

UNIVERSITY OF MICHIGAN.

MUSEUM OF ZOOLOGY.

**Miscellaneous Publications No. 2.**

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# An Annotated List of the Odonata of Indiana

BY

E. B. WILLIAMSON.

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ANN ARBOR, MICHIGAN.

PUBLISHED BY THE UNIVERSITY.

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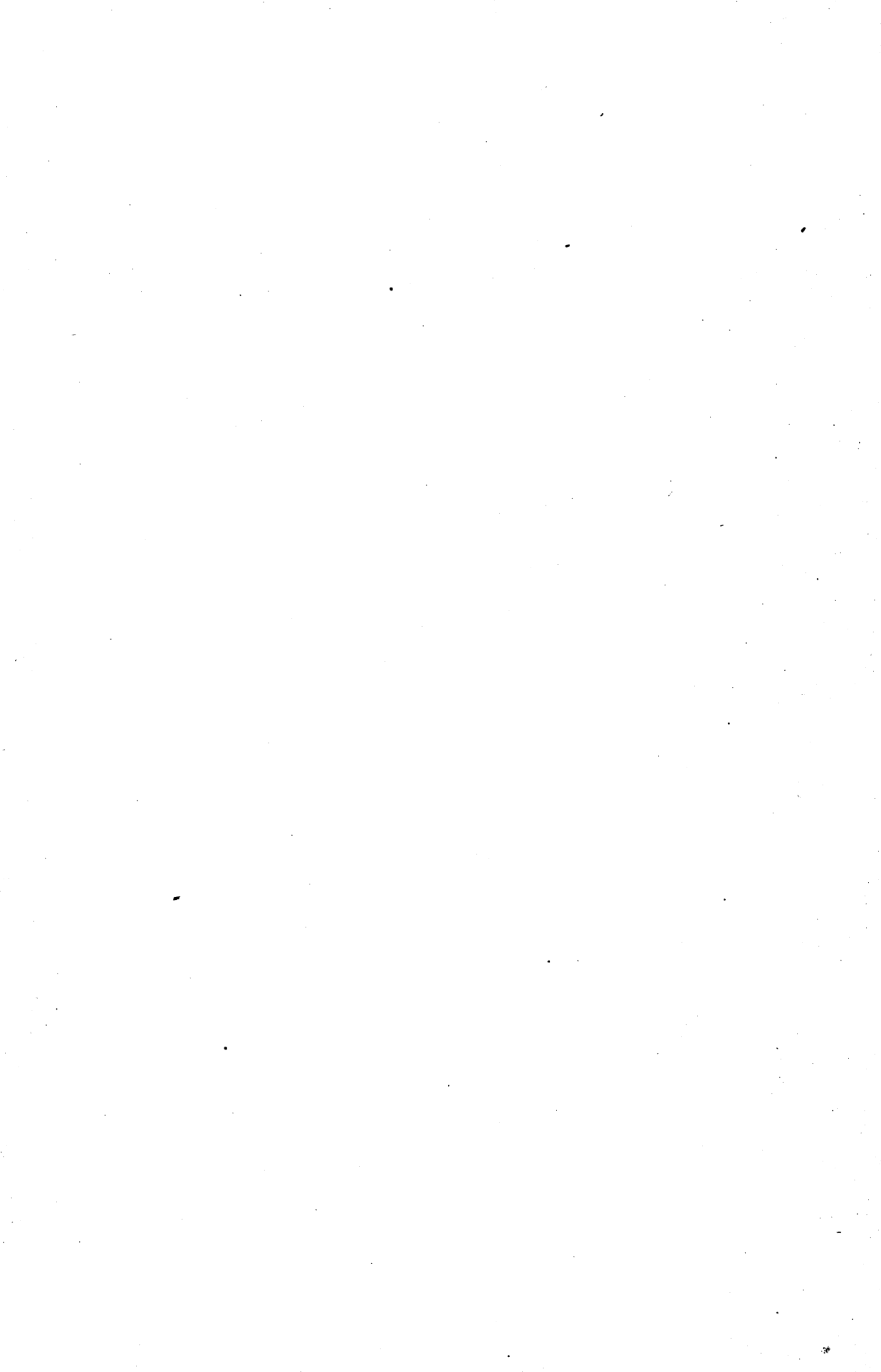
ALEXANDER G. RUTHVEN,  
Director of the Museum of Zoology,  
University of Michigan.

CONTENTS.

	PAGE
Introduction .....	5
List of Species.....	6
Bibliographical Notes.....	12

ILLUSTRATION

Outline Map of Indiana Showing Location of Counties.....	Facing Page 12
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# AN ANNOTATED LIST OF THE ODONATA OF INDIANA.

BY E. B. WILLIAMSON.

## INTRODUCTION.

Our knowledge of Indiana Odonata began in 1839 when Thomas Say recorded 17 species for the state. This seems hardly a good start since many an old gravel pit on a favorable day may yield a larger number of species. In Ohio, Hine and Osburn took 58 species during a week's collecting. But Say was not a specialist in the group, and in 1839 that great specialist, de Selys, had published only the third one of his many later papers, while Hagen in the same year made his first contribution to entomology. Burmeister and Rambur's books on Neuroptera appeared in 1839 and 1842. Say's odonate publication, too, it must not be forgotten, was the result of earlier studies and was published posthumously. Thus considering the time and circumstances together with the range of Say's activities, the start does not seem to be so poor. Following the publication of Say's paper there was a gap of 56 years before a paper dealing exclusively with Indiana dragonflies appeared, and it recorded only 14 species as against Say's 17. Indiana was too far west to be visited by the eastern entomologists and too far east to share in the great western explorations of the period.

The present list of dragonflies brings our knowledge of the distribution of these insects within the state up to date, and such references to the literature\* are included as will enable students to identify species not described or not well described in my paper, "The Dragonflies of Indiana," Indiana Geological Report for 1899. References to this list will show that records for the southern half of the state are practically wanting. As a matter of fact the entire list is based largely on random field work, carried on as opportunity permitted and done almost entirely on Sundays and all too rare holidays. The records, both as regards dates and localities, are based in every case upon specimens examined except where the contrary is noted, and, as here published, are condensed from detailed data in my possession. For convenience each month is divided into thirds, 1-10, 11-20 and 21-30 or 31. Where no figures follow the month, the dragonfly under discussion has been taken in all three divisions of the month.

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\* These references are grouped at the end of the list. The numbers following the specific names in the list refer to corresponding numbers in the bibliography.

## LIST OF SPECIES.

## Suborder ZYGOPTERA.

## Family AGRIONIDAE.

## Subfamily Agrioninae.

Genus *Agrion* Fabricius.<sup>2</sup>

1. *Agrion acquabile* Say.—Lagrange, Lake, Noble, Putnam, St. Joseph, Wells and Whitley Counties. May 20-31; June; July; August 1-10.
2. *Agrion angustipenne* Selys.—Crawford County (Chas. Dury). May 20-31.
3. *Agrion maculatum* Beauvois.—Allen, Crawford, De Kalb, Elkhart, Fountain, Kosciusko, Lagrange, Lake, Noble, Putnam, Shelby, Steuben, Wells and Whitley Counties. May 11-31; June; July 1-20; August 11-20; September 1-10.

Genus *Hetaerina* Hagen.

4. *Hetaerina americana* Fabricius.—Allen, Blackford, Dearborn, De Kalb, Elkhart, Fountain, Franklin, Huntington, Kosciusko, Lagrange, Lake, Montgomery, Noble, Putnam, Shelby, Steuben, Wells, and Whitley Counties. May 20-31; June 11-30; July; August; September 1-10.
5. *Hetaerina titia* Drury.<sup>34</sup>—Franklin, Lagrange and Wells Counties. August 11-20; September 1-10.

Genus *Lestes* Leach.

6. *Lestes congener* Hagen.—Allen, Noble, Steuben and Wells Counties. August 11-31; September 1-20.
7. *Lestes disjunctus* Selys.—Allen, Elkhart, Kosciusko and Wells Counties. July 11-31.
8. *Lestes eurinus* Say.—Elkhart and Wells Counties. May 20-31; June; July 1-20.
9. *Lestes forcipatus* Rambur.—Allen, Blackford, Noble, Wells and Whitley Counties. April 20-30; May; June; July; August; September 1-10.
10. *Lestes inaequalis* Walsh.—Allen, Kosciusko, Steuben and Whitley Counties. June 10-20; July.
11. *Lestes rectangularis* Say.—Adams, Allen, Blackford, Elkhart, Kosciusko, Lagrange, Noble, Putnam, Steuben, Wells and Whitley Counties. May 20-31; June; July; August 1-10, 20-31; September 1-10.
12. *Lestes uncatus* Kirby.—Allen, Blackford, Noble, Steuben, Wells and Whitley Counties. May 20-31; June; July.
13. *Lestes unguiculatus* Hagen.—Allen, Blackford, Elkhart, Kosciusko, Lagrange, Noble, Steuben, Wells and Whitley Counties. May 21-31; June 1-10, 21-30; July; August 11-31; September 1-20.
14. *Lestes vigilax* Hagen.—Allen, Blackford, Kosciusko, Lagrange, Noble, Steuben, Wells and Whitley Counties. June 1-10, 21-30; July; August 11-31; September 1-10.

## Subfamily Coenagrioninae.

Genus *Argia* Rambur.

15. *Argia apicalis* Say.—Allen, Blackford, Dearborn, Elkhart, Fountain, Kosciusko, Putnam, Shelby, Warren, Wells and Whitley Counties. June; July; August; September 1-10.
16. *Argia moesta* Hagen.<sup>3</sup>—Allen, Blackford, Crawford, Dearborn, Elkhart, Fountain, Kosciusko, Steuben, Wells and Whitley Counties. June; July; August 1-21; September 1-21.
17. *Argia sedula* Hagen.—Allen, Dearborn, Elkhart, Franklin, Jay, Kosciusko, Lagrange, Noble, Shelby, Steuben and Wells Counties. June; July; August; September.



18. *Argia tibialis* Rambur.—Adams, Allen, Blackford, Crawford, Dearborn, Kosciusko, Putnam and Wells Counties. May 21-31; June; July; August 1-10.  
 19. *Argia translata* Hagen.<sup>4</sup>—Shelby County. August 11-20.  
 20. *Argia violacea* Hagen.—Adams, Allen, Blackford, Crawford, Dearborn, DeKalb, Elkhart, Kosciusko, Lagrange, Marion, Noble, Steuben, Wells and Whitley Counties. June; July; August; September.

Genus *Enallagma* Charpentier.

21. *Enallagma antennatum* Say.—Allen, Elkhart, Kosciusko, Noble, Steuben, Wells and Whitley Counties. May 11-31; June; July; August.  
 22. *Enallagma aspersum* Hagen.<sup>4</sup>—Kosciusko and Wells Counties. May 21-31; June 21-30.  
 23. *Enallagma calverti* Morse.<sup>5</sup>—Marshall, Noble and Wells Counties. May 21-31; June; July 1-10.  
 24. *Enallagma carunculatum* Morse.—Blackford, Elkhart, Kosciusko, Lagrange, Noble, Steuben, Wells and Whitley Counties. May 21-31; June 1-10, 21-30; July; August 11-20; September 1-20.  
 25. *Enallagma civile* Hagen.—Allen, Blackford, Elkhart, Grant, Wells and Whitley Counties. May 11-31; June; July; August; September 1-20.  
 26. *Enallagma cyathigerum* Charpentier.<sup>6</sup>—Noble and Wells Counties. May 21-31; June 11-20.  
 27. *Enallagma divagans* Selys.—Steuben and Whitley Counties. June 11-31; July 1-10.  
 28. *Enallagma ebrium* Hagen.—Allen, Blackford, Elkhart, Lagrange, Noble, Steuben and Wells Counties. May 21-31; June; July 1-20.  
 29. *Enallagma exsulans* Hagen.—Allen, Dearborn, Elkhart, Fountain, Kosciusko, Marion, Noble, Putnam, Shelby, Steuben, Wells and Whitley Counties. May 21-31; June; July; August.  
 30. *Enallagma geminatum* Kellicott.—Allen, Blackford, Elkhart, Fountain, Kosciusko, Steuben, Wells and Whitley Counties. May 21-31; June; July 1-20; August 1-20; September 1-20.  
 31. *Enallagma hageni* Walsh.—Allen, Blackford, Crawford, Elkhart, Kosciusko, Noble, Steuben, Wells and Whitley Counties. May 21-31; June; July.  
 32. *Enallagma piscinatum* Williamson.—Wells County. July 1-10.  
 33. *Enallagma pollutum* Hagen.—Allen, Elkhart, Kosciusko, Noble, Steuben, Wells and Whitley Counties. June; July; August 11-20; September 1-10.  
 34. *Enallagma signatum* Hagen.—Allen, Blackford, Elkhart, Kosciusko, Noble, Steuben, Wells and Whitley Counties. May 21-31; June; July; August 1-20; September 1-20; October 1-10.  
 35. *Enallagma traviatum* Selys.—Allen, Kosciusko, Steuben, Wells and Whitley Counties. June; July 1-20.

Genus *Nehalennia* Selys.

36. *Nehalennia gracilis* Morse.<sup>7</sup>—Lagrange County. July 1-10.  
 37. *Nehalennia irene* Hagen.—Allen, Elkhart, Fountain, Kosciusko, Lagrange, Marshall, Noble, Steuben, Wells and Whitley Counties. May 11-31; June 11-30; July; August 11-21.

Genus *Amphiagrion* Selys.

38. *Amphiagrion saucium* Burmeister.—Allen, Elkhart, Huntington, Lagrange, St. Joseph and Steuben Counties. May 21-31; June; July 1-10, 21-31.

Genus *Chromagrion* Needham.<sup>8</sup>

39. *Chromagrion conditum* Hagen.—Allen and Steuben Counties. May 21-31; June 11-20; July 1-10.

Genus *Ischnura* Charpentier.

40. *Ischnura kellicotti* Williamson.—Steuben and Whitley Counties. June 1-10, 21-30; July; August 11-31; September 1-10

41. *Ischnura posita* Hagen.<sup>9</sup>—Allen, De Kalb, Elkhart, Kosciusko, Lagrange, Noble, Steuben, Wells and Whitley Counties. May; June; July; August; September 1-20.
42. *Ischnura prognata* Hagen.<sup>10</sup>—Wells County. April 21-30; June 21-30.
43. *Ischnura verticalis* Say.—Allen, Blackford, Crawford, De Kalb, Elkhart, Fountain, Kosciusko, Lagrange, Marshall, Noble, Steuben, Wells and Whitley Counties. May; June; July; August 1-20; September 1-20.

Genus *Anomalagrion* Selys.

44. *Anomalagrion hastatum* Say.—Blackford, Elkhart and Wells Counties. May 1-10; June 21-30; July.

## Suborder ANISOPTERA.

## Family AESHNIDAE.

## Subfamily Petalurinae.

Genus *Tachopteryx* Selys.

45. *Tachopteryx thoreyi* Hagen.—Montgomery County (C. C. Deam). July 21-31.

## Subfamily Cordulegasterinae.

Genus *Cordulegaster* Leach.

46. *Cordulegaster diastatops* Selys.<sup>11</sup>—St. Joseph County. May 21-31.
47. *Cordulegaster maculatus* Selys.<sup>12</sup>—Noble County. June 1-10.
48. *Cordulegaster obliquus* Say.—“Inhabits Indiana” (Say).

## Subfamily Gomphinae.

Genus *Progomphus* Selys.

49. *Progomphus obscurus* Rambur.—Allen, Dearborn, Elkhart, Huntington, Kosciusko, Putnam, Steuben, Wells and Whitley Counties. June; July.

Genus *Hagenius* Selys.

50. *Hagenius brevistylus* Selys.—Allen, Elkhart, Kosciusko, Noble, Putnam, Shelby and Wells Counties. June; July 1-10; August 11-31; September 1-10.

Genus *Ophiogomphus* Selys.

51. *Ophiogomphus rupinsulensis* Walsh.—Allen, Elkhart, Kosciusko and Wells Counties.—May 1-10, 21-31; June.

Genus *Erpetogomphus* Selys.

52. *Erpetogomphus designatus* Hagen.<sup>13</sup>—Dearborn and Franklin Counties. July 21-31; August 21-31.

Genus *Gomphus* Leach.

53. *Gomphus crassus* Hagen.<sup>14</sup>—Wabash and Wells Counties. May 11-31; June 1-20; July 11-31.
54. *Gomphus dilatatus* Rambur.—Crawford and Kosciusko Counties. May 21-31; June 21-31.
55. *Gomphus exilis* Selys.—Elkhart, Kosciusko, Noble, Steuben, Wells and Whitley Counties. May 21-31; June; July 1-20.
56. *Gomphus fraternus* Say.—Allen, Blackford, Dearborn, De Kalb, Elkhart, Huntington, Noble, Putnam, St. Joseph, Wabash, Wells and Whitley Counties. May 11-31; June; July 1-20.
57. *Gomphus furcifer* Hagen.—Allen and Lake Counties. June 1-20.
58. *Gomphus graslinellus* Walsh.—Adams, Blackford, Huntington, Marshall, Putnam, Wabash, Wells and Whitley Counties. May 11-31; June; July.

59. *Gomphus lividus* Selys.<sup>15</sup>—Allen, Elkhart, Lagrange, Noble, Steuben and Wells Counties. May 21-31; June 1-20; July 1-10.
60. *Gomphus quadricolor* Walsh.—Allen, Elkhart and Putnam Counties. May 21-31; June 11-30.
61. *Gomphus spicatus* Hagen.—Allen, Elkhart, Noble, Steuben and Whitley Counties. May 11-31; June 1-20; July 1-10.
62. *Gomphus spiniceps* Walsh.<sup>18</sup>—Allen and Wells Counties. July 11-20; August 1-10.
63. *Gomphus submedianus* Williamson.<sup>16</sup>—Elkhart County. May 21-31; June 1-10.
64. *Gomphus vastus* Walsh.—Elkhart, Putnam and St. Joseph Counties. May 11-31; June 21-31.
65. *Gomphus ventricosus* Walsh.—Allen, Lagrange and St. Joseph Counties. May 21-31; June 11-20; July 1-10.
66. *Gomphus villosipes* Selys.—Allen, Kosciusko, Putnam and Wells Counties. May 21-31; June 11-30; July 1-10.
67. *Gomphus williamsoni* Muttkowski.<sup>17</sup>—Wells County. June 1-10.

Genus *Dromogomphus* Selys.

68. *Dromogomphus spinosus* Selys.—Allen, Elkhart, Kosciusko, Putnam, Steuben, Wells and Whitley Counties. May 21-31; June; July 1-20; August 1-10.
69. *Dromogomphus spoliatus* Hagen.—Allen and Wells Counties. July; August; September 11-20.

## Subfamily Aeshninae.

Genus *Boyeria* MacLachlan.

70. *Boyeria vinosa* Say.—Allen, Delaware, Elkhart, Kosciusko, Lagrange, Noble, Putnam, Steuben and Wells Counties. June 11-30; July 11-20; August 1-10, 21-31; September 1-10.

Genus *Basiaeschna* Selys.

71. *Basiaeschna janata* Say.—Allen, Elkhart, Kosciusko, Noble, St. Joseph, Wells and Whitley Counties. April 21-31; May; June.

Genus *Anax* Leach.

72. *Anax junius* Drury.—Allen, Blackford, De Kalb, Elkhart, Fountain, Kosciusko, Marshall, Noble, Steuben, Wells and Whitley Counties. April 21-31; May; June; July; August; September 1-20; October 1-10.

Genus *Aeshna* Fabricius.<sup>19</sup>

73. *Aeshna canadensis* Walker.<sup>19</sup>—Steuben County. August 11-31.
74. *Aeshna clepsydra* Say.—Steuben and Whitley Counties. August 11-31; September 1-10.
75. *Aeshna constricta* Say.—Allen, Grant, Lagrange, Steuben and Wells Counties. August 11-31; September; October 1-10.
76. *Aeshna mutata* Hagen.<sup>19</sup>—Lagrange, Noble, Steuben and Wells Counties. June; July 1-20.
77. *Aeshna tuberculifera* Walker.<sup>19</sup>—Lagrange County (C. C. Deam). August 11-20.
78. *Aeshna umbrosa* Walker.<sup>19</sup>—Allen, Grant, Lagrange, Steuben and Wells Counties. July 11-20; August 11-31; September 1-20.
79. *Aeshna verticalis* Hagen.—Allen, Steuben and Wells Counties. August 21-31; September 1-20.

Genus *Nasiaeschna* Selys.<sup>20</sup>

80. *Nasiaeschna pentacantha* Rambur.<sup>21</sup>—Allen, Elkhart, Wells and Whitley Counties. June 1-20; July 1-20.

Genus *Epiaeschna* Hagen.

81. *Epiaeschna heros* Fabricius.—Allen, Elkhart and Wells Counties. March 21-31; April 11-30; May 1-10, 21-31; June; July 1-20; August 21-31; September 11-20.

## Family LIBELLULIDAE.

## Subfamily Cordulinae.

Genus *Didymops* Rambur.

82. *Didymops transversa* Say.—Allen, Elkhart, Noble, Steuben, Wells and Whitley Counties. May 11-31; June 1-20.

Genus *Macromia* Rambur.<sup>22</sup>

83. *Macromia illinoensis* Walsh.—Allen, Elkhart, Kosciusko, Putnam, and Wells Counties. May 21-31; June 11-30; July; August 11-20.  
 84. *Macromia pacifica* Hagen.—Huntington and Wells Counties. June 11-30; July; August.  
 85. *Macromia taeniolata* Rambur.—Allen, Elkhart, Noble and Wells Counties. May 21-31; June 11-20; July 11-20; August 1-20.  
 86. *Macromia reabashensis* Williamson.<sup>22</sup>—Wells County. June 11-30; July; August.

Genus *Epicordulia* Selys.

87. *Epicordulia princeps* Hagen.—Allen, Elkhart, Kosciusko, Noble, Wells and Whitley Counties. May 21-31; June; July; August 1-20.

Genus *Neurocordulia* Selys.

88. *Neurocordulia obsoleta* Say.—“Inhabits Indiana” (Say).

Genus *Tetragoneuria* Hagen.<sup>23</sup>

89. *Tetragoneuria cynosura* Say.—Allen, St. Joseph, Wells and Whitley Counties. May 21-31; June.  
 90. *Tetragoneuria simulans* Muttkowski.<sup>23</sup>—Allen, De Kalb, Noble, St. Joseph, Steuben, Wells and Whitley Counties. May 21-31; June.  
 91. *Tetragoneuria spinigera* Selys.—Steuben County (Mr. and Mrs. C. C. Deam). June 11-20.

Genus *Dorocordulia* Needham.<sup>24</sup>

92. *Dorocordulia libera* Selys.<sup>25</sup>—Allen and St. Joseph Counties. May 21-31; June 11-20.

Genus *Somatochlora* Selys.

93. *Somatochlora charadraea* Williamson.<sup>26</sup>—Wells County. July 1-10.  
 94. *Somatochlora linearis* Hagen.—Fountain and Wells Counties. June 1-10; July 1-10.  
 95. *Somatochlora tenebrosa* Say.—“Inhabits Indiana” (Say).

## Subfamily Libellulinae.

Genus *Libellula* Linne.

96. *Libellula cyanea* Fabricius.—Allen, Elkhart, Kosciusko, Noble, Steuben, Wells and Whitley Counties. May 21-31; June; July; August 11-20.  
 97. *Libellula exusta* Say.—Elkhart, Lake and Wells Counties. May; June 1-10; September 1-10.  
 98. *Libellula incesta* Hagen.—Allen, Kosciusko, Lagrange, Noble, Steuben, Wells and Whitley Counties. June; July; August; September 1-10.  
 99. *Libellula luctuosa* Burmeister.<sup>27</sup>—Allen, Blackford, Elkhart, Kosciusko, Noble, Steuben, Wells and Whitley Counties. May 21-31; June; July; August 1-20; September 1-10.  
 100. *Libellula pulchella* Drury.—Allen, Blackford, Crawford, De Kalb, Elkhart, Huntington, Kosciusko, Marion, Noble, Steuben, Wells and Whitley Counties. May 21-31; June; July; August 1-20.  
 101. *Libellula quadrimaculata* Linne.—Blackford, Elkhart and Wells Counties. May 21-31; July 11-20; September 21-31.

102. *Libellula semifasciata* Burmeister.—Blackford, Elkhart, Kosciusko, Steuben and Wells Counties. April 21-31; May; June 1-20; July 1-20.

103. *Libellula vibrans* Fabricius.—Blackford, Lake and Wells Counties. June; July 1-10.

Genus *Plathemis* Hagen.

104. *Plathemis lydia* Drury.—Allen, Blackford, Crawford, Elkhart, Kosciusko, Marshall, Wells and Whitley Counties. May 11-31; June; July 1-10, 21-31; August 11-31; September 21-31.

Genus *Perithemis* Hagen.

105. *Perithemis tenera* Say.<sup>28</sup>—Allen, Blackford, Elkhart, Jay, Kosciusko, Lagrange, Noble, Steuben, Wells and Whitley Counties. May 21-31; June; July; August 1-10; September 1-10.

Genus *Nannothemis* Brauer.

106. *Nannothemis bella* Uhler.—Elkhart and Lagrange Counties. June 11-30; July 1-10.

Genus *Erythemis* Hagen.<sup>29</sup>

107. *Erythemis simplicicollis* Say.—Allen, Blackford, Elkhart, Kosciusko, Noble, Steuben, Wells and Whitley Counties. May 21-31; June; July 1-20; August 1-10.

Genus *Sympetrum* Newman.

108. *Sympetrum ambiguum* Rambur.<sup>30</sup>—Blackford and Wells Counties. June 21-30; August; September 1-20.

109. *Sympetrum corruptum* Hagen.—Kosciusko and Wells Counties. July 11-31; August 1-10.

110. *Sympetrum decisum* Hagen.<sup>31</sup>—Wells County. September 21-30.

111. *Sympetrum obtusum* Hagen.—Allen, Blackford, Kosciusko, Lagrange, Noble, Steuben, Wells and Whitley Counties. May 21-31; June; July; August; September; October 1-10.

112. *Sympetrum rubicundulum* Say.—Allen, Blackford, Elkhart, Huntington, Kosciusko, Lagrange, Noble, Steuben, Wells and Whitley Counties. June 11-20; July; August 11-31; September 1-20.

113. *Sympetrum semicinctum* Say.—Huntington, Lagrange and Whitley Counties. July 1-10, 21-31; September 1-10.

114. *Sympetrum vicinum* Hagen.—Allen, Elkhart, Grant, Kosciusko, Lagrange, Noble, Steuben, Wells and Whitley Counties. June 21-30; July 11-31; August; September; October 1-10; November 1-10, 21-30.

Genus *Pachydiplax* Brauer.

115. *Pachydiplax longipennis* Burmeister.—Adams, Allen, Blackford, Elkhart, Kosciusko, Noble, Steuben, Wells and Whitley Counties. April 21-30; May; June; July; August 1-20; September 1-10.

Genus *Leucorhinia* Brittinger.

116. *Leucorhinia frigida* Hagen.<sup>32</sup>—St. Joseph, Steuben and Wells Counties. May 21-31; July 1-10.

117. *Leucorhinia intacta* Hagen.—Allen, Blackford, Elkhart, Marshall, Noble, St. Joseph, Steuben, Wells and Whitley Counties. May 11-31; June; July.

Genus *Celithemis* Hagen.

118. *Celithemis elisa* Hagen.—Allen, Blackford, Elkhart, Kosciusko, Lagrange, Noble, Steuben, Wells and Whitley Counties. April 21-31; May 21-31; June; July; August; September 1-10.

119. *Celithemis eponina* Drury.—Allen, Elkhart, Kosciusko, Lagrange, Noble, Steuben, Wells and Whitley Counties. June 11-30; July; August 1-20; September 1-10.

120. *Celithemis monomelaena* Williamson.<sup>33</sup>—Allen, Kosciusko, Lagrange, Noble, Steuben, Wells and Whitley Counties. June 11-31; July; August 1-20.

Genus *Pantala* Hagen.

121. *Pantala flavescens* Fabricius.—Lake and Wells Counties. June 1-10; August 11-20.  
 122. *Pantala hymenaea* Say.—"Inhabits Indiana" (Say). Wells County. July 11-20; August 1-10.

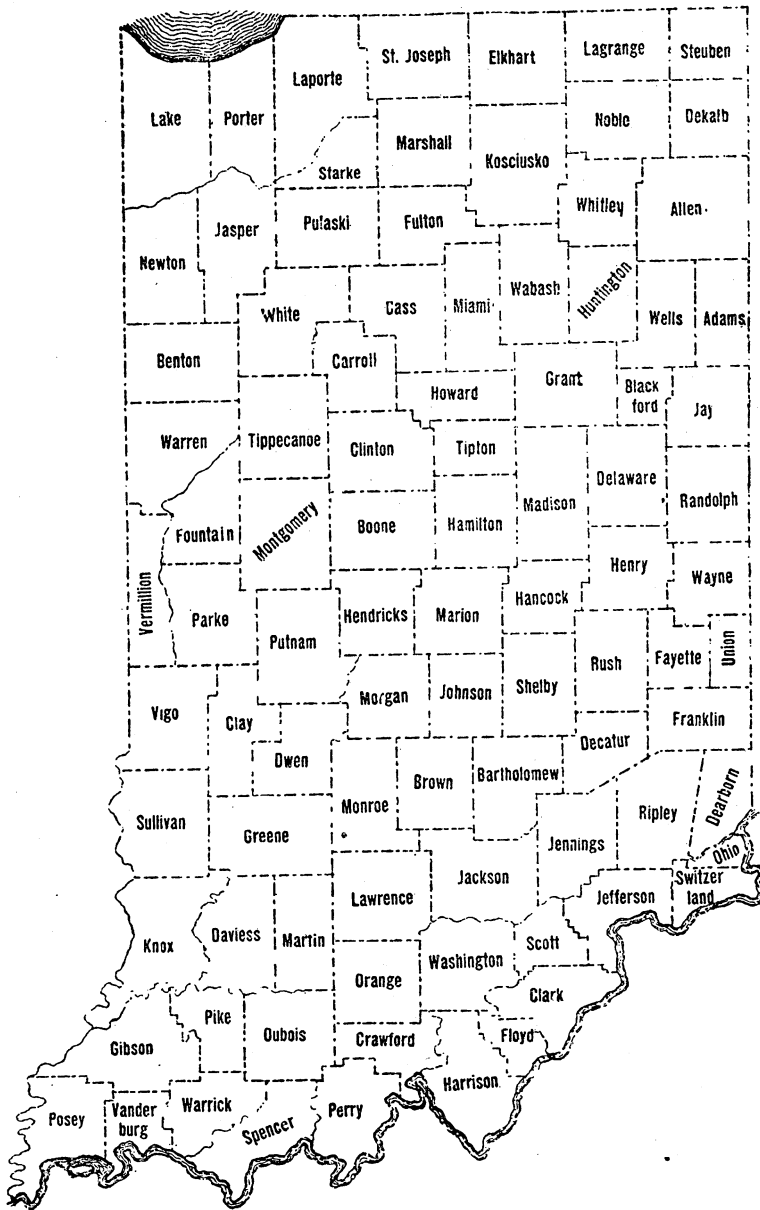
Genus *Tramea* Hagen.

123. *Tramea carolina* Linne.—Blackford and Wells Counties. April 21-31; May.  
 124. *Tramea lacerata* Hagen.—Adams, Allen, Blackford, Kosciusko, Lake, Marshall, Noble, Wells and Whitley Counties. April 21-31; May 11-31; June; July; August 11-20; September 1-10, 21-30.  
 125. *Tramea onusta* Hagen.—Wells County. July 1-10.

## BIBLIOGRAPHICAL NOTES.\*

1. Catalogue of the Odonata of North America. Bulletin of the Public Mus., Milwaukee, Vol. I, Article 1, May, 1910, R. A. Muttikowski.
2. *Calopteryx* of earlier authors must give way to *Agrion*.
3. *Putrida* is a synonym.
4. Additions to the Indiana List of Dragonflies. II, Proc. Ind. Acad. of Sci., 1901, E. B. Williamson, p. 120.
5. Additions to the Indiana List of Dragonflies. Proc. Ind. Acad. of Sci., 1900, E. B. Williamson, p. 173.
6. Syn. Neur. N. Am., 1861, Hagen, p. 87 (as *annexum*); see 4, p. 121.
7. Psyche, 7, 1895, A. P. Morse, p. 274.
8. Bulletin 48, N. Y. State Museum, 1903, J. G. Needham, p. 246.
9. Under *Nehalennia* in Dragonflies of Indiana.
10. See 6, p. 83.
11. See 1, p. 76.
12. See 6, p. 115.
13. See 6, p. 99, and 4, p. 121.
14. Ent. News, 12, 1901, P. P. Calvert, p. 65.
15. *G. sordidus* is a synonym.
16. Ent. News, 25, 1914, E. B. Williamson, pp. 49-58.
17. See 1, p. 99; Ent. News, 14, 1903, E. B. Williamson, pp. 253-258.
18. *G. segregans* Needham is a synonym.
19. The North American Dragon-flies of the Genus *Aeshna*, Univ. of Toronto Studies, Biol. Series, 1912, E. M. Walker.
20. See 1, p. 116.
21. Under *Aeschna* in Drf. of Ind.
22. Proc. U. S. Nat. Mus., 37, 1909, E. B. Williamson, pp. 368-398.
23. Bulletin Wisconsin Nat. Hist. Soc. 9, 1911, R. A. Muttikowski, pp. 91-134.
24. Bulletin 47, N. Y. State Museum, 1901, J. G. Needham, pp. 485, 504.
25. Under *Somatochlora* in Drf. of Ind.
26. Ent. News, 18, 1907, E. B. Williamson, p. 5.
27. As *L. basalis* in Drf. of Ind.
28. As *P. domitia* in Drf. of Ind.
29. As *Mesothemis* in Drf. of Ind.; see 1, p. 155.
30. As *albifrons* in Drf. of Ind.
31. U. S. Survey Terr. Colo., 1874, Hagen, p. 588. Not a synonym of *obtrusum* as stated in 1, p. 162.
32. Trans. Am. Ent. Soc., 17, 1890, Hagen, p. 231.
33. Ohio Naturalist, 10, 1910, E. B. Williamson, p. 155; as *fasciata* in Drf. of Ind.
34. As *tricolor* in Drf. of Indiana.

\* This list is in no sense complete, and is designed merely as an aid to students of Indiana dragonflies. For a fuller bibliography see 1 above, and the American entomological journals, especially the Canadian Entomologist and the Entomological News, since 1910.



MAP OF INDIANA SHOWING LOCATION OF COUNTIES.

