

SEPTEMBER DRAGONFLIES OF ROUND AND SHRINER LAKES, WHITLEY COUNTY, INDIANA.

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These lakes have been described by Mr. P. H. Kirsch (Report of Indiana State Fish Commissioner for 1896), so only a remark in this connection is necessary. The diversified character of the shores of these beautiful bodies of water is such that dragonflies of widely varying habits may find here suitable feeding and breeding grounds. Thus the shores of Round Lake, for example, may be divided into sections, each of which may have one or more species that are pretty closely confined to that particular section. The strong flying *Libellula incesta*, during two seasons, has been observed to be at all common only for a short distance along the northern shore of Round Lake. Here the species was very abundant. In the same way *Celithemis eliza* was observed commonly only along the eastern and northeastern shores of Shriner Lake.

By September many of the species which were so common during the earlier summer have disappeared, and more apparent still is the decrease in the number of individuals. In the patch of giant bulrushes where, during July days, myriads of blue and green forms waged defensive and offensive warfare, in September *Lestes vigilax* flutters languidly from stem to stem, or sits with listless wings as though meditating on "days that never come again." On account of this decrease in the number of species and individuals, it happens that some species, which, during the summer months, appeared comparatively common, in the fall come to appear comparatively rare or disappear altogether. During July *Argia putrida* is much more abundant than *Argia violacea*. In September *putrida* is rare and *violacea* is abundant.

The dragonflies mentioned below were observed and collected on September 2, 3 and 4, 1897. In the preparation of the list whenever there has been any doubt as to the identification of species, specimens of such species have been examined and named by Professor Kellicott and Mr. Hine of the Ohio State University.

A LIST OF DRAGONFLIES COLLECTED ON SEPTEMBER 2, 3 AND 4,
ABOUT ROUND AND SHRINER LAKES, WHITLEY COUNTY IN-
DIANA, BY E. B. WILLIAMSON.

1. *Heterina americana* Fabr. Rare, three specimens, one male and two females, taken on Shriner Lake.
2. *Lestes rectangularis* Say. Only one specimen, a male, captured.
3. *Lestes unguiculata* Hagen. Common in patches of *Typha* and *Scirpus lacustris* and *S. americanus*.
4. *Lestes vigilax* Selys. Very common; found in company with *L. unguiculata*; often observed pairing.
5. *Argia putrida* Hagen. Rare.
6. *Argia violacea* Hagen. Abundant; observed pairing.
7. *Ischnura verticalis* Say. A few observed; seen pairing.
8. *Enallagma pollutum* Hagen. Two males were taken.
9. *Enallagma signatum* Hagen. Common, especially about the lily pads, flitting about until after sunset; observed pairing.
- 10.* *Enallagma laterale* Morse. One male.
- 11.† *Enallagma* sp (?) One female.
12. *Anax junius* Drury. Rather rare.
13. *Aeschna constricta* Say. Common; observed pairing.
14. *Tramea lacerata* Hagen. Two young males were taken.
15. *Celithemis elizi* Hagen. Abundant; observed pairing.
16. *Celithemis eponina* Drury. Common; observed pairing.
17. *Celithemis fasciata* Kirb. Rare; one specimen taken at Shriner Lake.
18. *Perithemis domitia* Drury. Common.
19. *Libellula basalis* Say. Common along the northern shore of Round Lake; observed ovipositing.

* I have examined the specimen mentioned, and have compared the abdominal appendages with drawings made for me by Mr. Morse, and I feel sure that the identification is correct.—Prof. D. S. Kellicott.

† The single female is not sufficient to determine the species; there is little doubt but that it belongs to the subgenus *Agrion*. The color is bronze-black with yellow markings; there are large yellow areas on the rear of the head; a broad yellow ante-humeral stripe; sides of thorax yellow with a black line on the second lateral suture, and a half line on the first. The first and second abdominal segments are yellow, each with a dorsal black spot; the third, fourth, fifth, sixth and seventh segments are black except narrowed apical yellow rings; the dorsum of the eighth, ninth and tenth segments is mostly yellow. I think the species is unnamed.—Prof. D. S. Kellicott.

20. *Libellula incesta* Hagen. Common in company with *L. basalis*; observed ovipositing. The males of *L. basalis* persistently attack the females of *L. incesta* which are ovipositing. The males of *L. incesta* at once hasten to protect the females, and royal battles, involving perhaps half a dozen individuals, are thus being constantly waged.
21. *Mesothemis simplicicollis* Say. Common; observed ovipositing, the males always fluttering near. One individual was observed feeding on a *Lestes vigilax*, and another on a *Pamphila*.
22. *Diplax obtrusa* Hagen. Common.
23. *Diplax rubicundula* Say. Rare; one male taken.
24. *Diplax rubicundula assimilata* Uhler. One male captured.
25. *Diplax vicina* Hagen. Very abundant; frequently observed pairing.