

**ADDITIONS AND CORRECTIONS TO THE ODONATA OF OHIO.**

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The "Odonata of Ohio" by Dr. David S. Kellicott was published in March, 1899. At that time 98 species had been taken in the state and all were represented in Professor Kellicott's collection. *Anax longipes* Hagen was mentioned as a possible member of Ohio's fauna, but no specimens had been procured and we have no further information in regard to it at the present time.

A few misstatements have been noted in Dr. Kellicott's articles concerning dragonflies, largely unavoidable at that time because of the small amount of work that had been done on some of the genera. Recent investigations have revealed the fact that some additional species were at hand in 1899 but were associated with nearly related ones on account of not being described. Finally a number of species not previously reported for Ohio have been collected in various sections of the state and by various collectors, most usually while engaged in preparing general faunal collections.

On account of the few misstatements and the several additions that have been made to the number of species taken within the limits of the state, it seems desirable at this time to print some statements for the purpose of bringing the list of Ohio dragonflies up to date. In Volume I of the OHIO NATURALIST, page 13, are given a few additions and corrections, but since some of these should be mentioned again, I have thought best at this time to give such information as has been collected since the appearance of *The Odonata of Ohio*.

An attractive species of *Enallagma* was considered an undescribed species and named *Enallagma fischeri* by Dr. Kellicott. After studying a large amount of material Mr. E. B. Williamson came to the conclusion that *E. fischeri* is the same as *Agrion antennata* Say and Dr. Calvert concurred. I believe that Williamson is correct in his conclusion in this matter, but due deference to Dr. Kellicott merits the statement that Say's description is rather brief and does not fully explain distinctive characters. After one is well acquainted with the dragonfly fauna of the section where Say procured his specimens it is possible to reach the proper conclusion by the process of elimination. In other words there appears to be no other species in this region that answers so well Say's description as the one in question.

At the time when Dr. Kellicott did his work on Ohio dragonflies some of the species of the genus *Gomphus* were not well defined, consequently a few of his determinations have been

proven incorrect and the following statements may be made in order to harmonize his publications with recent conclusions of the foremost students of Odonata.

In Volume XII of Entomological News, page 65, Dr. Calvert gives a comparative study of three closely related species of this genus. After studying Ohio material as well as much material from other sections he announces that *Gomphus fraternus* var. *walshii* as published in Jour. Cin. Soc. Nat. Hist. XVIII, p. 107, and *Gomphus externus* in Odonata of Ohio, page 60, should be changed to *Gomphus crassus* Hagen.

*Gomphus intricatus* mentioned in Agricultural Student, Vol. III, page 143, and *Gomphus* sp. Jour. Cin. Soc. of Nat. Hist., Vol. XIX, page 67, are referable to *Gomphus notatus* Rambur.

*Gomphus notatus* Ramb. as used by Dr. Kellicott in Jour. Cin. Soc. Nat. Hist., Vol. XIX, page 67, is *Gomphus plagiatus* Selys, as we know it at the present time.

*Celithemis fasciata* Kirby, Odonata of Ohio, page 104, and in Dr. Kellicott's other writings, is referable to *Celithemis monomelæna* Williamson, which was described as a new species in OHIO NATURALIST, Volume X, page 153, and the reader is referred to this paper for particulars.

The following changes and statements are supplementary to the Odonata of Ohio and are made for the benefit of future students and collectors of the order in the state:

*Enallagma antennata* (Say) to be used instead of *Enallagma fischeri* Kellicott.

*Gomphus crassus* Hagen to be used instead of *Gomphus externus* Selys.

*Celithemis monomelæna* Williamson to be used instead of *Celithemis fasciata* Kirby.

*Gomphus lividus* Selys should stand as it is, since *Gomphus sordidus* Hagen is now considered a synonym.

*Gomphus plagiatus* Selys, spoken of with some doubt, is correct as given.

*Gomphus notatus* Rambur is correct as given and additional Ohio species have been procured.

The following species have been taken in the state and should be added to the Ohio list:

*Calopteryx angustipenne* (Selys), was procured near Loudonville by Osburn and Parker, June 10, 1899. Additional specimens were procured at the same place in June, 1900.

*Lestes eurinus* Say, taken in Portage County, June 3, 1900, by E. B. Williamson. Numerous specimens of both sexes taken on Cedar Point, Sandusky, by the writer, July 10, 1900.

*Gomphoides obscura* (Rambur), taken by R. C. Osburn, at Ironton, June 1, 1899. Additional specimens taken by myself at Vinton, June 10, 1900.

*Erpctogomphus designatus* Hagen, taken by Williamson along the White Water River near Harrison, July 26, 1903. Calvert mentions this species as a member of the Ohio fauna in *Biol. Cent. Amer. Volume on Odonata*, page 167. Williamson states that he has seen specimens in Dury's collection, taken at Cincinnati.

*Gomphus viridifrons* Hine. In *OHIO NATURALIST*, Volume I, page 13, this species is listed under *Gomphus abbreviatus* (?) Hagen. Specimens procured near Loudonville by J. B. Parker and R. C. Osburn, June 10, 1899. The species was common at the same locality June 14, 1900.

*Gomphus amnicola* Walsh, taken along the Little Miami River at Cincinnati by Chas. Dury, May 5, 1899, and July 10, 1903. Along the Ohio River by the same collector, July 25, 1911.

*Boyeria grafiana* Williamson. This species was included under *B. Vinosa* (Say) in *The Odonata of Ohio*. Williamson published a description of it as a new species in 1907, *Entomological News*, XVIII, page 1. A male, taken at Orwell, Ohio, September, 1894, by E. E. Bogue, is in the Kellicott collection.

*Aeschna mutata* Hagen. Specimens taken by Osburn and Hine at Stewart's Lake, near Kent, O., June 22, 1900. Listed in *OHIO NATURALIST*, Vol. I, page 14, as *Aeschna verticalis* Hagen.

*Nasiaschna pentacantha* (Rambur) was taken near Kent, O., June 21, 1900. In company with R. C. Osburn we procured three pairs of the species. Others were seen.

*Neurocordulia obsoleta* (Say) has been taken at Cincinnati, by Chas. Dury and his associates in different years. A male specimen in the Kellicott collection was taken at Cincinnati, June 15, 1899.

*Neurocordulia yamaskanensis* (Provancher) was procured on Rattlesnake Island, in Lake Erie, June 28, 1900, by Prof. H. Osborn

The additions here enumerated bring the number of species of dragonflies actually collected in Ohio up to 109. There is no doubt but that more additions can be made by thorough collecting in all parts of the State.