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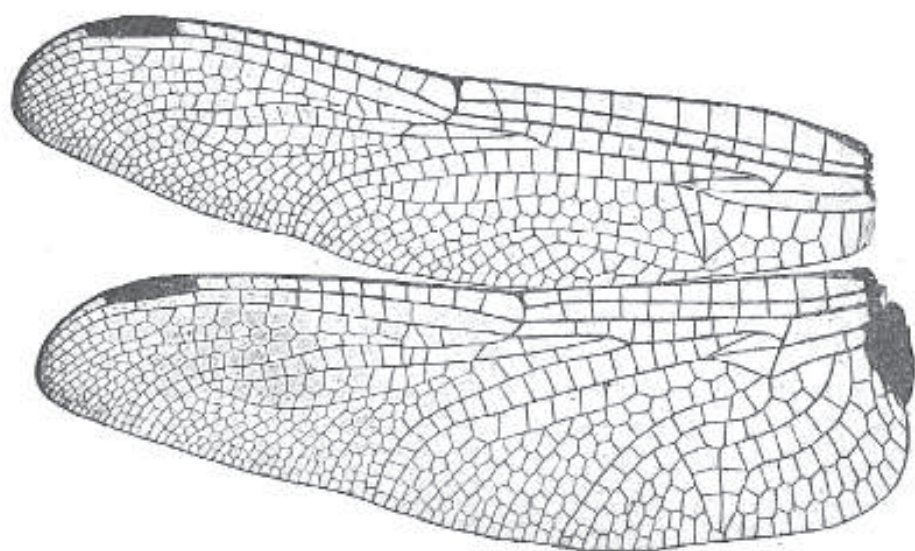
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*The Naming of
Australia's Dragonflies*



IAN ENDERSBY
HEINRICH FLIEDNER



*The Naming of
Australia's Dragonflies*



IAN ENDERSBY
HEINRICH FLIEDNER

First published by Busybird Publishing 2015

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Preface

Words and their meanings fascinate me. As I also have a long-standing interest in Odonata I thought that it would be an interesting project to investigate the scientific names of the Victorian dragonflies. This meant locating the original descriptions, most of which were published in Latin, French or German. Sometimes the etymology is specifically stated by the author; often it can be deduced from the Greek or Latin roots. If not, some speculation is required. I went to a school which expected its students to memorise many Latin and Greek roots of English words but did not teach Latin grammar. I therefore found descriptions in German and Latin to be a challenge. I had taken French as my second language, but a long time ago. Gunther Theischinger gladly provided translations from Latin and German and Benoît Guillon assisted with ancient and obscure French. There were also morphological characters which Gunther could check from specimens in his own extensive collection. For instance, does *Diplacodes bipunctata* have two spots on the same side of the thorax, or is there one spot on each side?

The most prolific of modern describers of the Australian dragonflies have been Robin Tillyard, Tony Watson and Gunther Theischinger. I had copies of all of their papers, and all but one was in English. So, while I was working my way through the names of the Victorian taxa, I thought that it would be relatively easy to prepare additional papers on their etymologies. That on the Victorian names was submitted to the Royal Society of Victoria (Endersby 2012c); Tillyard's taxa to the Linnean Society of New South Wales which had published much of his material (Endersby 2012a), and the names from the work of Watson and Theischinger to the Royal Society of New South Wales (Endersby 2012b). These three papers covered about 70% of the Australian dragonfly fauna.

The Tillyard paper was the first to be published. Soon after I received a courteous note from Heinrich Fliedner, a German philologist with a particular interest in the Odonata, and whose work I had quoted. He pointed out that I had used a

Modern Greek dictionary where I should have used Ancient Greek, and other etymological errors. He kindly offered to review any future work and thereafter provided much more than many philological corrections, including insights into the history of odonatology and possible explanations for taxa with obscure names. One of the anonymous reviewers, revealed by his shibboleth to be Bert Orr, suggested that the grammar of each genus and species name would be a valuable addition.

With such a large proportion of the Australian fauna now analysed it seemed a pity not to complete the set and publish it all in one place. However, because so much was already in print, no editor of a respectable journal would consider such a publication and the remaining taxa did not constitute a cohesive grouping that could be published separately. Hence this publication. Those societies which had assumed copyright for the articles mentioned above have granted permission to use the material again. Seeing that it was to be the complete set, synonyms, homonyms, subgenera and subspecies have been included.

Heinrich has invested so much intellectual effort into this project that it is only right and proper that he should be recognised as co-author. It has been an education and a pleasure to work with him and Gunther.

Many iterations later we have this book.

Ian Endersby

Endersby, I.D. (2012a) Etymology of the dragonflies (Insecta: Odonata) named by R.J. Tillyard, F.R.S. *Proceedings of the Linnean Society of New South Wales* 134: 1-16.

Endersby, I. (2012b) Watson and Theischinger: the etymology of the dragonfly (Insecta: Odonata) names which they published. *Journal and Proceedings of the Royal Society of New South Wales* 145 (443 & 444): 34-53.

Endersby, I.D. (2012c) The naming of Victoria's dragonflies (Insecta: Odonata). *Proceedings of the Royal Society of Victoria* 123: 155-178.

Acknowledgements

This study would have been very difficult without access to the scholarship embedded in Houston & Watson (1988) and Bridges (1994).

Scanned copies of early journals are becoming easier to locate on the internet but, in the early stages, Mike May (Rutgers University) and Roy Beckemeyer (Kansas) gave valuable assistance tracking down papers of Charpentier, Burmeister and Rambur.

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The scan of *Orthetrum sabina* in the frontispiece was provided by Hayley Webster Manager, Library Museum Victoria.

Richard Rowe and Rhondda Jones (James Cook University) and John Trueman (Australian National University) produced a website “The Dragonfiles System” <http://medusa.jcu.edu.au/Dragonflies/home.php>. It initially listed all the species recognized by Van Tol in the *Naturalis* database, and almost 6,000 publications covering Odonatan research. Its bibliography is accurate and access is easy. <http://medusa.jcu.edu.au/Dragonflies/openset/references.php>

Gunther Theischinger assisted with translations from German and Benoît Guillon provided valuable insights into Selys’ old-fashioned French and other obscure French terms.

Frank Carle and Gunther Theischinger explained the sources of names they had used. Gunther also checked specimens in his extensive collection to confirm morphological characters. Matti Hämäläinen discussed a number of eponyms. Vincent Kalkman provided references and valuable information about the Dutch royal family.

Hansruedi Wildermuth (Rüti, Switzerland) provided the correct interpretation of the terminus Fr. *virgule*/ Lat. *virgula*. Martin Schorr (Zerf, Germany) provided thoughts and articles on Ferdinand Karsch, and Wolfgang Schneider helped with

details of J.J. Kaup. Numerous people assisted with the biography of Friedrich Förster. Some letters of him, his widow and sons were provided by Mark O'Brien (University of Michigan; Museum of Zoology, Ann Arbor, USA). Marcel Wasscher (Utrecht, The Netherlands) helped with copies of the first two letters from Förster to Selys and other information. The archive of the Heidelberg University and the town archives of Mannheim, Schopfheim, Bretten, Oberkirch and Offenburg (all Baden, Germany) made available biographical details of Förster. Harald Pieper (Kiel, Germany) listed those animals described by Förster excluding Odonata. Bo Ekstrand (Gällstad, Sweden) helped with the clarification of the Swedish biography of B.Y. Sjöstedt. Mirosław Syniawa advised where he had located a portrait of Toussaint de Charpentier for his book *Biograficzny słownik przyrodników śląskich*, 2 vols, Kattowitz 2006 (ISBN 83-906910-7-8) and provided a copy.

Dr. Karla Schneider Zentralmagazin Naturwissenschaftlicher Sammlungen der Martin-Luther-Universität Zoologische Sammlung provided permission to use the portrait of Burmeister and information on its provenance. André Günther, Albert-Ludwigs-Universität Freiburg, obtained a scan of the portrait of Charpentier.

Three published papers preceded this full account and the editors and referees of those journals are thanked for their useful comments which improved the manuscript, particularly the suggestion to extend the scope of the article to give the grammatical status of each taxon.

Marilyn Hewish took delight in reading the whole manuscript, pointing out where the meaning was obscure, simplifying circumlocutious passages and checking English grammar and punctuation with assiduous care.

Many friends and colleagues have given encouragement during this long gestation. All contributors are sincerely thanked but absolved from any errors which are the responsibility of the authors.

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Kennedy: *Annals of the Entomological Society of America* DOI: <http://dx.doi.org/10.1093/aesa/40.2.168> 168-171 First published online: 1 June 1947;

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Krüger: Senckenberg: Deutsches Entomologisches Institut (SDEI) Eberswalder Straße 90, D 15374 Münchberg (Germany);

Laidlaw: *Journal of Conchology* 25 –pl. 19 (1964): Conchological Society of Great Britain and Ireland;

Lieftinck: *Odonatologica* 13: 5-20(1984);

Linnaeus: https://en.wikipedia.org/wiki/Carl_Linnaeus#/media/File:Carl_von_Linn%C3%A9.jpg. Oil painting in the portrait collection at Gripsholm Castle, Mariefred, Sweden;

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Ris: http://www.med-etc.com/soz/buch-hoelle/03_psychiatrie-holocaust.htm Bildernachweis <http://www.stadtarchiv-schaffhausen.ch/Biographien/Personen-r.htm>;

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Introduction

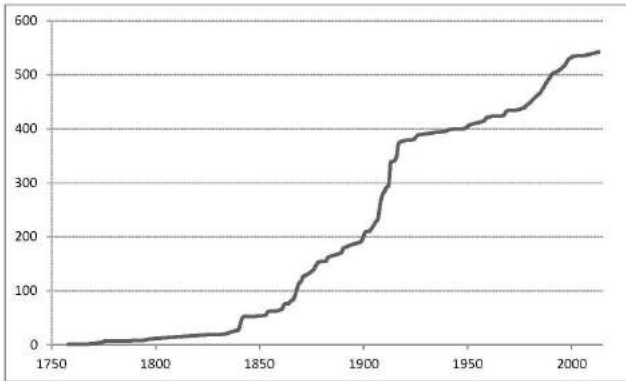
In 1758 Linnaeus established the genus name *Libellula* for all species of the Odonata. His student, Johann Fabricius created two new genera in 1775: *Aeshna* for the long-bodied dragonflies and *Agrion* for the small slim-bodied species then known (Zygoptera). William Leach wrote an essay on Entomology for Brewster's 1815 edition of the *Edinburgh Encyclopaedia*, in which he increased the number of genera to nine with the addition of *Cordulia*, *Cordulegaster*, *Gomphus*, *Anax*, *Lestes* and *Calepteryx* (sic). Of Leach's new genera, *Cordulia*, *Gomphus*, *Anax*, and *Lestes* occur in compound names of genera known from Australia, as do the names from Linnaeus and Fabricius.

Dru Drury named *Libellula sabina* in 1770, probably after St Sabina, a Roman noblewoman converted to Christianity by her slave, Serapia, with whom she was beheaded during the persecutions of Emperor Hadrian. The specimen came from China but it is a widespread species and is also found in Australia. It was the first of Australia's dragonflies to be formally named; it is now known as *Orthetrum sabina*. Since then 121 genera, 7 subgenera, 336 species and 18 subspecies have been recognised from Australia and named. In addition there are an additional 21 generic and 41 species names that are now considered to be synonyms or homonyms. The etymologies of the names of each of these 544 taxa are the main theme of this book.

Linnaeus can be claimed as an author of an Australian genus only by default as his genus name *Libellula* occurs in the compound name of *Notolibellula*. Nevertheless, his work marks the start of binomial nomenclature. Forty authors were involved in the naming of Australia's dragonflies and short biographies of each can be found in a later chapter. Appendix 1 tabulates the contribution that each one has made to the various taxonomic levels and Appendix 2 does the same thing for joint authorship. In terms of numbers, the largest contributions have come from Robin Tillyard (135), Baron Edmund de Selys (69), Gunther Theischinger

(43 + 27 as joint author), Tony Watson (42 + 23 as joint author), Friedrich Brauer (29), René Martin (24), Jules Rambur (23) and Frederick Fraser (20). Between them they are responsible for about three-quarters of the total; a fine example of Pareto's Principle.

The cumulative growth of named species can be seen from the following timeline. It suggests that there were three principal eras in the naming of Australia's dragonflies: 1758-1845, 1845-1906 and 1907-2013.



1758 – 1845 Era of Establishment of Odonata Nomenclature

From 1758, when Linnaeus placed all of the known Odonata in the genus *Libellula*, until 1845, eleven authors named 52 taxa (17 genera and 35 species) relevant to the Australian fauna, just under 10% of the total. Rambur was the most prolific with 23 and Fabricius (8), Burmeister (7) and Leach (5) also made major contributions.

Captain James Cook discovered the eastern coast of Australia in 1770. No specimen collections are known from earlier explorers so this could be construed as the starting date for Australian entomology. The First Fleet with its military contingent and convicts from England arrived in 1788; some of the arrivals had an interest in natural history.

This first era in the naming of Australia's dragonflies was too early for any major collections to be made but the benefit to the Australian fauna was from the establishment of a stable nomenclature developed in Europe. Of the 17 genera and 35 species named during this era, the type specimens of only one genus and 17 species were collected from Australia.

Herbert Campion¹ studied the fourteen dragonfly specimens in the British Museum (Natural History) which had been described or determined by Fabricius.

All but two of them came from the Sir Joseph Banks' collection, presented to the Museum by the Linnean Society in 1863. These included two collected in Australia, presumably when Banks accompanied Cook as naturalist on HM Bark *Endeavour*: *Libellula* [*Neurothemis*] *stigmatizans* (♀) and *Libellula oculata* (♂). De Selys recognised that these were male and female of the same species and page precedence determines that the correct name is *stigmatizans*.

William Leach named the genus and species of *Petalura gigantea* from a specimen in the British Museum. The collector is unknown although the type locality is given as New Holland. It is too early to have been collected by Alexander Macleay who later held a large entomological collection in Sydney. Alexander Macleay's son, William Sharp Macleay, named three species from specimens collected by his friend Captain Philip Parker King during King's exploration voyages around the coast of Australia, but none of those names has survived.

Late in this era Hermann Burmeister in Germany and Jules Rambur from France had access to dragonflies collected in Australia. Burmeister studied specimens of five species from the collection of Ernst Friedrich Germar in Halle and one from Michael Christian Sommer, Burmeister's father-in-law, in Altona. Germar himself described Coleoptera and Hemiptera from Australia but his collectors remain unknown. The seven species with specimens from Australia which Rambur named were all described in his sole dragonfly publication, *Histoire naturelle des Névroptères* (part of the *Suites à Buffon*) 1842. Two of them, *Austrogomphus guerini* and *Procordulia jacksoniensis*, were probably collected by J.S.C. Dumont d'Urville during the voyage of the *Coquille*. Another came from the collection of Jean Guillaume Audinet-Serville but no details of the source of this specimen, or the other four, can be found.

1845 – 1906 Era of European Referrals

The grand era of the taxonomy of the Odonata can perhaps be considered to have commenced in 1840 with the publication of Hermann Hagen's dissertation for his medical degree, *Synonymia libellularum europaearum*. A year earlier Baron Edmund de Selys Longchamps had published *Descriptions de deux nouvelles espèces d'Aeschna du sous-genre Anax*².

Hagen and Selys first corresponded in 1841 during their work on European dragonflies and they subsequently met in 1843 becoming friends. Their collaboration had the benefit of a large collection of specimens obtained from through-

out the world by Selys through personal collecting, commercial purchases and gifts from friends and co-workers. This timing also marked an acceleration in the rate of naming of Australia's dragonflies. Specimens were now becoming available from the collections of visiting explorers and local naturalists and they were being submitted to the major European and English entomologists for examination and classification. Coincidentally, there were eleven authors in this era and the previous one. The 174 taxa named during this period represent almost one-third of the Australian fauna. The first papers relevant to the Australian fauna from this era were Hagen's *Uebersicht der neueren Literatur betreffend die Neuropteren* Linn. [Overview of recent literature concerning the Neuroptera Linn.] in 1849 and Selys' *Synopsis des Caloptérygines* in 1853. In these papers Hagen named the genus *Trapezostigma* and Selys named the genus *Neurobasis* and the species *Amphipteryx* [*Diphlebia*] *lestoides*. Neither of the two genera was based on Australian specimens; *Diphlebia lestoides* is an Australian endemic but, ironically, Selys doubted the locality for the specimen held in the British Museum.

The major contributors to this era were Selys (69), Friedrich Brauer (29), René Martin (24), William Forsell Kirby (16), Hermann Hagen (15) and Friedrich Förster (12). These authors usually quoted the collection where the specimen was held but a search through the original descriptions for the abbreviation *leg.* (*legit* = he gathered) is unlikely to be successful as it was not the custom in those days to acknowledge the collector. One exception was Martin whose major collector was Francombe Billinghamurst, a bank manager who lived in various towns in central Victoria. It is quite likely that the collecting firm, O. Staudinger & A. Bang-Haas, Dresden, was another source.

1907 – 2013 Era of Australian Odonatology

The third era commenced in 1906 with the arrival of Robin Tillyard from New Zealand. He and other resident entomologists had the knowledge and collections to name specimens without recourse to their European counterparts. In addition there were overseas collecting expeditions mounted with Australia as a destination. Eighteen authors in this third era produced 312 names, nearly 60% of the Australian total. The Australian resident contingent was quite small, with only three prolific authors and their four co-authors, but they described more than three quarters of the taxa named in this era. Another inflexion in the graph, at about 1977, shows where Gunther Theischinger joined Tony Watson,

who had started a little earlier. Together with their collaborators, they ushered in the current phase of Australian dragonfly taxonomy. This is also the era when multiple authors, particularly Watson and Theischinger, were jointly responsible for the names of new taxa. Tillyard, with 135 taxa to his name, by far outnumbered any other namer of Australian dragonflies. However considerable contributions were made as sole or senior author by Günther Theischinger (60), Tony Watson (53), Frederick Fraser (20), Maurits Lieftinck (13), Yngve Sjöstedt (11), and Clarence Kennedy (8). The work of Martin and Förster straddles the artificial boundary between eras 2 and 3 so their total output has been attributed to era 2.

Where do the Names come from?

The scientific names of Australia's dragonflies are mostly derived from Latin roots, or Greek roots which have been borrowed by Latin or transliterated into a Latin format. These roots are used singly, in combination, or modified by Latin or Greek prefixes and suffixes. Prefixes and suffixes indicate, among other things: without ($\alpha\upsilon\text{-}$); provided with (-atus -ata -atum); place of origin (-ensis); belonging to ($\text{-ακός -ή -όν ; -acus -a -um}$); resemblance (-ειδής; -ώδης); belonging to or coming from ($\text{-(a)nus or -(i)nus -a -um}$); abundant (-osus -a -um); becoming (-escens); diminutive (-ulus -a -um); and superlative ($\text{-issimus -a -um; -errimus -a -um}$). However, the comparative and superlative form of irregular adjectives are not always derived from the adjective itself, as in the Latin for small = *parvus*, *minor*, *minimus* (cf. English: good, better, best).

The general expectation is that the roots have been chosen to portray some physical aspect of the genus or species, but a closer examination reveals that there are many other attributes which are used for naming. Later in this chapter analyses of the names derived from those of people and places are given. There are some names where the meaning is ambiguous or unknown. Was *Anax georgius* named for a person or a place? Was *Acanthaeschna victoria* named for the state, where it doesn't occur, or for the British monarch of the time? *Tholymis tillarga* is a double mystery. The genus *Tholymis* seems to be an amalgam of parts of other genus names. The species name was capitalised and, at the time of its naming, the practice of capitalising proper nouns used as species names was still in vogue, so Tillarga was probably the name of a place or possibly a person. No amount of searching has revealed its origin. In a number of genera with compound names, the second root is taken from the name of a similar genus, or one from which it

was excised, rather than from a characteristic of the new genus itself. The roots *-phya*, *-phlebia* and *-sticta* are examples. In an atypical case it is likely that *Agri-on*, produces the element *agri-* (from its root) and its anagram *argio-*.

The following classification scheme, although artificial, shows the breadth and scope of the sources of the names of Australian dragonflies. Appendix 3 allocates each root to one of these categories for all those taxa where it is possible. Some of the allocations become clearer when read in conjunction with the etymological explanations in a later chapter.

People

Figures from antiquity

Friends/relatives/colleagues

Professions

The genus *Anax* is derived from Gr. *ἄναξ* = *king* and *Lestes* from Gr. *ληστής* = a robber or pirate. The former probably refers to the dominant behaviour of members of the genus but there is no explanation for the latter as all Odonata are predators. There are two genera with *Anax* in their derivation and eleven genera with *Lestes*. Amongst the dragonfly species we have a queen (*regina*), a chief (*princeps*) and an imitator (*μιμητής*).

Places

Geographical provenance

North/south/east/west

Environment/habitat

Agri-on comes from Gr. *ἄγριος* = wild, probably chosen because the insects live in the fields rather than domestic areas³. *Argio-* is possibly its anagram. Between them they account for the basis of sixteen genera. Other habitats include sand (*arenarius*), ferns (*filicicola*), woods (*silvarum*), deserts (*aridus*, *Xerogomphus*), waterlilies (*nymphaeae*), marshes (*paludosus*) and mountains (*alpinus*, *Glaciaeschna*, *Montiaeschna*, *Oristicta*).

Appearance

Morphology

The name of the genus *Cordulia* is derived from a Gr. word meaning a club or cudgel and that of *Gomphus* from a Gr. word meaning a bolt or peg used in shipbuilding; both of them refer to the shape of the adult body, mainly of the males. Numerous genus names contain one of these

two roots in combination with others. There are other morphological parameters which occur frequently in genus names: *-phya* (stature, from Gr. φύη), *-phleb* or *-neur* ([wing] vein from Gr. φλέψ, stem φλεβ or νεῦρον respectively), *-sticta* (spotted, tattooed, often in relation to the pterostigma, from Gr. στικτός), *-cnemis* (κνημῖς armour for the leg) and *-ptera* (winged from Gr. *-πτερος* (in compounds)).

The roots *ούρά* or *uro-* in *Ischn-ura*, *Nanos-ura*, *Petal-ura* and *Uro-themis* all refer to the tail, meaning abdomen or anal appendages. *ἄκανθα* is a thorn or prickle describing the shape of a protuberance and *πεντα-* (five) and *τετρα-* (four) count the sides in a particular cell in the wing.

A number of the roots used in the naming of genera are also used in species names. Amongst the species names we find *-cauda* (tail) and *-styla*, both generally referring to the anal appendages. Those appendages might be short (*brevi-*), white (*albi-*) or toothed (*denti-*). As male anal appendages can be diagnostic their form or ornamentation can be seen in the names of several species: (*armiger* – bearing arms, *bidens* – two toothed, *calcaris* – of a spur (genitive), *convergens* – convergent, *cristatus* – crested, *divergens* – divergent, *refracta* – broken, *spiniger* – thorn-bearing).

Other body parts used to distinguish species are the frons (*atrifrons*, *aureofrons*, *nigrifrons*) and the thorax (*thoracalis*, *rufithorax*). *Macrops* has big eyes and *microcephalum* has a little head. Some roots refer directly or indirectly to wing veins (*costalis*, *irregularis*, *oligoneura*, *subcostalis*).

Colour

Colour is often an important characteristic for the identification of Odonata. In many cases the colour name is used in conjunction with the anatomical character to which it refers (*albicauda*, *erythroneurum*, *nigrifrons*, *rufithorax*). The most common colours are black (*μέλας*, *nigr-*), blue (*cyan-*, *caeruleus*), gold (*aureus*), red (*erythro-*, *rubr-*), and yellow (*xantho-*, *flav-*). Other colour-related elements include bright (*lucifer*), dark (*obscura*), painted (*tincta*), rusty (*aeruginosum*) and shining (*resplendens*, *splendida*).

Pattern

Shape can refer to the appearance of a marking or to the form of a structure. In the 36 taxa in this category, 13 names describe spots or tattoos (*punctata*, *maculata*, *guttata*, *-stigma*), and others refer to sprinkled appearance (*aspersa*, *conspersa*). There are rings and girdles (*annulosus*, *balteatum*, *cingillum*, *villosovittatum*) and lines (*lineata*, *virgula*). Other shapes include the Greek letters *sigma* and *tau*, arrow (*sagittata*) and goblet (*αλεισον*). *Circularis* and *elliptica* describe shapes of the male anal appendages.

Size

As well as the common elements indicating size, large (*macr-*), small (*micro-*), *brachy-* (short), and dwarf (*nanno-*, *pygmaea*), there are a number of examples where an adjective and its superlative are each used in different species names (*pusillus* – *pusillissimus*; *tenuis* – *tenuissimus*). Other terms in this category refer to stature rather than size: *tenera* (delicate), *fragile*, *solida*.

Beauty, wonder

The Gr. adjective *καλός* denotes beautiful, as does the L. equivalent *pulcher* – *chra* – *chrum*. They are used to produce appropriate scientific names directly in the superlative form, or as part of a compound. To imply beauty we have *Belladonna*, the beautiful lady, and Tillyard uses the Greek *νόμφη* (a bride) in allusion to the taxon's beauty. Morphemes with the meanings of delicate, elegant (*concinuus*), lovely or likeable (*amabilis*) and wonderful (*mirabilis*) are used to describe species of Zygoptera. For the Anisoptera, elements suggesting showy, beautiful (*speciosa*), magnificent (*magnifica*), remarkable (*insignis*), splendid (*superba*), distinctly visible (*oculata*) and dressed for a festive occasion (*fešta*) are used.

Similarities to other taxa

The prefix in the genus name *Apocordulia* comes from the Greek *ἀπό*, from or away, referring to the divergence of these dragonflies from normal corduliid appearance. There are other prefixes which also indicate relationships between genera: *advers-* = opposite, *ἀν(α)-* = similar, *choris-* = without, *ἐπι-* = in addition, *ἡμι-* = half (close relationship), *μετα-* = with or among, *neo-* = new, *παρα-* = beside, *pseudo-* = false and *συν-* = together. *Anaciaeschna* comes from *Anax* and *Aeshna* combined. Among species, affinities are shown by *affinis*, *congener*, *fraterna* and *soror*; differences by *εἰτερο-* (different from), *subjuncta* (subordinated) and *ἀλλογενής* (of a different race); and hybrid appearance by *hybridoides*, *intermedia* and *interposita*. Names ending in *-ώδης* (resemblance) also belong here: *Diplacodes*; *haematodes*.

Other

Behaviour

Behavioural traits can be determined only from living specimens but most of the early descriptions were made overseas without the benefit of field notes. The meaning of *migratum* and *solitaria* are self-evident; *eludens* has an evasive flight pattern; *cladophila* perches on twigs; and *comitatus* was seen flying in the company of another species. *Dromaeschna* implies a behaviour or morphology associated with running. Behaviour can be ruled out as the genus was named from a preserved specimen and there is nothing distinctive about its legs, so its derivation remains enigmatic.

Evolution

Archaeo- (from the beginning) and *palaeo-* both mean ancient; *proto-* means first; and *πρό-* means before, in this sense a predecessor. These prefixes indicate an early evolutionary stage. *εὖ* meaning well, suggests a genus well or more recently evolved, while *pleio-* (more) was especially chosen to describe the apparent affinities of a group of gomphids to more than one subfamily. The species name *conjuncta* specifies a missing link. Tillyard's term *asthenogenesis*, used in the description of *Antipodophlebia asthenes*, is not in current use, nor is it readily understood. He defines it as the development of a successful line of descent by the adoption of weakness in structure. Another early author interpreted it as meaning a reference to convergence through the loss of characters or neoteny.

Frequency

This is a tiny category from Gr. κοινός = common and L. *trivialis*, also meaning common.

Incertae sedis

From the Latin for “of uncertain placement” this term is used to label a group when its taxonomic position is unclear. We use it loosely for those taxa for which we are unable to deduce a meaning. For instance, there is a plausible etymological explanation for Linnaeus' original genus *Libellula* but he gave no indication of his reasoning. Similarly Fabricius gave no derivation for *Aeshna* and there is no agreement on its etymology. Twelve taxa are related because of their Gondwanan affinities and all incorporate the *-aeschna* root. For the relationship between *-aeschna* and *Aeshna* refer to the chapter entitled Etymology. *Nososticta* is curious as its first element seems to come from Gr. νόστος (disease). The species *victoria* could be named for a place or a person.

Neuroptera sensu Linné

Few if any of the authors restricted their interests to the Odonata. The term 'Neuroptera' has not always had its current meaning. As can be seen in the phrases taken from biographers of the time, some studied Neuroptera (in the Linnaean sense), Neuroptera *sensu* Linné, Neuroptera (in the broad sense), Neuroptera (in the old sense) or Neuroptera (especially Odonata). What did this broad group comprise?

In the 10th edition of his *System Naturae*, Linnaeus (1707-1778) classified the following genera of net-winged insects in his Order Neuroptera: *Libellula*, *Ephemera*, *Phryganea*, *Hemerobius*, *Panorpa* and *Raphidia* ⁴. Their modern-day equivalents approximate to, respectively, the Orders Odonata (dragonflies), Ephemeroptera (mayflies), Trichoptera (caddisflies), Neuroptera (lacewings), Mecoptera (scorpionflies) and Raphidioptera (snakeflies). However his *Phryganea* contained species of Plecoptera (stoneflies) and Megaloptera (alderflies), his *Hemerobius* contained Megaloptera and a species of Isoptera (termites), and his *Panorpa* contained a species of Neuroptera.

Pierre André Latreille (1762-1833), perhaps the earliest systematist to recognise the heterogeneity of the Linnaean order Neuroptera, split the group into what he termed three families: the Subulicornes (modern Odonata and Ephemeroptera), Planipennes (modern Plecoptera, Isoptera, Mecoptera, Neuroptera, Megaloptera and Raphidioptera) and Plicipennes (modern Trichoptera) ^{5 6}. Later he denoted the Subulicornes as Section 1 and combined the other two into Section 2, the Filicornes, adding the Embioptera, closely related to the termites ^{7 8}.

Wilhelm Ferdinand Erichson (1809-1848) also divided the Neuroptera of Linnaeus into two suborders but in an entirely different manner ⁹. He classified those Neuroptera exhibiting incomplete metamorphosis (Ephemeroptera, Odonata, Plecoptera, Isoptera and Psocidae) as a suborder, placing them in the Order Orthoptera based on their mouthparts. He retained Trichoptera, Neuroptera (*s.s.*), Mecoptera and Megaloptera within the Order Neuroptera. Erichson is attributed with naming the new suborder Pseudoneuroptera but this cannot be found in any of his writings. The earliest reference that we can find to this name is in an annual report compiled by Carl Eduard Adolf Gerstaecker on the progress of entomology during 1854 ¹⁰.

Friedrich Moritz Brauer (1832-1904) recognised that Pseudoneuroptera seemed to contain very heterogeneous forms ¹¹. His subsequent classification split

the Linnaean Class Insecta into 17 orders and the Neuroptera into no less than 7: Ephemerae, Odonata, Plecoptera, Corrodentia (Termitidae, Psocidae and Mallophaga), Neuroptera, Panorptatae (= Mecoptera) and Trichoptera ¹².

Eponyms and Toponyms

Almost thirty percent of the 544 names applied to taxa known from Australia are either eponyms (named for a person) or toponyms (named for a place). An additional four superficially appear to qualify as toponyms: *asiatica* [*Lathrecista*]; *continentalis* [*Hemicordulia*]; *territoria* [*Austrocordulia*]; and *australiae* [*Hemicordulia*]. However, the first three are adjectives related to or derived from the place name so are not toponyms in a strict sense. The Greek root τόπος means region or place, so the continents or territories referred to in all four names are too broad a region to be considered a toponym.

For three of the species names, *braganza* [*Rhyothemis*], *georgius* [*Anax*] and *victoria* [*Acanthaeschna*], there is insufficient information in the original description or other relevant documents to determine whether they were named for a person or a place.

Eponyms

By far the most common sources of the 112 eponyms are the names of other odonatologists. The sources can be assigned to the following categories:

Odonatologists	27%
Collectors	19%
Figures from antiquity	14%
Other entomologists	13%
Relatives	12%
Friends and colleagues	6%
Other naturalists	6%
Unclassified	3%

In discussing each of the categories a table has been provided which shows the eponyms used for Australian dragonflies and the authors who coined them. The authors are given in the column headings and the eponyms each have a row. Double or triple asterisks indicate that one author erected more than one eponym for a given recipient.

Odonatologists

	Campion	Förster	Fraser	Krüger	Lieftinck	Martin	Morton	Ris	Theischinger	Theischinger & Watson	Tillyard	Watson
<i>dobsoni</i>												*
<i>donnellyi</i>												*
<i>fraseri</i>												*
<i>garrisoni</i>										*		
<i>jurzitzai</i>									*			
<i>kirbyi</i>				*								
<i>lieftincki</i>			*									
<i>martini</i>											*	
<i>ofarrelli</i>										*		
<i>paulsoni</i>									*			
<i>Petersaeschna</i>									*			
<i>pinheyi</i>									*			
<i>reevesi</i>									*			
<i>risi & Risiolestes</i>			*			*	*				*	
<i>selysi</i>		*									*	
<i>theischingeri</i>												*
<i>tillyardi</i>	*		**		*	*		*	*			
<i>watsoni & tonyana</i>					*				**			

Tillyard, Watson and Theischinger worked predominantly on the Australian fauna and so are well represented on this list. In order, Theischinger (8), Fraser (4), Watson (4) and Tillyard (3) produced the highest numbers of eponyms.

There are few examples of reciprocity in establishing eponyms amongst the odonatologists. Tillyard and Martin named a species for each other as did Tillyard and Ris, and Theischinger and Watson. It is most likely that they were acknowledging each other's work rather than expecting repayment in kind.

Collectors

	Brauer	Förster	Fraser	Kirby	Liefinck	Martin	Ris	Selys	Theischinger	Theischinger & O'Farrell	Tillyard
<i>adamsi</i>			*								
<i>alleni</i>											*
<i>angelorum</i>											*
<i>berthoudi</i>											*
<i>billinghursti</i>						*					
<i>brookhousei</i>										*	
<i>dobsoni & rodericki</i>			***								
<i>duivenbodei</i>	*										
<i>elgneri</i>							*				
<i>fieldi</i>											*
<i>godeffroyi</i>								*			
<i>humphriesi</i>					*						
<i>netta</i>									*		
<i>rosenbergi</i>	*										
<i>tindalei</i>											*
<i>turneri</i>				*		*					
<i>vallisi</i>			*								
<i>weiskei</i>		*									

As is the custom, a number of collectors were honoured by having species named after them. Some odonatologists (e.g. Rosser Garrison) and entomologists (e.g. Max and Barbara Moulds, David Rentz) also collected the specimens which were named after them, so the allocation of eponyms to categories has been somewhat arbitrary. Most of the original descriptions for these species cite the collector as the source of the name. Of the others, Billinghurst, Duivenbode and Rosenberg were resident collectors; Elgner and Weiske led expeditions; Godeffroy, a rich merchant and owner of a shipping company, commissioned collectors so is perhaps not properly categorised here. Fraser and Tillyard, no doubt through their reputations, attracted a network of collectors.

Figures from Antiquity

	Brauer	Drury	Hagen	Kaup	Kirby	Selys	Sulzer	Tillyard	Watson
<i>aurora</i>	*								
<i>cora</i>				*					
<i>cyane</i>						*			
<i>eurybia</i>						*			
<i>io</i>						*			
<i>alcestis</i>								*	
<i>chloe</i>					*				
<i>cyclops</i>								*	
<i>hyacinthus</i>								*	
<i>leda</i>						*			
<i>phyllis</i>							*		
<i>psyche</i>			*						
<i>othello</i>								*	
<i>sabina</i>		*							
<i>paulini</i>									*
<i>serapia</i>									*

It might be thought that creating eponyms from antiquity was a phenomenon from the 18th and 19th centuries. However Tillyard and Watson were active in the latest era of Australian odonatology and both utilized such sources. In the table above the first five names are those of the immortals. Then there are seven names of mortals from mythology, although some are quite likely to have been visited by a god. Othello comes from literature. The three remaining names have ecclesiastical origins; two of them are saints. With *paulini*, Watson makes a nice juxtaposition of the Paulinus, the first Archbishop of York, A.D. 625, with the type locality of the species, Cape York (itself not named for the Bishop).

Other entomologists

	Brauer	Förster	Lieftinck	Martin	Selys	Theischinger	Tillyard
<i>loewii</i>	*						
<i>mocsaryi</i>		*					
<i>severini</i>		*					
<i>handschini</i>			*				
<i>racleayi</i> [<i>macleayi</i>]				*			
<i>weyersii</i>					*		
<i>mouldsi</i>						*	
<i>mouldsorum</i>						*	
<i>rentziana</i>						*	
<i>dalei</i>							*
<i>doddi</i>							*
<i>hardyi</i>							*
<i>lyelli</i>							*
<i>tryoni</i>							*

Through their reputations in the study of Odonata, authors in this group would receive specimens believed to be new to science. Handschin was director of the Basel Museum with a personal interest in Archaeognatha and Thysanura. Mocsary was a curator at the Hungarian Museum and Severin a curator at Brussels Museum specialising in Hymenoptera and Coleoptera respectively. Mocsary was also the editor of the scientific journal in which his eponym was published. Hardy served as curator at the Tasmanian Museum in Hobart. Other professional entomologists were Tryon (Queensland Government), Moulds (Australian Museum) and Rentz (Australian National Insect Collection). The primary interest of David Rentz was Orthoptera while those of Max Moulds were Cicadidae and Spingidae, although he also named one Australian species of Odonata and was junior author in the naming of another two. Of the amateur entomologists, Dale and Macleay had large, general, personal collections; Dodd specialised in butterflies and beetles; Lyell collected Lepidoptera; and Loew was a teacher with an international reputation in the Diptera. As librarian and secretary of the Entomological Society of Belgium, Weyers had access to all incoming specimens and an obligation to forward them to the appropriate specialist; his own interest was the Buprestidae.

Relatives

	Watson	Tillyard	Theischinger & O'Farrell	Theischinger	Moulds	Förster
<i>annaliese</i>				*		
<i>barbarae</i>	*				*	
<i>christine</i>			*	*		
<i>deniseae</i>				*		
<i>elke</i>			*			
<i>ingrid</i>				**		
<i>isabellae</i>			*			
<i>patricia</i>		*				
<i>reinholdi</i>						*
<i>ursula</i>				*		

Five wives were honoured (one twice) and Elke was the wife of a collector, so might have been better classified as a friend. The names of one son and one daughter were made into eponyms and, in the third generation, three granddaughters, one of whom had a second species named for her when the first was recognised as a junior synonym.

Friends and colleagues

	Watson	Tillyard	Theischinger	Macleay
<i>kingii</i>				*
<i>bucki</i>			*	
<i>leonardi & muelleri</i>			**	
<i>olivei</i>		*		
<i>gordoni</i>	*			
<i>hodgkini</i>	*			

Other naturalists

	Rambur	Selys	Sjöstedt	Tillyard
<i>guerini</i>	*			
<i>gouldii</i>		*		
<i>leachii</i>		*		
<i>mjobergi</i>			**	
<i>maccullochi</i>				**

In a curious geographical partitioning, each author recognised naturalists from only one country. Rambur recognised the French entomologist Guerin; Selys honoured the English ornithologist Gould and English zoologist Leach; Sjöstedt named the specimens collected by the Swedish zoologist and ethnographer, Mjöberg; and Tillyard commemorated the Australian ichthyologist MacCulloch.

Unclassified

beatricis *injibandi* *jedda* *victoria*

The species *beatricis* and one example of the species *victoria* were named for royalty; *injibandi* for an Australian aboriginal tribe. Jedda was a character in an Australian film.

Toponyms

Forty two Australian odonate taxa are toponyms, most of them named for their place of first capture. Seven localities are extralimital but the taxon has subsequently been recorded from Australia.

Ceylonolestes *caledonicum* *papuense* *vitiensis*
Huonia *kalliste* *papuensis*

The name *kalliste* is unusual in that it commemorates the home of Dr. M.A. Lieftinck in the Netherlands.

Other than [*Hemicordulia*] *novaehollandiae*, named by Selys, all place names can be attributed to a state of Australia. Both [*Rhadinosticta*] *banksi* and [*Ischnura*] *torresiana* were collected on Banks Island, Torres Strait which is politically part of Queensland.

Geographic location of species with Australian toponyms

	NSW	NT	QLD	TAS	WA
Rambur	1				
Tillyard	2		3	3	
Brown & Theischinger		1			
Theischinger & Watson		1	4		
Watson		3	2		6
Watson & Arthington			1		
Watson & Theischinger		5			2

Apart from Rambur, who referred to Port Jackson in [*Procordulia*] *jacksoniensis*, the authors who evoked toponyms are relatively recent, with the bulk of the names emanating from Watson, Theischinger and their associates.

Methodology

Scientific names for the taxonomic levels of genus, subgenus, species and subspecies from Australia were obtained from the Odonata section of the *Zoological Catalogue of Australia*¹³ and from subsequent literature. The presence of members of the families Chlorocyphidae and Calopterygidae in Australia has been disputed but their names are retained for completeness. The Catalogue had omitted *Agriocnemis exsudans* which occurs in the Australian territory of Norfolk Island but we have included it. The names of all junior synonyms and homonyms are also considered. Nomenclature is consistent with a checklist published in 2009¹⁴.

In more recent times original descriptions have usually included an explanation of the etymology, sometimes even specifying the grammar of the new taxon. This was not the case in the nineteenth and early twentieth centuries when the bulk of Australian species were described.

All original descriptions of the 544 taxa have been sighted (121 genera, 7 subgenera, 336 species, 18 subspecies, 62 synonyms or homonyms). The following hierarchy has been used to analyse each entry:

- When the etymology is included in the original description it has been directly quoted;
- If the etymology is not quoted but the Greek or Latin roots are obvious (e.g. *flavo-macul-ata* = with yellow spots) then a search has been made of the original description for the terms which best match those roots;
- If no obvious characters are apparent, the probable derivations are given with some speculation as to how they might apply.

The names of genera are, by convention, nouns in the nominative case. The gender of each (masculine, feminine or neuter) is given in {braces} at the end of its entry. The grammatical status of each species' name is also given in braces at the end of the entry, viz. a noun in apposition; a noun in the genitive case (usually an eponym); or a declinable adjective or participle. The provision of declensions is significant, especially should the species name be transferred to a genus of different gender from the original under ICZN regulations¹⁵. If a specific name is an adjective from Greek or another non-Latin language, or a Latin adjective which has the same ending for all three genders in the nominative singular, there will be no change if the species is transferred to a genus of a different gender. Such cases have been marked as {adjective} to distinguish them from those where a change in genus gender does affect the name of the species {declinable adjective}.

Brief biographies of the authors were assembled from published obituaries, a Festschrift normally celebrating a major birthday, or, in a few cases, from a living author's curriculum vitae. That chapter, as well as this one, is referenced using endnotes thus reserving the references section for citations relevant to the etymology of names.

The dictionary of scientific roots prepared by Tim Williams¹⁶ was an excellent source for determining the probable construction of genus and species names that had not been defined by the author. Greek words were taken from Liddell and Scott¹⁷ and those in Latin from Lewis and Short¹⁸.

Direct quotations from references are given in inverted commas and square brackets have been used for translations, clarifications and comments. Page numbers given in normal type in the citations refer to the location of the actual

quotation, not the original description. In some cases the clue to the etymology can be on pages quite remote from the original description. Page numbers in italics indicate the original description and these are used where no etymological information could be found.

Etymology and Grammar

After Linnaeus established the binomial system of biological nomenclature it became the practice to choose genus group names from Greek roots and species group names from Latin, although other languages are now allowed. In forming compounds the roots should be from the same source language although certain prefixes and suffixes (e.g. *anti-*, *post-*, *sub-*, *-oid-*) are commonly used with either Latin or Greek roots. There are general rules used for the formation of zoological names in the *International Code of Zoological Nomenclature* (ICZN)¹⁹, but there will always be exceptions. The following discussion applies only to the Australian taxa, for which etymological explanations have been given in a later chapter.

In the classical languages of Greek and Latin the word “root” has a specific and circumscribed meaning. However, this book refers to the Greek and Latin roots of scientific names consistent with the English usage of the term as the base form of a word which cannot be further analysed without total loss of identity. It is that part of the word left when all of the affixes are removed. In the context of the classical languages the English uses of the word “root” would be considered to be a morpheme or the less formal “element”. As an example we use *Agrio-* (from *Agrion*, derived from Gr. ἄγριος = wild) as one of the two “roots” of *Agriocnemis* whereas the Greek scholar would consider the root of *Agrion* to be ἄγ-. The root ἄγ- is at the base of the verb ἄγειν (to drive) and the noun ἀγρός (field = where the domestic animals are driven). From the root of this word ἄγρ- with the morpheme -ιος the adjective ἄγριος (belonging to the fields, wild) is formed.

Transliteration of Greek words occurs when the letters are given their exact equivalents in the Latin alphabet. This process differs from latinization in which the form is determined by the use of classical Latin. Some relevant examples are the Greek -ov which transliterates to the Latin equivalent *-on* but is latinised as *-um* and -η in the final position which latinises to *-a*. To denote aspiration as an initial sound the Greeks used a diacritic called the *spiritus asper* (´) above the initial vowel, while the Romans used the letter h. If the initial vowel was not

aspirated, the Greeks used a *spiritus lenis* (') [see footnote i in Appendix 5]. The transliterated and latinised equivalents of the Greek alphabet are shown in Appendix 5.

There is a rule for forming compound names by combining two morphemes. If the first stem does not end with a vowel or the second one does not begin with a vowel, the elements are connected by a combining vowel. Mostly the letter *i* is used with Latin roots and *o* with Greek roots. When the second of two combined roots begins with a vowel, it is usually sufficient to combine the roots. If the name of a species ends in a Latin or latinised adjective or participle it must agree in gender with the generic name with which it is combined. It must be amended if the species is moved to a genus which has a different gender.

Greek nouns taken into Latin retain their original gender, and compounds derived from two or more words take the gender of the last. For animate and supernatural beings the grammatical gender of Ancient Greek and Latin nouns is usually the same as the actual gender. Unlike in English, these languages also ascribe masculine, feminine or neuter genders to inanimate objects. While there are a few rules and patterns, the reasons for the genders of inanimate objects are not always obvious. Suffixes often have their own inherent genders. In some cases an adjectival attribute can take on the properties of a noun. This is a concept from Greek and Latin grammar, rarely encountered in English. A fixed combination of a noun and an adjective can be seen in the example [*homo*] *rusticus* = man of the country, farmer. In Greek grammar the addition of the definite article to an adjective yields a noun e.g. ὁ βάρβαρος = the barbarian (masculine) or ἡ βάρβαρος = the barbarian (feminine). In these instances the omission of the antecedent noun as being self-evident (*homo* in the example) or article (ὁ, ἡ) renders the apparent adjective to a form which has the quality of a noun. Appendix 4 shows how the grammar of each genus name was established.

Most of the genera from Australia which have masculine grammar endings are derived from *-gomphus* (γόμφοϛ = peg, bolt or pin), *-lestes* (ληστήϛ = a robber or pirate) or *-anax* (ἄναξ = sovereign, king). They are all Greek masculine nouns which have been latinised. It should be noted that not all genus names ending in *-x* or *-ax* are masculine: for instance πτέρυξ is a feminine noun meaning wing, so *Podopteryx* is feminine. Charpentier first utilised the feminine noun πλάξ (anything flat and broad) in the construction of the genus name *Diplax*²⁰ so all examples of genera terminating with *-diplax* are therefore feminine.

All Latin nouns in the first declension end in *-a* and are feminine except where an animate subject indicates a male. Recognise that *-α* and *-η*, when they are in the final position, latinise to *-a*. *Libellula*, *Libella* and *Huonia* are not names of Greek origin. The first two were originally Latin nouns of the feminine gender and the other has been given a latinised, feminine, first declension ending. *Tramea* seems to be an abbreviation of *Trapezostigma*²¹ but it is correctly feminine of the first declension as Hagen, when he named the genus, described two new species, *Tramea lacerata* and *T. onusta*, both declinable feminine adjectives. By inference, the International Code allows the gender of a genus group name to be deduced from the gender of its type species²². The origin of the genus name *Tholymis* is not stated by Hagen but its gender is defined as feminine by the species *T. citrina* which he named. Themis (Θέμις) was an ancient Greek goddess and is the personification of divine order, natural law and custom. As such her gender is feminine, as are all genus group names ending in *-themis*. The adjectival suffixes *-ώδης*, *-ειδής* (m., f.), and *-ώδες*, *-ειδές* (n.), indicating resemblance, are all latinised to *-odes* so it is not possible to determine the gender from the latinised form. For the type of *Diplacodes*, Rambur chose *Libellula tetra*, Rambur, thus fixing this new genus as feminine. Similarly, *Lestoidea* is derived from *-ειδής*, an adjectival suffix which can be either masculine or feminine, and the neuter form is *-ειδές*, so the gender of the latinised form is indeterminate. Tillyard added *-a* as an ending thus establishing the gender as feminine.

According to the ICZN adjectives or participles may be used as genus group names but, as such, gain the quality of a noun the gender of which is determined by the grammatical form chosen by the author. So genera which end in *-sticta* plus *Agrionoptera*, *Macromia*, and *Rhinocypha* are feminine, whereas their final element will be found in dictionaries under the masculine form which ends in *-ος*. In *Potamarcha* the author has created a feminine form of the noun *ἀρχός* = chief, leader by analogy with other nouns where that applies.

These are either adjectival elements, or treated as such, and have been adapted in gender to the prior genera from which they were separated. However, genus group names are nouns by definition which is shown in these examples by the addition of the feminine ending *-a*. Selys named *Isosticta* as a subgenus of the feminine genus *Alloneura* (and all other Australian genera ending in *-sticta* are derived from this); *Agrionoptera* was previously in *Libellula* and *Rhinocypha* in *Calopteryx*, both

feminine genera. The authors have formed the new names and transferred them to the feminine gender according to the demands of the prior genus.

Macromia is the feminine form of an adjective ending in *-omios*. In a similar manner the three genera which end in *-neura* come via a Gr. adjective ἄνευρος *-ov* to the adjectival L. suffix *-neurus -a -um*. The element *-petalia* is the feminine form of an adjective derived from the noun *pétalon*. The authors have formed the names and transferred them to the feminine gender.

However, not all genus group names which end in *-a* are feminine. Greek neuter nouns of the third declension in *-α*, which have dental stems in *-τ* that are omitted in the nominative singular, present another difficulty of gender recognition. The only examples from the Australian fauna are the elements ὄμμα (*eye*) and στίγμα (*mark, puncture*) forming *Zyxomma* and *Trapezostigma* respectively.

There are three other neuter final elements: *-agrion* and the genera *Brachytron* and *Orthetrum*. The ἄτρον of *Orthetrum* latinises to the second declension neuter *-um* but in *Brachytron*, and also in ἄγριον, it is only transliterated into the Latin alphabet. *Agrion* was originally an adjective but, as a genus group name it becomes a noun.

Grammatically, species group names are modifiers added to the generic name which becomes the noun-head. The modifiers which may be used are:

- nouns in the genitive case;
- nouns in the nominative singular standing in apposition;
- adjectives or participles agreeing in case, number and gender to the noun-head.

Nouns of the first declension end the genitive case with *-ae* (singular) and *-arum* (plural) and are typically feminine. Nouns of the second declension end the genitive case with *-i* (singular) and *-orum* (plural) and are typically masculine or neuter. So, species named after men finish with *-i* and species named after women finish with *-ae*. If the species is named after two people the second declension plural *-orum* is used if they are both men or if at least one is a man. Nouns in the genitive case can also be used for places and countries in Latin are feminine, e.g. Australia in Latin is a word of the first declension, therefore the ending in the genitive must be *-ae* thus indicating the gender of *Hemicordulia [australiae]*.

[*Zyxomma*] *multinervorum* and [*Neosticta*] *silvarum* are nouns in the genitive case plural and the plural is used because there are many veins in *multinervorum*

and *silvarum* is found in more than one wood or forest.

Apposition is a grammatical construction in which two elements, normally nouns or noun phrases, are placed side by side, with one element serving to identify the other in a different way. The noun which follows is said to be in apposition to the first noun. Hence, e.g., *cyclops* is used as a noun in apposition to the generic noun *Telephlebia*. Any species name which is a noun in the nominative singular, whether it stands alone or is the final element in a compound name, is considered to be in apposition to its genus name.

- 1 *Annals & Magazine of Natural History* (1917) Ser 8 Vol. 19: 441-450.
- 2 *Bulletin Academie royale Belgique* (1839) (Serie 1) 6: 386-393.
- 3 Fliedner, H. (2006) Die wissenschaftlichen Namen der Libellen in Burmeisters 'Handbuch der Entomologie'. *Virgo* 9: 5-23. [Available in English translation at <http://www.entomologie-mv.de/> accessed 11 April 2011].
- 4 Linnaeus, C. (1758) *Systema naturae per regna tria naturae, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis*. (10th edn.): 343. Laurentius Salvius: Holmiae (Stockholm).
- 5 Latreille, P.A. (1817) pp. 417-449. in Cuvier G. *Le règne animal distribué d'après son organisation, pour servir de base à l'histoire naturelle des animaux et d'introduction à l'anatomie comparée. Avec figures, dessinées d'après nature*. T3: 1-653 Paris, Deterville.
- 6 <http://www.insecta.bio.spbu.ru/z/nom/~Latreille1817.htm#Planipennes> [accessed 24 June 2014].
- 7 Latreille, P.A. (1825) pp. 432-439. *Familles naturelles du règne animal: exposées succinctement et dans un ordre analytique, avec l'indication de leurs genres*. J.B. Baillière: Paris.
- 8 <http://www.insecta.bio.spbu.ru/z/nom/~Latreille1825.htm> [accessed 23 June 2014].
- 9 Erichson, W.F. (1839) Beiträge zu einer Monographie von Mantispa, mit einleitenden Betrachtungen über die Ordnungen der Orthopteren und Neuropteren. *Zeitschrift für die Entomologie* 1: 147-173.
- 10 Gerstaecker, C.E.A. (1855) Bericht über die Leistungen der Entomologie während des Jahres 1854. *Archiv für Naturgeschichte* 21(2): 111-312.
- 11 Brauer, F. (1857: iii-iv). *Neuroptera Austriaca*. C. Gerald's Sohn: Vienna.
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- 14 Theischinger, G. and Endersby, I. (2009) *Identification Guide to the Australian Odonata*. Department of Environment, Climate Change & Water, NSW: Sydney.
- 15 ICZN 2000. International Code of Zoological Nomenclature, Fourth Edition adopted by the International Union of Biological Sciences. [Available at <http://www.nhm.ac.uk/hosted-sites/iczn/code/> [accessed 26 May 2012].
- 16 Williams, T.W. (2005) *A Dictionary of the roots and combining forms of scientific words*. Squirro Press: Norfolk.

- 17 Liddell, H.G. and Scott, R. (1996) *A Greek Lexicon*. 9th ed with a revised supplement. Clarendon Press: Oxford.
- 18 Lewis, C.T. and Short, C. (1963) *Latin Dictionary* founded on Andrews' edition of Freund's *Latin Dictionary*. Oxford University Press: New York.
- 19 See Note 15.
- 20 See *Diplacodes* in Etymology chapter.
- 21 Hagen shortened *Trapezostigma* to *Tramea*, thus making it less cumbersome, and incorporated a pun with Latin *trameare* (pass through) which suits these vagrant species well. Fliedner and Martens (2008) *Phelsuma* 16: 49-57.
- 22 ICZN Code Article 30.1.4.2. "A genus-group name that is or ends in a word of common or variable gender (masculine or feminine) is to be treated as masculine unless its author, when establishing the name, stated that it is feminine or treated it as feminine in combination with an adjectival species-group name."

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Forty-one authors were involved directly or indirectly in the naming of Australia's dragonflies. *Aeshna* Fabricius, *Agrion* Fabricius, *Cordulia* Leach and *Libellula* Linnaeus have been included in the compilation to assist where they occur in compound names.

These author biographies are presented in chronological order of the dates on which their species relevant to Australia were named.

Carl Linnaeus (also known after his ennoblement as **Carl von Linné**) (*23 May 1707, Råshult, Småland, Sweden †10 January 1778, Uppsala, Sweden) ^{1 2}



Linnaeus was a Swedish scientist who laid the foundations for the modern scheme of taxonomy. He standardised the system of scientific naming in his two works, the *Species Plantarum* (1753) and the *Systema Naturae* (10th edition 1758), which gave binomial names to all the organisms then known. In his *Systema Naturæ*, Linnaeus established three kingdoms, namely *Regnum Animale*, *Regnum Vegetabile* and *Regnum Lapideum* (Animal, Vegetable, Mineral).

It was expected that Linnaeus would follow his father and maternal grandfather into the church but he showed little enthusiasm for the profession. His interest in botany impressed a physician from his home town of Råshult in southern Sweden and he was sent to study medicine at the University of Lund, transferring to Uppsala after a year. Here he and fellow student and friend Peter Artedi conceived the grand plan of revealing the works of the Creator, in a systematic, concise and orderly fashion. During this time Linnaeus became convinced that the basis for the classification of plants lay in the stamens and pistils of flowers, and he wrote a short work on the subject which led to him being offered a position as Demonstrator at the Botanic Garden. In 1732 the Academy of Sciences at Uppsala financed his expedition to explore Lapland, then virtually unknown. Then followed journeys throughout continental Europe and to London and Oxford.

Following Artedi's accidental death by drowning, Linnaeus used his work on fishes in the first edition of the *Systema Naturae* (1735). Identifying material collected on a journey to Lapland in 1732 and drafting the *Flora Lapponica* (1737) gave him a good knowledge of the north European flora. Work in Holland in the mid 1730s in the garden and herbarium of the wealthy merchant banker George Clifford made him better acquainted with a large range of plants, recorded in his book *Hortus Cliffortianus* (1738). Linnaeus had also begun work on what later became the *Species Plantarum*. In this work he eventually named and described concisely all known plants and provided a classification system that would allow the inclusion of new discoveries.

For a short time Linnaeus practiced medicine in Stockholm and was then offered a medical professorship at Uppsala which he commenced with his inaugural lecture in 1741. His highly popular, weekly botanising excursions in the neighbourhood, were open to anyone, not just students. Sometimes they attracted a hundred participants who were accompanied on their return by a band. In 1748 the strain of overwork forced him to put aside his writing but in early 1751 work resumed on his *Species Plantarum* and in May 1753 the first volume appeared, closely followed in August by the second. It contained diagnoses of 5,900 plant species. Once Linnaeus' account of the vegetable kingdom was completed he turned his attention again to the animal kingdom. In 1758 the 10th edition of *Systema Naturae* was published in Stockholm. It is now internationally recognised as the starting point of zoological nomenclature.

Linnaeus established the genus *Libellula* to contain all of the known Odonata and included eighteen species, only one of which has subsequently been synonymised. In 1792 he published two more species (*L. carolina*, *L. variegata*).

Dru **Drury** (*4 February 1725, Wood Lane, London †15 December 1803, Turnham Green)^{3 4}



Dru Drury's family owned a prosperous silversmith's business based in Wood Street in London. In 1748, when Drury was 23 years old, his father retired relinquishing the business to him. That year he also married Esther Pedley and came into possession of several houses in London and Essex. About this time he became interested in entomology and the formation of a collection. It was his custom for many years to insert advertisements in foreign papers appealing for specimens for purchase or exchange. He was wealthy enough to pay people to collect for him. In 1800, he published *Directions for Collecting Insects in Foreign Countries*, intended for travellers who might supply him with specimens from overseas. It is said that he provided equipment where necessary, and advice on how to make a collection, to crew members and passengers of over 70 ships. Drury's collection was the richest and most complete of its time and quite famous. At the time of his death it contained some 11,000 species.

Drury retired as a silversmith in 1789 to devote his time entirely to entomology and was the president of the Society of Entomologists of London from 1780 to 1782. The first of three volumes of Drury's *Illustrations of Natural History*, on exotic insects, was published in 1770. It contains upwards of 240 figures including 50 coloured plates by Moses Harris. Drury corresponded with Linnaeus and, later, William Kirby, who both named insects after him. Between 1772 and 1775, Fabricius spent winters in Copenhagen and summers in London and he included visits to Drury and his cabinets. Drury's collection was auctioned after his death for a surprisingly low amount. Many of his specimens were purchased by his friends William Kirby and Edward Donovan.

Almost without exception Drury chose female names from Roman antiquity for the species he named. He named *Orthetrum sabina* from China but it is a widespread species and known from Australia.

Johan Christian **Fabricius** (*7 January 1745, Tønder, Denmark †3 March 1808, Kiel, Holstein) ^{5 6}



Son of a physician, Johan Fabricius was born in Tønder, the Duchy of Schleswig, in South Jutland which was Danish territory. Fabricius was educated at the University of Copenhagen. His broad-minded father permitted him to follow his inclination for natural history by allowing him to study for two years, 1762-64, with Linnaeus in Uppsala. Fabricius' primary interest was the study of insects, particularly insect systematics, for which he obtained a solid foundation while he was Linnaeus' student.

Though a professorship suitable for him had been vacant in Copenhagen since 1759, he was not appointed upon his return from Uppsala, so he began travelling in Europe. He did not travel to collect but to study the collections of other entomologists. In this way, he became acquainted with most of the naturalists of his day and had access to all the important collections. He travelled in central Europe during 1765-66, in Holland in 1766-67, in Scotland in 1767-68, and in 1768-69 in France, Italy, and Germany. In 1768 he was appointed to the professorship at the Charlottenborg-Institution in

Copenhagen with permission to travel for another two years, but when he finally returned his professorship was transferred from the Institution to the Copenhagen University. In 1775 he left Copenhagen to take up a professorship in Kiel, but he did not get the necessary facilities for his work. He gave his lectures in Kiel in the winter season and travelled during the rest of the year.

In 1789 Fabricius wanted to resign and take up a position in London, but the students persuaded him to stay and so he withdrew the petition. His professorships at both Copenhagen and Kiel had the title Professor in Natural History, Economy and Finance. It should be noted that Fabricius used “classis” for our orders and “orders” for our families. He went far beyond Linnaeus’ system by basing his genera on natural rather than artificial characters explaining in his book, *Philosophia entomologica*, that artificial characters are useful only to determine species, whereas natural characters help to show relationships. Linnaeus distinguished the insect “classes” according to the wing structure, whereas Fabricius used the mouth parts; this led to the difficulty that Fabricius, in his *classis* Unogata, allied dragonflies with spiders, which are not insects at all.

Fabricius’ books on systematic entomology included: *Systema entomologiae*; *Genera insectorum*; *Species insectorum*; and *Entomologia systematica emendata et aucta*. His first work gave the system, his second the genera, and only then came his true species descriptions. He did not doubt that natural classes exist, only that it was too early to elaborate them. To the 3,000 species of insects named by Linnaeus he added 9,776. His descriptions were always concise: the name, a diagnosis of never more than two lines, and a reference to the locality and collector. The locality was given in the broadest sense: e.g. Novae Hollandiae.

Fabricius created two new genera, *Aeshna* for the long-bodied dragonflies (colloquially known as Hawkers in Britain) and *Agrion* for the small slim-bodied species then known (Zygoptera). In addition he named six species from Australia, one of which has subsequently been relegated to synonymy.

Johann Heinrich Sulzer (*18 September 1735, Winterthur †14 August 1814, Winterthur) ^{7 8 9}



Johann Sulzer was born in 1735 to a well respected family of the Swiss city of Winterthur. Both his father and grandfather were doctors, his father being town physician, whose duties included the supervision of health conditions and the inspection of midwives. Johann chose to follow that profession, so he attended the University of Tübingen (Germany), where he studied medicine, receiving his Dr. med. in 1751. Then he continued his studies at Strasbourg (France), devoting himself mainly to natural science.

On completion of his studies Sulzer settled in his native city as a physician. He was entrusted with some official functions: he was a member of the major council of the town from 1770 to 1796, responsible for the school system from 1780 to 1782, and second town physician from 1782 onwards. He was open to innovation and was the first to practice inoculation with the living virus (variolation) against smallpox at Winterthur in 1763 and vaccination in 1798. He was the first in Switzerland to experiment with digitalis for cardiac disease, publishing his results in 1792. On his estate he trialled the cultivation of new grass seeds, potatoes, and madder for dyeing. Also he promoted the rearing of silkworms and the processing of flax.

His contribution to entomology was to popularize the Linnean system in German speaking Europe. Two of his books were among the first on insects to adopt Linnaeus' binomial system: *Die Kennzeichen der Insekten, nach Anleitung des Königl. Schwed. Ritters und Leibarzts Karl Linnaeus, durch xxiv Kupfertafeln erläutert und mit derselben natürlichen Geschichte begleitet*. [Characteristics of the insects, accordingly to the instructions of the royal Swedish knight and medical attendant Karl Linnaeus, elucidated by 24 copperplate engravings and accompanied by their natural history] (1761) and *Abgekürzte Geschichte der Insecten nach deren Linnaeischen System* [Abbreviated history of the insects according to the Linnean system] (1776).

The insects were divided into seven classes, of which Neuroptera *sensu* Linné fell into the fourth class. The author was a keen observer, hence, unlike most entomological works of his time, the book contains accurate observations

of dragonfly mating and oviposition behaviour, life history and longevity. Examples of insects of each class from around the world were engraved on numerous plates of good quality. As Odonata are one of the minor orders, there are only two common but unspecified European dragonflies depicted in the first publication: one zygopteran and one *Aeshna*. In the second, more extensive work, three Anisoptera and two Zygoptera are represented and described, none of which had been described by Linnaeus and only one taken from the earlier publication by Dru Drury (1773). One European species had been published ten years earlier, but that was not known to Sulzer.

Sulzer named the species *Rhyothemis phyllis* (as *Libellula phyllis*), of which the subspecies *beatricis* and *chloe* are known from Australia. The source of his specimen, which he described as coming from India, is unknown.

William Elford Leach (*2 February 1791, Plymouth †25 August 1836, Palazzo San Sebastiano, near Tortona, Italy) ^{10 11 12 13 14}

William Leach, the son of a solicitor, was born at Plymouth and, at the age of twelve, went to school in Exeter, studying anatomy and chemistry. By this time he was already collecting marine samples from Plymouth Sound and along the Devon coast. He commenced studying medicine at St Bartholomew's Hospital in London, finishing his qualification at the University of Edinburgh and the University of St Andrews, where he graduated M.D. in 1812. Possessed of a private fortune he was able to abandon his profession shortly after taking his degree to devote himself to natural history. His particular interests were entomology and malacology and he distinguished himself at a very early age as an enthusiastic collector of British insects. The beetle collections of the British Museum became richly stocked under his later curatorship.

Leach visited Paris and secured the friendship and became a correspondent with Cuvier, Latreille, and other eminent zoologists. Upon returning to England in 1813 he was initially appointed assistant librarian in the Zoological Department at the British Museum, eventually becoming assistant keeper of the Natural History Department. He found that the zoological collections left to the museum by Hans Sloane had been neglected, so he set about remedying that situation. Leach made a major contribution to the study of conchology and entomology by introducing a natural system of arrangement,

based on the ideas of Latreille and Cuvier, wherein taxonomic groups are based on characters which show evolutionary relationships. This superseded the artificial systems inherent in Linnean taxonomy which relied on single or unrelated characters. His publications encompassed insects, myriopods, arachnids, mammals and birds. In 1815, he published the first bibliography of entomology in Brewster's *Edinburgh Encyclopedia*, and also the first part of his excellent history of the British crustacea, which was never completed.

Leach was elected a Fellow of the Royal Society in 1817, and was also a member of the Linnean Society and many other learned societies in England, France and North America. Leach's major works included *The Zoological Miscellany, being descriptions of new and interesting animals*, illustrated with plates, drawn and coloured by R.P. Nodder; *Monograph on the British Crabs, Lobsters, Prawns, and other Crustacea with pedunculated eyes*, with plates by J. Sowerby; *Systematic Catalogue of the Specimens of the indigenous Mammalia and Birds in the British Museum*, and *A synopsis of the Mollusca of Great Britain, arranged according to their natural affinities and anatomical structure*. He also wrote several articles in Brewster's *Edinburgh Encyclopaedia*, *Encyclopaedia Britannica* and the *Dictionnaire des Sciences Naturelles*. About the year 1821 his colleagues first noticed an evident change in his health. He suffered a nervous breakdown due to overwork and he resigned from the museum in March 1822. His elder sister took him to continental Europe to convalesce and for the last few years of his life he resided with her in Italy, where he died of cholera.

At this stage in the development of the nomenclature of the Odonata Fabricius had added to the original *Libellula* of Linnaeus two new genera, *Aeshna* and *Agrion*. In his essay on Entomology in Brewster's *Edinburgh Encyclopaedia*, Leach increased the number to nine with the addition of *Cordulia*, *Cordulegaster*, *Gomphus*, *Anax*, *Lestes* and *Calepteryx* (sic). Of Leach's new genera, *Cordulia*, *Gomphus*, *Anax*, and *Lestes* occur in compound names of genera known from Australia. The genus and species names of *Petalura gigantea* were published by Leach in his *Zoological Miscellany*.

William Sharp **Macleay** (*21 July 1792, London †26 January 1865, Sydney, Australia) ^{15 16 17 18 19}



William Sharp Macleay was born in 1792 in London. He was the eldest son of late Alexander Macleay Esq., F.R.S., F.L.S., who was also well-known in the scientific world as the Honorary Secretary of the Linnean Society. William Macleay was educated at Westminster School, where he distinguished himself as a classical scholar, and in 1800 proceeded to Trinity College, Cambridge where he graduated B.A., 1814; M.A., 1818. His university career seems to have had little influence on his interest in natural history.

On leaving the university he was appointed Attaché to the British Embassy in France, and subsequently was Secretary to the Board established at the Treaty of Paris of 1815 for liquidating British claims on the French Government. In the performance of this duty he spent several years in Paris, where he became the friend of Cuvier and other celebrated men of science in France, including Lamarck, Latreille, St. Hilaire and Savigny. It was the influence of these distinguished French zoologists and his father's example, influence, and fine collection of insects, which awakened his interest in zoology. Macleay published *Horae Entomologicae; or, Essays on the Annulose Animals* (1819-21), and *Annulosa Javanica* (1825), where the Annulosa comprise the annelid worms and the arthropods. The avowed object of his studies was the pursuit of the natural classification system and his views, expressed in *Horae Entomologicae*, came to be known as the *Quinary System*. This system was further expounded by Vigors and by Swainson but was criticised by a number of zoologists. As Macleay's published work covers the period 1819-1847 it is pre-Darwinian but, together with Agassiz and many others, he regarded the *Origin of Species* as a threat to his religious beliefs.

In 1825 William's father Alexander Macleay was appointed Colonial Secretary of New South Wales under Governor Darling. He brought his wife and six daughters with him to Sydney where he erected the handsome Elizabeth Bay House. William was not able to achieve a posting to New South Wales to join his family. Instead he left England for Havana, Cuba, in 1825 to take up his duties as Commissioner of Arbitration to the conjoint British

and Spanish Court of Commission for the Abolition of the Slave Trade. In 1830 he was Commissary Judge of the same Court. In 1836 he was appointed Judge of the Mixed British and Spanish Court of Justice established under the Treaty of 1835. While he was in Cuba, horticulture and natural history claimed much of his leisure.

Early in the year 1836, after completing more than ten years' service, Macleay set out on his return to England. On the way he visited the United States, meeting American entomologists, doing some collecting and entering into exchanges. This eventually led to his election as a Corresponding Member of the Academy of Natural Sciences of Philadelphia. On his return to England he was elected to the Councils of the Linnean Society and of the Zoological Society, as well as that of the British Association for the Advancement of Science, in which he served as President of Section D (Natural History) at the Liverpool meeting in 1837. In 1837 he retired from the Public Service on a pension. In 1838 he published in London *Illustrations of the Annulosa of South Africa* based on the very extensive collection made by Jules Pierre Verreaux (1807-1873) during his long residence at the Cape and purchased by Macleay.

On 11 November 1838, accompanied by his cousins William John and Walter, Macleay left for Australia in the *Royal George*, arriving in Sydney in March 1839. Despite his expressed intention of remaining in Australia for only three or four years Sydney became his home for the rest of his life. He lived at his father's home, Elizabeth Bay House, which he inherited in 1848. He quickly developed a keen interest in the natural history of Australia, especially in the marine fauna in and around Port Jackson. His first contribution to science after his arrival was a paper on the *Natural arrangement of Fishes*. Captain Phillip Parker King was an old friend of Macleay, the two having met in London before 1826. At King's request, Macleay described the collection of Annulosa accumulated by King, during his survey of the inter-tropical and western coasts of Australia between the years 1818 and 1822.

Macleay was keenly interested in the Australian Museum, holding the positions of Committeeman from 1841 to 1853 and Elective Trustee from 1853 onwards, until ill-health compelled him to resign in January 1862. Death ended his sufferings on 26 January 1865 in his seventy-third year.

Macleay's collection, which he brought to Australia in 1839, comprised the specimens left with him by his father for study; specimens collected or gained by exchange in Cuba, Philadelphia and other ports of call on his outward and homeward voyages; specimens acquired in England, after his return, by exchange or otherwise; and especially Verreaux's South African collection of insects, which he purchased. In due time he succeeded to the main collection which his father had brought to Australia. His cousin, William John Macleay, inherited his library and collection of specimens on the understanding that the bequest would be deposited in a suitable institution. In 1890 it was transferred to the Macleay Museum at the University of Sydney. Macleay named three species from Philip Parker King's collection, one of which was a homonym and the other two *incertae sedis*.

Edward **Newman** (*13 May 1801, Hampstead †12 June 1876)^{20 21}



Edward Newman was born at Hampstead, the eldest of four sons of Quaker parents. They were keen naturalists, probably accounting for his enthusiastic observation of natural objects, especially plants, birds and butterflies, from earliest childhood. At boarding school at Painswick in Gloucestershire, he was further encouraged to study all aspects of the natural world by a Quaker master. Newman worked in a number of professions. He had to leave school at the age of sixteen to join his father in his small business as a manufacturer of morocco leather who then moved to Guildford to become a wool stapler. In 1826, Newman moved to Deptford, then still a part of rural Kent, to take over a rope-making business which he relinquished in 1837. In 1840 he became a partner in a firm of London printers, Luxford & Co., but George Luxford soon retired and the business passed entirely into Newman's hands. He had discovered, at last, an occupation which he could enjoy and combine with his natural history pursuits.

Entomologically speaking, his main interest was in the Lepidoptera and insect pests. However he was first and foremost an all-round naturalist and writer studying and becoming an authority on botany, especially ferns, birds, birds' nests and mammals. In 1826, in conjunction with A.H. Davis, F. Walker and Edward Doubleday, Newman founded the Entomological Club

which often met at the Bull Inn in Birchwood. Its journal, *The Entomological Magazine*, commenced in 1832 and extended to five volumes, up to 1838 with Newman as editor. He contributed fifteen of the 63 articles in the first volume, besides notices of books.

In 1833, Newman took a large role in starting the Entomological Society, which grew out of the Entomological Club. The editors of *The Entomological Magazine* failed in their attempts to procure the memoirs read before the Society for publication, instead of in its special *Transactions*. As there was not then room for two publications having so much in common, *The Entomological Magazine* ceased. However, in 1840, Newman started the *Entomologist*, a monthly magazine. This continued until the end of 1842, when it was merged with the *Zoologist*, 34 volumes of which were brought out by Newman. In 1864 he revived the *Entomologist*.

Newman published his first pamphlet in 1832 *Sphinx vespiformis, an Essay*, an attempt to elevate the *Quinary System* of classification enunciated by Macleay into a septenary arrangement, a new system of classification which was much criticised. He joined the Linnean Society in 1833 and in 1840 published the modest first edition of what was to become a natural history classic, *A History of British Ferns*. His two most significant works on the British Lepidoptera, the *Illustrated Natural History of British Moths* (1869) followed by its companion *Illustrated Natural History of British Butterflies* (1871), were written late in his career. From June 1841 to June 1854 he contributed largely to another venture of his own, *The Phytologist*, a monthly magazine, edited by Luxford.

In 1842 the Entomological Club established a museum, Newman donating his entire collection, and being elected curator. For many years he spent a day a week curating and building up the Entomological Club collections. Newman seems to have published on the Odonata in only two parts of his Entomological Notes of *The Entomological Magazine*. When he named the genus *Sympetrum* he commented "The remaining species of Dr. Leach's genus *Libellula*, widely differ from each other ... they will in all probability, resolve eventually into three distinct genera, and as such I had once prepared them for publication, but a dislike to name-giving induced me to relinquish them." One of these was *Orthetrum*, widely distributed in Australia.

Carl Hermann Conrad **Burmeister** (*15 Jan. 1807, Stralsund †2 May 1892, Buenos Aires) ^{22 23}



Hermann Burmeister was a German zoologist and entomologist who was born at Stralsund and died as the result of an accident in Buenos Aires. He was educated for the medical profession at Halle and took his degree of M.D. On the advice of Prof. Nitsch (of whom he was a pupil) he turned his attention to natural history, eventually succeeding his master in the chair of Zoology at Halle (now Martin Luther University of Halle–Wittenberg) in 1842. The first volume of the *Handbuch der Entomologie*, by which Burmeister established his fame as an able writer, was published in 1832 when its author was only 25 years old. Three more volumes of the *Handbuch* appeared, the last in 1847 dealt with the systematic aspects giving a succinct account of all known families and genera, and brief diagnoses of many known and new species. However it was never completed.

In the revolutions of 1848 in the German states, also called the March Revolution (Märzrevolution), Burmeister was sent by the city of Halle as deputy to the National Assembly and subsequently, by the town of Leibnitz, to the first Prussian chamber. About 1850 he decided to spend two years in Brazil. He joined Peter Wilhelm Lund, a Danish palaeontologist, zoologist and archaeologist, at Lagoa Santa in the province of Minas Geraes. Although the move is often attributed to ill health there is an opinion that he left Germany because he was disenchanted with the restoration after the revolution of 1848/49. He spent the years 1857 to 1860 in Argentina returning to Europe by traversing the Andes to Chile by way of Mendoza, and passing through Panama and the West Indies.

In 1861 he resigned his professorship at Halle, and finally settled at Buenos Aires. There he founded the Institute at the Museo Nacional in Buenos Aires and headed the Academy of Sciences, formed from the scientific faculty of Argentina's National University of Córdoba. He devoted himself for the remainder of his life chiefly to studying and describing the museum's rich collection of fossil mammalia of the Tertiary deposits of the Argentine Republic.

Burmeister named seven of the dragonfly species known from Australia, all but two having this country as their type locality.

Toussaint de **Charpentier** (*27 November 1779, Freiberg †4 March 1847, Brieg, Silesia)^{24 25}



Toussaint de Charpentier was born in 1779 in Freiberg (Saxony). His father, Johann Friedrich Wilhelm von Charpentier, came from a Huguenot family and had studied law and mathematics at Leipzig and taught mathematics and drawing at the mining academy at Freiberg from 1766. He became a mining officer in 1773, finally becoming Head of the Mining Inspectorate. In Toussaint's early years he was taught by his father and he later attended the Freiberg Gymnasium and studied geology and mining engineering at the Mining Academy. From the autumn of 1797 he studied law at the University of Leipzig with good results. This was one of the requirements of becoming a mining officer. In 1802 Charpentier moved to Prussia, where he accepted a position with the Silesia Mining Authority [Oberbergamt].

Charpentier took over the management of Schweidnitz (Świdnica) local mining authority until he transferred to the upper mining authority in Breslau in 1811. In 1828 he transferred to Dortmund as Vice Mining Administrator and in 1830 he was promoted to the position of Mining Administrator [Berghauptmann] to control mining throughout the Prussian province of Westphalia. Five years later he was made chief of all mining operations in Silesia, based in Brieg.

In 1818 he had fulfilled a long-held desire to travel to Switzerland where he visited many places with his younger brother Johann, who lived there. He also visited Italy. Later he described the journey in two volumes. In his sketch books and diaries he depicted geological formations, stratigraphy, mines, flora and fauna, but also art treasures and the archeological sites of Pompeii and Paestum.

Charpentier published numerous writings on mountain structure and geology but was also a keen entomologist. His first entomological publications in 1818 were on beetles, butterflies and moths. In the years 1829 to 1839 he rendered services to entomology by arranging the publication of new editions of *Die europäischen Schmetterlinge* and *Die ausländischen Schmetterlinge* by Eugenius Johann Christoph Esper. But his main interests were orthopteres and odonates and he first tried to summarise the European

species in his *Horae Entomologicae* in 1825. In 1840 he composed a book on dragonflies, *Libellulinae europaeae descriptae ac depictae* in which he described 61 European species and added engravings of them all. Hagen²⁶ praised the work writing “whereas not being entirely without slips, these are the best and nearly the sole ones we have until now”. During the years 1841 to 1845 Charpentier published plates and descriptions of 60 species of Orthoptera from around the world (including three species from Australia). Although a member of several academic societies he deliberately did not publish these works as treatises so that he might reach a broader public. However he used the Latin language so this hope might have been a little optimistic.

Charpentier’s main contribution to odonatology was his effort to embrace all European dragonflies in a monograph for the first time. By diligently describing the body parts he also contributed to a consistent terminology. He is author of 16 European dragonfly species. He also recognised that the three genera of Linnaeus and Fabricius did not encompass all the different types of Odonata and he therefore suggested a further 17 subgenera, which all now have generic rank. Because he was not aware of the publications of Leach and Newman he created a number of synonyms.

After his death in Brieg in 1847 his odonatological collection was bought by the entomologist W.G. Schneider As a result of Hagen’s intervention, Schneider gave the types to Selys. Later Schneider fell into poverty and sold the rest of the collection to Hagen.

Charpentier named the genus *Ischnura* within which three species are known from Australia.

Jules Pierre **Rambur** (*21 July 1801, Ingrandes near Chinon †10 August 1870, Geneva)^{27 28}



Jules Pierre Rambur was born in Ingrandes near Chinon (Indre-et-Loire) and his early education took place in the Leguay boarding school at Tours. After completing his studies of Humanities at the college of Tours he was awarded the degree of Bachelor of Letters (1821). He then commenced his early medical studies in the same city, before completing them at Montpellier where he received the degree of Doctor of Medicine in

1827. Rambur used his spare time for the study of natural history; all branches of that science interested him to a high degree, but his main passions were for entomology, mainly Lepidoptera and Coleoptera, and botany. His entomological collections and herbarium were significantly increased from his stay in southern France.

After qualifying as a medical doctor Rambur returned to live in Tours, renewing his acquaintance with a school friend, Adolphe de Graslin, who had been living in Spain where his father was consul. Collecting excursions around Paris and to the Alps were a prelude to a trip to the island of Corsica that he made in 1829, staying there over a year. He found most of the butterfly species that were known to be peculiar to this island and Sardinia and published his findings as *Catalogue des Lépidoptères de L'Ile de Corse, avec la description et la figure des espèces inédites* (1832). After this trip, Rambur remained for some years in Paris, during which time he helped to found the Entomological Society of France in 1832. With de Graslin and Jean-Baptiste Alphonse Dechauffour Boisduval, he participated in the compilation of a major publication on European caterpillars: *Collection iconographique et historique des chenilles d'Europe*.

A trip which Rambur and de Graslin had planned for many years to take to Andalusia was finally scheduled for 1834, but an outbreak of cholera delayed de Graslin. Undaunted, Rambur embarked alone at Marseille for Malaga. He spent several months there and then made a sea voyage to Gibraltar and Cadiz. He was astonished by the abundance and diversity of insects and made a large collection of all orders but primarily Coleoptera and Lepidoptera. In 1835 the two friends finally met in Granada from where they explored Alpuzarras and Sierra Nevada. Upon their return to Paris Rambur suggested that the two collaborate in the publication of an entomological fauna of Andalusia but de Graslin declined. Rambur produced two volumes: *Faune entomologique de l'Andalousie* (1837-1840) and a *Catalogue systématique des Lépidoptères de l'Andalousie* (1858-1866).

Rambur, having married in 1841, settled in Seiches-sur-le-Loir to practice medicine but then chose a new residence in the Indre-et-Loire department, Saint-Christophe. He soon grew tired of practising medicine and left the residence causing deep regret among the population. He came to live in Tours, where he bought a house with a small garden in which he cultivated interesting plants brought back from his travels and plant species he thought

would be useful in raising Lepidoptera caterpillars. He used Tours as base to visit not only the neighbouring departments, but also much more distant localities: Pyrénées-Orientales, the Hautes-Pyrénées, the Basses-Alpes, Savoie, Montpellier, Marseille, Geneva and Spain including Madrid. Rambur moved to Geneva where he died in 1870, following an attack of dysentery he had contracted in Barcelona.

His chief work, the volume on Neuroptera in the 'Nouvelles Suites à Buffon' (*Histoire naturelle des insectes: Névroptères*), appeared in 1842. With its aim of including all Odonata from around the world, this book would emulate Burmeister's *Handbuch* (q.v.). It covered the group in its broad sense but, according to the preface to the work, the Lepidoptera were his favourite study. The Neuroptera were, of all insects, the least attractive to him. He also noted that he possessed few Neuroptera in his collection and the Parisian collections were extremely poor in European species and generally misclassified. Nevertheless, he paid great attention to structural details, and especially to secondary sexual characters, and laid the foundations of the modern classification of the Neuroptera (*s.l.*).

Of the Australian Odonata, Rambur named seven genera and 16 species; two genera and two species are now recognised as synonyms.

William Frederick **Evans**^{29 30 31}

Very little biographical information has been published about Evans. His publication record consists of 12 notes covering Lepidoptera, Neuroptera (*s.s.*) and Orthoptera and his *British Libellulinae or Dragonflies* (1845) which has 12 coloured plates. He gave his address in 1857 as 'Admiralty' and was a collector friend and colleague of James Francis Stephens, a civil servant at the Admiralty. Evans illustrated his book on dragonflies from specimens captured by himself or from Stephens' collection, and he applied the latter's names to the species. In 1848 he was Secretary of the Entomological Society of London. Between 1845 and 1847 he gave four gifts of Coleoptera to the British Museum (Natural History). Other insects he donated came from various countries including North Africa. In 1870 he sold a collection of British and foreign insects and in 1875 his library, both through Stephens.

Evans named only one genus of Odonata from Australia, *Brachytron*, of which *Dromaeschna* Förster, 1908 was originally a subgenus.

Hermann August **Hagen** (*30 May 1817, Königsberg, Prussia † 9 November 1893, Cambridge, Massachusetts, United States)^{32 33}



Hermann Hagen was born at Königsberg, East Prussia, the son of Karl Heinrich Hagen, a Royal Councillor and Professor in the Albert University at Königsberg. His early education was received at the Gymnasium of Kneiphoven, and in 1836 he entered the university of his native city as a medical student. His grandfather, Carl Gottfried Hagen, had been professor of natural history there and he was probably the source of Hagen's interest in entomology. Hermann toured major entomological collections and libraries in Norway, Sweden, Denmark and Germany with zoology professor Martin Heinrich Rathke in 1839. In 1840, he received his medical degree from the University of Königsberg. His thesis was a study of European dragonflies and encompassed the works of Selys and Charpentier. It provided a base for better identification of the species as it resolved many synonyms which had caused taxonomic errors. While studying medicine in Berlin, Vienna, Paris and elsewhere, he visited entomological collections which were fundamental in expanding his knowledge of species. In 1843, he returned to Königsberg, commenced his medical career in general practice, and for three years was first assistant at the surgical hospital. During this time, he continued his entomological studies.

In about 1841 his work attracted the attention of the eminent Belgian entomologist, Baron Edmond de Selys Longchamps, four years his senior. Jointly they produced *Revue des Odonates de Europe* (1850), to which Hagen contributed nearly all the illustrations for he was an excellent draughtsman. He also collaborated with Selys in the *Monographie des Calopterygines* (1854) and *Monographie des Gomphines* (1857). Fossil Neuroptera also engaged his attention continuously. For several years Hagen had been engaged in compiling the *Bibliotheca Entomologica*, which appeared in two volumes in 1862 and 1863. This publication aimed to give a list of all historical and current works and papers on entomology, grouped under authors' names. However, there are gaps in that work: for instance, studies in Russian are not covered.

In 1867, he was invited by Louis Agassiz, Director of the Zoological Museum of Harvard University, Cambridge, Mass., to take charge of the Department of Entomology there. He accepted the position, and left Europe in the autumn of 1867 to undertake his new duties. He held the title of Professor of Entomology, on which subject he gave instruction to special students. He was a prolific writer, as the 400 odd titles marking his 50 years of publication on all orders sufficiently attest.

Six genera and nine species known from Australia, were described by Hagen; one genus and two species have been synonymised. Only one of the genera and four species were described from specimens collected in Australia.

Baron Edmond de **Selys Longchamps** (*25 May 1813, Paris †11 December 1900, Liège, Belgium)^{34 35 36}



Michel Edmond de Selys Longchamps (known as Edmond) was born in Paris on 25 May 1813. His father, Michel Laurent de Selys Longchamps, was a wealthy aristocrat who held important political positions in Liège. The family name was Selys, the affix Longchamps being derived from the little village of Longchamps-sur-Geer near Waremme, where the family had large estates. As his father lived and worked in Liège, Selys spent his first nine years in Paris with his maternal grandmother. His parents thought it better for his education to have tutors in Paris rather than in Longchamps, so they employed Adolphe Hoffmann, a lawyer. By the age of 10, Selys had moved to Liège. There he was receiving music lessons from Théodore Coumanne and, some time before 1828, was instructed by another tutor, Tirelle de Modine, who taught the Italian language. Selys' liberal parents allowed him to read whatever he liked and he never formally attended school or university, though he took some courses at the Liège University.

He followed his father into political life commencing as Communal Councillor for Waremme. Sources differ on the timing of his appointments but his political life started in the early 1840s. He became a Provincial Councillor of the same canton, and then a Member of the Chamber of Representatives for Waremme. He attended the first Belgian Liberal Congress in 1846. As a liberal,

he was sent to the national Senate in 1855 to represent the arrondissement of Waremme, an office which he maintained until a few months before his death in 1900. In 1879 the Senate elected him Vice-president and, in 1880, he was appointed President for four years. He had also been President of l'Association liberale de Waremme and Envoy Extraordinary to the court of Italy.

In 1838 Selys married Sophie d'Omalius d'Halloy, daughter of the famous Belgian geologist Jean Baptiste d'Omalius d'Halloy. They had four children. His wife died of cancer at the relatively young age of 51 in 1869.

Selys' interests as a naturalist were not confined to insects. They extended to all aspects of Belgian natural history including mammals, birds, trees and meteorological phenomena. An early influence was Henri Stephens, a gardener at Liège University who, in 1828, sold him *Système Naturel* by Francois-Alexandre Des Bois and helped him to arrange his herbarium according to the Linnean system. As an entomologist he occupied himself with the Lepidoptera and Orthoptera of Europe and the Neuroptera (especially Odonata) of the world. In 1837 he published a list of the Lepidoptera and Odonata of Belgium. Selys travelled extensively within Europe, including Uppsala where he made a pilgrimage in honour of Linnaeus, Rome, Pisa, Milan, Geneva, Munich, Vienna, Budapest, Biarritz, Scotland, and London several times.

McLachlan divides the literature written by Selys into three chronological groups. The first of these, produced in the years from 1831 to 1851, deals almost exclusively with the European species. The principal works of this period were *Monographie des Libellulidées d'Europe* (1840), followed by an enlarged supplement *Revue des Odonates ou Libellules d'Europe* (1850). The second period from 1853 to 1886 is that of the monographic revisions of the Odonata of the world,. This comprises the two large monographs of Gomphines and Caloptérygines, and synopses of the Gomphines, Caloptérygines, Agrionines (five instalments only), Cordulines and Aeschnines (generic only). The only subfamily not touched in a synoptical way was the Libellulines. After an interval of eleven years the *Synopsis des Agrionines* (1876, 1877) was completed. The third group consists chiefly of faunal papers, beginning as early as 1857. However they did not occupy much of his working time, nor were they extensive until 1878. There were two memoirs on the Odonata of New Guinea, followed by others on those

of the Philippines (1882, 1891), Japan (1883), the Palaearctic *Diplax* (1884), Asia Minor and Europe (1887), Belgium (1888), Sumatra (1889), the Khirgiz steppes (1889) and Burma (1891).

Selys and Hermann Hagen had each published papers on European Odonata in 1840. In 1841 they started a correspondence and they met in spring 1843 in Paris, commencing a friendship which lasted until the death of the latter. Their joint authorship is recognised in *Revue des Odonates* (1850) and the two large monographs on Calopterygidae and Gomphidae, published in 1854 and 1858 respectively. Another good friend was Robert McLachlan, a British entomologist and pioneer in the study of the world fauna of Trichoptera and Neuroptera. Selys had several odonatological students, with the most important being Guillaume Severin who was a close friend. Other odonatological colleagues included Friedrich Karsch and Friedrich Brauer. Among his disciples were Friedrich Förster, Friedrich Ris, René Martin and Philip Calvert.

While Selys personally collected as much material as he could, he enlarged his collections by commercial purchases and gifts from friends and co-workers. He had a special connection with Henry Bates, who travelled and explored Brazil from 1848 to 1859 for commercial collecting. Selys acquired the collections of Latreille, Rambur, Audinet-Serville and Guérin-Meneville and parts of those of Toussaint de Charpentier and Wilhelm Gottlieb Schneider. Selys' collections became so large that he constructed an extra building to house them. Shortly before 1905, the Selysian Odonata collection was moved from Liège to the Royal Belgian Institute of Natural Sciences in Brussels.

Selys became a member of the Belgian Academy in 1841 and was a founding member of the *Société Entomologique de Belgique* in 1856 where he served several terms as the President and he was active in the *Académie royale des Sciences de Belgique*. He was also an honorary member of almost all European entomological societies including those of Paris, London, Berlin, Florence, Vienna, Stockholm, Dresden, Stettin, Berne, Helsingfors and Philadelphia, and of other scientific bodies throughout the world. A day after his retirement from the Senate he received the *Grand cordon de l'ordre de Léopold*.

Selys described over 700 species and established 134 valid genera within the Odonata. He recognised the importance of wing venation as an essential tool in taxonomy. In this he was influenced by a publication by van der

Hoeven, who distinguished between the genera *Aeshna* and *Libellula* by a difference in the direction of the triangle. Perhaps as a reaction to perceived competition from increasing numbers of workers in Odonata, he tended to affix names to all specimens in his collection considered to represent new species without necessarily describing them formally. This resulted in some confusion because he occasionally compared a species to some other by name, forgetting that the latter had not been published.

In his will, Selys expressed the wish that Robert McLachlan should finish the description of his large odonate collection, reserving a generous financial compensation for this. McLachlan, however, turned down the offer so Friedrich Ris coordinated the project and wrote on the Libellulines. Selys had not published a synopsis or monograph on this group as the taxonomy was too complex. In addition René Martin contributed the Cordulines and Aeschnines. He submitted a manuscript on the Calopterygines but it was never published; neither were the Gomphines entrusted to Karl Grünberg nor the Agrionids of Friedrich Förster.

Of the dragonfly names known from Australia, Selys named 68 taxa, one-eighth of the total. He ranked behind only Tillyard and Theischinger plus Watson in number. His taxa comprised 25 genera, 41 species and two subspecies. Of these, only two genera and two species have subsequently been recognised as synonyms.

James Charles **Dale** (*1792 †6 February 1872) ^{37 38 39}



James Dale, the wealthy squire of Glanville's Wooton in Dorset, devoted almost all of his adult life to entomology. He received his education at Cambridge University graduating MA in 1818. His life was dedicated to managing the broad acres of the family estate in Dorset and observing his social duties as a magistrate. This left him plenty of time for fieldwork, and he often journeyed up to 40 miles or more in a day.

His first note, on Lepidoptera, was published in the *Magazine of Natural History* in 1830. This was followed by some 83 further notes and articles covering a wide range of topics. He was elected a member of the first Entomological Society of London in 1822. Dale's collection is in the Hope Department of Entomology. It was housed in 33 cabinets when it was

received at Oxford in 1906. The collection included four cabinets of Odonata in which were a few Selys types. John Curtis credits Dale unambiguously as a joint author frequently in his *British Entomology*⁴⁰, and it was from Dale's collections that Curtis derived a vast portion of the material from which this elaborate work was produced.

Dale named one Australian species, *Austrogomphus australis*. In naming *Nannophya dalei*, Tillyard noted that Dale was a great friend of Selys.

Friedrich Moritz **Brauer** (*12 May 1832, Vienna †19 December 1904, Vienna)

41 42 43 44



Friedrich Brauer was born in Vienna in 1832, the son of Anton Justus Brauer, a well-to-do merchant, and his second wife Luise, née Baum. Both had migrated to Vienna from northern Germany. At first Friedrich was taught at home and he became interested in insects, inspired by his father, an uncle, and his tutor Anton Löw. After his father died in 1839, Brauer's mother took the children to live with relatives in Germany.

About a year later they returned to Döbling, a village outside the city gates of Vienna. In 1842 Friedrich's mother Luise married a famous urologist Viktor Ivanchich. Brauer was sent to a secondary school [*Gymnasium*] in Vienna in 1845 but found the transition from being taught at home difficult.

He was given a small collection of exotic insects in 1846 which he wanted to identify. As a result he came into contact with Vinzenz Kollar, the curator at the museum of the imperial court [*Hofmuseum*], who introduced him to the entomological collection there. Kollar gave him Burmeister's *Handbuch der Entomologie* which Brauer studied with interest in spite of not understanding it all. In the summer of 1849 Brauer reared eggs of a species of *Chrysopa* (Neuroptera). As he could not identify the larvae by means of Burmeister's *Handbuch*, he made descriptions and drawings of them. Brauer had become acquainted with Georg Frauenfeld, who would later be one of the scientists on the *Novara* expedition. Frauenfeld persuaded Brauer to present his results at a meeting of the scientific society [*Naturwissenschaftlicher Verein*] of Vienna, with the result that Brauer's observations were published in the *Naturwissenschaftlichen Abhandlungen*.

Inspired by this success Brauer decided to study the development of all

Neuroptera which Burmeister had annotated as 'metamorphosis unknown'. A paper on these investigations was published in the *Sitzungsberichte der Akademie der Wissenschaften* in 1851. Further findings on the development of Neuroptera led to a publication in which Brauer attempted a systematic review of the Planipennia Burmeister in the *Stettiner Entomologische Zeitschrift* (1852). In spite of these successes in natural science, Brauer's school teachers were not satisfied with his performance; he twice failed the final examinations which were a prerequisite for studying at the university. To comfort him, his parents allowed him a journey to Königsberg to visit H.A. Hagen, with whom he had been in contact by letter. Finally the authorities of the Ministry of Education allowed Brauer a special examination in mathematics and Latin to qualify for university. Like most zoologists of that time, he chose the study of medicine, which he commenced at the Vienna University from 1853. For his examination success he received from his mother I.O. Westwood's *Introduction to the modern classification of insects*, a gift which inspired him to learn English.

In May 1854 Brauer's mother died and, as his stepfather did not maintain the household as before, Brauer began a life on his own. During his study of medicine Brauer turned towards a new entomological field of interest, the Diptera and, within this order, the botflies (Oestridae). His studies later led to a new classification of that group. The year 1861 brought three important events: he completed his first medical exam; he survived a grave typhus infection, from which he recovered slowly; and to win economic independence he accepted a post at the *Naturalienkabinett* (the botanical, zoological and mineralogical collection, which later developed into the Museum of Natural History [*Naturhistorisches Museum*]). The position was financially important for him, as he had married in 1856. In that institution he worked for 16 years, first as assistant and later as curator of the conchological collection (there was no vacancy in the entomological department). But at the same time he continued to engage in entomological research, as indicated by his numerous publications. He published only one conchological paper.

In the years 1857-1859 the Austrian frigate *Novara* had been sent around the world for scientific research and to collect botanical, zoological and ethnological material. The Academy of Science assigned to Brauer the description of the Neuroptera, which he did meticulously. Because of this

publication other collectors were inspired to ask Brauer for determinations of Neuroptera e.g. E. v. Ransonett's specimens from the Red Sea and Ceylon (now Sri Lanka), J.J. Kaup's from Indonesia and those of C.G. Semper from the Philippines. From this Brauer gained so much experience that he was confident enough to publish an account of all Neuroptera *sensu* Linné⁴⁵ with a key. He created a number of new genus group taxa within the Libellulidae, a task that Selys had not addressed.

From 1867 until 1871 Brauer wrote the entomological research reports for the periodical *Wiegmanns Archiv für Naturgeschichte*. About that time he began to publish on the phylogeny of insects, based on his observations on metamorphosis. In 1871 he completed the second medical exam, a qualification which allowed him to have an academic career and in 1872 he habilitated⁴⁶ in the philosophical faculty. Two years later he became associate professor [*außerordentlicher Professor*], teaching at Vienna University and the agricultural college [*Hochschule für Bodenkultur*]. Brauer became curator in the university's entomological department in 1876; Correspondent to the Academy of Science [*korrespondierendes Mitglied der Akademie der Wissenschaften*] in 1878; Professor of Zoology at the university (1878); and Fellow of the Academy [*wirkliches Mitglied der Academie*] in 1888. About that time the *Naturalienkabinett* was transferred into the new Imperial Museum of Natural Science [today *Naturhistorisches Museum Wien*], but Brauer did not take part in the arrangement of the exhibition, as his time was occupied with teaching and publications. From 1894 he became visibly old and due to tremor in his hands his previously masterly ability of drawing began to fail. Brauer was assigned Director of the Zoological Museum in 1898, but he could no longer meet this challenge according to his own high standards. Published in 1901, his last work was the chapter on Diptera in a history of zoology in Austria from 1850 to 1900. He died on 29 December 1904 in the home of his daughter after a long, lingering illness.

The most prominent feature of Brauer's classification is the splitting up of the Linnean Class Insecta into 17 orders and the Neuroptera into no less than seven Orders (Ephemeroidea, Odonata, Plecoptera, Corrodentia, Neuroptera, Panorpatia and Trichoptera). Brauer described eleven genera and 18 species of Odonata known from Australia, just over 5% of the total. Of these, two genera and one species were subsequently recognized as synonyms.

Johann Jakob **Kaup** (*10 April 1803, Darmstadt † 4 July 1873, Darmstadt) ^{47 48 49 50}



Johann Kaup was a German naturalist who became Director of the Hessisches Landesmuseum Darmstadt. In that position he received specimens from the then Netherlands East Indies and Sulawesi. Kaup assigned names to those species he believed were new to science and sent specimens to Friedrich Brauer, a distinguished odonatologist at the Natural History Museum, Vienna. Brauer generously retained Kaup's names unless they were previously occupied. "Herr Dir. Kaup in Darmstadt hat mir seine Libellen zur Bearbeitung eingesendet. Dieselben sind von ihm bereits benannt und ich habe bei neuen Arten die Namen nur dann geändert, wenn dieselben schon bei Libellen vergeben waren." ⁵¹ [Director Kaup from Darmstadt has sent me his dragonflies for review. For those which he has already named as new species I have changed these names only if they were already attributed to [other] dragonflies.] For none of Kaup's specimens which he sent to Brauer, including three species known from Australia (*Tramea loewii*, *Macrodiplax cora*, and *Gynacantha rosenbergi*), is there evidence that he provided a description so he should not be considered the author (*sensu* ICZN Code), though he appears as such in some checklists. Nevertheless, for completeness, a short biography is included here.

Johann Kaup was born at Darmstadt Germany, on 10 April 1803 and there he passed through the lower school, the Pädagogium. Enticed by the reputation of Professor Johann Friedrich Blumenbach, one of the first to explore the study of mankind as an aspect of natural history, Kaup moved to Göttingen to study at the university. Disappointed that the natural history collection, the library, and even Blumenbach, did not meet his expectations, he moved to the University of Heidelberg the following year. Again, his hopes were not fulfilled so, with limited means, he travelled to Leiden where he obtained a position at the Rijks Museum van Natuurlijke Historie where Coenraad Jacob Temminck was the director. Here Kaup studied amphibians and fishes. Although he was respected by Temminck, his youthful pride on his newly discovered genera and species (published under the pseudonym of *Isis*) and his perception of the envy of his colleagues soon clouded his prospects. Within two years he left Leiden and, after peripatetic wanderings

through northwest Germany arrived back in his native country in 1828.

From 1830 Kaup was employed at the natural history collection of the Grand-ducal Museum in Darmstadt [Hessisches Landesmuseum], initially as a temporary assistant. In 1837 he advanced to the position of Inspector. The University of Giessen awarded him a degree of Dr. phil. *honoris causa* and, in 1858, he became a Professor. Although offered other advantageous positions Kaup refused them. He did however lead scientific missions of several month's duration to England and France, where he was held in great esteem among his professional colleagues. He was a knight of the Danish Dannebrog and the Hessian Philipps Order, and an honorary member of many learned societies. He remained at the Museum until his death in 1873.

In 1829 he published *Skizze zur Entwicklungsgeschichte der europäischen Thierwelt* [Sketch of the history of development of the European animal world]. In this work he regarded the animal world as developed from lower to higher forms, from the amphibians through the birds to the beasts of prey. However, he subsequently repudiated this work declaring himself against the doctrines of Darwin's *Origin of Species* when it was published. The Darmstadt Museum holds a large collection of fossils from the Late Miocene Deinotherium Sands, at nearby Eppelsheim where the first fossil ape was found. This gave Kaup ample opportunities for palaeontological studies and his publication of *Beiträge zur näheren Kenntniss der urweltlichen Säugethiere* [Contributions to the knowledge of the surrounding prehistoric mammals] (1855-1862) brought him renown.

Robert McLachlan (or **M'Lachlan** or **Mac Lachlan**) (*10 April 1837, Ongar, Essex †23 May 1904, Lewisham) ^{52 53 54 55 56 57 58}



Robert McLachlan was the son of Hugh McLachlan, ship-chandler, a native of Greenock, Scotland, who in early life settled in London. When Robert was 16 his father died so, upon his coming of age, he inherited the independent means which enabled him to devote his whole life to the pursuit of natural history. For some years he was nominally a shipbroker, acting for a single ship the *Canaan*, of which he was part owner with some of his relatives. When 18 years of age, McLachlan made a voyage extending over 13 months to New South Wales and Shanghai. On this tour he

amassed a considerable herbarium, the species of which were subsequently named with the assistance of the botanist Robert Brown who had himself collected extensively in Australia.

After McLachlan's return from this voyage he resided with his mother at Forest Hill, and it was there that his earliest papers on Lepidoptera and Neuroptera were written. His early entomological interest was with the Lepidoptera but, when Dr Hagen began to contribute *A synopsis of the British Neuroptera* to the *Entomologist's Annual*, McLachlan was stimulated to begin a special study of the group which was to provide the chief interest of his life, viz. the Neuroptera (in the broad sense). He corresponded with Hagen, de Selys and Brauer and made almost annual excursions to the Continent exploring the Alps of Dauphiné and Savoy, and the Pyrenees. He frequently paid a visit to his great friend Selys *en route*, McLachlan was one of the pioneers in the study of the fauna of the mountains of France and Switzerland. He amassed the largest collection of native and foreign Neuroptera in the British Isles, far exceeding that of the British Museum, mainly by purchase, gift and exchange, but also through his own captures at home and abroad.

Many acknowledgements for the loan of dragonflies from McLachlan are contained in the works of Baron de Selys Longchamps who left a considerable sum of money to McLachlan in his will. The purpose of this bequest was to review and catalogue the Selys' collections. Due to ill-health McLachlan was unable to accept this legacy. Specimens from McLachlan's collection were used in the Odonata section of the *Biologia Centrali-Americana*, privately issued in 215 parts from 1879 to 1915 by the editors Frederick Du Cane Godman and Osbert Salvin of the British Museum (Natural History) in London.

Before 1870, McLachlan had published monographs on most of the families of the British Neuroptera (*s.l.*) but refrained from writing a monograph on British Odonata as he considered these had been satisfactorily dealt with by de Selys and Hagen. His *Monographic Revision and Synopsis of the Trichoptera of the European Fauna* was the major work of his life, a volume of 630 pages and 59 plates containing about 2,000 figures, many illustrating structural details from his own camera lucida drawings. He also collaborated with his great personal friend Selys, publishing in Belgian journals. McLachlan was

a member of the editorial board of the *Entomologist's Monthly Magazine* from its commencement in 1864, becoming proprietor after the death of H.T. Stainton in 1893. He continued in that capacity to the time of his death.

Joining the Entomological Society of London when only 17 years of age, he filled almost every official position over a period of 40 years: President, Vice-President, Secretary, Member of Council, and Treasurer. He took an active part in various other scientific associations, becoming a Fellow of the Entomological (1858), Linnean (1862), Royal (1877), Zoological (1881) and Royal Horticultural (1888) Societies in London. He was an honorary member of the Entomological Societies of Belgium, Holland, Sweden, and Switzerland, and the Société Impériale des Amis des Sciences Naturelles, Moscow, the Societas pro Fauna et Flora Fennica of Helsingfors, and the New Zealand Institute.

McLachlan named one species from Australia, *Micromidia atrifrons*. The paper was read by the President as a note to a meeting of the Belgian Entomological Society.

Ferdinand Anton Franz **Karsch** (or **Karsch–Haack**) (*2 September 1853, Münster † 20 December 1936, Berlin) ^{59 60 61 62}



Ferdinand Karsch was born in 1853 in Münster and grew up there. While he was still at school, under the pseudonym Paul Grüne, he published a catalogue of spiders to be found in his native region, Westphalia (1870-73). This demonstrates that his systematic interest in nature developed early, probably due to the influence of his father Anton Karsch (1822-1892) a doctor. Karsch senior habilitated ⁶³ in Natural Science and in 1853 was appointed to a professorship in that discipline at Münster with the Royal Academy of Philosophy and Theology, an institute for the education of clergymen and teachers. Anton was the author of a general key to insects and the first reliable flora of Westphalia.

Upon leaving school Ferdinand Karsch studied natural science at the Münster Academy for four semesters. In 1875 he then changed to the Friedrich Wilhelm University in Berlin where he completed his Dr. phil. in 1877 with a publication on gall midges (*Cecidomyiidae*). In the following

year he obtained a position as assistant at the Zoological Museum Berlin. To that institution came zoological collections mostly from expeditions to the German colonies in Africa and New Guinea, but also from other parts of the world. There were many new taxa of arthropods to be described. After qualifying in 1881 Karsch taught at the agricultural college Berlin [*Landwirtschaftliche Hochschule*] for eleven years, first as private lecturer and later as professor. He became editor of the periodical *Entomologische Nachrichten* in 1884 until it was abandoned in 1900, and from 1886 until 1895 he was also entrusted with the editorship of the *Berliner Entomologische Zeitschrift*.

In 1899 he became Curator at the Zoological Museum and was responsible for its entomological collections until his retirement in 1921. From 1870 to 1903 he published some 270 papers and books on spiders and insects but there is an abrupt change of focus around 1900. He collected evidence for homosexuality in animals and in foreign people to show that kind of behaviour was natural, and this research resulted in about another 170 publications. It has been suggested that due to the demands of his father he gave himself over to entomology but his private interest pertained to psychology⁶⁴. He mostly published under the name Karsch-Haack from 1905 on, the latter part of the name being his mother's maiden name.

His importance in the field of the insect fauna and arachnids is to be seen not only from the number of his publications. Some 30 taxonomists dedicated taxa to him; at least 30 valid taxa and nine junior synonyms from various orders bear his name. He wrote 32 publications on Odonata. Of the 33 genera he named twelve are junior synonyms and three homonyms; of his 109 species group names two are subspecies, 24 are junior synonyms and one is a homonym. Many of these taxa were from the German colonies in Africa, but others are from South America, the Indo-Australian region and China.

Karsch described two Australian genera and three species from specimens held in the Royal Museum of Natural History in Berlin.

William Forsell **Kirby** (*14 January 1844, Leicester † 20 November 1912, London) ^{65 66 67 68 69}



William Kirby was born in Leicester, the eldest son of Mr. Samuel Kirby, a banker. He was educated by private tutors and became interested in butterflies and moths at an early age. After his father died the family moved and he joined the Brighton and Sussex Entomological Society. His first published entomological article was in the *Entomologist's Weekly Intelligencer* in 1856.

In 1860, Kirby left Brighton and moved to London, where he was employed with Messrs. Williams and Norgate, Publishers, until 1866. He was elected a fellow of the Entomological Society of London in 1861; in later years he was Secretary of that society. In 1867 Kirby accepted the post of Assistant Naturalist in the Museum of the Royal Dublin Society (afterwards National Museum of Science and Art). Then in 1871 his great work, *A Synonymic Catalogue of Diurnal Lepidoptera*, appeared and at once made him famous. In 1878, Kirby was asked to prepare the Catalogue of the renowned collection of butterflies bequeathed to the British Museum by W.C. Hewitson on his death.

In 1879, on the death of Frederick Smith, Kirby was transferred from Dublin to the Zoological Department of the British Museum, a post which he held until he retired according to its regulations, in 1907. From 1869 to 1884, Kirby contributed the annual reports on Lepidoptera for the *Zoological Record*, and afterwards on the greater part of the Insecta. For this task he needed to acquire a knowledge of various European languages such as Dutch, Swedish, Danish, Spanish, Portuguese and Russian. At the British Museum he worked on various orders of insects for which he published several catalogues including Lepidoptera, Odonata, Hymenoptera and Orthoptera. He also published popular books and articles on Entomology including an *Elementary Text-book of Entomology* (1885). In 1890 *A Synonymic Catalogue of Neuroptera, Odonata, or Dragonflies* was issued, which some considered to be the best of Kirby's entomological works. It was the first catalogue of the Odonata of the world.

Kirby had wide interests and exceptional ability as a linguist and philosopher, publishing on general natural history, botany, evolution,

folklore, mysticism and poetry. He translated the epic *Kalevala the Land of Heroes* from its original Finnish into English in 1907 and provided many footnotes to Sir Richard Burton's translation of the *Arabian Nights*.

Kirby named 16 odonate taxa from Australia: 10 genera, five species, and one subspecies. One genus and three species were subsequently recognised as synonyms. Seven taxa were named in his *Revision of the Libellulinae*, four from his catalogue and five from a collection received at the British Museum from Gilbert Turner of Mackay, Queensland.

George Herbert **Carpenter** (*1865, Peckham district of southeast London †22 January 1939, Belfast) ⁷⁰



George Carpenter was born in London and he graduated in Science from King's College, London. It is believed that he spent four years in an engineer's office before obtaining a position as clerk in the South Kensington Museum. He took a particular interest in the natural history of Ireland. At the age of 23, he was appointed as Assistant Naturalist to the Museum of Science and Art, Dublin, in association with Dr Robert Francis Scharff who held the Curatorship. Carpenter's interest was in entomology, particularly the Arachnida. His most eventful contribution to entomological study was his *List of the Spiders of Ireland* which was communicated to the Royal Irish Academy. In addition to the spiders, much of his attention was devoted to the Archaeognatha, a neglected Order of insects. Carpenter was particularly interested in the existence of a strong southern element in the Irish fauna, having its nearest relatives chiefly grouped in Portugal and western Spain.

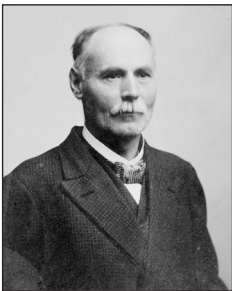
Early in 1889 Carpenter became a member of the newly formed Dublin Naturalists' Field Club and, together with Robert Lloyd Praeger, he inaugurated the *Irish Naturalist* in 1892. Until Carpenter's retirement from Dublin in 1922 he and Praeger remained joint editors of the magazine. He was awarded a Doctor of Science degree from Queen's University, Belfast and in 1904 was appointed Professor of Zoology in the Royal College of Science, Dublin. In 1911 he succeeded Robert Scharff as Secretary to the Royal Zoological Society, a position which he held until 1918.

In 1924 Carpenter left Ireland to become Keeper of the University Museum

of Manchester at a time when it was being re-organised and extended; a project in which he took particular pleasure. While here he also continued his entomological work, chiefly examining collections of Collembola for the British Museum. On reaching retiring age he was invited to continue as Keeper for a further three years' period; and this he did. After four years' residence in Manchester he sought and received ordination, doing the duties of an honorary curate.

After W.F. Kirby of the British Museum had named the dragonflies in the Dublin Museum collection, Carpenter recognised that two species were undescribed, a situation which he rectified. One of these, from the Australian fauna, *Zygomma multinervorum*, was collected in the then British New Guinea. The other was subsequently synonymised. This appears to be his only contribution to the Odonata.

Johann Friedrich Nepomuk **Förster** (*5 February 1865, Kehl †2 December 1918, Offenburg) ^{71 72 73 74 75 76}



Friedrich Förster was born in 1865 in Kehl (near Strasbourg), the second son of a Baden Customs Officer. Two years after his birth, the family moved to a new post in Randegg (today incorporated into Gottmadingen) and then to Mannheim in 1877. It would appear that Förster did not have access to a secondary school at Randegg and his education was delayed. At Mannheim Förster attended a secondary school achieving a qualification for university matriculation in 1886, at the age of 21. Subsequently he studied natural science at Heidelberg University until December 1889. Among the subjects taken by Förster for some terms was microscopy, a useful discipline for a taxonomist-to-be. After his final exam Förster chose the teaching profession and was sent to Schopfheim until September 1898 when he was appointed to Mannheim for almost a year.

In June 1899, as a secondary school teacher with an academic qualification, he was given the post of professor at Bretten and this is where he married Elise Common. There also their four sons were born: Fritz (1902), Karl (1904), Reinhold (1906) and Erwin (1907). In September 1914, shortly after the outbreak of World War 1, against his will he was transferred to a school at Oberkirch, probably to replace someone who was sent to the front.

Förster died in the hospital of Offenburg (the next major town to Oberkirch) in December 1918 after a short, severe illness. As his death took place only some days after the Armistice of World War 1 no obituary was published in any international periodical.

After his death his family was impoverished, so his widow had to sell his collections. She asked F. Ris to arrange the insect collection for sale, but he declined due to his severe eye damage. Förster's botanical collections went to the Collections of the Bavarian State at Munich; his odonatological collection to UMMZ Ann Arbor, facilitated by his odonatological friend E.B. Williamson, who also was godfather to his third son Reinhold; 572 of his butterflies went to Tring; and about 5,000 specimens from his beetle collection to the British Museum. Parts of his library were sent to Williamson with the remainder being forwarded to odonatologist C.H. Kennedy.

Förster began his odonatological studies in 1895. He contacted Selys to ascertain where he could obtain copies of his publications which he had not been able to purchase. Selys was very helpful, endowing him many reprints and specimens. They collaborated closely during the last few years of Selys' life. Their mutual interest focussed on Indo-Australian dragonflies, and both had independently purchased material from this region from Staudinger & Bang-Haas (Dresden). Förster also corresponded with F.F. Laidlaw, G. Severin, S. Uchida and E.B. Williamson. Most of his 50 publications are on dragonflies (34) with a particular emphasis on the description of species from the Indo-Australian region and Africa. The first odonate species he described was published in the *Annales de la Société entomologique de Belgique* in 1896 and was dedicated to Selys (as *Caconeura selysi*). After the death of Selys, Förster was commissioned to compile the section of the catalogue of the Selys collection on Agrionines. He also was invited to describe specimens collected by others, e.g. by Sámuel Fenichel and Lajos Bíró, each of whom collected in Kaiser-Wilhelmsland in that part of New Guinea which was a German colony.

In total Förster described 31 genera and one subgenus of Odonata. Of these 32 taxa, 14 had been described previously, so that Förster's names are junior synonyms, and for three genera he had chosen names that were preoccupied, so these names are homonyms. Of his 147 species and nine subspecies, 65 were synonyms.

Odonata were not Förster's sole interest. There are a few botanical papers by him. He asked E.B. Williamson to send him seeds of North American trees he wanted to cultivate in his garden at Bretten, and *Pseudemys* turtles, which he tried to acclimatise in vain. Furthermore he was interested in palaeozoology and palaeoanthropology and so participated in excavations at the locality of *Homo heidelbergensis* at Mauer near Heidelberg. This experience led him to ask Williamson to send him bones and antlers of moose, reindeer and other arctic animals and he tried to obtain such items from Siberia as well. Förster was in contact with Lord (Lionel Walter) Rothschild, to whom he dedicated the bird of paradise *Astrapia rothschildi* (Förster, 1906) and the marsupial *Peryoryctes raffrayanus rothschildi* (Förster, 1913). He described other vertebrates with Rothschild, and Rothschild honoured Förster in eponyms for the birds *Henicophaps foesteri* Rothschild & Hartert, 1907 and *Melidectes foesteri* (Rothschild & Hartert, 1911).

From the Australian dragonfly fauna Förster described four genera one of which was subsequently synonymised, and eight species, four of which are now considered as synonyms. *Eusynthemis* was named as a new genus from a specimen in Selys' collection, with a collection locality of Port Denison, Queensland, but, as with a number of species with similar label data, that is not within the known range of the species. Five of the remaining eleven taxa were collected in New Guinea and five were collected by Emil Weiske in Cairns. Weiske was associated with Staudinger & Bang-Haas and the source of two other of Förster's specimens were also attributed to that insect trading company.

Leopold **Krüger** (*9 December 1861, Stralsund, Germany †6 September 1942, Stettin) ^{77 78 79}



Leopold Krüger, was born on 9 December 1861 at Stralsund. What little is known about him comes from his association with the *Stettiner entomologischer Verein*, which had been founded in 1839 as the third entomological society in the world, second only to those of Paris and London.

Krüger was a teacher of biology and chemistry, and in the 1890s he came to Stettin (now Szczecin, Poland). A catastrophic outbreak of phylloxera in the European viticulture industry led to a competition being held for the best treatise on three questions: (1)

had there been a migration of insects between the USA and Germany?; (2) if a migration had occurred, was an acclimatisation of the insects possible?; and (3) what might be the economic results of such a migration? Krüger's paper was accepted though his opinions on these themes are not in accord with modern scientific knowledge ⁸⁰. Among the three members of the jury was Ferdinand Karsch, the famous entomologist. Krüger's paper was published by the Stettin Entomological Society, the president of which, Heinrich Dohrn, had been associated with the competition. During the years 1893 - 1897 Dohrn had procured a collection of insects from Sumatra and he entrusted Krüger with the determination and description of the dragonflies. This work was published in the following years.

Krüger became vice president of the *Stettiner entomologischer Verein* in 1910 and, after the death of Dohrn in 1913, he was elected president of that Entomological Society, continuing until his retirement in 1927. One of his duties was to edit the society's journal, the *Stettiner entomologische Zeitung*. The Stettin Museum had opened in 1913 with funding procured by Dohrn. In 1919, Krüger was appointed as curator. The museum's departments were the collection and the library of the Entomological Society, an antiques collection and an art collection, celebrated in a Festschrift authored by Krüger. During Krüger's time as President the society suffered difficult circumstances arising from World War I (1914 – 1918) and hyperinflation in Germany. The society's monetary funds were reduced to nothing. In spite of these difficulties Krüger managed to maintain the publication of the journal (albeit for three years with reduced volume) and the society by financial support secured by contract from the city of Stettin. These problems were not solved without controversy so, after his retirement in 1927, Krüger never again entered the museum. In spite of being elected an honorary member he could not be won over to participate in the activities of the society again. In 1918 he had supported the foundation of the *Pommersche Naturforschende Gesellschaft*, which shared half of its members with the Entomological Society, and in the first years he even edited its journal. Krüger died on 6 September 1942.

Besides his publications on the Odonata of Sumatra, Krüger wrote papers which contributed to a monograph of the Neuroptera *sensu* Linné, a study of the sawflies of the valley of the river Oder, and an introduction to the study of Odonata with a summary of the Odonata of Pomerania. Other papers

pertain to the mammal fauna of that region. The important collection, on which his description of Odonata of Sumatra was based, fortunately survived the destruction of Stettin in World War II and is now kept in the Museum and Institute of Zoology, Polish Academy of Sciences, Warsaw. It comprises about 4,300 specimens of Neotropical, Ethiopian and Oriental Fauna. The exotic part of the Krüger Collection chiefly consists of the large number of specimens obtained by Heinrich Dohrn.

Krüger named one Australian species, *Gynacantha kirbyi*, which was collected during an expedition to the Deli Serdang Regency, Sumatra, and later procured by Heinrich Dohrn.

René **Martin** (*5 June 1846, Châtellerault, France †20 August 1925, Villa Alemana, Chile) ⁸¹



René Martin was born at Châtellerault, department of Vienne, France, into a family with a history of serving in public office. He attended the Lycée of Versailles from 1859 to 1866 and studied law in Paris from 1866 to 1870. In 1871 he married Mlle. Marie Falchéro and, as her property was located to the east in the adjoining department of Indre they moved to Le Blanc in 1872.

There he practised as a solicitor until 1907. Starting from his arrival in this region he devoted much time to the study of the vertebrates, the Lepidoptera, the Neuroptera (in the Linnean sense) ⁸², that is, all insects with mandibulate jaws and two pairs of net-veined wings. such as dragonflies, mayflies, stoneflies, lacewings and caddis-flies. His special interest was in Odonata.

At the beginning of 1894 he spent four days in Belgium, solely to visit the collections of Baron de Selys Longchamps. He collected in Italy in 1894 and in 1896 he made a hurried visit to London, arriving on Monday evening, spending the Tuesday with Robert McLachlan and Wednesday at the British Museum, and returning to France the same evening. He was a long term correspondent with Philip Calvert in America, and also with J.G. Needham and E.B. Williamson. Near the end of 1900 his wife died and, shortly thereafter, his friend Baron de Selys Longchamps.

After Selys' death Martin was charged with preparing the catalogue of the Cordulinae and the Aeschninae in the Selys collection. Selys had left a

considerable sum of money to Robert McLachlan to work on the collection but McLachlan's ill health prevented from doing the work. As a result, Baron Walthère de Selys and his nephew Maurice, commissioned a general history of the Odonata in honour of Selys, to be based on his collection. It was to be a methodical (and iconographic) catalogue, including diagnoses of the new forms. Martin was assigned the Cordulinae and Aeschninae, Ris the Libellulinae and Förster the Agrioninae. At that time, 1901, there was no one to work on the Gomphinae or Calopteryginae. By 1904 Martin's revision of the Aeschnines of the Selys collection was approaching completion and he was collaborating with Philogène Wytzman on the publication of *Genera Insectorum*.

Martin moved to Paris in 1908 and soon thereafter occupied himself with the Calopterygines of the Selys collection which was completed by 1912. About then he made it known that he wished to sell his collection of Odonata which contained many types and at least 1600 species. Henry Skinner, acting for the Academy of Natural Sciences of Philadelphia, gave an unfavourable report and the collection remained unsold. Most of the collection was given to the Paris Museum in 1921. Martin's daughter moved with her husband to Chile in 1920 and Martin accompanied her intending to spend at least a year, perhaps two, in central Chile. Among the Fathers of the Sacred Heart of Santiago he found congenial collectors of insects and took part in the formation of an entomological society in that city in 1922. René Martin, died at Villa Alemana, a small village between Valparaiso and Santiago, Chile in 1925.

Amongst Martin's major publications were two of monographic status, on the Cordulines (1906) and the Aeschnines (1908-09) respectively in the *Catalogue of the zoological collections of baron E. de Selys Longchamps*, and one treatise on the Aeschninae in Wytzman's *Genera Insectorum*. He described 165 species and subspecies and 18 genera as new. He left at Brussels his manuscript on the Calopterygines of the Selys collection and that on the genera of the Gomphines, believing that they would appear when the price of paper and printing ink permitted, but that never eventuated.

Martin named one genus and 23 species from Australia, three of which were subsequently synonymised. Martin contributed to the first monograph of the Australian Odonata⁸³ and produced a more comprehensive survey

in 1901. Seventeen of his species were published in *Les Odonates du continent australien*, his substantial work based on specimens collected in Victoria by Farncombe Billingham and augmented with others from the Selys collection.

Robin John **Tillyard** (*31 January 1881, Norwich, England †13 January 1937, Goulburn)^{84 85}



Robin Tillyard was born on 31 January 1881 at Norwich, England. His school days were spent at Dover College, a small public school. He passed the examination for the Royal Military Academy at Woolwich, but was rejected on medical grounds. He won scholarships for both Oxford (classics) and Cambridge (mathematics), and choosing the latter, proceeded to Queens' College, Cambridge. In 1903 he took his B.A. degree and in the following year read Oriental languages and theology. He graduated Master of Arts of Cambridge in 1907. However rheumatism compelled him to leave England and he secured a position as a master in science and mathematics at Sydney Grammar School.

While at the Grammar School his interest in dragonflies developed. His first paper on these insects [*On dimorphism in the female of Ischnura heterosticta*] was published in 1905. In 1909 he married Patricia Craske, an old friend from his Cambridge days. As a result of his increasing preoccupation with natural history he decided to abandon teaching for a scientific career and he resigned his post at the Grammar School in 1913. He was admitted as a research student in the University of Sydney and awarded a Government Science Research Scholarship under Professor William Aitcheson Haswell, first Challis Professor of Biology. Tillyard was granted a B.Sc. at the end of 1914, this being the first occasion on which the university had conferred such a degree for research. He held a Linnean Macleay Fellowship in Zoology from 1915 to 1920, and in 1917 his book *The Biology of Dragonflies* was published by the Cambridge University Press. Also in 1917 the University of Sydney conferred a D.Sc. on him; he was appointed a Lecturer in Zoology; and he was awarded the Crisp Medal by the Linnean Society of London for his paper *On the Rectal Breathing Apparatus of Some Anisopteroid Larvae*.

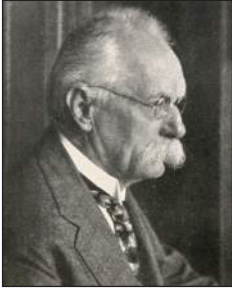
In 1919 the New Zealand Government requested Tillyard's advice on problems associated with the trout fisheries, his first study in applied biology. As a consequence of his visit to New Zealand he accepted the position of Chief of the Biological Department of the newly established Cawthron Institute at Nelson. He went to Nelson in 1920 and, in the same year, was awarded a Sc.D. degree by Cambridge University. His successful introduction of an hymenopterous parasite of the Woolly Apple Aphid into New Zealand was a notable achievement in the field of applied entomology. In 1925 he was elected a Fellow of the Royal Society and in the following year his great work, *Insects of Australia and New Zealand*, was published.

Tillyard returned to Australia as Chief of the Division of Entomology in the Council for Scientific and Industrial Research in 1928 but his years at Canberra were not happy ones. Continuous pain from an injured spine and concerns about lack of progress in the department and his relationships with administrative colleagues led to a nervous breakdown. In 1934 he resigned from CSIR on the grounds of ill-health. He died in Goulburn District Hospital on 13th January, 1937, as a result of a motor accident while driving from Canberra to Sydney.

While in New Zealand, and subsequently, Canberra, he necessarily devoted a large proportion of his time to the control of a number of insect pests. As well as his two books he published some 200 scientific journal articles. His early work was mostly on the Odonata but his interest ranged over the whole insect kingdom where he described new material in all but a very few Orders. He made significant contributions to knowledge of the Panorpid Complex [Mecoptera, Trichoptera, Lepidoptera, Siphonaptera, and Diptera] and the study of fossil insects of Permian and Triassic age in Queensland and New South Wales.

Tillyard was demonstrably the most prolific of authors of the Australian odonate fauna, describing 25% of the taxa; 135 in total. This number comprised 24 genera, 103 species and eight subspecies. Two of these genera and 14 species were subsequently recognised to be synonyms.

Friedrich **Ris** (*8 January 1867, Glarus; †30 January 1931, Rheinau) ^{86 87 88}



Friedrich Ris was born in Glarus, Switzerland, the second oldest of four children in a family whose members had been citizens of Glarus since the sixteenth century. In 1873 he commenced his education at the Volkshule of his small town and then, in 1881 when the family moved to Zurich, he attended the Zurich Gymnasium until he passed his final examination in 1885. At the Zurich Gymnasium, Prof. Gustav Schoch, taught Zoology and introduced his scholar Ris into the *Entomologische Kränzchen*, a small society of Zurich entomologists. By this time, Ris had already written the first comprehensive study of the Swiss odonate fauna *Die Schweizerischen Libellen*. Another influence on Ris was an amateur female taxidermist who showed the boy the methods for setting and preserving insects. She also lent him her books on natural history. As a boy he collected butterflies and during his college days he made a collection of over 1,200 species of Coleoptera.

Ris' main interest, however, was the Neuroptera (in the old sense), especially the Trichoptera and Odonata. He made large and well-preserved collections of these from about Zurich, where the fauna is rich, and from the Alps. Between 1884 and 1889 he studied medicine at the University of Zurich, passing the State Examination and acquiring his doctor's diploma in 1890. After acting for a time as house-surgeon of the Zurich hospital, he entered the employ of the Norddeutscher Lloyd at Bremen as a ship's surgeon, making four voyages: one to North America, two to South America (Brazil and the River Plate) and one to the east where he visited Singapore, Hong Kong and Shanghai. During his shore leave he took every opportunity for entomological collecting, especially of Odonata. This was the beginning of what ultimately became a very large and representative collection of these insects from all parts of the world.

After a short period of private practice at Liestal, he accepted the post of assistant physician at the Insane Hospital at Rheinau in 1894 under Director Paul Eugen Bleuler. In 1897 the canton Tessin began the construction of its Insane Hospital and invited Dr. Ris to be its Director. He accepted the call and went to Mendrisio after some months of study with Prof. August Forel in

Burghölzli, the psychiatric hospital of the University of Zürich. Overseeing the building of the Mendrisio Asylum did not fully occupy his time so he obtained permission to live in Pavia (Lombardy, Italy) studying neurology in the laboratory of Camillo Golgi, an Italian physician, pathologist, scientist and Nobel laureate. In the same period he visited Germany, inspecting asylums there and studying Odonata in the Berlin and Hamburg Museums. He never actually settled at Mendrisio. In 1898 Prof. Forel retired from his office, Bleuler became his successor as Director of Burghölzli and Professor of Psychiatry, and Dr. Ris was chosen as Director of the Insane Hospital at Rheinau, where he remained until his death.

The Odonata were his primary interest and early in his entomological career he visited Baron de Selys Longchamps. His correspondence with Selys began in the mid 1880s, that with K.J. Morton in 1893 after an introduction by Robert McLachlan, and that with Philip Calvert in 1896. In 1899 he visited Selys a second time at Liège and Longchamps, and during the same holiday made the personal acquaintance of René Martin at Le Blanc. Ris studied their two large collections intensively. After the death of de Selys in 1900, members of the Baron's family proposed the publication of a catalogue of his zoological collections, in the form of monographs. Ris was invited to be the general adviser. He personally worked on the subfamily Libellulinae, the only one in the Odonata for which de Selys had not prepared a synopsis or monograph. A serious injury to an eye threatened the continuance of his work on the Selys Catalogue, but printing of the Libelluline portion began at Brussels in the spring of 1909. The last instalment (with the indices and bibliography) was deposited at the National Library, Academy of Sciences on 1 March 1919, delayed by the outbreak of World War 1.

By 1897 Ris had begun to write on extra-European Odonata, various memoirs dealing with the dragonflies of the New Guinea region, South Africa and the region of the American Cordillera from Costa Rica to Catamarca. A large amount of material had been made available for his study, especially the extensive Guatemalan, Guinean and Trinidad collections of E.B. Williamson. Seven of his papers are concerned with the Australasian area: southwest Australia (1910), New Guinea, the Bismarck Archipelago and the Moluccas. He considered his collection to be in good condition and one of

the largest in existence.

Ris named two genera and two species of the Australian fauna. *Metaphya tillyardi* came from the expedition of Dr. H.A. Lorentz to southwest New Guinea while the others resulted from his work on the Libellulinae section of the Selys Catalogue.

Frank Fortescue **Laidlaw** (*1 February 1876, Galashiels †11 December 1963, Foxearth, Suffolk) ⁸⁹



Frank Laidlaw was born at Galashiels, Scotland and spent his childhood at Guildford, Surrey. He took a 'double first' in Zoology from Trinity College, Cambridge. In 1899 he joined the Cambridge University Expedition to Malaya under the leadership of Walter William Skeat. On his return he was appointed Lecturer and Assistant Demonstrator in Zoology at Owen's College, Manchester. In 1903 he turned to the study of medicine and qualified M.R.C.S. and L.R.C.P. from St. Bartholomew's Hospital, London. His medical practice commenced in Devon in 1911, where he remained until his retirement in 1945, except for three years in the R.A.M.C. during the first World War. Between 1911 and 1945 all his research on natural history was done during such spare time as he could find from his work as a general practitioner.

During the Skeat Expedition he had been obliged to cover several widely different groups of animals thus extending his talents as student and field collector. He reported on the dragonflies, marine turbellarians, amphibians and reptiles collected on the expedition. The systematics of dragonflies and polyclad flatworms was advanced considerably by his studies and he maintained a keen interest in these groups all his life. The Malayan adventure made a deep impression on him and was the origin of his lifelong interest in the natural history of the region. Although better known as an amateur malacologist, earlier in his career he studied dragonflies, identifying a number of new species. His name was recorded in species such as *Epiophlebia laidlawi* Tillyard, 1921 and *Burmagomphus laidlawi* Fraser, 1924.

Laidlaw named the genus *Metaphya*. The only species from this genus known from Australia has been collected from the island of Bramble Cay, the northernmost point of land in Australia. Bramble Cay is only 55 km southeast

of Kiwai Island in the Fly River delta of Papua New Guinea. Although the island is located 25 km north of the Seabed and Fisheries Jurisdiction Line between Australia and Papua New Guinea, administratively it is part of the Eastern Islands Region in the Shire of Torres. Its Australian sovereignty is undisputed and explicitly recognized by Papua New Guinea.

Kenneth John **Morton** (*5 August 1858, Carlisle, Lanarkshire †29 January 1940, Edinburgh) ^{90 91 92}



Kenneth Morton was born at Carlisle, Lanarkshire, Scotland, and was educated at the village school, receiving tuition in the classics and mathematics. In 1874, at the early age of 16, he entered the British Linen Bank, in their Glasgow branch. He transferred to Edinburgh in 1897, where he remained until his retirement in 1922. Although offered the post of manager, he declined this honour to have more leisure time for the pursuit of entomological studies.

Morton collected insects from his youth, firstly the Lepidoptera of which he acquired a fine collection of British species. At about the age of 18 however, he began to extend his interests to other orders. His favourite Order was probably the Odonata, although he made important contributions to knowledge of the Trichoptera, Plecoptera, Ephemeroptera and Neuroptera. Mainly interested in systematics and distribution, he described a number of new species belonging to these orders, and published on the distribution of many others. In his earlier years he collected mainly on the river Clyde but then throughout Britain. He made numerous excursions to Europe for Odonata, Neuroptera and Trichoptera. His first overseas visit was to Switzerland in 1888, where most of his time was spent in the Chamonix region. In 1900 he spent a month in Norway. Two years later he collected in the south of France, and in 1904 spent a memorable holiday at Rheinau with Dr. Ris, the famous odonatologist. The visit was returned in 1906 when Ris came to England to study the Morton collection. Overall France was visited on four occasions, Switzerland twice, and Norway, Italy, Corsica, Austria and Spain on other trips.

It was to his early collecting grounds on the Clyde that he took his friend Robert McLachlan when the latter visited Carlisle in about the year 1886.

His correspondence on Trichoptera and Odonata was extensive and included Professors Needham and Kennedy, E.B. Williamson and P.P. Calvert in the United States. The 50 papers by Morton dealing with the Odonata are chiefly concerned with the fauna of the Near and Middle East and Yunnan, China. However they did include the descriptions of two new genera, *Chorismagrion* from North Queensland, and *Coryphagrion* from Tanganyika. His collection and library have been presented to the Royal Scottish Museum, Edinburgh (now part of the National Museum of Scotland).

Morton's contribution to the Australian fauna was to name both the genus and species of *Chorismagrion risi*.

Herbert Campion (*2 August 1869, London †24 January 1924)^{93 94}



Herbert Campion was born in London but, frail physically, he never attended school. His delicate health from boyhood onward prevented him from doing strenuous work and hindered his field studies. In his early days he studied the Odonate fauna of Epping Forest with his brother, Frederick William. For the seven years 1903-1909 they wrote annual reports in *The Entomologist* on their observations. From 1910 to 1913 these were replaced by notes in the same journal on the dragonflies of varied localities visited by the authors and others.

Campion became a shorthand clerk but in 1911 joined the newly established Imperial Bureau of Entomology. In 1921, he transferred to the British Museum where he held the position of Temporary Assistant to the Entomology Department of the Museum until the time of his death. After becoming connected with the Imperial Bureau of Entomology, Campion's attention was directed to exotic Odonata and he produced articles on these insects from Tunisia, West Africa, Dutch New Guinea, Australia, Macedonia and New Caledonia, and on some Gomphines from South America. He described (1916) a beautifully preserved fossil wing from the English Eocene as *Triaeschna gossi*, and in the following year (1917) published notes on Fabricius' Types of Odonata in the British Museum.

Campion named two Australian species, *Austroagrion exclamationis* and *Telephlebia tillyardi*, the latter within a paper authored by Tillyard.

Bror Yngve **Sjöstedt** (*3 August 1866, Hoj, Sweden †28 January 1948, Stockholm)^{95 96}



The Swedish entomologist and ornithologist Bror Yngve Sjöstedt was born to a merchant and his wife on 3 August 1866 in Hoj, a small town beside Lake Vättern. His father used to stuff birds. Before he went to school Yngve kept a zoological collection in the family's summerhouse which also contained his attempts at taxidermy. Later at school in Jonköping his interest in nature was stimulated by good teachers and he served as amanuensis of the school's zoological collection, to which he made personal contributions. After his school leaving examination he went to the University of Uppsala in 1886, where he was awarded his BA in 1890.

Sjöstedt was then offered the position as leader of an expedition commissioned by order of the Swedish Academy of Science to Cameroon (then a German colony). His duties were to collect rodents for T. Tullberg, one of his academic teachers, and insects for C. Aurivillius, who was professor of entomology at the Museum of Natural Science at Stockholm [*Naturhistoriska riksmuseet*]. Sjöberg stipulated the right to collect independently for himself. The expedition took almost two years and was very productive. In 1896 Sjöberg was awarded a licentiate and PhD for a thesis on the birds he had collected in Cameroon. In the same year he produced his first entomological paper, a study on termites from Cameroon. Probably as a result of this publication he was appointed as assistant at the Entomological State Institute [*Statens entomologiska anstalt*], in 1897, the year of its establishment. At the same time he worked in the entomological collections of the Natural History Museum [*Naturhistoriska riksmuseet*]. He later became professor and curator in this institution.

In spring 1898 Sjöstedt visited entomological institutions in USA and Canada to gain expert knowledge which he later used in pest control of gypsy moths (*Lymantria dispar*) and Hessian flies (*Mayetiola destructor*) in Sweden. He took over as editor of the journal *Entomologisk Tidskrift*, a position he retained until 1910. In 1904 he became head of the advisory board of the Skansen Zoo. About that time he began to plan a second expedition to Africa, this time to the Kilimanjaro region in the colony of

German East Africa (today Tanzania). This eventuated in 1905-1906. During this expedition he collected some 4,300 species, of which about one third were not previously known⁹⁷. In 1910 he published the results in three volumes in German. Sjöstedt became a member of the Royal Swedish Academy of Science [*Kungliga Vetenskapsakademien*] in 1909. Over the decade to 1916 he managed the relocation of the entomological collection of the Natural History Museum to its new building. He planned the public exhibition of insects there and composed the catalogue.

In 1918 Sjöberg married the opera singer Rosa Grünberg (1878-1960). From 1922 to 1933 he presided over the board of the Natural History Museum, and from 1927 to 1933 he was vice president of the Vassijaure Institute of Natural Science [*Vassijaure naturvetenskapligns station*] in the Abisko National Park in northern Sweden. As leader of the institute's entomological department he produced an entomological inventory of that park in three volumes. He died on 28 of January 1948 in Stockholm.

Sjöstedt published in German, Swedish, English and French. Among his more than 120 publications, a great many are descriptive and taxonomic. They contain the scientific results of his own expeditions and those of others, as well as travel reports for a broader public. He was interested in international cooperation and so he attended the third International Congress of Ornithology in Paris in 1900, and the first International Congress of Entomology held in Brussels during the World Exhibition of 1910. In 1925 he joined the executive committee for the Third International Congress of Entomology at Zürich. He would have been host of the VIIIth Congress, planned for in 1941, but it was delayed until 1948 because of the Second World War.

His special subjects as an entomologist were Isoptera, Orthoptera and Odonata. His most important works were three volumes on the termites of Africa (1900-1925) and his publications on the Australian Acridioidea (1921-1936). His publications on Odonata pertained to Sweden, some parts of Africa, Australia (from Mjöberg's expedition), Madagascar, the Amazon region, China and central Asia and Kamchatka. Of the nine genera described by him seven are now junior synonyms; among the 72 species group taxa named by him are two homonyms, 22 synonyms and four subspecies.

Among the Australian taxa Sjöstedt named the genus *Amphisticta*, which is a junior synonym, and nine species, two of which are synonyms.

Clarence Hamilton **Kennedy** (*25 June 1879 †6 June 1952) ^{98 99 100}



Clarence Kennedy was Professor of Entomology at Ohio State University. He first studied at Indiana State University where he received the A.B. degree in 1902, the A.M. in 1903 and an honorary D.Sc. in 1950. He was an assistant in zoology in 1902 and 1903 and then accepted a position on the scientific staff of the U.S. Bureau of Fisheries as a scientific artist of sea fishes. In 1908 he toured Oregon and Texas as a collector for the herbarium of Mount Holyoke College. He received an A.M. degree at Stanford University in 1915. From 1915 to 1917 he was an assistant in biology and instructor in limnology at Cornell University. He received the PhD degree at Cornell in 1919. In 1918 he worked at North Carolina University. In 1919 he was appointed Instructor in Entomology at Ohio State University; Assistant Professor of the subject in 1921-30; Associate Professor in 1930-33; and Professor of Entomology until his retirement at age 70; and Professor Emeritus until his death.

His entomological writings were concerned largely with the systematics of dragonflies, particularly those of North and South America, but he also published on ants, birds, fishes, Native American Indian archaeology and general biological topics. He published 57 papers on dragonflies with perhaps 2,000 of his drawings as illustrations.

Kennedy named seven genera from Australia and one species. Five of those genera were contained in his paper *Forty-two hitherto unrecognized genera and subgenera of Zygoptera* (1920), where his primary criterion for establishing new genera was the structure of the penis. Only *Austroargiolestes*, *Archiargiolestes* and *Episynlestes* are still in use but *Austrocoenagrion* is likely to be resurrected.

Frederic Charles **Fraser** (*15 February 1880, Woolwich †2 March 1963, Linwood)^{101 102}



Frederic Fraser graduated from Guy's Medical School, London in 1903 and obtained his M.D. from Brussels in the following year. After two years in general practice in London he joined the Indian Medical Service. He saw active military service in Mesopotamia during the 1914-18 war when he was in charge of field hospitals and hospital ships. Appointments with the Indian Medical Service included posts of Superintendent of the Central Jail, Rangoon, and the gaol at Hyderabad, Sind; Professor of Surgery at Vizagapatam Medical College; and Professor and Lecturer in Obstetrics and Gynaecology at Madras University Medical School. For some part of his service he was stationed in the Nilgiri Hills, south of Mysore. He made many contributions on the dragonfly fauna of this area to the Bombay Natural History Society. During 1933, Colonel Fraser was asked to become Acting Surgeon-General at the Madras Medical School; however as this appointment would have interfered with his entomological pursuits, he resigned from the Service and returned to England to live in Bournemouth.

Although Fraser was a good all-round naturalist, his main interests were in the field of entomology and it is his many works dealing with the dragonflies by which his name will always be remembered. Col. Fraser studied the Odonata of the world. By 1955, 255 of his papers on this Order had been published by various societies and periodicals, and this had grown to more than 300 by 1962. He was, in consequence, recognised as one of the leading authorities, and he received a constant flow of material from all over the world for identification. He was responsible for the Royal Entomological Society of London's Handbooks dealing with the Odonata, Mecoptera, Megaloptera and Neuroptera. Major works include the three volumes on Odonata in the *Fauna of British India* series; a monograph on the Fissilaboidea¹⁰³; the reclassification of the order Odonata, left incomplete by Dr. R.J. Tillyard at his death, and published 17 years later (1957) by the Royal Zoological Society of NSW as a completely revised edition; and a *Handbook of the Dragonflies of Australia* also published by that society. His collections were given to the British Museum (Natural History), while his

library, one of the most complete on the Odonata in existence at the time, is now in the Manchester Museum.

Fraser named just over 5% of the Australian Odonates: nine genera, of which three were subsequently synonymised, eight species, and three subspecies.

Maurits Anne **Lieftinck** (*18 September 1904, Amsterdam †13 April 1985, Rhenen) ^{104 105 106}



Maurits Lieftinck was born in Amsterdam in 1904, the second son in the family of Gerard Lieftinck, director of the tobacco brokerage company Lieftinck JH and Son. He attended the Amsterdam Lyceum (1916-1922) and studied biology at the University of Amsterdam (1923-1929). His biology teacher at the Amsterdam Lyceum was Dr. Jacob Heimans who had published in *De Levende Natuur* an illustrated key for the recognition of Dutch dragonfly species. He encouraged Lieftinck to study dragonflies. By the age of 21 Lieftinck had published the first standard work on Dutch dragonflies, *Odonata Neerlandica*. His interest in nature, especially entomology, steadily increased. In 1919 he became a member of the Dutch Entomological Society [*Nederlandse Entomologische Vereniging*]. In 1921 he was among the founder members of the Dutch Youth Association for Nature [*Nederlandse Jeugbond voor Natuurstudie*]; he was editor of its still existing periodical *Amoeba* from its first issue in January 1922 until 1926. After the publication of his *Odonata neerlandica* Lieftinck wrote a number of notes on local birds and insects, with an emphasis on the Odonata and the aculeate Hymenoptera.

Lieftinck was unable to find an adequate research position in the Netherlands, because of a worldwide economic crisis. He therefore accepted an invitation for the position of Zoologist at the Zoological Museum and Laboratory at the Botanic Gardens at Buitenzorg, now Bogor, Java. He left the Netherlands in August 1929. Between 1931 and 1954 Lieftinck was Secretary and President of the East Indies branch of the Netherlands Entomological Society, and towards the end of this period, of the Entomological Society of Indonesia. As well as keeping his position at the Zoological Museum in Buitenzorg during 1935-36 he was temporarily in charge of the Laboratory

of Marine Research in Batavia. Early in 1939, he was appointed Head of the Buitenzorg Museum, a position he held till March 1954. When the Dutch East Indies were occupied by the Japanese military forces Lieftinck was first jailed in Buitenzorg as a prisoner-of-war, and subsequently interned in the POW camps of Buitenzorg, Tjimahi and Batavia (April 1943 – January 1946). After the liberation he went on recuperation leave to Holland (December 1946 – September 1947) to recover from the war-time physical and psychological hardships. He used this leave period to visit museums and other institutions in Belgium, Italy, Sweden, France and England, examining type-material of Indo-Australian Odonata and solitary bees.

Organisation and distribution to international specialists of the enormous invertebrate collections resulting from the Third Archbold Expedition to Netherlands New Guinea in 1938-1939 fell to Lieftinck who also arranged publication of the manuscripts. In 1948 he was leader of the Netherlands-Indies party of the Swedish-Dutch ornithological expedition to West New Guinea. This gave him the opportunity to study the odonate fauna of interior of the 'Vogelkop' of West New Guinea as well as to visit some islands to the west. He also spent some time in the South Moluccan islands, Ambon and Saparua. In 1950 he went to Malaya and Sarawak to advise and reorganise the Sarawak insect collection in Kuching. His series of reports on the odonate fauna of New Guinea dealt with over 600 species and, as a sequel, Lieftinck studied the odonate faunas of northern Australia and several archipelagos in the Pacific. These zoogeographical studies covered the relationships between the Odonata of the Asian and Australian mainlands. From 1939 to 1954 he served as editor of *Treubia*, and Secretary of the Royal Netherlands East Indies Society of Natural Sciences. In 1950 the University of Basle conferred upon him the degree of Doctor *honoris causa*.

In 1954 Lieftinck returned to the Netherlands and was appointed as Curator at the National Museum of Natural History in Leiden [*Rijksmuseum van Natuurlijke Historie*] under the direction of Professor Dr. Hilbrand Boschma. His first task was to reorganise the museum's odonate collection and to incorporate his own material. As Lieftinck had exchanged many specimens with specialists all over the world the Leiden world collection of Odonata now consists of at least 100,000 specimens, referable to approximately 3,500 named species and numerous taxa still to be described. His contributions to

the knowledge of the African fauna are given in papers on the Zygoptera of Madagascar and on the Anisoptera of parts of Katanga and Zambia. His survey of the odonate fauna of Morocco still remains the keystone of north African odonatology. Lieftinck's interests extended beyond the Odonata to include many other aspects of insect life in Indonesia, especially solitary bees, carpenter-bees and moths. Herbarium Bogoriense, Bogor, contains 49 plant specimens which he collected from Sumatra and a number from Java.

In 1963 he was elected a Member of Honour of the *Société royale belge d'Entomologie*. He received similar honours from the *Società degli Amici del Museo Civico di Storia Naturale di Genova*, Italy (1968); the *Societas Internationalis Odonatologica* (at the charter meeting in Ghent, September 1971); and the *Netherlands Entomological Society* (1972). When Lieftinck retired from office at the Leiden Museum in 1969 he was appointed an Officer in the Order of Orange-Nassau. The next year, together with his wife C.M. (Corry) van Veen, he moved to a newly built house in the countryside in Rhenen, a small town in the province of Utrecht. Relieved from administrative duties he found time for extended overseas research trips and published more than 20 substantial papers. His taxonomic output relating to the world Odonata comprises the names of 614 primary types: 22 genera and 592 species and subspecies.

Lieftinck's contribution to the naming of the fauna known from Australia was two genera, ten species and one subspecies; one of the genera and three of the species are now recognised to be synonyms.

John **Cowley** (* ca. 1909 †June 1967) ¹⁰⁷



Very little biographical information has been published about Cowley. He was an amateur entomologist of independent means who was elected a Fellow of the Royal Entomological Society in 1931. He was born and died in Sussex but travelled extensively in pursuit of his lifelong interest in natural history, especially the Odonata, and latterly Diptera. He published a number of papers, almost 40 on the Odonata. His collections were presented to the Natural History Museum in London.

Cowley named numerous genera and species but, relating to Australia, only *Ictinogomphus* to replace *Ictinus* Rambur, 1842 which was preoccupied.

John Anthony Linthorne **Watson** (*20 September 1935 †4 December 1993) ^{108 109}

110 111 112



Tony Watson was born at Nedlands, Western Australia, on 20 September 1935, the younger of two children. His education commenced at Nedlands State School at which he was awarded scholarships from the WA government and the Shell Company giving him entry to the academically elite Perth Modern School in 1948. At the end of his secondary schooling in 1953 he spent a year travelling with his parents through Britain and Western Europe. His early interest in plants and animals was fostered by his scientist parents. On his return to Western Australia, Watson enrolled at the University of Western Australia with Zoology as his major subject. He graduated in 1956 with a Bachelor of Science and was awarded the Lady James Prize in Natural Science. In the following year he gained first class Honours and was awarded a Hackett scholarship from the University of Western Australia which enabled him to become a post-graduate student at the University of Cambridge (Gonville and Caius College). Under the supervision of Sir Vincent Wigglesworth he was awarded a PhD in 1962 for his research on the endocrinology, reproduction and development of silverfish.

After Cambridge, Watson continued his physiology studies as a Postdoctoral Fellow (1962-63) and then as a Visiting Assistant Professor (1964-65) in Prof. H.A. Schneiderman's laboratory at Western Reserve University, Cleveland, Ohio. From 1965-1967, as a Queen Elizabeth II Fellow at CSIRO Division of Entomology in Canberra, he completed his studies on the endocrinology of the silverfish and wrote the chapters on Apterygota for the first edition of *The Insects of Australia*. In 1967 Watson joined the Division's Termite Group and became its leader in 1970. He published extensively on this group, which formed the primary focus of his scientific work and on which he became a respected world authority. The *Atlas of Australian Termites* is an important publication in which he played a major role. He was also assigned responsibility for dragonflies in the Australian National Insect Collection and was authorised to devote part of his official time to this function.

He had become an expert on the Odonata while still at the University of Western Australia. A publication documenting the first record of a petalurid in Western Australia appeared in 1957, to be followed the next year by a joint letter to *Nature* on the breeding of dragonflies in temporary waters. Among his early publications was a handbook on the dragonflies of south-western Australia (1962). Altogether he published over 50 research papers on dragonflies, covering taxonomy and aspects of their biology including functional morphology, larval biology, faunal relationships and their potential role as biological indicators of pollution. His work included eight synopses, eight faunal or zoogeographic studies, 29 taxonomic works, and the comprehensive handbook *The Australian Dragonflies*, co-authored with Gunther Theischinger and Hilda Abbey and published in 1993.

The *Australian Journal of Zoology* was launched in 1953 by CSIRO and, in 1979, Watson replaced Don Colless on the editorial advisory committee. He remained in this position until the middle of 1984. He served on the editorial boards of *Odonatologica* and *Notulae Odonatologicae*, on the Standards Association of Australia Committee on termite treatments, and on a number of Commonwealth and international review panels relating to termites and other entomological matters. Watson's contributions to entomology were recognised formally by his promotion in CSIRO to Chief Research Scientist in 1991; by the award of the inaugural Ian Mackerras Medal of the Australian Entomological Society in 1984 for outstanding contributions to entomology; and by his election to the Membership of Honour of the *Societas Internationalis Odonatologica* in 1989.

As sole author, Watson named eight genera, two subgenera and 32 species. He and Theischinger jointly named one genus and 20 species; with Moulds he named two species; and with Arthington, one; in total, 66 taxa.

Günther **Theischinger** (*1940 –) ¹¹³



Günther Theischinger grew up in a rural area of Linz (Austria) and was fascinated by nature in early life. Walking home alone from school every day for twelve years, often wading barefoot in the then reasonably clean River Danube, awakened his early interest in aquatic insects. Unfortunately, upon completing a classical education at Humanistisches Gymnasium and matriculating, he had to find employment outside his

field of interest. As an employee of the Austrian Railways he was fortunate to be able to collect his then beloved moths at railway lights and shop windows. He travelled all over the country, including the Austrian Alps, light trapping.

Following a career change to Educator, Social Worker and Environmental Advisor for the City Council of Linz he married Christine Pingitzer in 1966. About that time he transferred his attention to dragonflies after coming across a book in a shop window: *Die Libellen unserer Heimat* by H. Schiemenz. As finding a home in Austria was too difficult, the couple temporarily moved to Australia. There Theischinger took a job as a quality controller in the plastics division of ICI and collected dragonflies mostly in suburban Sydney. In 1970 the Theischingers, now with daughter Denise, were able to buy a house in Austria and they returned home. After going through several jobs again, Günther was hired as Collection Manager and Curator of Invertebrates at the Oberösterreichisches Landmuseum in Linz, a tenured position that he relinquished after the death of his parents and parents-in-law. The family returned to Australia in 1979. Here he worked for nearly 20 years in private industry before he was given two opportunities: curating the aquatic insect orders in the Division of Entomology, CSIRO, and working as a taxonomist identifying aquatic macroinvertebrates for Environment Protection Authority/Office of Environment and Heritage in New South Wales.

Theischinger has published extensively on the taxonomy of Plecoptera, Megaloptera, Diptera (Thaumaleidae and Tipulidae) and Odonata. He has published several books on adult Australian odonates in collaboration with various authors. However, his main interest in the Order is larval taxonomy, which he has documented in a number of comprehensive reviews, generally at superfamily level. He also focuses on dragonflies in addressing conservation and climate change issues. He is a Research Associate at the Australian Museum, and a Visiting Fellow at the Smithsonian Institute. Theischinger is well known as the ‘father of heros’ for his description in 1979 of *Cordulegaster heros*, the largest European dragonfly. In 2009 this was a major factor in his being awarded the professional title “Professor” by the Federal President of his native country, Austria.

As sole author, Theischinger has named four Australian genera of Odonata, four subgenera, 34 species (one of them a synonym) and 2 subspecies. He

and Watson jointly named one genus and 19 species; with O'Farrell he named four species and one subspecies, with Brown one species and with Peters, one subgenus; in total 70 valid taxa, all from Australia. This number represents approximately 10% of his total taxonomic output from all Orders.

Maxwell Sydney **Moulds** (*1941 –)^{114 115}



Max Moulds was born and grew up in Greenwich on Sydney Harbour, New South Wales. As a schoolboy his interest in entomology was kindled after seeing the butterfly collection of a local dentist. His secondary schooling finished in 1958 and he became a primary school teacher in Glen Innes in northern New South Wales in 1962. School teaching allowed him long holidays for catching insects. Prior to entering teachers' college he had become familiar to the entomological staff at the Australian Museum, Sydney, meeting Courtenay Smithers who had recently arrived from South Africa. The encouragement from Smithers was a large influence on Moulds' development as an entomologist.

At that time it was very difficult to purchase entomological equipment in Australia so, in 1962, Moulds established *Australian Entomological Supplies*, a business which imported equipment and dealt mainly through mail order. In 1968 he decided to give up teaching, returned to Sydney, ran the entomological business at night, and spent the days at the museum working on his insect research. In 1972 the business was sold. There was no journal in Australia for publishing entomological notes so Moulds set up the Australian Entomological Press in 1972. Its prime purpose was to publish the *Australian Entomological Magazine*; Moulds was founding editor from 1972 to 1988 when the Entomological Society of Queensland took over publication. At this stage he was compiling a bibliography of Australian butterfly literature which took about five years to complete, and was published in 1977. While on a field trip to Queensland in the late 1960s or early 70s he received a letter from the Australian Museum recognising him as an honorary Research Associate (of which there were very few in those days). In 1985 he was the recipient of the J.C. Le Souëf Memorial Award, made for contributions to entomology by amateurs in Australia. He was appointed an Honorary Life Member of the Entomological Society of Queensland in 2015 for services to the Society and entomology.

In 1989, Geoffrey Holloway, the Technical Officer who looked after the invertebrate collections at the museum, had a severe stroke. A large part of his task had been answering public enquiries and Moulds was invited to assist on a temporary basis, which extended for several months. In 1990 the position was upgraded to Collection Manager and Moulds was appointed as a permanent employee. His research interests have included the systematics and phylogeny of cicadas; systematics and biology of Indo-Australian hawk moths; systematics and biology of Australian butterflies; Australian entomological literature; and the history of Australian entomology. In 1995 he received his M.Sc. from Macquarie University and Sydney University awarded him a PhD in 1999. He retired from the position of Collection Manager at the Australian Museum in August 2003 and continues in an honorary capacity as a Senior Research Fellow.

Moulds named one Australian species of Odonata, *Eusynthemis barbarae*, an eponym for his wife, and was junior author with J.A.L. Watson in the naming of two other species. His collection of dragonflies which is particularly strong in material from Cape York Peninsula is housed in the Australian Museum.

Angela Helen **Arthington** ¹¹⁶



Angela Arthington is an aquatic ecologist in the Australian Rivers Institute at Griffith University in Brisbane, her academic home since 1975. Her early ecological studies on the freshwater lakes and wetlands of coastal islands off south-east Queensland began with biodiversity assessments and the discovery of several new invertebrate species. *Orthetrum boumiera* was one of these. Specimens collected from Brown Lake (Lake Bumiera) on North Stradbroke Island were verified by Dr Tony Watson, ANIC. With Tony's help, Angela described the species and its association with brown-water dune lakes of SE Queensland. She and Tony continued to work on Odonata, documenting their utility as indicators of organic and trace metal pollution in urban streams. Many happy times were spent trying to emulate Tony's remarkable skill collecting dragonflies with his sweep net, and he has been sorely missed. Angela's later research interests have been focused around stream and river ecology, fish communities and

the science and management of environmental flows, producing numerous papers and a book on this subject. Yet the ecology of sand islands and their unusual aquatic ecosystems have always been of special interest, and Angela has continued to publish on lake ecology and the conservation of threatened species. In 2011 she led the publication of a Special Issue of the Proceedings of the Royal Society of Queensland “*A Place of Sandhills: Ecology, Hydrogeomorphology and Management of Queensland's Dune Islands*”.¹¹⁷

Antony Frederick Louis **O'Farrell** (*9 January 1917, Badlipar, India †19 June 1997, Armidale, New South Wales)^{118 119 120 121}



Tony O'Farrell was born in 1917 at Badlipar, Assam, India, the only child of Irish parents. His father had spent most of his life in Assam, working for the Brahmaputra Steam Navigation Company but when he retired in 1920 the family returned to England. Due to a serious illness O'Farrell's formal education did not begin until he was 12-13 years old. During his convalescence in a farmhouse surrounded by the largely unspoilt forests of the Weald, his zeal for the study of insects was kindled. He attended Wimbledon College in London and the Royal College of Science, then a constituent college of Imperial College London. He graduated in 1939 with First Class Honours and the Forbes Memorial Medal in Entomology. Declared unfit for flying duties during the Second World War, O'Farrell became a part-time soldier in the Berkshire and East Sussex units of the Home Guard. At the same time he served as an entomologist with the British Ministry of Agriculture. From 1940 to 42, he worked on problems caused by elaterid beetle larvae (wireworms) in crops grown on old pasture ploughed for conversion to arable land. By 1942, the emergency storage of wheat and other foodstuffs, often in unsuitable places, had produced major problems with insect pests, and Tony was posted to Belfast to deal with them. There he met Mary Isabel Millen and they married in 1944.

O'Farrell was a Fellow of the Royal Entomological Society and of the British Institute of Biology. In 1947, Tony and Isabel moved to Australia after he was appointed to the position of Senior Lecturer in charge of Zoology at the then New England College in Armidale, north-eastern New South Wales. He played a very active role in the formative years of the college, and of the university into which it matured in 1954. The selection panel for staff for the

new university were impressed with O'Farrell and supported his claim to a Chair without reservation; in September 1955, he became foundation Professor of Zoology, a position he retained until he retired in February 1982. For some years he was Chairman of the Board of Studies and, briefly, Acting Vice-Chancellor. Later he was Sub-Dean, and then Dean of the Faculty of Science.

From the time of his arrival in Australia, O'Farrell's major publications have described studies on the physiology of limb regeneration in insects, particularly cockroaches. His enthusiasm for Odonata began early and remained a major part of his entomological interest. He collected Odonata in many parts of eastern Australia, particularly in north-eastern New South Wales assisted by the late Clyde Frazier and by many students. Paradoxically, he published very little on the order (15 notes and papers) but his general knowledge of the Australian Odonata was ably expressed in his chapter in *The Insects of Australia* (1970) and its supplement (1974). Little change was required for the revised edition (1990) prepared by J.A.L. Watson. He discovered temperature-dependent colour change in Odonata when he chilled the vivid species of *Diphlebia*, to calm them for photography. Most of the Odonata collected by O'Farrell and his associates while at the University of New England are now housed in the Australian National Insect Collection.

Far from being restricted to entomology, O'Farrell's zoological interests were wide. He found a site at Arrawarra Headland near Woolgoola on the north coast of New South Wales where both tropical and temperate marine biology could be studied. He fought hard for the establishment of a laboratory there and succeeded in 1961. It is now, very appropriately, named after him.

As junior author to Gunther Theischinger, O'Farrell named four species and one subspecies in the genus *Austroargiolestes*.

Frank Louis **Carle** ¹²²



Professor Frank Louis Carle is Curator of the Rutgers Entomological Museum and Director of The New Jersey Aquatic Insect Survey with interests in systematics, biodiversity, phylogenetics, aquatic entomology, palaeontology and biogeography. His research efforts have been devoted toward the conservation of biodiversity and environmental protection. Early in his career he invented the circular

depletion benthic sampler, developed Maximum Weighted Likelihood estimation, proposed a system for ranking rare and endangered species, and established rare and endangered rankings for North American dragonflies, mayflies, stoneflies, and caddisflies. Carle has described several species of Odonata and Ephemeroptera new to science, described many fossil Odonata, named several new genera, and with J. A. Louton, established the family Austropetaliidae including several relict antipodean species. He has also completed revisions of Austropetaliidae, Gomphoidea, and Libelluloidea. Carle teaches several courses including: The World of Insects, Insect Structure and Function, Aquatic Entomology, Advanced Aquatic Entomology, Insect Systematics, Entomology for Anglers, and Molecular Phylogenetic Methods. He has named four genera which have Australian species and one species relegated to synonymy.

Graham Brown ¹²³

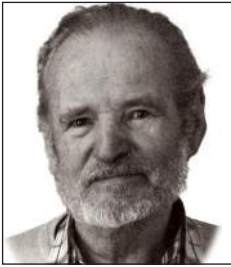


Graham Brown majored in entomology and biochemistry and worked for 20 years at the Biological and Chemical Research Institute, NSW Agriculture, Rydalmere. Most of that period was spent curating and managing the insect collection of some 250,000 specimens. He undertook many field trips throughout the state to curate regional collections and collect and he was frequently seconded to AQIS as a Quarantine

Entomologist. He received a PhD for the taxonomic revision of the Australian thynnine flower wasps (Hymenoptera: Tiphiidae: Thynninae). In 1993 he became Curator of Entomology and Arachnology at the Museum and Art Gallery of the Northern Territory. After five years the position was transferred to the Department of Primary Industry and Fisheries. During that time he collected in much of the Northern Territory and adjacent areas including several offshore islands.

He was senior author in the naming of *Huonia melvillensis*.

Günther **Peters** (*10 July 1932 –)¹²⁴



Günther Peters was born in Stralendorf near Schwerin in Mecklenburg-Vorpommern (Germany) the oldest of five siblings. Growing up in the country put him in close touch with nature, and exposed him to hard work early in life. He commenced his tertiary education at the State University in Leningrad, receiving his diploma in 1952 with a major in zoology and palaeontology. He completed a PhD thesis (1960) and habilitation¹²⁵ (1972) at Humboldt University in Berlin, both dealing mainly with zoogeography and systematics of various groups of lizards. This training in herpetology was instrumental in him gaining employment in the *Museum für Naturkunde* in Berlin. In 1975, while still director responsible for research at the museum, he accepted a professorship at Humboldt University. The essential components of his lectures and seminars were vertebrate palaeozoology, comparative morphology, zoogeography, evolution, phylogenetics and systematics. It was his leadership which established the field of phylogenetic systematics at this university.

As early as the 1960s Peters had become interested in dragonflies. From 1986 they became his main interest with a particular focus on the evolution and systematics of aeshnids. His work on European dragonflies culminated in the publication in 1987 of *Die Edellibellen Europas: Aeshnidae* which is still the standard work on the group, and in the discovery and description of a new European aeshnid species in 1991. Peters travelled widely in Europe, Africa, the Americas and Asia, and published on many aspects (e.g. faunistics, ecology, conservation, biogeography) of the aeshnids in these continents. In 2004 he finally travelled and collected in south-eastern Australia. This resulted in the publication, together with G. Theischinger, of a phylogenetic assessment of the southern element in Australia's aeshnid fauna *Die gondwanischen Aeshniden Australiens (Odonata: Telephlebiidae und Brachytronidae)*.

Peters was senior co-author of the subgenus (*Austroaeshna*) *Pulchaeshna*.

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Etymology

Acanthaeschna Selys, 1883: 732

Gr. ἄκανθα = thorn, prickle + *-aeschna* (see *Aeshna*). This describes the teeth on the 10th abdominal segment of the female. “♀ Bord du 10^e segment subarrondi en dessous, portant quatre fortes dents et quelques autres plus petites entre celles-ci.” [♀ Edge of the tenth segment subrounded below, with four strong teeth and some smaller ones between them.] {Feminine}

Aciagrion Selys, 1891: 509

Gr. ἀκίς = pointed object, hence needle + *Agrion* (q.v.). This is obviously based on “Abdomen long, excessivement grêle.” [Abdomen long, exceedingly slender.] {Neuter}

acolythus, *Antipodogomphus* (Martin, 1901: 233)

At first appearance the root of *acolythus* would appear to be L. *acolytus* *-itus*/*-ithus* transferred from Gr. ἀκόλουθος, which has the meaning of an attendant or follower. There is no obvious connotation of behaviour or morphology. Martin's (1901) original description includes “Dans la collection De Selys figurent deux autres espèces non décrites mais nommées par notre éminent collègue: *Austrogomphus acolythus* ... et *Austrogomphus proselythus*. Ces deux exemplaires uniques viennent, si je ne me trompe, du Queensland.” [In the collection of Selys figure two other species not described but named by our eminent colleague: *Austrogomphus acolythus* ... and *Austrogomphus proselythus*. These two unique specimens come, if I am not mistaken, from Queensland.]

One plausible explanation is that Selys had erected the genus *Austrogomphus*

in 1854 to include all species from his collection. When he received a new species of this genus, he called it *prosélythos* (one that has arrived/ arrived in addition) (q.v.)' The next one he called *akóloythos* (the following one). Martin did not recognise the subtlety of this and quoted the names in reverse (i.e. alphabetical) order. {noun in apposition}

adamsi, *Archaeophya* Fraser, 1959: 355, 352.

“... a single, rather teneral female, collected by E. Adams, after whom this fine new species is named” and “... that keen coleopterist Mr E. Adams”. No further biographic details of Adams can be located. {noun in the genitive case}

Adversaeschna Watson, 1992: 470

“*Adversaeschna* subgen. nov. *adversus*, opposite in physical position.” + *-aeschna* (see *Aeshna*). “This comparison between *Aeshna brevistyla* and its congeners confirms its taxonomic isolation, except from *Oreaeschna*.” {Feminine}

aeruginosum, *Ceriagrion* (Brauer, 1869: 13)

L. aeruginosus *-a -um* = rusty. “Der ganze Körper oben rostbraun, Kopf unten heller, grüngelb bleich, ebenso die Brustseiten und Beine, ...” [The whole body rusty brown above, the head lighter below, pale yellow-green, as are the sides of the thorax and legs, ...]. {declinable adjective}

Aeshna Fabricius, 1775: 424

Æshna Fabricius, 1775 was published originally without citation of its derivation. Hemming (1958) records that Mr. R.A. Muttkowski had submitted a case to the ICZN for amending the “barbaric *Æshna* to *Æschna*, a *lapsus calami* being assumed.” He argued *inter alia* that *Æshna* is not a Greek spelling and “Fabricius being a purist, as is evident from most of his generic names, the elision of “c” in *Æshna* suggests a typographical error”.

In searching for possible derivations Muttkowski quoted αἰσχρός = ugly and αἰσχύνω = to disfigure or tarnish, with a preference for the latter as the former would lead to *Æschrus*. Quoting the submission and other references, the

Commission recognised that a certain amount of speculation was required in arriving at the derivation of the name. It declared that it was of the “opinion that since the original publication of *Æshna* Fabricius, 1775, 424-425, does not indicate clearly the origin of the word, it is not evident that there is either an error of transcription, a *lapsus calami*, or a typographical error present. It is, therefore, the opinion of the Commission that the original spelling, namely, *Æshna*, should be preserved”.

However, *-aeschna* is retained in compound names such as *Adversaeschna*, *Austroaeschna*, *Notoaeschna*, *Spinaeschna* and many other extralimital ones.

Aeschna was used in pre-Linnean England as a term for the Ephemeroptera by Thomas Moffett (1634) and others. From 1769 Fabricius spent his winters in Copenhagen and summers in London where he worked on the collections of Banks, Hunter and Drury. He published his *Systema Entomologicae* in 1775, the main part of which was based on his own and pre-existing English collections. Perhaps Fabricius became acquainted with this name whilst in England and used it for the new odonate genus he was about to create. Linguistic units such as *-sch-* in some European languages are written as *-sh-* in English, possibly leading Fabricius to adopt that spelling. {Feminine}

Aethriamanta Kirby, 1889: 283

The original description is purely morphological with no clues as to the etymology. Gr. αἴθρα = bright sky is also the name of Aethra, a daughter of King Pittheus of Troezen and the mother of Theseus. However none of Kirby's (1889) other new genera had sources from antiquity. Fliedner (2007) postulates that, as there is no Greek word that resembles the second half of the name, Kirby may have taken the stem of the Latin adj. *amans* = loving, and added the ending *-a* to indicate the feminine gender. Therefore the name could mean loving the bright sky. {Feminine}

affinis, *Procordulia* (Selys, 1871b: 261)

L. *affinis* *-is -e (adfinis)* = neighbouring, related to. “N.B. Très-voisine de la *Jacksoniensis*” [Very close to [*Procordulia*] *jacksoniensis*]. {declinable adjective}

Agriocnemis Selys, 1877: 134

Agrion (q.v.) was the name established by Fabricius (1775) to contain all of the Zygoptera. *Cnemis* comes from Gr. κνημῖς = legging. Fliedner & Martens (2008) point out that it “was used first in ‘*Platycnemis*’ [Greek: ‘broad greave [i.e. armour for the leg]’, an allusion to the widened tibiae in that genus]. But in many names it only means Coenagrionid dragonfly”. {Feminine}

Agrion Fabricius, 1775: 425

Agrion was the name established by Fabricius (1775) to contain all of the Zygoptera. It is derived from Gr. ἄγριος = wild, and Fliedner (2006) suggests this was chosen because the insects live in the fields rather than domestic areas.

It occurs in the compound names *Austroagrion*, *Caliagrion*, *Coenagrion*, *Pseudagrion* and *Xanthagrion*. {Neuter, although Fabricius treated the name as Feminine}.

Agrionoptera Brauer, 1864: 164

Agrion (q.v.) was the name established by Fabricius (1775) to contain all of the Zygoptera + feminine form of Gr. –πτερος (in compounds) = winged. This refers to the similarity with the wings of the Calopterygidae. “... in der Gestalt den Flügeln der Agrioniden (*Euphaea*) im weiteren Sinne ähnlich” [... in a broad sense similar to the shape of the wings of the Agrionid (*Euphaea*)] and “Eine Libelle mit Calopteryginenflügeln” [A dragonfly with calopterygine wings]. {Feminine}

Agyrtacantha Lieftinck, 1937: 56

Gr. ἀγύρτης = impostor + ἄκανθα = thorn. The first element refers to the errors in Martin’s nomenclature, necessitating a new genus name: “In the writer’s opinion *Platacantha* Martin and *Plattacantha* Martin are both mistakes for *Plattycantha* Förster (based on a communication from Förster to Martin) and therefore the genotype provided by Martin for *Plattacantha* is in effect only a pseudotype of *Plattacantha*: so *Plat(t)acantha* is the same as *Plattycantha*, and *dirupta* requires a new generic name, for which species I propose the

name **Agyrtacantha**, nom. nov.” The second root comes primarily from Martin’s (1909: 154) prior names and refers to the spines on segment 10 of the female. “Le 10^e segment de la femelle prolongé dessous en une plaque portant trois épines.” [The 10th segment of the female extended below into a plate bearing three spines.] {Feminine}

albescens, *Griseargiolestes* (Tillyard, 1913a: 414)

L. *albus* –a –um = white + suffix –escens = becoming. Is it to be noted that compounds of colour names ending with –escens often denote a lighter stage of coloration as if the process of dyeing had been prematurely halted (hence whitish).

“Specimens taken from February to May show a growth of very white pruinescence.” {present participle}

albicauda, *Episynlestes* (Tillyard, 1913d: 239, 240)

L. *albus* –a –um = white + *cauda* = tail of an animal. “Appendages: superior, 2.7 mm., white, elongate, forcipate, and also bifid at their basal third” and “They are, curiously enough, only betrayed by the distinct white tip of the abdomen, which, I soon convinced myself, is actually necessary to enable the sexes to discover one another”. {noun in apposition}

alcestis, *Rhyothemis* Tillyard, 1906b: 482

[junior synonym of *Rhyothemis braganza* Karsch, 1890]

No information on etymology is given in the original description but the reference is probably to Alcestis, a princess in Greek mythology and wife of King Admetus in Thessaly. She sacrificed her life to save her husband from death, but was rescued from Hades by Hercules. {noun in apposition}

aleison, *Austrolestes* Watson & Moulds, 1979: 144

Gr. ἄλεισον = goblet. “ἄλεισον, a goblet, referring to the goblet-shaped mark on abdominal segment 2 of the male.” {noun in apposition}

aliena, *Urothemis* Selys, 1878: 305

L. alienus –a –um = belonging to another person, place, object. This raises the question of whether the species is geographically or morphologically ‘alien’, but the latter is more likely as the genus is widespread. Presumably, the large *Urothemis* with the black wing spot is alien to the rest of the genus. “NB. Distincte des autres *Urothemis* de grande taille comme elle par la base des ailes inférieures sans tache obscure.” [NB. Distinct from other *Urothemis* of large size like it by the base of the hind wings without an obscure spot.] {declinable adjective}

alleni, *Indolestes* (Tillyard, 1913a: 425)

“I have dedicated this species to its discoverer, Mr. E. Allen, to whom I am indebted for much valuable help in the form of careful collecting of *Odonata* in the Cairns district.” {noun in the genitive case}

allogenes, *Agrionoptera insignis* Tillyard, 1908f: 641

The derivation is Gr. ἀλλογενής (adj.) = of another race (or species in this context). “This species was described by me under the name *A. insignis* Rambur (?)... Since that description was published I have sent specimens of my type-series to Dr. Ris, and he tells me that they are distinct from the type *A. insignis* Ramb. of Java.” {adjective}

alpinus, *Austroargiolestes* (Tillyard, 1913a: 418)

L. alpinus –a –um = pertaining to the Alps. “*Hab.* – Ebor, N.S.W., altitude 4600-4800 feet; January, 1912” and “The males are very conspicuous, and easy to capture, as they sit poised on the long grass and sedge growing on the damp hill-slopes at the top of the watershed”. {declinable adjective}

amabilis, *Austroargiolestes* (Förster, 1899: 72)

From *L. amabilis* –is –e = lovely or likeable. Many names of damselflies refer to their charming character, but that is elusive, as it cannot be found in a morphological description. The face and prothorax are quite colourful, and might have been considered lovely. “Lèvre supérieure bleu métallique,

ses côtés jusqu'aux yeux rouge orange. Une bande transversale et un prolongement médian au rhinarium et une bande transversale au nasus rouge orange avec une vestige de bande noire effacé entre eux.” [Labrum metallic blue, red orange as far as the sides of the eyes. A transverse band and a median extension to postclypeus and a transverse band at anteclypeus red orange with a trace of a black band obliterated between them.] “Prothorax noir velouté, le lobe basal, une tache triangulaire de chaque côté en dessus du lobe médian rouge orange.” [Prothorax velvety black, the basal lobe, a triangular patch on each side above the median lobe red orange.] {declinable adjective}

amphiclitus, *Austrogomphus* (Selys, 1873a: 768)

Gr. ἀμφί = on both sides + verbal adj. κλιτός (from κλίνω = to cause to slope or slant), thus leaning or sloping on both sides.

Although it might not have been the intent of Selys, the part of the original description that matches best concerns the abdominal segments where “les 5-6^e avec une fine arête dorsale et une lunule basale latérale.” [5-6th with a fine dorsal ridge and lateral basal crescent.]

Although live specimens do not exhibit a dorsal ridge perhaps the specimen examined by Selys was deformed and shrunken. {declinable adjective}

Amphisticta Sjöstedt, 1917: 31

[junior synonym of *Neosticta* Tillyard, 1913]

Gr. ἀμφίς = apart, asunder + στικτός = spotted, tattooed.

The first root refers to the subnodal sector which is apart from the nodus, not a direct continuation as in *Neosticta*. “Diese Gattung steht *Neosticta* Tillyard (Proc. Linn. Soc. N.S. Wales vol. 37 (1912) p. 435) nahe, unterscheidet sich aber sofort durch die Lage des Subnodalsectors, der hier hinter dem Nodus entspringt, bei *Neosticta* aber eine direkte Fortsetzung des Nodus.” [This genus is close to *Neosticta* Tillyard (Proc. Linn. Soc. N.S. Wales vol. 37 (1912) p. 435), but immediately differs by the position of the subnodal sector that here originates distal to the nodus, in *Neosticta*, however, it forms a direct continuation of the nodus.] The second root comes from *Neosticta*

which this new genus resembles, rather than being a characteristic of the genus itself. {Feminine}

anacantha, *Austroaeschna* Tillyard, 1908e: 735

Gr. prefix ἀν- = without + ἄκανθα = thorn. “This species, to which I have given the name *anacantha* because of the absence of the large dorsal spike on segment 10 of the male, is very closely allied to *A. parvistigma* and *A. multipunctata* of the Eastern States.” Alternatively there is a Gr. adjective ἀνάκανθος –ος –ον = without thorn(s) which latinises to *anacanthus* –a –um so *anacantha* could be interpreted as a declinable adjective. {noun in apposition}

Anaciaeschna Selys, 1878: 317

Selys (1878) established this genus to hold *A. jaspidea* Burmeister, 1839. It is a combination of *Anax* and –*aeschna* (see *Aeshna*), both of which have similarities to the new genus.

“Mais l’*Anaciaeschna* se sépare des vraies *Æschna* par ses yeux très-grandes et très-contigus, et par la courbure subite et courte que fait le secteur nodal sous le ptérostigma dans la direction de cet organe.” [But *Anaciaeschna* is separated from the true *Aeschna* by its very large and contiguous eyes, and by the sudden and short curvature that makes the nodal sector under the pterostigma in the direction of that structure.] “Le nouveau sous-genre ressemble donc aux *Anax* ... par les yeux et par la courbure du secteur nodal, mais les deux sous-genres d’*Anax* ont le bord anal arrondi dans les deux sexes tandis que chez l’*Anaciaeschna* il est excavé chez le mâle, comme chez les *Æschna* etc.” [The new subgenus is thus similar to *Anax*, ... from the eyes and the curvature of the nodal sector, but the two subgenera of *Anax* have the anal margin rounded in both sexes while in *Anaciaeschna* it is excavated in the male, as in *Aeschna*.] {Feminine}

Anacordulia Tillyard, 1926: 161

[junior synonym of *Metaphya* Laidlaw, 1912]

“Closely allied to *Hemicordulia* and also to *Tetragoneuria*.” Although the name expresses a similarity to *Cordulia*, it is not easy to reconstruct why Tillyard chose the prefix. According to Williams (2005), who was cognisant

of Liddel & Scott (1996), the Greek prefix ἀνα– can have numerous meanings, “on/up/up to/upon/again/backwards/back/through/throughout/towards (in general significance opposite to cata– [κατα–]” but none of those seems to be at the base of *Anacordulia*. In the plant genera *Anacardia* and *Anamirta*, Genaust (2005, 59 sq.) interprets the prefix as “nach Art von” [similar to]. If Tillyard knew this interpretation he might have adopted it in this name, as the names *Epicordulia* Selys, *Paracordulia* Martin and *Syncordulia* Selys were already in use for other genera. Thus, the meaning is best regarded as “similar to *Cordulia* (q.v.)”. Gr. ἀνα– also has a sense of direction and Tillyard might have considered *Anacordulia* to be more advanced in an evolutionary sense than *Cordulia*. There are precedents as he included evolutionary concepts in his nomenclature (see *Metaphya* and *asthenes*). {Feminine}

analis, *Austrolestes* (Rambur, 1842: 253)

Apparently from L. *analis* –is –e = ‘of the anus’. The original description includes “valves génitales denticulées, dépassant un peu l’anus” [genital valves denticulate, slightly exceeding the anus]. Chao (1953) recognises an anal opening situated at the bases of the anal laminae in his description of the external morphology of a gomphid species. It is not clear whether Rambur (1842) is referring to an homologous structure in this lestedid. *Anus* is a rare word in entomology and the only detail that bears some relevance would be the gap in the middle of the bipartite sternite 11 of Chao (1953) or between the paraprocts of Westfall & May (1996). The genital valves do indeed reach slightly beyond at least the beginning of this ‘anal opening’(Günther Theischinger, pers. obs.) {declinable adjective}

Anax Leach, 1815a: 137

The name comes from Gr. ἄναξ = sovereign, king, and is usually attributed to the dominant behaviour of *Anax imperator*. There is no explanation in the description, only the comment “GENUS CCCCLXXXIV. ANAX. Leach’s MSS. Sp. 1. Imperator Inhabits England.” {Masculine}

angelorum, *Austrogomphus* Tillyard, 1913d: 234

The discussion in the original description includes the statements: “Taken by Messrs. F[rank Milton] and S[idney] Angel, of Adelaide, to whom I am indebted for a series of five males and six females, taken between 1909 and 1912” and “which I have much pleasure in naming after its discoverers”.

Peterson (1993) argued that the specific epithet should be amended from *angeli* to the group masculine form *angelorum* as Tillyard (1913d) “had clearly named this species after two people (two brothers).” {noun in the genitive case}

annaliese, *Austropetalia* Theischinger, 2013: 2

“The species is named for my granddaughter Annaliese, her name being used as a noun in apposition to the generic name.”

annulosus, *Austrolestes* (Selys, 1862a: 333)

L. *an(n)ulus* = ring + suffix *-osus -a -um* = abundant in, remarkable by. In a note to the original description, Selys (1862a) confirms that the ring occurs on abdominal segment 2: “Le mâle differe bien de l’*analis* par ... de même que par le 2^e segment, ayant un très-large anneau median bleu” [The male differs much from *analis* by ... the second segment, having a very broad median blue ring]. Note that *-osus* is rarely used for a single occurrence but when it is, it usually denotes a significant feature as in this case. {declinable adjective}

Antipodogomphus Fraser, 1951a: 254

Fraser has chosen Gr. ἀντίποδες = those situated diametrically opposite (of position on the earth) [from the European point of view] to emphasise the southern connection + *Gomphus* (see *Austrogomphus*). From the original description: “these two species [*Austrogomphus proselytus*, *A. acolytus*] must, therefore, be removed from their present genus to a new one which I name *Antipodogomphus* with *Austrogomphus proselytus* (Selys MS.) Martin as genotype.” {Masculine}.

Antipodophlebia Fraser, 1960: 32

To emphasize the southern connection, Fraser chose Gr. ἀντίποδες = those situated diametrically opposite (of position on the earth). This is combined

with Gr. φλέψ (stem φλεβ-) = vein + adjectival suffix -ιος -α -ον = associated with. Fraser (1951a) also named *Antipodogomphus*. In his key to the genera of Subfamily Aeshninae, Fraser (1960) includes *Telephlebia* Selys and *Austrophlebia* Tillyard, giving a basis for his new genus *Antipodophlebia*, of which there is but a single species known from southern Queensland. {Feminine}

Apocordulia Watson, 1980: 287

Gr. ἀπό = from or away + *Cordulia* (q.v.). “From the Greek *apo*, from or away, referring to the divergence of these dragonflies from normal corduliid appearance.” {Feminine}

arbustorum, *Austrogomphus* Tillyard, 1906a: 549

Genitive pl. of *L. arbustum* = coppice, shrubbery. “It is also fond of flying in and out about the trees on warm still days.” {noun in the genitive case}

Archaeophya Fraser, 1959: 355

Gr. ἀρχαῖος = ancient, derived from ἀρχή- = beginning, origin, i.e. from the beginning (archaic) + Gr. φύη = stature or growth. Fraser uses the root φύη to indicate a particular group within the Corduliidae (see *Micromidia*).

“The persistence of the primary antenodals is an archaic character, as in the Synthemistinae, ... One can only place the genus at the root of the Corduliidae in a somewhat isolated position.”

It is interesting that Fraser postulates a Gondwanan continent before the general acceptance of plate tectonic theory: “An extraordinary richness in the family Corduliidae is one of the most striking characteristics of the Australian Odonata, and all evidence seems to point to the origin of this important family in that continent or in a former Antarctic continent which connected South America with Australasia, the positive close relationship of the Corduliidae of the two areas strongly supporting this thesis.” {Feminine}

Archaeosynthemis Carle, 1995: 392

Gr. ἀρχαῖος = from the beginning, archaic + *Synthemis* (q.v.).

There is no etymological explanation in the original designation. The author states “Because phylogenetic keys, like phylogenetic classifications are inherently more stable and confer more information than artificial phenetic constructs, the following descriptive phylogenetic keys are presented in place of isolated descriptions.”

Carle (1995) placed *Archaeosynthemis* gen. nov. and *Palaeosynthemis* Förster in *Palaeosynthemistini* trib. nov. {Feminine}

Archiargiolestes Kennedy, 1925: 297

The derivation is Gr. ἀρχή = beginning, origin + *Argiolestes* (q.v.). “This is one of the very primitive and generalized genera of the Megapodagrioninae.” {Masculine}

Archibasis Kirby, 1890: 156

Within his genus *Telebasis*, Selys (1877) established five sous-genres (*Leptobasis*, *Stenobasis*, *Telebasis*, *Amphicnemis*, *Pericnemis*). Although Kirby (1890), gave no explanation, he replaced *Stenobasis* with *Archibasis* as it was a homonym and therefore not a valid name. *Stenobasis* was derived from Gr. στενός = narrow + βάσις = that wheron one stands, pedestal, base referring to the petiolated wing bases. “Ailes pétiolées jusqu’à la nervule basale postcostale ou même un peu plus loin, un peu avant l’origine du quadrilatère.” [Wings stalked up to the basal postcostal vein or even a little further, a little before the origin of the quadrilateral.] Kirby retains the root βάσις, preceding it with ἀρχή = beginning, origin. {Feminine}

Archipetalia Tillyard, 1917a: 450

Gr. ἀρχή = beginning, origin + πέταλον = petal, referring to the leaflike anal appendages of the males + adjectival suffix -ιος -α -ον = associated with. “*Archipetalia auriculata*, n.g. et sp., is probably the most archaic *Æschnine* Dragonfly yet discovered, and appears to represent a type ancestral, in many

of its characters, to *Austropetalia* of the Blue Mountains on the one hand, and to the three Chilian genera *Petalia*, *Phyllopetalia*, and *Hypopetalia* on the other. These five genera forming the tribe Petaliini.” {Feminine}

arenarius, *Austrogomphus* Tillyard, 1906a: 551

[junior synonym of *Antipodogomphus proselythus* (Martin, 1901)]

L. (*h*)*arenarius* –*a* –*um* = pertaining to sand. “This species is found along the sandy shores of the River Barron.” {declinable adjective}

argentea, *Argiocnemis* Tillyard, 1906b: 192, 193

L. *argenteus* –*a* –*um* = of the colour of silver. “Abdomen very thin, cylindrical. Colour: the true ground colour is a dull black, but this is completely covered in mature specimens by a beautiful silvery white bloom, which can be rubbed off with the fingers” and “When flying its wings are invisible, and it appears as a bright silver streak, darting in and out of the grass”. {declinable adjective}

Argiocnemis Selys, 1877: 135

At first reading, *Argio*– is derived from Gr. ἀργία = idleness, rest, leisure. However, it is much more likely that Selys (1877) has used *argio*– as an anagram of *agri*–, itself based on the genus *Agrion* (q.v.). See also *Argiolestes*. *Cnemis* comes from Gr κνημῖς = legging an allusion to the widened tibiae in *Platycnemis* (Fliedner & Martens 2008). Selys’ genus *Argiocnemis* contains sous-genres *Argiocnemis* and *Agriocnemis*, recognising their closeness. {Feminine}

Argiolestes Selys, 1862b: 38

Argio– (see *Argiocnemis* also) + *Lestes* (q.v.). Selys’ intent is not known but, whether by design or default, he has used *argio*– as an anagram of *agri*–, itself based on the genus *Agrion* (q.v.). In naming Sous-genre 1 – *Argiocnemis* and Sous-genre 2 – *Agriocnemis*, within Genre 4 – *Argiocnemis*, Selys (1877) provides another example of this construction. Rambur (1842) had previously taken a similar path in naming the North American genus *Argia* with a name signifying its closeness to *Agrion*: “par le ptérostigma et les deux nervules du

premier espace costal elles se rapprochent des *Agrion*” [in the pterostigma and two veins of the first costal space they approach *Agrion*]. In discussing *Argia* Rambur, Fliedner (2006) dismisses Greek mythology as a source and argues that Rambur looked for a name as similar to *Agrion* as possible without causing confusion. Perhaps Selys took this approach as his model. {Masculine}

Argyrocnemis Kennedy, 1920: 85

[junior synonym of *Agriocnemis* Selys, 1877]

Gr. ἄργυρος = silver + κνημῖς = legging (see *Agriocnemis*). A monotypic genus established by Kennedy with “Type—*Agriocnemis argentea* Tillyard.” Kennedy has retained the second element from the original genus but modified it with reference to the species *argentea* (q.v.) from the *L. argenteus* –a –um = of the colour of silver. {Feminine}

aridus, *Austrolestes* (Tillyard, 1908c: 764)

There is no etymological explanation in the original description but the derivation is consistent with *L. aridus* –a –um = dry, arid. The habitat details are: “Tennant’s Creek, N.T.; common round the waterholes in September – April. Probably widely distributed in Central Australia.” {declinable adjective}

Armagomphus Carle, 1986: 287

L. arma = armour, weapons of war + *Gomphus* (see *Austrogomphus*). Carle (1986) erected *Armagomphus* as a new subgenus of *Hemigomphus*. It was differentiated by, *inter alia*, “male paraprocts with lateral clawlike process”. {Masculine}

armiger, *Armagomphus* (Tillyard, 1913b: 578)

L. armiger –gera –gerum = bearing arms. “The remarkable development of parallel spurs on segment 10 and the superior appendages seems to be a contrivance to enable the male to clasp the occipital ridge of the female, which, in this species, is not furnished with the usual tubercular processes by which this process is accomplished.” {declinable adjective}

asiatica, *Lathrecista* (Fabricius, 1798: 283)

L. asiaticus –*a* –*um* = Asian. “Habitat in India orientali Dom. Daldorff.”
{declinable adjective}

aspersa, *Austroaeschna* Martin, 1909: 96

[junior synonym of *Austroaeschna anacantha* Tillyard, 1908]

L. aspersus –*a* –*um* perfect participle of *aspergo* = to scatter or sprinkle, thus sprinkled.

Coloration of the thorax is probably the source of this species name. “Thorax brun noirâtre, avec deux taches jaunes en haut, contre les sinus, et une dizaine de petits points jaunes; les côtés avec environ neuf points jaunes.” [Thorax blackish brown, with two yellow spots at the top up against the sinuses, and a dozen small yellow dots, the sides with about nine yellow spots.] {declinable participle}

asthenes, *Antipodophlebia* (Tillyard, 1916: 42)

Gr. ἀσθενής = weak. Tillyard (1917b: 376) defines “*Asthenogenesis* (Gr. ἀσθενής, weak; γένεσις, begetting), the development of a successful line of descent by the adoption of weakness in structure.” “This species [*Telephlebia asthenes*] is very different from *T. godeffroyi* by its hyaline wings without trace of bands, its short pterostigma, open venation, absence of membranule, very regular prolongation of subcosta, smaller size, and somewhat different coloration. It appears to be a specialized asthenogenetic offshoot from the main stock, and is one of the smallest *Æschninæ* known to me.” {adjective}

atrata, *Austroaeschna* Martin, 1909: 95, 96

L. atratus –*a* –*um* = blackened. While *A. atratus* is a dark coloured species, in life it is no more so than some other *Austroaeschna* species known to Martin. The only mentions of black in the original description are “♂ face noir luisant in bas avec deux points jaunes accolés au milieu du labrum” [♂ face shiny black at the base with two yellow dots side by side in the middle of labrum] and “Abdomen brun noirâtre marqué de jaunâtre ou de couleur

chair” [Abdomen blackish-brown marked with yellow or flesh-coloured]. It may be of relevance that, of the 17 taxa in Martin’s (1909) review of the genus *Austroaeschna*, only *A. atrata* and *A. aspersa* (= *A. anacantha* Tillyard, 1908) have the character of “♂ face noir.” {declinable adjective}

atratus, *Hemigomphus* Watson, 1991b: 316, 315

L. atratus –a –um. “*Atratus*, clothed in black.” referring to “Abdomen. Substantially blackish brown to black”. {declinable adjective}

atrifrons, *Micromidia* (McLachlan, 1883: xci)

L. ater –tra –trum = black + *frons* = forehead. This alludes to the black elements of the anterior head. “Face (y compris la lèvre supérieure, le rhinarium, le vertex et sa vésicule) en entier d’un noir verdâtre luisant, avec de petits poils noirs” [Face (including the labrum, clypeus, vertex and tubercle) entirely shining greenish-black, with small black hairs]. {adjective}

aureofrons, *Pseudagrion* Tillyard, 1906b: 190

L. aureus –a –um = adorned with gold, golden + *frons* = forehead, brow.

There is no etymological explanation in the original description but it includes the statement: “Head - ...front, near the postclypeus, golden-yellow.” {adjective }

aureum, *Pseudagrion ignifer* Theischinger, 1997a: 802

L. aureus –a –um = adorned with gold, golden. “aureus 3 = Latin for “golden”, referring to the pale yellow face of the male.” {declinable adjective}

aureus, *Austroargiolestes* (Tillyard, 1906b: 179)

L. aureus –a –um = adorned with gold, golden. “It is easily distinguished from the other two Australian species of the genus [*Argiolestes*] by its brilliant orange thorax.” {declinable adjective}

auriculata, *Archipetalia* Tillyard, 1917a: 457

L. *auricula* = ear + suffix *-atus -ata -atum* = provided with. This is used to describe the ear-shaped processes on tergum 2 of this species. “*Auricles* very large, bright yellow above, edged with dark brown outwards and posteriorly; underside brown.” {declinable adjective}

aurolineata, *Eusynthemis* (Tillyard, 1913b: 575)

[as *Metathemis guttata aurolineata*, n. subsp., Tillyard]

L. *aurum* = gold + *linea* = a straight line + suffix *-atus -ata -atum*, provided with. “A pair of distinct antehumeral lines or rays on thorax, gold or yellow, from 1.5 to 2.5 mm. in length. These are not present in the type-form.” {declinable adjective}

aurora, *Ischnura* (Brauer, 1865a: 510)

L. *aurora* = dawn, break of day, but Brauer (1865) capitalises “Aurora” implying that it is named for the Goddess of the Dawn, whose ever-falling tears for the death of her son Memnon give the early morning dew. Other than the general colour and the labium being orange, there is nothing in the original description to suggest the colours of sunrise. “*Aurantiacum, occipite punctis duobus pallide coeruleis, Clypeo aeneo, labio aurantiaco*” [Orange, the head with two pale blue spots, with clypeus brassy and with labium orange]. {noun in apposition}

australiae, *Hemicordulia* (Rambur, 1842: 146)

“Collection de M. Marchal, et indiquée de la Nouvelle-Hollande”
= of Australia. {noun in the genitive case}

australis, *Agriocnemis* (Selys, 1877: 156)

[junior synonym of *Agriocnemis pygmaea* (Rambur, 1842)]

From *L. australis* *-is -e* = southern but in this case referring directly to Australia. “Patrie: Queens’ Land (Australie). Un seul exemplaire. Coll. MacLachlan.” {declinable adjective}

australis, *Austrogomphus* Dale, 1854: 65

From *L. australis* *-is -e* = southern. However the only corroborative statement from the original description is “*Patrie*: Terre de Nuits. (Collect. Dale.)”. Presumably that “land of the night” implies the land which is in darkness when that of the author is in daylight, hence, the opposite side of the world, viz. Australia. Selys (1857: 437) confirms the southern locality with “Le mâle vient du port Adélaïde (Terre de Nuits) d’après l’exemplaire appartenant à M. Dale.” [The male comes from Port Adelaide (Earth of Night) from the specimen belonging to Mr. Dale.] {declinable adjective}

australis, *Brachydiplax* Kirby, 1894: 19

[junior synonym of *Brachydiplax denticauda* (Brauer, 1867)]

From *L. australis* *-is -e* = southern, in this case directly referring to Australia. “This is the first species of the genus described from Australia. It is probably allied to *B. denticauda*, Brauer, &c.” {declinable adjective}

australis, *Ictinogomphus* (Selys, 1873a: 770)

From *L. australis* *-is -e* = southern, in this case directly referring to Australia. “*Patrie*: Queen’s-Land (Australie), communiquée par M. MacLachlan. (Coll. Selys.)” {declinable adjective}

australis, *Nannophya* Brauer, 1865a: 502

L. australis *-is -e* = southern.

There is no etymological explanation in the original description but it includes the collection location as: “*Vaterland*: Australien, Sidney [sic]” [Country: Australia, Sydney]. {declinable adjective}

australis, *Neurobasis* Selys, 1897b: 428

L. australis –is –e = southern. “Patrie: Waigiou [Indonesia], Aru [Moluccas]; Ternate? [Moluccas]”. {declinable adjective}

Austrictinogomphus Fraser, 1940: 550

[junior synonym of *Ictinogomphus* Cowley, 1934a]

The distribution is given as Papuan so the derivation is *L. auster* (stem *austro*–) = south wind, hence south + *Ictinogomphus* (q.v). {Masculine}

Austroaeschna Selys, 1883: 733

L. auster (stem *austro*–) = south wind, hence south + –*aeschna* (see *Aeshna*).

This is recognised as an Australian genus in “*Patrie: Nouvelle Hollande*” and also in a note to the original description of *Acanthaeschna* Selys, 1883 n.g.: 732 “Les deux species australiennes qui constituent les *Acanthaeschna* ont de l’affinité avec les *Austroaeschna* de la même contrée” [The two Australian species that constitute the *Acanthaeschna* have an affinity with the *Austroaeschna* of the same region]. {Feminine}

Austroagrion Tillyard, 1913a: 467

L. auster (stem *austro*–) = south wind, hence south + *Agrion* (q.v.).

There is no etymological explanation in the original description but it includes the statement: “they [*Pseudagrion cyane* and *Pseudagrion coeruleum*] are more of the *Agrion* build, and probably represent one of the first asthenogenetic offshoots from that type.” The two species names which Tillyard discusses are synonyms but the distribution of the taxon is in Australia. {Neuter}

Austroargiolestes Kennedy, 1925: 300

L. auster (stem *austro*–) = south wind, hence south + *Argiolestes* (q.v.).

There is no etymological explanation in the original description but the discussion includes the statement: “This genus was erected to include

Argiolestes icteromelas Selys and those other Australian species in which *Ac* lies nearer antenodal two, petiolation ceases near the base of the quadrangle; the male superior appendages have a large inferior subapical tooth and there are usually 2-3 rows of cells in the Cu_2 area.” {Masculine}

Austrocnemis Tillyard, 1913a: 456

L. auster (stem *austro-*) = south wind, hence south + Gr. κνημῖς = legging. Fliedner & Martens (2008) point out that *-cnemis* was used first in *Platycnemis* [Greek: ‘broad greave’ i.e. armour for the leg, an allusion to the widened tibiae in that genus]. But in many names it means simply Coenagrionid or Platycnemidid dragonfly.

There is no etymological explanation in the original description but it includes the statements: “Characters of *Agriocnemis* Selys, but with closer venation, narrower wings, and remarkably long legs. ... It is with M. René Martin’s approval, that I propose this new genus for his interesting species [*Agriocnemis splendida*], which is clearly not congeneric with other members of the genus *Agriocnemis*.” {Feminine}

Austrocoenagrion Kennedy, 1920: 86

[junior synonym of *Coenagrion* Kirby, 1890]

This monotypic genus is restricted to Australia, hence *L. auster* (stem *austro-*) = south wind, hence south + *Coenagrion* (q.v.). Kennedy bases this new monotypic genus on “Type—*Coenagrion lyelli* Tilly. Like *Coenagrion* except penis with shaft spines and the internal soft fold hood-like.” {Neuter}

Austrocordulia Tillyard, 1909a: 744

L. auster (stem *austro-*) = south wind, hence south + *Cordulia* (q.v.).

There is no etymological explanation in the original description but the discussion includes the statement: “Allied to *Oxygastra* Selys (Europe) and *Syncordulia* Selys (Australia)” . {Feminine}

Austroepigomphus Fraser, 1951a: 254

L. auster (stem *austro-*) = south wind, hence south + *Epigomphus*. For the meaning of *Gomphus*, see *Austrogomphus*. The Gr. prefix ἐπι- can mean something upon something else, or an accumulation of one thing over another. Hagen in Selys (1854) gives no explanation of the genus name *Epigomphus*. If the former it might refer to the “oreilletes saillantes” [prominent auricles] of the female of *E. paludosus* (the unique specimen of that taxon when described) which are not mentioned in related genera. If the latter, the name could mean: yet another genus besides *Gomphus*. From the original description: “*praeruptus* is an *Epigomphine*, so that I have created a new genus *Austroepigomphus* to hold it.” Fraser (1959) uses “more than one cross-vein between the sectors of the arculus in the hindwings” to distinguish epigomphine species. {Masculine}

Austrogomphus Selys, 1854: 65

L. auster (stem *austro-*) = south wind, hence south + Gr. γόμφος = peg, bolt or pin, alluding to the shape of the male abdomen in most species, which appears like the bolt used for ship building. {Masculine}

Austrogynacantha Tillyard, 1908d: 425

L. auster (stem *austro-*) = south wind, hence south + *Gynacantha*, which is derived from the Gr. γυνή = woman + ἄκανθα = thorn, alluding to the spines on the ventral side of the 10th abdominal segment of the females in this genus. “Though the two species of *Karschia* are of smaller size than the true species of *Gynacantha*, yet *G. heterogena* again is smaller still” and “I propose to found a new genus *Austrogynacantha* for the reception of the beautiful and remarkable species *Gynacantha heterogena*” [see *Austrogynacantha heterogena*]. {Feminine}

Austrolestes Tillyard, 1913a: 410, 421-422

L. auster (stem *austro-*) = south wind, hence south + *Lestes* “Greek ληστής = a robber or pirate, masculine (rarely used in the common gender). I have therefore treated *Lestes* and its derivations as masculine, though de Selys used feminine terminations with them”.

Tillyard (1913a) defines *Austrolestes* by “Characters of *Lestes* Leach, and Selys, *second section*, with the important addition that the wings are not spread out horizontally in repose, but are completely folded back (as in most other Agrionidae). The genus *Lestes* contains a very large number of species, and has become somewhat unwieldy. De Selys himself indicated a good point from which a subdivision might be made, when he divided the genus into two sections, distinguished by the form of the quadrilateral. In all the Australian species, together with a very few from outside Australia, the quadrilateral is of a very different shape from that of the more typical *Lestes* of de Selys’ *first section*.” {Masculine}

Austropetalia Tillyard, 1916: 15

L. auster (stem *austro-*) = south wind, hence south + Gr. πέταλον = petal, referring to the leaflike anal appendages of the males + adjectival suffix -ιος -α -ον = associated with.

There is no etymological explanation in the original description but it includes the statement: “This genus is very closely related to the *Petalia*-group of genera which inhabits Chili, viz.: - *Petalia*, *Phyllopetalia*, and *Hypopetalia*.” {Feminine}

Austrophlebia Tillyard, 1916: 22

L. auster (stem *austro-*) = south wind, hence south + Gr. φλέψ (stem φλεβ-) = vein + adjectival suffix -ιος -α -ον = associated with. “This genus is closely allied both to *Telephlebia* and to *Austroaeschna*.” Hence the concatenation of parts of the two generic names. {Feminine}

Austrophya Tillyard, 1909a: 738

See *Austrosticta* where the quotation from Tillyard says, in part, that the prefix *Austro-* derived from the *L. auster* (stem *austro-*) = south wind, hence south may conveniently be used to denote purely Australian genera. To this is added Gr. φύη = stature or growth, used in the name of its two allies. “Allied to *Neophya* Selys, and to *Cordulephya* Selys.” {Feminine}

Austrosticta Tillyard, 1908c: 765

“Allied to *Isosticta* Selys” Tillyard (1916) states: “The prefix *Austro-* [L. *auster* (stem *austro-*) = south wind] may conveniently be used to denote purely Australian genera.” In *Austrosticta* *Austro-* applies it to the second element of the genus *Isosticta*, in spite of it mixing Latin and Greek roots. Gr. στεικτός = spotted, tattooed. {Feminine}

Austrosynthemis Carle, 1995: 393

There is no etymological explanation in the original description. However Carle includes in *Austrosynthemis* gen. nov., *Synthemis cyanitincta*, Tillyard, *S. claviculata* and *S. ofarrelli*, Theischinger & Watson, all Australian species. Hence L. *auster* (stem *austro-*) = south wind, hence south + *Synthemis* (q.v.) The author states “Because phylogenetic keys, like phylogenetic classifications are inherently more stable and confer more information than artificial phenetic constructs, the following descriptive phylogenetic keys are presented in place of isolated descriptions.” {Feminine}

Austrothemis Ris, 1912: 738

L. *auster* (stem *austro-*) = south wind, hence south + Gr. θέμις = law as established by custom (see *Synthemis*).

There is little in the original description to connect *Austrothemis* to other genera with the *-themis* root, except that it is in the family Libellulidae (see *Synthemis*). {Feminine}

balteatum, *Orthetrum* Lieftinck, 1933b: 64

L. *balteus* = a girdle + suffix *-atus -a -um* = provided with. This probably refers to the markings on abdominal segments 3-6, visible in the young male before being obscured by pruinescence. “Segm. 3 with complete, very broad, submedian ring, irregularly indented behind, bordering the transverse carina ... and 5 with a broad median ring, divided longitudinally by the black carina ... Dorsum of 6 with very large, clear-cut median transverse marking, likewise divided by the black median carina.” {declinable adjective}

banksi, *Rhadinosticta* (Tillyard, 1913b: 434)

“*Hab.* – Banks Island, Torres Strait. Four males and five females, taken by Mr. H. Elgner, in February, 1910.” {noun in the genitive case}

barbarae, *Eusynthemis* (Moulds, 1985: 115)

“The species is named after my wife in recognition of her considerable assistance in field collecting over many years.” {noun in the genitive case}

barbarae, *Lestoidea* Watson, 1967a: 77

Although not acknowledged in the original description, this species was obviously named for the author's wife, Barbara. {noun in the genitive case}

baroalba, *Nososticta* Watson & Theischinger, 1984: 7

“Holotype ♂: Baroalba Creek springs, 19 km NE. by N. of Mt Cahill, Northern Territory.” {noun in apposition}

beatricis, *Rhyothemis phyllis* Lieftinck, 1942

The subspecies was named for Princess Beatrix of the Netherlands, confirmed by a statement by Geijskes (1984) “two subspecies of the libellulid genus *Rhyothemis* were described and photographed, both named in honour of members of the [Dutch] Royal family”. In fact there were three subspecies (only one known from Australia) named for Queen Juliana and her two oldest daughters: *Rhyothemis phyllis beatricis*, *Rhyothemis princeps irene*, *Rhyothemis regia juliana*. The quotation continues “[the descriptions] at that time perhaps considered somewhat risky but which, of course, remained entirely unnoticed.” The last part refers to the fact that the paper was published in Bogor (Java), which had been seized by the Japanese a few months before (Vincent Kalkman, in litt.). {noun in the genitive case}

belladonna, *Lestes* Macleay, W.S. 1827 *Incertae sedis*

It would seem that Macleay used a name from Italian rather than Latin roots: literally ‘beautiful lady’. He seems to be following a European tradition of using a name for a damselfly that evokes womanly beauty but with no mention

of the specific loveliness or beauty in the description. See also *amabilis* and *concinus*. Alternatively, Macleay might have seen a resemblance to some part of the plant *Atropa belladonna* Linn. Here the name 'belladonna' originates from its ancient cosmetic usage in eye-drops by women to dilate the pupils of the eyes to make them appear seductive. {noun in apposition}

berthoudi, *Hesperocordulia* Tillyard, 1911a: 377

"Taken by my friend Mr G[eorge] F[rederick] Berthoud, to whom I dedicate this species." Tillyard (1908b: 721) gives further details of this collector: "I am much indebted to Mr. G. Berthoud, of the State Farm, Hamel [WA], for sending me a large number of specimens from Waroona (Murray District), thus linking together the northern and southern localities which I myself worked." {noun in the genitive case}

bicolor, *Notolibellula* Theischinger & Watson, 1977: 417

L. *bicolor* = of two colours. "In 1968, Watson encountered specimens of a vivid blue and red, broad-bodied libelluline dragonfly in the Kimberley region, in the north of Western Australia." {adjective}

bidens, *Cordulephya* Sjöstedt, 1917: 8

L. *bidens* = with two teeth, most likely referring to the tooth on each of the superior anal appendages, although there is a slight possibility that it refers to the tooth on the superior anal appendage and the denticle on the inferior appendage. "... die oberen Analanhänge ... von der Seite gesehen zuerst fast gerade, nach aussen etwas abwärts gebogen, unten jederseits der Mitte mit einem deutlichen Zahn versehen, der vordere etwas stärker; der untere Anhang schmal dreieckig, etwas aufwärts gebogen, nicht viel kürzer als die oberen, in der Spitze oben mit zwei Zähnen." [... the upper anal appendages: ... in lateral view the first is almost straight, slightly bent downward, with a distinct tooth below on both sides of the middle, the anterior one somewhat stronger; inferior appendage narrowly triangular, somewhat bent upward, not much shorter than the superiors, its tip above with two denticles.] {adjective}

bifurcatus, *Austrogomphus* Tillyard, 1909b: 245

L. *bi-* (in compounds) = two + *furcatus* *-a -um* = forked, branched. “Appendages: *superior* very remarkable; 1.6 mm., bases separated, straight, cylindrical, jet black, hairy, *strongly bifurcated*; the outer fork being the longer, fairly pointed, the inner somewhat shorter, very pointed. *Inferior* bifurcated, the two parts widely separated.” {declinable adjective}

billinghamursti, *Caliagrion* (Martin, 1901: 221)

Farncombe Lovett Billinghamurst was not mentioned specifically in the original description but was acknowledged in the introduction to the paper, thus: “M. Billinghamurst, d’Alexandra, qui a chassé pour moi en plusieurs districts de Victoria avec une compétence et une intelligence remarquables et qui va lui-même, parait-il, publier d’intéressantes notes sur le mœurs et la coloration des Odonates de son pays.” [Mr Billinghamurst, of Alexandra, who hunted for me in several districts of Victoria with a competence and a remarkable intelligence and will himself, it seems, publish some interesting notes on the habits and coloration of the Odonates of his country.]

“Farncombe was a Bank Manager in Australia with The Union Bank in Alexandra till 1903 when he moved to Bacchus Marsh.” (M. Billinghamurst, in litt.). {noun in the genitive case}

bipunctata, *Diplacodes* (Brauer, 1865a: 503)

L. *bi-* (in compounds) = two + *punctum* = point, spot + suffix *-atus -a -um* = provided with.

“... ad stigmata mesothoracalia [sic] punctis duobus nigris” [... with two black spots at the mesothoracic stigmata].

That now raises the question of which are the two spots on *bipunctata*. Is there one black spot on each side of the thorax, making two in total, or did Brauer look at one side of the thorax and see the black spot and the dark metastigma. Brauer describes the spots as being on the mesothorax (mesothoracalia) whereas they are on the metathorax. Examination of specimens shows that

dark coloration extends beyond the metastigma giving two adjacent spots on each side of the thorax. {declinable adjective}

biserialis, *Agrionoptera longitudinalis* Selys, 1879: 304

L. *bi-* (in compounds) = two + *series* = row + adj. suffix *-alis -is -e* = relating to. “Diffère du type *longitudinalis* des Moluques par ce qui suit: 3° Aux ailes supérieures le triangle discoïdal n’est suivi que de deux rangs de cellules (ou par exception trois cellules contre le triangle même)” [Differs from the type *longitudinalis* of the Moluccas by the following: 3° The discoïdal triangle of the forewings is followed by two rows of cells (or exceptionally three cells against the same triangle)]. {declinable adjective}

bispina, *Raphismia* (Hagen, 1867a: 91)

L. *bi-* (in compounds) = two + *spina* = thorn, prickle. The first literature reference to [*Diplax*] *bispina* is a comparison within a discussion appertaining to *Nannophya phryne*. “*N. Phryne* Perty ist äusserst merkwürdig durch einen langen schwarzen Dorn auf der Unterseite des Metathorax, der den übrigen *Nannophya*-Arten durchweg fehlt. Von allen mir bekannten Odonaten hat nur *Diplax bispina* Hag. Aus Morotai und Nord-Halmaheira, und zwar nur das Männchen, eine ähnliche Bewaffnung auf der Bauchseite des Thorax, aber hier zwei Dorne.” [*N. Phryne* Perty is very strange with a long black spike on the bottom of the metathorax, which is consistently missing in other species of *Nannophya*. Of all Odonata known to me only *Diplax bispina* Hag. from Morotai and north-Halmaheira, and only the male, has a similar armament on the ventral side of the thorax, but here are two spines.] {declinable adjective}

boumiera, *Orthetrum* Watson & Arthington, 1978: 152

“The specific name is derived from the Aboriginal name for Brown Lake, North Stradbroke Island. It is to be treated as an undeclinable noun.”

The name *Orthetrum bumiera* (after Lake Bumiera - Brown Lake) was proposed but it was rejected and the ‘o’ inserted for the sake of decency. {noun in apposition}

Brachydiplax Brauer, 1868a: 172

Gr. βραχύς = short, + *Diplax* (see *Diplacodes*). Members of the subfamily Brachydiplacinae are very small to medium sized with the colloquial name of 'Dwarves'. In a key to Gattungen der Libellulinen, given in a later paper, Brauer (1868b: 368) implies the relationship with *Diplax*:

“Weniger als 10 Antecubitales, anfangs 2 dann 3 Discoidalreihen vide *Diplax* (Ostindien). *Brachydiplax* Brau. 10 und mehr Antecubitales. Schwarz und gelb gefleckte Thiere. 2 Discoidalreihen vorherrschend (Ostindien). *Diplacina* Brau.”

[Less than 10 Antecubitales, initially 2 then 3 discoidal rows see *Diplax* (East India). *Brachydiplax* Brau. 10 or more Antecubitales. Black and yellow spotted animals. Predominantly 2 discoidal rows (East India). *Diplacina* Brau.] {Feminine}

Brachytron Evans, 1845: 22

“Named from βραχύνω, to abbreviate, ἦτρον, abdomen, in allusion to its being short and stout; which, together with the different shape of its wings, and the pilose body, has induced me to separate it from *Æshna*.”

Evans did not show the Gr. accents but his etymology was equivalent to Gr. βραχύνω = to shorten + ἦτρον = abdomen. This was incorrect philology and would be better expressed as Gr. βραχύς = short + ἦτρον = abdomen (cf. *Brachydiplax*). Cowley (1934b: 240) argued that, because the title page of Evan's work noted “Printed for private circulation”, his genus *Brachytron* was only a MS name. In his 1^{re} Groupe of *Aeschna* (sic) (type: *Æ. pratensis*. Müll.) Selys (1850: 113) states “Je n'en connais qu'une espèce qui forme le premier groupe. M. Evans en fait le genre *Brachytron*.” [I know only one species that forms the first group. Mr. Evans made the genus *Brachytron*.] Although Selys did not use the name, Cowley considers this to be the first valid publication of it and it should be cited as *Brachytron* Evans MS in Selys (1850). Even though this amendment has generally not been accepted, Gambles (1976) gives the same argument. {Neuter}

braganza, *Rhyothemis* Karsch, 1890b: 354, 355

The type locality for this species is Brazil, with the comment “Es liegt kein Grund vor, an der Richtigkeit der Vaterlandsangabe ‘Brasilien’ zu zweifeln.” [No reason exists to doubt the correctness of the country statement ‘Brazil’.] The Most Serene House of Braganza (*Sereníssima Casa de Bragança*), an important Portuguese noble family, ruled the Kingdom of Portugal and its colonial Empire from 1640 to 1910. A branch of the house founded and governed the Empire of Brazil from 1822 to 1889 as the Brazilian Imperial Family. Hämäläinen (2015) attributes the name to Dom Pedro II (1825-1891), Monarch of Brazil, a member of the House of Braganza. However the name *braganza* is a misnomer as the species is known only from northern Australia. Ris (1913b: 954) noted this discrepancy. “Karsch’s rätselhafte, angeblich aus Brasilien stammende *Rhyothemis* ist unzweifelhaft die gleiche Art, die Mr. Tillyard in Queensland gefangen und von dort beschrieben hat.” [Karsch’s puzzling *Rhyothemis*, allegedly originating from Brazil, is undoubtedly the same species that Mr Tillyard caught in Queensland and described from there.] {noun in apposition}

brevicauda, *Lestoidea* Theischinger, 1996b: 318

“A combination of the *L. brevis* (= short) and *L. cauda* (= tail) refers to the short inferior appendages of the male.” {noun in apposition}

brevicauda, *Telephlebia* Tillyard, 1916: 36

L. brevis –*is* –*e* = short + *cauda* = tail of an animal.

There is no specific etymological explanation in the original description but the discussion includes the statement: “It seems therefore extremely probable that the longer [superior] appendage is the more archaic form, and that the shorter one of *T. brevicuda* [cf. *Telephlebia godeffroyi*] has either evolved gradually from it as a more useful form, or has arisen as a sudden mutation, or, possibly, as the direct inheritance of an acquired character, in the Lamarckian sense.” {noun in apposition}

brevistyla, *Adversaeschna* (Rambur, 1842: 206)

L. brevis –*is* –*e* = short + *stilus* = a stake, a pointed instrument used by the Romans for writing upon wax tablets. From late antiquity until modern times *y* is often used instead of *i* thus converting *stilus* to *stylus*. The name applies to the anal appendages, that formerly also were called ‘*styli*’. “Cette espèce ressemble beaucoup à la *Bonariensis*; mais elle s’en distingue de suite par la brièveté des appendices.” [This species is very similar to [*Aeshna*] *bonariensis*, but it differs by the short appendages]. {declinable adjective}

brevistyla, *Eusynthemis* (Selys, 1871b: 564)

L. brevis –*is* –*e* = short + *stilus* = a stake, a pointed instrument used by the Romans for writing upon wax tablets. The name applies to the anal appendages, although the original description is not explicit about their brevity except to compare them with the length of abdominal segment 10. “♂ Appendices noirs; les supérieurs un peu plus longs que le 10^e” [♂ Anal appendices black, the superiors a little longer than the 10th [segment]]. {declinable adjective}

brevistylus, *Hydrobasileus* (Brauer, 1865b: 978)

L. brevis –*is* –*e* = short + *stilus* = a stake, a pointed instrument used by the Romans for writing upon wax tablets. The name applies to the anal appendages, that formerly were also called ‘*styli*’.

“[A]ppendicibus feminae brevissimis, nigris” [female appendages very short, black]. {declinable adjective}

brisbanense, *Agrion* Tillyard 1917a: 478

[junior synonym of *Coenagrion lyelli* (Tillyard, 1913)]

The species name is derived from Brisbane + = –*ensis* –*is* –*e*, adjectival suffix indicating place of origin. “Type, ♂, in Coll. Tillyard. (Brisbane, a unique specimen, taken by myself on Kedron Brook, January 22nd, 1913).” {declinable adjective}

brookhousei, *Austroargiolestes* Theischinger & O'Farrell, 1986: 409

“The species is dedicated to Mr P[eter A.] Brookhouse who was much involved in collecting material for this study.” {noun in the genitive case}

bucki, *Griseargiolestes* Theischinger, 1998b: 623

“Dedication to Dr. K[laus] Buck of Wilster, Germany, prolific photographer of Australian dragonflies.” {noun in the genitive case}

calcaris, *Austroargiolestes* (Fraser, 1958a: 70)

The species name is derived from *L. calcar* –*aris* = spur.

From the original description the superior anal appendages are described as: “shortly before apex a strong thorn-like spine, similar to that found in *icteromelas* is directed ventrally and obliquely posteriorly.” {noun in the genitive case}

caledonicum, *Orthetrum* (Brauer, 1865a: 506)

Brauer (1865) gives the collection details as “Patria: Nova Caledonia.” from which the specific epithet is derived. {declinable adjective}

Caliagrion Tillyard, 1913a: 468

Gr. κάλός = beautiful, good + *Agrion* (q.v.). The adjectival meaning ‘beautiful’ has more relevance than ‘good’.

The type of this genus is *Pseudagrion billinghursti* Martin. There is no etymological explanation in the original description; the only comment of relevance being “Very distinct from *Pseudagrion* Selys ...; but connected with this genus by the intermediate species *Ps. ignifer* Tillyard, which is retained in *Pseudagrion* on venational and other characters.” {Neuter}

Camacinia Kirby, 1889: 266

It is possible that the meaning comes from Gr. καμάκινος = made of reed, cane or like material + suffix –*ia* to denote the feminine gender to match that of *Neurothemis* from which it was excised. The reed-like appearance

could refer to “abdomen stout, not thickened at the base, the sides nearly parallel.” In his key to the genera of Libellulinae presented earlier in the paper, Kirby isolates *Camacinia* (together with only *Belonia*) on the parallel-sided abdomen. {Feminine}

canescens, *Neosticta* Tillyard, 1913b: 436

Present participle of *L. canesco* = to become hoary, become grey, whiten. “More mature specimens show signs of becoming pruinescent-grey.” {present participle}

Ceriagrion Selys, 1876: 527

From the *L. cerinus* –*a* –*um* = wax-coloured + *Agrion* (q.v.). This alludes to the yellowish colouring. “Coloration générale jaunâtre orangée sans taches, ou mélangée d’olivâtre.” [General orangish yellowish colouring without spots, or mixed with olive.] {Neuter}

Ceylonolestes Kennedy, 1920: 84

[junior synonym of *Austrolestes* Tillyard, 1913]

This genus name is based on Ceylon + *Lestes* (q.v.). Kennedy (1920) neither gives an explanation of his etymology nor cites any references. He writes of this new genus “Type—*Austrolestes analis* Ramb. includes also *aridus*, *colenisonis*, *cyaneus*, *divisus*, *gracilis*, *leda* and *tenuissimus*.” Selys 1862a: 326, in his Synopsis of *Lestes* Deuxième Section, 1^{re} Groupe (*L. Cingulata*), lists its components as

“A. De Ceylan. – *L. gracilis*, – *divisa*.

B. De l’Australie. – *L. colenisonis*, – *psyche*, – *io*, – *leda*, – *annulosa*, – *analis*, – *cingulata*.” {Masculine}

chloe, *Rhyothemis phyllis* Kirby, 1894

Kirby’s only comment is “Allied to *R. amaryllis*, Selys”. Both *Amaryllis* and *Chloe* were rustic shepherdesses, the former mentioned in the pastorals of Theocritus and Virgil, the latter beloved by Daphnis in the pastoral romance of Longus entitled *Daphnis and Chloe*. {noun in apposition}

Chorismagrion Morton, 1914: 169

Greek χωρίσμός = being separated + *Agrion* (q.v.). This signifies that it is not an *Agrion*, as evidenced by the absence of the proximal side of the quadrilateral.

“The species, of course, forms the type of a new genus. Notwithstanding the important character above alluded to [the proximal side of the quadrilateral is absent in the forewing], it cannot, however, be referred to even the same Legion (*Agrion*) as *Hemiphlebia*, and it seems to find a more natural place in the Legion *Podagrion*.” {Neuter}

Choristhemis Tillyard, 1910b: 334

“Greek χωρίς without, in allusion to the absence of membranule” + θέμις = laws, decrees, ordinances, judgements (see *Synthemis*). {Feminine}

christine, Austroaeschna Theischinger, 1993: 806

“After my wife Christine; to be treated as a noun in apposition.”

christine, Austroargiolestes Theischinger & O’Farrell, 1986: 394

“The species is named after Mrs Christine Theischinger, *christine* being regarded as a noun in apposition to the generic name.”

chrysoides, Austroargiolestes (Tillyard, 1913d: 237)

Gr. χρυσός = gold + -ειδής = Gr. adjectival suffix indicating resemblance. “*Meso-* and *metathorax* bright golden-yellow above, except for a narrow black border near prothorax, and a broad black patch above and surrounding interalar ridge;” {adjective}

cingillum, Pseudagrion (Brauer, 1869: 12)

L. *cingillum* = diminutive of *cingulum*, a girdle, hence a small girdle, probably referring to the annular markings on the abdomen. The relevant phrases from the description are shown in italics “Erster Hinterleibsring blau, oben an der Basis ein schwarzer, viereckiger Fleck, der den Hinterrand breit blau

lässt, die äusserste Kante daselbst erst *einen feinen schwarzen Ring* bildend. Zweiter Ring oben blau, in der hinteren Hälfte ein metallisch schwarzer, vorne in zwei seitliche Spitzen ausgezogener, hinten durch *einen schmalen blauen Ring* vom schwarzen Hinterrande, bis auf eine schmale schwarze mittlere Verbindungslinie, getrennter Fleck.” [First abdominal segment blue, on top at the base a black, square patch, which leaves the posterior margin broadly blue, the outermost edge there forming *a fine black ring*. Second ring blue above, in the posterior half a metallic black patch, drawn out anteriorly into two lateral peaks, posteriorly separated by *a narrow blue ring* from the black posterior margin except for a narrow black median connecting line.] {noun in apposition}

cingulatus, *Austrolestes* (Burmeister, 1839: 823)

L. cingulum = girdle, sword-belt + suffix *-atus -a -um* = provided with. Named for the reddish yellow rings at the bases of the abdominal segments: “segmentis abdominalibus in basi cingulo rubro-flavo” [abdominal segments with red-yellow ring at base]. {declinable adjective}

circularis, *Pseudocordulia* Tillyard, 1909a: 743

L. circularis *-is -e* = circular. “Named from the exceedingly forcipate appendages, forming almost a complete circle.” {declinable adjective}

circumsignata, *Aethriamanta* Selys, 1897a: 83

L. circum = all around + *signatus -a -um* = perfect participle of *signo*, to mark. There is also an ancient verb *circumsigno* = to mark around. This refers to the dark spot on the hindwings bordered all around with yellow.

The original descriptions of [*Aethriamanta*] *circumsignata* and [*Æ.*] *subsignata* are sequential entries in Selys (1897). The factor in common is the hindwing markings. “La base des ailes inférieures marquée d’une tache brune jusqu’à l’origine du triangle; cette tache déchiquetée en dehors, formée d’abord d’un espace entre la sous-costale et la médiane, puis d’un autre entre la sous-médiane et la postcostale, laissant un espace jaune transparent en dehors, puis arrondi vers le bord anal.” [The base of the hindwings marked with a brown spot as far as the origin of the triangle; that spot broken, formed at first of a space between the subcostal and the median, then of another

between the sub-median and postcostal, leaving a transparent yellow space outside, then rounded towards the anal edge.] {declinable participle}

cladophila, *Tetrathemis irregularis* Tillyard, 1908f: 648

Gr. κλάδος = branch, twig + adjectival suffix φίλος -η -ον = loved / loving. “I have named it *T. cladophila* because of its great fondness for returning again and again to the same twig, even after being frightened away with the net.” {declinable adjective}

claviculata, *Tonyosynthemis* (Tillyard, 1909a: 749, 750)

L. diminutive of *clava* = cudgel + suffix *-atus -a -um* = provided with. “Named from the peculiar form of the appendages” and “Appendages: *superior* long, 3 mm. hairy, black, wide apart and slightly swollen at bases, then undulating and swelling out into a rather rounded and somewhat clubbed tip”. {declinable adjective}

coelestina, *Nososticta* (Tillyard, 1906b: 186, 185)

L. *caelestinus -a -um* = heavenly; in later Latin the original diphthong *-ae-* became *-oe-*. “Superior appendages of ♂ pale sky-blue” and “I have named it *coelistina* [sic] because of the remarkable colour of the appendages”. {declinable adjective}

Coenagrion Kirby, 1890: v

Although Kirby (1890) admonished that “no generic name ought to be issued without a description” he did not stand by that principle when naming *Coenagrion*. The name is derived from Gr. κοινός = common + *Agrion* (q.v.) and Kirby used it to partition species then in *Agrion* between *Agrion* for the calopterygids and *Coenagrion* for the remainder. Dijkstra and Kalkman (2012) argue that “Based on its distribution, it seems almost certain that the southeastern Australian *C. lyelli* should be placed in *Austrocoenagrion* (Kennedy, 1920). [q.v.]” This was followed by Dijkstra *et al.* (2013): “Also the Australian *Austrocoenagrion* and Holarctic *Coenagrion* were not recovered with any specific subgroup, although their genetic distinctiveness confirms their separation as genera.” {Neuter}

coerulescens, *Diphlebia* Tillyard, 1913d: 235

[as *Diphlebia euphæides cœrulescens*, n.subsp. Tillyard, 1913]

L. caeruleus = blue, + the suffix *-escens* = becoming. “Abdomen coloured as follows: ... 4-7 black with a pair of conspicuous basal blue spots (these segments are wholly black in type form).” The second morpheme seems to indicate that this [sub] species has blue spots that are lacking in the type species, rather than indicating some temporal change in colour. {adjective}

coeruleum, *Pseudagrion* Tillyard, 1908b: 741

[junior synonym of *Austroagrion cyane* (Selys, 1876)]

L. caeruleus –a –um = blue, dark blue (especially of the sea or sky). “This species is very closely related to *P. cyane* Selys, of the eastern States. The males can be at once distinguished by the greater amount of blue on the abdomen of *P. cœruleum*; in particular, segments 3 and 7-9.” {declinable adjective}

collaris, *Austrogomphus* Hagen, 1854: 64

L. collaris –is –e = pertaining to the neck (*L. collum* = neck), probably referring to a tooth on the rear of the female occiput. “Une petite pointe médiane en arrière de l’occiput.” [A small median point behind the occiput.] Note that this species has one median and two lateral teeth on the female occiput. This character is also present in *Austrogomphus australis*. Dale (1854) describes *A. australis* immediately after *A. collaris* in his text. “♀ Une forte pointe médiane en arrière de l’occiput” [♀ a strong median point behind the occiput]. {declinable adjective}

comitatus, *Hemigomphus* (Tillyard, 1909b: 247)

L. comitatus –a –um is the perfect participle of the verb *comito* = to accompany, hence accompanied. The only reference in the original description that might allude to the specific epithet is “It flies in small clearings in company with *Synthemis Olivei* Tillyard.” {declinable perfect participle}

concinus, *Lestes* Hagen, 1862a: 321

L. *concinus* –a –um = elegant, neat, pleasing.

Hagen (1862) described a male and female from Batavia, an immature male from China and an immature female from Manila. In a note Selys described differences on the 8th segment and wrote “Dans ce cas, M. Hagen propose de donner à ces exemplaires de Batavia le nom de *Lestes amata*, le nom *concinna* étant réservé à la femelle de Manille.” [In this case, Mr. Hagen proposes to give these specimens from Batavia the name *Lestes amata*, the name *concinna* being reserved for the female from Manila.] They were subsequently synonymised. There is nothing in the descriptions of any of the specimens alluding to elegance or neatness. Hagen seems to be following a tradition of using a name for a damselfly that evokes womanly beauty but with no mention of the specific loveliness or beauty in the description (cf. *elegans*, *festiva*, *ornatum*, *pulchellum*). {declinable adjective}

congener, *Anax* Rambur, 1842: 191

[junior synonym of *Hemianax papuensis* (Burmeister, 1839)]

From L. *congener* = of the same race or kind, in this case, genus. “De la taille du *Senegalensis*, et lui ressemblant; comme lui n’ayant pas d’arête latérale supplémentaire.” [The size of *Senegalensis*, and resembling it, and like it, not having an additional lateral ridge.] *Anax senegalensis* (Rambur, 1842), was described immediately prior to *A. congener* in the same publication. {adjective}

congener, *Potamarcha* (Rambur, 1842: 70)

From L. *congener* = of the same race or kind. It is not clear to what this alludes. Rambur described *Libellula* (now *Potamarcha*) *congener* Rambur, (1842: 70). A few pages earlier in the same publication, he had described *Libellula* (now *Potamarcha*) *obscura* Rambur (1842: 64). Ris (1910a, b) later declared the two species of Rambur to be synonymous and, evidently through page priority, declared *congener* to be the first synonym. However, both Rambur and Ris were apparently unaware that *Libellula* (now *Potamarcha*) *obscura* is a homonym of *Libellula* (now *Diastops*) *obscura* Fabricius, 1775. Kimmins (1957) corrected the nomenclature, restoring

congener as a valid name: *Potamarcha congener* (Rambur, 1842) being the correct name.

Clues to the etymology should be sought in Rambur's original description of *L. congener*.

Rambur wrote "Les espèces de ce genre étant très-nombreuses" [The species of this genus [*Libellula*] are very numerous]. He therefore divided *Libellula* into twelve groups and a number of subgroups. Both *congener* and *obscura* were placed within the eighth group containing 13 species, with *L. coerulescens* as the exemplar. Ten of these were named by Rambur in this paper. So, the species *L. congener* might be congeneric with the Huitième [Eighth] Groupe. Alternatively, the comparison may be with the Ninth Group. Rambur compares *L. congener* with *L. ferruginea*. "De la taille à peu près de la *Ferruginea*, mais ayant les ailes plus longues et plus étroites." [Size approximately of *Ferruginea*, but having the wings longer and narrower.] *L. ferruginea* is the exemplar for the Ninth Group. {adjective}

conjuncta, *Lestoidea* Tillyard, 1913a: 429

L. conjunctus –a –um (perfect participle of the verb *conjungo* = to bind together, connect), thus linked with, associated with. "This unique and wonderful insect ... is of the greatest phylogenetic importance, as it supplies the missing link between two very distinct groups or legions of the *Agrionidae*, both of which have been claimed to be archaic. *Lestöidea* may be regarded as a form *asthenogenetically intermediate* between the less-reduced *Lestes* and the more reduced *Protoneura*." {declinable perfect participle}

conspersa, *Dendroaeschna* (Tillyard, 1907a: 728)

L. conspersus –a –um = sprinkled, which probably refers to "Meso- and metathorax rich dark chocolate-brown spotted with pea green. ... Colour of abdomen deep rich-chocolate-brown spotted with pea green." {declinable perfect participle}

continentalis, *Hemicordulia* Martin, 1907: 13

L. *continens* = continent (present participle of *contineo* = to cohere, to be uninterrupted) + *-alis -is -e* = pertaining to. This apparently refers to the continent of Australia. "Habitat: Nouvelles-Galles du Sud, Queensland, îles Mariannes." The description also compares the new species with *H. novaehollandiae* and *H. assimilis* (extralimital). "Cette espèce tient le milieu entre *assimilis* et *novæhollandæ*." [This species is intermediate between *assimilis* and *novæhollandæ*.] {declinable adjective}

convergens, *Micromidia* Theischinger & Watson, 1978: 423

L. *convergens* = inclining together. "... the superiors ... slightly longer than inferior, convergent, with strong ventrobasal tooth in *M. convergens*." {present participle.}

coolawanyah, *Eurysticta* Watson, 1969a: 67

Although the type locality is Deep Reach, Fortescue R., Millstream Station, WA, the species is named for Coolawanyah Station, Pilbara, WA. {noun in apposition}

cooloola, *Austroaeschna* Theischinger, 1991: 39

Type locality: "Searys Creek near Rainbow Beach, Cooloola National Park, Queensland." First described as a subspecies of *A. unicornis*. {noun in apposition}

cooloola, *Hemigomphus* Watson, 1991b: 321

"From Cooloola National Park, in southern Queensland, the only locality where this species has been found; to be treated as a noun in apposition."

coomalie, *Eurysticta* Watson, 1991a: 28

"The name refers to the locality from which this insect was first recognised [Coomalie Creek, Northern Territory]; used as a noun in apposition."

cora, *Macrodiplax* (Brauer, 1867: 20)

[*Diplax*] *Cora* was capitalised by Brauer, to whom Kaup had suggested the name, indicating a proper noun. The derivation seems to be from the Gr. κόρη = girl, maiden. Persephone, the Greek goddess, was known in her childhood by the name Kore or Cora, meaning young maiden. Another possibility is that the name commemorates a friend of Kaup, but no references have been unearthed in his correspondence. The naming of the Central and South American zygopteroïd genus *Cora* Selys, 1853 predates Kaup's *Diplax cora*, but is unlikely to have been the model as there is no obvious connection. {noun in apposition}

Cordulephya Selys, 1870: vi

The roots are *Cordulia* (q.v.) + Gr. φύή = stature or growth, thus having the form of *Cordulia*. Selys (1870) placed *Cordulephya* n.g. within his Sous-famille Cordulines: Légion Cordulia: Division Tetragonales, firmly establishing it as a corduliid. {Feminine}

Cordulia Leach, 1815a: 137

Leach (1815) introduced the genus name *Cordulia*, without explanation. It is the feminine form of a Latinized adjective derived from the Gr. κορδύλη = club or cudgel, alluding to the shape of the abdomen in the males of the genus *Cordulia*. Because of this origin, pronunciation should be accented on the 'i' (not the 'u' as is often done). {Feminine}

cornutus, *Austrogomphus* Watson, 1991b: 392

L. cornutus –a –um. “*Cornutus*, horned, referring to the horn on the male occiput.” {declinable adjective}

costalis, *Austrophlebia* (Tillyard, 1907a: 724)

L. costa = rib has given rise to the name of the costal vein in Odonata and other insect orders. In this case, *L. costa* = rib + *L. –alis –is –e* = pertaining to. “Wings with a deep russet-brown colouration covering the lower half of the costal space up to nodus and all of it beyond, also all the subcostal and

median spaces, except the basilar area.” {declinable adjective}

cristatus, *Episynlestes* Watson & Moulds, 1977: 258

L. cristatus –a –um = with a crest, plume or comb.

“Superior appendages ... each bearing crest of black setae approximately 0.8 mm long, the crests interlocking at their bases.” {declinable adjective}

Crocothemis Brauer, 1868b: 367

Fliedner (2006) deduces that the derivation of the genus name is from Gr. κρόκος = crocus, the source of saffron + θέμις = laws, decrees, ordinances, judgements (see *Synthemis*). All species which comprised the genus at the time of its first description have the wings marked with saffron spots at the base.

Brauer (1868b) first introduces the name in the couplet of a dichotomous key which separates *Brachythemis* and *Crocothemis* but there is no mention of the saffron wing coloration. “Nur der 2. und 3. Ring mit einer Querkante, ♀ mit dreieckig abstehender Scheidenklappe (Europa, Asien, Neuholland). *Crocothemis* Brau.” [Only the second and third [abdominal] segment with a transverse edge, ♀ with triangular protruding vaginal flap (Europe, Asia, New Holland). *Crocothemis* Brau.]. {Feminine}

cyane, *Austroagrion* (Selys, 1876: 508, 509)

Gr. κυανῆ = feminine form of the adjective κυανός = dark blue. The terminal –e of *cyane* shows that the name cannot be a form of the Latin *cyaneus*. It has to be a Latinized form of a Greek word. Even though Fabricius treated *Agrion* (q.v.) as feminine, the gender of *Pseudagrion* (the genus in which this species was described) is neuter. Selys would normally have matched the genus by putting the species name that was an adjective into neuter, so, as the –e (ῆ) is a feminine ending in Greek, *Cyane* must be a personal name. *Kyane* was a Naiad nymph of a spring in the Sicilian town of Syrakusa (Syracuse). After witnessing the abduction of Persephone by Hades, *Kyane* dissolved away into the spring. Selys’ practice was to capitalise proper nouns which he has not done in the case of *cyane*, casting a little doubt on this interpretation.

The blue coloration of the species is distinctive. {adjective, or noun in apposition if the eponym is accepted}

cyanitincta, *Austrosynthemis* (Tillyard, 1908b: 725, 726)

L. cyanus = lapis lazuli + *L. tinctus* –a –um = perfect participle of *L. tingo* = to dye. “Rest of abdomen dark brown shading to black, each of the segments 3-7 carrying a pair of central dorsal spots, oval or suboval, of a beautiful very pale greyish-blue colour; those of 3-5 touching along the dorsal ridge, each spot crossed by a transverse black line in the supplementary carina; 8, a pair of large oval spots similar to those on 3-7, but more than half the length of the segment; 9, a pair of small round basal spots of the same colour” and “The pale blue colouring of the spots is remarkable, and I do not know of another species of the *Corduliinae* which possesses it”. {declinable adjective}

cyclops, *Telephlebia* Tillyard, 1916: 36

Although Tillyard (1916) does not disclose why he chose *cyclops* as a name for the subspecies of *Telephlebia goddefroyi*, one of its prime distinguishing features is “Front ... with a large black rounded blotch”, perhaps reminiscent of the single eye of the giant Cyclops. {noun in apposition}

dalei, *Nannophya* (Tillyard, 1908e: 446)

Within the introduction to the original description, Tillyard (1908b) states: “I propose to name the Western Australian form *N[annodythemis] occidentalis*, and to give to the third species (that from the Wentworth Falls) the name of *N. Dalei* in memory of de Selys’ great friend, the well-known British entomologist Mr. Dale; this name having already been applied by de Selys to this species on the label in his cabinet.” {noun in the genitive case}

delicata, *Ischnura* Hagen in Selys, 1876: 283

[junior synonym of *Ischnura aurora* Brauer, 1865]

L. delicatus –a –um = delicate, delightful, that gives pleasure, probably referring to the small size (delicate) or the coloration (delightful). “C’est une de plus petites espèces. Le mâle est très-facile à reconnaître à ses deux longues et fines cornes du devant du thorax et à son abdomen rouge avec les 8^e et 9^e segments bleus. La femelle a l’abdomen assez épais en comparaison

de celui du mâle.” [It is one of the smaller species. The male is very easy to recognize with two long, thin horns in front of the thorax and abdomen red with blue 8th and 9th segments. The female abdomen rather thick in comparison to that of the male.] {declinable adjective}

Dendroaeschna Tillyard, 1916: 42, 44

From the original description: “δένδρον, a tree” + *-aeschna* (see *Aeshna*). The description does not specify which structure showed the dendritic character but a key to the genera includes “Basilar space reticulated”. A possible alternative derivation is that the name is habitat-related and this receives some support from the original description of the type species *Dendroaeschna conspersa*: “The immature imagines fly straight up into the trees, which become their home for the rest of their existence.” {Feminine}

deniseae, Eusynthemis Theischinger, 1977: 105

“The new species is named after my daughter, Denise.” {noun in the genitive case}

denticauda, Brachydiplax (Brauer, 1867b: 302)

L. *dens, dentis* = a tooth, teeth + *cauda* = tail of an animal. This refers to the teeth on the male superior anal appendages. “Appendices sup. schwarz, so lang als die 2 letzten Ringe, wie bei andern *Diplax*-Arten geformt, ausserhalb der Mitte, an der verdickten Stelle unten ein kurzer zahnartiger breiter Fortsatz, der am unteren Rande 4 Zähne trägt, von denen die 2 ersten grösser und getrennter sind, die 2 letzten dicht beisammen stehen.” [Appendices sup. black, as long as the two last rings [segments], shaped as in other *Diplax* species, outside of the centre, at the thickened point, below a short tooth-like broad appendage that bears on the lower edge 4 teeth of which the first 2 are bigger and more separate and the last 2 are close together.] {noun in apposition}

dentosus, Antipodogomphus Watson, 1991b: 349

L. *dentosus -a -um* = having teeth. “Referring to the large, composite tooth on each side of the female occiput.” {declinable adjective}

Dineura [as *Dinevra*] Selys, 1859: 450

[junior homonym of *Dineura* Dahlbom, 1835 (Hymenoptera: Symphyta: Tenthredinidae) replaced with *Diphlebia* Selys, 1869 (q.v.)]

Gr. δι- = two + νεῦρον = nerve, or vein in entomology. See also *Diphlebia*.
“Les deux premières nervules costales prolongées dans l’espace sous-costal.”
[The first two costal veins extend into the subcostal space.] Hence the use of
Gr. δι- = two, double. {Feminine}

Diphlebia Selys, 1869c: 662

Upon realising that *Dineura* (q.v.) was preoccupied, Selys (1869c) replaced the Gr. νεῦρον = nerve with the φλέψ (stem φλεβ-) = vein. “Le nom de *Dinevra*, proposé pour désigner un sous-genre de l’*Amphipteryx*, étant déjà employé dans la famille des Tenthredinidae, je propose de la remplacer par celui de *Diphlebia*. (L’espèce est *Diphlebia lestoides* De Selys; d’Australie.)”.
[The name of *Dinevra*, proposed to designate a subgenus of *Amphipteryx*, is already used in the family Tenthredinidae, I propose replacing it with that of *Diphlebia* (The species is *Diphlebia lestoides* De Selys; from Australia).]
{Feminine}

Diplacodes Kirby, 1889: 308

There is no etymological explanation in the original description but -ώδης = Gr. adjectival suffix indicating resemblance is applied to *Diplax* (Charpentier, 1840) and *Diplacina* (Brauer, 1868a). *Diplax* refers to the bilobed prothorax as defined by Charpentier (1840): “Nomen e Graecis vocabulis δῖς et πλάξ derivatum, ob prothoracis formam” [Name derived from the Greek words dis (twice) and plax (anything flat and broad) on the account of the shape of the prothorax] and “Prothorax in postica parte elevatus seu erectus in plagulam seu discum a duobus semicirculis formatum, pilisque longis ciliatum” [Prothorax in rear part [probably the posterior lobe of pronotum] erect and raised into a small area or a disc formed by two semicircles and set with long hairs]. The discussion includes the statement: “This genus will include all the species placed in *Diplacina* by Brauer, except his type, *D. nana*, from the Philippines, which is clearly not generic with the others. Several species previously referred to *Diplax* will come better here, ...”

Diplacina is derived from *Diplax* with the Latin suffix *-inus -a -um* = resembling, related to. {Feminine}

dirupta, *Agyrtacantha* (Karsch, 1889: 236)

L. *diruptus -a -um* perfect participle of *dirumpo* = to break apart. There is no morphological character in the original description that seems relevant. The name might refer to the large extension in geographic range for the genus *Triacanthagyna* revealed by the discovery of this species. “De Selys-Longchamps führt in seiner Synopsis des Aeschnines, première partie, classification, Bruxelles 1883, p.11 und 37 *Triacanthagyna* als ein nur drei tropisch-amerikanische Arten enthaltendes Subgenus von *Gynacantha* Ramb. auf und bezeichnet als dessen typischen Vertreter *G. trifida* Ramb. *Triacanthagyna* Selys ist jedoch nicht auf Südamerika beschränkt, da ein Weibchen derselben, auf einer der Key-Inseln (N.O. von Timor) von Herrn Langen erbeutet, durch Herrn G. Semper in Altona kürzlich beim Königlichen Museum für Naturkunde in Berlin eingegangen ist.” [De Selys-Longchamps, in his synopsis of Aeschnines, première partie, classification, Bruxelles, 1883, pp. 11 and 37, presents *Triacanthagyna* as a subgenus of *Gynacantha* Ramb. that includes only three tropical American species and designates as its typical representative *G. trifida* Ramb. *Triacanthagyna* Selys is, however, not confined to South America, as a female of the same, collected on one of the Kai Islands (NE of Timor) by Mr Langen, arrived recently, by courtesy of Mr G. Semper in Altona, at Königliches Museum für Naturkunde in Berlin.] {declinable perfect participle}

distigma, *Agrion* (*Ischnura*) Brauer, 1869: 14

[junior synonym of *Ischnura heterosticta* (Burmeister, 1839)

Gr. $\delta\iota-$ = two + $\sigma\tau\acute{\iota}\gamma\mu\alpha$ = tattoo-mark. This refers either to the bicoloured pterostigma in the forewing or the fact that forewing and hindwing pterostigmata are different.

“Pterostigma im Vorderflügel kurz, die Aussenseite etwas weniger schief als die Innenseite, die Hinterseite etwas in die dahinter liegende Zelle bogig eingedrückt, — tief schwarz, der vordere äussere Winkel hell weiss, im Hinterflügel dasselbe rhombisch, weisslich, in der Mitte kaum getrübt, beide

etwas weniger als eine Zelle überstellend.” [Pterostigma in forewing short, the distal side slightly less inclined than the proximal side, the posterior side somewhat arched into the underlying cell - deep black, the anterior outer angle bright white, the same [pterostigma] in hind wing rhombic, whitish, hardly darkened in centre, both [pterostigmata] overlying a little less than one cell.] {noun in apposition}

divaricatus, *Austrogomphus* Watson, 1991b: 421

L. divaricatus –a –um = spread apart. “Referring to the divaricate superior appendages of the male, and emphasising the close affinity with *Austrogomphus bifurcatus*.” {declinable perfect participle}

divergens, *Cordulephya* Tillyard, 1917a: 469

L. dis = apart + *vergens*, present participle of *vergo* = to bend, turn.

“... superior appendages of ♂ distinctly divergent.” {adjective}

dobsoni, *Agriocnemis* Fraser, 1954: 147

“... collected R. Dobson.” Roderick Dobson collected dragonflies and other aquatic insects in Australia between 1948 and 1958, and made a return visit from his home in Jersey, Channel Islands, in 1967-68 (Daniels, 2004). {noun in the genitive case}

dobsoni, *Gynacantha* Fraser, 1951b: 157

“I have named this new species after its collector [Mr. R. Dobson of Sydney, Australia], to whom I am indebted for much rich Australian material and the loan of parts of his collection of Odonata.” {noun in the genitive case}

dobsoni, *Ictinogomphus* (Watson, 1969a): 88, 110

R. Dobson is cited as a collector of extralimital (Queensland) material. “In particular I would like to thank Mr. R. Dobson, of Jersey, Channel Is., ... for invaluable material.” Roderick Dobson collected dragonflies and other aquatic insects in Australia between 1948 and 1958, and made a return visit from his home in Jersey, Channel Islands in 1967-68. *Indictogomphus*

australis dobsoni was originally described as a subspecies. “Two subspecies have hitherto been recognized, *I. a. australis* and a darker form, *I. a. lieftincki* (Schmidt, 1934), the former occurring in Queensland, the type locality, and the Northern Territory, and the latter in New Guinea, Halmahera, and the Solomons. The specimens from the Hamersley Range are paler than either of these two subspecies, particularly on the abdomen, and may therefore be designated *I. a. dobsoni*, subsp. nov.” {noun in the genitive case}

doddi, *Austrogomphus* Tillyard, 1909b: 251

“A single male taken by Mr F.P. Dodd.” Frederick Parkhurst Dodd, an amateur collector of butterflies and beetles originally employed in a bank, moved from Victoria to Brisbane, Townsville and then Kuranda, where he became known as the ‘Butterfly Man of Kuranda’. {noun in the genitive case}

donnelyi, *Odontogomphus* Watson, 1991b: 337

“Named for its discoverer, odonatist and geologist T[homas] W[allace] Donnelly.” {noun in the genitive case}

dorrigoensis, *Neosticta canescens* Tillyard, 1913a: 437

A toponym from Dorrigo + *-ensis* *-is* *-e* = L. adjectival suffix indicating place of origin. “Race *dorrigoensis*. – On the Little Murray River, near Dorrigo, N.S.W., I met with this insect again, in November, 1911, and secured two males, for comparison.” {declinable adjective}

Dromaeschna Förster, 1908a: 191

Gr. δρόμος = race + *-aeschna* (see *Aeshna*). *Dromaeschna* was introduced as a subgenus within a key to the Australian aeschnids of the group *Brachytron*. The taxonomic status of the ‘Gruppe *Brachytron*’ is not clear. While δρόμος is usually translated as [horse] race it can also mean any quick movement e.g. flight, but, as Förster had only preserved specimens, a behavioural reference seems implausible. Selys (1854: 58) created the genus *Dromogomphus* apparently based on “Fémurs postérieurs excessivement longs” [Excessively long hind femora]. However, there are no similarities which might suggest that

Förster's name *Dromaeschna* was inspired by Selys' name *Dromogomphus*. The meaning remains enigmatic. {Feminine}

duivenbodei, *Brachydiplax* (Brauer, 1866: 569)

There is no direct reference in the original description but Johann Jacob Kaup, director of the Hessisches Landesmuseum Darmstadt in Germany received specimens from [Maarten Dirksz van] Renesse van Duivenbode, then resident in Sulawesi (Schneider, 2004).

Wallace said in a letter to Darwin "I have lent the book [*On the Origin of Species*] to two persons here in the East, neither of them with any but the vaguest & most general knowledge of or taste for Natural History but both men of much reading & with a taste for speculation & theory which, as Bentham says is but another term for thought. The first, Mr. Duivenbode of Ternate [an island in the Maluku Islands of eastern Indonesia], a Dutchman educated in England, read it three times through before he returned it to me, expressing himself so much pleased & interested that he wished to master the whole argument" (Darwin Correspondence Project Database). {noun in the genitive case}

eboracus, *Griseargiolestes* (Tillyard, 1913a: 413)

There is no direct etymological explanation in the original description but it includes the statement: "Race *eboracus* – A short series taken by me at Ebor and Dorrigo, N.S.W." + $-\alpha\acute{\kappa}\acute{o}\varsigma$ (Latinized to $-acus$), a Gr. adjectival suffix indicating 'belonging' to'. {declinable adjective}

edentulus, *Antipodogomphus* Watson, 1991b: 352

L. edentulus $-a$ $-um$ = toothless. "Lacking teeth, in reference to the unarmed occiput in the female" [cf. *Antipodogomphus dentosus*]. {declinable adjective}

elgneri, *Zyxomma* Ris, 1913b: 906

"Die schöne und sehr distinkte Art is Herrn Hermann Elgner gewidmet, dessen Gefälligkeit ich reiches Material von Nord-Australien und den Aru Inseln verdanke." [The beautiful and very distinct species is dedicated to Mr. Hermann Elgner to whose kindness I owe a wealth of material from northern

Australia and the Aru Islands.] Moulds (1977) tracks Elgner's expeditions using specimen label data. {noun in the genitive case}

elke, *Austroargiolestes* Theischinger & O'Farrell, 1986: 396

"The species is named after Mrs Elke Müller, the wife of one of its collectors, *elke* being regarded as a noun in apposition to the generic name."

elliptica, *Pseudocordulia* Tillyard, 1913d: 229

Gr. ἔλλειψις = ellipse + -τικός = concerning, pertaining to. "Appendages: *superior* 1.5 mm., black, slightly forcipate; viewed from above, they form a slightly pointed oval;" {declinable adjective}

eludens, *Nannophlebia* Tillyard, 1908f: 647

Present participle of L. *eludo* = to evade. "I have named it *N. eludens* because of its peculiar elusive zigzag flight up into the air when disturbed from its usual rest on a favourite twig." {present participle}

Episynlestes Kennedy, 1920: 84

Gr. ἐπί = upon, over, above + *Synlestes* (q.v.). This indicates that it was an addition of a new lested genus to *Synlestes*. "The following new genera and subgenera have been in manuscript form for from two to five years. In nearly every case the characters of the penis have been the primary indicators that a new generic term might be advisable. In nearly every case other characters, usually venational, were found to parallel the penis characters." "*Episynlestes* genus nov. Type—*Synlestes albicanda* [sic] Tilly. Quadrilateral broad, its inner end one-third of the hind side, first segment of Cu₂ present. Penis with a long attenuate tip." {Masculine}

erubescens, *Agrion* (*Ceriagrion*) Selys, 1891: 517

[junior synonym of *Ceriagrion aeruginosum* (Brauer, 1869)]

Present participle of L. *erubesco* = to grow red, to blush, thus reddening or blushing. Is it to be noted that compounds of colour names ending with *-escens* often denote a lighter stage of coloration as if the process of dyeing had been prematurely halted (hence reddish).

“Chez ceux que j’avais été tenté de rapporter au *glabrum*, l’abdomen est franchement rouge ou carmin clair. Peut-être sont-ce des mâles très-adultes qui prendraient cette coloration. Pour le moment je les présente, avec doute, comme une race, sous le nom de *Ceriagrion erubescens*.” [Among those that I was tempted to refer to *glabrum*, the abdomen is positively red or clear carmine. Maybe they are very old males which take this colour. For now I present it, with doubt, as a race, under the name *Ceriagrion erubescens*.] {present participle}

erythroneurum, *Xanthagrion* (Selys, 1876: (42): 521)

Gr. ἐρυθρός = red + νεῦρον = nerve. As the original description says: “La plupart des grandes nervures rougeâtres, surtout à la base.” [Most large veins reddish, especially at the base.] {declinable adjective}

eungella, *Austroaeschna* Theischinger, 1993: 810

“From Eungella, in north-eastern Queensland; to be treated as a noun in apposition.”

euphoeoides, *Diphlebia* Tillyard, 1907b: 398

Euphaia is a Greek female name, derived from the adjective εὐφαής = very bright + –εἰδής = suffix indicating resemblance. “The specific name is adopted on the suggestion of M. Martin so as to maintain the uniformity of the specific nomenclature in use for this genus.” This is an allusion to the Calopterygid genus *Euphaea* (Selys 1840), [misspelled by Tillyard], as the three species known in that genus at the time were named for *Agrion*, *Lestes* and then *Euphaea*. {adjective}

eurybia, *Tramea* Selys, 1878: 298

In the original description the species name is capitalised confirming it is a proper noun. In Greek mythology, Eurybia was a minor sea goddess under the dominion of Poseidon. Her parents were Pontos and Gaia. She was consort to the Titan Crius and gave birth to Astraeus, Perses, and Pallas. The next species named in the same paper was *Tramea* [*transmarina*] *euryale* Selys, 1878, also named from Greek mythology. Euryale was one of the three

Gorgons. That was also the name of the daughter of Minos, King of Crete, and mother of Orion who was fathered by the sea-god Poseidon. {noun in apposition}

Eurysticta Watson, 1969a: 83

Gr. εὐρύς = wide + *-sticta* which is derived from the Gr. adjective στικτός = spotted, tattooed. However in this case, the root *-sticta* refers to the sub-family Isostictinae Fraser, in which this genus was placed. “The name of the new genus, derived from the Greek εὐρύς [= wide, broad], emphasizes the broadness of the abdomen in both sexes, and the additional swelling of the ninth segment in the female.” {Feminine}

eustalacta, *Synthemis* (Burmeister, 1839: 845)

Gr. εὔ = well + σταλακτός = struck by drops. This refers to the two yellow drop-like marks on the abdominal segments: “abdomine nigro, segmentis in basi guttisque duabus sulphureis” [abdomen black, with segments at base and two spots sulphur yellow]. {declinable adjective}

Eusynthemis Förster, 1903: 545, 546

In a dichotomous couplet to the females, Förster (1903) introduced *Eusynthemis* and *Palaeosynthemis* as new subgenera of “Unterfamilie Cordulinae, Gruppe Synthemideae”, the former with type of *Synthemis brevistyla* Selys, and the latter with type of *S. primigenia* n.sp. The name *Eusynthemis* comes from Gr. εὔ = well + *Synthemis* (q.v.). This perhaps signifies that *Eusynthemis* is a fully developed species as opposed to *Palaeosynthemis* an archaic or primordial form from Gr. παλαιός = old, ancient + *Synthemis*. This is confirmed in the original description: “Es erlauben die bisherigen Gattungsbegriffe nicht, dass *primigenia* und *brevistyla* in einer Gattung verbleiben können, wenn auch zugegeben werden muss, das alle *Synthemis*-Arten in Bezug auf Gattungsmerkmale etwas unfertiges, variables an sich tragen.” [The existing genus concepts do not allow that *primigenia* and *brevistyla* remain in one and the same genus although it has to be admitted that in terms of generic characters all *Synthemis* species have something incomplete and variable.] {Feminine}

exclamationis, *Austroagrion* Campion, 1915: 106

From L. *exclamatio* = exclamation, referring to the marking on abdominal segment 3. "Abdomen ... [Segment 3] occupied for its entire length, except quite near the base, by a spot somewhat resembling the note of exclamation (!) in form, the greatest constriction occurring at about three-quarters the length of the segment." {noun in the genitive case}

exsudans, *Agriocnemis* Selys, 1877: 140

Present participle of L. *exsudo* = to sweat, exude, referring to the pruinescence on the male specimen. The female was unknown to Selys. "Le front, le dessus de la tête, le devant du thorax et les fémurs sont couverts d'une pulvérulence blanc bleuâtre." [The forehead, above the head, the front of the thorax and femurs are covered in a bluish white powder.] {present participle}

femina, *Agriocnemis* (Brauer, 1868c: 554)

L. *femina* = a female, referring to the male inferior appendages which Brauer described as having the appearance of the female ovipositor. "Untere Anhänge ... so lang als der 9. Ring, am Ende dicht aneinander liegend, legscheidenartig, am Ende allmählig erweitert, stumpf, am oberen Rande vor der Spitze mit kurzem schwärzlichen Zahn." [Inferior appendages ... as long as the 9th ring, apically close together, ovipositor-like, apically gradually expanded, obtuse at the upper edge before the tip with short blackish tooth.] {noun in apposition}

festus, *Lathrecista asiatica* (Selys, 1879: 300)

L. *festus* –a –um = of a holiday, festive. There is nothing in the original description which seems relevant; it mentions only three points of difference from *A[grionoptera] pectoralis*. However, there is an additional meaning = adorned for a festivity, and this is quite consistent with the bright coloration of the male. {declinable adjective}

fieldi, *Austrosticta* Tillyard, 1908c: 766

"I wish to tender my heartiest thanks to Mr J. F. Field [of Tennant's Creek, N.T.] for the interest and keenness with which he undertook to supply me

with specimens, and to his aboriginal servant, Billy, who wielded the net with the greatest sagacity and discrimination, and evidently handled the specimens with much care.” No further biographical details about James Field have been located. {noun in the genitive case}

filicicola, *Oristicta* Tillyard, 1913a: 440

L. *felix* = fern + L. *-cola* (in compounds) = inhabitant. “The whole of the rock is densely covered in ferns. Resting on these ferns, deep in shade, and drenched with the spray of the fall, I found this little dragonfly.” {noun in apposition}

flava, *Hemicordulia* Theischinger & Watson, 1991: 44

L. *flavus* *-a -um* = yellow. “... *flavus*, yellow, refers to the extensive yellow coloration.” {declinable adjective}

flavescens, *Pantala* (Fabricius, 1798: 285)

Present participle of L. *flavesco* = to become yellow or gold-coloured. Is it to be noted that compounds of colour names ending with *-escens* often denote a lighter stage of coloration as if the process of dyeing had been prematurely halted (hence yellowish). From the original description: “Caput flavescens oculis magnis, fuscis. Thorax flavescens, immaculatus. Abdomen compressum, flavescens linea dorsali nigra.” [Head yellowish with eyes large, dark. Thorax yellowish, unmarked. Abdomen compressed, yellowish, with black dorsal line.] {present participle}

flavomaculata, *Austroaeschna* Tillyard, 1916: 49

L. *flavus* *-a -um* = yellow, golden + *macula* = spot, stain + suffix *-atus -a -um* = provided with. There is no etymological explanation in the original description but the discussion includes the statement: “This very striking and beautiful subspecies is very different from the type-form [*A. parvistigma*] in appearance, owing to the yellow colouring and greater size of its markings.” In a table on p. 48 the yellow spots and streaks on the thorax and the yellow abdominal spots are given as characteristics of the species. {declinable adjective}

flavoterminalata, *Choristhemis* (Martin, 1901: 229)

L. flavus –*a* –*um* = yellow + *terminus* = limit, end, + suffix –*atus* –*a* –*um* = provided with. The name refers to the last two abdominal segments which are yellow. “Abdomen très mince et long, noir varié de jaune comme suit: ... 9-10^e jaunes.” [Abdomen very long and thin, black varied with yellow as follows: 9-10th yellow.] {declinable adjective}

fontanus, *Griseargiolestes* (Tillyard, 1913a: 420)

L. fontanus –*a* –*um* = of or from a spring or fountain. “The Dorrigo series were all found either settled upon or flying round the ferns which clustered on the steep, rocky sides of a small waterfall, about twenty feet high, in dense scrub. ... Two other males were also seen flying about dense vegetation near a waterfall.” {declinable adjective}

forcipata, *Dromaeschna* (Tillyard, 1907a: 727)

L. forceps (stem *forcip-*) = a pair of tongs, pincers + suffix –*atus* –*ata* –*atum* = provided with. “Appendages: *Superior* 3 mm., depressed, forcipate, black; wide apart at bases.” {declinable adjective}

fragile, *Aciagrion* (Tillyard, 1906b: 187)

L. fragilis –*is* –*e* = fragile, easily broken. In discussing the genus *Ischnura* (in which he had provisionally placed this species) Tillyard gives the only clue to the specific epithet. “... the present species differs from other members of the genus *Ischnura*.” “The typical characters of the genus as exhibited by *I. delicata* or *I. heterosticta* are (1) rather broad head and thorax, rather robust form, wings not remarkably slender, and well-rounded at tips.” {declinable adjective}

fraseri, *Neosticta* Watson, 1991a: 36

“Named for the late F.C. Fraser who, in 1960, illustrated this species (as *Neosticta silvarum*).” {noun in the genitive case}

frater, *Austrosticta* Theischinger, 1997b: 807

“Frater = Latin for ‘brother’, a match for soror (= Latin for ‘sister’).” See *soror*; *Austrosticta*. {noun in apposition}

fraterna, *Nososticta* (Lieftinck, 1933a: 411)

L. *fraternus* –a –um = of a brother, alluding to the similarity with *Neosticta* (now *Nososticta*) *solitaria*. “Sehr ähnlich *N. solitaria* (Till.) von Queensland.” [Very similar to *N. solitaria* (Till.) of Queensland.] {declinable adjective}

garrisoni, *Lathrocordulia* Theischinger & Watson, 1991: 48

“Named in honour of its discoverer, Rosser Garrison.” {noun in the genitive case}

geminata, *Notoaeschna* Theischinger, 1982: 36

L. *geminatus* –a –um = doubled, twinned. “Tillyard (1916) named as ‘var. *geminata*’ specimens from Guy Fawkes (Ebor), N.S.W., which he thought belonged to *N. sagittata* (Martin). Although Tillyard did not expressly allocate infrasubspecific status to the variety, there is, as Watson (1969c) has pointed out, no reason to suppose that ‘var. *geminata*’ is anything more than infrasubspecific. However, as Tillyard’s specimens of ‘var. *geminata*’ are not conspecific with *N. sagittata*, I here use *geminata* as the name of a new species of *Notoaeschna*, based on Tillyard’s series from Ebor.”

Tillyard (1916: 59) wrote “a very fine and long series taken by me at Guy Fawkes, N.S.W., is distinct enough to warrant a varietal name. I therefore propose for it the name var. *geminata* defined by the following characters: ... Sagittate dorsal spots of abdomen much reduced, each being split into two geminate [paired] subtriangular halves separated by the black line of the dorsal ridge.” {declinable perfect participle}

georgius, *Anax* Selys, 1872: 179

The first use of *Anax georgius* in the literature was as a brief description appended to that of *Anax goliath* (*A. tristis* Hagen) from Madagascar. The specimen was ambiguously labelled and although Selys (1872) used Natal

as the locality, Asahina (1990) and Watson & Theischinger (1987) argue that the alternative label of Timor is more likely to be correct. The original description gives no indication of the etymology of the name. The specimen is reputed to have come from the voyage of M. Pollen. He was Dr. François Paul Louis Pollen (Vincent Kalkman (Leiden) in litt.). “M. le professeur Wright de Dublin” is thanked for correspondence. His name was Edward Percival Wright (Brian Nelson (Dublin) in litt.). Neither Pollen nor Wright was the source of the name *georgius*. Although the specimen could not have been collected there, an extremely remote possibility is that Pollen visited Georgetown, South Africa. In 1851, 100 Christian families settled on the farm Welverdiend, renamed Edendale, 10 km from the colonial capital of Natal, Pietermaritzburg. The struggling mission received the support of Sir George Grey, after whom their village ‘Georgetown’ was named (Meintjes 1988). Grey was Governor of Cape Colony from 1854 to 1861. {declinable adjective}

gibbosulus, *Anax* Rambur, 1842: 187

L. *gibbosus* *-a -um* = humped + diminutive suffix *-ulus*, hence slightly humped. This refers to the hump on the second abdominal segment. Rambur (1842) includes this character in both the Latin diagnosis and the full description. “... abdomine nigro, maculis flavis, segmenti primi margine postico elevato, secundo gibbulo” [abdomen black, with yellow spots, the hind margin of the first segment elevated, second slightly humped] and “Second, avec le bord antérieur et les côtés d’un jaune roussâtre, ayant une petite gibbosité arrondie” [Second, with the front edge and sides of a reddish yellow, with small rounded hump]. {declinable adjective}

gigantea, *Petalura* Leach, 1815b: 96

No explanation is given for *gigantea* but the insect is of a large size and the name comes from L. *giganteus* *-a -um* = *gigantic*. Leach gives as a common name the Gigantic Petalure. {declinable adjective}

(*Glaciaeschna*), *Austroaeschna* Theischinger, 2012: 38

“From Latin glaciers = ice, referring to its distribution in high elevations of the Australian Alps” + *-aeschna* (see *Aeshna*). {Feminine}

godeffroyi, *Telephlebia* Selys, 1883: 741

There is no acknowledgement of Godeffroy in the original description but it undoubtedly was named for Johann Cesar VI Godeffroy, a shipping magnate made wealthy from the expansion of his trade in Australia and the South Seas. His expert collectors and captains brought back to Hamburg zoological, botanical and ethnographic material which formed the basis for the collection in the Museum Godeffroy, which existed from 1861 to 1885. {noun in the genitive case}

gomphomacromioides, *Synthemipsis* Tillyard, 1917a: 463

-ειδής = Gr. adjectival suffix indicating resemblance applied to *Gomphomacromia* which, in turn, is derived from *Gomphus* (see *Austrogomphus*) and *Macromia* (q.v.). “General facies of the insect resembles that of *Gomphomacromia paradoxa* Br.” {adjective}

gordoni, *Austroepigomphus* (Watson, 1962: 8)

The name was first made available in a checklist (p. 8) for the *Dragonflies of South-western Australia*, and in keys to the larvae (p. 13) and adults (p. 20). From Watson (1969a: 90): “This species, inadvertently named in Watson (1962), is most closely related to *A. turneri* Martin, 1901, from northern Queensland and the Northern Territory. ... The specific name commemorates Mr. Stewart Gordon, of a family long associated with Millstream and Kangiangi Stations [Pilbara, WA].” {noun in the genitive case}

gouldii, *Hemigomphus* (Selys, 1854: 64)

John Gould (1804–1881) was an ornithologist and bird artist who travelled and collected in Australia between 1838 and 1840. The collection from which this specimen came was held by William Wilson Saunders who served as President of the Entomological Society (1841-1842, 1856-1857) and Treasurer of the Linnean Society of London from (1861-1873) and was a Fellow of the Royal Society (from 1853). The connection probably came through the Royal Society of which Gould was also a Fellow.

“Patrie: Sud de l’Australie. (Collect. Saunders).” Additional details are given in Selys (1857: 432): “Patrie. Le Sud de l’Australie (Terre de Nuits ?) d’après un exemplaire incomplet communiqué par M. le capitaine Saunders. Je me suis fait un plaisir de lui donner le nom du zoologiste éminent qui a si admirablement fait connaître les oiseaux de l’Australie.” [Country: South Australia from an incomplete specimen communicated by Captain Saunders. I am more than happy to give it the name of the eminent zoologist who has so admirably made known the birds of Australia.]. {noun in the genitive case}

graphiptera, *Rhyothemis* (Rambur, 1842: 45)

Gr. γραφή = drawing, painting + feminine form of Gr. –πτερός (in compounds) = winged. This refers to the coloured wing markings. “Ailes d’un jaune roussâtre, les postérieures larges, ayant deux bandes transverses sinuées, une tache aux premières, deux aux secondes, d’un bleu obscur ou d’un brun roux bleuâtre; la bande médiane envoie vers la base un prolongement linéaire, et aux inférieures, la seconde tache, qui est en forme de bande, est divisée à son extrémité qui produit alors une autre tache le plus souvent distincte” [Wings of a reddish yellow, the forewing large, having two sinuate transverse stripes, a spot on the first, two in the second, of a dark blue or bluish russet; the median strip sends a linear extension to the base, and of the hindwings, the second spot, which is in the form of a stripe, is divided at its end which then produces another spot most often separate.]. {declinable adjective}

Griseargiolestes Theischinger, 1998a: 614

“Combination of grise (from griseus [= grey, pearl-grey]) and *Argiolestes* [q.v.]” This refers to the pruinescence attained by the genus. {Masculine}

griseus, *Griseargiolestes* (Hagen, 1862b: 40)

L. *griseus* –a –um = grey. Adults usually develop strong pruinescence particularly on the thorax and anterior abdominal segments and the species definitely warrants the scientific name of *griseus* for that reason. However, there is no mention of that characteristic in the original description. {declinable adjective}

guerini, Austrogomphus (Rambur, 1842: 163)

From the original description “Nouvelle Hollande. Communiquée par M. Guérin.”

Félix Édouard Guérin-Méneville had been charged with describing the crustaceans and insects from the voyage of the ‘*Coquille*’. The insects were collected by the ship’s 2nd Officer J.S.C. Dumont d’Urville. It would seem that Guérin passed the Odonata to Rambur. See also entry for *Procordulia jacksoniensis*. {noun in the genitive case}

guttata, Eusynthemis (Selys, 1871b: 563)

L. *gutta* = spot, drop or mark + L. suffix *-atus -a -um* = provided with. There is no mention of spots in the original description but in a table which compares *Synthemis brevistyla* with *Synthemis guttata*, Martin (1901: 228) states for the latter “Abdomen noir, taché de jaune comme suit: 3^e – 8^e segments avec 2 points au centre, de chaque côté de l’arête; les points du 8^e segment pas plus gros que les autres.” [Abdomen black, marked with yellow as follows: 3rd to 8th segments with 2 spots in the centre of each side of the ridge, the spots of the eighth segment not larger than the others.] {declinable adjective}

guttatus, Anax (Burmeister, 1839: 840)

L. *gutta* = spot, drop or mark + suffix *-atus -a -um* = provided with. This refers to the pair of large, pale posterodorsal spots on tergum 9 of the male. “abdomine supra fusco, segmentis utrinque gutta duplici flava” [abdomen dark above, segments on both sides with a double drop of yellow]. {declinable adjective}

Gynacantha Rambur, 1842: 209

Gr. γυνή = woman + ἄκανθα = thorn, prickle. This refers to the spines on the tenth abdominal segment of females. “... dernier segment chez les femelles, saillant et prolongé inférieurement, garni d’épines longues (2 à 3 seulement dans les espèces que je connais)” [last segment in females, prominent and extended below, furnished with long spines (2-3 in the only species I know)]. {Feminine}

haematodes, *Diplacodes* (Burmeister, 1839: 849)

Gr. αἷμα –ατος = blood + –ώδης = adjectival suffix indicating resemblance. There is also an ancient Gr. adjective αἱματώδης = looking like blood. The original description gives such a colour to the body and the wing veins: “obscure-sanguinea, ... alarum venis sanguineis” [indistinctly blood-red, ... with wing venation dark-red]. {adjective}

handschini, *Isosticta* Lieftinck, 1933a: 417

[junior synonym of *Isosticta banksi* Tillyard, 1913]

Dr. Eduard Handschin-Hofstetter was director of the Zoological Museum in Basel, and professor emeritus in the University of Basel. He was a member of the Permanent Committee of the International Congresses of Entomology. His interests were in the Apterygota and the phylogenetic origin of the Insecta. “Die von Herrn Prof. Ed. Handschin während seiner Forschungsreise in Nord-Australien vom April bis zum Juni 1931 und im April 1932 gesammelten Odonaten wurden mir nach Heimkehr des Reisenden in liebenswürdigster Weise zur Bearbeitung anvertraut.” [The odonates collected by Prof. Ed. Handschin during his research trip in northern Australia from April to June 1931 and in April 1932 were entrusted to me in the most amiable manner for processing after the return of the traveller.] {noun in the genitive case}

hardyi, *Austroaeschna* Tillyard, 1917a: 461

No information is given in the original description but the species is endemic to Tasmania and George Hurlstone Hurdlestone Hardy was Acting Curator of the Tasmanian Museum, Hobart in 1913-1917. In the original description of *Synthemiopsis gomphomacromioides* (Tillyard 1917a: 466) the author relates “Mr G.H. Hardy, of the Tasmanian Museum, also captured a single male at Flowerdale Creek.” {noun in the genitive case}

Hemianax Selys, 1883: 722

Gr. ἡμι- = half + ἄναξ = sovereign, king. In this case, the Greek root ἡμι- indicates the similarity to the genus *Anax*. *Anax*, as lord or king perhaps refers to the size or dominant behaviour of *A. imperator*. Selys (1883) named *Hemianax* as a second sous-genre within *Anax* Leach, 1815, the other

sous-genre being *Anax*, Leach. “En considérant les deux sexes des espèces d’*Anax*, ils sont bien distincts de toutes les autres *Æschnines*, puisque ce sont les seules dont le bord at l’angle anal des secondes ailes sont arrondis et semblables dans les deux sexes, et qui n’ont pas d’oreillettes au 2^e segment, ce qui les différencie du grand genre *Æschna*.” [Considering both sexes of the species of *Anax*, they are well distinct from all the other *Æschnines*, since these are the only ones which have the edge and the anal angle of the second wing round and similar in the two sexes and that do not have any auricles on the 2nd segment, which differentiates the great genus *Æschna*.]

Peters (2000) argues that *Hemianax* is not a separate grouping beside *Anax*, but belongs to the common parentage of *Anax*. “Die zahlreichen apomorphen Eigenschaften, die *A. ephippiger* und *A. papuensis* (Burmeister) mit den übrigen *Anax*-Species gemeinsam haben, lassen darauf schließen, dass alle miteinander auf eine nur ihnen gemeinsame Stammart zurückgehen und darum als eine monophyletische Gruppe ... hypothetisiert werden können (Gentilini & Peters 1993).” [The numerous apomorphic characteristics, which *A. ephippiger* and *A. papuensis* (Burmeister) have in common with the rest of the *Anax* species, allow the conclusion that they all are descended from one ancestral species, that is common to these exclusively, so that they may be hypothesized as a monophyletic group (Gentilini & Peters 1993).] Von Ellenrieder (2002), cognisant of the work of Peters, preferred to maintain the two original genera until the reasons why the genus *Hemianax* was considered paraphyletic were delineated. {Masculine}

Hemicordulia Selys, 1870: v

Gr. ἡμι- = half + *Cordulia* (q.v.). Rather than the literal meaning of the English “half”, hemi acknowledges the close relationship to the genus *Cordulia*. Selys (1870) defines Sous-genre: *Hemicordulia*, Selys and Sous-genre: *Cordulia*, Leach (pars) Selys within his Légion – *Cordulia*, Leach: Division – Trigonaes: Genre – *Cordulia*, Leach (pars) Selys. The differences are slight. *Hemicordulia* – “Le bord anal des ailes inférieures du mâle arrondi, non excavé avec une nervule transverse dans le triangle adossé à la membranule. Oreillettes oblitérées” [Male hindwing anal border rounded and not excavated, with a transversal crossvein in the triangle that is dorsally fused with the wing membrane. Auricles lost]. *Cordulia* – “Le bord anal des

ailes inférieures du males excavé avec une nervule transverse dans le triangle adossé à la membranule. Oreillettes distincte” [Male hindwing anal border excavated, with a transversal crossvein in the triangle that is dorsally fused with the wing membrane. Distinct auricles]. {Feminine}

Hemigomphus Selys, 1854: 66

Gr. ἡμι- = half + Gomphus (see *Austrogomphus*). The Greek root ἡμι- indicates the similarity to the genus *Gomphus*. In a manner similar to that for *Hemianax/ Anax* (q.v.), Selys (1854) includes *Hemigomphus* as a sous-genre, together with *Gomphus et al.*, within his Genre 4 – *Gomphus*, Leach. {Masculine}

Hemiphlebia Selys, 1869a: lxxii

Gr. ἡμι- = half + Gr. φλέψ (stem φλεβ-) = vein + adjectival suffix -ιος -α -ov = associated with.

The original description mentions the characteristic feature of the incomplete arculus of the forewing so that the discoidal cell is open at the base. “L’arculus aux ailes antérieures n’existant que dans se moitié supérieure jusqu’à la naissance des secteurs principal et bref, de sorte que la quadrilatère est dépourvu de côté interne et se trouve réuni à l’espace basilaire” [Arculus of the forewings exists only in the upper half as far as the start of the main sectors and short, so that the discoidal cell has no internal side and is joined to the basal area]. {Feminine}

hesperia, Petalura Watson, 1958: 116, 120

Gr. adj. ἑσπέριος -ία -ιον = towards evening, hence western. “Derived from the Greek ἑσπερος – western” referring to “This new species, the first recorded from Western Australia.” {declinable adjective}

Hesperocordulia Tillyard, 1911a: 376

The derivation appears to be Gr. ἑσπερος = of or at evening, hence western + *Cordulia* (q.v.). Neither the original description nor subsequent texts give any indication that this monotypic genus is crepuscular; to the contrary, the collector (Tillyard 1911: 378) is quoted “On the wing, they are very active

and mostly high out of reach. ... On some very good days I have taken four, but mostly only one or two.” Evening is therefore equated with the west, as the distribution of the species is restricted to southwest Western Australia. “This genus is intermediate between the two main divisions of *Cordulina* (s.str.), of which the typical genera may be taken to be *Somatochlora* and *Syncordulia*.” {Feminine}

heteroclytus, *Hemigomphus* Selys, 1854: 68

Gr. ἕτερος = other, different + κλυτός = renowned, glorious, noble, splendid.

There is nothing in the original description for either the *groupe* or the species that warrants the description ‘different’. At that time the genus *Hemigomphus* was a depauperate taxon. Gr. ἕτερος (*héteros*) originally meant one (or the other one) of two. Selys formed two groups within *Hemigomphus*: the first was the *molestus* group; the *heteroclytus* group, introduced with this species, was the second designated, hence a different one. The species was renowned by a feature differing from that of the foregoing group.

Selys wrote in the monograph:

Sous-genre 13. – *Hemigomphus*, De Selys

1^{er} groupe: (*H. molestus*)

63. *Hemigomphus elegans*, De Selys

64. *Hemigomphus molestus*, Hagen

2^{me} groupe: (*H. heteroclytus*)

65. *Hemigomphus heteroclytus*, De Selys

The *molestus* and the *heteroclytus* groups differ in the presence or absence of the “demi collier jaune” [yellow half-collar]. This is probably the difference to which the element *hetero-* refers. {declinable adjective}

heterogena, *Austrogynacantha* Tillyard, 1908d: 423, 424

Gr. ἕτερογενής –ές = of different kind or race (but not sufficiently different to warrant a new genus in Selys’ opinion). “In his unpublished MSS. de Selys has described a new species *Gynacantha heterogena* from a unique female in his collection” and “Doubtless de Selys felt, when describing the female, that

its smaller size and very different markings and colouration might warrant the formation of a new genus to contain it; at least the name *heterogena* irresistibly suggests the impression it made on his mind. But it was not de Selys' way to propose a new genus for a unique female, which possessed all the more essential characters of the genus *Gynacantha* as defined by Rambur." {declinable adjective}

heterosticta, *Ichnura* (Burmeister, 1839: 820)

Gr. ἕτερος = different + στικτός = spotted, tattooed. This refers to the pterostigmata where that of the forewing is black with a white point and that of the hindwing, white: "stigmata alarum anticarum nigro, in apice albido, alarum posticarum toto albido" [pterostigma of forewings black, apically whitish, of hind-wings completely whitish]. {declinable adjective}

hodgkini, *Antipodogomphus* Watson, 1969a: 110

"Dr. E[rnest) P[lease] Hodgkin, Department of Zoology, University of Western Australia, provided the initial material on which the project was based, and supervised the early stages of the work." {noun in the genitive case}

humphriesi, *Lestes* Lieftinck, 1952: 126

[junior synonym of *Austrolestes aridus* (Tillyard, 1908)]

"By the courtesy of Mr. Lindsay Humphries, of Renmark, South Australia, I received several small consignments of Odonata taken by him at the Murray River during five consecutive years, 1947 to 1951" and "I have pleasure in dedicating the present species to the collector, in recognition of his efforts in contributing to our knowledge of the Australian fauna." {noun in the genitive case}

Huonia Förster, 1903: 519

Förster (1903: 516) listed two type species for this genus: *Huonia epinephela* and *H. thalassophila*. The collection localities cited for each were respectively: “Heimath: Auf dem Sattelberg am Huongolf, im regenfeuchten Walde” [Country: at Sattelburg in the Huon Gulf, in the humid rain forest] and “Heimath: Simbang am Huongolf” [Country: Simbang in the Huon Gulf]. Huon Gulf is a large gulf in eastern Papua New Guinea and was named after French explorer Jean-Michel Huon de Kermadec. {Feminine}

hyacinthus, *Agriocnemis* Tillyard, 1913a: 457-458

[junior synonym of *Agriocnemis pygmaea* (Rambur, 1842)]

The flower *Hyacinthus* Linn. was supposedly from an ancient Greek name used by Homer, the flowers being said to spring from the blood of the dead Hyakinthos, a youth beloved by Apollo and accidentally slain by him. This species bears some resemblance in colour to the flower: “Abdomen: ... Colour, 1-7 bronzy-black above, greenish or yellowish underneath; 3-6 with a pair of pale yellow basal marks, very small; 8, basal two-thirds black, apical third and sides red; 9-10 bright red.” [The original wild plant known as *hyakinthos* to Homer has subsequently been identified as *Scilla bifolia* Linn.] {noun in apposition}

hybridoides, *Diphlebia* Tillyard, 1912: 588

L. hybrida (*hybrida*) = a mongrel, cross + Gr. -ειδής = suffix indicating resemblance. “In colouration, it resembles *D. lestoïdes*, but the shape of the abdomen is closer to that of *D. euphæoïdes*. The banding of the wings may also be considered as intermediate between the narrow milky band of *D. lestoïdes* and the deep, almost black, shading of *D. euphæoïdes*, which nearly covers the wing. For these reasons, I have proposed the name *D. hybridoides* for this species.” {adjective}

Hydrobasileus Kirby, 1889: 266

The original description contains only morphological information but it would appear that the roots of this species' name are Gr. ὕδωρ = water + βασιλεύς = king. {Masculine}

icteromelas, *Austroargiolestes* (Selys, 1862b: 40)

Gr. ἴκτερος = yellow + μέλας = black. While the primary meaning of ἴκτερος given by Liddell and Scott (1996) is jaundiced perhaps their alternative meaning “Golden Oriole” is more appropriate: a bird of yellowish green colour, by looking at which, a jaundiced person was cured – the bird died.

“Corps noir, marqué de jaune d’ocre, ainsi qu’il suit: une bande latérale au prothorax; une bande humérale au thorax, confluyente par en haut avec une latérale très-oblique, la poitrine et une tache basale latérale aux six premiers segments.” [Body black, marked with yellow ochre, as follows: a lateral band on the prothorax, a humeral band on the thorax, confluent from the top side with a very oblique lateral, the upper part of the thorax and a basal lateral spot on the first six segments.] {adjective}

Ictinogomphus Cowley, 1934a: 274

Cowley recognised that *Ictinus Rambur*, 1842 was preoccupied by *Ictinus* de Laporte, 1834 in Coleoptera and *Ictinus* Morris, 1837 in Aves, so he combined the original name with *Gomphus* (see *Austrogomphus*). *Ictinus* is from Gr. ἴκτινος = kite. Fliedner (2007) considers that the name aptly describes the enormous size of the adults. The illusion is possibly enhanced by the protuberance on segment 8 simulating the tail of a kite: “Abdomen ayant une dilatation au bord latéral du huitième segment en form d’écaille ou membrane large, noire, semblable dans les deux sexes” (Rambur 1842: 171). [Abdomen with an expansion to the lateral edge of the eighth segment in the form of a scale or broad membrane, black, similar in both sexes.] {Masculine}

Ictinus Rambur, 1842: 171

[homonym of *Ictinus* de Laporte, 1834 in Coleoptera and *Ictinus* Morris, 1837 in Aves, replaced with *Ictinogomphus* Cowley, 1934a (q.v.)]

ignifer, *Pseudagrion* Tillyard, 1906b: 188

L. *ignifer* –era –erum = fire-bearing. “Head. – *Epicranium* black behind, front brilliant rust colour, crossed by a short black transverse line in the

middle, and bordered below, next the clypeus, by a second black line. ...
Clypeus and labrum brilliant rust-colour.” {declinable adjective}

Indictinogomphus Fraser, 1939: 21

[junior synonym of *Ictinogomphus* Cowley, 1934a]

Fraser described a new genus for some species previously in *Ictinogomphus*, retaining the old genus name as one of the roots. The first root is probably from L. *Indus* = of or belonging to India as he gives “Distribution: Oriental, from India to the Philippines.” This is corroborated to some extent by the naming of the other genus, *Sinictinogomphus* Fraser, probably from Gr. Σῖναί = China. See also *Indolestes*. {Masculine}

Indolestes Fraser, 1922: 57

L. *Indus* = Indian + *Lestes* (q.v.). All three species which Fraser placed in this new genus were collected in India and so he placed the genus in the subfamily Lestinæ. {Masculine}

inermis, *Austroaeschna* Martin, 1901: 240

L. *inermis* –is –e = unarmed, without spines, prickles or stings.

“Cette espèce ... est tout-à-fait identique à la précédente [*Austroaeschna parvistigma*].” [This species ... is quite identical to the previous one.] The two species are compared in a table: “*parvistigma* et sur le 10^e une forte épine conique pointue sur le milieu dorsal” [and on the 10th [abdominal segment] a strong conical pointed spine on the middle of the back] and “*inermis* le 10^e ... sans aucune apparence d’épine ni de tubercle” [*inermis* the 10th ... without any appearance of spine or tubercle]. {declinable adjective}

ingentissima, *Petalura* Tillyard, 1908a: 717

Superlative of L. *ingens* = enormous. *P. ingentissima* is much larger than *P. gigantea* as seen in a table in Tillyard 1908a: “The expanse of wing in *P. gigantea* is ♂ about 110 mm.; ♀ about 120 mm. ditto *P. ingentissima* ♂ 151 mm.; ♀ 163 mm.” {declinable adjective}

ingrid, *Austroaeschna* Theischinger, 2008: 242

“The species is named for my granddaughter Ingrid, her name being used as a noun in apposition to the generic name.”

ingrid, *Pseudagrion* Theischinger, 2000a: 253
[junior synonym of *Archibasis mimetes* Tillyard, 1913]

“Name: after my grand-daughter Ingrid.” {noun in apposition}

injibandi, *Nannophlebia* Watson, 1969a: 100

“The name commemorates the Injibandi tribe, which previously occupied the tableland adjacent to Millstream.” {noun in apposition}

insignis, *Agrionoptera* (Rambur, 1842: 123)

L. insignis –is –e = remarkable. The feature that is remarkable is noted in the main description and also contained in the Latin diagnosis. “Cette espèce est très-remarquable par l’étroitesse de la base des ailes inférieures.” [This species is very remarkable by the narrow base of the hind wings] and “alis hyalinis posticis ad basim angustissimis” [rear wings hyaline very narrow at the base]. {declinable adjective}

insularis, *Austrolestes* Tillyard, 1913a: 426

L. insularis –is –e = pertaining to an island. “Hab. – Banks Island, Torres Straits, taken by Mr. H. Elgner, February 16th, 1910.” {declinable adjective}

intermedia, *Hemicordulia* (Selys, 1871b: 256)

L. adj. intermedius –a –um = intermediary. Selys describes the species as being intermediate between *Hemicordulia tau* and *H. australiae*. “Elle semble vraiment intermédiaire entre ces deux espèces” [It really seems intermediate between these two species]. {declinable adjective}.

intermedius, *Episynlestes* Theischinger & Watson, 1985: 146

L. adj. intermedius –a –um = intermediary. “As the name implies, *E. intermedius* bridges the gap between *E. albicauda* and *E. cristatus*, it is

intermediate in some characters, like *E. albicauda* in some, and like *E. cristatus* in others.” {declinable adjective}

intermedius, *Griseargiolestes* (Tillyard, 1913a: 412)

From the original description: “Race *intermedius* – A small series of three males and one female taken by me at Alexandra, Vic, December, 1906, are of intermediate form between typical specimens [*Argiolestes griseus* Blue Mountain Series] and the very distinct form *eboracus*.” {declinable adjective}

interposita, *Phasmoticta* Lieftinck, 1951: 17

[junior synonym of *Oristicta filicicola* Tillyard, 1913

L. interpositus –a –um = positioned in between, inserted. “This new species resembles *Isosticta banksi* Tillyard and *handschini* Lieftinck fairly closely in general appearance, but it has a larger head and slightly shorter legs than do these species.” Lieftinck appears to have placed this species, and its monotypic genus *Phasmoticta*, between the two species of *Isosticta* even though there is no gradation of characters between the three species. {declinable perfect participle}

io, *Austrolestes* (Selys, 1862a: 330)

In Greek mythology, Io was a priestess of Hera, daughter of the river god Inachus but a mortal. She was pursued by Zeus and subsequently changed into a heifer (Bray 1964). In consecutive entries in Selys (1862a), Hagen named *A. psyche* and Selys named *A. io* and *A. leda*, all after characters from Greek mythology. {noun in apposition}

irregularis, *Tetrathemis* Brauer, 1868a: 183

L. in- = un-, not (where the ‘n’ assimilates itself to the following consonant ‘r’), thus *ir-* + *regularis* –is –e = containing rules for guidance; hence not in accordance with the rule or norm. The name refers to the apparently four-sided triangle. “Das sogenannte Dreieck durch winklige Vorziehung der Vorderseite in ein Vierseit verwandelt, leer.” [The so-called triangle transformed by bringing forward the front side turns into a quadrilateral,

free.] See also *Tetrathemis*. {declinable adjective}

isabellae, *Austroargiolestes* Theischinger & O'Farrell, 1986: 400

“The species is dedicated to Mrs [Mary] Isabel O'Farrell.” {noun in the genitive case}

Ischnura Charpentier, 1840: 20

Gr. ἰσχνός = lean, thin + οὐρά = tail.

From the original description: “Nomen e Graeco ἰσχνός et οὐρά compositum, ob abdominis eximiam tenuitatem.” [Name composed from the Greek *ischnos* [lean, thin] and *oura* [tail] on account of the exceptional slenderness of the abdomen.]

Fliedner (2006) notes that the name is suitable only if the genus is compared with *Calopteryx*; for the abdomen is not significantly leaner in comparison to other coenagrionid genera known to Charpentier. {Feminine}

Isosticta Selys, 1885: cxlv

[Junior synonym of *Rhadinosticta* Watson, 1991]

Gr. ἴσος = equal + στικτός = spotted, tattooed which, in the Odonata, often refers to the pterostigma. There is no indication of the derivation of the name in the original descriptions for the genus or the species *I. spinipes*, Selys on which it was based. Within the Agrionines Selys (1885) distinguishes between the Pseudostigmatées for the tropical family Pseudostigmatidae “Un faux Ptérostigma traverse par des nervules ou nul” [A false stigma traversed by veins or none] and the Normostigmatées “Ptérostigma régulier” [Regular pterostigma]. This is the only reference to the pterostigma.

In his 4th Légion – *Protonevra*, Selys includes four genera, and in Genus II- *Allonevra*, *Isosticta* is one of four subgenera. Of the 12 subgenera names included in the Légion five end in *-sticta*, six in *-neura*, with the remaining one *-mnema*. Selys (1886: 144) keys the genus *Allonevra* with “Pas de nervule basale postcostale supplémentaire, ptérostigma rhomboïde ou en losange.” [No supplementary basal postcostal vein, pterostigma rhomboidal or diamond-shaped.] Although a rhombus has equal straight sides and its

opposite angles are equal, this definition applies to all four subgenera so it is not unique to *Isosticta*. Selys seems to have used *-sticta* in genus group-names as a general term within his Legion *Protonevra*: Agrionines [Zygoptera]. It is not possible to determine whether *Iso-* refers to a morphological characteristic or a relationship between genera.

There is an interesting philological connection between *Isosticta* and *Ischnura heterosticta*. Genus group names containing *-sticta* were established in 1860 viz. *Peristicta*, *Platysticta* and the enigmatic *Nososticta*, earlier than *Isosticta*. At least the first two of these refer to the pterostigma. Philologically *Iso-sticta* is the opposite of *hetero-stictus* *-a -um* suggesting a contrast., In all of the Subischnurinae, including *Ischnura heterosticta*, the pterostigmata in fore and hindwings are of a different shape and often colour. Perhaps the genus name *Iso-sticta* was chosen because in that genus two coloured or different stigmata are not found. {Feminine}

jacksoniensis, *Procordulia* (Rambur, 1842: 148)

Derived from Jackson + *-ensis -is -e* = L. adjectival suffix indicating place of origin It is highly likely that this species of *Procordulia* (as *Cordulia*) was named for Port Jackson, Sydney. The specimen was probably collected by Second Officer J.S.C. Dumont d'Urville on the voyage of the '*Coquille*', which visited Port Jackson in 1824. Felix Edouard Guérin-Meneville was charged with describing the collections of insects and crustaceans from this voyage. It would seem that Guérin passed the Odonata to Rambur. In his description of *Cordulia jacksoniensis*, Rambur (1842) acknowledges "Communiquée par M. Guérin. De la Nouvelle-Hollande." See also *Austrogomphus guerini*. {declinable adjective}

jaspidea, *Anaciaeschna* (Burmeister, 1839: 840)

From L. *iaspideus -a -um* = like jasper. Jasper is a form of chalcedony, a microcrystalline mineral of quartz containing other elements which give it colourful bands and patterns of red, yellow, brown or green. The likeness seems to have been suggested by the collector. "Aus Java, unter obigem Namen vom Herrn Grafen v. Hoffmannsegg." [From Java, under the above name from Count v. Hoffmannsegg.]

The original description based on a female specimen is minimal: “thoracis vittis lateralibus abdominisque guttis albido-flavis” [drops of whitish-yellow positioned on the side of the thorax and abdomen]. Hagen (1867c: 32) renders the jasper-like appearance more accurately. “Thorax olivenbraun, oben mit wenig sichtbarem grünlichen Fleck neben den Flügeln; seitlich mit zwei breiten grünlich gelben Binden, getrennt durch eine schräge dunkelbraune Binde; Schulternaht dunkelbraun.” [Thorax olive-brown above, with a hardly visible greenish fleck adjacent to the wings, dark brown shoulder seam, side with two broad greenish yellow bands, separated by an oblique dark brown band.] {declinable adjective}

jedda, *Pseudagrion* Watson & Theischinger, 1991: 26

“Named for Jedda in the 1955 film of that name; parts of the film were set in Katherine Gorge [Type locality – Katherine River, NT]. To be treated as a noun in apposition.”

jurzitza, *Austrocordulia refracta* Theischinger, 1999d: 381

“Dedication to Professor Gerhard Jurzitza who acted incredibly fast and unselfish when the undescribed larval material of *Gomphomacromia* Brauer was needed for a study of the Australian Gomphomacromiinae (Theischinger & Watson, 1984).” {noun in the genitive case}

kalliste, *Hemicordulia* Theischinger & Watson, 1991: 46

“The name commemorates ‘Kalliste’, the home of the late Dr. M.A. Lieftinck and his wife Corrie, in Rhenen, the Netherlands.” Kalliste, from the Gr. superlative adjective κάλλιστος –η –ον = most pretty. {noun in apposition}

kalumburu, *Nososticta* Watson & Theischinger, 1984: 14

“Holotype ♂: ... Drysdale River, Western Australia.” Kalumburu and Kalumburu Community (formerly Drysdale River Mission) are localities within the Shire of Wyndham-East Kimberley. {noun in apposition}

kingii, *Agrion* Macleay W.S, 1827: 456

Synlestidae *Incertae sedis*. Hämäläinen (2015) argues the name is “*nomen oblitum*, obviously an *Episynlestes* species.”

No information on etymology is given in the original description but it is obviously named for Phillip Parker King. Between the years 1818 and 1822 King commanded the cutter *Mermaid* on exploration voyages from Sydney to the North West Cape, Van Diemen Gulf and Timor, then to Van Diemen's Land [Tasmania] and back to Torres Strait. He also commanded the *Bathurst* from Sydney by way of Torres Strait to the north-west coast. {noun in the genitive case}

kirbyi, *Gynacantha* Krüger, 1898: 268

Krüger cites two references by Kirby: Catalogue of the described Neuroptera Odonata of Ceylon, with descriptions of new species *The Journal of the Linnean Society*. XXIV No. 157. 1894. p. 545 and his *Synonymic Catalogue of the Odonata or Dragonflies* (Kirby, 1890). There is no other acknowledgment of Kirby. William Forsell Kirby (1844–1912) was an English entomologist who became a curator in the Museum of the Royal Dublin Society, and later joined the staff of the British Museum (Natural History). {noun in the genitive case}

koolpinyah, *Nososticta* Watson & Theischinger, 1984: 16

“Holotype ♂: ... Black Jungle, Koolpinyah Station, Northern Territory.”
{noun in apposition}

koomina, *Hemicordulia* Watson, 1969a: 97

“Material. – 2 ♀ (bred from larvae), Koomina Pool, Tanberry Creek [Sherlock River system, Hamersley Range. WA].” {noun in apposition}

koongarra, *Nososticta* Watson & Theischinger, 1984: 20

“Paratypes 15 ♂, 7 ♀, Koongarra ... 15 km E. of Mt Cahill [NT]” plus three other collections from the same locality. {noun in apposition}

kunjina Agriocnemis Watson, 1969a: 76

“Material. ... 1 ♀, Kunjina Spring, Daniel's Well [Station]”, Fortescue River System, Hamersley Range, WA. {noun in apposition}

kununurra, Eurysticta Watson, 1991a: 31

Type locality: Ord River and Packsaddle Plains, Kununurra, Western Australia. “The name is to be used as a noun in apposition.”

Labidiosticta Watson, 1991a: 22

“Name derived from the Greek *labidion*, small tongs, referring to the shape of the male superior appendages.” Gr. λαβίδιον = pair of tweezers + *-sticta* which is derived from the Gr. adjective στικτός = spotted, tattooed. However, in this case, the root refers to the second phrase of the genus *Phasmosticta*, in which *L. vallis* was originally included, rather than being a character of the species itself. {Feminine}

lateralis, Zephyrogomphus (Selys, 1873b: 502)

L. adjective *lateralis* *-is -e* from L. *latus* = the side. The only appropriate characteristic from Selys' description seems to be: “Prothorax brun avec une tache centrale géminée et deux petites taches jaunes latérales de chaque côté.” [Prothorax brown with a twinned central spot and two small lateral yellow spots on each side.] Or perhaps it could refer to the thoracic pattern. “Sur les côtés du thorax deux bandes obliques réniformes isoleées, écartées l'une de l'autre, d'un vert pâle, chacune d'elles presque cerclée de noir.” [On the sides of the thorax two isolated reniform oblique bands, separated from one another, of a pale green, each almost circled in black.] {declinable adjective}

Lathrecista Kirby, 1889: 291

Gr. λαθραῖος = clandestine, hidden + κίστη = basket, urn. Perhaps this refers to the inconspicuous male secondary genitalia: “anal appendages as long as the eighth segment, the lower one hardly shorter than the others, those of the second segment not conspicuous.” {Feminine}

Lathrocordulia Tillyard, 1911a: 378

λαθραῖος = furtive, clandestine + *Cordulia* (q.v.). “Allied to *Syncordulia** ... (* It must be understood that I refer here to *S. atrifrons* McLach., which I assume is congeneric with the type *S. gracilis* Burm., of which no really reliable or sufficiently full descriptions are available.)” {Feminine}

leachii, *Archaeosynthemis* (Selys, 1871b: 243)

In the introduction to his *Synopsis des Cordulines*, Selys states “Pour désigner les genres et sous-genres que j’admets au nombre de onze, j’ai adopté des noms proposés par Leach, Charpentier, Burmeister, Rambur, Brauer et Bates (MSS)” [To designate genera and subgenera that I accept to the number of eleven, I adopted the names proposed by Leach, Charpentier, Burmeister, Rambur, Brauer and Bates (MSS)]. Leach receives no other mention in the paper. William Elford Leach FRS (1790–1836) was an English zoologist and marine biologist who published dragonfly names in his *Zoological Miscellany* and also the topic ‘Entomology’ in Brewster’s *Edinburgh Encyclopaedia*. {noun in the genitive case}

leda, *Austrolestes* (Selys, 1862a: 331)

Named for Leda, wife of King Tyndareus of Sparta. She was visited by Zeus who took the form of a swan. She brought forth two eggs; from one issued Castor and Clytemnestra, from the other Pollux and Helene (Bray 1964).

In consecutive entries in Selys (1862a), Hagen named *A. psyche* and Selys named *A. io* and *A. leda*, all after characters from Greek mythology. {noun in apposition}

leonardi, *Austrocordulia* Theischinger, 1973: 388

“Ich möchte meinem Freund, Herrn Leonard Müller, der viele Tage mit mir auf Exkursionen in Australien verbrachte, für seine wertvolle Hilfe danken.”

[I want to thank my friend, Mr. Leonard Mueller, who spent many days with me on trips in Australia, for his valuable help.] {noun in the genitive case}

Lestes Leach, 1815a: 137

Apparently from the Gr. ληστής = a robber or pirate. Leach had to distinguish only three genera of damselflies (*Agrion*, *Lestes* and ‘*Calepteryx*’) so the sparse information he gave was “GENUS CCCCLXXVI. *Lestes*. Leach. Wings membranaceous, with an oblong quadrate stigma. Abdomen of the male armed with a forceps-like appendage.” {Masculine}

Lestoidea Tillyard, 1913a: 428

The genus name is composed of –ειδής = Gr. adjectival suffix indicating resemblance, applied to *Lestes* (q.v.). This element can be either masculine or feminine in gender. To indicate the intended gender of his new genus the author used an –a as the ending, which normally signals the feminine gender. “Characters intermediate between those of the legions *Lestes* and *Protoneura*” [see also *Lestoidea conjuncta* Tillyard, 1913]. {Feminine}

lestoides, *Diphlebia* (Selys, 1853: 67)

This is composed of –ειδής = Gr. suffix indicating resemblance applied to *Lestes* (q.v.)

Selys names two species, *Amphipteryx agrioides* and *Amphipteryx lestoides* in his Légion Amphipteryx: Genre unique – *Amphipteryx*, De Selys: Sous-genre unique – *Amphipteryx*, De Selys: Group unique: (*A. agrioides*), showing that the species are named, respectively, after *Agrion* and *Lestes*. {adjective}

lewisiana, *Lestoidea* Theischinger, 1996b: 320

L. lewisianus –a –um. “Lewisianus 3 = Latinized for ‘from Mount Lewis’” {declinable adjective}

Libella Brauer, 1868b: 368, d

The genus is first described in a key within Brauer 1868b: 368 and further details are given in Brauer 1868d: 731. However there are no clues to the etymology. Of the 31 species which Brauer placed in his new genus *Libella*, 19 are currently in *Orthetrum*. Hagen (1888) states that Newman’s (1833)

description of *Orthetrum* was poorly known in Europe and this implies that it was unknown to Brauer. It appears that he chose a name as close to *Libellula* as possible and *Libella* was still available in post-Linnean nomenclature. Although Brauer was a poor Latinist he certainly knew enough of that language to see that *libellula* was the diminutive of *libella*, but he is unlikely to have known the derivation of that latter name. {Feminine}

Libellula Linnaeus, 1758: 543

Linnaeus erected *Libellula* for all known Odonata. The derivation is from the diminutive of the Latin *libella*, a carpenter's level which was T-shaped. Corbet 1999: 561-562 concludes that "the resemblance of the zygopteran larva to a T-shaped balance, as typified by the hammerhead shark [*Libella marina* Rondelet], is responsible for the generic name *Libellula*." Fliedner (1997) dismisses the derivation of *libellus*, the diminutive of *liber*, meaning a little book, as being linguistically incorrect. "Die Ableitung des Wortes libellula von *libellus* (= Büchlein; Diminutiv zu liber = Buch) ist nicht möglich, da dieses Wort maskulin ist und nur eine Verkleinerung *libellulus* (= Büchelchen) hervorbringen könnte." [To derive the word *libellula* from *libellus* (= booklet; diminutive of *liber* = book) is not possible, as this word is of masculine gender and its diminutive only could be *libellulus* (= little booklet).] {Feminine}

lieftincki, *Rhodothemis* Fraser, 1954: 148

"I have named this new species after Dr. M.A. Lieftinck to whom we owe the extraordinary advance in our knowledge of the Papuan Odonata in recent years." {noun in the genitive case}

Lithosticta Watson, 1991a: 22

Gr. λίθος = stone + *-sticta* which is derived from the Gr. στικτός = spotted, tattooed. However in this case the root refers to the second phrase of the family Isostictidae rather than being a character of the species *L. macra*. "Name derived from the Greek *lithos*, alluding to the stony habitats from which these damselflies have been recorded." {Feminine}

litorea, *Petalura* Theischinger, 1999a: 160

L. litoreus –a –um. “Litoreus 3 = Latin for ‘belonging to the shore’”.
{declinable adjective}

liveringa, *Nososticta* Watson & Theischinger, 1984: 23

“Paratypes: Western Australia: ... 8 ♂, 9 ♀, Camballin, Fitzroy River barrage dam.” Most probably the locality was Lower Liveringa Pool, Camballin WA.
{noun in apposition}

loewii, *Tramea* Brauer, 1866: 563

In the original description in Brauer (1866) the species was named *Tramea löwii* in agreement with a proposal of J.J. Kaup to whom Brauer owed his specimen. No etymological explanation was given but the specimen was named for either Friedrich Hermann Loew or Franz Löw. Friedrich Hermann Loew (1807-1879) was a German entomologist who specialised in the study of Diptera. Franz Löw (1829-1889) was an Austrian physician and entomologist. He was Brauer's friend and they co-authored *Neuroptera austriaca* (1857) Carl Gerold's Sohn: Vienna. However, the name *löwii* was chosen by Kaup and was the label name in his collection. No connection between Kaup and either of the two possible sources of the name has been established. (Hämäläinen, M. (2015) and pers. comm.) {noun in the genitive case}

longipositor, *Zephyrogomphus* (Watson, 1991b: 341)

“Referring to the extraordinarily long ovipositor.” {noun in apposition}

longissima, *Planaeschna* Martin, 1901: 237

Superlative of *L. longus* –a –um = longest. Martin (1901) described the male of *Planaeschna longissima*: “Abdomen excessivement allongé” [Abdomen extremely elongated]. See *Austroaeschna unicornis*. {declinable adjective}

longitudinalis, *Agrionoptera* Selys 1878: 312

L. adjective *longitudinalis* –is –e from *longitudo* = length, hence running

lengthwise. In anatomical nomenclature it designates a structure that is parallel to the long axis of the body or an organ. In this case it refers to the obvious yellow markings along the thorax.

“... sur les côtés une très-large bande longitudinale sinuée, d’un bout à l’autre, presque divisée en quatre taches par les sutures” [on the sides a very wide sinuous longitudinal band, from one end to the other, almost divided into four spots by the sutures] and “NB. Très-distincte des autres espèces par le dessin des côtés du thorax où le jaune forme une large bande ondulée tout à fait longitudinale” [NB. Very distinct from other species in the pattern on the side of the thorax where the yellow forms a broad wavy band completely longitudinal]. {declinable adjective}

lucifer, *Pseudagrion* Theischinger, 1997a: 803

“Name: lucifer = Latin for ‘morning-star’, referring to the bright face of the male.” {noun in apposition}

lyelli, *Coenagrion* (Tillyard, 1913a: 450)

There is no direct etymological explanation in the original description but it includes the statement: “This very beautiful and conspicuous species [*Agria lyelli*] was first discovered by me during a visit to my friend, Mr. Lyell, at Gisborne, Vic., in December, 1908.” The naturalist George Lyell (1866-1951) built up an enormous collection of butterflies and moths, at first from country areas near Melbourne and then from the Gisborne area and other States. He donated it to the National Museum of Victoria over a period of 14 years, 1932 to 1946 (Hewish, 2014). {noun in the genitive case}

maccullochi, *Anacordulia* Tillyard, 1926: 163

[junior synonym of *Metaphya tillyardi* Ris, 1913]

“This unique specimen is a fine discovery, and the species is dedicated to its captor, the late Allan R. McCulloch.” Allan Riverstone McCulloch (1885-1925) was a noted systematic ichthyologist working at the Australian Museum, Sydney. {noun in the genitive case}

maccullochi, *Austrocnemis* (Tillyard, 1926: 161)

“The species is dedicated to its captor, the late Mr. Allan R. McCulloch.”
{noun in the genitive case}

macra, *Lithosticta* Watson, 1991a: 34

Feminine form of the L. adj. *macer macra macrum*. “Name derived from the Latin *macer* = lean.” “A medium-sized to large but slender, dull bronze damselfly.” {declinable adjective}

Macrodiplax Brauer, 1868b: 366

Gr. μακρός = extensive, large + *Diplax* (see *Diplacodes*). The derivation probably refers to size, as in *Nannodiplax* (q.v.), named in the same key. Brauer (1868b) introduces *Macrodiplax* in a key to the genera of his Subf. Libellulidae: Tribus Libellulina, with no more detail than “Sector triang. sup. wenig gebogen, kurz, Sectors arculi kaum gestielt, Scheide des ♀ bedeckt, 2 Reihen Discoidalzellen Geäder weit (Ostindien).” [Sector triang. sup. slightly curved, short, Sectors of arculus barely stalked, sheath of ♀ covered, 2 rows of cells in discoidal field venation not dense (East Indies).] {Feminine}

Macromia Rambur, 1842: 137

Gr. μακρός = long, extensive + ὤμος shoulder. Williamson (1899: 231, 307), with advice from Calvert, gives the etymology as “(macros Gr., great, long; omos Gr., equally) ... the name probably referring to the equally long tarsal nails.” This is based on Rambur’s “onglets fortement bifides” [strongly bifid tarsal claws]. Rambur also states “elles se distinguent bien des *Cordulia* par la forme des ongles” [they are well distinguished from *Cordulia* by the form of their tarsal claws]. In commenting on *Cordulia* [= *Macromia*] *splendens*, Selys (1843) says “Les principaux caractères qui distinguent les Macromies des Cordulies sont d’avoir les ongles des tarse entièrement bifides” [The main characteristics that distinguish the Macromines from Cordulines are having the tarsal claws fully bifid].

However, the Calvert/Williamson interpretation is not correct on philological grounds. ὀμῶς translates to equally, likewise or alike and is an adverb, from which a derivation *-omia* would be hazardous and not likely to have been made by Rambur, whose names in the main are philologically correct. At the base of the name is the Gr. noun ὄμιος– shoulder; *-ώμιος* would be an adjectival suffix meaning shouldered. The passage in Rambur p.137 to which it seems to refer is: “Ailes ayant la partie humérale du bord costal au moins deux fois aussi longue que la partie cubitale jusqu’au pterostigma” [Wings with the humeral part of the costal edge at least twice as long as the cubital as far as the pterostigma]. {Feminine}

macrops, *Apocordulia* Watson, 1980: 287

Gr. μακρός = long + ὄψ = eye. “From the Greek *makros*, long, and *ops*, eye, referring to the long eye seam; a noun in apposition.”

macrostigma, *Synthemis* Hagen, 1871: 559

Gr. μακρός = long + στίγμα = tattoo-mark (referring to the pterostigma).

♂ “Pterostigma brun roussâtre (long de 3½ mm), surmontant plus de 2 cellules” [Pterostigma reddish brown (3 ½ mm long), overlying more than two cells].

♀ “Pterostigma un peu plus long et plus large (long de 4 mm)” [Stigma slightly longer and wider (4 mm long)].

“[J]e pense que les deux sexes appartiennent à une meme espèce, qui se distinguee des autres du meme groupe par sa fort taille, le pterostigma très-long.” [I think both sexes belong to the same species, which is distinguishable from others of the same group by its large size, the stigma very long.] (See *Archaeosynthemis occidentalis*, *Archaeosynthemis orientalis*.) {noun in apposition}

magela, *Hemigomphus* Watson, 1991b: 324

“From Magela Creek, in western Arnhem Land; to be treated as a noun in apposition.”

magnifica, *Archaeophya* Theischinger & Watson, 1978: 404

L. magnificus –a –um = great, splendid. There is nothing in the original description to indicate which aspects of this species warrant the epithet ‘magnificent’. Both species in the genus are large and metallic black with yellow markings. {declinable adjective}

manifestus, *Austrogomphus* Tillyard, 1909b: 241, 249

[junior synonym of *Antipodogomphus acolythus* (Martin, 1901)]

L. manifestus –a –um = clear, visible, evident. “My friend, Mr. Allen, of Cairns, took [the female of] a very remarkable new species at Atherton, N.Q., in April, 1907.” Perhaps the meaning lies within the comparison with “*A. bifurcatus*, of which the female is not known. It cannot be the female of that species, however, as the markings of head, thorax, and abdomen are entirely different.” However, the new species is clearly an *Austrogomphus*. {declinable adjective}

martini, *Synthemis* Tillyard, 1908b: 726

[junior synonym of *Synthemis leachii* Selys, 1871]

No information on etymology is given in the original description but the name obviously honours René Martin (1846 – 1925) who was a French student, chiefly of the Odonata, and contemporary of de Selys. He studied and practised law in Paris but, through a wide range of correspondents, published on the dragonflies of Europe, Africa, southeast Asia and parts of South America. He also prepared sections of the *Catalogue of the zoological collections of Baron E. de Selys Longchamps*. From 1920 until his death Martin resided in Chile with his married daughter. Tillyard (1917b) contains the dedication “To my good friends and mentors in Odonatology M. René Martin and Dr F. Ris, I dedicate this book, in memory of many kindnesses received from them.” {noun in the genitive case}

melaleuca, *Austroepigomphus* (Tillyard, 1909b: 244)

“All the other specimens I have, were taken, one or two at a time, in the teatree [*Melaleuca* sp.] bush fringing the creek. The insect is very fond of sitting perched high up on a sprig of teatree, sometimes beyond reach of the net. If disturbed, it flies off with bewildering swiftness and settles on another bush. I have named it *A. melaleuca* because of this habit.” (*Melaleuca* L. is named from Gr. μέλας = black + λευκός = white, as the trees often have a black trunk and white branches due to the papery bark.) {noun in the genitive case}

melanopsis, *Diplacodes* (Martin, 1901: 222)

Gr. μέλας (stem μελαν-) = black + ὄψις = appearance or face.

Bridges (1994), Davies & Tobin (1985) and Houston & Watson (1988) all give Martin, 1901 as the author. Martin does not claim this as nov. sp. but says “*Diplax melanopsis* Selys. Cette espèce, non encore décrite” [This species, not yet described]. Presumably it was a manuscript name of Selys. Martin then does give a description which includes “♂ Face noir brillant, traverse par deux raies jaunâtres, et les lèvres jaunes; le vertex noir violet métallique” [♂ face brilliant black, crossed by two yellowish stripes, and labrum yellow, vertex metallic violet black], from which the specific epithet can be readily understood. {noun in apposition}

melanosoma, *Eusynthemis guttata* Tillyard, 1913d: 231

Gr. μέλας (stem μελαν-) = black + σῶμα = body. “Coloration of abdomen: ♂, almost completely black.” {noun in apposition}

melvillensis, *Huonia* Brown & Theischinger, 1998: 99

L. melvillensis –is –e. A derived adjective indicating place of origin. “... a species of *Huonia* was collected as part of a freshwater survey of Melville Island. Since it is different from all described species, it is described as new below.” {declinable adjective}

membranulata, *Pentathemis* Karsch, 1890a: 34

L. membranula, diminutive of *membrana* = skin, membrane + suffix *-atus -a -um* = provided with. This refers to the distinctive membranule of the wing. "Membranula gross, weisslich, auf der Mitte schwärzlichgrau." [Membranula large, whitish, blackish grey in the centre.]

The species (and genus) was based on a single, aberrant female (see *Pentathemis*) and no further material was collected until 1968 (Watson, (1969b). Watson's expanded description confirms the form of the membranule. "Membranule large, extending far beyond anal triangle, grey with anterior and posterior margins whitish." {declinable adjective}

metallica, *Lathrocordulia* Tillyard, 1911a: 379

L. metallicus -a -um = metallic. "Thorax dark brown, with grey downy hairs. On each side of dorsal ridge is a band of metallic green; sides also reflecting metallic green or rich steel-colour nearly all over." {declinable adjective}

metallicus, *Griseargiolestes* (Sjöstedt, 1917: 24, 25)

L. metallicus -a -um = metallic. This refers to the metallic coloration on head, prothorax, and, particularly, synthorax and abdomen.

"♂: Kopf mit Epistom und Oberlippe schwarz, oberhalb der Augen und Nacken etwas metallblau; die Seiten der Mandibeln und die Partie zwischen denselben und den Augen graugelblich; Unterlippe hellgelb; Prothorax schwarz, etwas metallblau, Vorderrand und ein Fleck jederseits eine kurze, schwach markierte Humeralstrieme; Seiten des Thorax schön hellgelb, zwischen den Flügeln von oben bis fast zum Stigma ein nach unten verengtes metallblaues Band; auch unterhalb des Stigma ein dunkler, langgestreckter Fleck; Coxa und Trochanter aller Beine hellgelb; Schenkel oben schwarz, unten gelblich (das 1. Paar fehlt); Schienen und Tarsen dunkelbraun; Hinterleib schwarz, die zwei ersten Segmente oben metallblau, die folgenden etwas metallgrün schillernd, die zwei ersten längs der Seiten gelb" [♂: Head with epistome and labrum black, above the eyes and neck slightly metallic blue; the sides of the mandibles and the area between them and the eyes of greyish-yellow; labium pale yellow; prothorax black, slightly metallic

blue, the anterior edge and a patch on each side a short, slightly marked humeral weal; sides of the thorax beautiful bright yellow, between the wings from the top almost to the pterostigma of a downward narrowed metallic blue band; underneath the pterostigma a dark, elongated patch; coxa and trochanter of all legs bright yellow; femora black above, yellowish below (the first pair is missing), tibiae and tarsi dark brown; abdomen black, the first two segments metallic blue above, the following somewhat opalescent metallic green, the first two yellow along the sides]. {declinable adjective}

Metaphya Laidlaw, 1912: 65, 66

Gr. μετά = among, in the midst of + φῶή = stature or growth. The second element in the name alludes to its taxonomic position amongst other genera of the Corduliinae, *Cordulephya*, *Neophya*. “*Metaphya* then falls into the Cordulina group [of Tillyard].” “Amongst these genera *Metaphya* must take its place, and I cannot at present indicate its exact position much more clearly than this.” {Feminine}

Metathemis Tillyard, 1910b: 335

[junior synonym of *Eusynthemis* Förster, 1903]

Gr. μετα- = later, in one's dealings with (this seems to be the most relevant meaning of μετα- for the interpretation of this name) + θέμις (see *Synthemis*). Hence it seems that Tillyard wanted to give this name to the most advanced group in *Synthemistina*. Although describing a new genus for four species, Tillyard still considers them to be among the other members of the *Synthemistina*. “In studying the remaining thirteen species, we can at once pick out a homogeneous group of four characterised by the short anal appendages of the males, the absolute loss of the ovipositor in the females, and the generally rather shorter and less constricted abdomen. These are *S. brevistyla*, *S. virgula*, *S. guttata* and *S. nigra*. I regard these as the most advanced members of the group *Synthemistina*. Their venation is more open and less inclined to variation than that of the other species, and in the complete loss of the ovipositor, they have at last reached an invariant stage. These four species are also very much more allied to one another than any other two species outside them. I therefore propose to place them in a new genus, *Metathemis*, of which the type will be *S. guttata* Selys.” {Feminine}

microcephalum, *Pseudagrion* (Rambur, 1842: 259)

Gr. μικρός = small + κεφαλή = head.

From the original description “Tête petite, peu large; yeux proportionnellement plus grosse que chez la plupart des autres espèces.” [Head small, not very wide, eyes proportionally larger than in most other species]. {declinable adjective}

Micromidia Fraser, 1959: 352, 354

Gr. μικρός = small + ὤμος = shoulder + -ιον a diminutive suffix. However, as that suffix is always neuter, Fraser may have decided to make the genus feminine by the addition of -α. Perhaps more likely is his use of the element -ωμίδιος which is found in the adjective ἐπ- ωμίδιος, on the shoulder, or as a noun ἐπ- ωμίδιον, diminutive of ἐπ- ωμίζ which, among other things, can mean the shoulder-strap of a woman's tunic. Because of its vertebrate connotations, ‘shoulder’ is a difficult word to translate in entomology. The most likely meaning is an angled or sloping part, as the area between the body and neck of a bottle or vase. So, it is possible that ‘shoulder’ refers to “base of hindwing shallowly notched but the tornal angle prominent” and the diminutive is possibly from “It probably belongs to the group *Austrophya*, *Neophya* and *Cordulephya*, matching the latter in its small size”. (See also discussion under *Macromia*.)

Another possibility is that Fraser took *Macromidia* Martin, 1907 as a model name and applied the diminutive *micro-* instead of *macro-*, although there is no obvious connection between the two genera. {Feminine}

Micronympha Kirby, 1890: 140

[junior synonym of *Ischnura* Charpentier, 1840]

Gr. μικρός = small + νύμφη = a bride, young girl, marriageable maiden or Nymph (goddess of the lower rank). Kirby places 30 species of *Agriion* or *Ischnura* into this new genus without explanation. {Feminine}

Microthemis Brauer, 1868: 367

[junior synonym of *Brachydiplax* Brauer, 1868]

Gr. μικρός = small + θέμις = laws, decrees, ordinances, judgements (see *Synthemis*). Brauer (1868b: 367) establishes this genus in a key to the 'Libellulina' and gives a full description (Brauer 1868d: 725) which establishes the type species as *Perithemis duivenbodi* (Brauer). With body length 30-31 mm and wingspan 41-43 mm (Brauer 1866: 570) this is demonstrably a small species. {Feminine}

migratum, *Orthetrum* Lieftinck, 1951: 37

L. *migratus* –a –um, perfect participle of L. *migro* = to remove, to migrate. Lieftinck obviously deemed the form '*migratum*' to mean 'having migrated' which is not quite in accordance with Latin grammar. Lieftinck quotes Tillyard (1908f: 641): "The specimen is of interest as affording direct evidence of a stream of immigration to the Cape York Peninsula independent of that across the Torres Strait from New Guinea." {declinable perfect participle}

mimetes, *Archibasis* (Tillyard, 1913a: 473)

Gr. μιμητής = imitator. "Evidently rare, but probably often overlooked owing to the remarkable similarity between it and the commoner *Pseudagrion australasiæ*. I have named it *mimetes* because of this resemblance." {noun in apposition}

Miniargiolestes Theischinger, 1998a: 615

"Combination of mini (from minimus) and *Argiolestes* [q.v.]." {Masculine}

minimus, *Miniargiolestes* (Tillyard, 1908b: 735, 736)

L. *minimus* –a –um = superlative of *parvus* = small, i.e. smallest. While dimensions of the most common form are given, there is no comparison to show how it might be considered smallest. The sizes given for race *pusillus* (q.v.) are smaller than for the type of *minimus*. {declinable adjective}

minjerriba, *Austrolestes* Watson, 1979: 147

“... *minjerriba*, the Aboriginal name for North Stradbroke Island, where the species was first discovered; to be treated as an undeclinable noun.” {noun in apposition}

mirabilis, *Hemiphlebia* Selys, 1869a: lxxiii

L. mirabilis = wonderful, extraordinary, unusual.

Its uniqueness is mirrored in “mais elle differe de tous les Odonates vivants connu jusqu’ici, par la suppression du côté interne du quadrilatère discoidal formé par arculus” [but it differs from all hitherto known living Odonata by the loss of the internal side of the discoidal quadrilateral formed by the arculus]. This comment predates the description of *Choristhemis* Tillyard, 1910 which shows a similar characteristic. {declinable adjective}

mjobergi, *Austrogomphus* Sjöstedt, 1917: 1

“Die von Dr. Eric Mjöberg während seiner ersten ergebnisreichen Expedition 1910-1911 besuchten, zool. bisher unerforschten nordwestlichen Teile des australischen Kontinents, der Kimberley-Distrikt, von welchem in Teil der vorliegenden Sammlung stammt, scheint an Odonaten arm zu sein.” [The visit of Dr. Eric Mjöberg during his first expedition 1910-1911, to the so far unexplored north-western part of the Australian continent, the Kimberley district, from which this collection in part originates, was zool[ogically] fruitful but seems to be poor in Odonata.] Dr Eric Georg Mjöberg (1882 –1938) was a Swedish zoologist and ethnographer who led the first Swedish scientific expeditions to Australia in the early 1900s, and also worked in Indonesia. The expeditions were to north-western Australia in 1910-1911 and to Queensland in 1912-1913 (Ferrier 2006). {noun in the genitive case}

mjobergi, *Telephlebia godeffroyi* Sjöstedt, 1917: 21

[junior synonym of *Telephlebia tillyardi* Campion, 1916]

Named for Dr Eric Georg Mjöberg (1882 –1938) a Swedish zoologist and ethnographer who led the first Swedish scientific expeditions to Australia in the early 1900s. See *Austrogomphus mjobergi*. {noun in the genitive case}

mocsaryi, *Gynacantha* Förster, 1898: 271

Sándor Mocsáry was Editor of *Természetráji Füzetek* (1895–1902), the journal in which this species was published. “Es ist mir zum Schlusse noch eine angenehme Pflicht, Herrn A. Mocsáry, Custos am ungarischen Nationalmuseum, dem geschätzten Hymenopterologen [sic], für seine freundlichen Bemühungen in der Sache meinen besten Dank auszusprechen.” [Finally, it is a pleasant duty to give my best thanks to Mr. A. Mocsáry, Custodian of the Hungarian National Museum, the esteemed Hymenopterologist, for his kind efforts in the matter.] {noun in the genitive case}

montana, *Cordulephya* Tillyard, 1911b: 397

L. montanus –*a* –*um* = pertaining to a mountain or mountains.

“The only known locality for *C. montana* at present is Medlow, Blue Mountains, N.S.W., where I took the type-male and female on January 19th 1910.” {declinable adjective}

(*Montiaeschna*) *Austroaeschna* Theischinger, 2012: 40

“From Latin mons = mountain, referring to its distribution in mostly montane areas.” {Feminine}

mouldsi, *Nososticta* Theischinger, 2000b: 1175

“Dedication to Dr. M.S. Moulds.” {noun in the genitive case}

mouldsorum, *Austrogomphus* Theischinger, 1999b: 369

“Dedication to the collectors M.S. and B.J. Moulds.” {noun in the genitive case plural}

mudginberri, *Nannophlebia* Watson & Theischinger, 1991: 49

“Named after Mudginberri Station [Northern Territory, 12° 35' 49", 132° 52' 20"]; name to be treated as an undecidable noun.” {noun in apposition}

muelleri, *Austroaeschna* Theischinger, 1982: 45

“I also wish to express my special gratitude to my friends Mr L. Müller (Berowa) and Dr J.A.L. Watson (Canberra) who supported my work in many ways.” {noun in the genitive case}

multinervorum, *Zyxomma* Carpenter, 1897: 436

L. multus –a –um = many, numerous + plural genitive of *nervus* = of the nerves, or wing veins in entomology. This refers to the higher number of antenodal and postnodal crossveins compared with its congeners known at the time. “... forewings, with 14-15 antecubital, and 11 postcubital nervures, first four of the latter not continuous; hindwings, with 10-11 antecubital, and 12-13 postcubital nervures.”

“This is, I believe, the first *Zyxomma* recorded from any part of the Australian region. *Z. petiolatum*, Rambur, the type-species from India, has but 12 antecubital nervures in the forewing. *Z. obtusum*, Alb. from Sumatra, has 13 antecubitals and only 7-9 postcubitals.” {noun in the genitive case plural}

multipunctata, *Austroaeschna* (Martin, 1901: 238-239)

L. multus –a –um = many + *punctum* = point, spot + suffix –atus –ata –atum = provided with. Numerous yellow spots on the thorax and abdomen are mentioned in the original description, thus: “Thorax ... de chaque côté une raie jaune divisée en 4 trançons et au-dessous 4 points espacés. Abdomen ... noirâtre, varié de jaune comme suit: ... 3^e – 6^e avec une ligne oblique à la base, 2 points au centre de chaque côté de l’arête et 2 points de chaque côté; le 7^e – 8^e avec 1 point à la base et les 2 points du centre fondus et une seule tache de chaque côté de l’arête, ainsi que 2 points de chaque côté; 9 – 10^e noirs avec 2 grosses taches latérales vers l’extrémité.” [Thorax ... on each side one yellow stripe divided into four sections and below 4 dots spaced apart. ... Abdomen blackish, varied with yellow as follows: ... 3rd-6th with a roughly oblique line at the base, two dots at the centre of each side of the ridge and two dots on each side, the 7th and 8th with one dot at the base one mark on each side of the ridge formed by the fusion of 2 dots, as well as two marks on each side, 9th – 10th black with two large lateral marks towards the extremity]. When comparing *A. parvistigma* and *A. multipunctata*, Tillyard

(1913b: 580) states “♂. Abdomen much less spotted (the name *multipunctata* is unfortunate, from this point of view.)” {declinable adjective}

mystica, *Austrophya* Tillyard, 1909a: 740

L. mysticus –a –um = mysterious, enigmatic, baffling which would be fitting for a species not easily detected or determined. Only a female specimen was available. “The specimen is an aged one, somewhat damaged, and if there are other markings they have been obliterated.” {declinable adjective}

Nannodiplax Brauer, 1868b: 369

Gr. *vāvoç* or *vávvoç* = a dwarf + *Diplax* (see *Diplacodes*). No morphological details in the original description seem relevant so the derivation most probably refers to size. {Feminine}

Nannodythemis Brauer, 1868b: 369

[junior synonym of *Nannophya* Rambur, 1842]

Gr. *vāvoç* or *vávvoç* = a dwarf + *δύο* = two + *θέμις* = laws, decrees, ordinances, judgements (see *Synthemis*). The first and last roots come from *Nannophya* (q.v.) and *Neurothemis* (q.v.) respectively. Brauer (1868b: 369) first names the new genus within a dichotomous key where these three genera occur within two couplets. However, it is in Part 2 of the article (Brauer 1868d: 726) where the distinguishing morphological character is given: “Prothoraxlappen breit, halbrund, der freie Rand durch eine kleine Kerbe etwas 2theilig.” [Lobe of the prothorax broad, semi-circular, its free margin somewhat bipartite by an indentation.] This point of difference is corroborated by Brauer’s description of *Nannophya* on the same page with “Prothorax lappen ganz, fast quadratisch.” [Lobe of the prothorax entire, nearly square.] {Feminine}

Nannophlebia Selys, 1878: 315

Gr. *vāvoç* or *vávvoç* = dwarf + *φλέψ* (stem *φλεβ-*) = vein + adjectival suffix –ιος –α –ον = associated with.

This combination of Greek roots is inherited from *Nannophya* and *Neophlebia*, thus: “C’est une coupe nouvelle à constituer, pour placer ma *Neophlebia Lorquini* qui appartient au genre *Nannophya* de Rambur par

la position du triangle discoidal des ailes inférieures, don't le côté interne (basal) est *dans le prolongement de l'arculus*, l'espace hypertrigonal sans nervule et l'espace median des quatre ailes libre (excepté la nervule basale normale).” [It is a new division formed, to place my *Neophlebia lorquini* that belongs to the genus *Nannophya* of Rambur by the position of the discoidal triangle of the hindwings, of which the internal side (basal) is an extension of the arculus, the hypertrigonal space without nervule and the median space of the four wings free (except the normal basal vein).] Recognise that Selys described *Nannophlebia* as “sous-genre”. {Feminine}

Nannophya Rambur, 1842: 27

From the Gr. *vāvoç* or *vávvoç* = dwarf + *φύη* = stature or growth. “J’ai formé ce genre sur la plus petite espèce de Libellulide connue et dont je n’ai vu que la femelle.” [I formed this genus on the smallest type of known Libellulide of which I saw only the female]. *Nannophya* is the earliest described of the extant odonate genera to utilise the root ‘-*phya*’. Later examples were *Archaeophya* Fraser, 1959; *Austrophya* Tillyard, 1909; *Cordulephya* Selys, 1870; and *Metaphya* Laidlaw, 1912; (all Corduliidae). {Feminine}

Nanosura Kennedy, 1920: 88

[junior synonym of *Ischnura* Charpentier, 1840]

Gr. *vāvoç* or *vávvoç* = a dwarf + *οὐρά* = tail. Another monotypic genus raised by Kennedy with “Type—*Ischnura aurora* Brauer.” This is the smallest species of *Ischnura* and Kennedy has retained a reference to the second root (see *Ischnura*). {Feminine}

nebulosa, *Diplacodes* (Fabricius, 1793: 379)

L. *nebulosus* -a -um = misty, foggy, but it can also mean dark, perhaps referring to “*alis albis apice nigris*” [wings white with black tips] or “*Corpus parvum, nigrum*” [Body small, black]. {declinable adjective}

neophytus, *Antipodogomphus* Fraser, 1958b: 71

Gr. νέος = new is logical for a new species but the real root, νεόφυτος = new convert, is enigmatic for an insect. Perhaps the link lies with the three English words derived from the respective roots: acolyte (a devoted follower or attendant); proselyte (a new convert to a doctrine or religion); neophyte (a novice of a religious order). The first two species of *Antipodogomphus* were named *A. acolytus* Martin and *A. proselytus* Martin. See also, entries for these two species. "... a new Gomphus belonging to the genus *Antipodogomphus* Fraser, bringing the number of species of the genus to three." {declinable adjective}

Neosticta Tillyard, 1913a: 435

Gr. νέος = new + *-sticta* being the common root of *Isosticta* and *Austrosticta*. The element *-sticta* comes from the Gr. στικτός = spotted, tattooed. "Allied to both *Isosticta* and *Austrosticta*, but easily distinguished from both by the form of the male appendages, and by the much greater length of the superior sector of the triangle." {Feminine}

netta, *Eusynthemis* Theischinger, 1999c: 374

"Dedication to Mrs N. [Annette (Netta)] Smith, cocollector of this species." {noun in apposition}

Neurobasis Selys, 1853: 18

Gr. νεῦρον = nerve, or wing veins in entomology + Gr βάσις = base, foundation. The characteristic for which the species is named, the presence of crossveins in the basal space, is described by Selys under the "Sous-genre unique – *Nevrobasis*" of the new genus *Nevrobasis*, De Selys "... espace basilaire réticulé" [basal space reticulated]. A characteristic of the 1^{re} Légion – *Calopteryx* is "espace basilaire presque toujours libre" [basilar space almost always free]. *Neurobasis* falls within the 1st Legion so is unusual, but not unique. {Feminine}

Neurothemis Brauer, 1867a: 6

Gr. νεῦρον = nerve, or wing veins in entomology + θέμις (see *Synthemis*). Brauer (1867) was replacing *Polyneura* Rambur, 1842: 127 which was preoccupied. “Der Name *Polyneura* ist bei Hemipteren vergeben,” [The name *Polyneura* is allocated in Hemiptera [Fulgoroidea: Dictyopharidae: *Polyneura* Westwood, 1840]]. It retained the prominent characteristic of Rambur's *Polyneura* which was named for its many wing veins. “Ayant les nervules beaucoup plus nombreuses; ce qui paraît tenir un peu à la coloration souvent générales des ailes.” [Having the veins a lot more numerous; which often seem generally to hold a little colour of the wings.] {Feminine}

nigra, *Eusynthemis* (Tillyard, 1906c: 489, 491)

L. *niger* –*gra* –*grum* = black, dark-coloured. “Abdomen Colour deep black” and in a key to the closely related species of *Synthemis*: “Abdomen almost entirely black”. {declinable adjective}

nigrescens, *Austrothemis* (Martin, 1901: 223)

Present participle of L. *nigresco* = to become black. The following phrases from the original description are consistent with this coloration. “Thorax noir au-dessus, sauf une très fine ligne dorsale de jaune. ... Abdomen ... tout le premier segment noir et la base de 2^e; le 3^e avec deux points noirs à l'extrémité ...; les suivants avec les côtés noirs et une large bande noir dorsale ... le 10^e tout noir” [Thorax black above, except a very thin dorsal line of yellow. Abdomen... all the first segment black and the base of the 2nd, the 3rd with two black dots at the end ...; the following with black sides and a large black dorsal band ... the 10th all black]. {present participle}

nigrescens, *Synlestes weyersii* Tillyard, 1917a: 473

Present participle of L. *nigresco* = to become black. Is it to be noted that compounds of colour names ending with –*escens* often denote a lighter stage of coloration as if the process of dyeing had been prematurely halted (hence blackish). “... eyes black; epicranium, frons, clypeus, and labrum nearly black, antennae black, thorax dull blackish, abdomen blackish.” “This

subspecies is at once strikingly distinguished from the type-form by its dull coloration; but it does not differ from it morphologically sufficiently to warrant its elevation to full specific rank.” {present participle}

nigrifrons, *Crocothemis* (Kirby, 1894: 19)

L. niger –*gra* –*grum* = black + *frons* = forehead, brow.

The original description makes no direct reference to the etymology but it includes “Male. – Head black, sutures of the rhinarium and labrum yellowish, face smooth and shining.” {noun in apposition}

nigrolabiatus, *Austroargiolestes icteromelas* Theischinger & O’Farrell, 1986: 421

L. niger –*gra* –*grum* = black + *labium* = a lip + suffix –*atus* –*ata* –*atum* = provided with. “The diagnostic character of *A. i. nigrolabiatus* is a very dark, mostly black, labium.” {declinable adjective}

nobilis, *Argiolestes icteromelas* Tillyard, 1913a: 410

L. nobilis –*is* –*e* = known, of noble birth. “This fine race occurs on the Dorriggo Plateau, N.S.W., and especially at Ebor. ... It differs from the type-form not only in size, but in its very robust build, and in a much greater tendency towards pruinescence, giving the insect a much greyer appearance.” {declinable adjective}

Nososticta Hagen, 1860: 456

Gr. νόσος = disease + στικτός = spotted, tattooed which, in the Odonata, often refers to the pterostigma. This remains an enigma with no indication for the derivation of the name in the original descriptions for the genus or the species *N. solida* on which it was based. {Feminine}

Notoaeschna Tillyard, 1916: 58

From the original description: “Greek Νότος, the South Wind. The prefixes *Noto*– and *Austro*– may conveniently be used to denote purely Australian genera. Before the ‘æ’ of –*aeschna* the ‘o’ may be retained for euphony.”

“This remarkable dragonfly stands out as by far the most highly specialized of our entogenic Australian *Æschninæ*.” {Feminine}

Notolibellula Theischinger & Watson, 1977: 417

When naming *Notoaeschna* Tillyard (1916: 58) explained “Greek Νότος, the South Wind. The prefixes *Noto*– and *Austro*– may conveniently be used to denote purely Australian genera.” *Notolibellula* uses the same construction, viz., νότος + *Libellula* (q.v.) to recognise its southern/Australian distribution as opposed to *Libellula* which is predominantly a genus of the northern hemisphere. “With the characters of the subfamily Libellulinae (*sensu* Fraser 1957)” and “Subsequent investigations have shown not only that the species is undescribed, but also that its characteristics do not fit any of the described genera of Libellulinae (*sensu* Fraser 1957)”. {Feminine}

Notoneura Tillyard, 1913a: 431

Gr. νότος, the South Wind, hence south + *neura* (Gr. νεῦρον = nerve), being the second root of *Alloneura*, from which two species were transferred into the new genus. “It is necessary to propose this new genus for the reception of the two Australian species, *Alloneura solitaria* Tillyard, and *A. cælestina* Tillyard, inasmuch as a careful comparison with de Selys’ definition of *Alloneura* (viz., that portion of his ‘grand-genre’ *Alloneura*, which he designated as ‘Sous-genre’ *Alloneura*) shows us that the two groups are evidently not congeneric. The two species mentioned are most closely related to *Nososticta*, and might be included in that genus, were it not for important differences in build and venation.” {Feminine}

nourlangie, *Gynacantha* Theischinger & Watson, 1991: 41

Named for Nourlangie Creek, West Arnhem Land, Northern Territory. “Name to be treated as an undeclinable noun.” {noun in apposition}

novaehollandiae, *Hemicordulia* (Selys, 1871b: 254)

“Patrie: Nouvelle-Hollande. Musée de Saint-Pétersbourg.” [Country: New Holland. Museum of St. Petersburg.]. This the name given to Western Australia by Dutch explorers and by which Australia was known to Europeans until the early 19th century. {noun in the genitive case}

nymphaeae, *Aethriamanta* Lieftinck, 1949: 233

Named for the plant genus *Nymphaea* Linn. (Waterlily) derived from Gr. νυμφαία = waterlily. “Material studied. – North New Guinea: 17 ♂, 4 ♀ (ad., 4 pairs in cop.), Lake Sentani, W. of Hollandia, waterlily-ponds,” {noun in the genitive case}

nymphoides, *Diphlebia* Tillyard, 1912: 590

From the original description: “It is one of the most beautiful and brilliant insects known to me, the blue of its body far out-rivalling the colour of *D. lestoides*, itself a brilliant insect. I have therefore chosen the name *nymphoïdes* (Greek νύμφη, a bride) in allusion to its beauty” + – ειδής = suffix indicating resemblance. {adjective}

obiri, *Indolestes* Watson, 1979: 152

Named “*obiri*, for Obiri (Oberie) Rock, a habitat of this cave-haunting lested; to be treated as an undeclinable noun.” {noun in apposition}

obscura, *Austroaeschna* Theischinger, 1982: 15

L. obscurus –a –um = obscured, dark. Theischinger named this species *A. obscura* because it is markedly darker than *A. multipunctata*, with the pale anterodorsal spots in mature adults usually no longer present from segment 4 or at least 5. {declinable adjective}

obscura, *Austrocnemis* Theischinger & Watson, 1991: 24

L. obscurus –a –um = obscured, dark. “The name alludes to the obscure coloration of this species, in contrast to its more brightly coloured congener, *A. splendida*.” {declinable adjective}

obscura, *Libellula* Rambur, (1842: 64)

[junior synonym of *Potamarcha congener* Rambur, 1842]

L. obscurus –a –um = obscured, dark.

“... abdomine supra fasciis duabus nigris” [two black bands on the abdomen]. {declinable adjective}

(*Occidaeschna*) *Austroaeschna* Theischinger, 2012: 41

“From Latin *occidens* = west, referring to its restriction to south-western Australia” + *-aeschna* (see *Aeshna*). {Feminine}

occidentalis, *Archaeosynthemis* (Tillyard, 1910b: 354)

L. adj. derived from *occidens* = the setting sun, thus sunset, west, hence western. “I consider that the eastern and western Australian races [of *Synthemis macrostigma* Selys] are sufficiently distinct from one another, and from the oceanic types, to warrant subspecific names.” {declinable adjective}

occidentalis, *Austrogomphus* Tillyard, 1908b: 731

[junior synonym of *Austrogomphus lateralis* (Selys, 1873)]

L. adj. derived from *occidens* = the setting sun, thus sunset, west, hence western. “Hab. – Margaret River district [Western Australia]; very rare.” {declinable adjective}

occidentalis, *Nannophya* (Tillyard, 1908e: 452)

L. adj. derived from *occidens* = the setting sun, thus sunset, west, hence western. “Hab. – South-Western Australia” {declinable adjective}

ochraceus, *Austrogomphus* (Selys, 1869c: 187)

L. adjective, derived from Gr. ὄχρα = yellow ochre [a mineral].

On a first reading of the original description it appears that the name relates to yellow markings on the head and legs, but it more likely refers to the three available abdominal segments. “1^{er} et 2^e segments de l’abdomen jaunâtres, avec une tache dorsale jaune lancéolée; 3^e avec une tache basale de chaque côté et une raie dorsale jaune dans presque tout sa longueur. (Le reste manque).” [1st and 2nd segments of abdomen yellowish, with a yellow lanceolate dorsal spot; 3rd with a basal spot on each side and a yellow dorsal stripe for almost all its length. (The rest is missing)]. However, in the postscript which compares it with *H. gouldii*, additional relevant characters are mentioned which could be at the base of the name. “*N.B.* Voisin de l’*H. Gouldii*. Il en diffère par ... la presence d’une tache jaune ronde supérieure derrière les yeux, la bande longitudinale

jaune du 3^e segment, la bande jaune interne des femurs antérieurs.” [Close to *H. Gouldii*. It differs by ... the presence of a round yellow patch behind the eyes, the longitudinal band of yellow on the third segment, the internal yellow band of the anterior femurs.] {declinable adjective}

oculata, *Libellula* Fabricius, 1775: 421

[junior synonym of *Neurothemis stigmatizans* (Fabricius, 1775)]

L. oculatus –a –um = furnished with or having eyes. However it can also mean distinctly visible or conspicuous and this interpretation is more likely.

“*L. flavescens*, alis anticis apice, posticis margine aqueis: stigmatate niveo” and “*Alae anticae flavescentes usque ad stigma marginis crassioris niveum, tunc aqueae: posticae flavescentes, margine postico aqueo*”. [A dragonfly becoming yellowish-red with the forewings at the apex, the hindwings at the margin hyaline: pterostigma snow white] and [Forewings becoming yellowish-red up to the white thicker margined pterostigma, then hyaline: hindwings becoming yellowish-red with a clearly hyaline rear margin]. {declinable adjective}

Odontogomphus Watson, 1991b: 334

Gr. ὀδών = tooth + *Gomphus* (see *Austrogomphus*). “*Odon*, a tooth, referring to the dentate 11th abdominal sternite of the male.” {Masculine}

ofarrelli, *Tonyosynthemis* (Theischinger & Watson, 1986: 457)

“We describe it here, and dedicate it to Professor A.F. O’Farrell, previously Professor of Zoology in the University of New England, Armidale, Australia, in honour of his 70th birthday (9th January, 1987) and in recognition of the great contribution he has made to the knowledge of the Australian Odonata.” {noun in the genitive case}

oligoneura, *Neurothemis* Brauer, 1867c: 976

Gr. ὀλίγος = few + νεῦρον = nerve (i.e. vein)

The relevant comment of Brauer seems to be “fast so gross wie *palliata* aber weitmaschig, die Flügel bis zum Dreieck tief schwarz. – Pterostigma im Postcubitalraum $3\frac{1}{2}$ - $3\frac{2}{3}$ mal enthalten” [almost as big as *palliata* but venation an open mesh, the wings jet black up to triangle. Pterostigma fitting into postcubital space $3\frac{1}{2}$ - $3\frac{2}{3}$ times].

The comparison is with *palliata* which was originally in the genus *Polyneura* and which Rambur (1842: 127) described as “Ayant les nervules beaucoup plus nombreuses; ce qui paraît tenir un peu à la coloration souvent générale des ailes.” [Having many more numerous veins, which in general often seem to hold a little colour of the wings.] Of the two Australian species, Fraser (1960: 59) separates *N. oligoneura* from *N. stigmatizans*, inter alia, by referring to “Secondary venation very profuse” for *stigmatizans*, implying that of *oligoneura* is less so. {declinable adjective}

olivei, *Choristhemis* (Tillyard, 1909a: 747)

“Dedicated to my friend, Mr. E.A.C. Olive, of Cooktown.”

Edmund Abraham Cumberbatch Olive established a business as an auctioneer, and horse and cattle salesman during the early days of the Palmer River gold rush and remained in Cooktown until his death in 1921. In his later natural history collecting he relied heavily on the knowledge and assistance of Aboriginal people (McKay 2000). {noun in the genitive case}

orientalis, *Archaeosynthemis* (Tillyard, 1910b: 354)

L. adj. derived from *oriens* = the rising sun, thus sunrise, east, hence eastern. There is no direct etymological explanation in the original description but the preamble includes the statement: “I consider that the eastern and western Australian races are sufficiently distinct from one another, and from the oceanic types [of *Synthemis macrostigma*], to warrant subspecific names.” {declinable adjective}

Oristicta Tillyard, 1913a: 438, 439

Gr. ὄρος = mountain + στικτός = spotted, tattooed. The type is *Oristicta filicicola*, n.sp. “This retiring and inconspicuous species was discovered by me not far from the summit of Mount Cook [Cooktown, Queensland].” The second root refers to the genera *Isosticta* and *Nososticta* rather than being a character of the new genus. “It resembles *Isosticta* and *Nososticta* in the shortness of the superior sector of the triangle, and further resembles *Isosticta* in its elongated and slender abdomen.” {Feminine}

Orthetrum Newman, 1833: 511

Gr. ὀρθός =straight + ἦτρον = abdomen. Newman (1833) wrote: “The remaining species of Dr. Leach’s genus, *Libellula*, widely differ from each other in the form of the posterior segments, and in the length of the superior caudal appendages of the male; ... they will, in all probability, resolve eventually into three distinct genera, and as such I had prepared them for publication, together with *Sympetrum* as below, but a dislike to name-giving induced me to relinquish them

Sympetrum; abdomen laterally compressed.

Orthetrum; abdomen laterally parallel.

Platetrum; abdomen depressed and dilated.

Leptetrum; abdomen conical and pointed.” {Neuter}

othello, *Camacinia* Tillyard, 1908f: 640

The primary character Tillyard cites is “contraction and intensification of dark pigmentation on the wings.” Perhaps this led him to name the species for Shakespeare’s Moor. He stated in 1908 “It is quite feasible that *C. othello* arose as a differentiation from the parent stock *C. gigantea*, which does not occur in Australia.” {noun in apposition}

Palaeosynthemis Förster, 1903: 546

This genus is not known from Australia but, in naming *Eusynthemis paradoxa* (q.v.), Förster (1908c) also refers to it as *Palaeosynthemis paradoxa*. See *Eusynthemis*. {Feminine}

paludosus, *Lestes* Tillyard, 1906b: 182

[junior synonym of *Lestes concinnus* Hagen, 1862]

L. paludosus –a –um = marshy, boggy. “A single pair of this species was taken by me on the lagoons by the town [Townsville, Queensland].” {declinable adjective}

Pantala Hagen, 1861: 142

The name is composed of Gr. πάντες = all + ἄλη = wandering or roaming, alluding to the cosmopolitan distribution and vagrant behaviour (Fliedner & Martens 2008). There is no etymological explanation in the original description of *Pantala*. However, under *P. flavescens*, which is the type species for this genus, Hagen wrote: “Hab. It encircles the whole world; no other species occupies so many countries.” {Feminine}

papuense, *Pseudagrion* Tillyard, 1926: 157

[junior synonym of *Pseudagrion cingillum* (Brauer, 1869)]

The species name is derived from Papua + L.–ensis –is –e, adjectival suffix indicating place of origin or habitat.

“The collection of Dragonflies dealt with in this paper was made by the late Allan R. McCulloch of the Australian Museum, Sydney, during the period from November, 1922, to January, 1923, while exploring unknown regions of the central western part of Papua by boat and aeroplane, in company with Captain Frank Hurley.” {declinable adjective}

papuensis, *Hemianax* (Burmeister, 1839: 841)

The species name is derived from Papua + L.–ensis –is –e, adjectival suffix indicating place of origin or habitat. There is no etymological explanation in the original description, the only comment of relevance being “Aus Neu-

Holland, in Sommer's Sammlung." [From New Holland, in Sommer's collection.] Gelpke (1993) examines the etymology of "Papua" and concludes that it is a toponym rather than the name of a people, and this is consistent with the suffix used in the specific epithet. The name is a misnomer as Lieftinck (1953) confirms that *H. papuensis* has never been taken in Papua and New Guinea. Champion (1923: 25) arranged for the types in Selys' collection to be examined which confirmed that both Burmeister (1839) and Martin (1908) had probably misread the labels. {declinable adjective}

paradoxa, *Eusynthemis* Förster, 1908c: 25

[junior synonym of *Choristhemis flavoterminata* Martin, 1901]

L. paradoxus –a –um = paradoxical, contrary to all expectations, apparently referring to the difficulty in assigning the species to one of two alternative genera.

"Von *Synthemis* seien zwei weitere Arten beschrieben, deren eine, *P[alaeosynthemis] paradoxa*, eine dreieckige Legscheide besitzt, die das Hinterende von Segment neun erreicht, so daß Übergänge von *Eusynthemis* zu *Palaeosynthemis*, was die Scheidenbildung anbelangt, existieren." [Two additional species of *Synthemis* are to be described, one of which, *P. paradoxa*, has a triangular ovipositor that reaches the posterior end of segment nine, so that transitions in terms of ovipositor development exist from *Eusynthemis* to *Palaeosynthemis* (q.v.).] The genotype *Palaeosynthemis primigenia* Förster has "♀ mit Legscheide, mindesten von Länge des neunten Segmentes" [♀ with ovipositor at least as long as the ninth segment] while *Eusynthemis brevistyla* Förster exhibits "♀ ohne Legscheide" [♀ without ovipositor].

Förster describes his new species as *Eusynthemis paradoxa* (p. 28) but elsewhere in the paper places it in a table as *Palaeosynthemis paradoxa* (p. 29). {declinable adjective}

Parasynthemis Carle, 1995: 393

Gr. παρά = near + *Synthemis* (q.v.). See comments under *Archaeosynthemis*. Carle (1995) erected *Parasynthemis* gen. n., type species *S[synthemis] regina* Selys, monotypic. {Feminine}

parvistigma, *Austroaeschna* (Selys, 1883: 733)

L. *parvus* –a –um = little, small + *stigma* = spot, brand [from Gr. στίγμα = tattoo-mark] (referring to the pterostigma). There is no original description but a footnote to the generic description includes “Ce sous-genre rappelle les *Gomphaeschna* de l’Amerique par le ptérostigma très court” [This subgenus recalls the *Gomphaeschna* of America by the very short pterostigma]. Martin (1901: 239), who has sometimes been recognised as the author of this species, describes it thus “Ptérostigma noir, très court et très-étroit.” [Pterostigma black, very short and very narrow.] This species was introduced into the literature as the type species for *Austroaeschna* Selys, 1883 gen. nov. {noun in apposition}

parvulus, *Archiargiolestes* (Watson, 1977: 198)

L. *parvulus* –a –um. “*parvulus* – very small” {declinable adjective}

patricia, *Austropetalia* (Tillyard, 1910a: 699)

“I propose to name it *Phyllopetalia patricia* in honour of my wife.” {noun in apposition}

paulini, *Ictinogomphus* Watson, 1991b: 302

“Named after Paulinus, the first Archbishop of York, A.D. 625.” The species appears to be confined to the northern part of Cape York Peninsula. {noun in the genitive case}

paulsoni, *Nannophya* Theischinger, 2003: 662

“Dedication to Dennis R. Paulson (Seattle, USA) world authority on Odonata.” {noun in the genitive case}

Pentathemis Karsch, 1890a: 33

Gr. πεντα– (this form exists only in compounds) = five + θέμις (see *Synthemis*). This refers to the five-sided forewing triangle. “Cellula cardinalis im Vorderflügel fünfseitig mit doppelt gebrochener Vorderseite, von einer Ader getheilt.” [Cellula cardinalis [triangle] in forewing five-sided with a doubly

broken costal side and divided by one crossvein.] Ironically, the sole female specimen seen by Karsch was an aberration; a series taken by Watson (1969b) over eighty years later shows that the triangle has only three sides. {Feminine}

Petalura Leach, 1815b: 95

Gr. πέταλον = a leaf + οὐρά = a tail. This refers to the leaf-shaped anal appendages. "... *cauda* lamella una latissima utrinque instructa, squama inferne interjecta" [tail furnished with one very broad lamella on each side, a scale being interposed beneath]. {Feminine}

(*Petersaeschna*) *Austroaeschna* Theischinger, 2012: 43

"Dedicated to Prof. Günther Peters, leading expert of world aeschnids, in recognition of his significant contributions to the knowledge of the group." {Feminine}

petiolatum, *Zyxomma* Rambur, 1842: 30

L. petiolus, diminutive of *pes* = foot, but also used in antiquity for the stalk of a fruit + suffix *-atus -a -um* = provided with. The botanical term 'petiole', meaning leaf-stalk, has the same roots and is translated into stalk-like in zoological applications. It refers to the excessively slender portion of the abdomen that Rambur saw in his damaged specimen. "Abdomen ... ayant la base vésiculeuse, formée par les trois premiers segments qui sont resserrés, après cette base excessivement grêle, filiforme (les cinq derniers anneaux manquent)" [Abdomen ... with a bladder-like base, formed by the first three segments which are contracted, after this base excessively slender, filiform (lacking the last five rings)]. {declinable adjective}

Phasmosticta Lieftinck, 1951: 19, 21

[junior synonym of *Oristicta* Tillyard, 1913]

Gr. φάσμα = apparition, phantom + στικτός = spotted, tattooed, but in this case, the root refers to the second part of the genus name *Isosticta* rather than necessarily being a character of the new genus. The name of the Order Phasmatodea (phasmids) is derived from the same Greek root and refers to the resemblance of many species to sticks or leaves. Their natural camouflage

can make them extremely difficult to see. However, among dragonflies the notion of cryptic is taxonomic not physical. “The current confusion in the classification of the Indo-Australian Protoneuridae is probably due to the failure to recognize this eastern group [*Amphisticta* Sjöstedt, *Austrosticta* Tillyard, *Isosticta* Selys, *Neosticta* Tillyard, *Oristicta* Tillyard, *Phasmosticta*, new genus, *Selysioneura* Förster and *Tanymecosticta* Lieftinck] as a distinct subfamily, the characterization of which, it is hoped, will soon be carried into effect.” “In its venational characters, *Phasmosticta* most nearly approaches *Isosticta* Selys *sensu stricto* (type *spinipes* Selys), but unless the generic diagnosis of *Isosticta* be again considerably modified, our new species *interposita* cannot be included in that genus” and “*Phasmosticta* is also somewhat related to the monotypic genera *Neosticta* and *Amphisticta* and has approximately the same ‘facies’ as these”. {Feminine}

phyllis, *Rhyothemis* (Sulzer, 1776: 169)

In his section “1. Ruhen mit ausgebreiteten Flügeln” [Resting with outspread wings]. Sulzer named *L. Phyllis* and *L. Danae*, both after characters from Greek mythology. Phyllis was the daughter of King Lycurgus of Thrace. She committed suicide when Demophon, son of Theseus, did not return on their betrothal date. One legend is that she became a leafless almond tree which Demophon later embraced, whereupon leaves grew (Bray, 1964). Her name, therefore, is possibly derived from Gr. φύλλον = leaf. The nominate subspecies is not known from Australia. See entries for *R. p. beatricis* and *R. p. chloe*. {noun in apposition}

pilbara, *Nososticta* Watson, 1969a: 80

“The specimens from the Fortescue R. [Pilbara, WA] system are smaller than those from eastern Australia.” *N. pilbara* was originally described as a subspecies, *N. solida pilbara*. Watson (1969a: 80) wrote “The original description of *N. solida* could equally characterize either population; but as the description applied to eastern Australian material (Selys 1886), the north-western form must be the one described as new.”

Nososticta solida pilbara Watson, 1969 is redescribed as a full species *N. pilbara* in Watson and Theischinger (1984: 26). “It is clear that the differences

between the two species are at least as great as those between some of the *Nososticta* which we now regard as distinct species. The original description of *N. pilbara* was comparative, focusing on the differences between it and *N. solida*; we here describe it fully.” {noun in apposition}

pindrina, *Austroagrion* Watson, 1969a: 68

“Additional localities ... Pindrina Spring [Sherlock River system, Hamersley Range, WA].” {noun in apposition}

pinheyi, *Austroaeschna* Theischinger, 2001b: 92

“Dedicated to the memory of our great colleague, Dr Elliott Pinhey.” First described as a subspecies of *A. unicornis*. {noun in the genitive case}

(*Pleiomorphus*) *Austrogomphus* Watson, 1991b: 410

Gr. πλείων = more + *Gomphus* (see *Austrogomphus*). “Pleion, more, alluding to the apparent affinities of these gomphids to more than one subfamily.” {Masculine}

Podopteryx Selys, 1871a: 415

Gr. πούς (stem ποδ-) = leg + πτέρυξ = wing. The root ποδ- refers not to the species itself but is inherited from the Legion Podagrion into which Selys placed it. “... le *Podopteryx* est très voisin des *Argiolestes*, qui appartiennent à la légion des *Podagrion*.” [*Podopteryx* is very close to *Argiolestes* which belongs to the legion *Podagrion*.]

Selys was obliged to change the name of the genus *Podagrion* because of priority in Hymenoptera: Torymidae. “Je crois pouvoir conserver à cette légion le nom de *Podagrion*, quoique j’aie dû modifier en *Megapodagrion* en ce qui concerne le genre-type, parce qu’il est déjà employé par Spinola en 1811 pour un genre d’Hyménoptères.” [I believe I can keep the name *Podagrion* for this legion, though I had to change it to *Megapodagrion* with regard to the type genus, because it is already used by Spinola in 1811 for a genus of Hymenoptera.] Within the descriptions of the Legion *Podagrion* and the original genus *Podagrion* long legs are described. Legion *Podagrion*: “Pieds assez longs ou très-longs, à cils longs” [Legs rather long or very long,

with long cilia]. Genus *Podagrion*: “Pieds très-longes, longuement ciliés” [Legs very long, long ciliate]. This is consistent with the generic root ποδ. However leg length is not a distinguishing character of the genus. “NB. Très-distincts des autres Agrionines à grand ptérostigma par le 2^e article des antennes aussi long que le 3^e.” [NB. Very distinct from other Agrionines by the large pterostigma [and] the second segment of the antennae as long as the third.] {Feminine}

Polyneura Rambur, 1842: 127

[junior primary homonym of *Polyneura* Westwood, 1840 (Hemiptera: Fulgoroidea: Dictyopharidae) replaced with *Neurothemis* Brauer, 1867 (q.v.)]

Gr. πολύς = many + νεῦρον = nerve, or wing veins in entomology. (See *Neurothemis*.)

“Ayant les nervules beaucoup plus nombreuses; ce qui paraît tenir un peu à la coloration souvent générale des ailes.” [Having far more numerous veins, which frequently seems to take a little general colour of the wings.] {Feminine}

Potamarcha Karsch, 1890b: 370

Gr. ποταμός = river + ἀρχός = chief, leader.

No habitat information is given in the original description but the species is known to inhabit lentic waters. Perhaps the name was influenced by *Potamothemis* (Kirby, 1889), although Kirby gives no clues as to the etymology of that name. {Feminine}

praeruptus, *Austroepigomphus* (Selys, 1857: 656)

L. praeruptus –a –um = broken off, the perfect participle of *L. praerumpo* = to break off in front.

The broken feature is the mid-dorsal line: “L’abdomen est noir, avec une raie dorsale interrompue et des taches basales latérales jaunes” [The abdomen is black, with a broken dorsal stripe and lateral yellow basal spots] with further detail in “aux 3^e, 4^e, 5^e, 6^e, une raie dorsale commençant à la base, pointue en arrière, où elle atteint presque le bout au 3^e et seulement la moitié au 6^e” [on each of the 3rd, 4th, 5th, 6th, a dorsal stripe starting at the base,

pointed backwards, where it almost reaches the end of the third and only half of the 6th]. Selys 1857: 658 links *Onychogomphus praeruptus* to the previously described *O. interruptus*, thus “Le *praeruptus* et l’*interruptus* formeraient alors avec eux un groupe particulier parmi les *Onychogomphus*.” [The *praeruptus* and the *interruptus* would form then with them a special group among the *Onychogomphus*.] The broken feature which they have in common is described for *interruptus* as “Abdomen avec une raie dorsale jaune interrompue aux articulations (Selys 1854: 66)” [Abdomen with a yellow dorsal stripe interrupted at the intersegmental joints]. {declinable perfect participle}

prasinus, *Austrogomphus* Tillyard, 1906a: 554

Gr. πράσινος and Latin *prasinus* –a –um = leek-green. The head and thorax each bear green markings which give rise to the specific epithet. “*A. prasinus* seems to be the least closely allied to the others [*A. arbustorum*, *A. arenarius*], and it is the only one whose colours are not pure yellow and black.” {declinable adjective}

princeps, *Rhyothemis* Kirby, 1894: 17

L. *princeps* = first, chief, foremost. Kirby describes three new species of *Rhyothemis*, *R. chloë*, *R. princeps* and *R. turneri*, in that page order in the same article but there is no indication as to why *princeps* should be considered first or foremost. Perhaps the loose translation of *princeps* as ‘prince’ connects it with [*R.*] *regiae* where L. *regius* –a –um = of a king, regal. “Probably allied to *R. regiae* and *chalcoptilon* Brauer.” {noun in apposition – L. *princeps* can be a noun or an adjective but is here deemed a noun under section 31.2.2 of the ICZN Code}

Procordulia Martin, 1907: 16

Gr. πρό = before + *Cordulia* (q.v.). There is no etymological explanation in the original description but Martin may have considered *Procordulia* to be a precursor to, or more primitive form of, the genus *Cordulia*. The only relevant comment is: “Ce genre forme le passage du genre *Hemicordulia* au genre *Somatochlora*.” [This genus forms the connection between the genus *Hemicordulia* and the genus *Somatochlora*.] {Feminine}

propinqua, *Tramea* Lieftinck, 1942: 538

From *L. propinquus* –*a* –*um* = similar, nearly related. In his introduction to the *Tramea limbata* Desj. group, Lieftinck states: “I find it necessary to trace all ‘forms’ of the *limbata*-group as distinct species, but at the same time it should be emphasized that indications of very close relationship inter se of *transmarina*, *euryale*, and *propinqua* are clearly evident, so that the two new species of this cluster, described in this paper [*aquila*, *propinqua*], are evidently geographical subspecies of either *transmarina* or *euryale*: leaving out of account the Ethiopian *limbata* on geographical grounds, any future selection of a nominotype should, I think, be made from those two species.”
{declinable adjective}

prosellythus, *Antipodogomphus* (Martin, 1901: 233)

Gr. προσήλυτος = one that has arrived. [The h in the Latin name is a *lapsus calami*, possibly induced by a wrong analogy to akolythos, where it is correct.] As explained under *acolythus* (q.v.), one plausible explanation is that Selys had erected the genus *Austrogomphus* in 1854 to include all existing species from his collection. When he received a new species of this genus, he called it *prosellythos* (one that has arrived/ arrived in addition) (q.v.), and the next one he called *akóloythos* (the following one). Martin did not recognise the subtlety of this and quoted the names in reverse (i.e. alphabetical) order.

“Dans la collection de Selys figurent deux autres espèces non décrites mais nommées par notre éminent collègue: *Austrogomphus acolythus* et *Austrogomphus proselythus*, ces deux exemplaires uniques viennent, si je ne me trompe, du Queensland.” [In the collection of Selys are figured two other non described types but named by our eminent colleague: *Austrogomphus acolythus* and *Austrogomphus proselythus*, these two unique specimens coming, if I am not mistaken, from Queensland.] {noun in apposition}

Protoaeschna Förster, 1908b: 218

[junior synonym of *Anaciaeschna* Selys, 1878]

Gr. superlative πρώτος = first, foremost + –*aeschna* (see *Aeshna*). This separates this genus from the *Aeshna* group. “*Protoaeschna* ist die erste Form der Gruppe *Æschna* von der grossen Insel Neuguinea.” [*Protoaeschna* is

the first taxon of the group *Aeschna* from the large island of New Guinea.]
{Feminine}

pruinescens, *Ischnura* (Tillyard, 1906b: 191, 192)

L. *pruinus* = frosty + suffix *-escens* = becoming. “Thorax - ... *Mesometathorax* deep black, slightly metallic, a little bluish-grey bloom low down on the sides. *Underside* covered with bluish-grey bloom. ... Abdomen ... Colour: 1-2 dull black, bluish-grey bloom on sides of 1 and at base of 2.”
{adjective}

Pseudagrion Selys, 1876: 491

Gr. ψευδής = false, not true + *Agrion* (q.v). The root ‘false’ implies a difficulty in separating *Pseudagrion* from *Agrion* as the author states: “Les Pseudagrions semblent très-voisins des vrais Agrions” [The Pseudagrions seem very near to the true Agrions]. {Neuter}

Pseudocordulia Tillyard, 1909a: 743

Gr. ψευδής = false, not true + [*Syn*]*Cordulia*, which is best interpreted as meaning not a true *Cordulia*. “This genus comes closest to *Syncordulia* Selys [= *Micromidia*], of the Australian Corduline genera, but may be easily distinguished from it by the fact that *Syncordulia* has the sectors of the arculus separated at their base, while the appendages of the male are very long.” {Feminine}

psyche, *Austrolestes* (Hagen, 1862a: 329)

Named for Psyche, a legendary maiden secretly loved by Cupid but forbidden to see his face (Bray 1964).

In consecutive entries in Selys (1862), Hagen named *A. psyche* and Selys named *A. io* and *A. leda*, all after characters from Greek mythology. {noun in apposition}

ptilorhina, *Eusynthemis* Förster, 1908c: 26

[junior synonym of *Eusynthemis nigra* Tillyard, 1906]

Gr. πτίλον = feather (down) + ρίς (stem ρίτ-) = nose. This apparently refers to the fringed markings on the frons. “Vorderseite der Stirn gelb oder gelbgrün, am Augenrande fein schwarz gesäumt und in der Verlängerung der Mittelfurche, herab bis zum Nasus, durch eine feine schwarze Linie geteilt.” [Frontal side of the frons yellow or yellow-green, at eye margin finely fringed with black and in the extension of the central furrow, down to the nasus, divided by a fine black line.] {declinable adjective}

(*Pulchaeshna*) *Austroaeschna* Peters & Theischinger, 2007: 526

L. *pulcher* –*chra* –*chrum* = beautiful + –*aeschna* (see *Aeshna*). Subgenus named for its type species. “Typusart: *Austroaeschna unicornis pulchra* TILLYARD, 1909; einschließlich *A. pulchra*, *A. eungella* THEISCHINGER und *A. muelleri* THEISCHINGER.” [Type species: *Austroaeschna unicornis pulchra* Tillyard, 1909, including *A. pulchra*, *A. eungella* Theischinger and *A. muelleri* Theischinger.] {Feminine}

pulcherrima, *Petalura* Tillyard, 1913b: 583

L. superlative of *pulchra* = beautiful, hence, most beautiful. “This very beautiful insect is intermediate in size between *P. ingentissima* Tillyard and *P. gigantea* Leach.” {declinable adjective}

pulchra, *Austroaeschna* Tillyard, 1909c: 91

The specific epithet comes from L. *pulcher* –*chra* –*chrum* = beautiful. There is no etymological explanation in Tillyard’s (1909) original description, the only relevant comment being perhaps: “le 9^e avec une belle tache dorsale centrale” [the 9th with a beautiful central, dorsal mark].

Martin (1909) described what he regarded as the male of *Austroaeschna unicornis*, but it was not. In the same work Tillyard (1909) described *pulchra* as a new race of *A. unicornis*. The variability in *pulchra* is such that Tillyard’s (1909) specimen does not warrant subspecific rank. Theischinger (1982)

corrected the erroneous use of *A. unicornis*, recognising these specimens as *Austroaeschna pulchra*. {declinable adjective}

punctata, *Synthemis guttata* Martin in Tillyard, 1906c: 489

L. punctatus –*ata* –*atum* = pricked.

A distinguishing character of this taxon is “a distinct white round spot at the base of the costal nervure of all the wings.” The only reference to a punctate state is: “Head: ... Front hairy, cleft medially, minutely punctuate.” {declinable adjective}

pusillissimus, *Archiargiolestes* Kennedy, 1925: 292, 291

The species name is the superlative of *L. pusillus* –*a* –*um* = very small, i.e. the smallest. Specimens of *Archiargiolestes pusillissimus*, which have the abdomen only 19 mm. long “were the smallest species of the Megapodagrioninae yet found, being of the size of the smaller *Ischnuras*.” {declinable adjective}

pusillus, *Archiargiolestes* (Tillyard, 1908b: 736)

L. pusillus –*a* –*um* = very small. “An extremely small race found in the southern districts, and differing considerably from the type.” {declinable adjective}

pusillus, *Austrogomphus* Sjöstedt, 1917: 1

L. pusillus –*a* –*um* = very small. In the introduction to the species' descriptions Sjöstedt states “Die in diesem Gebiet angetroffenen Gomphiden sind beide neu und gehören zu den kleinsten Formen der ganzen Familie.” [The Gomphidae encountered in this area are both new and are among the smallest forms of the whole family.]

The first small Gomphid was named *A. mjobergi* and the second *A. pusillus*. {declinable adjective}

pygmaea, *Agriocnemis* (Rambur, 1842: 278)

Gr. πυγμαῖος = pygmy. The original description commences with “Minimum obscure viridi aenum” [very small dark green copper] and the following text includes “Elle parait appartenir au groupe où se trouvent l’[*Ischnura*] *Elegans* et *Senegalense*; et ressemble beaucoup à ce dernier, mais elle n’est pas plus grande que l’*Anomalum*” [It seems to belong to the group where one finds [*Ischnura*] *elegans* and *senegalense*, and much resembles the latter, but it is not larger than *anomalum*]. *Agrion anomalum* Rambur is a junior synonym of *Ischnura hastata* (Say, 1839), a small species of 21-28 mm. {declinable adjective}

pygmaea, *Cordulephya* Selys, 1870: vi

The name comes from Gr. πυγμαῖος = pygmy. The name *pygmaea* is established only within the combined description of *Cordulephya* and *C. pygmaea* and no additional information is given. Selys (1871b: 316) later distinguishes it by “Reconnaissable à sa taille naine à ses caractères génériques” [Recognizable by its dwarf size and its generic characters] and Martin (1901) describes it as “Très jolie petite espèce” [Very pretty little species]. {declinable adjective}

racleayi, *Telephlebia* Martin, 1909: 142

[junior synonym of *Austrophlebia costalis* (Tillyard, 1907)]

This is presumably a mis-spelling of *macleayi* which Martin (1911: 22) corrected. It was attributed to “Tillyard, in litt. 1906”, “Type : Muséum de Sydney.” Three members of the Macleay family were involved in natural history collection in Australia. The Macleay Museum’s natural history collections were started by Alexander Macleay (1767-1848) in the late 18th century in England. His son William Sharp Macleay (1792-1865) expanded and diversified the collection. It passed to his cousin William John Macleay (1820-1891) in 1865. It is probable that the specimen was named for William Sharp as he had named dragonflies from the voyages of Philip Parker King [see *Agrion kingii*, *Lestes belladonna*, *Libellula sanguinea*]. {noun in the genitive case}

Raphismia Kirby, 1889: 293

Gr. ῥαφίς = needle + an ending in the format of a Gr. feminine adjective apparently invented by Kirby; hence needle-like, referring to the “male with two small spines projecting from the middle of the metasternum.” {Feminine}

reevesi, *Eurysticta* Theischinger, 2001a: 1291

“Dedication to Deniss Reeves, president of the Australian Dragonfly Society, who was the first to draw attention to the existence of a species of *Eurysticta* in Queensland.” {noun in the genitive case}

refracta, *Austrocordulia* Tillyard, 1909a: 744

L. *refractus* –a –um = perfect participle of *refringo* = to break open, to break off. From the original description: “Named from the peculiarly bent or broken appearance of the appendages.” {declinable perfect participle}

regalis, *Agrionoptera* Tillyard, 1908f: 645

[junior synonym of *Agrionoptera longitudinalis biserialis* Selys, 1879]

L. *regalis* –is –e = royal, regal. When comparing it with its close ally, *A. longitudinalis* from New Guinea, Tillyard states “The species is peculiar in being an exception to the general rule that the Australian form is generally smaller than the closely allied form from Papua or the Malay Archipelago.” There is no other indication why it might be considered regal. {declinable adjective}

regina, *Parasynthemis* (Selys, 1874: 31)

L. *regina* = queen.

There is nothing in the original description to suggest why this species should be considered regal. Of the eight species of *Synthemis* known to Selys it is the largest except for *S. miranda*, whoser name is derived from L. *mirandus* = admirable. Nevertheless, it is a spectacular dragonfly. {noun in apposition}

reinholdi, *Diphlebia* Förster, 1910: 55

[junior synonym of *Diphlebia euphaeoides* Tillyard, 1907]

Most probably Förster named the species after his third son, Reinhold, who was born on 21st February 1906; similarly he had named a species with the maiden name of his wife (*Pseudagrion commoniae* 1902). In that case, also, he gave no explanation for the source of the name. Reinhold Förster emigrated to the US in the 1920s with his three brothers, but returned to Germany in the 1930s with his youngest brother. Because he helped Jewish people with his American passport he was incarcerated in a mental home, where he perished. {noun in the genitive case}

rentziana, *Eusynthemis* Theischinger, 1998e: 148

L. rentzianus –a –um. A derived adjective with the meaning of pertaining to Rentz. “Dedication to Dr D.C.F. Rentz of Canberra whose record of the species is the only one from south of the Hunter River.” {declinable adjective}

resplendens, *Rhyothemis* Selys, 1878: 301

L. resplendens = glittering, shining, present participle of *resplendo* = to shine back, be resplendent, as the prefix re– (back) expresses the reflection.

“En dessus des ailes le noirâtre opaque a un magnifique reflet bleu foncé métallique, excepté sur le bord postérieur de cet espace.” [On the upper side of the wings the blackish opaque has a magnificent dark blue metallic reflection, except on the posterior edge of this space.] {present participle}

Rhadinosticta Watson, 1991a: 22, 23

“Name derived from the Greek *rhadinos*, slender.” Gr. ῥαδινός + –*sticta* which is derived from the Gr. στικτός = spotted, tattooed. However, in this case the root refers to the second part of the genus name *Isosticta* in which *R. simplex* and *R. banksi* were originally described, rather than being a character of the species. “A new genus is needed for the Australian species hitherto referred to as *Isosticta*.” {Feminine}

Rhinocypha Rambur, 1842: 232

Gr. ῥίς (stem ῥιϛ-) = nose + κυφός = bent forwards, hunchbacked. This refers to the protruding clypeus. "... epistome fortement renflé et saillant" [Clypeus strongly swollen and protruding] {Feminine}

Rhodothemis Ris, 1911: 592

Gr. ῥόδον = rose + θέμις (see *Synthemis*). There is no reference to rose or red in the original description. A possibly relevant remark in the original description refers to the relationship of *Rhodothemis* and *Erythemis*. Ris seems to have substituted the Gr. Gr. ῥοδο- (in compounds) = roseate, rosy for ἐρυθρός = red in *Erythemis* Hagen, 1861. "Von den amerikanischen *Erythemis* unterscheidet sie die etwas mehr distale Lage des Nodus im Vorderflügel und die Armatur der Beine, die noch nicht den gleich hohen Grad der Differenzierung erreicht hat. Doch ist die Verwandtschaft mit *Erythemis* zweifellos eine sehr nahe." [From the American *Erythemis* it differs in the little more distal position of the nodus in the front wings and the armature of the legs, which has not yet reached the same high degree of differentiation. But the relationship with *Erythemis* is certainly very close.] {Feminine}

Rhyothemis Hagen, 1867b: 232

On first impressions this genus seems to have been named from Gr. ῥύαξ = rushing stream + θέμις (see *Synthemis*), indicating a habitat preference. However the first root would transliterate to rhyaco-. Therefore, Fliedner (1997) proposes that Hagen might have been influenced by the recent naming of the rock Rhyolite by F. von Richthofen in 1861. It is a fine-grained volcanic rock of granite composition which often exhibits flow banding, hence its name from Gr. ῥέω = to flow (Aorist stem ῥυη-/ῥυε-), thus having flowed + λίθος = stone. (The Aorist tense has no equivalent in English, German or Latin.) Members of the genus show differently coloured irregular patterns on their wings. Although the patterns are obvious, little comment is given about this character in the original description. {Feminine}

risi, *Austrogomphus* Martin, 1901: 232

[junior synonym of *Austrogomphus amphiplitus* Selys, 1873]

Although there is no attribution in the original description, this species was named for Friedrich Ris (1867-1931) who was a Swiss physician and entomologist specialising in Odonata. He was Director of a psychiatric clinic in Rheinau, Switzerland.

Martin and Ris were both engaged to complete the catalogue of the Collection Selys by the 'Father of Odonatology' himself. {noun in the genitive case}

risi, *Chorismagrion* Morton, 1914: 171

"I have pleasure in dedicating this interesting species to Dr. Fr. Ris, Rheinau, the distinguished Monographer of the Libellulinae, in recognition of many kindnesses received at his hands during a friendship of over twenty years." For Ris, see *Austrogomphus risi* and pp. 67-69. {noun in the genitive case}

risi, *Nannophlebia* Tillyard, 1913c: 713

There is no direct etymological explanation within the original description but the preamble contains the statement: "Comparing them with types of my *N. eludens*, it was at once evident that they were a new and very distinct species, which I now propose to describe under the name of *Nannophlebia risi* n.sp., in honour of my friend, Dr. F. Ris." For Ris, see *Austrogomphus risi* and pp. 67-69. {noun in the genitive case}

Risiolestes Fraser, 1926: 486

[junior synonym of *Austroargiolestes* Kennedy, 1925]

The new genus name is formed by combining the name of Ris, latinised to *Risius* (stem *Risio-*), with *Lestes* (q.v.), the source of which is *Argiolestes*. Fraser (1926: 467) honoured Ris for his contribution to knowledge of the Odonata of the region. "The Odonata fauna of New Guinea has been dealt with largely by Selys, Förster and Ris," "Laidlaw has listed 175 species from Borneo, Karsch 89 from Sumatra, Ris 77 from New Guinea, ..." "Selys divided his large genus *Argiolestes* into two subgenera *Podopteryx* and *Argiolestes*, further subdividing the latter into two groups. These two

groups differ so widely that it seems essential to give generic rank to the 2nd, reserving the name *Argiolestes* for the first. For the second I propose the new name of *Risiolestes*, with *icteromelas* Selys as genotype.” {Masculine}

rodericki, *Micromidia* Fraser, 1959: 354

“... collected by R[oderick] Dobson 15.i.57.” See also references to ‘*dobsoni*’ species. {noun in the genitive case}

rosenbergi, *Gynacantha* Brauer, 1867: 295

There is no direct reference in the original description. However between 1857 and 1863, [Carl Benjamin] Hermann [Freiherr] von Rosenberg worked in the then Netherlands East Indies and sent specimens of Odonata to his former teacher Johann Jacob Kaup, director of the Hessisches Landesmuseum Darmstadt in Germany (Schneider, 2004). {noun in the genitive case}

rubescens, *Argiocnemis* Selys, 1877: 156

L. *rubescens* = reddish (from L. *rubesco* = to blush). Is it to be noted that compounds of colour names ending with *-escens* often denote a lighter stage of coloration as if the process of dyeing had been prematurely halted (hence reddish). “D’un rougeâtre clair en dessus, passant au jaunâtre dessous.” [Of a bright reddish above, passing to yellowish below.] {present participle}

rubra, *Nannodiplax* Brauer, 1868c: 557

L. *ruber* –*bra* –*brum* = red. “Hinterleib roth, am Grunde kaum und nur bei seitlicher Ansicht etwas blasig, von der Länge der Flügel, kurz, nach hinten allmählig wenig verdünnt.” [Abdomen red, somewhat bulging at the base only to be seen in lateral view, short, of the same length as the wings, slightly attenuated towards the end.] {declinable adjective}

rubra, *Trithemis* Kirby, 1889: 328

[junior synonym of *Diplacodes haematodes* Burmeister, 1839]

L. ruber –*bra* –*brum* = red, ruddy. “Bright red.” {declinable adjective}

rubricauda, *Agriocnemis* Tillyard, 1913a: 460

L. ruber –*bra* –*brum* = red + *cauda* = tail of an animal. “Abdomen ... 7, brilliant red, with a touch of black at base; 8 – 10 brilliant red; ... Appendages: superior 0.2 mm., bright red.” {noun in apposition}

rufithorax, *Teinobasis* (Selys, 1877: 123)

L. rufus –*a* –*um* = red, ruddy + θώραξ = chest, thorax. “Thorax petit, roux, sans taches, plus clair à la poitrine.” [Thorax small, reddish, without spots, brighter on the upper thorax.] {noun in apposition}

sabina, *Orthetrum* (Drury, 1770: 114)

In his description of *Orthetrum serapia* (q.v) Watson (1984) assumed that *O. sabina* was named for St Sabina, a Roman noblewoman converted to Christianity by her slave (Serapia), with whom she was beheaded during the persecutions of Emperor Hadrian. An alternative possibility, as the Latin implies, is that it was named for a woman from the tribe of the Sabinae. Of the 17 species which Drury named, 15 were eponymous, with names derived from ecclesiastical sources or Roman history or mythology. “Sabina was also a common Christian name in England in Drury’s time” (Watson, 1984). {noun in apposition}

sagittata, *Notoaeschna* (Martin, 1901: 236)

L. sagitta = arrow + suffix –*atus* –*a* –*um* = marked with. No direct definition of the etymology is given in the original description but *sagitta* is Latin for arrow and the equivalent in Martin’s description is “fer de lance” [spearhead]. It describes the markings on abdominal segments 3-8. From the original description: “Abdomen ... le 3^e avec une tache basal et une ligne dorsale en fer de lance d’un bout à l’autre, 4^e-7^e avec une tache centrale et une ligne dorsale en fer de lance, la pointe tournée vers le haut, le 8^e avec le fer de lance plus ou moins bien marqué” [Abdomen: the 3rd with a basal spot and a

dorsal line as a spearhead from one end to the other, 4th to 7th with a central spot and a dorsal line as a spearhead, the tip pointing upwards, the 8th with the spearhead more or less well marked]. {declinable adjective}

sanguinea, *Libellula* Macleay W.S., 1827: 456

[junior primary homonym of *Libellula sanguinea* Müller, 1764 Watson in Houston & Watson 1988: 283]

L. sanguineus –a –um = of blood, blood-red.

“L. tota sanguinea alis hyalinis stigmatibus fulvo nervisque sanguineis, posticis basi flavescens.” [Dragonfly completely blood-red with hyaline wings with yellow pterostigma and blood-red venation, the hind wings at the base yellowish.] {declinable adjective}

selysi, *Podopteryx* (Förster, 1899: 70-71)

“Collection Foerster et de Selys.” The description also acknowledges that “M. de Selys a publié son genre *Argiolestes* de sa légion *Podagrion*, le divisant en deux sous-genres, *Argiolestes* s. str. et *Podopteryx*” [Selys published his genus *Argiolestes* in his légion *Podagrion*, dividing it into two subgenera, *Argiolestes* s. str. and *Podopteryx*]. See also *selysi*, *Synlestes* and pp.45-48. {noun in the genitive case}

selysi, *Synlestes* Tillyard, 1917a: 473

No mention is made of etymology but the species was obviously named for Baron Michel Edmond de Selys-Longchamps (1813 - 1900), a Belgian liberal politician and scientist. He was regarded as the world's greatest authority on dragonflies and damselflies. His wealth and influence enabled him to amass one of the finest collections of neuropteroid insects and to describe many species from around the world. {noun in the genitive case}

semitincta, *Rhinocypha tincta* Selys, 1869d: 664

L. semi = half + *tinctus* –a –um, past participle of *L. tingere* = to dye. This refers to the distal portion of the wings being coloured. “Ailes hyalines lavées de jaunâtre, presque les deux tiers terminaux subitement noirâtre-chatoyant, y compris le bout. Cette couleur commençant au nodus, ou un peu avant, convexe en dedans.” [Wings hyaline with a yellowish wash, almost the last two-thirds abruptly iridescent blackish, including the tip. This colour starting at the node, or a little before, convex inwards.] {declinable adjective}

serapia, *Orthetrum* Watson, 1984: 1, 2

Watson (1984) named this species for St Serapia. A slave and martyr, she was the servant of St. Sabina and was responsible for the Roman noblewoman's conversion to Christianity. Both Sabina and Serapia were beheaded during the persecutions of Emperor Hadrian. {noun in apposition}

severini, *Brachytron (Dromaeschna)* Förster, 1908a: 192

[junior synonym of *Dromaeschna forcipata* (Tillyard, 1907)]

“Diese schöne Art sei Herrn G. Severin, Kustos am Kön. Belg. Naturh. Museum, dem unermüdlichen Förderer des grossen Odonatenkataloges der Collection de Selys, gewidmet.” [This beautiful species is to be dedicated to Mr G. Severin, curator of the Royal Belgian Natural History Museum, the tireless promoter of the large Odonata catalogues of the Collection of de Selys.] Förster was designated to edit the section on Agrionids in the *Catalogue systématique* of the collection de Selys. {noun in the genitive case}

sigma, *Austroaeschna* Theischinger, 1982: 21

The Greek letter sigma is transliterated to the English letter S. This refers to the stripe on the synthorax. “front of synthorax dark brown with narrow pale bluish green anterior stripe which may be much broadened in dorsal half, or even be reduced to several marks, and broad bluish green S-shaped posterior stripe reaching from collar to near antearlar ridge.” {noun in apposition}

silvarum, *Neosticta* (Sjöstedt, 1917: 33)

The etymology seems to be the genitive plural of L. *silva* = wood, forest, that is, of the woodlands. There is no habitat information given in the original description except perhaps, “bei Malanda, Nord-Queensland, im Februar gefangen” [caught in Malanda, North Queensland, in February]. The vegetation of Malanda consists of rainforest, the streams of which this species inhabits. {noun in the genitive case plural}

simplex, *Rhadinosticta* (Martin, 1901: 246)

L. *simplex* = simple. From the original description: “Nous l’avons nommée *simplex* à cause de la cellule unique qui suit le quadrilatère.” [We have named it *simplex* because of the unique cell that follows the quadrilateral.] {adjective}

solida, *Nososticta* (Hagen, 1860: 457)

L. *solidus* –*a* –*um* = dense, solid, firm.

The most likely character defining the specific epithet is given in the description of the genus, at that time monotypic: “Thorax plus robuste que chez les trois autres sous-genres.” [Thorax more robust than in the other three sub-genera [of *Allonevra*, viz. *Peristicta*, *Disparonevra*, *Allonevra*].] {declinable adjective}

solitaria, *Nososticta* (Tillyard, 1906b: 184)

L. *solitarius* –*a* –*um* = alone, by itself. “On nearly every day on which I went collecting I secured one specimen, but only twice did I get a pair, and once a male and two females in one day. This fact suggested the name *solitaris* [sic].” {declinable adjective}

soror, *Austrosticta* Sjöstedt, 1917: 29

L. *soror* = sister, recognising that this is the second species known from the genus *Austrosticta*. “Diese neue Art unterscheidet sich von der einzigen bisher von dieser Gattung bekannten Art, *A. Fieldi* Tillyard (o.c.) durch die Form der Analanhänge (vergl. die Abbildungen!); die basale postcostale

Ader liegt hier zwar ausserhalb der ersten Antenodalquerader; aber viel näher dieser, als bei *Fieldi*, und der obere Sector des Vierecks endet etwas verschieden bei den beiden Arten.” [This new species differs from the only species hitherto known of this genus, *A. fieldi* Tillyard (op. cit.), by the shape of the anal appendages (compare the Figures!); the basal postcostal vein is here, even though situated distal of the first antenodal, much closer to this than in *fieldi*, and the upper sector of the quadrilateral ends a little differently in the two species.] {noun in apposition}

speciosa, *Austroaeschna* Sjöstedt, 1917: 18

L. speciosus –a –um = beautiful, imposing. There is nothing in the original description to suggest why this this epithet applies uniquely to this species. {declinable adjective}

Spinaeschna Theischinger, 1982: 41

L. spina = thorn, spine + –*aeschna* (see *Aeshna*).

The author does not provide an etymology for this gen. nov. but writes “*Spineaschna* shows affinities with the Australian genera *Austroaeschna* Selys and *Notoaeschna* Tillyard. It is distinguished from *Austroaeschna* by having ... a large spine on the supraanal plate.” {Feminine}

spiniger, *Archaeosynthemis* (Tillyard, 1913b: 573

L. spiniger –era –erum = thorn-bearing. “Appendages: ... The superior carry a large inferior spine at bases.” {declinable adjective}

splendida, *Austrocnemis* (Martin, 1901: 247)

L. splendidus –a –um = shining, bright, outstanding.

Martin rarely gave etymological information and this species is no exception. However, the original description includes the phrases “tout le reste de la tête vert bronzé brillant ... Prothorax et thorax entièrement d’un vert brillant. ... Abdomen vert brillant” [the rest of head bright bronze-green ... Prothorax and thorax entirely of a bright green ... Abdomen bright green]. {declinable adjective}

Stenobasis Selys, 1877: 110

[homonym replaced with *Archibasis* Kirby, 1890 (q.v.)]

This was a homonym and it is likely that the prior name was *Stenobasis* Agassiz, 1846a: 338 (Diptera: Asilidae). Agassiz (1846b) amended five of Macquart's dipteran genera which commenced with *Seno-* to *Steno-* on the basis that the correct root was Gr. στενός = narrow. This amendment is now considered invalid (Systema Dipteroorum 2013). {Feminine}

stenoloba, *Tramea* (Watson, 1962: 9, 15, 23)

Gr. στενός = narrow + λοβός = lobe. There is a Gr. adjective τρί- λοβος, -ov = three-lobed, the second element of which, when Latinized, becomes *-lobus -a -um*. In Watson (1967b: 398) "the genital lobe is the narrowest found in the group, hence the specific name." The name was first made available in a checklist (p. 9) to the *Dragonflies of South-western Australia*, and in keys to the larvae (p. 15) and adults (p. 23). {declinable adjective}

stigmatizans, *Neurothemis* (Fabricius, 1775: 421)

Present participle of L. *stigmatizo* = to mark with a spot or brand, derived from the Gr. verb στιγματίζω of the same meaning, referring to the white-bordered pterostigma. "Alae aqueae, macula fusca in medio marginis exterioris. Pone maculam stigma marginis crassioris niveum" [Wings transparent, with dark brown patch in the middle of outer border. Behind that patch a (snow-) white mark of the thicker margin]. It is difficult to equate Fabricius' terms with modern odonatological terminology; in this example the white mark is on the pterostigma and the thicker margin refers to the anterior margin of the wing. {present participle}

subapicalis, *Austroaeschna* Theischinger, 1982: 25

L. preposition *sub* = under, beneath + *apicalis -is -e* = apical. From the original description: "inferior appendage black, broad, deep, truncate, with 2 upright dorsal teeth far from apex." The two dorsal teeth on the epiproct of the male of *A. subapicalis* are not, as in *A. atrata*, at the epiproct end but well anterior to it (= subapical). {declinable adjective}

subcostalis, *Austrophlebia* Theischinger, 1996a: 307

L. preposition *sub* = under, beneath + *costalis* *-is -e* = pertaining to the ribs (in entomology, the costa is the first longitudinal vein of the wing). “To express the close affinity with *A. costalis* (Tillyard) as well as to indicate that the brown fasciae of the wings are less extensive than in *A. costalis* in costal field but at least equally extensive in subcostal field.” {declinable adjective}

subgriseus, *Argiolestes griseus* Fraser, 1959: 360, 361

L. preposition *sub* = under, beneath + *griseus* *-a -um* = grey (see *Griseargiolestes griseus*). “By employing the degree of development of the Anal vein and field, a number of subspecies or races [of the *Argiolestes iceromelas-griseus* complex] can be established on sound anatomical grounds.” For *A. g. subgriseus* “Only a single row of cells posterior to the Anal vein.” {declinable adjective}

subjuncta, *Eusynthemis brevistyla* (Tillyard, 1913b: 574)

L. *subiunctus* *-a -um* perfect participle of *subiungo* = to subordinate. “It differs from the type as follows: - (1) Smaller, more compact build. (2) Much shorter *pterostigma* ... (3) Smaller spots on abdomen.” {declinable perfect participle}

superba, *Hemicordulia* Tillyard, 1911a: 371

L. *superbus* *-a -um* = exalted, brilliant, splendid. “This fine insect is easily the most distinct and beautiful member of the genus. Greater size, more brilliant coloration.” {declinable adjective}

Synlestes Selys, 1869b: lxxvi

Gr. σύν = together, with + *Lestes* (q.v.).

Selys (1869b) considered that this new genus was sufficiently different from other lestoid genera to warrant a name ranking with *Lestes*. “Ce genre remarquable remplace en Australie les *Chlorolestes* de l’Afrique méridionale” and “qui rapelle les *Perilestes* de l’Amérique meridien”. [This remarkable genus in Australia replaces the *Chlorolestes* of Southern Africa which recalls the *Perilestes* of South America]. {Masculine}

Synthemiosis Tillyard, 1917a: 463

Synthemis (q.v.) + Gr. ὄψις = appearance, used as a suffix to denote resemblance. “Characters intermediate between those of the Australian genus *Synthemis* and the Chilian genus *Gomphomacromia*.” {Feminine}

Synthemis Selys, 1870: vi

σύν = together, with + Gr. θέμις.

Themis was the Goddess of Divine Law, Order and Justice, a wife of Zeus (Bray 1964). The first occurrence of this name is in Hagen (1861) He created eight genera ending in *-themis*, most probably choosing it to match other names of divine beings established in Odonata and because of its connotation of reflecting classification. Fliedner (2006) has ascertained that there are more than 50 names which contain *-themis* in combination. He adds the nice comment that “Being the goddess of order, Themis is a suitable patroness of taxonomists.” Recognising that at the time of its inception, Odonata taxonomy comprised only the families Libellulidae, Aeschnidae and Agrionidae, *-themis* is effectively a synonym for the Libellulidae of the time. Australian examples occur in the currently recognised families of Synthemistidae, Corduliidae and Libellulidae. {Feminine}

taracumbi, *Nososticta* Watson & Theischinger, 1984: 34

“Holotype ♂: Taracumbi Falls, Melville Island, Northern Territory.” {noun in apposition}

tasmanica, *Austroaeschna* Tillyard, 1916: 50

L. tasmanicus *-a -um* = belonging to or pertaining to Tasmania. “Type: ♂ unique, Hobart Museum (Hobart, February 1892). This peculiar species, which Mr. Robert Hall, Curator of the Hobart Museum [Tasmania], kindly sent me for study, is without doubt very distinct from all other known species of the genus in possessing its remarkable bifid inferior appendage, and the huge tubercle or spine on segment 10.” {declinable adjective}

tasmanica, *Ischnura heterosticta* Tillyard, 1913a: 451

L. tasmanicus –a –um = belonging to or pertaining to Tasmania. “In Tasmania, this species is common, and appears to reach its highest development in a form that seems to me to deserve a racial name.” {declinable adjective}

tasmanica, *Synthemis* Tillyard, 1910b: 346

L. tasmanicus –a –um = belonging to or pertaining to Tasmania. “This species is the Tasmanian representative of *S*[*ynthemis*] *eustalacta*, the latter not being found on the island.” {declinable adjective}

tau, *Hemicordulia* (Selys, 1871b: 256)

Tau, nineteenth letter of the Greek alphabet, transliterates to the Latin ‘T’ and describes the mark on the frons, thus “Tête olivâtre ou jaunâtre; dessus du front avec une bande transverse noire formant un T par une queue médiane qui rejoint le noir de la base du front” [Head greenish or yellowish above the frons with a transverse black band forming a T with a median line which joins the black of the base of the frons]. {noun in apposition}

Teinobasis Kirby, 1890: 157

Kirby (1890) established the genus to replace “*Telebasis*, Selys, *Bull. Acad. Belg.* (2), xliii, p. 112 1877” which was preoccupied by *Telebasis* Selys, 1865: 376 (Odonata), by changing Gr. τῆλε = at a distance to τεῖνω = stretch out. Selys (1877: 112) had recognised that the long petiolation of the wing moved the basal postcostal vein far from the point of attachment. “Ailes pétiolées au moins jusqu’à la nervule basale postcostale et en général jusqu’à quadrilatère, cette nervule placée à un niveau beaucoup plus près de la 2^e que de la 1^e antécubitale.” [Wings stalked at least as far as the basal postcostal vein and usually as far as the quadrilateral, this vein placed at a level much closer to the second than to the first antecubital.] The derivation is, therefore. Gr. τεῖνω = stretch out + βάσις = base, foundation. {Feminine}

Telephlebia Selys, 1883: 741, 742

Gr. τῆλε = at a distance + φλέψ (stem φλεβ–) = vein.

This probably refers to “Nervure sous-costale prolongée aux quatre ailes

à travers la veine du nodus, jusqu'à la seconde postcubitale." [Subcostal vein prolonged in the four wings to cross the vein of the nodus, as far as the second postcubital.] or "la nervure sous-costale prolongée au delà de la veine du nodus" [the subcostal vein extends beyond the vein of the nodus]. {Feminine}

tenera, *Eusynthemis* Theischinger, 1995b: 305

"From Latin tener –a –um meaning delicate." {declinable adjective}

tenuis, *Argiolestes griseus* Tillyard, 1913a: 413-414

L. *tenuis* –is –e = thin, slender. "A single male ... is of the very slender build found in *A. fontanus* n. sp." {declinable adjective}

tenuissimus, *Indolestes* (Tillyard, 1906b: 180, 181)

L. superlative of *tenuis* = thin, slender, i.e. thinnest. "Abdomen extremely long and thin" and "It is easily distinguished from all other species of *Lestes* by its extremely long abdomen". {declinable adjective}

territoria, *Austrocordulia* Theischinger & Watson, 1978: 409

"Holotype ♂ and associated larval skin: Baroalba Creek ... 19 km E. by N. of Mt Cahill, Northern Territory." The authors most probably deemed this to be the proper adjectival form derived from L. *territorium* = territory which, philologically, was not correct. {declinable adjective}

Tetrathemis Brauer, 1868a: 183

From Gr. τετρα– (in compounds) = four + Gr. θέμις (see *Synthemis*).

"Cellula cardinalis (Dreieck) in beiden Flügeln 4eckig, durch Knickung der Vorderseite." [Cellula cardinalis (triangle) in both wings quadrangular by a kink in the front side.] This characteristic also gave the name to the type species *T. irregularis* (q.v.). {Feminine}

theischingeri, *Hemigomphus* Watson, 1991b: 331

"Named for my colleague, Günther Theischinger." {noun in the genitive case}

Tholymis Hagen, 1867b: 221

Although it might look like a character from Greek antiquity, Fliedner (1997) speculates that *Tholymis* might be a composition of parts of Gr. thōrax, lygaios (= shadowed, murky) and themis. In support of this, he quotes the fact that *T. citrina* has a dark coloured thorax in adult males (Hagen 1867b: 219). For *-themis* see *Synthemis*. {Feminine}

thoracalis, *Agriocnemis* Sjöstedt, 1917: 35

Gr. θώραξ = chest, thorax + L. suffix *-alis -is -e* = relating to. This refers to the shape of the prothorax. “Prothorax oben blasenartig gewölbt, längs der Mitte rinnenförmig eingedrückt; Hinterlappen abstehend, abgerundet querrektangulär, olivenschwarz, Vorderlappen graubläulich, Seiten und ein schmaler Rand hinten ockergelb” [Prothorax arched above, bubble-like, depressed along the centre trough, posterior lobe protruding, rounded cross-rectangular, olive-black, anterior lobe greyish blue, sides and a narrow margin posteriorly ochre yellow]. {declinable adjective}

tillarga, *Tholymis* (Fabricius, 1798: 285)

Other than the species' name being given a capital letter in the original description, implying a proper noun, there is no information to assist in determining its source. The collector was the Danish naturalist, Dr. Baron Dagobert Karl (sometimes named Ingobert Carl) de Daldorff, a lieutenant in the Danish East India Company. He lived in Tranquebar near Pondicherry (Tamil Nadu), at that time a Danish colony on the west Indian coast (Tjärnö marinbiologiska laboratoriums webbplats, 2012). The name does not appear to be related to the collector or the local geography. {noun in apposition}

tillyardi, *Diphlebia lestoides* Fraser, 1956: 304

“In addition to the black apices of the wings, I have found other differences both in colour and morphology, which are sufficiently marked to give this form subspecific rank and have accordingly named it *Diphlebia lestoides tillyardi* in memory of my late esteemed colleague [Dr. R.J. Tillyard].” {noun in the genitive case}

tillyardi, *Eusynthemis* Theischinger, 1995b: 300

From the original description: “Tillyard (1910b) named as ‘var. *pallida*’ specimens from the Illawarra District of New South Wales, which he thought belonged to *E. guttata* (Selys), and expressly allocated infrasubspecific status to the variety. However, as Tillyard’s specimens of ‘var. *pallida*’ and other material from New South Wales and Victoria belong to a previously undescribed species, this species is dedicated to the great man who established the framework of the Australian dragonfly fauna.” {noun in the genitive case}

tillyardi, *Macromia* Martin, 1906: 489

The first use of this specific epithet was by Martin in Tillyard (1906). The description by Martin, 1907: 72 and the dedication of the species to Tillyard appears as “Une seule ♀ dans la coll. de M. Tillyard, qui l’a prise, en décembre, au Queensland (Kuranda), et à qui nous avons le plaisir de dédier cette espèce. Le mâle est inconnu.” [A single ♀ in the coll. of Mr. Tillyard, who took it, in December, in Queensland (Kuranda), and to whom we have the pleasure to dedicate this species. The male is unknown.] Tillyard states “Three females of this magnificent insect were taken by me at Kuranda, N.Q., in January 1905. As M. René Martin is about to issue his work on the Corduliinæ, it seems fitting that the record and description of so fine a species should appear in his new work. I have therefore sent him my description of the insect together with the type-specimen.” {noun in the genitive case}

tillyardi, *Metaphya* Ris, 1913a: 497-498

“Benannt habe ich sie nach meinem werten Freunde R.J. Tillyard, dessen unermüdlichen Forschungen wir soviel für die Vertiefung der Kenntnis australischer Odonaten, ganz besonders auch der Cordulinen verdanken.” [I have named it after my valued friend R.J. Tillyard to whose indefatigable researches we owe so much for the deepening of the knowledge of Australian Odonata, most especially the Corduliidae.] {noun in the genitive case}

tillyardi, *Synlestes weyersii* Fraser 1948: 6

There is no direct reference in the original description but the specimens came from Tillyard's collection: "a number of both sexes in the British Museum, formerly Tillyard collection." {noun in the genitive case}

tillyardi, *Telephlebia* Campion, 1916: 80

"I have pleasure in naming this fine species after my friend Mr. R.J. Tillyard, in recognition of the important additions which he has made to our knowledge of the Australian Dragonflies." Robin John Tillyard dominated the Australian odonatological scene in the early 20th Century. Baker (2010) gives details of his life, career and influence on the study of Odonata. See also pp. 65-66. {noun in the genitive case}

tillyardi, *Tramea loewii* Lieftinck, 1942: 528

No information on etymology is given in the original description but it is obviously named for R.J. Tillyard. {noun in the genitive case}

tincta, *Rhinocypha* Rambur, 1842: 238

L. tinctus –a –um = perfect participle of *tingo* = to dye, referring to the coloration of the wings. "Ailes d'un brun violâtre, largement transparentes à la base; dessous des postérieures ayant au moins le tiers moyen d'un vert brillant; portion humérale ne faisant plus du tiers de la longueur de l'aile." [Wings of a purplish brown, largely transparent at the base, lower hindwings having at least the middle third of a brilliant green; humeral portion does not form more than one third of the length of the wing.] {declinable perfect participle}

tindalei, *Austrolestes albicauda* Tillyard, 1925: 42, 41
[junior synonym of *Indolestes alleni* (Tillyard, 1913)]

"As this form is probably a distinct race, I name it race *tindalei*, after its discoverer" and "The collection of ninety specimens dealt with in this paper was made by Mr. N.B. Tindale".

Norman Barnett Tindale was Curator of Anthropology in the South Australian

Museum but also had special interests in entomology, geology and botany.
{noun in the genitive case}

tonyana, *Austropetalia* Theischinger, 1995a: 292

L. *tonyanus* –a –um. A derived adjective with the meaning of pertaining to Tony. From the original description: “A tribute to the late Dr J.A.L. (Tony) Watson, great friend and odonatologist.” {declinable adjective}

Tonyosynthemis Theischinger, 1998c: 140

“... in memory of Prof. A.F.L. (Tony) O’Farrell (1917-1997) and Dr. J.A.L. (Tony) Watson (1935-1993), two unforgettable friends and outstanding odonatologists.” {Feminine}

torresiana, *Ischnura* Tillyard, 1913a: 453

[junior synonym of *Ischnura heterosticta* (Burmeister, 1839)]

L. *torresianus* –a –um. Latinization of ‘from Torres’. “*Hab.* - ... Banks’ Island, Torres Straits (H. Elgner); February 1910.” {declinable adjective}

Tramea Hagen, 1861: 143

Hagen (1849: 174) foreshadowed publication of the genus as *Trapezostigma* [Gr. τράπεζιον = trapezium + στίγμα = spot, mark, tattoo]. There is no etymological explanation in the original description but it does say “pterostigma small, trapezoidal”. In the actual description of the genus Hagen (1861) shortened the name to *Tramea*, thus simplifying it and adding a pun with Latin *trameare*, ‘pass through’, which suits these vagrant species well. (Fliedner & Martens 2008). {Feminine}

Trapezostigma Hagen, 1849: 174

[senior objective synonym of *Tramea* Hagen, 1861 which was suppressed by ICZN Opinion 2158 (Case 3324)]

Gr. τράπεζιον = trapezium + στίγμα = spot, mark, tattoo (here pterostigma). Hagen (1849) foreshadowed publication of the genus as *Trapezostigma*, though he later amended it to *Tramea* (Hagen, 1861). “Hier könnte vielleicht am passendsten einer kleinen Gruppe gedacht werden, welche ich später

unter dem Namen *Trapezostigma* als eigene Gattung absondern möchte.” [Here might most appropriately be considered a small group, which I would later isolate under the name *Trapezostigma* as a separate genus.] It was based on “Form und Grösse des Pterostigma und der App. anales bieten genugsam Charaktere, um die Aufstellung einer eigenen Gattung zu rechtfertigen.” [Shape and size of the pterostigma and the anal appendages provide sufficient characters to justify the establishment of a separate genus.] {Neuter}

trilobata, *Agriocnemis* Sjöstedt, 1917: 36

[junior synonym of *Agriocnemis rubricauda* Tillyard, 1913]

L. *tres* = three (tri- in compounds) + L. *lobatus* –a –um = having lobes.

“Der Hinterlappen des Prothorax charakteristisch dreilappig.” [The posterior lobe of the prothorax characteristically three-lobed.] As –*cnemis* is feminine, the name must be *trilobata* not *trilobatus* which Sjöstedt used (a case of incorrect original spelling according to ICZN). {declinable adjective}

tripunctata, *Spinaeschna* (Martin, 1901: 235)

L. *tres* = three (tri- in compounds) + *punctum* = point, spot + suffix –*atus* –a –um = marked with. There are three well defined spots on the dorsal face of the second abdominal segment, anterior to the transverse carina. “le 2^e ... à l’extrémité une tache dorsale flanquée de 2 points” [the 2nd ... at the end a dorsal spot flanked by 2 marks]. {declinable adjective}

trivialis, *Diplacodes* (Rambur, 1842: 115)

Rambur rarely gives any explanation of the sources for his etymology and this species is no exception. It most likely comes from L. *trivialis* –is –e = common, ordinary, rather than the alternative meaning of trivial. “De la collection de M. Serville, et indiquée de Bombay.” [From the collection of Mr. Serville, and labelled from Bombay.] Fraser (1936: 338) comments “It is probably the most common dragonfly found in India, and occurs from the plains up to over 7000 ft.” {declinable adjective}

tropicus, *Synlestes* Tillyard, 1917a: 475

Gr. τροπικός = tropical alluding to the locations which are north of the Tropic

of Capricorn. “Hab – Kuranda and Herberton, North Queensland. Only two males known.” {declinable adjective}

tryoni, *Telephlebia* Tillyard, 1917a: 460

“I dedicate this very rare species to Mr Henry Tryon, F.E.S., Government Entomologist of Queensland to whom I am indebted for the opportunity of studying it.” Henry Tryon (1856-1943) became Queensland government entomologist in August 1894 and vegetable pathologist in 1901. His efforts to rear cactoblastis to control Prickly Pear failed. {noun in the genitive case}

turneri, *Austroepigomphus* (Martin, 1901: 230)

Martin (1901) gives no indication of Turner's identity. However it is likely to be either Gilbert or Rowland Turner of Mackay Queensland. See *turneri*, *Rhyothemis*. {noun in the genitive case}

turneri, *Rhyothemis* Kirby, 1894

[junior synonym of *Rhyothemis resplendens* Selys, 1878]

Rhyothemis turneri Kirby, 1894 is a junior synonym of *Rhyothemis resplendens* and, in the original description of *resplendens*, Kirby states “The British Museum has lately received one or two collections of insects of various orders from Mr Gilbert Turner, of Mackay, Queensland, among which were twenty species of dragonflies” (Kirby, 1894: 15). It is therefore probable that Gilbert Turner collected this species but, if he did not, it would have been his brother Rowland. They jointly owned a property 13 miles from Mackay (Daniels, 2004). {noun in the genitive case}

undia, *Telephlebia* Theischinger, 1985: 254

Undia is an Aboriginal word meaning gorge (Reed, 2006), alluding to Carnarvon Gorge. “Holotype ♂, in ANIC (Type No. 9887): Queensland, Carnarvon Gorge, Aljon Falls”. {noun in apposition}

unicornis, *Austroaeschna* (Martin, 1901; 237, 238)

The specific name describes the female occipital tubercle: L. adjective *unicornis* –is –e derived from L. *unus* = one + *cornu* = horn, with a

single horn. Selys (1883: 732) listed the name *unicornis* after the generic description of *Acanthaeschna*, with his own name to indicate authorship. It was based on a single female specimen. Allbrook & Watson (1979) declared the name to be a *nomen nudum*. Martin (1901) described the same specimen thus making *unicornis* Martin an available name. Martin (1901) also described *Planaeschna longissima* from male and female specimens. For the male, “Abdomen excessivement allongé” [Abdomen extremely elongated] (hence *L. longissima* = longest) and for the female “Le triangle occipital jaune, projectement en arrière une protuberance jaune en forme de corne” [The occipital triangle yellow, a yellow horn-shaped protuberance projecting backwards]. In the description of the female *unicornis* he had included “L’occiput porte, en arrière, sous la lame, un fort tubercule pâle, mousse, subcylindrique.” [The occiput carries, behind, under the occipital margin, a strong, pale, dull, subcylindrical tubercule.] Theischinger’s (1982) examination of the type material showed that the female of *unicornis* and the male and female of *longissima* were conspecific, with the name *A. unicornis* having priority. {declinable adjective}

Urothemis Brauer, 1868a: 175, 176

Gr. οὐρά = tail + θέμις (See *Synthemis*). This refers to the elongated female vulvar scale which reaches to the 10th abdominal segment. “Scheide bedeckt, die Klappe ein cylindrisches langes Rohr bildend, Hinterrand des 9. Ringes lappig erweitert” [Sheath covered, the flap forming a long cylindrical tube, posterior edge of the 9th ring [segment] flabbily expanded] and “Scheidenklappe sehr gross, rohrartig, cylindrisch, etwas nach unten abstehend, bis zum Hinterrande des 10. Ringes reichend, abgestutzt, rothgelb. Hinterrand des 9. Ringes etwas zungenartiger weitert” [Vaginal flap very large, tubular, cylindrical, slightly directed downward, reaching to the rear edge of the 10th ring [segment], truncate, reddish-yellow. Posterior margin of the 9th ring [segment] somewhat more tongue-like expanded]. {Feminine}

ursa, *Eusynthemis* Theischinger, 1999c: 375

“Ursa = Latin for ‘she-bear’; the species is markedly more massive than *E. ursula* (= Latin for ‘little she-bear’) THEISCHINGER.” {noun in apposition}

ursula, *Eusynthemis* Theischinger, 1998d: 143

“... after my granddaughter Ursula.” {noun in apposition}

vallisi, *Labidiosticta* (Fraser, 1955: 288)

“Described from a male and female, part of a small series from N. Queensland, Rockhampton, iv. 54, collected by C. Vallis after whom the new species is named.” There is a brief biographical note for Eliah Close (‘Closie’) Vallis in Daniels (2004). {noun in the genitive case}

velaris, *Agriocnemis* Hagen in Selys, 1882: 31

[junior synonym of *Agriocnemis pygmaea* (Rambur, 1842)]

L. velaris –is –e = belonging to a veil or curtain.

“L’*Agrion pygmaeum* Ramb., est une espèce différente de l’Inde, dont la femelle est caractérisée par le prothorax très-échancré en arrière. Il convient donc de rétablir le nom de *velaris* Hagen, pour la présente espèce.” [*Agrion pygmaeum* Ramb., is a different species from India, in which the female is characterized by very notched dorsal prothorax. It is therefore necessary to restore the name of *velaris* Hagen, for the present species.]

Agrion velare Hagen, 1858: 479 was a *nomen nudum* with no indication of the etymology. {declinable adjective}

victoria, *Acanthaeschna* Martin, 1901: 233

In establishing *Austroaeschna* Selys, 1883 n.g., the author includes two previously unnamed species, *victoria* and *unicornis* (p. 732). Allbrook and Watson (1978) thus declared them *nomina nuda* so, as Martin (1901) provided the first description, he assumes authorship. It is reasonable to assume that the species was named for the state of Victoria. However it has not been recorded in Victoria and an alternative derivation is possible. Queen Victoria was the monarch of the United Kingdom of Great Britain and Ireland in 1837-1901, encompassing the date of this species’ description. The name may be an eponym. Selys recorded “Patrie: Nouvelle-Hollande” and Martin listed it as “67 *Acanthaeschna victoria* Selys. Queensland, New South Wales”. Therefore although neither Selys nor Martin capitalised the name, perhaps there is a case

for considering it to be named for the British monarch of the time. It might be corroborative that Selys (1873a: 770) hyphenated the collecting locality “Queen’s-Land” when naming *Ictinus* [*Ictinogomphus*] *australis*. {noun in apposition}

victoria, *Austropetalia* Carle, 1996: 239

[subjective synonym of *Austropetalia tonya* Theischinger, 1995]

“Well I think that Victoria makes a nice sister for Patricia, she was named in honor of Queen Victoria just like the States of Victoria and Queensland. It is fitting that this most ancient dragonfly is named after Queen Victoria; the British monarch with the longest reign in history” (Frank Carle in litt.). {noun in apposition}

villosovittatum, *Orthetrum* (Brauer, 1868a: 168)

L. villosus *-a -um* = shaggy, hairy + *L. vittatus* *-a -um* = bound with a fillet (headband), i.e. wearing a shaggy band. “Thorax einfarbig olivengelb, nur jederseits vorne von der Wurzel der Vorderflügel bis zum Prothorax eine schwarzbraune unten dunklere und braun zottig behaarte Strieme.” [Thorax unicolorously olive-brown, on each side anteriorly from the base of the forewing to the prothorax a blackish brown streak, darker below, and covered with brown shaggy hair.] {declinable adjective}

virgula, *Eusynthemis* (Selys, 1874: 33)

L. virgula, diminutive of *L. virga* = little twig or wand; *virga* and *virgula* can also denote a line or stripe of colour. A later Latin meaning of ‘*virgula*’ is the punctuation mark (comma). Selys’ meaning was probably a little stripe of colour.

When discussing *Diplax* [*Sympetrum*] *illota* Selys (1884: 44) uses the French word ‘virgule’ [comma] to denote the short black line at the base of each wing. “Enfin, je regarde comme conformes à la description du type *illota* de Hagen mes exemplaires de Californie et de Nevada, dont les ailes sont vivement safranées jusqu’au nodus, y compris la réticulation, et dont la base des ailes est marquée aux supérieures d’une virgule noire sous-costale dépassant la première antécubitale et aux inférieures de deux virgules distinctes, la sous-costale allant environ jusqu’à la seconde antécubitale, la virgule médiane jusqu’à la nervule

médiane ordinaire.” [Finally, I consider as conforming with the description of the type of *illota* of Hagen my specimens from California and Nevada, whose wings are strongly saffron to the nodus, including the wingveins, and having the base of the wings marked on the forewings with a black subcostal ‘virgule’ beyond the first antecubital and in the hindwings two distinct ‘virgules’, the subcostal going up to about the second antecubital, the median ‘virgule’ as far as the ordinary median nerve.]

In the description to *Synthemis virgula* the equivalent marking is in the phrase “Ailes assez étroites, lavées de jaunâtre ocracé, ayant une gouttelette basale noire, occupant l’espace entre la sous-costale et la médiane jusqu’à la 1^{re} antécubitale; les parties voisines un peu brunies” [Wings rather narrow, washed with yellowish ochre, having a black basal droplet, occupying the space between the subcostal and median as far as the first antecubital; neighboring parts slightly browned]. {noun in apposition}

viridescens, *Macromia* Tillyard, 1911a: 380, 381

L. *viridis* =green, with the suffix *-escens* = becoming. “Thorax deep brilliant metallic-green all over, ... Abdomen ... 1-4 brilliant metallic green.” {adjective }

vitiensis, *Agriocnemis* Tillyard, 1924: 338

[junior synonym of *Agriocnemis exsudans* (Selys,1877)]

The specific name *vitiensis* is a L. adjective derived from the Latin word for Fiji: *Viti* + *-ensis* = adjectival suffix indicating place of origin. “... taken by Mr. Simmonds on Waidoi Plantation [not far from Navua on the Island of Viti Levu, Fiji].” {declinable adjective}

watsoni, *Austroagrion* Lieftinck, 1982: 288

From the original description: “I here propose *watsoni* nom. nov. for the most familiar species of *Austroagrion*. It is named after my colleague, J.A.L. Watson, of the Division of Entomology, CSIRO, Canberra, in recognition of his excellent work on the biology and ecology of Australian dragonfly fauna and other insect orders.” {noun in the genitive case}

watsoni, *Spinaeschna* Theischinger, 1982: 45

“I also wish to express my special gratitude to my friends Mr L. Müller (Berowa) and Dr J.A.L. Watson (Canberra) who supported my work in many ways.” {noun in the genitive case}

weiskei, *Dromaeschna* (Förster, 1908a: 194)

“Gesammelt von Emil Weiske.” [Collected by Emil Weiske.] Emil Weiske, born in 1867 in Dolsenhain, Germany, travelled extensively as a natural history collector. Between 1895 and 1897 he collected in New Zealand and Cairns. He died in 1950 in Saalfeld, Germany (Stadtgeschichte-weida 2012). {noun in the genitive case}

weyersii, *Synlestes* Selys, 1869b: lxxvii

From the original description: “d’après une femelle donnée par M. Weyers auquel je suis heureux de témoigner ici ma reconnaissance pour les services que par ses relations étendues il rend à l’Entomologie” [from a female given by M. Weyers to whom I am glad to show here my gratitude for the services he makes to Entomology through his extensive connections]. Joseph Léopold Weyers was Secretary and Librarian of *La Société Entomologique de Belgique*. {noun in the genitive case}

Xanthagrion Selys, 1876: 520

Gr. ξανθός = yellow + *Agrion* (q.v.). The original description, based on the then sole species *Xanthagrion erythroneurum*, states “♂ Coloration orangée; ♀ Coloration jaunâtre.” [♂ Orange colour; ♀ yellowish colouring. “{Neuter}”

xanthosticta, *Eusynthemis nigra* (Tillyard, 1913d: 230)

Gr. ξανθός = yellow, golden + Gr. στικτός = spotted. ‘Abdomen of male with segments 1-8 spotted with yellow’. {declinable adjective}

(*Xerogomphus*) *Austroepigomphus* Watson, 1991b: 425

Gr. ξερός = dry + *Gomphus* (see *Austrogomphus*). “*Xeros*, dry, referring to the dry habitats into which the ranges of both species [Z. (*Xerogomphus*) *turneri*”

and *Z. (Xerogomphus) gordonii*] extend.” {Masculine}

Zephyrogomphus Watson, 1991b: 432

Gr. ζέφυρος = west wind + *Gomphus* (see *Austrogomphus*). “*Zephyrus*, the west wind, alluding to the fact that it is known only from south-western Australia.” {Masculine}

Zyxomma Rambur, 1842: 30

Gr. ζεύξις = yoking, a bridging junction + Gr. ὄμμα = eye. This refers to the large contiguous eyes. “Tête grosse, ayant la face très-étroite; yeux très-développés, comme chez les *Æschna*, contigus dans une étendue égale à peu près à leur plus grande largeur” [Large head, with very narrow face, eyes very developed, as in *Æschna*, contiguous in an area roughly equal to their greatest width] and from the description of its type species *Z. petiolatum*, “Tête très-grosse, ayant les yeux très-largement, contigus, comme chez les *Æschna*.” [Head very large, with eyes very wide, contiguous, as in *Æschna*]. {Neuter}

Page numbers given in normal type in the citations refer to the location of the actual quotation, not the original description. In some cases the clue to the etymology can be on pages quite remote from the original description. Page numbers in italics indicate the original description and these are used where no etymological information could be found.

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Appendix 1

Numbers and level of taxa named by each author

	Genera	(Genera)	Subgenera	Species	(Species)	Subspecies	TOTAL	Taxa headings in brackets are synonyms
Brauer	9	2		17	1		29	
Burmeister				7			7	
Campion				2			2	
Carle	4			1			5	
Carpenter				1			1	
Charpentier	1						1	
Cowley	1						1	
Dale				1			1	
Drury				1			1	
Evans	1						1	
Fabricius	2			5	1		8	
Förster	3	1		4	4		12	
Fraser	6	3		8		3	20	
Hagen	5	1		7	2		15	
Karsch	2			3			5	
Kennedy	3	4		1			8	
Kirby	9	1		2	3	1	16	
Krüger				1			1	
Laidlaw	1						1	
Leach	4			1			5	
Lieftinck	1	1		7	3	1	13	
Linnaeus	1						1	

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Macleay				3			3
Martin	1		20	3			24
McLachlan			1				1
Morton	1		1				2
Moulds			1				1
Newman	1						1
Rambur	5	2	14	2			23
Ris	2		2				4
Selys	23	3	39	2	2		69
Sjöstedt		1	8	2			11
Sulzer			1				1
Theischinger	4		4	33	1	2	44
Tillyard	22	2		89	14	8	135
Watson	8		2	32			42
	120	21	6	310	41	17	515

Appendix 2

Numbers and level of taxa named by joint authors

	Genera	Subgenera	Species	Subspecies	TOTAL
Brown & Theischinger			1		1
Peters & Theischinger		1			1
Theischinger & O'Farrell			4	1	5
Theischinger & Watson	1		11		12
Watson & Moulds			2		2
Watson & Theischinger			8		8
TOTAL	1	1	26	1	29

Appendix 3

Categorisation of roots of the names of genera and species

Within each category relevant roots are in *italics*.

People

Antiquity

<i>Archaeosynthemis</i>	<i>Palaeosynthemis</i>	<i>alcestis.</i>	<i>jedda</i>
<i>Austrosynthemis</i>	<i>Palaeosynthemis</i>	<i>aurora</i>	<i>leda</i>
<i>Austrothemis</i>	<i>Parasynthemis</i>	<i>chloe</i>	<i>othello</i>
<i>Choristhemis</i>	<i>Pentathemis</i>	<i>cora</i>	<i>paulini</i>
<i>Crocothemis</i>	<i>Rhodothemis</i>	<i>cyane</i>	<i>phyllis</i>
<i>Eusynthemis</i>	<i>Rhyothemis</i>	<i>cyclops</i>	<i>psyche</i>
<i>Metathemis</i>	<i>Synthemiosis</i>	<i>euphoeoides</i>	<i>sabina</i>
<i>Microthemis</i>	<i>Synthemis</i>	<i>eurybia</i>	<i>serapia</i>
<i>Nannodythemis</i>	<i>Tetrathemis</i>	<i>hyacinthus</i>	
<i>Neurothemis</i>	<i>Urothemis</i>	<i>io</i>	

Friends/Relatives/Colleagues

<i>Petersaeschna</i>	<i>duivenbodei</i>	<i>leonardi</i>	<i>reinholdi</i>
<i>Risiolestes</i>	<i>elgneri</i>	<i>lewisiana</i>	<i>rentziana</i>
<i>Tonyosynthemis</i>	<i>elke</i>	<i>lieftincki</i>	<i>risi</i> (3)
	<i>fieldi</i>	<i>loewii</i>	<i>rodericki</i>
<i>adamsi</i>	<i>fraseri</i>	<i>lyelli</i>	<i>rosenbergi</i>
<i>alleni</i>	<i>godeffroyi</i>	<i>maccullochi</i> (2)	<i>selysi</i> (2)
<i>angelorum</i>	<i>gordoni</i>	<i>martini</i>	<i>severini</i>
<i>annaliese</i>	<i>gouldii</i>	<i>mjobergi</i> (2)	<i>theischingeri</i>
<i>barbarae</i> (2)	<i>guerini</i>	<i>mocsaryi</i>	<i>tillyardi</i> (7)
<i>beatricis</i>	<i>handschini</i>	<i>mouldsi</i>	<i>tindalei</i>
<i>berthoudi</i>	<i>hardyi</i>	<i>mouldsorum</i>	<i>tonyana</i>
<i>billinghursti</i>	<i>hodgkini</i>	<i>muelleri</i>	<i>tryoni</i>
<i>brookhousei</i>	<i>humphriesi</i>	<i>netta</i>	<i>turneri</i> (2)
<i>bucki</i>	<i>ingrid</i> (2)	<i>ofarrelli</i>	<i>ursula</i>
<i>christine</i> (2)	<i>isabellae</i>	<i>olivei</i>	<i>vallisi</i>
<i>dalei</i>	<i>jurzitzi</i>	<i>patricia</i>	<i>watsoni</i> (2)
<i>deniseae</i>	<i>kingii</i>	<i>paulsoni</i>	<i>weiskei</i>
<i>dobsoni</i> (3)	<i>kirbyi</i>	<i>pinheyi</i>	<i>weyersii</i>
<i>doddi</i>	<i>leachii</i>	<i>racleayi</i>	
<i>donnelyi</i>	<i>hodgkini</i>	<i>reevesi</i>	

Professions

<i>Anax</i> = lord, master	<i>Austrolestes</i>	<i>Synlestes</i>	<i>mimetes</i> = imitator
<i>Hemianax</i>	<i>Ceylonolestes</i>	<i>basileus</i> = king, chief	<i>princeps</i> = chief
<i>Lestes</i> = pirate	<i>Episynlestes</i>	<i>Hydrobasileus</i>	<i>regina</i> = queen
<i>Archiargiolestes</i>	<i>Griseargiolestes</i>	<i>archos</i> = leader, chief	
<i>Argiolestes</i>	<i>Indolestes</i>	<i>Potamarcha</i>	
<i>Austroargiolestes</i>	<i>Miniargiolestes</i>		

Places

Geographical Provenance

<i>Ceylonolestes</i>	<i>caledonicum</i>	<i>kalumburu</i>	<i>obiri</i>
<i>Huonia</i>	<i>continentalis</i>	<i>koolpinyah</i>	<i>papuense</i>
<i>Indictinogomphus</i>	<i>coolawanyah</i>	<i>koomina</i>	<i>papuensis</i>
<i>Indolestes</i>	<i>cooloola</i> (2)	<i>koongarra</i>	<i>pilbara</i>
<i>Pantala</i>	<i>coomalie</i>	<i>kunjina</i>	<i>pindrina</i>
	<i>dirupta</i>	<i>kununurra</i>	<i>taracumbi</i>
<i>asiatica</i>	<i>dorrigoensis</i>	<i>liveringa</i>	<i>tasmanica</i> (3)
<i>australiae</i>	<i>eboracus</i>	<i>magela</i>	<i>territoria</i>
<i>banksi</i>	<i>eungella</i>	<i>melvillensis</i>	<i>torresiana</i>
<i>baroalba</i>	<i>injibandi</i>	<i>minjerriba</i>	<i>tropicus</i>
<i>boumiera</i>	<i>insularis</i>	<i>mudginberri</i>	<i>undia</i>
<i>braganza</i>	<i>jacksoniensis</i>	<i>nourlangie</i>	<i>victoria</i>
<i>brisbanense</i>	<i>kalliste</i>	<i>novaehollandiae</i>	<i>vitiensis</i>

North/South/East/West

<i>Antipodogomphus</i>	<i>Austrocordulia</i>	<i>Austrosticta</i>	<i>Zephyrogomphus</i>
<i>Antipodophlebia</i>	<i>Austroepigomphus</i>	<i>Austrosynthemis</i>	
<i>Austrictinogomphus</i>	<i>Austrogomphus</i>	<i>Austrothemis</i>	<i>australis</i> (6)
<i>Austroaeschna</i>	<i>Austrogynacantha</i>	<i>Hesperocordulia</i>	<i>hesperia</i>
<i>Austroagrion</i>	<i>Austrolestes</i>	<i>Notoaeschna</i>	<i>occidentalis</i> (3)
<i>Austroargiolestes</i>	<i>Austropetalia</i>	<i>Notolibellula</i>	<i>orientalis</i>
<i>Austrocnemis</i>	<i>Austrophlebia</i>	<i>Notoneura</i>	
<i>Austrocoenagrion</i>	<i>Austrophya</i>	<i>Occidaeschna</i>	

Environment/habitat

<i>Aggrion</i>	<i>Archiargiolestes</i>	<i>Hydrobasileus</i>	<i>aridus</i>
<i>Aciagrion</i>	<i>Argiocnemis</i>	<i>Lithosticta</i>	<i>filicicola</i>
<i>Argiocnemis</i>	<i>Argiolestes</i>	<i>Oristicta</i>	<i>fontanus</i>
<i>Aggrionoptera</i>	<i>Austroargiolestes</i>	<i>Potamarcha</i>	<i>litorea</i>
<i>Austroagrion</i>	<i>Griseargiolestes</i>	<i>Xerogomphus</i>	<i>melaleucae</i>
<i>Caliagrion</i>	<i>Miniargiolestes</i>		<i>montana</i>
<i>Ceriagrion</i>	<i>Glaciaeschna</i>	<i>alpinus</i>	<i>nymphaeae</i>
<i>Chorismagrion</i>	<i>Montiaeschna</i>	<i>arbustorum</i>	<i>paludosus</i>
<i>Pseudagrion</i>		<i>arenarius</i>	<i>silvarum</i>
<i>Xanthagrion</i>			

Appearance

Morphology

<i>Acanthaeschna</i>	<i>Hemigomphus</i>	<i>Spinaeschna</i>	<i>divaricatus</i>
<i>Aciagrion</i>	<i>Hemiphlebia</i>	<i>Stenobasis</i>	<i>divergens</i>
<i>Agrionoptera</i>	<i>Hesperocordulia</i>	<i>Synthemopsis</i>	<i>edentulus</i>
<i>Agyrtacantha</i>	<i>Ictinogomphus</i>	<i>Teinobasis</i>	<i>erythroneurum</i>
<i>Amphisticta</i>	<i>Ictinus</i>	<i>Telephlebia</i>	<i>femina</i>
<i>Anacordulia</i>	<i>Indictinogomphus</i>	<i>Tetrathemis</i>	<i>forcipata</i>
<i>Antipodogomphus</i>	<i>Ischnura</i>	<i>Tramea</i>	<i>gibbosulus</i>
<i>Antipodophlebia</i>	<i>Isosticta</i>	<i>Trapezostigma</i>	<i>gomphomacromioides</i>
<i>Apocordulia</i>	<i>Labiodiosticta</i>	<i>Urothemis</i>	<i>graphiptera</i>
<i>Archaeophya</i>	<i>Lathrecista</i>	<i>Xerogomphus</i>	<i>heterosticta</i>
<i>Archibasis</i>	<i>Lathrocordulia</i>	<i>Zephyrogomphus</i>	<i>inermis</i>
<i>Archipetalia</i>	<i>Macromia</i>	<i>Zyxomma</i>	<i>irregularis</i>
<i>Argiocnemis</i>	<i>Metaphya</i>		<i>longipositor</i>
<i>Argyrocnemis</i>	<i>Micromidia</i>	<i>albicauda</i>	<i>macrops</i>
<i>Armagomphus</i>	<i>Nannodiplax</i>	<i>amphiclitus</i>	<i>melanopsis</i>
<i>Astrictinogomphus</i>	<i>Nannodythemis</i>	<i>anacantha</i>	<i>membranulata</i>
<i>Austrocnemis</i>	<i>Nannophlebia</i>	<i>analisis</i>	<i>microcephalum</i>
<i>Austrocordulia</i>	<i>Nannophya</i>	<i>armiger</i>	<i>multinervorum</i>
<i>Austroepigomphus</i>	<i>Nanosura</i>	<i>atrifrons</i>	<i>nigrifrons</i>
<i>Austrogomphus</i>	<i>Neosticta</i>	<i>aureofrons</i>	<i>nigrolabiatius</i>
<i>Austrogynacantha</i>	<i>Neurobasis</i>	<i>auriculata</i>	<i>oligoneura</i>
<i>Austropetalia</i>	<i>Neurothemis</i>	<i>bidens</i>	<i>parvistigma</i>
<i>Austrophlebia</i>	<i>Nososticta</i>	<i>bifurcatus</i>	<i>petiolatum</i>
<i>Austrophya</i>	<i>Notoneura</i>	<i>biserialis</i>	<i>ptilorhina</i>
<i>Brachytron</i>	<i>Odontogomphus</i>	<i>bispina</i>	<i>refracta</i>
<i>Camacinia</i>	<i>Orthetrum</i>	<i>brevicauda</i> (2)	<i>rubricauda</i>
<i>Choristhemis</i>	<i>Pentathemis</i>	<i>brevistyla</i> –us (2)	<i>rufithorax</i>
<i>Cordulephya</i>	<i>Petalura</i>	<i>calcaris</i>	<i>simplex</i>
<i>Cordulia</i>	<i>Phasmosticta</i>	<i>claviculata</i>	<i>spiniger</i>
<i>Dendroaeschna</i>	<i>Pleiogomphus</i>	<i>collaris</i>	<i>stenoloba</i>
<i>Dineura</i>	<i>Podopteryx</i>	<i>convergens</i>	<i>subapicalis</i>
<i>Diphlebia</i>	<i>Polyneura</i>	<i>cornutus</i>	<i>subcostalis</i>
<i>Diplacodes</i>	<i>Procordulia</i>	<i>costalis</i>	<i>thoracalis</i>
<i>Eurysticta</i>	<i>Pseudocordulia</i>	<i>cristatus</i>	<i>trilobatus</i>
<i>Gynacantha</i>	<i>Raphismia</i>	<i>denticauda</i>	<i>unicornis</i>
<i>Hemicordulia</i>	<i>Rhinocypha</i>	<i>dentosus</i>	<i>velaris</i>

Colour

<i>Argyrocnemis</i>	<i>aurolineata</i>	<i>griseus</i>	<i>ochraceus</i>
<i>Ceriagrion</i>	<i>bicolor</i>	<i>haematodes</i>	<i>prasinus</i>
<i>Crocothemis</i>	<i>canescens</i>	<i>icteromelas</i>	<i>pruinescens</i>
<i>Griseargiolestes</i>	<i>chrysoides</i>	<i>ignifer</i>	<i>resplendens</i>
<i>Rhodothemis</i>	<i>coelestina</i>	<i>jaspidea</i>	<i>rubescens</i>
<i>Xanthagrion</i>	<i>coerulescens</i>	<i>lucifer</i>	<i>rubra</i> (2)
	<i>coeruleum</i>	<i>melanopsis</i>	<i>rubricauda</i>
<i>aeruginosum</i>	<i>cyanitincta</i>	<i>melanosoma</i>	<i>rufithorax</i>
<i>albescens</i>	<i>erubescens</i>	<i>metallica –us</i>	<i>sanguinea</i>
<i>albicauda</i>	<i>erythroneurum</i>	<i>nebulosa</i>	<i>splendida</i>
<i>argentea</i>	<i>exsudans</i>	<i>nigra</i>	<i>subgriseus</i>
<i>atrata –us</i>	<i>flava</i>	<i>nigrescens</i> (2)	<i>tincta</i>
<i>atrifrons</i>	<i>flavescens</i>	<i>nigrifrons</i>	<i>viridescens</i>
<i>aureofrons</i>	<i>flavomaculata</i>	<i>nigrolabiatus</i>	<i>xanthosticta</i>
<i>aureus –um</i>	<i>flavotermata</i>	<i>obscura</i> (3)	

Pattern

<i>Rhyothemis</i>	<i>cingulatus</i>	<i>flavotermata</i>	<i>sagittata</i>
	<i>circularis</i>	<i>geminata</i>	<i>semitincta</i>
<i>aleison</i>	<i>circumsignata</i>	<i>guttata –us</i>	<i>sigma</i>
<i>annulosus</i>	<i>conspersa</i>	<i>lateralis</i>	<i>stigmatizans</i>
<i>aspersa</i>	<i>distigma</i>	<i>longitudinalis</i>	<i>tau</i>
<i>aurolineata</i>	<i>elliptica</i>	<i>macrostigma</i>	<i>tripunctata</i>
<i>balteatum</i>	<i>eustalacta</i>	<i>multipunctata</i>	<i>villosovittatum</i>
<i>bipunctata</i>	<i>exclamationis</i>	<i>praeruptus</i>	<i>virgula</i>
<i>cingillum</i>	<i>flavomaculata</i>	<i>punctata</i>	<i>xanthosticta</i>

Size

<i>Brachydiplax</i>	<i>Nannodythemis</i>	<i>gigantea</i>	<i>pusillus</i> (2)
<i>Macrodiplax</i>	<i>Nannophlebia</i>	<i>ingentissima</i>	<i>pygmaea</i> (2)
<i>Micromidia</i>	<i>Nannophya</i>	<i>longissima</i>	<i>regalis</i>
<i>Micronympha</i>	<i>Nanosura</i>	<i>macra</i>	<i>solida</i>
<i>Microthemis</i>	<i>Rhadinosticta</i>	<i>minimus</i>	<i>tenera</i>
<i>Miniargiolestes</i>		<i>parvulus</i>	<i>tenuis</i>
<i>Nannodiplax</i>	<i>fragile</i>	<i>pusillissimus</i>	<i>tenuissimus</i>

Beauty, Wonder

<i>Caliagrion</i>	<i>amabilis</i>	<i>insignis</i>	<i>oculata</i>
<i>Micronympha</i>	<i>belladonna</i>	<i>magnifica</i>	<i>pulcherrima</i>
<i>Pulchaeschna</i>	<i>concinus</i>	<i>mirabilis</i>	<i>pulchra</i>
	<i>delicata</i>	<i>nobilis</i>	<i>speciosa</i>
	<i>festi</i>	<i>nymphoides</i>	<i>superba</i>

Similarities to other taxa

<i>Adversaeschna</i>	<i>Hemicordulia</i>	<i>Palaeosynthemis</i>	<i>fraterna</i>
<i>Anaciaeschna</i>	<i>Hemigomphus</i>	<i>Parasynthemis</i>	<i>gomphomacromioides</i>
<i>Amphisticta</i>	<i>Isosticta</i>	<i>Phasmosticta</i>	<i>heteroclytus</i>
<i>Anacordulia</i>	<i>Labidiosticta</i>	<i>Pseudagrion</i>	<i>hybridoides</i>
<i>Apocordulia</i>	<i>Lathrocordulia</i>	<i>Pseudocordulia</i>	<i>intermedia</i> –us (2)
<i>Archaeosynthemis</i>	<i>Lestoidea</i>	<i>Rhadinosticta</i>	<i>interposita</i>
<i>Austroepigomphus</i>	<i>Libella</i>	<i>Synlestes</i>	<i>lestoides</i>
<i>Austrosticta</i>	<i>Lithosticta</i>	<i>Synthemiosis</i>	<i>mystica</i>
<i>Austrosynthemis</i>	<i>Libellula</i>		<i>propinqua</i>
<i>Chorismagrion</i>	<i>Metaphya</i>	<i>affinis</i>	<i>soror</i>
<i>Episynlestes</i>	<i>Metathemis</i>	<i>allogenes</i>	<i>subjuncta</i>
<i>Eurysticta</i>	<i>Neosticta</i>	<i>congener</i> (2)	<i>ursa</i>
<i>Eusynthemis</i>	<i>Notolibellula</i>	<i>euphoeoides</i>	
<i>Hemianax</i>	<i>Oristicta</i>	<i>frater</i>	

Other

Behaviour

<i>Dromaeschna</i>		<i>comitatus</i>	<i>migratum</i>
<i>Aethriamanta</i>	<i>cladophila</i>	<i>eludens</i>	<i>solitaria</i>

Evolution

<i>Archaeophya</i>	<i>Archibasis</i>	<i>Palaeosynthemis</i>	<i>Protoaeschna</i>
<i>Archaeosynthemis</i>	<i>Archipetalia</i>	<i>Pleiogomphus</i>	<i>asthenes</i>
<i>Archiargiolestes</i>	<i>Eusynthemis</i>	<i>Procordulia</i>	<i>conjuncta</i>

Frequency

<i>Austrocoenagrion</i>	<i>Coenagrion</i>	<i>trivialis</i>
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Incertae sedis

<i>Aeshna</i>	<i>Montiaeschna</i>	<i>Libellula</i>	<i>georgius</i>
<i>Acanthaeschna</i>	<i>Notoaeschna</i>	<i>Notolibellula</i>	<i>manifestus</i>
<i>Adversaeschna</i>	<i>Occidaeschna</i>	<i>Micromidia</i>	<i>neophytus</i>
<i>Austroaeschna</i>	<i>Protoaeschna</i>	<i>Nososticta</i>	<i>paradoxa</i>
<i>Dendroaeschna</i>	<i>Pulchaeschna</i>	<i>Tholymis</i>	<i>proselythus</i>
<i>Dromaeschna</i>	<i>Spinaeschna</i>	<i>acolythus</i>	<i>tillarga</i>
<i>Glaciaeschna</i>	<i>Libella</i>	<i>aliena</i>	<i>victoria</i>

Appendix 4

Establishing the gender of genus names

The nouns which determine the gender of each of these genera are all in the nominative singular.

MASCULINE

From Greek second declension –ος latinised to second declension –us

<i>Antipodogomphus</i>	<i>Armagomphus</i>	<i>Austrictinogomphus</i>	<i>Austroepigomphus</i>
<i>Austrogomphus</i>	<i>Hemigomphus</i>	<i>Ictinogomphus</i>	<i>Indictinogomphus</i>
<i>Odontogomphus</i>	<i>Pleiogomphus</i>	<i>Xerogomphus</i>	<i>Zephyrogomphus</i>
<i>Ictinus</i>			

From Greek first declension –ης transliterated to the Latin alphabet

<i>Archiargiolestes</i>	<i>Argiolestes</i>	<i>Austroargiolestes</i>	<i>Austrolestes</i>
<i>Ceylonolestes</i>	<i>Episynlestes</i>	<i>Griseargiolestes</i>	<i>Indolestes</i>
<i>Lestes</i>	<i>Miniargiolestes</i>	<i>Risiolestes</i>	<i>Synlestes</i>

From Greek third declension –αξ transliterated to the Latin alphabet

<i>Anax</i>	<i>Hemianax</i>
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From Greek third declension –εως transliterated to the Latin alphabet

Hydrobasileus

FEMININE

From Greek first declension $-\alpha$ or $-\eta$ transliterated to the Latin alphabet or latinised to first declension $-a$

<i>Ischnura</i>	<i>Nanosura</i>	<i>Petalura</i>	
<i>Agyrtacantha</i>	<i>Austrogynacantha</i>	<i>Gynacantha</i>	
<i>Archaeophya</i>	<i>Austrophya</i>	<i>Cordulephya</i>	<i>Metaphya</i>
<i>Nannophya</i>			
<i>Lathrecista</i>	<i>Micronympha</i>	<i>Pantala</i>	

Greek name in which the masculine ending has been replaced by the feminine (to avoid change of a species name transferred into it) and subsequently latinised

Potamarcha

Not of certain Greek origin but latinised to first declension $-a$

<i>Aeshna</i>	<i>Acanthaeschna</i>	<i>Adversaeschna</i>	<i>Anaciaeschna</i>
<i>Austroaeschna</i>	<i>Dendroaeschna</i>	<i>Dromaeschna</i>	<i>Glaciaeschna</i>
<i>Montiaeschna</i>	<i>Notoaeschna</i>	<i>Occidaeschna</i>	<i>Petersaeschna</i>
<i>Protoaeschna</i>	<i>Pulchaeschna</i>	<i>Spinaeschna</i>	

No Greek word that resembles the second half of the name, but latinised to first declension $-a$

Aethriamanta

The author has affixed the suffix $-ia$ to denote the feminine gender

<i>Camacinia</i>	<i>Raphismia</i>
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Feminine forms of Greek adjectives in –ος that have been latinised and, as genus group names have become nouns

<i>Amphisticta</i>	<i>Austrosticta</i>	<i>Eurysticta</i>	<i>Labidiosticta</i>
<i>Lithosticta</i>	<i>Neosticta</i>	<i>Nososticta</i>	<i>Oristicta</i>
<i>Phasmosticta</i>	<i>Rhadinosticta</i>		
<i>Rhinocypha</i>			

Feminine forms of Greek adjectives derived from nouns; as genus group names they have become nouns

<i>Agrionoptera</i>	<i>Archipetalia</i>	<i>Austropetalia</i>	
<i>Cordulia</i>	<i>Anacordulia</i>	<i>Apocordulia</i>	<i>Austrocordulia</i>
<i>Hemicordulia</i>	<i>Hesperocordulia</i>	<i>Lathrocordulia</i>	<i>Procordulia</i>
<i>Pseudocordulia</i>			
<i>Dineura</i>	<i>Notoneura</i>	<i>Polyneura</i>	
<i>Macromia</i>	<i>Macromidia</i>		

Not of Greek origin but from Latin or latinised to first declension –a

<i>Huonia</i>	<i>Libella</i>	<i>Libellula</i>	<i>Notolibellula</i>
<i>Tramea</i>			

From Greek third declension –ις transliterated to the Latin alphabet or latinised

<i>Archaeosynthemis</i>	<i>Austrosynthemis</i>	<i>Austrothemis</i>	<i>Choristhemis</i>
<i>Crocothemis</i>	<i>Eusynthemis</i>	<i>Metathemis</i>	<i>Microthemis</i>
<i>Nannodythemis</i>	<i>Neurothemis</i>	<i>Palaeothemis</i>	<i>Parasynthemis</i>
<i>Pentathemis</i>	<i>Rhodothemis</i>	<i>Rhyothemis</i>	<i>Synthemis</i>
<i>Tetrathemis</i>	<i>Tonyosynthemis</i>	<i>Urothemis</i>	
<i>Agriocnemis</i>	<i>Argiocnemis</i>	<i>Argyrocnemis</i>	<i>Austrocnemis</i>
<i>Archibasis</i>	<i>Neurobasis</i>	<i>Stenobasis</i>	<i>Teinobasis</i>
<i>Synthemiosis</i>	<i>Tholymis</i>		

From Greek feminine nouns πλάξ and πτέρυξ

<i>Brachydiplax</i>	<i>Macrodiplax</i>	<i>Nannodiplax</i>	<i>Podopteryx</i>
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From Greek adjectival endings which are latinised of indeterminate gender but defined by reference to type species

<i>Diplacodes</i>	<i>Lestoides</i>
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NEUTER

From Greek second declension *-ov* transliterated to *-on* but become a genus-group noun by definition

<i>Aciagrion</i>	<i>Agrion</i>	<i>Austroagrion</i>	<i>Austrocoenagrion</i>
<i>Caliagrion</i>	<i>Ceriagrion</i>	<i>Chorismagrion</i>	<i>Coenagrion</i>
<i>Pseudagrion</i>	<i>Xanthagrion</i>		
<i>Brachytron</i>			

From Greek second declension *-ov* latinised to second declension *-um*

Orthetrum

From Greek neuter nouns of the third declension in *-α*, which have dental stems in *-τ*

<i>Trapezostigma</i>	<i>Zyxomma</i>
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Appendix 5

English and Latin equivalents of the Greek alphabet

		Transliterated	Pronunciation	Latinised			Transliterated	Pronunciation	Latinised
α	alpha	a	father	a	μ	mu	m		m
αι ⁱ				hae	ν	nu	n		n
αυ		au			ξ	xi	x		x
β	beta	b		b	ο	omicron	o	off	o
γ	gamma	g		g	ό				ho
δ	delta	d		d	οι		oi		oe
ε	epsilon	e	end	e	ον ^{iv}		on		um
ε̇				he	ου		ou		u ^v
ει		ei		i	π	pi	p		p
ευ		eu		eu	ρ	rho	r		r
ζ	zeta	z		z	ρ̇ ^{vi}				rh
η	eta	e	see	e	σ, ς ^{vii}	sigma	s	say	s
η ⁱⁱ				a	τ	tau	t		t
ή				he	υ	upsilon	u	put ^{viii}	y
θ	theta	th	thick	th	ύ				hy
ι	iota	i, j ⁱⁱⁱ		i	φ	phi	ph		ph
ι				hi	χ	chi	ch	Bach	ch
κ	kappa	k		c	ψ	psi	ps		ps
λ	lambda	l		l	ω	omega	o	grow	o

ⁱWhen a Greek word starts with a vowel it is marked with a diacritic to indicate whether it is aspirated (spiritus asper ') or not (spiritus lenis '). If the word starts with a diphthong the diacritic is placed on the second letter.

ⁱⁱη in the final position latinises to *-a*.

ⁱⁱⁱThe Romans in antiquity had only one letter *i* and one letter *u*. Each could be used as vowel or a consonant. However in mediaeval times people found that it was easier to distinguish between the vowel *i* and the consonant *j* as well as between the vowel *u* and the consonant *v* (and later *w* which was pronounced in a different way). As this later tradition was followed into modern times, it is maintained in scientific names, whereas in classical philology the notation of antiquity was revived.

^{iv}ου in the final position latinises to *-um*; ος latinises to *-us* as well.

^vlatinises to a long *u* as in through.

^{vi}ρ always bears the spiritus asper when it is the first letter of a word.

^{vii}Of the two forms, σ is used as the first letter or in the middle of a word and ς at the end only.

^{viii}In early Greek υ was pronounced as a short *u*, but later as the *y* in pyramid. Ypsilon is the common transliteration in German and some other European languages.