of native bees observed at 12 Mile Prairie during July-August 1995. Scientific names and order of treatment follow Hurd (1979). Sites as in Table 1. Documentation: X = vouchered record; S = sight record.

Table 3.

	Site #					
	1	2	3	4	5	6
<u>Colletes latitarsus</u>						X
<u>Hylaeus affinis</u>	X		X			X
<u>Hylaeus cressoni</u>		X	X			
<u>Andrena rudbeckiae</u>	X	X				
<u>Verbenapis nebraskensis</u>		X				
<u>Calliopsis andreniformis</u>						X
<u>Nomia nortoni</u>	X					X
<u>Nomia heteropoda</u>						
<u>Halictus ligatus</u>	X	X	X			X
<u>Halictus parallelus</u>						X
<u>Halictus rubicundus</u>		X				
<u>Halictus confusus</u>				X		
<u>Lasioglossum (?) admirandus</u>		X				
<u>Lasioglossum bruneri</u>				X		
<u>Lasioglossum cressonii</u>						X
<u>Lasioglossum regularis</u>						
<u>Lasioglossum rohweri</u>		X				
<u>Lasioglossum versatus</u>						
<u>Paralictus sp.</u>						
<u>Sphecodes heraclei</u>						X
<u>Sphecodes (?) prosoporus</u>						
<u>Agapostemon virescens</u>	X					

	Site #					
	1	2	3	4	5	6
<u>Augochlorella (?) persimilis</u>						
<u>Augochlorella striata</u>			X			
<u>Augochloropsis metallica</u>				X		
<u>Hoplitis pilosifrons</u>		X				
<u>Megachile brevis</u>			X			
<u>Megachile brevis pseudobrevis</u>	X					
<u>Megachile mendica</u>		X				
<u>Megachile petulans</u>		X				
<u>Megachile inimica</u>		X				
<u>Megachile pollicaris</u>			X			
<u>Coelioxys octodentata</u>						X
<u>Holcopasites calliopsidis</u>						
<u>Triepeolus concavus</u>			X			
<u>Triepeolus helianthi</u>						
<u>Triepeolus lunatus</u>	X		X			X
<u>Triepeolus sp. nr. lunatus</u>						
<u>Triepeolus simplex</u>			X			
<u>Svastra obliqua</u>	X	X				X
<u>Melissodes bimaculata</u>	S	X	X		S	S
<u>Melissodes comptoides</u>						X
<u>Melissodes desponsa</u>	X		X			
<u>Melissodes agilis</u>		S	X			
<u>Melissodes boltoniae</u>						
<u>Melissodes coloradensis</u>		X				
<u>Melissodes dentiventris</u>						X

	1	2	3	4	Site # 5	6
<u>Melissodes trinodis</u>		X			X	
<u>Melissodes vernoniae</u>		X	X	X	X	X
<u>Melissodes wheeleri</u>	X					
<u>Florilegus condignus</u>						
<u>Ceratina dupla</u>	X	X	X			
<u>Xylocopa virginica</u>						
<u>Bombus bimaculatus</u>		X	X			
<u>Bombus pennsylvanicus</u>		X				

Table 4. List of species of native bees observed at prairie chicken preserves and at Ramsey Prairie during July-August 1995. Scientific names and order of treatment follow Hurd (1979). Sites as in Table 2. Documentation: X = vouchered record; S = sight record.

Table 4.

	NH	SL	GL	Site		YT	HQ	RM
				WL	DN			
<u>Colletes latitarsus</u>								
<u>Hylaeus affinis</u>		X		X				
<u>Hylaeus cressoni</u>		X						
<u>Andrena rudbeckiae</u>	X							
<u>Verbenapis nebraskensis</u>						X		
<u>Calliopsis andreniformis</u>			X	S				
<u>Nomia nortoni</u>	X						X	
<u>Nomia heteropoda</u>								X
<u>Halictus ligatus</u>	S	X		S	S		S	
<u>Halictus parallelus</u>	S	X		X			X	X
<u>Halictus rubicundus</u>								
<u>Halictus confusus</u>								X
<u>Lasioglossum (?) admirandus</u>								X
<u>Lasioglossum bruneri</u>				X				
<u>Lasioglossum cressonii</u>						X		
<u>Lasioglossum regularis</u>		X						
<u>Lasioglossum rohweri</u>	X	X						
<u>Lasioglossum versatus</u>				X				
<u>Paralictus sp.</u>				X				
<u>Sphecodes heraclei</u>		X						
<u>Sphecodes (?) prosoporus</u>		X						
<u>Agapostemon virescens</u>	X						X	

Table 5. List of the native bees observed at 12 Mile Prairie, Ramsey Prairie, and prairie chicken preserves during July-August 1995 along with the source pollen and nectar plants. Scientific names of bees and order of treatment follow Hurd (1979). Names of plants follow Mohlenbrock (1986). Bold face indicates an oligolectic species of bee.

Table 5.

<u>Hylaeus affinis</u>	<u>Daucus carota</u> <u>Pycnanthemum tenuifolium</u> <u>Rudbeckia hirta</u> <u>Sabatia angularis</u>
<u>Hylaeus cressoni</u>	<u>Daucus carota</u> <u>Eryngium yuccifolium</u>
<u>Andrena rudbeckiae</u>	<u>Rudbeckia hirta</u>
<u>Verbenapis nebraskensis</u>	<u>Verbena hastata</u>
<u>Calliopsis andreniformis</u>	<u>Trifolium</u> sp.
<u>Nomia nortoni</u>	<u>Cassia fasciculata</u>
<u>Nomia heteropoda</u>	<u>Silphium integrifolium</u>
<u>Halictus ligatus</u>	<u>Helenium autumnale</u> <u>Rudbeckia hirta</u> <u>Vernonia baldwini</u>
<u>Halictus parallelus</u>	<u>Cassia fasciculata</u> <u>Liatris pycnostachya</u> <u>Monarda fistulosa</u> <u>Pycnanthemum tenuifolium</u> <u>Sabatia angularis</u>
<u>Halictus rubicundus</u>	<u>Pycnanthemum tenuifolium</u>
<u>Halictus confusus</u>	<u>Apocynum cannabinum</u> <u>Cassia fasciculata</u>
<u>Lasioglossum (?) admirandus</u>	<u>Cassia fasciculata</u> <u>Melilotus alba</u>
<u>Lasioglossum perpunctatus</u>	<u>Apocynum cannabinum</u>
<u>Lasioglossum regularis</u>	<u>Eryngium yuccifolium</u>
<u>Lasioglossum rohweri</u>	<u>Daucus carota</u> <u>Pycnanthemum tenuifolium</u>

<u>Lasioglossum versatus</u>	<u>Apocynum cannabinum</u> <u>Cassia fasciculata</u> <u>Chichorium intybus</u> <u>Daucus carota</u> <u>Pycnanthemum tenuifolium</u>
<u>Sphecodes heraclei</u>	<u>Pycnanthemum tenuifolium</u>
<u>Sphecodes (?) prosoporus</u>	<u>Pycnanthemum tenuifolium</u>
<u>Agapostemon virescens</u>	<u>Liatris pycnostachya</u> <u>Rudbeckia hirta</u>
<u>Augochlorella (?) persimilis</u>	<u>Pycnanthemum tenuifolium</u> <u>Sabatia angularis</u>
<u>Augochlorella striata</u>	<u>Cassia fasciculata</u> <u>Cichorium intybus</u> <u>Liatris pycnostachya</u> <u>Sabatia angularis</u>
<u>Augochloropsis metallica</u>	<u>Apocynum cannabinum</u> <u>Cassia fasciculata</u>
<u>Hoplitis pilosifrons</u>	<u>Monarda fistulosa</u>
<u>Megachile brevis</u>	<u>Ludwigia alternifolia</u>
<u>Megachile brevis pseudobrevis</u>	<u>Rudbeckia hirta</u>
<u>Megachile mendica</u>	<u>Cassia fasciculata</u>
<u>Megachile petulans</u>	<u>Cassia fasciculata</u> <u>Desmodium sp.</u> <u>Lespedeza capitata</u> <u>Silphium integrifolium</u> <u>Solidago sp.</u>
<u>Megachile inimica</u>	<u>Liatris pycnostachya</u> <u>Ratibida pinnata</u> <u>Vernonia baldwini</u>
<u>Megachile polycaris</u>	<u>Helianthus mollis</u>
<u>Coelioxys octodentata</u>	<u>Pycnanthemum tenuifolium</u>
<u>Triepeolus concavus</u>	<u>Helianthus mollis</u> <u>Vernonia baldwini</u>
<u>Triepeolus helianthi</u>	<u>Silphium perfoliatum</u>
<u>Triepeolus simplex</u>	<u>Pycnanthemum tenuifolium</u>

Svastra obliqua

Helianthus mollis
Liatris pycnostachya
Silphium integrifolium
Vernonia baldwini

Melissodes bimaculata

Liatris pycnostachya
Pycnanthemum tenuifolium
Ratibida pinnata
Silphium laciniatum

Melissodes comptoides

Cassia fasciculata

Melissodes desponsa

Cirsium sp.

Melissodes agilis

Liatris pycnostachya
Silphium laciniatum
Silphium perfoliatum

Melissodes boltoniae

Helianthus mollis

Melissodes coloradensis

Helianthus mollis

Melissodes denticulata

Vernonia baldwini

Melissodes dentiventris

Boltonia diffusa

Melissodes trinodis

Helianthus mollis
Vernonia baldwini

Melissodes vernoniae

Liatris pycnostachya
Silphium integrifolium
Vernonia baldwini

Melissodes wheeleri

Rudbeckia hirta

Florilegus condignus

Cassia fasciculata
Pycnanthemum tenuifolium
Silphium perfoliatum

Ceratina dupla

Pycnanthemum tenuifolium
Rudbeckia hirta
Silphium laciniatum
Verbena hastata

Xylocopa virginica

Cassia fasciculata

Bombus bimaculatus

Cassia fasciculata
Melilotus alba
Ratibida pinnata

Bombus pennsylvanicus

Cirsium sp.
Hypericum sp.

Table 6: Alphabetical list of plant species observed at 12 Mile Prairie, Ramsey Prairie, and prairie chicken preserves during July-August 1995 and their associated native bees at the sites. Scientific names of bees follow Hurd (1979). Names of plants follow Mohlenbrock (1986). Bold face indicates an oligolectic species of bee.

<u>Apocynum cannabinum</u>	<u>Augochloropsis metallica</u> <u>Halictus confusus</u> <u>Lasioglossum perpunctatus</u> <u>Lasioglossum versatus</u>
<u>Boltonia diffusa</u>	<u>Melissodes dentiventris</u>
<u>Cichorium intybus</u>	<u>Augochlorella striata</u> <u>Lasioglossum versatus</u>
<u>Cassia fasciculata</u>	<u>Augochlorella striata</u> <u>Augochloropsis metallica</u> <u>Florilegus condignus</u> <u>Halictus confusus</u> <u>Halictus parallelus</u> <u>Lasioglossum (?) admirandus</u> <u>Lasioglossum versatus</u> <u>Megachile mendica</u> <u>Megachile petulans</u> <u>Melissodes comptoides</u> <u>Nomia nortoni</u>
<u>Cirsium sp.</u>	<u>Bombus pennsylvanicus</u> <u>Melissodes desponsa</u>
<u>Daucus carota</u>	<u>Hylaeus affinis</u> <u>Hylaeus cressoni</u> <u>Lasioglossum rohweri</u> <u>Lasioglossum versatus</u>
<u>Eryngium yuccifolium</u>	<u>Hylaeus cressoni</u> <u>Lasioglossum regularis</u>
<u>Desmodium sp.</u>	<u>Megachile petulans</u>
<u>Helenium autumnale</u>	<u>Halictus ligatus</u>
<u>Helianthus mollis</u>	<u>Megachile pollicaris</u> <u>Melissodes boltoniae</u> <u>Melissodes coloradensis</u> <u>Melissodes trinodis</u> <u>Svastra obliqua</u> <u>Triepeolus concavus</u>
<u>Hypericum sp.</u>	<u>Bombus pennsylvanicus</u>
<u>Lespedeza capitata</u>	<u>Megachile petulans</u>

<u>Liatris pycnostachya</u>	<u>Agapostemon virescens</u> <u>Augochlorella striata</u> <u>Halictus parallelus</u> <u>Megachile inimica</u> <u>Melissodes agilis</u> <u>Melissodes bimaculata</u> <u>Melissodes vernoniae</u> <u>Svastra obliqua</u>
<u>Ludwigia alternifolia</u>	<u>Megachile brevis</u>
<u>Melilotus alba</u>	<u>Bombus bimaculata</u> <u>Lasioglossum admirandus</u>
<u>Monarda fistulosa</u>	<u>Halictus parallelus</u> <u>Hoplitis pilosifrons</u>
<u>Pycnanthemum tenuifolium</u>	<u>Augochlorella (?) persimilis</u> <u>Ceratina dupla</u> <u>Coelioxys octodentata</u> <u>Florilegus condignus</u> <u>Halictus parallelus</u> <u>Halictus rubicundus</u> <u>Hylaeus affinis</u> <u>Lasioglossum rohweri</u> <u>Melissodes bimaculata</u> <u>Sphecodes heraclei</u> <u>Sphecodes (?) prosoporus</u> <u>Triepeolus simplex</u>
<u>Ratibida pinnata</u>	<u>Bombus bimaculatus</u> <u>Megachile inimica</u> <u>Melissodes bimaculata</u>
<u>Rudbeckia hirta</u>	<u>Agapostemon virescens</u> <u>Andrena rudbeckiae</u> <u>Ceratina dupla</u> <u>Halictus ligatus</u> <u>Hylaeus affinis</u> <u>Megachile brevis pseudobrevis</u> <u>Melissodes wheeleri</u>
<u>Sabatia angularis</u>	<u>Augochlorella (?) persimilis</u> <u>Augochlorella striata</u> <u>Halictus parallelus</u> <u>Hylaeus affinis</u>
<u>Silphium integrifolium</u>	<u>Megachile petulans</u> <u>Melissodes vernoniae</u> <u>Nomia heteropoda</u> <u>Svastra obliqua</u>

Silphium laciniatumSilphium perfoliatumSolidago sp.Trifolium sp.Verbena hastataVernonia baldwiniMelissodes bimaculataCeratina dupla**Melissodes agilis**Florilegus condignus**Melissodes agilis**Triepeolus helianthiMegachile petulansCalliopsis andreniformisCeratina dupla**Verbenapis nebraskensis**Halictus ligatusMegachile inimica**Melissodes denticulata****Melissodes trinodis**Melissodes vernoniae**Svastra obliqua**Triepeolus concavus

CICADAS AND BEETLES.

During sampling in 1995, an especial effort was made to collect and record several species of insects known to the author to be of rare occurrence in Illinois. The results of this effort are summarized in Table 7.

Table 7. List of species of insects of rare or restricted occurrence in Illinois observed at protected prairie sites during July-August 1995. Abbreviations of sites are as in Table 1 and Table 2. Documentation: X=vouchered record; S=sight record.

	1	2	3	4	Site 5	6	NH	SL	WL	RM
<u>Cicadetta calliope</u> (Homopter: Cicadidae)		X								
<u>Tibicen dorsata</u> (Homoptera: Cicadidae)		X	X	X		X	X		X	
<u>Pyrota mutata</u> (Coleoptera: Meloidae)		X								
<u>Nemognatha lurida</u> (Coleoptera: Meloidae)		X	S							
<u>Zonitis vittigera</u> (Coleoptera Meloidae)		X				X	X	S		
<u>Macrosiagon dimidiatum</u> (Coleoptera:Rhipiphoridae)	X	X	X			X		S		S
<u>Macrosiagon limbatum</u> (Coleoptera:Rhipiphoridae)		X	X		X			X	X	

NOTABLE SPECIES (Table 7)

Cicadetta calliope. This small grassland cicada is otherwise known in Illinois only from collections made at the Valmeyer Hill prairie by M. W. Sanderson in 1956 and by the author and L. J. Stannard in 1957 and from a collection at Milan in 1885.

Tibicen dorsata. This grassland cicada is perhaps the rarest large insect in Illinois. Previous records are as follows: Tamaroa (1882), Urbana (1886), Champaign (1891), Forest City (1904), Odin (1909), Vera (1910). It is interesting to note that all previous records save Urbana were from sites along the Illinois Central Gulf Railroad and its predecessors. The species is known to occur in a railroad prairie site (again ICGRR) at Paxton.

Pyrota mutata. This rare meloid is a parasite of native bees. Roberson (1921) recorded it from Carlinville.

Nemognatha lurida. This species is a parasite of native bees. It was first recorded from Illinois by the author (Bouseman, 1958) on the basis of collections made by him at Farina and Mason. The species has since been collected by the author from a few railroad prairies in southern and central Illinois.

Zonitis vittigera. This species is a parasite of native bees. It was recorded from Farina by the author (Bouseman, 1958). It has since been collected by the author from a few sand prairies, railroad prairies and old fields in Illinois.

Macrosiagon dimidiatum. This species is a hyperparasite of solitary wasps. It has been recorded from Carlinville (Robertson, 1921) and from McLeansboro (Bouseman, 1976).

Macrosiagon limbatum. This species is a hyperparasite of solitary wasps. It has been recorded from Carlinville (Robertson, 1921) and from McLeansboro (Bouseman, 1976).

CONCLUSIONS AND RECOMMENDATIONS

The author has been engaged in collecting and observing insects in grassland habitats in Illinois - in sand prairies, in hill prairies, in mesic prairies and in old field situations-for 40 years. With the exceptions of hill prairies and old fields, most of these investigations have been conducted in railroad prairies. It is the author's opinion that the 12 Mile Prairie (from Mason to Alma) is the most important and biotically diverse assemblage of prairie associated insect species in Illinois and hence in the eastern United States (US east of the Mississippi River).

During the course of the author's forty-year study of selected prairie insects he has seen the degradation, destruction and loss of several superb prairie sites. This unfortunate loss has had numerous causes: abandonment of rail lines, invasion of woody species, usurption by agricultural interests, destruction by highway construction, etc.

Because the 12 Mile Prairie and its associated sites are incomparable and irreplaceable, I make the following recommendations.

- 1) That these sites be given the highest level of protection available,
- 2) That the sites be effectively managed for their survival,
- 3) That the cooperation of adjacent land-owners in the interest of the prairies be solicited,
- 4) That additional lands be acquired and restored, and
- 5) That continuing surveys be conducted to document the rich diversity of these sites.

POSTSCRIPT

To those who seek no more than "splendor in the grass and glory in the flower", prairie restorations may suffice. But for those who seek biotic diversity with its panoply of insect color and form and the cacaphony of insect sounds, the remnant sites of critical mass must be identified and preserved. Such is the 12 Mile Prairie.

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