

FORUM

SELYS' LEGIONS ...

INTRODUCTION

Henri J. Dumont

Laboratory of Animal Ecology, University of Ghent,
Ledeganckstraat, 35, 9000 Ghent, Belgium.
(e-mail: henri.dumont@rug.ac.be)

Received 10 March 1999; revised 01 April 1999; accepted 02 April 1999

In his paper on damselflies in amber, Bechly (1998) argued that the long-standing practice of regarding the "Légions" of Edmond de Sélys Longchamps as the basis from which to derive a number of family-group names under Sélys' authorship, is invalid. As an example, he cites the case of Légion Euphaea, and rejects the family-group name Euphaeidae in favour of Epallagidae.

This position elicited a number of reactions, and it soon appeared that two "schools of thought" face each other: one favours a strictly formal interpretation of the provisions of the Code of Zoological Nomenclature (but see the provisions of the fourth edition of 1999) in considering the légions as equivalent to generic designations, another one that argues that the légions are both suprageneric designations, and fulfill the requirements of the Code by inference. It follows that the name of Sélys should be attached to the modern family-group names derived from them.

In the next few pages, both points of view will be exposed in detail, by Günther Bechly and by John Trueman.

Here, and by way of introduction, I offer some background on Sélys' thinking.

Sélys' system of the Odonata

A convenient point to start is the *Monographie des Caloptérygines* of 1854, co-authored by Sélys and Hermann Hagen. It is one of Sélys' early major works, and one in which the use of the concept of "légions" is prominent, but it is also clear that he never substantially changed his position. Almost forty years later, he still refers to the same "légions" (e.g. Sélys, 1889).

What should we understand by this term? From the start, it is of interest to attract attention to a discrepancy in Sélys' use of the term as compared to mainstream taxonomy. In fact, he inversed the meaning of the categories "legion" and "tribus" (Table 1), a legio being situated between subordinal and superfamily rank, and a tribus between subfamily and generic rank (Poche, 1911, 1912; Handlirsch, 1925).

With this adjustment in mind, his system was fully consistent, however, even if a certain diffidence for using higher hierarchical categories was apparent. Thus, he considered the Odonata as a suborder of the Orthoptera, composed of two “tribes”, the Anisoptera and the Zygoptera. But tribe Zygoptera was believed to be represented by only a single family, the Agrionidae, with two subfamilies, the Agrioninae and Calopteryginae. Having thus used up the suffix —inae at a level that would currently be ranked at that of a superfamily or infra-order, Sélys clearly ran out of latinized endings, and resorted to clarifying his taxonomic intentions in French. As can be seen from the analytical tables in the *Monographie des Caloptérygines*, he had some problems in “cramming” his numerous below-family categories under suitable names. He used modern generic notation as well for sub-genus (corresponding to most modern genera), as for genus (corresponding to anything from genus to family), and for légion (corresponding to today’s families and even superfamilies). In fact, he used four categories between species and legion: the species-group, subgenus, genus and cohorts (another category that, in mainstream taxonomic hierarchies, is situated at the suprafamily level). To distinguish supra-generic from generic categories, he used the French plural (thus, légion *des Calopteryx*, as opposed to genre *Calopteryx*). He could of course have used an ending in —ini, but his purpose was clarity and consistency, and his French-language system provided this to perfection.

Table 1. Taxonomic hierarchy system, with approximate equivalences indicated and discrepancies in use of terms highlighted.

According to Handlirsch, 1925	According to Sélys & Hagen (1854)
Superordo	
Ordo	Ordo
Subordo	Subordo (Odonata)
Infraordo	
Superlegio	
Legio	Tribus (Anisoptera and Zygoptera)
Sublegio	
Supercohors	
Cohors	
Subcohors	
Superfamilia	
Familia	Familia (Agrionidae)
Subfamilia	Subfamilia (Agrioninae and Calopteryginae)
Supertribus	Divisio
	Subdivisio
	Sectio
Tribus	Legio
Subtribus	Cohors
Supergenus	Genus
Genus	Subgenus
Subgenus	Species-group

Hereafter, John Trueman and Gunther Bechly agree on at least this point: nomenclatorial rules simply did not exist in the days of Sélys and Hagen, and therefore it would be unfair on our account to hold any non-conformity with present-day rules against them. That this is about the only point on which both agree perhaps only reflects that the code of zoological nomenclature is a valuable yet imperfect and evolving instrument. In fact, at the time this text was about to go to press, the fourth edition of the International Code on Zoological Nomenclature (1999) was published. It now contains several clarifications regarding the validity of family-group names which are likely to settle the dispute. In particular, article 11.7.2 (p. 13) explicitly accepts vernacular names (an example of a French term for family is given) as valid family-group names, provided they have been widely accepted as the valid name for a given family and they were published before 1900. I have little doubt that this applies to the case of Sélys' legions...

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EPALLAGIDAE VERSUS EUPHAEIDAE REVISITED

Günter Bechly

Staatliches Museum für Naturkunde, Abt. Paläontologie,

Rosenstein 1, D-70191 Stuttgart, Germany.

(e-mail bechly@gmx.de)

Received 22 Februari 1999; revised 20 March 1999; accepted 21 March 1999

Key words: Odonata, taxonomy, family-group, legions, Selys, Epallagidae, Euphaeidae, Heliocharitidae, Dictერიadidae.

Abstract

The author's previous rejection of Selys' legions as available family-group taxa is restated and elaborated, strictly based on the provisions of the International Rules of Zoological Nomenclature (4th ed.).

Introduction

In my paper on amber damselflies and fossil Epallagidae (Bechly, 1998) I recently discussed the taxonomic problem of the odonate family-group taxa based on Selys' legions. Because of the relevant regulations of the Code (Art. 11.7. IRZN) I came to the conclusion that Selys' legions are not available as family-group taxa. As a consequence, I proposed that Epallagidae Needham, 1903 has priority over Euphaeidae Jacobson & Bianchi, 1905 (nec Selys, 1853), and Heliocharitidae Tillyard & Fraser, 1939 has priority over Dictერიadidae Montgomery, 1959 (nec Selys, 1853) (contra Dunkle, 1991).

To my surprise this issue seems to have stirred up a rather vivid debate among some fellow odonatologists. Some of them suggested to me an alternative interpretation of the referring article of the Code, claiming that the "overriding principle of stability should apply" in this case instead of "nitty-gritty priority seeking".

Discussion

Here, I take the opportunity to further explain my view:

- 1) In fact there is no serious taxonomic problem involved that requires any "overriding principle of stability". Most family-group names that were based on Selys' legions are perfectly valid names, though not under Selys' authorship. The only three exceptions known to me, are the "legion Podagrion", the "legion Euphaea" and the "legion Dictერიas". The "legion Podagrion" is obsolete anyway, since the generic name *Podagrion* is a junior homonym that was later replaced by Selys himself with *Megapodagrion*, so that the valid family-group name became

Megapodagrionidae. In the case of the other two legions, the names Epallagidae and Heliocharitidae indeed get priority over Euphaeidae and Dictერიადიდაე (see above). However, this involves no taxonomic instability at all, since both names have been frequently used throughout this century and thus are as well known as the other two names. The only thing that changes in all other cases of family-group names based on Selys' legions, is the authorship of the taxa, but not the taxonomic names themselves. I regard the question of correct authorship of a taxon as a minor side issue that should not stir up "strong feelings". Though Selys certainly deserves the authorship from a historical point of view, considering his monumental pioneer work in odonate systematics, this is unfortunately not of any taxonomic relevance from the viewpoint of the rules of nomenclature.

- 2) The mentioned alternative interpretation of Art.11 by some fellow odonatologists suggests that I have only cited the first half of the referring Art.11.7.1.1. while the second half would allow one to infer by the context and the presumed intention of the author, that Selys' legions have to be regarded as "nouns in the nominative plural". This is certainly incorrect. The second half of the mentioned paragraph only applies in those cases of doubt, in which the taxonomic name at least *could be* (grammatically) a noun in the nominative plural, but in which it is not fully clear if this is indeed the case and if this was really intended by the author. In case of Selys' legions this part of Art.11 cannot apply, because a combination of a genus name with the word "legion" grammatically simply cannot represent a noun in the nominative plural. It would be different if Selys would have coined higher taxa names like Dictერიასტიდეს or Euphaeoidés (with French suffix), or likewise. Some other fellow odonatologists also claimed that Art.11.7.1.2. is what really matters, since this paragraph states that the name must clearly be used to denote a suprageneric taxon.

However, the fact that Selys' legions indeed meet this criterion is actually irrelevant, since Art.11.7.1. mentions *four* criteria that are all connected by the word "*and*", which means that *all* these four criteria must be fulfilled. Selys' legions only meet criteria (2) and (4), but fail to meet criteria (1) and (3), since they are neither nouns in the nominative plural, nor do they end in a latinized suffix. Art.11.7.2. indeed allows names that were published before 1900 to be accepted as family-group taxa, even if they do not meet the third criterion (3), and thus even if they do not end in a latinized suffix. However, one has to consider the precise condition for this exception. This part of Art.11 says "If a family-group name published before 1900, *in accordance* with the above provisions of this Article, but not in latinized form, it is available with its original author and date only if it has been latinized by later authors and has been generally accepted ...". This paragraph clearly states that this exception from the rule is only possible in cases where all other criteria (except 3: latinized suffix) are met. Since Selys' legions also fail to meet the criterion (1), this exception clause is not applicable.

Therefore, according to Art. 11.7. of the Code there is unfortunately no possibility to save Selys' authorship by any overriding principle. The Code only allows the suppression of senior synonyms in very exceptional cases (certainly not just to save

someone's authorship) and only by a ruling of the Commission. Whether we like the result or not is of no importance in this affair. Those who are upset about this consequence should keep in mind, that if everybody were to be allowed to make his own rules of nomenclature or his private re-interpretations of the Code, the outcome would be a return to a taxonomic chaos that once was the reason for the creation of universally accepted rules of nomenclature. I do not agree with certain provisions of the current Code myself, but, unless they are officially changed, we have to live with them and strive to apply them correctly.

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THE FAMILY-GROUP NAMES BASED ON SELYS' LÉGIONS

John W. H. Trueman

Research School of Biological Sciences,
Australian National University, Canberra, ACT 0200, Australia.
(email: trueman@rsbs.anu.edu.au)

Received 22 Februari 1999; revised 20 March 1999; accepted 21 March 1999

Abstract

It recently was suggested that family-group names derived from the names of Selys' légions are not valid. I state why I believe this view is mistaken and I argue that, even if it were not, nomenclatural stability in Odonata can be better served by the preservation of these names than by their overturn.

Introduction

Bechly (1998:49-50), expressed a view that family-group names derived from Selys' Légions do not satisfy the requirements of the International Code of Zoological Nomenclature (ICZN, 1985). He gave two examples, Euphaeidae and Dicteriadidae (the latter commonly written Dicteriastidae the emendation to Dicteriadidae was suggested by Dunkle, 1991). Both of these family names are currently and generally attributed to Selys (1853). In Bechly's view the correct names are Epallagidae Needham 1903 and Heliocharidae Tillyard & Fraser 1939.

Argument

The modern construction "Euphaeidae" was coined by Jacobson & Bianchi (1905). If, by his use of the term "Légion Euphaea", Selys (1853) did not create a family-level name, this construction becomes a junior synonym of Epallagidae (Needham, 1903). In like manner, Dicteriastidae, coined by Montgomery (1960), becomes a junior synonym of Heliocharitidae (Tillyard & Fraser, 1939).

The correctness or otherwise of Selys' family-group names hinges on whether they satisfy the requirements of the Code of Zoological Nomenclature. Bechly (1998) states "... Selys' 'Légions' are not available as family-group taxa, since they are neither 'nouns in the nominative plural' [Art. 11(f)(i)(1) of the code], nor 'ending in a latinized suffix' [Art. 11(f)(i)(3)]."

The relevant Article is 11(f)(i)

A family-group name must, when first published,

(1) be a noun in the nominative plural based on a generic name then used as valid for

- a genus contained in that family-group taxon, ... and
- (2) be clearly used to denote a suprageneric taxon and not merely as a plural noun or adjective referring to the members of a genus, ... and
 - (3) end in a latinized suffix except as provided in subsection f(iii).

Article 11f(iii) reads:

A family-group name published before 1900 in accordance with the above provisions of this section, but not itself fully latinized, is available with its original author and date, provided it has been latinized by later authors and that it has been generally accepted as valid by authors interested in the group concerned and as dating from that first publication as a vernacular name.

It is convenient to take these requirements in reverse order.

Subclause (3): In 1853 Selys created “Légion Euphaea” and “Légion Dictérias”. These are not latinized in that they do not end in the suffix “idae”. The suffixes were added later, for Euphaeidae by Jacobson & Bianchi (1905), and for Dictériastidae by Montgomery (1960). The latter remains attributable to Montgomery notwithstanding the emendation by Dunkle (1991). Each name is widely accepted and in common use. Clearly, in regard to the attachment of a suffix these names are covered by the exception provided for in Article 11f(i)(3). Thus, the second of Bechly’s stated grounds for rejecting these names is simply and unequivocally incorrect.

Subclause (2): There is no disagreement about this requirement. From the start, each of Selys’ Légions denoted a suprageneric taxon. The Légion Euphaea comprised the genera *Euphaea*, *Anisopleura*, *Bayadera*, and *Dysphaea*. The Légion Dictérias comprised the genera *Dictérias* and *Heliocharis*.

Subclause (1): This clause has two parts, of which the second clearly is satisfied, “Légion Euphaea” and “Légion Dictérias” indeed are based on genus names which then, as now, are used as the valid name for a genus within the supergeneric taxon.

Thus, the only *possible* ground for doubting whether Selys’ names conform to the code relates to the first seven words of subclause 11f(i)(1). In a construction of the form “Légion Euphaea”, is “Euphaea” a noun in the nominative plural?

It is here that a naive misapplication of latin grammar can readily mislead, for it must be remembered that Selys wrote in French, and in each of his Synopses he purported to create not merely a set of names for the taxonomic level he termed the légion, but an entire nomenclature extending from above the family level to below subgenus. For Selys, the suborder Zygoptera was divided into two huge families, Agrionines and Calopterygines. Within each he created subfamilies (sous-famille), légions, genera (genre), sub-genera (sous-genre) and groups (groupe). Given its position in this hierarchy the modern nomenclatural equivalent of a légion is a tribe, and the corresponding modern ending would be “ini”. However, Selys’ Légions correspond for the most part to what are now regarded as families or superfamilies.

Throughout his works, the method by which Selys formed new names below subfamily level was remarkable but consistent. He simply used the same spellings everywhere, never changing the ending to denote taxonomic rank. For example, within Calopteryginae, Légion Dictérias contains genre *Dictérias* which contains sous-genre *Dictérias*, and Légion Euphaea contains genre *Euphaea* which contains sous-genre *Euphaea*.

Further, the genre are themselves supra-generic in the sense that Selys almost always included two or more existing genera, adopting the name of one (not always the first published) as the name of the genre and relegating the others to sous-genre level in his system. But he kept the original binomen. For example, the genus (genre) Euphaea contains both *Euphaea variegata* Rambur and *Epallage fatime* Charpentier; the latter is not rendered as *Euphaea fatime* (Charp.).

To a modern systematist this naming system looks somewhat unusual. Certainly, taken at face value it creates several difficulties for anyone attempting to follow the [1985] Code. For example, do *genres* represent genus-level or family-level taxa? I would argue for the latter. This particular doubt does not affect the rank of légion. As a supra-generic grouping, a légion clearly is a family-level category. For our present purpose, the only difficulty is that the Code requires genus-group names to be singular and family-group names plural.

The construction “Légion Euphaea”, considered purely as a name in the Latin language, appears at first sight to be singular. This is because, in Latin, “Euphaea” is in the nominative singular case. Of course, if it were not, its use as a genus name would immediately be called into question. In the context of Selys’ Synopses, however, it is abundantly clear that the names of the légions are plural. Technically, in terms of the Code, they are vernacular names only available to be treated as family names after having been fully latinized and used by later authors.

The reasoning is simple. As a writer of French, Selys did not handle *any* name in his system, including any genus name, as if it were in Latin. Instead he invariably and consistently treated each name, whatever its original derivation (“Euphaea” is from Latin; “Dictérias” is from Greek), as an indeclinable French noun. The underlying context is that in French, as in English, nouns do not have cases as such, and the ending does not necessarily change with the number. Selys could have chosen to treat some or all names as Latin, in which case he might have formed Latin plurals, e.g., Euphaearum from Euphaea. The fact that he did not, and was entirely consistent in this matter, is clear evidence of his intention to do otherwise. We should note that it was not open to him to use a French form plural, e.g., Euphaeennes, as the name for a légion, because that would have falsely indicated that his légions (tribes) were the equal of his subfamilies. The modern way around this difficulty, the appendation of a second standard plural ending, “ini”, was arrived at much later.

Today we must respect Selys’ decision to treat all names as French, and not require him *a posteriori* to have regarded them as Latin. We cannot now identify the case from the ending, because that does not change. We *can* readily identify it from the context. It is clear that when we regard Selys’ Légion names as French vernacular names they are plural, and therefore properly formed when published. To argue otherwise is to reject these names because the author wrote in French. It follows immediately that Selys’ names are available according to the Code.

Stability

Thus, in my view, Bechly (1998) has reasoned incorrectly and his conclusions are wrong. The correct name and attribution for family Euphaeidae is Euphaeidae Selys 1853.

The correct name for family Dicteriastidae is Dicteriastidae Selys 1853, or, if Dunkle (1991) is right (a question I have not addressed and prefer to leave open), the correct name for this family is Dicteriadidae Selys 1853.

However, let us suppose that after further argument I am proved wrong, and Bechly's view prevails. There is a wider issue of nomenclatural stability to consider. For odonatologists to reject these two of Selys' names at this date, after many years' acceptance and use, would perhaps cause only minor confusion. To accept the logical consequence that all of Selys' family-level names, including (arguably) his genre names, are similarly flawed would produce a complete disaster. This prospect recalls the time when Kirby (1890) reassigned the genus name *Agrion* from narrow-winged coenagrionines (Type *Agrion puella* = *Coenagrion puella*) to broad-winged calopterygines (Type *Agrion virgo* = *Calopteryx virgo*) on the basis of an obscure and long-forgotten work by Latreille (1810). That reassignment created a major nomenclatural confusion which lasted over forty years (Montgomery, 1954). If Bechly's conclusion were indeed correct, the sensible solution, in my view, would be to approach the International Commission on Zoological Nomenclature with a case to have Selys' names preserved.

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