

NEW RECORDS OF OHIO DRAGONFLIES (ODONATA)

DONALD J. BORROR

Department of Zoology and Entomology
Ohio State University, Columbus, Ohio

The latest complete list of Ohio dragonflies (Kellicott, 1899) lists 99 species. Since that time new records have been added by various workers, the last published records (Borrer, 1930) bringing the list up to 116. During the last few years eleven new records for the state have been obtained, some of which are of unusual interest.

The new records for the state are as follows:¹

117. *Lanthus albistylus* Hagen. Loudonville: 1♂, 3♀, and 6 exuviae June 6, 1915, J. S. Hine (DZE). Although these specimens were taken a number of years ago, the records were never published. This is an eastern species, and apparently has never been taken this far west before.

118. *Gomphus ventricosus* Walsh. Big Darby Creek, Harrisburg: 1♂ May 23, 1930, D. J. Borrer.

119. *Cordulegaster diastatops* Selys. Cedar Swamp, Urbana: 14♂ June 12, 1926, and 1♀ June 7, 1927, J. S. Hine (OSM); 2♂ June 9, 1929, C. H. Kennedy (DZE); 2♂ and 1♀ June 6, 1931, 1♂ June 3, 1933, and 1♂ June 11, 1934, D. J. Borrer. Eden Twp., Licking Co.: 1♂ July 6, 1931, M. D. Neiswander (OSM). Wakatomika Creek, Licking Co.: 1♂ May 21, 1932, and 1♀ May 30, 1934, D. J. Borrer. Portage Co.: 1♂ July 7, 1935, J. A. Strasburg (in coll. D. J. Borrer). This is an eastern species, but has been taken in Michigan and western Pennsylvania (Fraser, 1929), and in Indiana (Williamson, 1917, and Montgomery, 1930).

120. *Cordulegaster maculatus* Selys. Cantwell Cliffs, Hocking Co.: 1♂ June 14, 1925, C. H. Kennedy (DZE). Clear Creek, Hocking Co.: 1♀ June 17, 1931, J. S. Thomas (OSM); 1♂ and exuvium June 2, 1934, D. J. Borrer.

121. *Somatochlora tenebrosa* Say. Byer, Jackson Co.: 2♀ July 1, 1934, C. F. Walker (OSM). Cedar Swamp, Urbana: 6♂ and 2♀ July 27, 1935, D. J. Borrer. The specimens taken by Mr. Walker were two of several seen flying in a clearing near a small stream about a mile east of Byer. Those taken at Cedar Swamp were flying low over small pools in the open part of the swamp, and were fairly easy to capture.

¹The location of the specimens listed in this paper is indicated in parentheses following the name of the collector, e. g., DZE, the collection of the Department of Zoology and Entomology, Ohio State University; OSM, the collection of the Ohio State Museum. All specimens collected by the writer, except several duplicates of *Sympetrum ambiguum* which were sent to the Museum of Zoology at Ann Arbor, Michigan, are in the writer's collection.

Although this is only the second species of *Somatochlora* to be found in Ohio, it is probable that other species also occur here. Walker's distribution maps (Walker, 1925) suggest that *williamsoni* Walker and *linearis* Say may also occur in Ohio.

122. *Erythrodiplax umbrata* Linnaeus. Cedar Swamp, Urbana: 1♂ June 11, 1934, D. J. Borror. This is a very unusual record. *E. umbrata* is a neotropical species, ranging normally from northern Argentina to southern United States. The most northern records hitherto reported are Georgia (Hagen, 1861) and Woods Co., Oklahoma (Bird, 1932). This specimen was taken in a cedar bog, a relic of post-glacial times, certainly a type of habitat in which one would least expect to find a tropical species. The specimen is entirely black and fully adult; the wing-band is black and extends from the nodus to the middle of the stigma, as is the case with most of the specimens from Mexico and Central America. In specimens from South America the wing-band tends to be shorter, frequently not reaching the proximal end of the stigma. This specimen was taken in the same swing with a male of *Cordulegaster diastatops*.

It might be of interest to note in this connection that I have just received from Mr. B. Elwood Montgomery, of Lafayette, Indiana, two specimens of *E. umbrata* collected by him in southern Indiana: 1♂ Gibson Co., September 1, 1934, and 1♀ (heterochromatic) Pike Co., September 1, 1934. Both specimens are quite teneral, suggesting that this species has bred in southern Indiana during the past season.

123. *Erythrodiplax minuscula* Rambur. Lake Alma, Vinton Co.: 1♂, June 23, 1933, D. J. Borror. This is also a neotropical species, normally occurring from northern Argentina to southern United States. However, it has been taken in Indiana (Montgomery, 1930), Kentucky (Williamson, 1899), and Maryland (specimens in the Museum of Zoology, Ann Arbor, Michigan, collected by R. P. Currie). This specimen is similar to those from Florida which I have examined, but is slightly larger than Venezuelan specimens (hw. 20, abd. 17).

124. *Sympetrum ambiguum* Rambur. Middle Bass Island, Lake Erie: 1♂ August 4, 1933. Kelleys Island, Lake Erie: 26♂ and 3♀ August 26, 1933. Indian Lake, Logan Co.: 1♂ August 23, 1934, and 1♂ August 10, 1935. Minerva Lake, Franklin Co.: 1♂ August 3, 1935. Blacklick Woods, Franklin Co.: 1♂ August 16, 1935, W. R. Piper. Blacklick Woods, Fairfield Co.: 1♂ August 16, 1935. Black Lake, Logan Co.: 2♀ August 24, 1935. Lake Loramie, Shelby Co.: 9♂ and 1♀ August 24, 1935. All except the male from Blacklick Woods, Franklin Co., were collected by the writer. This species may be easily differentiated in the field from other species of *Sympetrum* by the conspicuous light green color of the face and the dark markings on the abdomen.

125. *Nehalennia gracilis* Morse. Cedar Swamp, Urbana: 1♂ June 6, 1931, D. J. Borror. Cranberry Bog, Buckeye Lake: 3♂ and 2♀ July 17, 1935, D. J. Borror.

126. *Enallagma boreale* Selys (= *E. calverti* Morse). Sandusky: 2♂ June 20, 1926, B. E. Montgomery (in coll. B. E. M.). Baum-

gardner's Lake, Franklin Co.: 1♂ May 14, 1930, and 1♂ May 24, 1930, D. J. Borror.

127. *Ischnura prognatha* Hagen. Crane Hollow, Hocking Co.: 1♂ April 20, 1930, C. H. Kennedy (DZE).

The 116 species of Odonata hitherto reported from Ohio, with the worker who first reported them (beginning with Kellicott, 1899) are as follows:

1. *Tachopteryx thoreyi* Hagen. Hine, 1925.
2. *Progomphus obscurus* Rambur. Hine, 1900.
3. *Hagenius brevistylus* Selys. Kellicott, 1899.
4. *Ophiogomphus rupinsulensis* Walsh. Kellicott, 1899.
5. *Erpetogomphus designatus* Hagen. Hine, 1913.
6. *Gomphus abbreviatus* Hagen. Hine, 1900.
7. *G. amnicola* Walsh. Hine, 1913.
8. *G. crassus* Hagen. Kellicott, 1899 (as *G. externus* Selys).
9. *G. dilatatus* Rambur. Kellicott, 1899.
10. *G. exilis* Selys. Kellicott, 1899.
11. *G. fraternus* Say. Kellicott, 1899.
12. *G. furcifer* Hagen. Kellicott, 1899.
13. *G. graslinellus* Walsh. Kellicott, 1899.
14. *G. lividus* Selys. Kellicott, 1899.
15. *G. notatus* Rambur. Kellicott, 1899.
16. *G. plagiatus* Selys. Kellicott, 1899.
17. *G. quadricolor* Walsh. Kellicott, 1899.
18. *G. spicatus* Hagen. Kellicott, 1899.
19. *G. spiniceps* Walsh. Kellicott, 1899.
20. *G. vastus* Walsh. Kellicott, 1899.
21. *G. villosipes* Selys. Kellicott, 1899.
22. *G. viridifrons* Hine. Hine, 1901.
23. *Dromogomphus spinosus* Selys. Kellicott, 1899.
24. *D. spoliatus* Hagen. Kellicott, 1899.
25. *Gomphaeschna furcillata* Say. Kellicott, 1899.
26. *Basiaeschna janata* Say. Kellicott, 1899.
27. *Boyeria grafiana* Williamson. Hine, 1913.
28. *B. vinosa* Say. Kellicott, 1899.
29. *Anax junius* Drury. Kellicott, 1899.
30. *A. longipes* Hagen. Kellicott, 1899.
31. *Nasiaeschna pentacantha* Rambur. Hine, 1900.
32. *Epiaeschna heros* Fabricius. Kellicott, 1899.
33. *Aeschna clepsydra* Say. Kellicott, 1899.
34. *A. constricta* Say. Kellicott, 1899.
35. *A. mutata* Hagen. Osburn and Hine, 1900 (as *A. verticalis* Hagen).
36. *A. umbrosa* Walker. Walker, 1912.
37. *A. verticalis* Hagen. Kellicott, 1899.
38. *Cordulegaster erroneus* Hagen. Kellicott, 1899.
39. *C. obliquus* Say. Kellicott, 1899.
40. *Macromia illinoiensis* Walsh. Kellicott, 1899.

41. *M. taeniolata* Rambur. Kellicott, 1899.
42. *Didymops transversa* Say. Kellicott, 1899.
43. *Neurocordulia obsoleta* Say. Hine, 1900.
44. *N. yamaskensis* Provancher. Hine, 1900.
45. *Epicordulia princeps* Hagen. Kellicott, 1899.
46. *Tetragoneuria cynosura* Say. Kellicott, 1899.
47. *Somatochlora hineana* Williamson. Williamson, 1931.
48. *Nannothemis bella* Uhler. Borrer, 1930.
49. *Perithemis tenera* Say. Kellicott, 1899 (as *P. domitia* Drury).
50. *Celithemis elisa* Hagen. Kellicott, 1899.
51. *C. eponina* Drury. Kellicott, 1899.
52. *C. monomelaena* Williamson. Kellicott, 1899 (as *C. fasciata* Kirby).
53. *Ladona julia* Uhler. Kellicott, 1899 (as *Libellula exusta* Say).
54. *Libellula (Holotania) auripennis* Burmeister. Kellicott, 1899.
55. *L. (H.) cyanea* Fabricius. Kellicott, 1899.
56. *L. (H.) incesta* Hagen. Kellicott, 1899.
57. *L. (H.) luctuosa* Burmeister. Kellicott, 1899 (as *L. basalis* Say).
58. *L. (Neotetrum) pulchella* Drury. Kellicott, 1899.
59. *L. (Libellula) quadrimaculata* Linnaeus. Kellicott, 1899.
60. *L. (Eolibellula) semifasciata* Burmeister. Kellicott, 1899.
61. *L. (Holotania) vibrans* Fabricius. Kellicott, 1899.
62. *Plathemis lydia* Drury. Kellicott, 1899 (as *P. trimaculata* De Geer).
63. *Sympetrum corruptum* Hagen. Kellicott, 1899.
64. *S. obtrusum* Hagen. Kellicott, 1899.
65. *S. rubicundulum* Say (= *S. assimilatatum* Uhler). Kellicott, 1899.
66. *S. semicinctum* Say. Kellicott, 1899.
67. *S. verum* Bartenef. Bartenef, 1915.
68. *S. vicinum* Hagen. Kellicott, 1899.
69. *Leucorrhinia intacta* Hagen. Kellicott, 1899.
70. *Pachydiplax longipennis* Burmeister. Kellicott, 1899.
71. *Erythemis simplicicollis* Say. Kellicott, 1899.
72. *Pantala flavescens* Fabricius. Kellicott, 1899.
73. *P. hymenaea* Say. Kellicott, 1899.
74. *Tramea carolina* Linnaeus. Kellicott, 1899.
75. *T. lacerata* Hagen. Kellicott, 1899.
76. *T. onusta* Hagen. Kellicott, 1899.
77. *Agrion aequabilis* Say. Kellicott, 1899.
78. *A. angustipennis* Selys. Hine, 1913.
79. *A. maculatum* Beauvais. Kellicott, 1899.
80. *Hetaerina americana* Fabricius. Kellicott, 1899.
81. *H. titia* Drury (= *H. tricolor* Burm.). Kellicott, 1899 (as *H. tricolor* Burm.).
82. *Archilestes grandis* Rambur. Williamson, 1930.
83. *Lestes congener* Hagen. Kellicott, 1899.
84. *L. disjunctus* Selys. Kellicott, 1899.
85. *L. eurinus* Say. Hine, 1900.
86. *L. forcipatus* Rambur. Kellicott, 1899.
87. *L. inaequalis* Walsh. Kellicott, 1899.

88. *L. rectangularis* Say. Kellicott, 1899.
89. *L. uncatius* Kirby. Kellicott, 1899.
90. *L. unguiculatus* Hagen. Kellicott, 1899.
91. *L. vigilax* Hagen. Kellicott, 1899.
92. *Argia apicalis* Say. Kellicott, 1899.
93. *A. bipunctulata* Hagen. Borror, 1930.
94. *A. moesta* Hagen. Kellicott, 1899.
95. *A. sedula* Hagen. Kellicott, 1899.
96. *A. tibialis* Rambur. Kellicott, 1899.
97. *A. violacea* Hagen. Kellicott, 1899.
98. *Amphiagrion saucium* Burmeister. Kellicott, 1899.
99. *Nehalennia irene* Hagen. Kellicott, 1899.
100. *Chromagrion conditum* Hagen. Kellicott, 1899.
101. *Enallagma antennatum* Say. Kellicott, 1899 (as *E. fischeri* Kellicott).
102. *E. aspersum* Hagen. Kellicott, 1899.
103. *E. carunculatum* Morse. Kellicott, 1899.
104. *E. civile* Hagen. Kellicott, 1899.
105. *E. divagans* Selys. Kellicott, 1899.
106. *E. doubledayi* Selys. Kellicott, 1899.
107. *E. ebrium* Hagen. Kellicott, 1899.
108. *E. exsulans* Hagen. Kellicott, 1899.
109. *E. geminatum* Hagen. Kellicott, 1899.
110. *E. hageni* Walsh. Kellicott, 1899.
111. *E. signatum* Hagen. Kellicott, 1899.
112. *E. traviatum* Selys. Kellicott, 1899.
113. *E. vesperum* Calvert. Kellicott, 1899 (as *E. pollutum* Hagen).
114. *Ischnura posita* Hagen. Kellicott, 1899.
115. *I. verticalis* Say. Kellicott, 1899.
116. *Anomalagrion hastatum* Say. Kellicott, 1899.

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