

OCCASIONAL PAPERS OF THE MUSEUM OF
ZOOLOGY

UNIVERSITY OF MICHIGAN

ANN ARBOR, MICHIGAN

UNIVERSITY OF MICHIGAN PRESS

A PRELIMINARY LIST OF UTAH ODONATA

CLAUDEOUS J. D. BROWN

In spite of the generally arid conditions found throughout Utah, there is a surprisingly large variety of aquatic situations favorable as breeding places for many species of Odonata. The range from north to south covers some 350 miles. The northern lakes and streams of the high Wasatch and Uinta ranges offer conditions of a subarctic nature, and the Colorado and Virgin river valleys of the south allow the entrance of subtropical species. The practice of irrigation alone has increased the number of breeding places by no small measure, and it is not unusual to find large numbers of *Sympetrum*, *Libellula*, and *Enallagma* utilizing these situations.

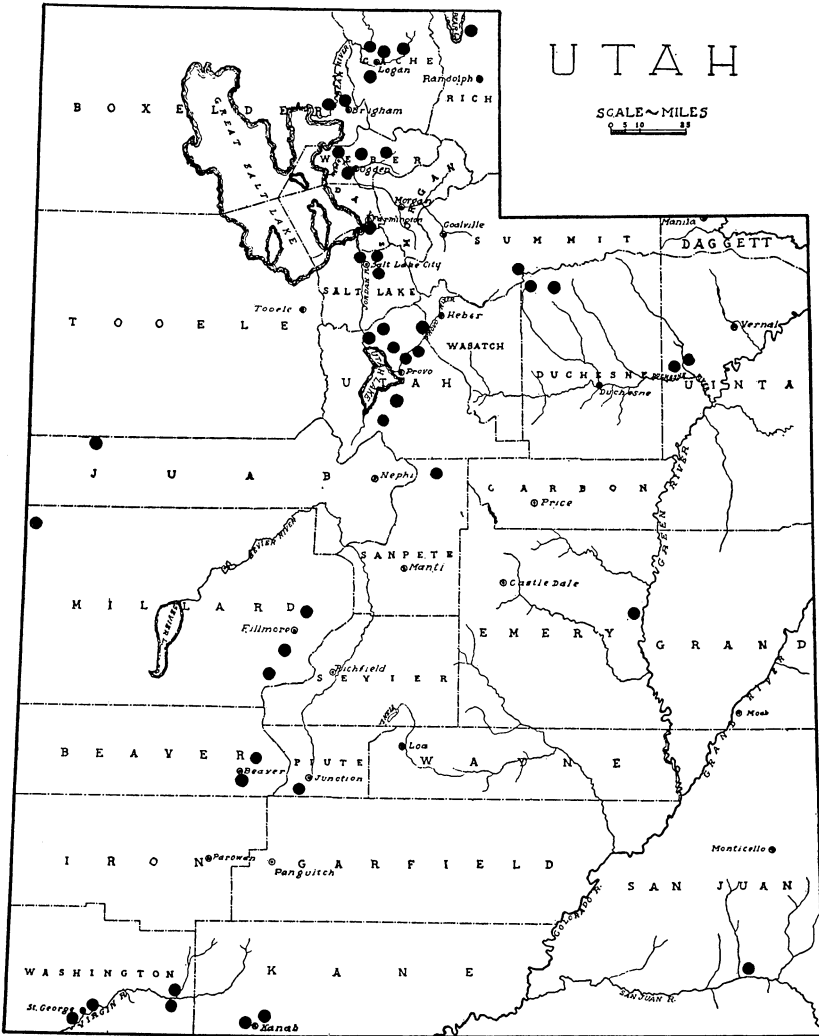
The present list is the beginning of a study which the writer plans to carry out over ensuing years. It is hoped that after thorough collections and life history and habitat studies have been made, that a comprehensive handbook of the dragonflies of Utah might be assembled. This can only be accomplished with the aid of interested collectors from that region, who have many times in the past allowed the dragonfly freedom because of the difficulties involved in preservation. With the more successful method of papering specimens in envelopes, it is now possible to make preservations in a shorter time and retain collections in a much smaller space. For those who are

still unacquainted with this method, the writer offers, gratis, sample envelopes with instructions.

Published records of the Odonata of Utah include 32 species. These constitute approximately one-fourth of the number that probably occur in the state. In nearly all instances, the records were based upon a small number of specimens collected from one of the three or four most accessible counties. The present total area from which collections have been made (see map) is still only a small part of the state. It represents, however, the region of most probable odonate abundance. Weber County is the only one in which systematical collecting has been done, and here there are no early spring or late fall records.

A census of the collections of the Brigham Young University, Utah State College, and the University of Michigan, along with those made by the writer during the summers of 1931-1933, includes 35 species not hitherto recorded and adds additional data to all published records with the exception of *Ophiogomphus occidentis*, *Cordulegaster diadema*, *Sympetrum rubicundulum*, and *Ischnura utahensis*. The present state list records 24 genera including 67 species.

For the loan of specimens the writer is indebted to Vasco M. Tanner, Brigham Young University, and Geo. F. Knowlton, Utah State College. The writer wishes also to thank F. M. Gaige, Director of the University of Michigan Museum of Zoology, for the use of the Museum collection and Mrs. Leonora K. Gloyd for help in identification. The writer is also indebted to N. Banks for identifications of certain *Sympetrum*. Because of convenience, the arrangement of species of Needham (1929) has been chosen. Published as well as new records are given. Collection data are arranged alphabetically according to counties, followed by the specific locality, number of males and females, place of deposition, and collector. The inclusive dates are given whenever these were available. Explanation of the symbols designating the place of deposition are as follows: ANS, Academy of Natural Sciences of Philadelphia, Philadelphia, Pennsylvania; BYU, Brigham Young Uni-



COUNTY MAP OF UTAH, SHOWING THE LOCALITIES FROM WHICH THERE ARE KNOWN COLLECTIONS OF ODONATA

versity, Provo, Utah; MBI, Museum of Brooklyn Institute, Brooklyn, New York; MCZ, Museum of Comparative Zoology, Harvard College, Cambridge, Massachusetts; PPC, P. P. Calvert private collection, Philadelphia, Pennsylvania; UMMZ, Museum of Zoology, University of Michigan, Ann Arbor, Michigan; USC, Utah State College, Logan, Utah; USNM, United States National Museum, Washington, D. C.

LIST OF SPECIES

ANISOPTERA—AESCHNIDAE

Progomphus borealis McLachlan

Published record.—None.

New record.—Washington Co.: St. George (♂, UMMZ, T. Spalding). June 6.

Ophiogomphus occidentis Hagen

Published record.—Utah (no specific locality given), Needham (1929).

New record.—None.

Ophiogomphus severus Hagen

Published records.—Cache Co.: Amalga (Cornell Univ. Coll.); Utah Co.: Provo (Cornell Univ. Coll.), Walker (1933).

New record.—Piute Co.: Circleville (♀, UMMZ, C. J. D. Brown). Aug. 1.

Gomphus externus Hagen

Published record.—None.

New record.—Utah Co.: Jordan River (♀, BYU, Collector ?).

Anax junius Drury

Published record.—Utah (no specific locality). Needham (1927).

New records.—Kane Co.: Kanab environs (3♂, UMMZ, L. C. Stuart); Utah Co.: Provo (♂, BYU, C. Cottam); Washington Co.: St. George (♂, UMMZ, T. Spalding); Weber Co.: Farr West (♀, UMMZ, C. J. D. Brown). May–Aug.

Aeshna californica Calvert

Published records.—Utah Co.: Utah Lake (♂, USNM, E. A. Schwarz); Weber Co.: Ogden (♀, MCZ, C. Thomas), Walker (1912).

New records.—Utah Co.: Provo (♀, BYU, A. Sutherland); Vineyard (♀, UMMZ, T. Spalding); Weber Co.: Farr West (♂, UMMZ, C. J. D. Brown), Ogden Canyon (♂, UMMZ, Helena Brown). July 4–July 26.

Aeshna multicolor Hagen

Published record.—Salt Lake Co.: Red Butte Canyon (♀, Browning), Walker (1912).

New records.—Utah Co.: Provo Canyon (♂, 2♀, UMMZ, Evangeline S. Brown); Washington Co.: St. George (♂, BYU, V. M. Tanner). July 29–Aug. 15.

Aeshna umbrosa Walker

Published record.—Cache Co.: Logan Canyon, Needham, Christenson (1927).

New records.—Cache Co.: Logan (♀, USC, J. H. Linford); Utah Co.: Provo (♀, BYU, H. Cottam); Weber Co.: Farr West (♂, ♀, UMMZ, C. J. D. Brown). July 15–Aug. 24.

Aeshna palmata Hagen

Published record.—Salt Lake Co.: City Creek Canyon (♂, Calvert); Weber Co.: Ogden (♀, Needham), Walker (1912).

New records.—Cache Co.: Logan (♀, USC, W. L. Thomas); Kane Co.: Kanab (5♂, UMMZ, L. C. Stuart); Utah Co.: Provo Canyon (♂, UMMZ, Evangeline S. Brown), Salamander Lake (♂, BYU, V. M. Tanner), Rock Canyon (♂, BYU, C. L. Hayward), Provo (♀, BYU, V. M. Tanner); Weber Co.: Farr West (♂, UMMZ, C. J. D. Brown), Slaterville (♂, UMMZ, C. J. D. Brown). July 5–Aug. 30.

Aeshna constricta Say

Published records.—Beaver Co.: Beaver Canyon (♂, Englehard and Doll); Salt Lake Co.: Salt Lake City (J. E. Talmage), City Creek Canyon (♂, H. Skinner), Calvert (1901–1908).

New record.—Weber Co.: Farr West (♀, UMMZ, Helena Brown). Aug. 24.

Aeschna interrupta interna Walker

Published records.—Salt Lake Co.: Lamb's Canyon (♂, ♀ [Type] ANS, Browning), City Creek Canyon (♀, PPC, Collector?); Weber Co.: Ogden (♂, 2♀, MCZ, C. Thomas); County?: Summit Cavern (2♂, 8♀, MCZ, Collector ?), Walker (1912).

New record.—Boxelder Co.: Corrine (♂, UMMZ, C. J. D. Brown). July 5–Sept. 6.

Aeshna interrupta nevadensis Walker

Published record.—None.

New records.—Cache Co.: Logan (♀, USC, W. W. Henderson); Kane Co.: Kanab (♂, UMMZ, L. C. Stuart); Utah Co.: Provo Canyon (♀, UMMZ, C. J. D. Brown). July.

Aeshna eremita Scudder

Published record.—None.

New record.—Duchesne Co.: Granddaddy Lakes (♀, BYU, V. M. Tanner).

Cordulegaster diadema Selys

Published record.—Washington Co.: Zion Natl. Park (♀, BYU, V. M. Tanner), Woodbury (1933).

New record.—None.

Cordulegaster dorsalis Hagen

Published record.—None.

New record.—Washington Co.: Zion Natl. Park (♂, UMMZ, C. J. D. Brown). July 30.

ANISOPTERA—LIBELLULIDAE

Somatochlora semicircularis (Selys)

Published record.—Weber Co.: Ogden (♂, ♀, C. Thomas), Walker (1925).

New record.—Utah Co.: Provo (♂, BYU, V. M. Tanner).

Cordulia shurtleffi Scudder

Published record.—None.

New record.—Duchesne Co.: Mirror Lake (2♀, BYU, V. M. Tanner). June.

Orthemis ferruginea (Fabricius)

Published record.—None.

New record.—Washington Co.: St. George (♂, BYU, V. M. Tanner). August.

Libellula (Belonia) saturata Uhler

Published records.—Utah Co.: Spring Lake, Calvert (1901–1908); Washington Co.: Zion Natl. Park (♂, BYU, V. M. Tanner), Woodbury (1933).

New records.—Kane Co.: Kanab (3♂, UMMZ, L. C. Stuart); Washington Co.: St. George (♀, BYU, V. M. Tanner; 4♂, ♀, UMMZ, T. Spalding). May 26–Aug. 19.

Libellula (Holotania) comanche Calvert.

Published record.—None.

New record.—Washington Co.: St. George (♂, UMMZ, T. Spalding). June 10.

Libellula (Neotetrum) pulchella Drury

Published record.—None.

New records.—Cache Co.: Logan (♂, USC, W. W. Henderson; ♂, USC, J. H. Linford; ♀, F. K. Stoffers); Kane Co.: Kanab (3♂, UMMZ, L. C. Stuart); Uinta Co.: Ft. Duchesne (♂, USC, F. K. Stoffers; 3♂, ♀, UMMZ, C. J. D. Brown); Utah Co.: Provo (♀, BYU, C. L. Hayward); Weber Co.: Farr West (4♂, 3♀, UMMZ, C. J. D. Brown), Riverdale (♂, BYU, V. M. Tanner). June 20–Sept. 2.

Libellula (Neotetrum) forensis Hagen

Published record.—None.

New records.—Kane Co.: Kanab (♂, UMMZ, L. C. Stuart); Weber Co.: Farr West (6♂, UMMZ, C. J. D. Brown). July–Aug.

Libellula quadrimaculata Linné

Published record.—None.

New records.—Cache Co.: Providence (♂, ♀, USC, D. Hammon); Juab Co.: Callao (7♂, 9♀, UMMZ, T. Spalding); Utah Co.: Provo (♂, UMMZ, T. Spalding; ♀, BYU, D. D. Jorgensen; ♀, BYU, L. B. Curtis), Vineyard (♂, ♀, UMMZ, T. Spalding); Weber Co.: Riverdale (♂, BYU, V. M. Tanner). May 28–Aug. 1.

Libellula (Neotetrum) nodistica Hagen

Published record.—Washington Co.: Zion Natl. Park (♂, BYU, V. M. Tanner), Woodbury (1933).

New records.—Juab Co.: Callao (♂, UMMZ, T. Spalding); Utah Co.: Vineyard (♂, UMMZ, T. Spalding). June 24, 26.

Libellula (Holotania) composita Hagen

Published record.—Utah (no specific locality), Needham (1929).

New records.—Boxelder Co.: Brigham City (♂, USC, G. F. Knowlton); Cache Co.: Logan (♀, USC, W. Thomas); Utah Co.: Lehi (♀, BYU, Collector ?). July.

Plathemis subornata Hagen

Published records.—Beaver Co.: Beaver Valley (♂, ♀, MBI, Englehardt and Doll); Salt Lake Co.: City Creek Canyon (♂, ♀, ANS, Skinner); Utah Co.: Utah Lake (♀, MBI, Englehardt and Doll), Calvert (1901–1908); Washington Co.: Zion Natl. Park (♂, ♀, BYU, V. M. Tanner), Woodbury (1933).

New records.—Millard Co.: Kanosh (♂, UMMZ, C. J. D. Brown); Juab Co.: Callao (2♂, 2♀, UMMZ, T. Spalding). Utah Co.: Provo (♂, BYU, C. L. Hayward); Washington Co.: St. George (♀, BYU, V. M. Tanner); Weber Co.: Farr West (♂, UMMZ, C. J. D. Brown). May 31–August.

Sympetrum corruptum (Hagen)

Published record.—Washington Co.: Zion Natl. Park (♂, BYU, V. M. Tanner), Woodbury (1933).

New records.—Kane Co.: Kanab (15♂, 2♀, UMMZ, L. C. Stuart); Millard Co.: Meadow (♀, UMMZ, C. J. D. Brown); Uinta Co.: Ft. Duchesne (♀, UMMZ, C. J. D. Brown); Utah Co.: Spanish Fork (♂, BYU, H. Hardy), Provo (♀, BYU, H. Cottam, ♂, BYU, Lucille Maughn, ♂, BYU, L. Jeppson), Rock Canyon (♀, BYU, C. L. Hayward); Washington Co.: Hurricane (♀, UMMZ, T. Spalding), St. George (♂, 2♀, UMMZ, T. Spalding); Weber Co.: Farr West (9♂, 6♀, UMMZ, C. J. D. Brown). May 31–August.

Sympetrum pallipes (Hagen)

Published record.—None.

New records.—Juab Co.: Callao (♂, 3♀, UMMZ, T. Spalding); Weber Co.: Farr West (♀, UMMZ, Helena Brown, 2♂, 2♀, UMMZ, C. J. D. Brown). June 15–Sept. 13.

Sympetrum obtusum (Hagen)

Published record.—None.

New records.—Cache Co.: Logan (♂, USC, J. H. Linford); Uinta Co.: Ft. Duchesne (♂, USC, F. K. Stoffers, ♂, ♀, UMMZ, C. J. D. Brown); Utah Co.: Provo (♂, BYU, D. E. Johnson), Salamander Lake (♂, BYU, V. M. Tanner); Weber Co.: Farr West (♂, 3♀, UMMZ, C. J. D. Brown), Slaterville (♂, UMMZ, Clifford Dabb). July 1–Aug. 9.

Sympetrum rubicundulum (Say)

Published record.—Cache Co.: Logan River (J. G. Needham), Needham and Christenson (1927).

New record.—None.

Sympetrum decisum (Hagen)

Published record.—None.

New records.—Cache Co.: Logan (♂, USC, W. L. Thomas); Juab Co.: Callao (♀, UMMZ, T. Spalding); Utah Co.: Vineyard (♀, UMMZ, T. Spalding); Weber Co.: Farr West (10♂, 3♀, UMMZ, C. J. D. Brown); Slaterville (2♀, UMMZ, C. J. D. Brown). June 21–August.

Sympetrum semicinatum (Say)

Published record.—None.

New records.—Boxelder Co.: Corrine (♀, USC, M. F. Bowen); Cache Co.: Logan (♂, 2♀, USC, W. W. Henderson; 2♀, USC, J. H. Linford); Davis Co.: Farmington (♀, USC, W. W. Henderson); Grand Co.: Moab (♀, BYU, V. M. Tanner); Uinta Co.: Ft. Duchesne (♂, USC, F. K. Stoffer; ♀, UMMZ, L. Cutler); Utah Co.: Provo (♂, UMMZ, G. F. Ferris; ♂, BYU, D. E. Beck), Utah Lake (♂, BYU, D. D. Jorgensen), Payson (♂, BYU, H. Hardy); Washington Co.: Hurricane (♀, UMMZ, T. Spalding); Weber Co.: Farr West (11♂, 3♀, UMMZ, C. J. D. Brown). June 6–Aug. 19.

Sympetrum costiferum (Hagen)

Published record.—None.

New records.—Cache Co.: Logan (♀, USC, J. H. Linford); Utah Co.: Provo (♀, BYU, D. E. Johnson); Weber Co.: Farr West (♀, UMMZ, C. J. D. Brown). July–August.

Sympetrum danae (Sulzer)

Published record.—None.

New records.—Beaver Co.: Beaver (3♂, 3♀, UMMZ, C. J. D. Brown); Kane Co.: Kanab (3♂, ♀, UMMZ, L. C. Stuart); Rich Co.: Bear Lake (♀, BYU, C. L. Hayward); Uinta Co.: Ft. Duchesne (♀, USC, F. K. Stoffers); Utah Co.: Provo (2♂, ♀, BYU, D. E. Johnson). July 30–Sept. 28.

Leucorrhinia hudsonica (Selys)

Published record.—None.

New record.—Summit Co.: Tyrol Lake (♂, 2♀, BYU, V. M. Tanner).

Leucorrhinia intacta (Hagen)

Published record.—None.

New records.—Weber Co.: Farr West (♀, UMMZ, C. J. D. Brown), Riverdale (♂, BYU, C. L. Hayward). June–July.

Pachydiplax longipennis (Burmeister)

Published record.—None.

New record.—Kane Co.: Kanab (2♂, UMMZ, L. C. Stuart).
August.

Erythemis collocata (Hagen)

Published records.—Beaver Co.: Beaver Valley (♂, ♀, MBI, Englehardt and Doll); Salt Lake Co.: City Creek Canyon (♂, ♀, PPC, Browning; ♀, ANS, Skinner); Weber Co.: Ogden (MCZ, Collector ?), Calvert (1901–1908); Washington Co.: Zion Natl. Park (♂, ♀, BYU, V. M. Tanner), Woodbury (1933).

New records.—Juab Co.: Callao (2♀, UMMZ, T. Spalding); Uinta Co.: Ft. Duchesne (♂, UMMZ, C. J. D. Brown); Weber Co.: Farr West (6♂, UMMZ, C. J. D. Brown; ♂, BYU, Collector ?). June 1–August.

Tramea lacerata (Hagen)

Published record.—None.

New record.—Kane Co.: Kanab (3♂, UMMZ, L. C. Stuart).
August.

Tramea onusta (Hagen)

Published record.—None.

New record.—Kane Co.: Kanab (♂, UMMZ, L. C. Stuart).
August.

ZYGOPTERA—AGRIONIDAE

Calopteryx aequable Say

Published record.—None.

New record.—Weber Co.: Farr West (♀, BYU, V. M. Tanner). June.

Hetaerina vulnerata Hagen

Published record.—None.

New record.—Washington Co.: Zion Natl. Park (♂, UMMZ, C. J. D. Brown). Aug. 20.

Hetaerina americana (Fabricius)

- Published record.—Washington Co.: Zion Natl. Park (♂, BYU, V. M. Tanner), Woodbury (1933).
 New records.—Millard Co.: Gandy (2♂, UMMZ, C. J. Sorenson); Washington Co.: Hurricane (♂, ♀, UMMZ, T. Spalding). June 12–Sept. 24.

ZYGOPTERA—COENAGRIONIDAE

Archilestes grandis (Rambur)

- Published record.—Washington Co.; Zion Natl. Park (♀, BYU, V. M. Tanner), Woodbury (1933).
 New record.—Washington Co.: St. George (♂, BYU, V. M. Tanner). August.

Lestes congener Hagen

- Published record.—None.
 New records.—Boxelder Co.: Brigham City (♂, BYU, Collector ?); Millard Co.: Fillmore (♀, BYU, T. Swallow); Uinta Co.: Ft. Duchesne (♀, UMMZ, C. J. D. Brown); Utah Co.: Provo (♀, BYU, W. Stanton); Weber Co.: Farr West (♂, 3♀, UMMZ, C. J. D. Brown). Aug. 3–Sept. 6.

Lestes unguiculatus Hagen

- Published record.—None.
 New records.—Uinta Co.: Ft. Duchesne (♀, UMMZ, Lowell Cutler); Weber Co.: Farr West (2♀, UMMZ, C. J. D. Brown). July 15–Aug. 3.

Lestes disjunctus Selys

- Published record.—None.
 New records.—Kane Co.: Kanab (♂, UMMZ, L. C. Stuart); Uinta Co.: Ft. Duchesne (♂, UMMZ, C. J. D. Brown). August.

Lestes uncatatus Kirby

- Published record.—Cache Co.: Logan River, Needham and Christenson (1927).

New record.—Weber Co.: Farr West (5♂, 18♀, UMMZ, BYU, C. J. D. Brown). July.

Argia agrioides Calvert

Published record.—None.

New record.—Washington Co.: St. George (♂, UMMZ, T. Spalding). June 5.

Argia alberta Kennedy

Published record.—Utah Co.: Provo (Ris Collection), Kennedy (1918).

New records.—Utah Co.: Provo (♂, ♀, UMMZ, T. Spalding); Weber Co.: Farr West (♂, UMMZ, C. J. D. Brown). June 11–July.

Argia emma Kennedy

Published record.—None.

New records.—Weber Co.: West Weber (♂, UMMZ, C. J. D. Brown), Slaterville (♀, UMMZ, C. J. D. Brown). July 12.

Argia vivida Hagen

Published record.—None.

New records.—Kane Co.: Kanab (2♂, ♀, UMMZ, L. C. Stuart); Utah Co.: Provo Canyon (6♂, 3♀, UMMZ, BYU, C. J. D. Brown); Washington Co.: Zion Natl. Park (4♂, ♀, BYU, V. M. Tanner; 10♂, UMMZ, C. J. D. Brown), St. George (♂, BYU, Collector ?). July–August.

Amphiagrion abbreviatum (Selys)

Published records.—Cache Co.: Logan River, Needham, Christenson (1927); Weber Co.: Ogden (♂, C. Thomas), Calvert 1901–1908).

New records.—Juab Co.: Callao (♂, ♀, UMMZ, T. Spalding); San Pete Co.: Indianola (♀, BYU, V. M. Tanner); Uinta Co.: Ft. Duchesne (♂, UMMZ, C. J. D. Brown); Utah Co.: Provo (3♂, 2♀, UMMZ, G. F. Ferris; ♂, BYU, J. Fechsler; ♀, BYU, J. Blazzard; ♀, BYU, H. Cottam); Weber Co.: Beaver Canyon (♂, UMMZ, C. J. D. Brown), Farr West

4♂, UMMZ, C. J. D. Brown), Ogden Canyon (7♂, ♀, UMMZ, BYU, C. J. D. Brown), Riverdale (♂, BYU, V. M. Tanner), Slaterville (3♂, ♀, UMMZ, C. Dabb). May 30–Aug. 9.

Enallagma boreale Selys

Published record.—Salt Lake Co.: Red Butte Cañon (♂, ♀, ANS, H. Skinner), Calvert (1901–1908).

New records.—Kane Co.: Kanab (33♂, 3♀, UMMZ, L. C. Stuart); Utah Co.: Jordan River (♂, BYU, D. E. Beck); Weber Co.: Farr West (♂, 3♀, UMMZ, BYU, C. J. D. Brown), West Weber (♂, UMMZ, C. J. D. Brown). July.

Enallagma clausum Morse

Published record.—None.

New record.—Weber Co.: Farr West (♂, UMMZ, C. J. D. Brown). July 27.

Enallagma cyathigerum (Charpentier)

Published record.—Summit Co.: Park City (6♂, A. J. Snyder) Calvert (1901–1908).

New records.—Duchesne Co.: Mirror Lake (♀, BYU, Collector ?); Kane Co.; Kanab (7♂, ♀, UMMZ, L. C. Stuart); Summit Co.: Tyrol Lake (2♂, ♀, BYU, V. M. Tanner); Uinta Co.: Ft. Duchesne (2♂, 2♀, UMMZ, L. Cutler). July–August.

Enallagma ebrium (Hagen)

Published record.—None.

New record.—Weber Co.: West Weber (14♂, UMMZ, BYU, C. J. D. Brown). July 12.

Enallagma carunculatum Morse

Published record.—None.

New records.—Kane Co.: Kanab (♂, UMMZ, L. C. Stuart); Weber Co.: Farr West (2♂, 2♀, UMMZ, BYU, C. J. D. Brown), West Weber (♂, ♀, UMMZ, C. J. D. Brown). July–August.

Enallagma civile (Hagen)

Published record.—None.

New records.—Emery Co.: Green River City (♂, BYU, D. I. Rasmussen); Kane Co.: Kanab (5♂, 3♀, UMMZ, L. C. Stuart); San Juan Co.: Bluff (♀, BYU, A. Call); Uinta Co.: Ft. Duchesne (♂, UMMZ, C. J. D. Brown). July–August.

Enallagma praevarium (Hagen)

Published record.—None.

New record.—Kane Co.: Kanab (♂, ♀, UMMZ, L. C. Stuart).

Enallagma anna Williamson

Published record.—Utah (no specific locality), Needham (1929).

New records.—Utah Co.: Provo (♂, BYU, L. B. Curtis; ♂, BYU, R. Rigby; ♂, BYU, A. Sutherland); Weber Co.: Farr West (8♂, 2♀, UMMZ, 2♂, BYU, C. J. D. Brown), West Weber (2♂, UMMZ, C. J. D. Brown). July.

Enallagma culicinatorum Byers

Published record.—Cache Co.: Logan River (Needham), Byers (1927).

New record.—None. The author is of the same opinion as the late E. B. Williamson that this species is probably synonymous with *E. anna*.

Ischnura denticollis (Burmeister)

Published record.—Utah (no specific locality), Needham 1929).

New record.—Washington Co.: St. George (2♂, 2♀, BYU, V. M. Tanner; 3♂, ♀, UMMZ, T. Spalding). June 5–August.

Ischnura barberi Currie

Published record.—Utah (no specific locality), Needham (1929).

New record.—Cache Co.: Logan (♂, UMMZ, J. G. Needham). July.

Ischnura utahensis Muttkowski

Published record.—Utah (no specific locality), Muttkowski (1910).

New record.—None.

Ischnura preparva Selys

Published record.—Salt Lake Co.: City Creek Cañon (H. Skinner), Calvert (1901–1908).

New records.—Kane Co.: Kanab (4♀, UMMZ, L. C. Stuart); Salt Lake City (♂, ♀, UMMZ, Ledyard); Uinta Co.: Ft. Duchesne (2♂, 3♀, UMMZ, C. J. D. Brown); Utah Co.: Provo (♂, 2♀, UMMZ, G. F. Ferris); Weber Co.: Farr West (2♂, 4♀, UMMZ, C. J. D. Brown), Ogden Canyon (3♂, UMMZ, C. J. D. Brown), Slaterville (3♂, 5♀, UMMZ, C. J. D. Brown. June 30–August 16.

Ischnura cervula Selys

Published record.—Utah (no specific locality), Needham (1929).

New records.—Weber Co.: Farr West (♀, BYU, V. M. Turner; 4♂, 4♀, UMMZ, C. J. D. Brown), Slaterville (2♂, 3♀, UMMZ, C. J. D. Brown). June 26–Aug. 3.

LITERATURE CITED

BYERS, C. F.

1927. Key to the North American species of *Enallagma*, with a description of a new species (Odonata: Zygoptera). Trans. Am. Ent. Soc., 53, no. 909: 249–260.

CALVERT, P. P.

1901–1908. *Biologia Centrali-Americana. Insecta. Odonata.* London: Publ. for the editor by R. H. Porter and Dulau and Co., i–viii, 17–420, 10 pls.

KENNEDY, C. H.

1918. New Species of Odonata from the Southwestern United States. Part I. Three New *Argias*. Can. Ent., 50: 256–260.

MUTTKOWSKI, RICHARD A.

1910. Miscellaneous notes and records of dragonflies (Odonata). Bull. Wisconsin Nat. Hist. Soc., 8, no. 4: 170–179.

- NEEDHAM, J. G., and CHRISTENSON, R. O.
1927. Economic Insects in some Streams of Northern Utah. Utah Agric. Exp. Sta. Bull. 201: 1-36.
- NEEDHAM, J. G., and HEYWOOD, H. B.
1929. A Handbook of the Dragonflies of North America. Springfield, Ill.: Chas. Thomas, i-viii, 1-378.
- WALKER, E. M.
1912. The North American Dragonflies of the Genus *Aeshna*. Univ. of Toronto Studies, Biol. Series, no. 11: 1-213.
1925. The North American Dragonflies of the Genus *Somatochlora*. *Ibid.*, no. 26: 1-202.
1933. The Nymphs of the Canadian Species of *Ophiogomphus*. 1. Odonata, Gomphidae. Can. Ent., 65, no. 10: 217-229.
- WOODBURY, A. M.
1933. Biotic Relationships of Zion Canyon, Utah, with Special Reference to Succession. Ecol. Mono., 3: 147-246.

