

**Miss Mattie Wadsworth (1862-1943):  
Early Woman Author in *Entomological News***

by

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**ABSTRACT**

Miss Mattie Wadsworth, an amateur entomologist from rural Maine, stands out as one of the early women authors in *Entomological News*. Wadsworth's correspondence with Philip P. Calvert, prominent and longtime member of the American Entomological Society, shows Calvert's important role in cultivating her entomological interests. *Celithemis martha* (Odonata: Libellulidae) was named in honor of Wadsworth by E. B. Williamson.

## INTRODUCTION

Mattie (Martha) Wadsworth was one of the first women to publish in *Entomological News*. Born on July 26, 1862, she was an amateur entomologist who lived in rural Maine. Her short paper on the dragonflies of Manchester, Maine, appeared on page 36 of volume I, number 3 (Wadsworth, 1890a). At that time, the field of entomology was almost exclusively dominated by men as exemplified by the membership of the American Entomological Society. Although two women members were elected between 1863 and 1865, only one additional woman was listed among the 254 members as of the fiftieth anniversary of the Society in 1909 (Cresson, 1909). Wadsworth herself was never nominated to be a member of the Society.

Mattie Wadsworth's initial note and five subsequent supplements in *Entomological News* can be attributed to the efforts of Philip P. Calvert (1871-1961), later president of the American Entomological Society (1900-1915), eventual longtime editor of *Entomological News* (1911-1943), and Wadsworth's contemporary (Rehn, 1962; White, 1984). This relationship can be traced through Wadsworth's letters to Calvert that are preserved in the Ewell Sale Stewart Library archives of the Academy of Natural Sciences of Philadelphia (ANSP Coll. #933 & #939).

Wadsworth was known among professional entomologists in the United States and Europe of the time through her correspondence and exchange of specimens. However, she remained close to home due to family responsibilities and poor health. With her two sisters, Mae (1860-1949) and Rose (1872-1970), Mattie helped to take care of the family farm, which was located along Meadow Hill Road in Manchester, Maine. She usually gave her address as Hallowell, Maine, where she received mail, but her home was actually within the town of Manchester, located four miles east of Hallowell. This discrepancy resulted in some past confusion about the source of her insect specimens. In an 1893 newspaper article about Wadsworth, it was stated that she "seldom goes away from her pretty home at 'Meadow Hill'..." (MBC, 1975). Her specimens, collected when time and health permitted, came from within two miles of her home (Wadsworth, 1898). She lived her entire life in the same home, where she maintained her collections in a small room with a single window that faced west toward Cobbosseeconte Lake. One of the few known pictures of Mattie Wadsworth (Fig. 1) was taken later in her life. Of Quaker faith, Mattie is buried with her parents (George and Sarah), sisters, and young brother (Leroy, 1881-1888) in the Friends cemetery in West Gardiner, Maine.<sup>1</sup> Their home and property have been carefully preserved by the families of Ray Pomeroy and, more recently, Ben and Sondra Sechrist.

At Calvert's request, the Academy of Natural Sciences of Philadelphia purchased Wadsworth's Odonata collection in 1920. That collection was integrated into the Academy's collection. After Wadsworth's death on December 19, 1943, at the age of 81, her sister Rose donated almost all of the remainder of Wadsworth's meticulously-kept insect collection (mostly Lepidoptera, but no Odonata) to the L. C. Bates Museum in Hinckley, Maine (Hinkley, 1949), where it resides today in a well-constructed 30-drawer wooden cabinet that Mattie may have built (Fig. 2). About 150 of her Odonata specimens are deposited in the [United States] National Museum of Natural History, Smithsonian

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<sup>1</sup> Wadsworth's other brother, Edward (1864-1926), is not interred here.

Institution (USNM). Most of these were acquired in 1898 and 1900 from Wadsworth (USNM 1898, 1900). The few remaining Odonata specimens were donated by her sister after Wadsworth's death (USNM 1944)<sup>2</sup>.

Although Wadsworth died in relative obscurity, her name lives on in *Celithemis martha*, a dragonfly she discovered near her home, which was named in her honor by Edward B. Williamson (Williamson, 1922). Additional glimpses of Wadsworth's life emerge from her letters to Williamson that are preserved in the library archives of the Bentley Historical Library at the University of Michigan (Bentley Archives).

### EARLY INTERESTS AND ENTOMOLOGICAL ACTIVITIES

Little is known of Wadsworth's early life other than that as a child she was an avid stamp collector (Jones, 1941), a hobby she pursued throughout her life. By age 10 she had a collection of several thousand stamps that she had acquired through exchanges, gifts, and small purchases. Later in life, she was president of the Augusta Maine Stamp Club (Wadsworth, 1928).

Although her few publications dealt with Odonata, her initial interest was in the Lepidoptera and Coleoptera. In his three-volume work entitled "The Butterflies of the Eastern United States and Canada, with Special Reference to New England" (1888-1889), Samuel H. Scudder listed records from Wadsworth for 18 butterfly species collected in Manchester (reported as Hallowell), Maine. Mattie's observations of chickadees eating the pupae of the moth *Hyalophora cecropia* (L.) near her home in Manchester were reported by Hitchings (1908).

Most notable among her surviving butterfly specimens are those of *Speyeria idalia* (Drury), the Regal Fritillary, a species now extirpated from virtually all of eastern North America, including Maine (Fig. 3). She told S. H. Scudder that this species was "not very common" (Scudder 1888-1889). She also had six specimens of *Polygonia faunus* (Edwards) from Manchester, a species now more often encountered in the boreal forests of northern Maine. She likely collected these species during the period 1880-1895. The butterflies that she reported to Scudder (1888-1889) are presumably those preserved in her collection at the L. C. Bates Museum, thus allowing valuable confirmation of these records. The latest date on butterflies in her collection is 1895. By 1893 it was estimated that her insect collection included 1200 specimens of nearly all orders of insects (MBC, 1975). In addition to Lepidoptera, her surviving collection also includes numerous species of Coleoptera, as well as a few of Hemiptera and Orthoptera. Most of her specimens are ostensibly from Manchester, but there are some labeled as received from Japan, Austria, China, and India, as well as the states of Florida, Indiana, Massachusetts, Rhode Island, and Texas. A number of butterfly specimens were sent to

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<sup>2</sup> In her correspondence with the USNM (January 29, 1944), Rose Wadsworth inquired if P. P. Calvert were still alive. She was informed by E. A. Chapin, Curator, that Calvert was still living and was Editor of *Entomological News* (February 3, 1944). (Actually he had stepped down from being editor in 1943.) It is not known whether Calvert was informed of Mattie Wadsworth's death. Had he been told, one might have expected a short obituary in *Entomological News* where he published more than 300 obituaries of entomologists as editor.

Wadsworth from F. H. Sprague of Wollaston, Massachusetts. Only the butterflies include date information, while most of the other insects bear only identification labels. Local species of Lepidoptera are preceded by large cabinet labels that identify them using Latin names (Fig. 3). These labels often include references to host plants, and most are signed “M. Wadsworth, Manchester, Me.”

#### FIRST CONTACT BETWEEN MATTIE WADSWORTH AND PHILIP P. CALVERT

In the late 1800's, interest in natural history was widespread. Harland H. Ballard, a high school teacher, organized and fostered this interest by forming the Agassiz Association in 1875 at his school in Lenox, Massachusetts (Ballard, 1888a). The Association was named after the popular and charismatic Swiss biologist, Louis Agassiz, who had immigrated to the United States in 1847 to become Director of what is now the Museum of Comparative Zoology at Harvard and who had recently died in 1873 (Lurie, 1960). Agassiz had been a strong advocate for natural history education for both men and women. Through his study of glacial geology, he was well known in Maine (Smith and Borns, 2000).

The Agassiz Association flourished and soon spread nationally with hundreds of local chapters forming across the country. Chapter 242 formed from a group of students, including Philip P. Calvert, at Central High School in Philadelphia. Not much later and almost 500 miles away, Chapter 535 formed in Hallowell, Maine. Among its members were sisters Mattie and Rose Wadsworth. As the number of chapters proliferated, the Agassiz Association sponsored a monthly publication, *Swiss Cross*, which served as the chief vehicle for communication among chapters during the publication's short-lived existence from 1887 to mid 1889.

The April 1887 issue of *Swiss Cross* contains the following report on the activities of Chapter 242 submitted by its secretary, Philip P. Calvert (Calvert, 1887a):

Chapter 242. Philadelphia, Penn. (I) The president F. G. Jones, devotes his time to *Lepidoptera*, of which he has a fine collection, and he carries on a correspondence with collectors in Canada, England, and elsewhere. Messrs. Bahl and Patton, while not specialists, have interested themselves in the Chapter's work. The secretary has also paid some attention to *Lepidoptera*, but is now preparing to devote his time and energies to dragon-flies. We are very much pleased with *The Swiss Cross* and trust that it is destined to many years of life and usefulness. –Philip P. Calvert, Sec.

Two months later Mattie Wadsworth posted the following request to exchange insect specimens (Wadsworth, 1887a).

Insects (*Coleoptera* and *Lepidoptera* especially) collected in Maine, for some from the south and west – Mattie Wadsworth, Hallowell, Maine.

Two lines below Wadsworth's request appeared Calvert's related request (Calvert, 1887b):

Wanted—Dragonflies from all parts of the world. Will exchange for them North American dragonflies, or a few West Indies shells, if preferred. Correspondence desired with those studying the *Odonata*. - Philip P. Calvert, Academy of Science, 19<sup>th</sup> and Race Sts., Philadelphia, Penn.

In the July issue of *Swiss Cross*, Mattie Wadsworth, secretary of her Agassiz Association Chapter, reported the following (Wadsworth, 1887b):

Chapter 535. Hallowell, Me. (A) We have held regular meetings, made frequent excursions for botanical and geological specimens, and learned the scientific names of common birds. One of our members has collected a large number of insects and stuffed a few birds.--Mattie Wadsworth, Sec.

The following year, Wadsworth published a short article in *Swiss Cross* about observations her Agassiz chapter had made of plant and animal life, particularly insects, during a walk in the woods upon the arrival of spring in Maine (Wadsworth, 1888a).

Meanwhile, Calvert continued to request exchanges of Odonata in *Swiss Cross* and corresponded with Harland H. Ballard about a project to use *Swiss Cross* to enlist collectors around the country to provide specimens and gather data on dragonflies. Calvert's project was described editorially by Ballard (1888b). The first correspondence between Calvert and Wadsworth resulted from this announcement. On June 7, 1888, Wadsworth, age 25, wrote the following to Calvert, age 17, at the Academy of Natural Sciences of Philadelphia (Wadsworth, 1888b).

Mr. Calvert,

Dear Sir, In the June number of Swiss Cross I saw your offer to send blanks for notes on the Odonata to those who wish them. If you will send me one of these blanks, I will do my best to fill it out and, as I know but few of the names of the dragonflies, may send some to you for identification, if you are willing.

I have collected more than eight hundred species of insect here, about fifty of them belonging to the Neuroptera, and though I am familiar with the butterflies and many moths and beetles, have never seen any work on dragonflies. I shall try to learn a great deal about them this season. Respectfully,

Miss Mattie Wadsworth,  
Hallowell, Maine

## LEARNING ABOUT ODONATA

Calvert must have replied promptly to Wadsworth's first letter because Wadsworth sent a box containing specimens from Maine only thirteen days later, on June 20, 1888 (Wadsworth, 1888c). Wadsworth also had begun recording local observations on the species for which she had no names and had referenced each with a separate number. Over the summer, the two continued their correspondence, with Wadsworth replacing numbers with names for her local species and asking Calvert questions about the biology of dragonflies. Wadsworth also made field observations on the behavior of a green snake trying to catch butterflies (Wadsworth, 1889a) and on an ovipositing damselfly, *Calopteryx maculata* (Beauvois), whose eggs she was able to see and count within the leaves of aquatic plants (Wadsworth, 1889b), both of which were published the following April in *Swiss Cross*. During that summer, she also helped care for her seven-year-old brother, Leroy, who became sick in August and died in early September.

By late October, Wadsworth sent Calvert a summary of all of her observations on twenty-seven species of Odonata that she now could identify. These records were carefully written on the forms ("blanks") that Calvert had supplied in June. Based on their correspondence and specimens exchanged, Calvert had already prepared a manuscript that included Wadsworth's records and those of several others who had studied Odonata in Illinois and New York. He submitted the manuscript to *Swiss Cross*.

Ballard, president of the Agassiz Association and editor of *Swiss Cross*, initially accepted the manuscript in October and then returned it in late December with sincere apologies, calling it “too technical” for the audience (Ballard, 1888c). Instead, perhaps to placate Calvert, Ballard wrote a short laudatory note in the January 1889 issue that described the wonderful work Calvert was doing and listed several highlights (Ballard, 1889). Interestingly, many of the highlights were observations and collections made by Mattie Wadsworth and credited by Calvert in his manuscript. However, Ballard failed to note Wadsworth’s contributions by name. He only noted that members of the Agassiz Association had contributed

As it turned out, two of the species collected by Wadsworth were undescribed at the time. *Leucorrhinia proxima* was soon described by Calvert (1890) and *Celithemis martha* was described later by Williamson (1922) and named in Wadsworth’s honor. Yet another species collected by Wadsworth in her first year, *Somatochlora walshii* (Scudder), was known previously from only two specimens (Calvert, 1890). Subsequently, specimens collected by Wadsworth contributed to the description of several more dragonfly species (Walker, 1912; 1925).

#### WADSWORTH’S PUBLICATION IN VOLUME I OF *ENTOMOLOGICAL NEWS*

Mattie Wadsworth continued to collect and study dragonflies in 1889 and sent her unfamiliar specimens to Calvert for identification. By the end of that year, she had observed 43 species in Manchester, Maine. In the meantime, Calvert had become an active associate member of the American Entomological Society and member of the advisory board of *Entomological News*, which began publication in January 1890, the month Calvert turned nineteen. Calvert had asked Mattie Wadsworth to submit a summary of her Odonata observations for publication in *Entomological News*. Her manuscript arrived in November and the first of two installments appeared in the March issue (Wadsworth, 1890a). Shortly thereafter, she began subscribing to *Entomological News* through her Agassiz Association chapter at the annual price of \$1.00.

In late July 1890 Calvert went to Boston where he met Herman Hagen (Calvert, 1893), then the preeminent Odonata specialist in the country and a scientist lured to Harvard by Louis Agassiz in 1867 from Königsberg in East Prussia. During a visit to Boston earlier in 1890, Wadsworth had tried to visit Hagen but was deterred by a foreboding “No Admittance” sign outside his room at the “Agassiz Museum”, now the Museum of Comparative Zoology (Wadsworth, 1890b). Knowing of Calvert’s planned visit, Wadsworth invited Calvert to extend his trip and visit her in Maine (Wadsworth, 1890b), which he did briefly. It was the only time the two met. Calvert apparently had already met her brother, Edward (1864-1926), a young Philadelphia lawyer, who had hand-delivered some of her specimens to Calvert the previous year (Wadsworth, 1889c).

For the next several years, Wadsworth continued to collect Odonata near her home and, with encouragement from Calvert, eventually published five additions to her list in *Entomological News* (Wadsworth, 1891; 1892a; 1894; 1898; 1902). The last, mislabeled a “sixth addition”, was a short note probably composed by Calvert based on their correspondence and published under her name. In 1912 she dropped her subscription to *Entomological News* because the subscription price, then \$2.00, had

increased so much (Wadsworth, 1912a). She apparently collected few dragonflies after 1915.

Wadsworth's first publication in *Entomological News* stimulated others in the region to ask for her help in identifying their specimens. Among them was E. F. Hitchings, who published about Massachusetts dragonflies in *Entomological News* and acknowledged the assistance of Mattie Wadsworth (Hitchings, 1892). Perhaps more significantly, Frances L. Harvey, the Chair of Natural History at the Maine State College in Orono, not so far away, took up the study of Odonata (Calvert, 1900). Because of his position, Harvey could spend much more time in the field and travel farther to collect than could Wadsworth. The first of his four papers on the dragonflies of Maine acknowledged Wadsworth's and Calvert's significant help (Harvey, 1891). His papers provided much more detailed information than Wadsworth's and included the description of a new species (Harvey, 1898). After Harvey's second publication on Maine dragonflies (Harvey, 1892), which only acknowledged Calvert, Wadsworth wrote to Calvert, "... no new species have been found this summer [by me] and I am dreadfully afraid that Prof. Harvey will find more kinds than I have done" (Wadsworth, 1892b). As it turns out, Harvey died in 1900 at age 50 and his fourth and last paper on Odonata was published posthumously by Calvert (Harvey, 1901).

As is evident, Calvert relied heavily on Wadsworth's specimens and observations of Maine dragonflies in his early work, in which he carefully acknowledged her contributions. In 1905, Calvert published a paper on the Odonata fauna of New England that included, among other sources, all of Wadsworth's published and unpublished records (Calvert, 1905) and again he acknowledged her contributions. This was the definitive work for the region at the time. Although Wadsworth continued to collect Odonata for another decade and obtained several new state records, she never published them herself. All of her new records were published by others with proper acknowledgment (e.g. Walker 1912, 1925).

Nevertheless, Wadsworth continued her interest and exchanged specimens with entomologists here and abroad. As with many who collect in the northern United States, she became interested in the Anisopteran families *Aeshna* and *Somatochlora*. In her correspondence with Calvert and Williamson, she repeatedly offered to provide them with specimens and encouraged them to sort out the taxonomic problems within the two groups. Both did publish a few articles on these groups before 1910, but ultimately the task fell on the shoulders of Edmund Walker, a Canadian entomologist (Walker, 1912; 1925). Wadsworth provided Walker with over 120 specimens of *Aeshna* and later, via Calvert, 66 specimens of *Somatochlora*. The last of these were collected in 1915. Whereas Calvert (1905) had attributed only two species of each genus to Wadsworth in his New England paper, Walker's monographs indicated that six species of *Aeshna* and five species of *Somatochlora* were among Wadsworth's specimens. Her specimens contributed significantly to Walker's work.

Shortly after New Years Day in 1920 and not long after her father's death following a long illness, a weary Wadsworth wrote to Calvert saying she had done no collecting in five years and offered him any specimens of hers he might want because she felt her collecting days were over (Wadsworth, 1920a). Calvert in turn offered to have the Academy of Natural Sciences of Philadelphia buy her Odonata collection for \$40,

reckoned by Calvert at about five cents per specimen. She accepted, and the collection was sent to the Academy in April (Wadsworth, 1920b).

#### DESCRIPTION AND NAMING OF *CELITHEMIS MARTHA*

Among the specimens Mattie Wadsworth collected in August 1888 was one that on initial study Calvert thought was an undescribed species. It was listed as “*Diplax new? species*” in Wadsworth’s first publication (Wadsworth, 1890a). In correspondence (Wadsworth, 1890b), Wadsworth suggested that Calvert name it *Diplax calverti* after himself, a suggestion he obviously rejected. After further examination, he concluded the specimen was *Diplax ornata* (Rambur), and Wadsworth corrected it in her second publication (Wadsworth, 1891). More than 30 years later, Williamson revisited Calvert’s initial thought that this might be a new species and described *Celithemis martha* (Figs. 4 & 5), a species distinct from *Celithemis ornata*, “Named for Miss Mattie Wadsworth, for nearly thirty years a careful and unselfish collector and student of Maine dragonflies, who collected many specimens of the species here named in her honor” (Williamson, 1922). Interestingly, more than 100 years after Wadsworth collected the first specimen, *Odonata* specialists still question whether *Celithemis martha* deserves specific rank (Orr, 1993). Recent DNA sequence analysis suggests that *C. martha* is distinct from *C. ornata*; however, the new question is whether it is distinct from *C. amanda* (Hagen) (Baskinger et al., 2008).

Although Mattie Wadsworth’s collecting sphere was very local, she corresponded with entomologists far and wide including E. B. Williamson. His salary as president of the Well’s County Bank in Bluffton, Indiana, enabled Williamson to finance his frequent travels in support of his serious avocational study of dragonflies until his bank failed in 1927 (Calvert, 1935<sup>3</sup>; Donnelly, 1998). He published over 100 articles on dragonflies and described 92 species. Others immortalized him with the dragonfly genus *Williamsonia* Davis and the species *Somatochlora williamsoni* Walker. He in turn immortalized fellow dragonfly specialists and others by naming species after them, such as *Somatochlora calverti* and *S. hineana*. He named *Enallagma anna* for his wife, *Libellula jesseana* for his cousin, *Stylurus ivae* and *S. laurae* for the wife and daughter of a friend, and *C. martha* for Mattie Wadsworth.

Taxonomists customarily derive species names from surnames except for family members, in which case one avoids the appearance of naming a species after one’s self by using first names. If Williamson wished to honor Wadsworth, why not *Celithemis wadsworthi*, rather than *Celithemis martha*, which is based on her first name that she never used? Such an issue may not have surfaced then, but an unrelated male entomologist at the time might have been insulted if his first name were used to form a

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<sup>3</sup> To write his obituary of E. B. Williamson, Calvert reread 527 letters he had received from Williamson. Although over 10,000 letters to Calvert are preserved in the Ewell Sale Stewart Library archives of the Academy of Natural Sciences of Philadelphia, fewer than 40 letters are from Williamson. The puzzling absence of many letters from Williamson is unexplained. Undoubtedly, if preserved, they would contain additional information on Mattie Wadsworth and *Celithemis martha*. Calvert’s correspondence to Williamson shows that Calvert approved of the name proposed by Williamson and that its form was consistent with accepted nomenclature rules and that either *martha* or *marthae* would have been permissible species names (Calvert, 1922).



species name. Williamson truly meant to honor Mattie Wadsworth, and though she made some alternative suggestions, it appears that she felt honored from the letters she wrote to Williamson when he proposed the name to her, but her comments suggest she was not fully happy with the name *martha* (Wadsworth, 1921; 1922):

August 13, 1921

Dear Mr. Williamson,

Your letter was received today and I will reply at once. That which you tell me about *Celithemis ornata*? is very interesting and I would certainly like the dragonfly named for me if the right arrangements can be made. At first I will confess that I was named Martha, but have never been called by that name, so do not feel that I am Martha at all. I am an ardent Esperantist and some of my Esperantaj friends always call me Matio, which is pronounced Marteo, with strong accent on the middle syllable. That name with *Celithemis* would be most euphonious if one knew how to pronounce it. Perhaps a more Latin style of the name would be Matia which you could use if you wish or if you really prefer Martha you may use that name. Matis means Mattie as you infer.

I began the study of dragonflies in 1888 though I had some mounted, unnamed specimens before that, so you may see that I am not very young. Dr. Calvert offered to identify all species caught by young members of the Agassiz Association and I found more than 20 species during that summer. My time and strength for collecting have always been very limited, but I kept on taking some specimens each year, until 1915 when having gradually improved in health—though never strong—it became necessary to devote all of my time to the multitudinous duties on the farm. My eyes would never permit studying of minute characteristics, so I always sent doubtful species to Dr. Calvert for identification. Now my eyes are very poor though I could still collect, and would be glad to do so, if it were possible to find time for such a pleasure. Did you know that my entire collection of Odonata, except the types, which I shall always keep, went to the Academy of Natural Sciences in Philadelphia, one year ago last spring? Now about the so called *ornata*. I captured the first specimen, a ♂, on Aug 6th, 1888, at 5 o'clock in the afternoon, and it is now before me as I write.

Dr. Calvert then called it *Diplax new?* species and I proposed that he describe it and let me give it his name. Afterwards he again looked it over and told me, when he made a short visit here in 1890, that he had decided it must be *ornata* and that his vanity could not be gratified in the way I suggested. It seems so strange, after all these years, to have the subject recalled. Do you wish to see the specimen I have? I shall be glad if my suggestion may be of any use to you, and thank you for wishing to name the dragonfly for me. It is indeed an honor and I appreciate it.

Sincerely,

Mattie Wadsworth.

[P.S.] Since writing this letter I have been looking at Dr. Ris' "Collections Zoologiques Die Baron de Selys Lonchamps" Book 6, pages 721 to 727. Of course you have the books and know that Dr. Ris made a drawing from specimens of *C. ornata* which I sent to him. Does he know that you have found it to be another species? I hope that I will not lose my chance for a name by mentioning this. Somewhat appreciatively, M. W.

August 26, 1921

Dear Mr. Williamson,

Family cares and some absence from home have prevented me from replying at once to your letter of Aug 17. Yes it will be alright for the dragonfly to be named *Celithemis martha*. At first it seemed that no one would ever know that it was named for me, if it bore that name, but I might become too vain if my friends did know about it and Martha, of course is a far better Latin name. I shall hope to see your description of the species. Will it appear in Entomological News?

For the first time since 1915 I took my net and tried to find a pair of *martha* for you, but alas did not succeed. It has been the driest season ever known in this locality, so the dragonfly pools and wells are sadly empty. I saw one *L. exusta*, a few *Aeshna sp.* and caught only *Sympetrum vicinum* and *costiferum*. If the fates permit, I will try once more but *martha* has always been very local. Mine were all taken South of our roadway never North. I did enjoy my hunting days. Hoping that you may have many such days. I am

Very truly,

Mattie Wadsworth

March 13, 1922

Dear Mr. Williamson,

I have received the "Notes On *Celithemis* With Descriptions of Two New Species" and again thank you most sincerely for I am much pleased that the species "martha" is now an established fact. It is an honor, indeed, and I do appreciate it. My relatives and admiring friends are pleased also, and want to hear about it. My sister has written to the University at Ann Harbor [sic], to ask for more copies of the pamphlet, so that she may have some to send away. Again thanking you. I am

Very truly,

Mattie Wadsworth

October 18, 1922

Prof. Williamson,

On just one day the past summer I found an hour for hunting and captured the few dragonflies which I now send to you. You once wrote that you would like more specimens of "*martha*" and I am very glad to send you these few. I hope that you have had lots of time for collecting and enjoyed every hour of it.

Very truly

Mattie Wadsworth

Summer 1922 is the last documented time that Mattie Wadsworth collected dragonflies.<sup>4</sup>

## STATUS OF WOMEN ENTOMOLOGISTS IN THE LATE 19<sup>TH</sup> CENTURY

Reflecting on her early interest in insects, Mattie Wadsworth wrote to Calvert, "... I remember those days and how I hoped to become a real entomologist. But homely everyday duties made that an impossibility and each year gives me less time for even collecting, but it is better to hope than despair" (Wadsworth, 1912b). The odds were stacked heavily against Wadsworth. Although entomology as a natural history hobby was apparently acceptable for women, though unusual, careers for women in entomology and science in general were virtually non-existent in the 19<sup>th</sup> century. Not only were these

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<sup>4</sup> In retrospect it is surprising that Williamson designated the type locality for *Celithemis martha* to be Wyandanch, Long Island, NY, especially since he named the species after Wadsworth, who provided specimens from her home in Manchester. As a result, Wadsworth's specimens are merely paratypes. One would think that one of Wadsworth's specimens should have served as the holotype.

considered male professions, but the education required was rarely available to women. Acceptable professions for women included teaching, stenography, and nursing, but not entomology. Wadsworth's sister Mae was a stenographer, and her sister Rose was a teacher. Wadsworth assumed the traditional roles of taking care of household, farm, and family obligations and in her case being nurse for sick and dying family members. Her surviving brother Edward, on the other hand, was well-educated at a Quaker boarding school in Providence, Rhode Island, and became a lawyer (Jones, 1941).

By contrast, Philip P. Calvert, as a male, had all the educational and culturally favored advantages. He had a superb education, a supportive family, and sped to a Ph.D. at the age of 24. Following that, he pursued postdoctoral studies in Europe and an academic career at the University of Pennsylvania (White, 1984). He had access to the Academy of Natural Sciences and could consult with the professional entomologists. His natural history hobby became his profession.

Edward B. Williamson (1877-1933) also had a high-quality college education. His banking profession enabled him to travel and have the means to be a serious amateur entomologist on the side. Nevertheless, after his bank failed, he had to resort to selling irises to make ends meet (Calvert, 1935), and like Wadsworth, had to give up dragonflies when necessity dictated. He was rescued with a position at the University of Michigan museum. There was no one to rescue Wadsworth. One wonders how different her life would have been had she been born male.

Although Mattie Wadsworth was an early contributor to *Entomological News* (March, 1890), she was not the first woman to publish in its pages. Annie Trumbull Slosson (1838-1926) achieved that distinction by 19 print pages (February 1890). Slosson contributed an article on New Hampshire moths on page 17 of the first volume (Slosson, 1890). Slosson was a well-known New England short story writer of independent means who, in 1891, became the third woman member of the American Entomological Society after asking Henry Skinner in a letter whether the Society admitted "feminine members". For more than 20 years, she contributed many articles to *Entomological News*. She came from a prominent Connecticut family and turned to entomology at the age of 48 (Ifkovic, 2004). She helped found and supported the New York Entomological Society and had a collection of over 35,000 insect specimens. Over 100 species were named in her honor. (None were dragonflies.) She was the most prominent amateur woman entomologist of the time. Unlike Wadsworth, Slosson had the means to travel and was unfettered by family responsibilities. She married relatively late (29), had no children, and her husband, some years older than she, died after only four years of marriage. Furthermore, she had relatively good health and a long life. Slosson must have been a plucky woman. At the age of 83 in response to an inquiry from Calvert she wrote, "Alas, my one [*Gomphus dilatatus*] is of the inferior sex, a male, poor thing" (Calvert, 1927).

Two other women of the late 19<sup>th</sup> century who became well known for their entomological work were Ida Mitchell Eliot and Caroline Gray Soule. In their "crawlers" they raised caterpillars that children in their neighborhood of suburban Boston brought to them. Soule, the more serious entomologist of the two, was a member of the Boston Society of Natural History and published many short articles on Lepidoptera that appeared in *Entomological News* and especially the journal *Psyche*. After more than twenty years of experience, they wrote a book, *Caterpillars and their Moths*, that is a

classic often referred to today (Elliot & Soule, 1902). As with Wadsworth, they lived in New England, were unmarried, developed a strong interest in insects, published in *Entomological News*, and corresponded with other notable entomologists of the period. Also like Wadsworth, many of their butterfly records were listed by Scudder (1888-1889).

#### IMPORTANCE OF *ENTOMOLOGICAL NEWS* FOR AMATEUR ENTOMOLOGISTS

While men populated the professional world of entomology in the 19<sup>th</sup> and the early 20<sup>th</sup> century, interest in insects was not restricted to men or to professional entomologists. As exemplified by Mattie Wadsworth, Annie Trumbull Slosson, Ida Mitchell Eliot, and Caroline Gray Soule, there were serious amateur women entomologists (as well as serious amateur male entomologists such as E. B. Williamson), many of whom published in *Entomological News*. The journal provided a unique outlet because it catered to both professional and amateur entomologists. That mix sometimes led to ire. For example the editor, Henry Skinner (1899), complained about submissions to the journal from superficial collectors reporting common cosmopolitan species and neglecting truly interesting species. He said these contributions were hardly worth being printed in the journal. A few years later, the rather cantankerous professional entomologist at the United States National Museum of Natural History, Harrison G. Dyar, excoriated Soule for her lack of familiarity with the published entomological literature and questioned the competence of the editors of *Entomological News* (Dyar, 1905, 1906). Soule's and Skinner's responses (Soule, 1906; Skinner, 1906) reaffirmed the importance of serious amateurs and the role of *Entomological News*.

The American Entomological Society and its journal *Entomological News* have maintained a tradition of inclusion for amateurs for more than a century—a record of distinction that was particularly important for women like Miss Mattie Wadsworth.

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Figure 1



Figure 1. Undated photograph of Miss Mattie Wadsworth. (From Ben and Sondra Sechrist.)

Figure 2



Figure 2. One of the authors (JVC) examining specimens from Mattie Wadsworth's collection now at the L. C. Bates Museum in Hinckley, Maine. Mattie is believed to have constructed the cabinet.

Figure 3.



Figure 3. Six specimens of *Speyeria idalia* (Drury), the Regal Fritillary, in the Wadsworth collection at the L. C. Bates Museum in Hinckley, Maine. This species, then uncommon in central Maine, is now extirpated from virtually all of eastern North America. Photograph by John Calhoun.

Figure 4 and 5.



Figures 4 & 5. Martha's Pennant, *Celithemis martha*, first collected by Mattie Wadsworth in 1888 in Manchester, Maine, and later named after her by E. B. Williamson in 1922. Upper photo of a specimen collected by Mattie Wadsworth on August 7, 1890 and part of her collection presented to the Academy of Natural Sciences of Philadelphia in 1920. Photo by Harold B. White. Lower photo of an adult male taken by Annette Oliviera on Long Island in New York.