

# NOTES ON THE NATURAL HISTORY OF THE LEECHES (HIRUDINEA) ON THE GEORGE RESERVE, MICHIGAN<sup>1</sup>

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## ABSTRACT

The local distribution and relative abundance of the leeches of the E. S. George Reserve, located in southeastern Michigan, were investigated. Fourteen species of leeches were found on the Reserve, five of which are new to Michigan and one is new to the United States.

## INTRODUCTION

The Edwin S. George Reserve, roughly two square miles in area, is located approximately four miles southwest of Pinckney in southwestern Livingston County, Michigan. A thorough physiographic description can be found in Cantrall (1943). Although a number of ponds, pools, canals, and springs, both permanent and temporary, occur on the Reserve, they are all basically woodland ponds with muddy, leafy bottoms. In most years, only a few of the larger ponds escape drying up by late summer. The locations and general descriptions of the bodies of water investigated are given in table 1 and figure 1, respectively.

TABLE 1

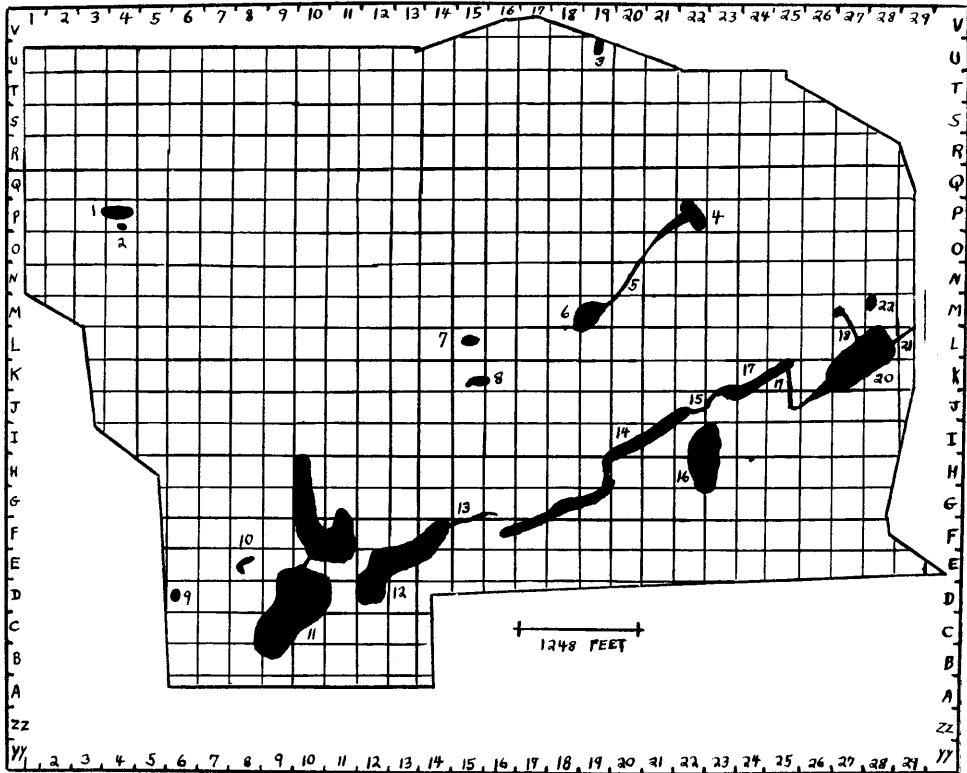
*Locations and types of bodies of water on the E. S. George Reserve*

Number	Name	Map Location	Type of Water
1		P-4	Temporary woods pond
2		P-4	Small temporary woods pond
3		U-19	Temporary swamp pond
4	Hidden Lake	P-22	Acid bog
5		N-20	Small temporary drainage stream
6		M-19	Semi-permanent swamp pond
7	George Pond	L-15	Permanent pond
8	Burt Pond	K-15	Permanent pond
9		D-6	Small temporary deep woods pool
10	Southwest Woods Pool	E-8	Semi-permanent woods pool
11	Southwest Swamp	D-10	Permanent swamp pond
12	Crane Pond	E-12	Permanent pond
13		F-15	Semi-permanent drainage stream
14	Longissimus Canal	I-19	Deep permanent woods canal
15		J-22	Semi-permanent drainage stream
16	Cattail Marsh	I-22	Semi-permanent marsh
17		K-24	Deep permanent woods canal
18		L-27	Temporary drainage stream
19		K-25	Semi-permanent drainage stream
20	East Marsh	L-28	Large permanent pond (recent)
21		L-29	Semi-permanent drainage stream
22		M-28	Temporary marsh

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Almost every major body of water on the Reserve was investigated for leeches at approximately two-week intervals from March until August, 1967, by examining submerged leaves, sticks, logs and likely hosts such as salamanders, frogs, toads, turtles, and snails. In each of the larger ponds, quantification was accomplished once, in the last week of May, by collecting in a given area for one hour, a method which has been used successfully by several British freshwater biologists (e.g. Reynoldson 1966).



## E. S. GEORGE RESERVE

FIGURE 1. Map of the major bodies of water on the E. S. George Reserve, Michigan. The co-ordinate units are adapted from Cantrall (1943).

### RESULTS

The results of the leech survey are presented in table 2. The following leeches were the most commonly encountered on the Reserve: *Erpobdella punctata*, *Helobdella stagnalis*, *Batrachobdella picta*, *Placobdella hollensis*, and *Oculobdella lucida*. Of the fourteen species found, five are reported from Michigan for the first time: *Helobdella papillata*, *H. lineata*, *Placobdella hollensis*, *Theromyzon meyeri*, and *Oculobdella lucida*. A complete series of sections of one individual of the

latter revealed that the gonopores are so close together that they appear to have a common opening. In other respects, also, this small smoky-gray leech, which is so common on the Reserve, fits the description of *Oculobdella lucida* Meyer and Moore 1954. Its occurrence on the Reserve is the first record for the United States. Heretofore, it was known only from Alberta (Moore 1964) and Manitoba, the type locality (Meyer and Moore 1954).

Neither *Haemopsis grandis* nor *H. marmoratis*, which are so common in similar ponds around Ann Arbor, was found on the Reserve. They will probably turn up with more collecting.

TABLE 2  
*Leech distribution and relative abundance with  
reference to the type of body of water\**

Type of Water	Temporary Ponds				Semi-permanent Ponds				Temporary and Semi-permanent Drainage Streams					Permanent Ponds				Acid Bog					
	1	2	3	9	22	6	10	16	5	13	15	18	19	21	7	8	11	12	14	17	20	4	
Leeches																							
<i>Macrobodella decora</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	+	-	-	-	-	
<i>Erpobdella punctata</i>	-	-	-	-	-	-	-	-	+	-	+	+	+	+	+	2	+	+	2	+	+	+	-
<i>Mooreobdella buccera</i>	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-
<i>Placobdella hollensis</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	+	+	18	+	-	-	-	-
<i>P. ornata</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	+	-	-	-	-
<i>P. parasitica</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	4	-	-	-	-	-	-	-
<i>Batrachobdella picta</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	+	+	4	+	-	-	-	-
<i>Theromyzon meyeri</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	+	-	-	-	-
<i>Glossiphonia complanata</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42	-	-	2	-	-	-	-	-
<i>G. heteroclita</i>	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-
<i>Helobdella stagnalis</i>	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	8	+	-	+	+	-	-	-
<i>H. papillata</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-
<i>H. lineata</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
<i>Oculobdella lucida</i>	-	-	-	-	-	-	+	+	-	-	+	-	+	-	-	-	-	-	+	+	-	-	-

\*Number refers to the number of specimens collected in that body of water in a one-hour period; + signifies at least one specimen eventually found but not during the one-hour period; - signifies water sampled but no specimens found.

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