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OBSERVATIONS ON THE SPELLING AND GENDER OF TECHNICAL NAMES IN THE ODONATA

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Mrs. Gloyd's remarks in the previous issue of Selysia (Nov. 1, 1971, v. 5, #2: 3-4) on the misspellings of dragonfly names and the caution to be observed "before making any changes in the ending of a name" (for gender) are timely and deserve considerable attention. However, many of the problems are quite complex and extend far beyond the implications of her discussion. Some of the examples she cited show this complexity.

Although the proper spelling of Aeshna, nec Aeschna, and its derivative compounds Aeschna-, nec Aeshna-, would appear to be beyond question, the confusion has existed in the literature since 1802 and continues today. Aeshna, the second oldest name in the Odonata was established by Fabricius in 1775 without reference to its derivation or meaning. It was emended to Aeschna by the editor or editors of Illiger's Magazine in 1802. Usage varied between the two spellings as illustrated by a few examples from the "classical" authors: Aeshna: Beauvois, 1805; van der Linden, 1823; Stephens, 1836; Fonscolombe, 1838; Say, 1839 (Written ante 1834); Evans, 1845; and Buchecker, 1878; Aeschna: Latreille, 1805 (et seq.?); Charpentier, 1825, 1840; Blanchard, 1837/1843; Burmeister, 1839; Selys, 1839 et seq.; Hagen, 1840 et seq.; Zetterstedt, 1840; Rambur, 1842; Schneider, 1845; Scudder, 1866; Brauer, 1865 et seq.; and Kolenti, 1856. Aeschna was quite generally used after its adoption by the "Founders of Odonatology" in 1839-1842, until the original spelling was restored by Calvert (1905) and Walker (1908-1912). Kirby (1890) used both "names" (!), Aeshna for Gomphus, and Aeschna for the legion Aeschna Selys. Fraser (1939-1940) carried the principle of "original" spelling to illogical conclusion by the emendation of all Aeschna- compounds to Aeshna-.

Aeshna is now generally used by American authors, but Aeschna is quite widely used by European writers, especially by non-systematists (Aeshna spp. are extensively used in physiological and other biological research).

The disputed spellings arise from the uncertain derivation of the word. Not only did Fabricius not give any information on the origin of the word when the name was proposed but it was omitted from his discussion of the types of names to be used for genera in his handbook of Entomology published three years later (1778). In three lists of generic names, noting what type of words should be used, "Obscura latina", "Obscura Graeca", and Latin and Greek words "quae characterem essentialem, habitum . .", respectively, all but 14 of the 78 generic names attributed to himself elsewhere in the text are included. Of the 14, six are well-known classical names for insects (mostly Greek, thoroughly latinized and used by Pliny and/or other Roman writers), and four others are Greek words, likewise latinized in antiquity, and listed in classical dictionaries as the names of other animals or plants. This leaves only four - Aeshna, Cucujus, Callidium, and Semblis - not utilized in the approximate form known to the ancient writers. I have been unable to find any of these, except Cucujus, in any classical dictionary, or in any root-word lexicon consulted. Borror (1960) cites Cucuj-, as referring to a beetle, from the (Brazilian) whatever that may be! It would seem strange, however, that Fabricius would use a Brazilian word for a north European beetle (Cucujus depressus, "Habitat in Germania"), especially in view of his penchant for classical names - "Nomena generica, quae characterem essentialem,

S E L Y S I A

A Newsletter of Odonatology

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by

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Issued at intervals as available news and information warrant

This newsletter is designed to disseminate facts and news about the activities of Odonatologists and Odonatology. It is not intended as a journal nor an organ for the publication of articles or technical papers. The name is based upon that of the "Father of Odonatology", Baron Edmond de Selys Longchamps.

habitum aut proprietatem singularem insectorum sub genere militantium exprimunt, semper optima sunt."

While Aeshna would appear to be impossible as a Greek word (and Aeschna does have the appearance of one) it has not been found in any dictionary or word list. All attempts to trace the derivation of the word have presupposed some error or variation in spelling. Thus Williamson considered that it was derived from αισχρος (aischros, ugly), but Tillyard suggested that the original was a printer's error for Aechma from αιχμη (aichme, spear) referring to the long slender abdomen in this group. However, the name Aeschna exists in pre-Fabrician literature, e. g. Mouffet (1634), "The AEschna so called, are a kinde of Waterfly of an ash colour, with four wings, six feet, near the tail having as it were many downy hairs." The early use of this form was the basis of the emendation by Illiger. For any relevance which it may have to the possible adaption of Aeschna to Aeshna by Fabricius from Mouffet or other early writers it may be noted that he did exhibit some variation in the spelling of names of authors. Thus, in his bibliography he listed Frisch, 1738 and Brunniche, 1764. In the text he refers to Frisch several times, but on page 106 he wrote "Scorpio Musea Frisch" and "Scorpio Araneus Frish" only two lines apart, and in the only two references which I note to Brunnische, the name is written "Brynnische" (p. 90) and "Bugo Brynn." (p. 115).

Another variant in spelling involving H is illustrated by Erpetogomphus (Herpetogomphus). Although the latter may not occur in recent literature it will show up in any retrospective research involving the group. This variation is due to the peculiar status of H in the Greek alphabet. H disappeared as an independent letter from "standard" Greek in 403 B.C. when the Athenians adopted the Ionian alphabet; H became the majuscule for eta (H, η). However, the sound remained and was indicated by the rough breathing sign (῾, spiritus asper). Every initial vowel or diphthong in the Greek dictionary has the rough (῾) or smooth (᾽, spiritus lenis) breathing sign. Since Latin used H to represent this rough breathing sign in transliteration from Greek, vowels with this sign should be preceded by H. Also initial rho (ρ) was always "rough" and words from the Greek beginning with this letter are transliterated rh-, unless the spelling is modified. Note the entries under R in a root word lexicon: almost all rh- words are of Greek origin and no others (except for variants in spelling) are derived from that language. Likewise medial double rho (ρρ) is transliterated -rrh-. Note: Huonia rheophila, (ρεος + φιλα), the stream loving Huonia, and Pyrrhosoma (Πυρρος + σομα), red body. Omission of H

from Ophiogomphus is relatively unimportant as the derivation of the root can scarcely be mistaken, and since Selys did not give the derivation when the name was proposed, he had no more right than any other author to "emend" it later. However, in words derived from such Greek roots as from oros (ὄρος, ὅρος) the H must be included or omitted to carry the appropriate meaning; thus, Orolestes is the Lestes of the mountain, but Horo- would be-----of the border, or of the hour. It may be a surprise to some people to learn that the tendency to drop H as a letter of the alphabet also appeared in Latin. Thus, Quintilianus, a rhetorician at the end of the first century A.D. wrote, "si H littera est, non nota,"and some very familiar words may be found with or without H before certain vowels although I know of no case of this variant in spelling appearing in nomenclature (aeneus or aheneus, -a, -um, of the color of bronze, brassy).

Some of the most troublesome problems in nomenclature to the average systematist are concerned with gender. Many, but by no means all of these, are due to unfamiliarity with Latin. The average zoological student studying systematics acquires at least a vague notion of three or four principles concerning the scientific names of animals.

1. That the names of species consist of two "Latin" words, of which the first is the genus and the second the species name, to which is sometimes added the name of the individual who "described" the species. If he is observant enough to note that some of the names of describers are enclosed in parentheses, and others not, he may remember that he has been taught to be consistent in writing and follow his inclination to place all such names in parentheses, or leave off those he finds. I have heard of editors of Biological journals doing this!

2. That the genus name must be a noun in the nominative singular.

3. That the species name must be an adjective agreeing with the genus name in case, number, and gender, or a noun either in apposition with the genus name, therefore in the nominative singular, or in the genitive. The fourth allowable type of species name - the genitive of an adjective name of an organism to which the organism to be named has some relationship such as a parasite, used as a substantive - is not so generally known. Perhaps, it is just as well as it is only a special application of the third class since adjectives have always been converted to nouns and vice-versa, for use in nomenclature. The change from "noun" to "substantive" in these paragraphs of the code is poor grammar and redundant. A substantive is a "word capable of being used as a noun" according to the dictionary meaning; it would seem more simple to say "used as a noun" instead of in effect "used as a word capable of being used as a noun."

As Steyakal (1970) has pointed out and many of us are painfully aware from teaching any course involving Biological terminology, "Nowadays, many biologists, especially in the United States, become systematists [or specialists in other Biological disciplines] without the benefit of any exposure to Latin grammar." To such students, without experience with a flexional language (since English and the modern romance languages have discarded or greatly reduced the flexional apparatus) case and gender are, at least, minor, if not major, mysteries. However, since gender has been a grammatical principle incorporated into every code of nomenclature from the beginning, attention must be given to it when a species is given a name or shifted from one genus to another. In theory the necessary determination should be made without difficulty. If the gender of the generic name(s) is not known or cannot be determined by the form of the names of the species assigned to it (as will be illustrated this indication can be wrong) it may be determined by consulting a classical dictionary (Latin or Greek, dependent upon the origin of the word). Then the ending for the species name can be determined in accordance with the

gender of the generic name and everything would seem to be in perfect order. However, this is not as simple as may appear. Anyone without some training in the classical languages may experience considerable difficulty in using a classical dictionary. His first reaction may be an agreement with Shakespeare's Casca, "For mine own part, it was Greek to me," even in using a Latin dictionary (actually many Latin words, especially scientific terms were derived from the Greek). Furthermore, a considerable proportion of generic names do not occur in the dictionaries as they are synthetic words, or other parts of speech (adjectives, verb forms) given substantive status. I have shown in a paper to be published elsewhere that most, if not all, of the insect generic names of Linnaeus were classical names, many of them ancient names of insects, or other organisms. However, the store of such names was soon exhausted and synthetic and metamorphosed words had to be used. Thus Agrion Fabricius, 1775, appears to be the neuter of the Greek adjective αγριοʃ, -α, -ον, (agrios, -a, -on, wild or strange). Without some knowledge of the basic structure of the language it would be impossible for anyone to locate this word, and determine its gender in the dictionary.

Moreover, the expression of gender in Latin (likewise, or "more so" in Greek) is far more complicated than the mere inter-changing of the endings "-us", "-a", and "-um". As Brown (1956) has observed there are "Other pitfalls involving gender, aside from boners such as 'The epistles were the wives of the apostles' . . ."

Latin adjectives include, at least, five groups according to the gender endings: three endings, masculine - feminine - neuter, (1) -us, -a, -um, as uncatus, uncata, uncatum, hooked; sponsus, sponsa, sponsum, promised; (2) -er, -ra, -rum, as liber, libera, liberum, free; -er, -ris, -re, as paluster, palustris, palustre, swampy; two endings, masculine and feminine (the same) - neuter, (4) -is, -is, -e, as viridis, viridis, viride, green; (5) one ending (all three genders the same, which is diverse), as anceps, two-headed; atrox, fierce; tricolor, three-colored; longipes, long-footed; simplex, plain; vigilax, watchful.

There are also three groups of Greek adjectives in relation to the gender endings - three, two and one termination in the nominative singular, but the endings in all three groups are much more diverse than in Latin. However, Greek adjectives are relatively much less directly important to the taxonomist than Latin forms. Simple, uncompounded Greek adjectives are used less frequently than Latin adjectives as specific names, although as elements of compounded words they are ubiquitous. An exception is μελαʃ, melas, black, or dark. I do not know of its use in the Odonata but as the terminal portion of compound (adjective) names; it is found as Xiphiagrion cyanomelas Selys, Coeliccia cyanomelas Ris, Lokia erythromelas Ris, Argiolestes icteromelas Selys, Orthetrum icteromelas Ris. This word poses a problem in its transformation into Latin, because of its irregular form -μελαʃ, μελαινα, μελαν, melas, melaina, melan, for the three genders, with the genitives - μελανοʃ, μελαινηʃ, μελανοʃ, melanos, melaines, melanos. This yields the well-known combining form melano- (Erythrodiplax melanorubra Borror, Notoneura melanoxantha Lieftinck, and with substantives - Burmariolestes melanothorax Selys, and Palaemnema melanostigma Selys). It was apparently not Latinized in antiquity except as nouns, melas, -anos, a black spot on the skin, and melania, --ae, blackness, or black spots, on the skin. Sherborn (1902, 1922/32) lists it as used for species in the Animal Kingdom, as melas 51 times (in genera of all three genders), as melanus twice, melana, four times and melaina once. Of course, some of the terms might be considered nouns but this would be only in special cases where the author gave such derivations. A troublesome form is Aeshna psilus Calvert which on first appearance is

likely to be recognized as the Greek adjective ψιλοʃ, ψιλη, ψιλον, psilos, psile, psilon, Latinized as psilus, psila, psilum. However, when Professor Westfall asked for an explanation of a change from --us to --a, it was readily discovered that the very precaution that this article stresses had not been followed! Calvert (1947) cited the word as a substantive and quoted a dictionary in support of such usage, "Greek ψιλοʃ ('in Attic prose as a military term, οι ψιλοι soldiers without heavy armour, light troops.' The Classic Greek Dictionary, Hinds Noble & Eldredge Publishers, New York City, 1901, page 797) transliterated according to Appendix F, International Rules of Zoological Nomenclature." Calvert's dictionary reference is not available to me, but several Greek dictionaries which I have consulted list ψιλοʃ as an adjective only. Liddell and Scott (1958) gives (among many other meanings) the one quoted by Calvert in exactly the same words, but some, if not most of the references quoted for this meaning use psilos as an adjective. This re-inforces Mrs. Gloyd's warning that care should be taken in changing the ending of a word for gender and indicates that the original should usually be examined. Even a very common adjective can have an obscure noun usage, or the author can, quite within his rights, give it such status when the name is proposed.

Kirby (1890) placed 61 names - species and synonyms - in the genus Lestes and listed two others which had been described in that genus. Of the 63 names two were new, 11 were nouns and 13 were one or two termination adjectives. All of the other 37 names, except eurinus, had been given a feminine ending when described in Lestes or transferred from Agrion into it and this practice had been followed universally as far as I can determine, until 1890. Although Say used the masculine ending for eurinus this is not proof that he considered Lestes masculine as the derivation of eurinus may be questioned. Three Greek words are spelled thus ευρινοʃ, (eurinos) an adjective meaning "keen-scented," one meaning "of good leather" and a noun, meaning "an east wind." Only the latter appears to have been incorporated into Latin in antiquity. Most of the words used by Say for his 36 species of Odonata were adjectives but at least, two others - cynosura and clepsydra - were nouns. Whether or not Say considered Lestes masculine and eurinus a noun, all following authors made eurinus an adjective and wrote it in feminine form. Lestes was probably considered feminine because it is one of a small number of masculine nouns ending in -τηʃ (-tes) (genitive -ου, (ou) and declined otherwise like feminines in -η (e) or -α (a) of the first declension) (compare: Latin pirata, agricola, etc.).

Kirby "corrected" 36 of the names to masculine, leaving sponsa and vidua as feminine, evidently considering them nouns. However, a study of the derivations of these words gives much indication that they might well be considered adjectives in zoological nomenclature unless the author proposing one of them indicated that it was to be considered a noun. Sponsus, -a, -um, promised, or engaged, is the past participle of spondeo, to promise; viduus, -a, -um, was derived eventually from viduo, to deprive (of anything). All three forms of the first attained the rank of substantives - sponsus, a betrothed man, or bridegroom, sponsa, a betrothed woman, or bride, sponsum, an engagement, or an agreement. In the case of viduus, the Roman social system was probably responsible for the fact that vidua, attained the rank of a substantive referring to a widow, but that viduus referring to a man whose wife had died remained an adjective! However, since both words had adjective origins they might well be so considered in nomenclature. Sherborn (1902, 1922/32) (see notation and quotation under the 1922/32 entry in Principal references cited) is somewhat ambiguous in his treatment of sponsa, but definitely considers vidua an adjective. In the first section there are four listings of sponsa, and one of sponsus, and the

entries follow sponsorius, indicating sponsus, --a. However, in the second section there are only sponsa listings (16) and they precede sponsana, clearly not entered under the masculine form, but there were no sponsus forms to enter! In the first part there is an entry vidua, following a genus Vidua, but it has a cross reference "v. viduus", and there are 15 vidua listings and one viduus entry there; in the second part, the entries, including 29 as viduus, 49 as vidua, and one as viduum, follow vidura.

Principal references cited

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Fabricius, Johann Christian 1775. Systema Entomologiae. Flensburgi et Kilonii, Korte. 30 + 832 pp.

____ 1778. Philosophia entomologica. Hamburgi et Kilonii, Bohn. 10 + 178 pp.

Gloyd, Leonora K. 1971. Some often repeated misspellings of names for American Odonata. Selysia, 5(2): 3-4.

Illiger, Johann Carl Wilhelm 1802. Magazin fur Insectenkunde, 1 (3/4): 261-492.

Kirby, W. F. 1890. Synonymic catalogue of Neuroptera Odonata. London, Gurney & Jackson. 10 + 202 pp.

Liddell, Henry George and Robert Scott. 1958 ["New (ninth) edition completed 1940", reprinted]. A Greek - English Lexicon, revised and augmented throughout by Sir Henry Stuart Jones, with the assistance of Roderick McKenzie. Oxford, Clarendon Press. xlviii + 2111 pp.

Mouffet, Thomas 1634. Insectorum sive Minimorum Animalium Teatrum. Londini, Thom. Cotes. 9 + 326 pp.

____ 1658. The Teater of Insects. (English edition of preceding, by E. Topsel). London. 6 + 818 pp. The quotation is from this edition, but it is identical with the 1634 edition except language.

Sherborn, Carolo Davies. 1902. Index Animalium sive Index nominum quae ab A. D. MDCCLVIII genera et speciebus animalium imposita sunt. 1758. London, Cambridge Univ. Press. 1195 pp.

____ 1922/32. Idem. Sectio Secunda. A Kalendis Januariis, MDCCCI usque finem Decembris MDCCCL. London, Oxford Univ. Press (for Trustees of the British Museum). cxlvii+7056+vi+1098 pp., in 33 parts.

(This is the only list of specific and generic names for the entire Animal Kingdom that I know. Of course, it covers only the period from Linnaeus to 1850 but it gives some idea of the range of names used. The following quotation from the introduction shows the treatment of specific names: "All trivial names are entered as if they were masculine, e. g., nigra will be found under niger, afrum will be found under afer, abdominale will be found under abdominalis. It is obvious that no other arrangement is possible if we wish to preserve the history of a species; but cross references are given when the feminine and neuter forms of the trivial word vary so much as to obscure it to those, who, like myself are unfamiliar with the dead languages."

Steyakal, George C. 1970. On gender concord in binomina. Coleopt. Bull., 24: 57-58.

FIRST EUROPEAN SYMPOSIUM ON ODONATOLOGY

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At the Second Odonatological Meeting in Utrecht, the Netherlands, on November 21, 1970, the initiative was born to organize a larger European Symposium; the Belgian odonatologists offered to be hosts to the gathering.

The Symposium has been held on October 22-23, 1971 in the Institute of Zoology of the State University of Ghent, Belgium. Nearly 60 members represented 11 countries (Belgium, Czechoslovakia, Denmark, France, German Federal Republic, India, Italy, the Netherlands, Poland, United Kingdom and U.S.S.R.), though the colleagues from Czechoslovakia, India, Poland and U.S.S.R. were unable to attend personally.

In the Opening Session, Dr. H. J. DUMONT (Ghent, Belgium) narrated briefly the history of odonatological research in Belgium and outlined the present odonatological work in his country. Dr. B. KIAUTA (Utrecht, Netherlands), pointed out the tendency of splitting up odonatology in specialized disciplines and stressed the growing desire to keep our science as an organic unity. With a minute of silence the Members of this first official international symposium commemorated the colleagues and pioneers of odonatology who have passed away.

In three Lecture Sessions, 12 lectures and demonstrations were given: Dr. J. C. ANDRIES (Lille, France): Étude de l'activité des nids de régénération de l'intestin moyen d'Aeshna cyanea; Dr. L. CAILLERE (Villeurbanne, France): Dynamique de la capture chez la larve d'Agrion (syn. Calopteryx) splendens Harris; Dr. H. J. DUMONT (Ghent, Belgium): The taxonomic status of Calopteryx xanthostoma (Charp.); and: Some faunistic peculiarities in the odonate fauna of Morocco; Dr. D. C. GEIJSKES (Leiden, Netherlands): Faunistic mapping of Odonata in the Netherlands; Dr. A. HEYMER (Brunoy, France): Comportement et évolution des Calopterygidae; Dr. B. KIAUTA (Utrecht, Netherlands): Cytotaxonomic peculiarities in the neotropical odonata genera Leptagrion Selys, Orthemis Hagen and Macrothemis Hagen; Dr. M. A. LIEFTINCK (Rhenen, Netherlands): Some unusual features of amphipterygid larvae and their possible phylogenetic significance; Dr. P. J. MILL and Mr. R. S. PICKARD (Leeds, United Kingdom): The mechanism and neural control of ventilation in aeshnid larvae; Dr. J. MOUZE (Lille, France): Etude descriptive et expérimentale de la croissance de l'oeil des insectes odonates; Prof. Dr. F. SCHALLER (Strasbourg, France): Action de la température sur la diapause embryonnaire et sur le type de développement d'Aeshna mixta Latr.; Prof. Dr. E. SCHMIDT (Flensburg, German Federal Republic): Zur Odonatenfauna Berliner Moore.

Most lectures were accompanied by projection of slides or technical films, whereas two popular films "Im Reich der Drachenfliegen" and "With the film camera at a Duth dragonfly pond" were demonstrated by Dr. C. JURZITZA (Karlsruhe, German Federal Republic) and Mr. J. L. MEULENBROEK (Leidschendam, Netherlands) respectively.

Due to lack of time, four more lectures sent in by Members not able to attend could not be read.

In the framework of the Symposium a Colloquium on the Status of the European Odonate Fauna has been held under the chairmanship of Dr. LIEFTINCK. The discussion was based on the draft of a catalogue prepared for this occasion by Mr. H. LOHMANN (Freiburg, German Federal Republic).

The abstracts of all papers have appeared in a mimeographed booklet. Copies of the latter and of the draft of the catalogue of the European Odonate Fauna can be obtained, free of charge, from the author of this report.

One of the topics discussed in the Business Session was the problem of the protection of dragonfly biotopes in Western Europe. The German colleagues informed the Symposium of the destruction of some odonatologically important wetlands by the German Army; at their suggestion the Symposium sent a letter of protest to the Ministry of Defense of the German Federal Republic.

The three most important results of the Symposium are:

(1) The foundation of the international odonatological society, SOCIETAS INTERNATIONALIS ODONATOLOGICA (S.I.O.). For the time being the following countries are represented in the Executive Committee: Belgium, France, German Federal Republic, Netherlands, United Kingdom and U.S.S.R. The Secretary is Dr. H. J. DUMONT (Instutute of Zoology, State University of Ghent, Ledeganckstraat 35, B-9000 Ghent, Belgium).

The Symposium, in its capacity as Founders' Meeting of the new society, unanimously elected four distinguished odonatologists as Members of Honour of the Society, i.e. Dr. S. ASAHINA (Tokyo), Dr. B. F. BELYSHEV (Novosibirsk, U.S.S.R.), Dr. M. A. LIEFTINCK (Rhenen, Netherlands) and Dr. E. PINHEY (Bulawayo, Rhodesia).

(2) The foundation of an interantional quarterly journal, ODONATOLOGICA. The first issue is scheduled to appear on March 1, 1972. An Editorial Board consisting of representatives of six countries is assisted by a Referee Board of specialists in different odonatological disciplines. A large portion of each issus will be devoted to abstracting of the current odonatological literature. All correspondence concerning the journal (editorial matters, abstracting service, subscriptions, etc.) should be directed to the Editors of Odonatologica (Institute of Genetics, University of Utrecht, Opaalweg 20, Utrecht, the Netherlands).

(3) International odonatological symposia will be held regularly every two years, each time in a different country. The next one is scheduled for September, 1973, and will be held in Karlsruhe, German Federal Republic. The President of the Organizing Committee is Dr. G. JURZITZA (Zehntwiesenstrasse 40, D-7505 Ettlingen, GFR).

ADDITIONS TO CALVERT BIBLIOGRAPHY

by
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Additions to the "Bibliography of Philip P. Calvert 1889-1950. Compiled by Rudolf G. Schmieder and Maurice E. Phillips", Entomological News, 1951, vol.62, pp.3-40, January.

Although the bibliography compiled by Schmieder and Phillips of the articles and notes written by Dr. Calvert would seem to be remarkably complete, it is not surprising that a few unsigned ones escaped notice, or that in such a long list the omission of one (1908 g) was not caught by a proofreader. Some items may appear to be missing or out of order but this is because a second part or another of the same title is included under the earlier date. However, the "g" under 1893 belongs under the date of 1894, and the "1" of 1908, under 1909.

According to the page number given in the index of Entomological News for volume 8, p. iv, either or both items listed below under 1897 could be credited to M. J. Elrod, but this must surely be erroneous. The first item, "Dragonflies in hot water," is mostly quotations from "Among the Rockies" by Mr. Elrod, and obviously is a report written by someone else and most likely by Calvert, as only the Odonata of all the insects collected are mentioned. These were identified by Dr. Calvert. The second entry under 1897 would also definitely seem to be written by Dr. Calvert.

Probably more published remarks and more notes from the pen of Dr. Calvert will eventually turn up than I am adding here.

p. 5
1897

____e Dragonflies in hot water. EN 8:39, Feb.
____f The gizzard of dragonflies (Odonata). EN 8:39-40, Feb.

p. 6
1898

____q [Exhibit of Odonata from Lower California; differential characters in the wing and leg structures were pointed out in the genera Dythemis, Brechmorhoga, Paltothemis, and Macrothemis.] EN 9:157, June.
____r On sending insects by mail or express. For professors of entomology, specialists, experiment station entomologists, beginners and others. EN 9:218-219, Nov.
____s A correction [on mailing Odonata]. EN 9:254, Dec.
____t [Note on New Jersey Somatochlora and Ischnura.] EN 9:262, Dec.

p. 7
1899

____p [Exhibited Odonata from Utah and some from New Jersey.] EN 10: 302-303, Dec.

p. 9
1903

____s' [Reared dragonfly from salt water identified as M. berenice.] EN 14:339, Dec.

p. 10
1904

____i' Mexican and Central American dragonflies (Odonata). EN 15:345, Dec.

p. 11
1908

____g [Comparison of Odonata found in the West Indies with those in Mexico and Central America.] EN 19:442, Nov.

p. 19
1917

____m Add: Juan J. Rodriguez. EN 28:335-337.

p. 20
1918

____l' [On some Odonata records for Pennsylvania.] EN 29:278, July.

p. 22
1920

____o Add: ;263, Nov.

Schmieder, Rudolf G.
1962 Additions to the bibliography of Philip P. Calvert, subsequent to 1950. Ent. News, vol. 73, no. 5, p. 121.

After 1956b add:
1958 Resultados zoologicos de la expedicion de la Universidad Central de Venezuela a la region del Auyantepui en la Guayana Venezolana, Abril de 1956. 4. Genus Racenaeschna new genus (Odonata: Aeshnidae). Acta Biol. Venezuelica, Vol. 2, Art. 20, p. 227-234, figs. 1-2.

It seems appropriate in connection with Dr. Calvert's bibliography to mention his work with the section, "Entomological Literature" in the early numbers of Entomological News. Although he may have had much to do with it beginning with volume 1, he apparently was not altogether responsible for it until 1897, as indicated in the index of authors for volume 8, p. iv, where page numbers are followed after his name with "and Entomological Literature." In the index for 1898, volume 9, only the page numbers for it are listed. For the years 1899-1901, volumes 10-12, there is a subheading, "Compiled by P. P. Calvert," for the section as well as a listing of the page numbers in the index of each volume.

NOTES FROM DR. DENNIS R. PAULSON
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EXCHANGE OF SPECIMENS.

I am attempting to build up a synoptic collection of Odonata, eventually worldwide, but for now emphasizing the New World. I have abundant material for exchange, as my collection totals somewhere over 30,000 specimens of over 1200 species of adults and many larvae. This material is primarily from southeastern and northwestern United States, Mexico and Costa Rica. In this issue I am listing all the United States and Canadian species I lack at present, any of which I am very interested in obtaining.

LESTIDAE: Lestes stultus. COENAGRIONIDAE: Argia alberta, Coenagrion interrogatum, Enallagma laterale, E. vernale, Ischnura gemina. AESHNIDAE: Aeshna persephone, A. septrionalis, A. verticalis. GOMPHIDAE: Gomphus (Arigomphus) cornutus, G. furcifer, G. (Gomphurus) adelphus, G. modestus, G. rogersi, G. ventricosus, (G. (Gomphus) borealis, G. (Hylogomphus) brevis, G. (Stylurus) amnicola, G. notatus, G. potulentus, Ophiogomphus anomalus, O. colubrinus, O. edmundo, O. howei, O. morrisoni, O. nevadensis. CORDULEGASTRIDAE: Cordulegaster deserticola, C. fasciata, C. obliqua. MACROMIIDAE: Macromia margarita, M. pacifica, M. wabashensis. CORDULIIDAE: Neurocordulia molesta, N. xanthosoma, Somatochlora brevicincta, S. ensigera, S. forcipata, S. hineana, S. incurvata, S. ozarkensis, S. sahlbergi, S. septentrionalis, Williamsonia fletcheri, W. lintneri. LIBELLULIDAE: Leucorrhinia patricia.

I am especially interested in obtaining a specimen of Williamsonia, the only North American genus lacking from my collection.

CORYPHAESCHNA.

With a great deal of luck and perseverance, I was able to collect specimens of a high-flying large Coryphaeschna in Costa Rica that has not been described. It has a green thorax with some brown markings and a brown abdomen. In addition I discovered that what has been called Coryphaeschna perrensi is in reality two species, a northern one (Mexico to Panama) and a southern one (Costa Rica to Argentina). The picture is very clear in Central America but much more confusing in South America, where two types of females seem to accompany one type of male. I would like to see additional specimens of these species.

SPECIES AND SEX RECOGNITION.

I am beginning a major research program on species and sex recognition in Odonata. I will be doing field experimental work in eastern Washington and eventually elsewhere and will be contrasting mechanical and behavioral isolation within the group. As male recognition of other males is important in territoriality, I will be looking at this phenomenon as well as male-female recognition. The first summer's work has shown that the mechanisms are simpler in some ways than had been thought, but there are many complicating factors and many unanswered questions. I hope ultimately to deal with the question of why odonates are colored the way they are, and some ideas have been generated by the study so far. I would like to correspond with anyone who is studying or thinking about these same phenomena.

HYBRIDIZATION.

I am working on a paper discussing hybridization and its relationship to reproductive isolation in Odonata and would like to know if anyone else has specimens of hybrids that have not been reported in the literature. Preliminary studies indicate that I have hybrids of three different pairs of species in the genus Enallagma, and large series of this genus should be scrutinized for hybrids. Only male hybrids have been found so far, and I am still searching for a mechanism to explain this. I would be especially interested in any hybrids in the family Libellulidae.

UNDESCRIBED SPECIES.

Although not very many people are actively working in dragonfly systematics and most of them correspond with one another, communication could be improved. There is little doubt in my mind that workers doing generic revisions or describing new species would benefit from a more complete knowledge of how many collections contain material of the group in question. To further this communication, I am listing herein all of the species in my collection which I believe are undescribed. This is obviously a tentative list, as the early literature is such that species in some genera will remain confusing until major revision (for example, Argia, which is not included in the list below). In addition, different taxonomists' ideas about species criteria differ, and I am a lumper, preferring to consider similar allopatric populations conspecific unless they differ in some way which I consider significant in terms of reproductive or ecological isolation.

LESTIDAE: Archilestes-1 Mexico, 1 Costa Rica; Lestes-1 Mexico.
MEGAPODAGRIONIDAE: Heteragrion-1 Ecuador, 1 Peru; Paraphlebia-2 Mexico; Philogenia-1 Ecuador.
PLATYSTICTIDAE: Palaemnema-4 Mexico, 5 Costa Rica.
PROTONEURIDAE: Psaironeura-1 Costa Rica.
COENAGRIONIDAE: Acanthagrion-1 Mexico to Costa Rica, 1 Costa Rica & Panama, 2 Ecuador; Leptobasis-1 Costa Rica; Metaleptobasis-2 Peru; Skiallagma-1 Peru; Telebasis-1 Costa Rica.
AESHNIDAE: Coryphaeschna-1 Mexico to Panama, 1 Mexico to Costa Rica; Gynacantha 1 Costa Rica; Neuraeschna-1 Costa Rica.
GOMPHIDAE: Agriogomphus-1 Costa Rica; Epigomphus-1 Mexico; Erpetogomphus-1 Mexico, 1 Mexico to Costa Rica; Gomphoides-2 Mexico, 1 Costa Rica; Gomphus (Gomphurus) 1 Washington; Peruviogomphus-1 Ecuador; Phyllocycla-1 Ecuador; Progomphus-1 Costa Rica.
LIBELLULIDAE: Brechmorhoga-1 Costa Rica; Micrathyria-1 Costa Rica; Perithemis-1 Peru; Sympetrum-1 Mexico, 1 Argentina.

NOTES FROM DR. GEORGE H. BICK

Dr. George H. Bick and Mrs. Bick attended the Third Colloquium of Dutch Dragonfly Workers held at the Genetics Institute, University of Utrecht, Utrecht, Netherlands on April 29, 1972. George gave a paper titled: "A Review of Territorial and Reproductive Behavior in Zygoptera." The talk was illustrated by 8mm movie and kodachrome slides. This talk was printed in ContactBrief, Nederlandse Libellenonderzoekers #10(Supplement):1-14, June 15, 1972. Dr. B. Kiauta presided at the meeting. Papers were given by: J. Belle, D. Smit, H.J. Dumont J. J. Beukema, D. C. Geijskes, and M. A. Lieftinck.

During July 1972 George H. Bick, Mrs. Bick, and L. E. Hornuff collected in Montana, working out from the University of Montana Biological Station at Flathead Lake. Collecting was good and 20 species new to the State list were taken. The work is now being organized for publication.

DR. THOMAS W. DONNELLY IN AUSTRALIA

If you want to collect exotic Odonata you should be a geologist. Just witness all the expeditions of "Nick" Donnelly. A tantalizing post card with a scene from Crystal Cascades, Cairns, North Queensland was received recently. He wrote, "This is one of our favorite collecting places. We have gotten around quite a bit since we have been here - a week each in Fiji, N. Queensland, S. Queensland, and two weeks in New Guinea. On Fiji we reveled in Nesobasis, a fabulous genus. Here we have taken many Australian "specialties," Hemiplebia, Austropetalia, Petalura, Lestoidea, Chorismagrion, and others. We have a new gomphid that Tony Watson says may be the best ever gomphid from Australia! Only a few new spp. from New Guinea-comparisons with tropical America are interesting. Around here are many insects with Chilean affinities. Great! We return 3 February." We will be hearing more about this trip.

DUNCAN CUYLER TAKES WESTERN TRIP

An interesting letter was received from Duncan Cuyler telling of his transcontinental trip in September and October of last year. He drove westward along the Trans-Canada Highway from S. S. Marie to Revelstoke, B. C. and south to California and Texas, collecting many interesting Odonata on the way. A number of species were collected later than previously reported.

A FANTASTICAL, HYPOTHETICAL BUT LOGICAL (?) EXPLANATION OF THE ORIGIN OF THE DRAGONFLY NAME AESHNA

by
Leonora K. Gloyd

In Freund's Latin Dictionary revised and enlarged by Lewis & Short, is the word "Aeschines" which applies to - "I. A desciple of Socrates," "II. The orator Aeschines, rival to Demosthenes," or "III. A physician of Athens."

We can easily associate a physician with the common name "snake doctor" and an orator with a blue face. Some women also talk until they are blue in the face. Most males of species of the genus Aeshna have blue faces. So to avoid any possibility of a famous doctor or orator taking offence at having an insect named for him, why not a little modification of the word and make it feminine as well? Most women in 1775 were not well versed in Latin or Greek (even fewer than today) and insofar as I know, none were entomologists or taxonomists. Or, maybe by their actions this group of dragonflies seemed wise enough to Fabricius to be students of Socrates, and by their beauty, feminine. Logic is logic. Nevertheless, if Fabricius intended the meaning to be a secret, it is one that has been well kept.

RECORDS OF Somatochlora semicircularis

We have a request from Dr. Ruth L. Willey of the Department of Biological Sciences, University of Illinois at Chicago Circle, Box 4348, Chicago Illinois 60680. She is requesting records of the above species from Colorado, Utah, Arizona, or New Mexico. She says the distribution of this species is much broader than originally listed and she is trying to determine its southernmost localities.

BIBLIOGRAPHY OF THE ODONATA FOR 1970

In SELYSIA v. 5, #2 we began to list papers in which Odonata were mentioned in the year 1970. Since then a number more have been brought to our attention. Many of the references again are from Dr. B. Elwood Montgomery. Several titles were furnished by N. N. Akramowski which we give with his translation. For papers in this list as well as those in v. 5, #2, with more than one author, we are adding here cross references. Wherever noted reference "numbers" for the bibliographic and abstract journals are given, the following abbreviations apply:

B. Abst.-Biological Abstracts
Bib. Ag.-Bibliography of Agriculture
B. Ind.-Bioresearch Index

Even though this listing for 1970 may still be incomplete, since ODONATOLOGICA, journal of the Societas Internationalis Odonatoligica to which many of us belong has begun to give bibliographic references with abstracts for 1971, we will discontinue this effort in SELYSIA to avoid duplication. Everyone is urged to join S.I.O. and see that your libraries subscribe to ODONATOLOGICA so that this venture will be a big success. The journal for the first year has been very impressive.

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To better acquaint odonatologists with work-in-progress, a list of projects currently pursued by graduate students will be given in subsequent issues if sufficient interest appears. To expedite this effort, please enter such particulars on this page. Detach at the dotted line and return to Gainesville. If the investigator has occasion to request assistance, specimens, localities, etc., this would seem to be an appropriate place.

Name:

College, University or Institute & Department:

Director of investigation (Student's Supervisor):

Proposed title of study:

Requests for data (where applicable):