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NEW ORTHOPTEROID RECORDS IN MICHIGAN DERIVED FROM SAMPLING A SMALL FIELD

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A 1.8 acre sandy field in Isabella County, Michigan was sampled in 1971 and 1972 to obtain data on ecological and chronological distribution of orthopteroid species (Bland and Swayze 1973a,b). The upland field vegetation was a mosaic of numerous non-contiguous floral associations (e.g. moss-grass, grass-milkweed, goldenrod-bergamot-fern) made up of 58 plant species. The land, bordered by shrubs, trees and a road, was relatively isolated. Sampling was done both day and night once a week by using sweep nets and 7 to 21 pit traps (some containing molasses as bait).

We collected 31 species distributed in the following 7 orthopteroid families: Acrididae (17), Gryllidae (5), Tettigoniidae (4), Gryllacrididae (1), Tetrigidae (2), Manteidae (1) and Phasmatidae (1). Adults of 3 species were collected earlier and 8 species collected later than the records for Michigan listed by Cantrall (1968). Twenty three species were captured that were previously unrecorded from the county (Table 1).

Table 1. Capture data for 31 species of orthopteroids from Isabella County, Michigan in 1971 and 1972.

Species	Date of 1st Capture		Date of Last Capture
	Nymph	Adult	Adult
<i>Mantis r. religiosa</i> (Linnaeus)*	June 29	Aug. 3	Sept. 28
<i>Diaperomera femorata</i> (Say)*	Aug. 3	-----	-----
<i>Tetrix subulata</i> (Linnaeus)	-----	June 2	June 2
<i>Tettigidea l. lateralis</i> (Say)*	-----	Sept. 14	Sept. 14
<i>Pseudopomala brachyptera</i> (Scudder)*, †	May 19	June 22	Sept. 7
<i>Chorthippus c. curtipennis</i> (Harris)*, ‡	June 2	July 6	Nov. 2
<i>Arphia p. pseudonietana</i> (Thomas)*	-----	Aug. 3	Sept. 7
<i>Arphia sulphurea</i> (Fabricius)*	July 29	May 26	June 29
<i>Chortophaga viridifasciata</i> (De Geer)	Aug. 25	May 26	June 29
<i>Encoptolophus s. sordidus</i> (Burmeister)	-----	Aug. 26	Oct. 26
<i>Camnula pellucida</i> (Scudder)†, ‡	May 26	July 6	Oct. 26
<i>Dissosteira carolina</i> (Linnaeus)	May 26	July 17	Aug. 17
<i>Spharagemon b. bolli</i> Scudder*	June 8	July 6	Sept. 7
<i>Spharagemon collare</i> (Scudder)*	June 8	June 29	Sept. 7
<i>Schistocerca alutacea</i> (Harris)*	June 29	-----	-----
<i>Melanoplus bivittatus</i> (Say)*, ‡	May 19	July 6	Sept. 28
<i>Melanoplus confusus</i> Scudder*, ‡	May 5	June 15	Sept. 21
<i>Melanoplus f-r. femur-rubrum</i> (De Geer)	June 13	Aug. 10	Nov. 10
<i>Melanoplus keeleri luridus</i> (Dodge)*	-----	Sept. 21	Sept. 21
<i>Melanoplus s. sanguinipes</i> (Fabricius)*, ‡	June 2	July 6	Oct. 26
<i>Melanoplus a. angustipennis</i> (Dodge)*	-----	Sept. 5	Sept. 5
<i>Scudderia f. furcata</i> Brunner	June 8	July 19	July 19
<i>Neoconocephalus ensiger</i> (Harris)*, †	June 15	July 13	Aug. 25
<i>Orchelimum gadiator</i> (Bruner)*, ‡	June 20	July 29	Sept. 28
<i>Conocephalus brevipennis</i> (Scudder)*	June 22	Aug. 25	Sept. 7
<i>Ceuthophilus brevipes</i> Scudder*	July 20	Aug. 17	Aug. 25
<i>Gryllus pennsylvanicus</i> Burmeister*	June 22	Aug. 17	Oct. 26
<i>G. veletis</i> (R. D. Alexander and Bigelow)*	May 26	May 26	July 6

Table 1. Cont'd.

Species	Date of 1st Capture		Date of Last Capture
	Nymph	Adult	Adult
<i>Allonemobius allardi</i> (R. D. Alexander and E. S. Thomas)*, ‡	July 14	Aug. 25	Nov. 2
<i>Oecanthus nigricornis</i> F. Walker	Aug. 10	Aug. 17	Sept. 28
<i>Oecanthus quadripunctatus</i> Beutenmuller*, ‡	June 22	July 29	Oct. 19

*New record for county (23).

†New record for date of earliest capture of an adult (3).

‡New record for latest capture of an adult (8).

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