

AGRION

NEWSLETTER OF THE WORLDWIDE DRAGONFLY ASSOCIATION

PATRON: Professor Edward O. Wilson FRS, FRSE

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AGRION

NEWSLETTER OF THE WORLDWIDE DRAGONFLY ASSOCIATION

AGRION is the Worldwide Dragonfly Association's (WDA's) newsletter, published twice a year, in January and July. The WDA aims to advance public education and awareness by the promotion of the study and conservation of dragonflies (Odonata) and their natural habitats in all parts of the world. AGRION covers all aspects of WDA's activities; it communicates facts and knowledge related to the study and conservation of dragonflies and is a forum for news and information exchange for members. AGRION is freely available for downloading from the WDA website at http://worlddragonfly.org/?page_id=125. WDA is a Registered Charity (Not-for-Profit Organization), Charity No. 1066039/0.

Editor's notes

Keith Wilson [kdpwilson@gmail.com]

Conference News

4th European Congress on Odonatology, Tyninge, Sweden was held 11-14 July, 2016. See ECOO 2016 web site at: [<https://ecoo2016.wordpress.com/>] for details of programme, abstracts and news of conference field trips. **ECOO 2018** is scheduled to be held in Brno, Czech Republic.

XXV International Congress of Entomology, Orlando, Florida, USA was held 25-30 September 2016. A digital copy of the ICE 2016 programme book can be downloaded from the conference web site at: [<http://ice2016orlando.org/>]. **Entomology 2017** is scheduled to be held in Denver, Colorado, USA, 5-8 November 2017; for further information see Entomological Society of America's web site at: [<http://entsoc.org/events/annual-meeting/>].

The International Congress of Odonatology 2017 (ICO2017)

The International Congress of Odonatology 2017 (ICO2017), originally scheduled to be held in Algeria, will be held in the Gillespie Centre at Clare College, Cambridge from 15-20 July 2017. For further information see page 8 and the ICO2017 web site at [<http://www.ico2017.org/>].



ICO 2017
Clare College
Cambridge

Newly formed regional Odonata institutions and their meetings

This issue provides an account of the establishment and subsequent first meeting of the Sociedad(e) de Odonatología Latinoamericana (SOL) at Jundiaí, Brazil in August 2016 (see page 22) and the third meeting of DragonflyIndia in Gorumara National Park, West Bengal, which was also held in August 2016 (see page 28).

Stories from social and cultural odonatology & Roland A. Müller Obituary

In this issue there is a third story by Matti Hämäläinen, in his series of *Stories from social and cultural odonatology*. The article is titled: *The genus name Kirby-Gomphus – the ironic culmination of Ferdinand Karsch's critical polemic on W.F. Kirby's work* (see page 16). This is another fascinating tale that provides a window onto past odonatological rivalries and reveals some of the strong characters that helped to establish early dragonfly taxonomy. In this case the two rivals were both very capable polymaths!

Matti and Jan van Tol have also provided an obituary for Roland A. Müller (1936-2016) who collected many odonates from the Philippines many of which were described by Matti and Jan.

Cover photo: *Amphithemis vacillans*, Gorumara National Park, West Bengal. This species is known from northeast India and Myanmar but unrecorded since the 1930s until recently. After a gap of almost seventy years this species has been recorded from West Bengal and Assam, and during the recent DragonflyIndia Meet held in Gorumara National Park, West Bengal, 26-29 August, 2016 (see page 28). Photo credit: Prosenjit Dawn.

European country-based Odonata societies and their journals

Geert De Knijf has kindly contacted the editors of a number of country or region-based European Odonata journals and bulletins requesting basic information and subscription costs for their respective publications and the responses received are reported here. The profiled journals and bulletins include *Boletín ROLA*, Andalusia, Spain (see page 41), *Martinia*, Journal of the French Society of Odonatology (see page 38), *Journal of the British Dragonfly Society*, UK (see page 3), *Brachytron*, Journal of the Dutch Dragonfly Society (see page 44) and *Libellula* the Journal of the Society of German-speaking Odonatologists (see page 39). Brief notes are also provided for the journal *Crenata* from Finland (page 37), the journal *Odonatrix* from Poland (page 37) and the bulletin *Erjavecija* (page 39), published by the Slovenskega odonatološkega društva (Slovene Odonatological Society).

WDA's International Journal of Odonatology (IJO)

The latest issue of our journal was published in December 2016 (19:4) and is now being shipped to subscribing members. John Abbott took over from Mike May as Editor-in-Chief of *IJO* at the beginning of 2016. Mike served very ably as Editor of *IJO* from the beginning of 2011 when he took over from Reinhard Jödicke. We owe both Mike and Reinhard a great deal of thanks for firmly establishing *IJO* as a notable and significant journal, which is included in the Thomas Reuters Science Citation Index (SCI). Mike steered the transition from self-publication of *IJO* in 2010 to using the professional academic publishing firm of Taylor & Francis (UK) for the production and distribution of *IJO* from 2011. Members who choose a membership option that includes a subscription to the journal receive both online access and a print subscription. Access to the online content is now provided to subscribing members via 'log in' on the WDA website. John Abbot, the new Editor of *IJO* welcomes manuscripts from WDA members; please visit the journal's website [www.tandfonline.com/tijo] for further information about the journal and the submission process. The journal now offers free colour figures in print at the discretion of the Editor. For further information on our WDA journal please also see the *IJO* profile on page 45.

WDA website

The WDA website can be accessed at [<http://worlddragonfly.org/>]. The site contains general information about dragonflies and the Society including, the composition of its WDA Board of Trustees, details of its WDA Conservation and Research Grants, WDA meetings and publications. WDA membership application forms can be completed at [http://worlddragonfly.org/?page_id=141] or downloaded for completion and submission to WDA Secretary at [http://worlddragonfly.org/wp-content/uploads/2013/11/membership_application_form.pdf].

Renewal of membership to WDA/IJO

Renewal notices for 2017 have been sent out. If you did not receive one, please get in touch with the WDA secretary at: wda.secretary@gmail.com. Your membership is vital to keeping the WDA/*IJO* active and we hope that you renew your membership this year. Even though many of you have access to *IJO* through your institution, your personal subscription is vital for the work of the WDA. It helps to support our grants program that supports research, education and conservation initiatives (see the two reports of grants given in 2016 on page 26 & page 28) and our Sponsored Memberships program that makes membership in the WDA and a subscription to *IJO* available to those who cannot otherwise afford it. Your personal subscription to WDA/*IJO* also supports the WDA's involvement in the International Congresses held every two years. Even a regular membership without a subscription to the journal helps to support the initiatives of the WDA including *Agrion*. And WDA members are eligible to apply for Grants to support their research efforts.

Next issue of AGRION

For the next issue of *AGRION*, to be published at the beginning of July 2017, please send your contributions to Keith Wilson [kdpwilson@gmail.com] or Graham Reels [gtreels@gmail.com]. All articles, information and news items related to dragonflies or of interest to WDA members are most welcome and will be considered for publication. Please send all text and figure captions in a Word file by email. Please do not include artwork with the text but provide a separate file or files, ideally in a compressed format (e.g. 'tiff', 'jpeg' or 'gif').

If you have an odonate photo illustrating any rarely observed aspect of dragonfly biology, or an unusual species, or simply a stunning dragonfly shot, please submit it for consideration for publication on the front cover of *AGRION*.

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Sponsor student accommodation at ICO 2017, Clare College, Cambridge

ICO 2017 is being held in Cambridge, England during 15-20 July, 2017 (see page 8 for further details) and although we have done our best to obtain competitive prices, accommodation is still on the high end, especially for students. One of the mandates of the WDA is to promote the study of the Odonata and to this end we need to encourage and support our student members. As detailed under *Support* on the ICO2017 web page [<http://www.ico2017.org/support/>] WDA is offering to provide five people with fully sponsored participation in the entire congress (Registration, mid Congress trip, dinner). To apply for one of these grants, please follow the procedure outlined on the ICO 2017 homepage under *Support* [<http://www.ico2017.org/support/>].

We would also like to provide additional financial support for student accommodation and ask that you consider sponsoring one-night's accommodation for a WDA Student Member attendee to help to fray the costs. A US\$25 or £20 donation would help fund half of the amount required per night (based on a student sharing in a triple ensuite). For further information and sponsor payment details please check the congress homepage under *Support* [<http://www.ico2017.org/support/>].

Odonatological Abstract Service (OAS)

The first issue of the OAS was published in July 2000 by the International Dragonfly Fund (IDF) in cooperation with the WDA. The service was suspended in 2016 due to a lack of editors to continue the service. All the published abstracts to date have been uploaded to the WDA web site and are available to download in the members' area [<http://worlddragonfly.org/>]. We owe a great deal of thanks to past Editors of the OAS, namely Dr. Martin Lindeboom, Dr Klaus Reinhardt, Martin Schorr and Dr Milen Marinov. There are several alternate ways to access papers, dissertations, technical reports etc. including Thomson Reuters' Web of Science, Elsevier's Scopus, Google Scholar [<https://scholar.google.co.uk/>], and CiteSeerX. Nevertheless, if anyone has access to a scientific citation indexing service, and would like to continue the OAS service for our members, the WDA Board of Trustees would be very happy to hear from you. If you are interested and willing please contact the WDA Secretary Jessica Ware [wda.secretary@gmail.com].

Nominations to the WDA Board of Trustees 2017-2019

The new WDA Board of Trustees, except for the President Elect, will take up their positions for a 2-year term at the next Biennial General Meeting to be held during ICO2017 at Clare College, Cambridge in July 2017. The existing board members have agreed to serve for a further two years, except for Richard Rowe (Congress Coordinator). Javier Muzon has been proposed and seconded for Congress Coordinator and Frank Suhling has agreed to stand for election to the post of President Elect. If any WDA member wishes to nominate another WDA member for any position on the Board of Trustees (except for President and Immediate Past President) please see page 48 for more information and nomination procedures.

Change of address

Sönke Hardersen [s.hardersen@gmx.net], Via Gianbattista Tiepolo 22, 25015 Desenzano del Garda (BS), Italy.

Sponsored memberships and WDA grants

**Nancy van der Poorten [nmgvdp@netscape.net]
President-elect & Chair Conservation & Fund Committee**

The WDA offers Sponsored Memberships to individuals who find it difficult to join or to remain in the WDA due to currency or other restrictions. If nominated and accepted, the individual will have their membership fully supported by the Association and its members for a maximum of three years, to be renewed annually. Potential nominees include individuals who generally fulfil either (i) or (ii) AND either (iii) or (iv) of the following criteria: (i) odonatists of considerable standing, including those whose membership of WDA would benefit the Association or its aims; (ii) odonatists, recommended by a WDA member, who are engaged in active research or in dragonfly conservation, including students who have been recommended by their faculty; (iii) odonatists residing in countries where currency restrictions are such that payment of subscriptions is virtually impossible; (iv) odonatists whose financial circumstances make the normal WDA subscription beyond their reach.

The WDA has 22 such memberships available that include a subscription to *IJO*. WDA members are invited to nominate suitable candidates. Please check the criteria which are outlined in full on the WDA website [http://worlddragonfly.org/?page_id=17].

The Sponsored Memberships program is administered by the Conservation and Fund Committee that is currently chaired by the President-elect, Nancy van der Poorten. Two WDA members are needed to sit on this committee. It is expected that the amount of work will be minimal. Once applications are received, the committee reviews them and makes a recommendation to the Board of Trustees. If anyone is interested, please contact the WDA Secretary [wda.secretary@gmail.com], or Nancy directly at: [nmgvdp@netscape.net].

Committee members are also needed for the Conservation and Fund Committee to review grant applications. The work is minimal; when an application is received, the committee reviews it and sends a recommendation to the Board of Trustees who vote on it. Generally two or three grants are given each year. If anyone is interested, please contact the WDA Secretary [wda.secretary@gmail.com] or Nancy [nmgvdp@netscape.net].

Applications for the WDA Conservation and Research Grants 2017 are now being accepted

**Nancy van der Poorten [nmgvdp@netscape.net]
President-elect & Chair Conservation & Fund Committee**

With the aim to stimulate research and conservation of dragonflies, the WDA offers grants varying from €500-1000 to members of the WDA. These grants are mainly aimed at projects for which no other funding is possible, although co-funding from other appropriate sources, for instance, the International Dragonfly Fund (IDF), is possible. Straightforward faunal surveys in well-studied areas will not be considered, but funds may be awarded for equipment, supplies, and travel expenses. No funding is available for visits to symposia but it is possible to receive funding when organising a symposium on dragonflies.

Applications can be submitted throughout the year to the Chair of Conservation and Fund Committee via the WDA secretary [wda.secretary@gmail.com]. Please allow three months for processing of your application. Details on how to apply are given on the WDA website: [http://worlddragonfly.org/?page_id=15Members' update].

WDA Constitution

The WDA constitution and a 'record of constitutional changes' are now available on the WDA website [http://worlddragonfly.org/?page_id=111].

The Odonata of Nepal - Blog

Nancy van der Poorten [nmgvdp@netscape.net]

Dr Karen Conniff has started a blog on the Odonata of Nepal [<http://odonatanepal.blogspot.com/>]. It is a work-in-progress, but is richly illustrated with Karen's own photographs and observations. Karen lived in Nepal from 1991 to 1995 and again from 2011 to the present; the intervening years were spent in Sri Lanka where Karen studied the dragonflies of that country.

Though the odonate fauna of Nepal is reasonably well-studied, there are still huge areas that have not been surveyed and Karen has photographed many individuals that she is unable to identify. She is keen to track down *Epiophlebia laidlawi* and would love to hear from anyone odonating in Nepal. You can contact her at: karoconniff@gmail.com.

Karen has also contributed many photographs to AllOdonata [www.alloodonata.com] and has co-authored many papers and books on the Odonata of Sri Lanka, most recently "*Taxonomy and molecular phylogeny of the Platystictidae of Sri Lanka (Insecta: Odonata)*" by Bedjanic et al. [Zootaxa 4182(1): 001–080]. She also writes a blogspot titled: "Walking and Wondering" [<http://karoconniff.blogspot.ca/>] that details her travels. Her husband Dr David Molden is the Director General of ICIMOD (International Centre for Integrated Mountain Development) and travels extensively to remote places in India, China, Bhutan, Bangladesh, Myanmar, Pakistan and Nepal. Karen often accompanies him and documents their trips with stunning photographs and interesting stories. Though there are not many photos of odonates, the stories of their travels are remarkable and the blog is well worth a look.

Karen also recommends these blogs:-

<http://vietodonata.blogspot.in/> by Sébastien Delonglée

<http://thaiodonata.blogspot.in/> by Dennis Farrell

<http://www.indianodonata.org/> edited by S. Joshi, P. Koparde, K.A. Subramanian and P. Roy.



Lamelligomphus risi, found at a stream on the Pokhara Road near River View Resort, Nepal. Photo credit: Karen Conniff.



ICO 2017
Clare College
Cambridge

2017 International Congress of Odonatology Clare College, Cambridge, UK, 15-20 July 2017

Dr. Richard Rowe: coordinator@ico2017.org
Prof. Boudjéma Samraoui: programme@ico2017.org

Website: [<http://www.ico2017.org/>]

The 2017 International Congress of Odonatology will be held from 15 through 20 July 2017 in the Gillespie Centre at Clare College Cambridge, UK. As most of you will know this Congress was originally set down for Annaba in Algeria. Widespread, but evidence-free, perceptions of safety led us to switch the venue to Cambridge in the UK.

Cambridge is an old university town. The university was created when about 40 years after the foundation of Oxford University there was dissatisfaction with prices being charged by the townsfolk for providing services. Some scholars loaded wagons and headed for Ely, a rich ecclesiastic centre of learning. Their caravan was unable to cross the flooded River Cam, so they unpacked and set up their new university at Cambridge. Rivalry between the two centres of learning runs deep. To Cambridge, Oxford is 'that other place', Oxford dons have been heard referring to Cambridge as 'The Fenland Polytechnic' ... notwithstanding that frequent, almost obligatory, exchanges of scholars between these universities has been a feature of the past 800 years. Major buildings and institutions in Cambridge date from the thirteenth century. Colleges were set up some time after the foundation of the University to provide accommodation and support for scholars and students. Peterhouse (est 1284) is the oldest college. Clare is next oldest, being founded in 1326 [visit <http://www.clare.cam.ac.uk/College-History/>]. There is much to see.

Many contributors to dragonfly science are associated with Cambridge: Tillyard, Wigglesworth, Moore, Corbet, Watson, Miller, Ellington, Laughlin to name some of the more prominent. The D.A.L. Davies collection is deposited in the Zoology Museum.

The Congress will be held in The Gillespie Centre, situated in the Memorial Court of Clare College. This is a modern, purpose built, conference centre. The auditorium holds 150, so with various 'overheads' we can accommodate a maximum of 140 registrants (this is slightly more than attended the last European Congress held in Freising). To avoid the potential for disappointment people are encouraged to register early. The Congress Dinner will be held in the Dining Hall of Caius College (Philip Corbet's college). The Dining Hall can accommodate 160 persons for a formal dinner.

Organisation of the Congress varies slightly from previous events. We have already arranged three special sessions featuring specially invited participants. These sessions will consider flight in dragonflies, vision in dragonflies, and a review of advances in fields that Philip Corbet was particularly involved in. The general programme of contributed papers will be arranged as a mixture of focussed and general sessions.



We do not propose to hold a post congress tour. There are three good reasons for this decision:

1) there is nobody to run it; 2) the interesting thing about the UK fauna is that it represents limits, not that it is unusual; 3) there are many fun places to go, people would be better organising themselves, choosing and going.

Help

We are desperately short of assistance 'on the ground'. All the main structural requirements for the Congress are in place, but the organisers need people to take over local responsibility for numerous tasks so we can focus



Accommodation

As a condition for use of the Gillespie Centre we are required to take 40 rooms in Clare College. These rooms are located in Memorial Court within a few minutes walk of the Centre. To maintain a 'residential' structure we have arranged further rooms in Harvey Court, the adjacent Caius College site. Other accommodation is available in Cambridge ... see the *Accommodations* page on the Congress web site.

on carrying out special functions that only we can do. The planned tasks are straightforward and would take a few hours each week; they would most appropriately be done by someone in England.

Most immediately we seek someone to collate registrations and ensure the spreadsheet data is 'clean'; someone to maintain the accommodation booking request spreadsheet; and someone able to respond to basic email queries (either to answer or to triage and kick up stairs), would take a load from our shoulders.



Support

Where required letters of support will be issued. Method of application is on the web page under *Support*. WDA is offering grants to five people, providing fully sponsored participation in the entire congress (Registration, mid Congress trip, dinner). GdO is providing €1,000 to assist people to attend. GdO and SOL are aiding selected student members. Other national societies may assist, but this isn't yet clear.

These grants will be administered by the scientific committee, with the intention to promote (preferably young) researchers from developing countries without their own funding possibilities, and who, from a scientific point of view, should attend ICO 2017. To apply for one of these grants, please follow the procedure outlined on the ICO 2017 homepage under *Support*.

Please check the congress homepage [<http://www.ico2017.org/>] for more detailed information on prices, fees, deadlines and registration, etc.; the homepage is regularly updated and filled with additional information at short intervals.

Overview on the preliminary congress agenda:

- 15 July 2017: Arrival, registration, informal welcome from 5pm in The Garden Room
- 16 July 2017: Morning – registration, opening, plenary talk, oral session
Afternoon – session 'Dragonfly flight' celebrating the work of Charlie Ellington
- 17 July 2017: Morning – oral sessions, plenary talk
Afternoon – session 'Dragonfly vision'
- 18 July 2017: Mid-congress field trip
- 19 July 2017: Oral sessions, poster session,
- 20 July 2017: Oral sessions, plenary talk,
Afternoon – session 'Ten years since Philip Corbet', closing
Evening – Congress Dinner, Caius College Dining Hall
- 21 July 2017: Departure

Timings of the 10th WDA Biennial General Meeting and the IUCN Dragonfly Specialist Group meeting are yet to be set. Looking forward to see you in Cambridge!

The congress logo is a stylised Anax imperator male to represent Philip Corbet's pioneering work on seasonal regulation in this species. Philip's Ph.D research was carried out in the Zoology Department at the University of Cambridge under the supervision of Vincent Wigglesworth, the renowned insect physiologist. Philip was his only ever ecology student.



Obituary: Roland A. Müller (1936–2016)

Matti Hämäläinen [matti.hamalainen@helsinki.fi] &
Jan van Tol [jan.vantol@naturalis.nl]

Roland Albert Müller died in St Gallen, Switzerland on 17th July 2016 at the age of 80 years following a long illness. From 1985 to 1998 he made an outstanding contribution to the science of odonatology by amassing a very large collection of dragonflies from the Philippines. This collection has greatly increased our knowledge of the rich diversity of the Philippine odonate fauna with its high proportion of endemic species. Roland Müller also participated in publishing some of the results of his collecting work, authoring or co-authoring the descriptions of five of the numerous new odonate species present in his collections.

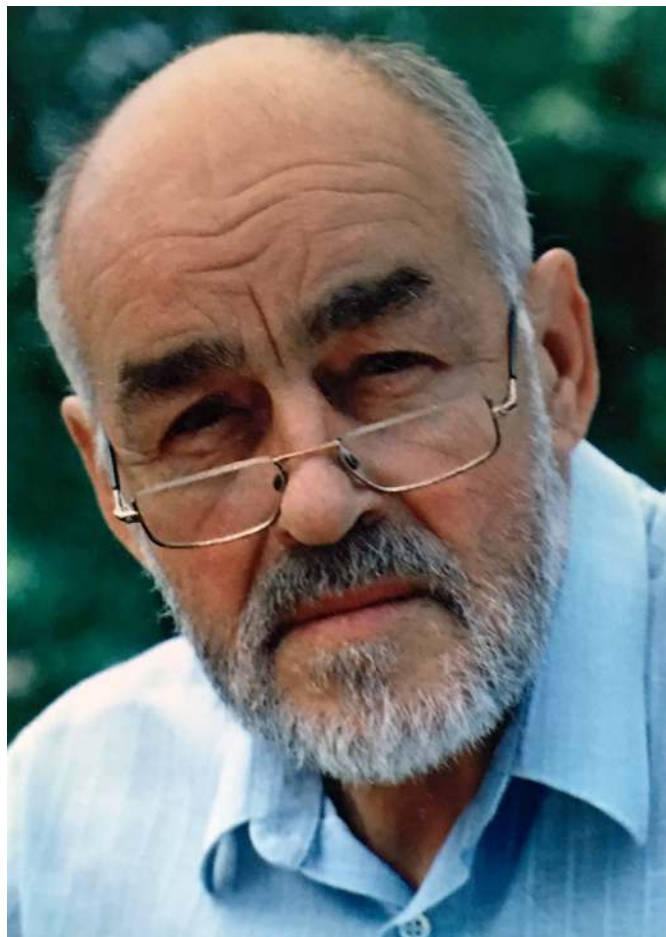
Family and career

Roland Müller was born on 9th January 1936 in Buriel, a small village in Thal municipality in the Swiss canton of St Gallen. His parents' house was rather isolated, being a few kilometres away from the centre of the village in the direction of Altenrhein. Throughout his school days Roland had to make the 40 minute walk to the school and back four times a day as children returned home to have lunch, a common habit in Switzerland even today. Roland's father worked in the factory of *Flug- und Fahrzeugwerke Altenrhein*, also located in Thal municipality. The family was rather poor and the second world war raging throughout the surrounding continent of Europe made conditions worse.

Roland's interest in nature developed early. By his earliest school years he already knew all the local birds and could recognize their calls. Soon he also became interested in entomology and started to collect butterflies, moths and other insects. In those days the region of Altenrhein encompassed much marshland and was largely still in pristine condition with numerous streamlets and small ponds. Roland came to know every corner of this area. His interest in animals may also have been partly evoked by his father's hobby of keeping tropical cage birds. At home the family also raised rabbits, sheep, chickens and ducks which helped to bring food to the table during the difficult war years. When Roland finished school in the beginning of the 1950s the family could not afford to send him to the lyceum at St Gallen. Instead, he was trained to become a locksmith and worked in this occupation at *Flug- und Fahrzeugwerke Altenrhein*. Later he worked for many years as a lift maintenance technician.

In February 1971 Roland Müller was appointed as a preparator (taxidermist) at the *Naturhistorisches Museum St. Gallen* (presently *Naturmuseum St. Gallen*), having earlier taken a three month course on taxidermy at the *Naturhistorisches Museum Bern*. His main duty was to restore and take care of the most valuable animal specimens which had become mouldy as a result of water leaks in the museum building in 1966 and 1970. These specimens were moved to temporary shelters in a house at Rosenbergstrasse 89, where Roland worked until he secured a position at *Staatsarchiv St. Gallen* on 1st November 1986. During his last year in the service of the museum the collections were moved back to the renovated museum at Museumstrasse 32. At *Staatsarchiv* Roland's diverse duties included microfilming, inventory of artwork and illustration of publications with photos. He retired from this position for health reasons on 1st February 1999.

In 1962 he married Myrtha Blum and the couple had four children, two sons and two daughters. The family lived at Kirchweg in St Margarethen, ca. 30 km east of St Gallen at the Austrian border. In 1966, when their youngest daughter was still a baby, Myrtha fell ill, dying three years later in 1969 at the age of just 33 years.



Roland Müller in the mid-1990s.

In 1972 Roland married Anna-Maija Kaltula, a 21-year-old Finn who had come to Switzerland in 1969 and met Roland in the same year. Their son Jorma was born in 1972. In March 1977 the family moved to a large house at Rehetobelstrasse in St Gallen, where Roland lived for the rest of his life. After their marriage Roland occasionally used the combined, 'alliance' name Roland Müller-Kaltula, following the Swiss tradition. Although it is not an official surname under Swiss law, it can nevertheless be used in passports and identification cards.

Entomological activities and travels

As already noted, Roland Müller began collecting butterflies and moths at an early age. In the late 1960s he became interested in moth collecting by light and he compared the effectiveness of different light sources for attracting moths. He designed a special 'light tower' trap for moth collecting.

With this contraption moths were caught alive and those specimens not needed could be released unharmed. He published the results of his comparison and instructions for constructing the light tower in an article in *Entomologische Zeitschrift* in 1970. In 1990 he published (with Kurt Grimm) a paper on the nocturnal Lepidoptera fauna of Ruggeller Riet in Liechtenstein based on collections made in March–November 1980; a total of 344 Macro-Lepidoptera and 190 Micro-Lepidoptera species were listed. He also contributed to the inventory of the butterfly fauna of northeastern Switzerland published by the *Entomologischer Verein Alpstein* as a book (1989): *Inventar der Tagfalter-Fauna (Lepidoptera) der Nordostschweiz und Veränderungen seit der Jahrhundertwende*.

Roland had his first experience with the fauna of the tropics during his visits to Colombia and Ecuador in 1974 and to New Guinea and the Bismarck Archipelago in 1979. However, during these visits he was only able to carry out very limited collecting of insects and other animals. In 1980 and 1988 he visited the United States with his wife. In 1985 he undertook a two and a half month long zoological expedition to the Philippines, visiting Mindanao, Palawan and Luzon (Table 1). The local arrangements were facilitated by the Gorostiza family, traders of birds and mammals in Manila, with whom Roland had been in contact from the start of his museum career in the beginning of the 1970s. Collecting moths and butterflies, as well as birds and mammals, was the main target of this expedition. However, at the suggestion of Bastiaan Kiauta, he also collected dragonflies.

Before his second expedition to the Philippines in July 1986, Roland contacted Matti Hämäläinen (again on the advice of Bastiaan Kiauta) and asked whether he would be willing to identify the Philippine dragonflies. This was to be the start of a fruitful collaboration. In Roland's 1985 expedition he collected a total of 344 dragonfly specimens representing 59 species and in 1986, 533 specimens of 45 species. As it turned out that these two collections included a dozen new species, dragonflies quickly became Roland's main entomological interest.



Roland Müller in front of his tent at Salacafe in South Cotabato province in Mindanao in April 1985.

Table 1. Roland Müller's zoological expeditions to the Philippines. Only the islands where field work was carried out are listed. The dates include the period of the actual field work only.

1985. 30 March – 9 June. Mindanao, Palawan, Luzon.

1986. 12 July – 4 August. Mindanao, Sibuyan.

1987. 18 March – 11 April. Sibuyan.

1988. 11 May – 1 June 1988. Homonhon.

1990. 6 June – 2 July 1990. Tawi Tawi, Bongao, Sibutu. [11 July – 4 August in Micronesia]; 5 August. Luzon.

1991. 13 May – 13 July 1991. Mindoro, Cebu, Palawan, Luzon.

1995. 28 March – 25 April 1995. Mindanao.

1996. 20 May – 18 June 1996. Negros, Mindanao.

1997. 7 March – 9 April 1997. Luzon, Samar.

He made seven further expeditions to the Philippines in 1987 – 1997 (Table 1) and he hired a number of local collectors to catch dragonflies for him from various islands on a regular basis. Three of these collectors, Adrian Gorostiza, Theobaldo B. Borromeo and Alex Buenafe, also participated as keen team members in most of Roland's own expeditions. In some of these expeditions his wife Anna-Maija and/or his son Jorma also participated. In addition to dragonflies Roland continued to collect Lepidoptera and other insects and occasionally also vertebrate animals, but the dragonflies were his main target. As part of his 1990 expedition he also visited Micronesia (Kosrae, Pohnpei, Truk) with his family and made a small dragonfly collection (ca 150 specimens of 11 species) there.

Roland had already reserved flights for a new five week expedition to the Philippines scheduled to begin on 16th May 1998, when in April 1998 he suffered a severe heart attack which forced him to cancel his travel plans. At this time, unable to travel to the field himself, he also decided to stop financing his Philippine dragonfly collectors. Thus a shipment of specimens collected in Surigao del Sur in Mindanao in the beginning of April 1998 was the last shipment he received. By then, the number of Philippine odonate specimens collected had grown to ca 35,000, a total of 33,257 of which had been examined and where possible identified by Matti Hämäläinen. The entire collection includes ca 260 species, some 80 of which represented undescribed species when collected.

In 1997 Matti Hämäläinen and Roland Müller published a 'Synopsis of the Philippine Odonata' in *Odonatologica* (26: 249–315). A total of ca 290–295 species (including the undescribed ones) collected in 40 different islands in the Philippines were listed. Roland Müller's collections accumulated before 1st October 1996 formed a major part of the data source for this work. Had the authors known that Roland's collecting activity would soon end, the publication of the synopsis would have been delayed in order to cover his results completely.

At the suggestion of Matti Hämäläinen, Roland Müller contacted the Leiden Museum in January 1998 to see if they were interested in purchasing his odonate collection. Earlier plans of depositing the collections in the Senckenberg Museum in Frankfurt am Main fell through. The Leiden Museum has a long history in the study of Oriental dragonflies. The work of M.A. Lieftinck, although focussing on the fauna of the Dutch East Indies (present Indonesia), also to a lesser extent covered the Odonata of surrounding countries, such as the Philippines. These studies were based mainly on specimens preserved in other museums, including the Noona Dan expedition by the Copenhagen museum (published in *Steenstrupia* 3 (1974): 111–147). The Leiden Museum was therefore very keen to obtain Müller's collection. The accession of this huge collection would greatly improve the museum's holdings of species of Southeast Asia, especially as work by Hämäläinen had revealed many undescribed species. However, it took the museum some time to find the financial resources to meet the asking price. It was certainly one of the most expensive invertebrate collections ever purchased and after the resources were found, the collection was finally moved to Leiden in early May 1999. Although the Leiden museum had only purchased the odonates, Roland included significant numbers of other taxa as well. The records of the accessions of the museum mention 24,000 specimens of Lepidoptera and 2,170 specimens of Coleoptera and the collection also included over 500 specimens of other insect orders. The import into the EU of a small number of bird skins caused problems with customs since relevant permits were lacking. Nevertheless, they too were transferred to Leiden and are now preserved there.

Virtually all odonate specimens were preserved in archival quality transparent envelopes. With his expertise obtained during his years working for the *Staatsarchiv*, Roland was aware of the value of using high quality plastics and paper for scientific collections. All his specimens were preserved in these small envelopes, which, once in Leiden were put in the standard-size 5x3 inch envelopes (glassine paper or Mylar transparent envelopes), and all provided with standardised labels.

Before the transfer of the Odonata collections to Leiden in 1999, 22 new Philippine species and one species from Hong Kong had already been described based wholly or partly on specimens in Müller's collection (Table 2). A few of the new species descriptions were authored or co-authored by Roland Müller. Up to the present the number of new Philippine species described from his material has increased to 52: 49 Zygoptera and 3 Anisoptera (Table 2). All these species are endemic to the Philippines. Moreover a few new species have been described based on later collected material without considering specimens in Müller's collection, collected earlier. Müller's collection still includes at least some 20 undescribed new species, from genera such as *Pericnemis* (formerly listed as undescribed *Amphicnemis* species), *Drepanosticta* (*halterata*-group), *Risioicnemis*, *Chlorogomphus*, *Oligoaeschna*/*Sarasaeschna* and *Idionyx*. The speciose *Pericnemis* material is expected to be published soon by Reagan Villanueva and Rory Dow. Besides the large number of new species included, the collection is also valuable as it includes long series of specimens of many widespread species collected on various islands. This enables studies on the geographical and individual variability of many species, such as *Rhinocypha colorata*.

Fortunately for odonatology, Roland Müller's activity took place at a time when it was still possible to collect dragonflies in the Philippines without the impediment of excessive bureaucracy around collecting permits, the ever increasing 'red tape' which has already made biodiversity research for visiting entomologists virtually impossible, or turned it to illicit activity in the Philippines and many other tropical countries. During Roland's expeditions the local authorities, such as mayors and barangay heads, were always ready to give written

permits for collecting in areas under their control. In his last trip in 1997 Roland also experienced his small share of 'red tape' in Luzon. Officials in a remote corner of a national park in Sierra Madre mountain range denied Roland permission to collect any insect specimens there, since he did not have a proper permit from the park headquarters in Quezon City. On the other hand his Philippine guides were free to collect, since selling the insects to Roland was their occupation. Thus, it seems that the fierce restrictions as apply to scientific collecting are designed to exploit foreign visitors rather than achieve any local conservation goals! Roland spent the next day with his camera and he managed to capture photos of the extraordinarily structured, large euphaeid *Heterophaea barbata*, the first of their kind.



A male of *Heterophaea barbata* (Martin, 1902) photographed by Roland Müller in Aurora province in Luzon on 21 March 1997.

In some cases Roland arrived in the nick of time at small islands (Homonhon in 1988; Sibutu in 1990) to collect in the last remaining small remnants of rainforest; a few years later these had also been disturbed and exploited. In Homonhon he found a potentially endemic coenagrionid species, perhaps now extinct.

In all his expeditions Roland and his team always used public transport for local travel. Travelling long distances along winding mountain roads in a hot, overcrowded jeepney is no fun for a tall European with lots of luggage. The expedition party usually camped in tents in forested areas, usually near the houses of local people. Often the luggage was transported to campsites in a cart drawn by a water buffalo. Good contacts with local people facilitated field work and added security in remote areas. The only luxury for Roland was always at the end of the journey when he spent his two last nights in some 5-star hotel in Manila. But this only for a good reason. He needed convenient conditions for packing the collections and a luxury hotel could arrange a reliable and safe posting of the specimens to Europe.

The sale of the collection and his deteriorating health nullified Roland's plan for a distribution atlas of the Philippine dragonflies. The idea was proposed to him by some colleagues at the Second odonatological symposium of the Alps-Adriatic regional community in which Roland participated in Vienna in July 1996. Also a later (1999) plan of privately publishing a limited edition of a booklet on Samar dragonflies with 10 colour photo plates remained unaccomplished. However, in 2002 Roland opened a website (<http://www.odophil.ch/>) the contents of which include his travel diaries of the expeditions to the Sulu Archipelago in 1990, to Negros and Mindanao in 1996 and to Luzon and Samar in 1997. The illustrated accounts contain much information and many photos of dragonflies and their habitats. Also included is an account of the dragonfly fauna of Sibutu. Roland also planned to include diaries of the other expeditions, but this remained undone. The last updates to the website were in March 2007 when he added data on the numismatic content of the site; ancient coins and old medals were among his diverse interests.

During the last ten years of his life Roland also became interested in breeding tropical beetles, especially lucanids, carabids and dynastine scarabids. Via the internet he established contact with beetle breeders in Japan and started to buy living specimens at beetle auctions in Japan. He purchased some rare and expensive species. A Japanese friend organized his offers and sent the beetles to Roland. He not only bred these beetles, but also by purchasing preserved specimens he built a handsome collection of tropical Asian beetles of the families Carabidae, Lucanidae, Scarabaeidea and Buprestidae. Being no longer able to see these insect wonders in their tropical haunts, breeding living individuals and admiring specimens in cabinet drawers brought him some consolation and much joy. Roland also encouraged several young people to become interested in beetles. One of them was Tobias Mainda, who will soon publish his first new species, a staphylinid of the genus *Stenus* from the Philippines, to be named after Roland.

Roland's last years were a struggle against serious illnesses. From 2011 he had to visit a hospital three times a week for the rest of his life for hemodialysis. From summer 2012 he was confined to a wheelchair after foot amputation. Even this did not prevent his regular visits to Rome with his wife; Rome had become Roland's favourite place. His last visit there was in May–June 2016. On 16th July he visited the hospital for hemodialysis and returned home. In the evening he felt ill and was taken back to the hospital where he died of intestinal ischemia next day. We wish to extend our sympathies to his wife Anna-Maija and children Marcel, Jasmin, Roman, Annette

and Jorma.

Roland Müller's name will forever remain associated with a tremendous advancement of our knowledge of the odonates of the Philippines during the last 30 years. Four dragonfly species have been named in his honour: *Gynacantha rolandmuelleri* Hämäläinen, 1991, *Risocnemis rolandmuelleri* Hämäläinen, 1991, *Igneoctenidia pistor* (Gassmann & Hämäläinen, 2002) and *Drepanosticta pistor* Van Tol, 2005. The latter two are 'cryptic' eponyms, the Latin 'pistor' meaning 'Müller' in German. At least two other insect species have already been named after him, the caddisfly species *Goera rolandmuelleri* Malicky & Chantaramongkol, 1992 and the cicindelid beetle species *Thopeutica rolandmuelleri* Cassola, 2000.

Acknowledgements

We are grateful to Anna-Maija Müller-Kaltula for providing information on her husband's life and activities. Tobias Mainda gave details of Roland's interest in beetles. Albert Orr improved the English expression of the manuscript of the obituary.

Table 2. List of new dragonfly species named from specimens in Coll. Roland A. Müller.

All = the whole type series belongs to Coll. Müller.

Most = most specimens of the type series belong to Coll. Müller.

Part = part of the specimens of the type series belong to Coll. Müller.

* Holotype selected from specimens in Coll. Müller; all holotypes presently deposited at RMNH (Leiden).

Genus name in bold – a new genus based on the study of Müller's collections.

Note 1. Although in the original description the statement of the depository of the holotype is given as follows (or correspondingly): "deposited at present in coll. Roland A. Müller (St. Gallen, Switzerland), to be transferred to the Senckenberg Museum (Frankfurt/Main)", the holotype was transferred (in 1999) to Naturalis Biodiversity Center in Leiden (RMNH).

Note 2. The holotype (single specimen in the material) was collected in Hong Kong.

Calopterygidae

Neurobasis anumariae Hämäläinen, 1989

Most * Note 1.

Neurobasis subpicta Hämäläinen, 1990

Most * Note 1.

Chlorocyphidae

Cyrano angustior Hämäläinen, 1989

Part

Philosinidae

Rhinagrion reinhardi Kalkman & Villanueva, 2011

Part *

Rhinagrion schneideri Kalkman & Villanueva, 2011

Most *

Platystictidae

Drepanosticta acuta Van Tol, 2005

Part *

Drepanosticta aurita Van Tol, 2005

All *

Drepanosticta belyshevi Hämäläinen, 1991

All * Note 1.

Drepanosticta centrosaurus Van Tol, 2005

All *

Drepanosticta flavomaculata Van Tol, 2005

Most *

Drepanosticta furcata Van Tol, 2005

All *

Drepanosticta hermes Van Tol, 2005

All *

Drepanosticta krios Van Tol, 2005

Most *

Drepanosticta malleus Van Tol, 2005

All *

Drepanosticta moorei Van Tol & Müller, 2003

All *

Drepanosticta myzouris Van Tol, 2005

All *

Drepanosticta paruatia Van Tol, 2005

All *

Drepanosticta pistor Van Tol, 2005

All *

Drepanosticta quadricornu Van Tol, 2005

All *

Drepanosticta rhamphis Van Tol, 2005

All *

Drepanosticta trachelocele Van Tol, 2005

All *

Protosticta lepteca Van Tol, 2005

All *

| | |
|----------------------------------------------------------------|---------------------|
| <i>Sulcosticta pallida</i> Van Tol, 2005 | All * |
| <i>Sulcosticta striata</i> Van Tol, 2005 | All * |
| <i>Sulcosticta viticula</i> Van Tol, 2005 | All * |
| Platycnemididae | |
| <i>Asthenocnemis linnaei</i> Gassmann & Hämäläinen, 2008 | All * |
| <i>Igneocnemis antoniae</i> (Gassmann & Hämäläinen, 2002) | All * |
| <i>Igneocnemis calceata</i> (Hämäläinen, 1991) | All * Note1. |
| <i>Igneocnemis fuligifrons</i> (Hämäläinen, 1991) | All * Note1. |
| <i>Igneocnemis kaiseri</i> (Gassmann & Hämäläinen, 2002) | Most * |
| <i>Igneocnemis nigra</i> (Gassmann & Hämäläinen, 2002) | All * |
| <i>Igneocnemis pistor</i> (Gassmann & Hämäläinen, 2002) | All * |
| <i>Igneocnemis plebeja</i> (Hämäläinen, 1991) | All * Note1. |
| <i>Igneocnemis rubricercus</i> (Gassmann & Hämäläinen, 2002) | All * |
| <i>Igneocnemis siniae</i> (Hämäläinen, 1991) | Most * Note1. |
| <i>Risioecnemis arator</i> Hämäläinen, 1991 | Most * Note1. |
| <i>Risioecnemis gracilis</i> Hämäläinen, 1991 | All * Note1. |
| <i>Risioecnemis kiautai</i> Hämäläinen, 1991 | All * Note1. |
| <i>Risioecnemis moroensis</i> Hämäläinen, 1991 | All * Note1. |
| <i>Risioecnemis praeusta</i> Hämäläinen, 1991 | All * Note1. |
| <i>Risioecnemis rolandmuelleri</i> Hämäläinen, 1991 | All * Note1. |
| <i>Risioecnemis varians</i> Hämäläinen, 1991 | All * Note1. |
| Coenagrionidae | |
| <i>Pandanabasis curacha</i> Villanueva, 2012 | Most * |
| <i>Pandanabasis daku</i> Villanueva, 2012 | All * |
| <i>Pseudagrion buenafei</i> Müller, 1996 | All * Note1. |
| <i>Sangabasis feliculoi</i> Villanueva & Dow, 2014 | All * |
| <i>Stenagrion petermilleri</i> Hämäläinen, 1997 | All * Note1. |
| <i>Teinobasis annamaijiae</i> Hämäläinen & Müller, 1989 | Most * Note1. |
| <i>Teinobasis hamalaineni</i> Müller, 1992 | All * Note1. |
| Aeshnidae | |
| <i>Gynacantha constricta</i> Hämäläinen, 1991 | All * Note1. |
| <i>Gynacantha rolandmuelleri</i> Hämäläinen, 1991 | All * Note1. |
| Gomphidae | |
| <i>Phaenadrogomphus treadawayi</i> (Müller & Hämäläinen, 1993) | All * Note1. |
| Synthemistidae | |
| <i>Idionyx victor</i> Hämäläinen, 1991 | All * Note1, Note 2 |

Stories from social and cultural odonatology:

The genus name *Kirby-Gomphus* – the ironic culmination of Ferdinand Karsch’s critical polemic on W.F. Kirby’s work

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William Forsell Kirby’s (Fig. 1a) major contributions to odonatology were a revision of the subfamily Libellulidae (Kirby 1889a) and a synonymic catalogue of world Odonata (Kirby 1890). The former publication classified members of the subfamily (the family Libellulidae in the present sense) into 88 genera, of which 39 were new. A total of 53 new species were described. Ferdinand Karsch (Fig. 1b) wrote a review of the libellulid revision (Karsch 1889b) in *Entomologische Nachrichten*, the Berlin-published journal he edited. This review praised the high standard of the colour and monochrome plates, but criticised the text, especially the keys to the genera, which were inconsistent with the generic diagnoses in several details. Karsch also pointed out some obvious synonyms, both in the new genera and species. Nevertheless, the overall tone of the review was objective and the critique well grounded. Karsch himself had just published a paper on the *Nannophya*-group (Karsch 1889a) and he was actively working on further topics of libellulid taxonomy, so he clearly had sufficient expertise to support his arguments. Soon however, the tone of Karsch’s criticism of Kirby’s work was to change for the worse.

Kirby’s (1890) World odonate catalogue, listing ca. 1,800 extant species and 103 fossil species, met with a mixed reception from his fellow odonatologists. Edmond de Selys Longchamps received a copy of the newly published catalogue (the preface dated July 1890) personally from Kirby on 25 August 1890 when Kirby and his German wife (Johanna Maria Kappel) visited Selys in Belgium¹. Selys hastened to write an extensive review of the catalogue, which was presented at the meeting of the *Société Entomologique Belgique* on 6 September 1890. In the beginning and the end of his review Selys (1890) pointed out the importance of the catalogue, the first of its kind, as a source of information. However, he regretted that Kirby’s ultra-radical and excessive application of priority laws caused many unwanted changes (some of them clearly erroneous, such as the use of genus name

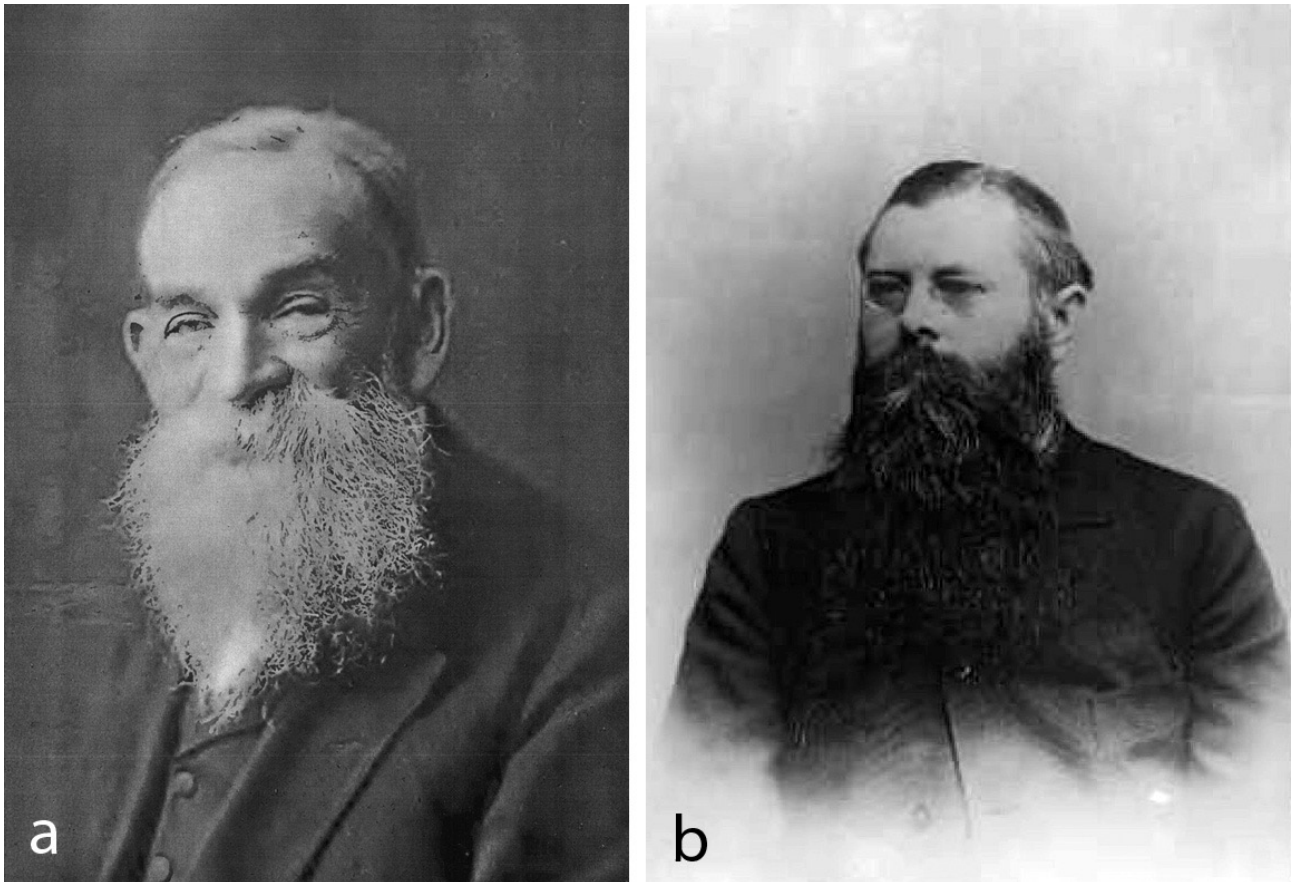


Figure 1. (a) William Forsell Kirby (1844–1912); (b) Ferdinand Anton Franz Karsch (1853–1936).

¹ Based on Selys diary entries on 25 and 26 August 1890 (Caulier-Mathy & Haesenne-Premans 2008: 1199–1200).

Aeshna to replace the name *Gomphus*) in established nomenclature. Selys then provided a detailed critique of the nomenclature used. Although Selys' tone was polite and objective, his indignation is obvious. This may explain his swift reaction to the publication.

Karsch's critical polemic on Kirby

Other odonatologists were not always as polite as Selys. Kirby's most fierce odonatological opponent was surely Ferdinand Karsch. In his final² odonatological paper Karsch (1900: 212) called Kirby's catalogue a '*Sitzfleischkatalog*' ('Buttock muscle' catalogue) with numerous mistakes. Karsch's use of this expression³ here is derogatory, suggesting that Kirby's catalogue is a product of stubborn doggedness, showing no ingenuity or inspiration. Earlier Karsch had already taken all possible opportunities to point out mistakes and omissions in Kirby's catalogue and other papers. Here are just a few examples. In a footnote of Karsch (1890b: 376) he expresses an opinion that *Sapho pulchella* Kirby, 1889 should be placed in *Cleis* (= *Umma*) rather than in *Sapho*. Next year he opined that *S. pulchella* could be identical with *Sapho orichalcea* McLachlan, 1869, or very close to it (Karsch 1891: 69). When Robert McLachlan wrote a brief letter to Karsch informing him that the species is in fact a synonym of *Thore* (= *Polythore*) *concinna* McLachlan, 1881, Karsch (1892: 456) eagerly rushed to publish McLachlan's communication *verbatim*, appending it to his descriptions of two new Chinese calopterygids. [The specimens from Bolivia were mislabelled as originating from Cameroon; this had misled Kirby, but in spite of this, the misidentification certainly demonstrated incompetence.] In Karsch (1890b: 348–349) there appeared a strong critique of Kirby's (1889a) libellulid classification, which Karsch had already reviewed the previous year. Karsch wrote that Kirby's greatest error was to not recognize relationships between the genera, but base his conclusions on dubious and arbitrary characters, such as minor details in venation, neglecting important characters such as structure of the prothorax and the valves of females and various structures of the male copulatory organs.

In the same month (January 1894) when Kirby (1894b) described a new calopterygid genus and species *Archineura basilactea* from China, Karsch (1894a) correctly pointed out that Kirby's species was the same as his *Echo incarnata* Karsch, 1892. He also wrote that it was inconceivable to him that Kirby did not compare his new genus with the oriental genus *Echo*, but only with the African genus *Sapho*. Karsch asked Kirby to explain how his *Archineura* differed from *Echo*. Kirby (1894c) replied without delay and at the same time criticized Karsch's rather short and inadequate description of *E. incarnata*.

In another paper (Kirby 1894a: 548) responded, also with a neutral tone as in the *Echo* case, when Karsch (1893: 23) castigated him for omitting Brauer's *Trithemis erythraea* from his catalogue. Obviously Karsch found it difficult to accept any criticism from Kirby on his own work and he published a brief, rather irascible polemic in an odonatological note (Karsch 1894b). Karsch ended his note as follows: "Wenn Herr Kirby zu Katalogen anderer Forscher weniger Vertrauen hegt, als zu seinen eigenen, so ist das bedauerlich und geht anderen Leuten gerade umgekehrt; erinnert sei nur an die zwar sehr wohlwollende, aber doch auch sehr unzweideutige Abfertigung, welche Kirby's neuestem Catalogue of Lepidoptera Heterocera, I, aus berufener Feder in der Dresdener Zeitschrift Iris, VII, 1894, p. 126 u.f. zu Theil geworden ist und damit wurde wohl nur der Anfang gemacht; denn dieser Katalog ist ein ungläubliches, ein vorsündflutliches⁴ Chaos! Aber Herr Kirby mag sich trösten: "Wenn die Könige bau'n, haben die Kärrner zu thun"⁵. This can be freely translated as follows: "If Mr Kirby has less confidence in the catalogues of other people than in his own, that is regrettable, as it is exactly the opposite for other people. Just think of the very mild but surely unambiguous reproof that Kirby's most recent Catalogue of Lepidoptera Heterocera, I, met in the *Dresdener Zeitschrift Iris* VII, 1894, p. 126 onward, penned by someone very skilled [by Chr. Aurivillius]. That would be just the beginning [of further criticism], for this catalogue [Lepidoptera] is an incredible, antediluvian chaos⁴: but Mr Kirby might be consoled: "While kings build, carters have work to do"⁵.

In October 1895 there appeared a brief paper by the English amateur entomologist W.H. Nunney (Nunney 1895) describing a new dragonfly species from Cameroon with the name *Ceratogomphus? aeneothorax*. The author was somewhat hesitant as to the generic placement of this species and so he proposed a new provisional genus name *Ceratopyga*, in case it proved not to belong in the gomphid genus *Ceratogomphus* Selys, 1854. From the description and illustration of the male appendages Karsch noticed that it was not a gomphid, but a corduliid [in the old sense; presently a macromiid] species. Karsch thought it to be identical to *Macromia melania* Selys, 1871. Nunney's confusing of a corduliid with a gomphid was a mistake also made by Kirby (1889b: 297; 1890: 81) when

² The publication year of this article has often been incorrectly given as 1903, although Karsch's article was in the first issue of volume 25 which appeared in 1900.

³ As such 'Sitzfleisch' is a neutral German expression for the ability to sit through or tolerate something very boring or the ability to endure a task.

⁴ The proper word for the Deluge in German is *Sintflut* (~ huge flooding); but sometimes it is spelled *Sündflut* (~ flooding caused by sins) to remind us that in the story from the Bible (Gen. chapter 7) the Deluge was caused by the sins (= ethical chaos) of mankind, which had to be cleansed by the Deluge. By his special orthography Karsch insinuates that Kirby has caused such a taxonomical chaos, that something like the Deluge would be needed to put things right.

⁵ A well known aphorism by the German poet Friedrich Schiller.

he placed his new genus and species *Pseudogomphus insignis* from Cameroon into the division Cordulegasterina within the subfamily Gomphinae. Although Kirby had already corrected his mistake in Appendix 2 of his catalogue (Kirby 1890: 184) by moving the genus *Pseudogomphus* into the subfamily Cordulinae, Karsch saw again an opportunity to disparage Kirby. He wrote a brief, anonymous article in English, which was published in *Entomologische Nachrichten* in January 1896 ([Karsch] 1896). In this highly ironic, mocking article (Fig. 2), two dragonfly species, ‘Nunney-Gomphus Cincta, formerly known as *Macromia*’ (Fig. 3a) and ‘Kirby-Gomphus Picta, formerly known as *Macromia*’ (Fig. 3b), feeling being neglected and left alone out in the cold, most humbly beg that also their genus names should be changed as had been done for their sisters by “the learned Mr. W.F. Kirby” and by “the still more learned writer Mr. W.H. Nunney”. Earlier Karsch had, in footnotes to two articles (Karsch 1890a: 372; Karsch 1890b: 376), pointed out Kirby’s mistake with *Pseudogomphus insignis*. He obviously sought to milk as much *Schadenfreude* from Kirby’s mistake as possible. Later both *aeneothorax* and *insignis* proved to be valid species (presently placed in *Phyllomacromia*), something which would surely have irritated Karsch!

No doubt the publication of the ‘Kirby-Gomphus and Nunney-Gomphus’ article in a scientific journal was inappropriate, but as the editor and publisher of the journal Karsch had a free hand. As far as I know, the Englishmen did not react in public, but it is ironic that these names are included as available genus-group names, with ‘Karsch 1896’ as the author, in *Nomenclator Zoologicus* (a publication which lists available genus-group names), originally published by the Zoological Society of London in 1939. For the internet database, see <http://uio.mbl.edu/NomenclatorZoologicus/> – so we might say in this case Karsch was foist on his own petard.

Anyway, the editor(s) of the *Nomenclator Zoologicus* have simply observed due diligence, since these names were proposed in a scientific zoological journal and fill all the requirements of the Code at that time. On the other hand, these genus names did not appear in the *Zoological Record*, the Odonata data of which was supplied by Kirby. Neither have these genus names been presented in any World catalogues of Odonata so far. However, if in future revisions the Asian *Macromia* species are split into new genera, the name *Nunneygomphus* is available if *M. cincta* Rambur, 1842 is placed in a different genus from *M. cingulata* Rambur, 1842, the type species of the genus *Macromia*. Clearly when writing this witticism, Karsch did not realize how dangerous it is to play with taxon names in a scientific journal.

Kirby and Karsch – two polymaths

Both Kirby and Karsch were versatile entomologists publishing widely on several insect orders. Kirby published several books, catalogues and papers on Lepidoptera, a catalogue and a book on Hymenoptera and a catalogue of the World Orthoptera in three volumes. Karsch published numerous papers on Hymenoptera, Diptera, Lepidoptera, Coleoptera, Orthoptera and some other groups. However, his major zoological interest was in the spiders and in scorpions. Karsch’s complete bibliography was presented by Schmidtke (2001). Kirby made his career mainly at the British Museum (Natural History) in London and Karsch at the Museum für Naturkunde in Berlin. Both of them began publishing specialized papers on Odonata many years after the start of their entomological careers. A brief comparison of their achievements in Odonata taxonomy may be of interest here.

Kirby published 27 papers on the taxonomy and faunistics of Odonata from 1884 to 1909, Karsch published 35 papers from 1889 to 1900. Kirby introduced a total of 71 new genus-group names, 43 (60.6 %) of which are in use as full genera today. Karsch’s corresponding output was 36 genus-group names⁶, 17 (47.2 %) of which are presently recognised as full genera. Kirby described 147 new species. Of these only 62 are presently ranked as good species, 12 are ranked

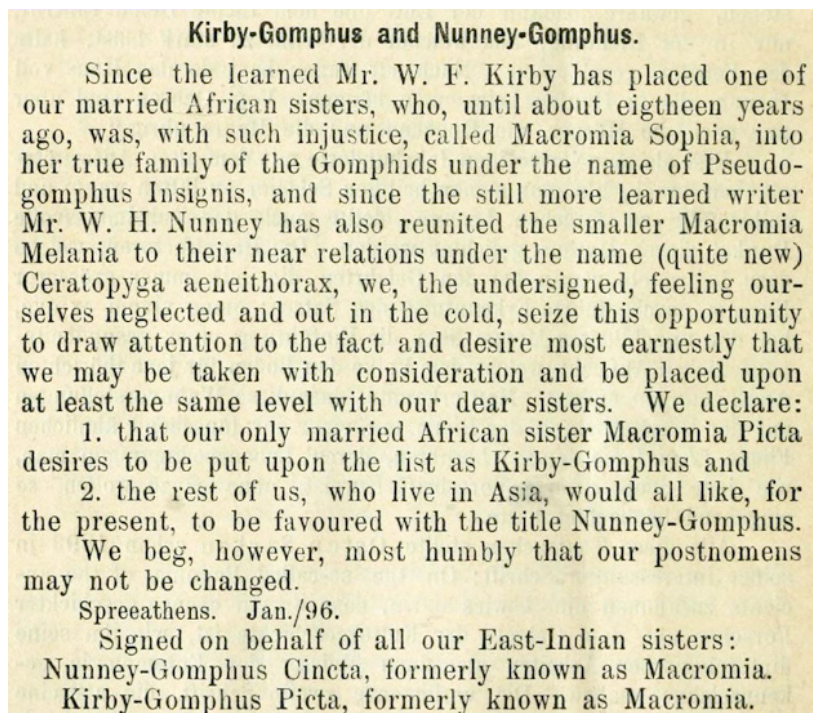


Figure 2. Facsimile of Karsch’s (1896) mock article disparaging Kirby and Nunney.

⁶ Including *Kirbygomphus* and *Nunneygomphus*.



Figure 3. a) Male of *Phyllomacromia picta* (Hagen in Selys, 1871) = ‘Kirby-Gomphus Picta’. Namibia, September 2012. Photo credit: Warwick Tarboton; b) Male of *Macromia cincta* Rambur, 1842 = ‘Nunney-Gomphus cincta’. Singapore, June 2016. Photo credit: Robin Wen Jiang Ngiam.

as subspecies and 73 (49.6 %) are synonyms. Karsch described 107 new species, of which 77 are presently ranked as good species and 30 (28.0 %) as synonyms. Therefore, it is fair to say that Karsch worked more carefully at the species level, but Kirby’s new genera were more successful. Many of Kirby’s species descriptions were provided with excellent illustrations in colour or b&w plates made by professional illustrators (Mintern Bros.). These often show a whole specimen with two or four wings spread. On the other hand, aside from the fine plate showing a complete specimen of *Pseudomacromia pretiosa* (in Karsch 1891) and four plates showing odonate larvae (in Karsch 1893), Karsch produced only a few mediocre ink drawings, illustrating some structures of a few of his new species.

Kirby will also be remembered for his clairvoyance in estimating the number of extant dragonfly species. In the Preface of his catalogue (Kirby 1890: iii) he wrote: "Comparatively few recent species of the suborder Odonata are known at present – about 1,800... I have little doubt that the number of species of Odonata now known could easily be at least quadrupled if more workers were attracted to the subject..." This means at least about 7,200 species, which is close to the recent estimates of the number of extant odonate species (e.g. Kalkman & al. 2008). In his review, Selys (1890) considered Kirby’s estimate as greatly exaggerated. Selys thought that the total number of species could be only around 3500.

Both William Forsell Kirby (1844–1912) and Ferdinand Anton Franz Karsch (since 1905 also known as Karsch-Haack) (1853–1936) were, and still are, well known as polymaths outside zoological circles. Kirby was a talented folklorist, versed in many languages: Latin, Classical Greek, German, Dutch, Danish, Swedish, Finnish, Estonian, Spanish, Portuguese, Italian, Russian and Persian. His best known publication must be the English translation of the Finnish national epic *Kalevala, The Land of Heroes*, which appeared in 1907; its latest edition was published in 2007 and remains in print. In 1895 he published the book *The Hero of Esthonia, and Other Studies in the Romantic Literature of That Country*. For details of his early career, see Kirby Brett (1996). In 1900 Karsch unexpectedly ended his publication activity on Arthropoda. Thereafter he published widely on sexuality, mainly on homosexuality, both in animals and humans. He has been ranked as one of the ‘great authorities’ in the area of sexual science. Details of his seminal activity in this field have been discussed for instance by Grau (2009) and Bauer (2015).

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The rise of SOL - Sociedad(e) de Odonatología Latinoamericana

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In the last decades, odonatology in Latin America has had a notable improvement in the number of researchers and students from within Latin American countries studying Odonata biology, ecology and systematics. This improvement together with the overwhelming diversity of the region not only has consolidated the integration among Latin American countries, but also made possible the integration of Latin America into the international scenario. This is evidenced by the election of two Latin American cities as venues for the International Congress of Odonatology (Xalapa, Mexico in 2009, and Buenos Aires, Argentina in 2015).

Informal conversations during ICO2013 in Freising were the starting point for the creation of a new Society that would gather Latin American odonatologists. Two years later, thanks to the resounding assistance of Latin American colleagues to ICO2015 in La Plata, the drafting process of the statutes began. Finally, the first meeting of the *Sociedad(e) de Odonatología Latinoamericana - SOL* was held from 14-16 August 2016 at Jundiaí, Brazil, located approximately 55 km west of the city São Paulo. This meeting was successfully organized by Rhainer Guillermo Ferreira and his team: Leandro Juén, Aurélio FajarTonetto, Diogo Silva Vilela, Gabrielle C. Pestana, Thais Caromano, Leonardo Ricioli, and Rafael Tavaes. It involved the participation of researchers and students from Mexico, Colombia, Venezuela, Peru, Brazil, Argentina, and Spain.



Figure 1. Members of the first Board of Directors of Sociedad(e) de Odonatología Latinoamericana (SOL). (From left to right): Rhainer Guillermo-Ferreira, Jenilee Montes Fontalvo, Javier Muzón and Federico Lozano. Photo credit: Enrique Gonzalez Soriano.



Figure 2. Organisational meeting held during ICO 2015 at the city of La Plata, Argentina.



Figure 3. Participants at the First Sociedad(e) de Odonatología Latinoamericana (SOL), 14-16 August 2016, held at Jundiá, Brazil. Photo credit: Enrique González Soriano.

SOL is a scientific and non-profit organization which seeks to promote odonatology among members of Latin American countries in terms of both scientific research and scientific outreach, to facilitate and promote contacts and exchange of experiences among people interested in odonatology, to develop outreach and educational activities through university training programs, scientific meetings, publications, etc., to promote research activities in the field of Latin American odonatology, and encourage the protection and conservation of Odonata and their habitats.

The purposes of the first SOL meeting were: (1) to hold the Constituent Assembly; (2) to perform an IUCN Red List training workshop and to schedule the assessment of 100 species; (3) to hold a scientific meeting. The Constituent Assembly was coordinated by Joachim Hoffman (Peru) and Adolfo Cordero Rivera (Spain) with the aid of Pablo Pessacq and Danielle Anjos-Santos who were in charge of taking the minutes. A total of 29 assistants were in charge of electing the Board of Directors. Javier Muzón (Argentina) was chosen as President, Rhainer Guillermo Ferreira (Brazil) as vice-President, Cornelio Bota Sierra (Colombia) as Secretary, Jenilee Montes (Colombia) as Treasurer, and Federico Lozano (Argentina) as Vocal. Additionally, during the Assembly the annual membership amount was decided (15 US\$ for professionals; 5 US\$ for students) and the statute was discussed and amended. All those interested in joining and paying the annual fee may do so as soon as the Society is registered in Colombia and the corresponding bank account is opened. All this information will be updated in the Society webpage



Figure 4. SOL meeting. (Left to right): Héctor Ortega Salas, Enrique González Soriano, Joachim Hoffmann, Javier Muzón, Jenilee Montes Fontalvo and Jonathan Vivas. Photo credit: Jenilee Montes

[<http://www.odonatasol.com/>] which is still under construction. For any doubt you can contact the Society via email to odonatasol@gmail.com

The IUCN Red List Training Workshop is part of a joint cooperation between SOL and IUCN aimed at evaluating the conservation status of Neotropical Odonata. It was conducted by Marcelo Tognelli (IUCN) and financed by IUCN. During the workshop the species to evaluate in the following months were chosen and working teams for evaluations were organized.

The scientific program opened with the session “Endemic species, species at risk and status of conservation” during which the following six plenary talks were given:-

- Odonata from Argentina, Chile and Uruguay. State of knowledge, strengths and weaknesses. Javier Muzón.
- The Odonata from Perú - Endemic species, species at risk and status of conservation Joachim Hoffmann.
- Priorities and challenges in the conservation of Odonata from Colombia. Jenilee Montes.
- Brazilian list of threatened species: An objective approach based on geographic distribution data. Paulo de Marco Jr.
- Odonata from México: endemic species and their distribution. Enrique González-Soriano.
- Current knowledge of the Odonata from Venezuela: taxonomic diversity and distribution of endemic species. Jonathan Vivas.

Apart from this eight oral presentation and 12 posters were also communicated. During the meeting, two SOL awards were given in order to pay tribute to Angelo Barbosa Monteiro Machado (who could not attend the meeting due to his current health conditions) and Frederico Augusto de Atayde Lencioni; both of them have contributed greatly to improving our current knowledge on Neotropical odonate species and are responsible for the formation of a generation of students who shared their interest and passion in odonatology



Figure 5. SOL meeting. Fred Lencioni receiving his award. Photo credit Enrique González Soriano.



Figure 6. IUCN Red List Training Workshop. From left to right: Adolfo Cordero Rivera, Marcelo Tognelli and Deborah Soldati. Photo credit Enrique González Soriano.

Arctic bluets with green eyes

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In 2015, I was on a private dragonfly tour with Daniel Green of Bird Safari Sweden [<http://www.birdsafarisweden.com/>]. The tour had originally been scheduled for June of that year, but due to the very poor weather early in the season, we had put it off until August. The idea was to change the principal focus from *Leucorrhinia* species to hawkers. In that, it was very successful, but both of us were surprised in that we actually saw three *Leucorrhinia* species as well. The effects of the poor start were still showing – everything was late that year. We were not expecting to see Arctic bluet (*Coenagrion johanssoni*). So our surprise was great when, at a site in the Norberg area, north-west Västmanland, we saw two males. But my surprise was even greater when I netted the first of them (to confirm the identity – this was a new species for me), as I noticed the underside of the eyes were green. For I remembered this message concerning the species from the *Field Guide to the Dragonflies of Britain and Europe* (by Klass-Douwe B Dijkstra, illustrated by Richard Lewington): “*C. johanssoni* overlaps most widely with *C. hastulatum* and *C. lunulatum*, but those males are greenish on the underside ...”. And the illustrations confirmed that this includes the eyes.

The second male that I saw was only seen from above.

C. hastulatum was known to occur at the site, so I wondered if it might possibly be a hybrid, but there were no other signs pointing that way. Anyway, I had already planned to come back the following June, and this reinforced my eagerness. Would it be a one-off?

June 2016, and we were at the site again (this time in conjunction with a Butterflies and Dragonflies tour that Bird Safari Sweden were running concurrently with the private dragonfly tour for myself alone). There were reasonable numbers of both *C. hastulatum* and *C. johanssoni* present, and I proceeded to net as many of the males as I could. The result? Every single individual was green below the eyes. Which means, *at this site at least*, that this particular characteristic cannot be used to separate the two species. In practice, I had no difficulty telling them apart at a glance, due to the size difference (not very great, but quite noticeable).



Figure 1. Northern damselfly or spearhead bluet (*Coenagrion hastulatum*).



Figure 2. Arctic bluet (*Coenagrion johanssoni*).

Dragonflies and Damselflies: Whistle blowers of freshwater health in Atewa Range Forest Reserve, Eastern Ghana.

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Odonata are known and admired for their beauty and charisma in nature. These colorful creatures are not just beautiful but also provide essential ecosystem services. Their presence or absence in freshwater bodies tells us about the state and condition of aquatic systems.

The Atewa Forest Reserve is rich in biodiversity and harbours many plant and animal species, many of which cannot be found anywhere else in the world. These include butterflies, frogs and black star plants. Perhaps this is why the reserve has been designated as a Globally Significant Biodiversity Area (Hawthorne 1998; Abu- Juam *et al.*, 2003; Larsen, 2006; Dijkstra, 2007). Importantly, the Atewa reserve is home to many freshwater bodies viz. the Sumatua, Suhen, Kuia, Ayensu, Birim, Adensu, Supon and the Densu river basins. Many of these freshwater bodies supply Ghana's capital, Accra, and many other communities with drinking and industrial water. The reserve is, however, under intense pressure from agriculture, illegal logging, settlement development and small scale mining activities, which threatens adjacent freshwater habitats and the diverse species therein. Of these threats, deforestation has been identified as a key driver of biodiversity loss in the reserve.

We used dragonflies and damselflies to determine the condition of freshwater bodies (Densu, Supon and Adensu River) along three habitats with different disturbance intensity in Atewa nature reserve in Ghana. The habitats included forest, forest margin (relatively low disturbance) and agricultural fields (completely transformed landscape).

We used a belt transect of 100 m × 10 m to sample adult Odonata in mature forest habitat, forest margin, agricultural land and along rivers in the reserve. Sampling was undertaken in both the wet and dry seasons. The wet season sampling was completed during the months of June and October, 2015, whilst the dry season sampling took place in the months of December, 2015 and January, 2016.

The analysis of our results revealed that greatest numbers of species were found in the agricultural fields whereas the freshwater bodies in the forest had the least number of species. This is because many Odonata species encountered were generalists that prefer open areas where there is much sunshine. Along the



Figure 1. Densu stream.



Figure 2. Forest encroached by human settlement.



Figure 3. *Ceragrion glabrum*, tolerant of degraded and stagnant freshwater bodies of water.



Figure 4. *Cyanothemis simpsoni*, specialized in open canopy habitats.

degraded habitats, we found relatively higher numbers of species like *Palpopleura lucia*, *Palpopleura portia* and *Ceriagrion* spp., which prefer relatively disturbed waters, an indication that the streams running through the agricultural fields are polluted. In contrast, we found specialized species such as *Gynacantha bullata*, *Micromacromia zygoptera* and *Chlorocypha selysi* dominating the streams running through the forest. These species can only survive in forest areas and prefer very clean waters to execute their reproduction activities. This study gives early warning signs for water resources managers, conservationists and stakeholders to take immediate action to address the impact of human-led disturbance on freshwater resources and aquatic biodiversity. Also the study highlights the importance of preserving forest resources for species with unique habitat requirements, and limited dispersal ability.

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DragonflyIndia Meet, 2016

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As the name suggests, DragonflyIndia is a group of enthusiastic Odonata lovers spread all over the country and sometimes beyond. The idea of tying them together in one thread started with the creation of the e-community called DragonflyIndia in 2005 on Yahoo Groups. Over time the priority of users for social media platforms changed and hence the community was moved to Facebook. Since 2009, the DragonflyIndia Facebook group has grown in size and presently we have 6000+ members. The first step towards gathering the researchers together was the first meet in 2014 at Nagpur. After two successful years, this year's meet was held in Gorumara National



Figure 1. Group meeting of participants at the 3rd DragonflyIndia Meeting, 2016. Photo credit: Arjan Basu Roy.

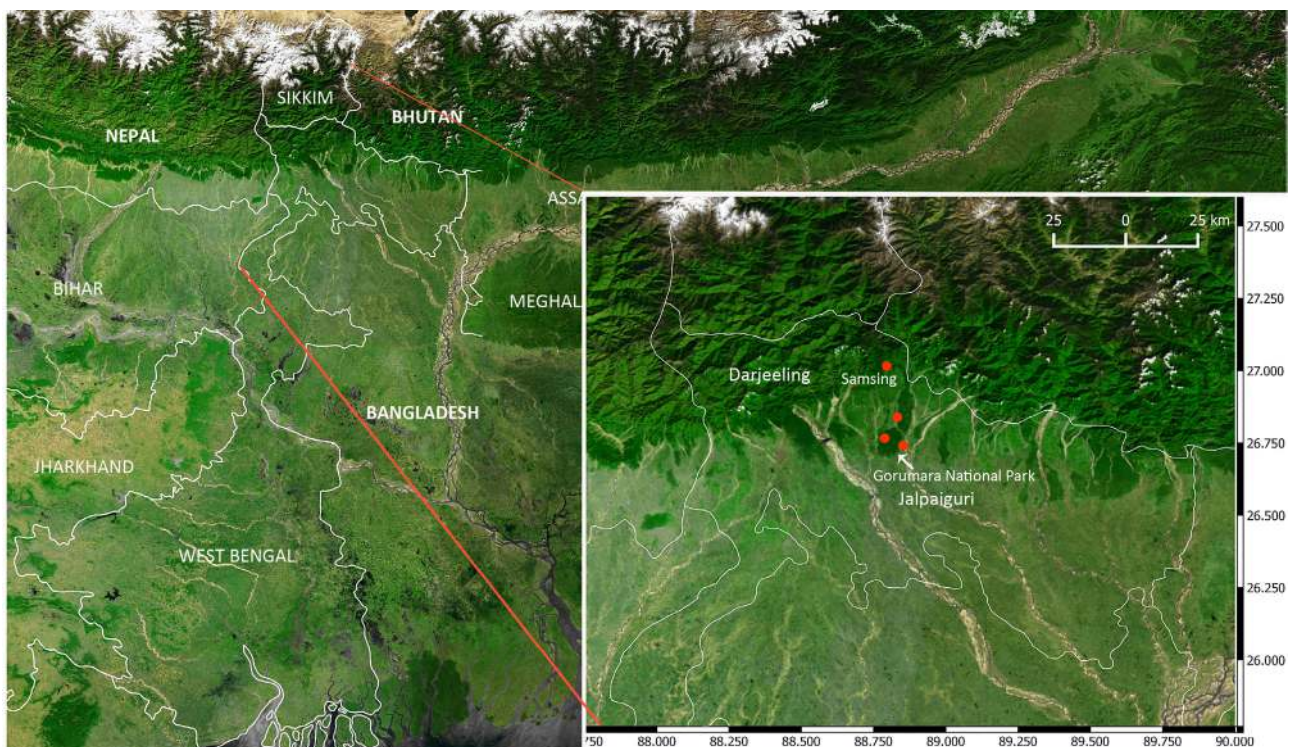


Figure 2. Map showing the locations visited during the DI 2016 meeting.

Park, West Bengal, 26-29 August, 2016.

This time we had a great team of 27 participants, representing eight different states of India and one from the neighbouring country Sri Lanka (Figure 1). The meet was held in Tiyabon Ecoresort adjacent to the Gorumara National Park in Jalpaiguri district of West Bengal. Field visits were made to a forest stream near Mohakal, perennial pond in Ramsai Rhino Camp, Chukchuki Lake and many other places in and around Gorumara NP and its adjacent villages. On 28th August there was a trip to Suntalekhola, Samsing i.e. the outskirts of Neora Valley National Park in the Himalayan foothills. We covered an altitude range of 100 to 1000m and six different habitat types, viz. forest, perennial lakes, flooded grassland and crop-fields, forest streams, river with flat rocky basin and fast-flowing hilly torrential streams (see Figure 6). Weather was overall sunny with an average temperature range of 20-35°C except for two hours of heavy rain in Samsing.

Gorumara National Park and Samsing

Being situated in the Indomalayan ecozone Gorumara National Park hosts Lower Gangetic plains moist deciduous forests mainly dominated by sal, teak, rain tree, silk cotton tree, etc. and Terai-Duar savanna and grasslands. This small park covers only 80 sq km and is mostly famous for its healthy population of Indian one horned rhinoceros and Indian elephant. Other remarkable animals include gaur, leopard, peafowl, hornbills and king cobra. Samsing on the other hand has Eastern Himalayan hilly moist deciduous forest.

During the meet the days were spent in the field and the presentation, workshop and seminar sessions were done during the evenings. Two presentations about general biology, field identification and odonates of West Bengal were associated with hands-on training on specimen handling, collection, preservation and identification of odonates both in field and laboratory (Figure 5). A special session was organized for discussion about larval identification, sampling and rearing. A special workshop was organized by Mr A. Pendharkar on popularizing odonatology study through outreach and the participants were asked to design insectorium, museum, dragonfly postcards, books and cartoons etc. as part of the workshop.

The three-day field trip resulted in records of 66 species belonging to 44 genera and nine families of odonates from the area (Table 1). Three of them were unidentified.



Figure 3. Participants venturing in the Gorumara National Park. Photo credit: Neha Mujumdar.



Figure 4. Murti, one of the main rivers near Gorumara National Park. Photo credit: Neha Mujumdar.



Figure 5. Parag Rangnekar supervising preservation and identification training for the Odonata collection. Photo credit: Neha Mujumdar.



Figure 6. Participants photographing Odonates in the hilly stream at Samsing. Photo credit: Neha Mujumdar.

Some of the records we found to be notable such as: *Agrionoptera insignis* (Rambur, 1842) – This widespread species is not very common and only found in West Bengal within Indian limits. This excellent insect has many subspecies throughout the world. The one present in West Bengal is sometimes believed to be *A. insignis dorothea* Fraser, 1927 (Figure 8E).

Amphithemis vacillans Selys, 1891 – After a gap of almost seventy years, recently this species was recorded from West Bengal and Assam. During the meet we came across more than 10 specimens of this species, and also identified the breeding site for this species as newly emerged teneral were spotted (Figure 8F).

Coeliccia bimaculata Laidlaw, 1914 – This species is known to be endemic to the north-eastern Himalayas. During the meet we recorded the species for the second time from West Bengal, after Dawn (in preparation) from the same area (Figure 7A).

Coeliccia renifera (Selys, 1886) – Widespread species throughout the Himalayas. Being an inhabitant of forest streams, they are not very commonly seen damselflies (Figure 7D).

Aristocypha cuneata (Selys, 1853) – This is one of the cryptic species we encountered during the meet. They are typically found near the fast forest streams of Samsing, associated with *Aristocypha quadrimaculata*. Separable by its bigger size, palest blue elongated triangular spot on thorax and typical marking patterns of wing (Figure 7E).

Aristocypha quadrimaculata Selys, 1853 – This species is locally common in the Eastern Himalayas. Smaller in size than *A. cuneata* and having distinctive wing markings (Figure 8C).

Participant’s notes by Kumaran Sathasivam

“During my long journey back home from Gorumara, I travelled alone. But I had company in the form of the conversations that kept playing in my mind—conversations that I had had over three days with my fellow participants at DragonflyIndia Meet 2016. Indeed, I keep recalling memories of the meet even now, three weeks later. I suppose that this is only natural, considering what a pleasant experience the meet was.

The agenda of DragonflyIndia Meet 2016 consisted of varied fare, and the combination was quite balanced. I find it impossible to identify what I liked most about the meet. I had looked forward to the companionship of like-minded dragonfly enthusiasts. I was fully satisfied in this respect. I had looked forward to being outdoors during the field trips in an area I would be visiting for the first time. The steamy jungles of Gorumara, the incredibly sticky, muddy place where we found *Amphithemis*, the Murti River, with its cannonball boulders, and the rushing stream of Samsing ensured that I could not have asked for more. I had imagined that most of the odonates I saw would be new to me. I was right! I had looked forward to honing my dragonfly identification skills. I was not disappointed. I had hoped to learn from the technical presentations and workshops. They were indeed instructive and thought-provoking.

Looking back, I wonder at how perfect the arrangements were, too. Even though the meet was organised with the

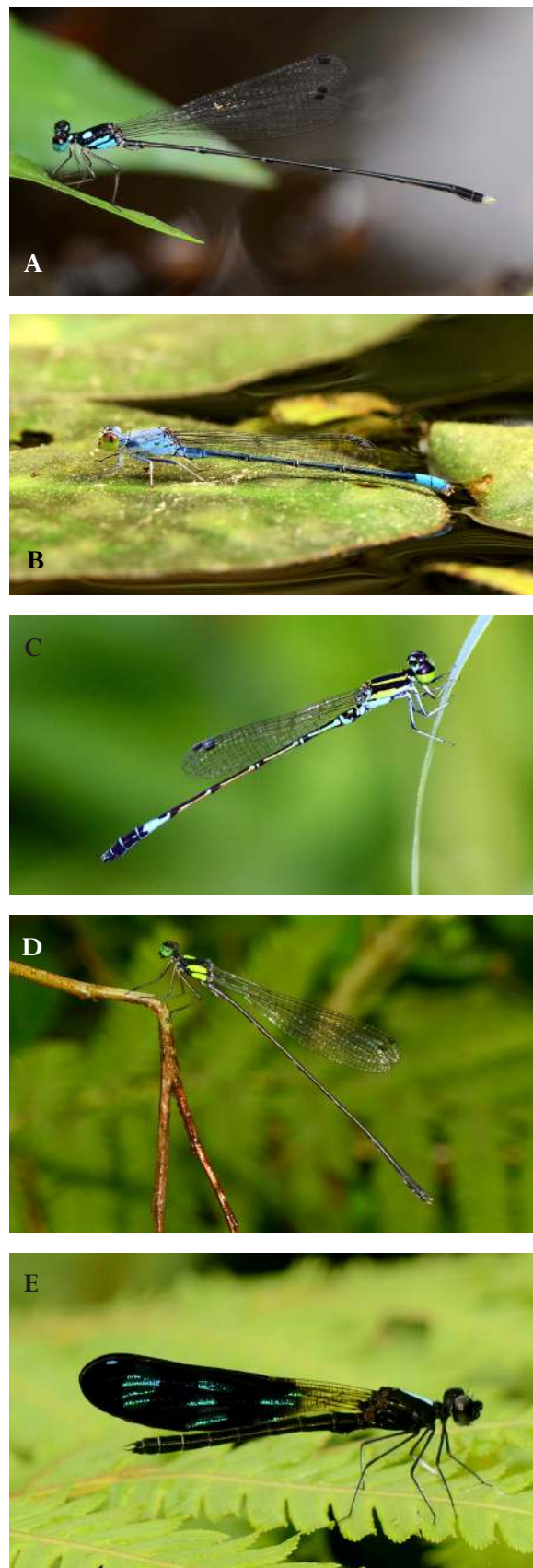


Figure 7. (A-C) Gorumara National Park, 26-29 Aug 2016, (D-E) Samsing, 28 Aug 2016. (A) *Coeliccia bimaculata*; (B) *Paracercion calamorum*; (C) *Agriocnemis clauseni*; (D) *Coeliccia renifera*; (E) *Aristocypha cuneata*. Photo credit: Prosenjit Dawn.

threat of rainy weather looming, there was only one cloudburst, a demonstration as it were, which seemed to bring out the damselflies, and so it was all well in the end.

Yes, everything about this edition of the DragonflyIndia Meet was perfect. If there is anything that could have been better, it is the quality of some of my souvenirs, the photographs I shot. I could have done with a dragonfly photography techniques workshop!”

Acknowledgement

The organizers are thankful to all the active members of DiversityIndia, DragonflyIndia and participants of the Meet 2016 for making the meet a big success. Thanks are also due to the Nature Mates – Nature Club for its support. Special mention for the International Dragonfly Fund and Worldwide Dragonfly Association for their financial support and the West Bengal Forest Department for its support in the field.



Figure 8. (A-B & E-F) Gorumara NP, 26-29 Aug 2016. (C-D) Samsing, 28 Aug 2016. (A) Exuvia of *Epophthalmia vittata*; (B) *Pseudagrion australasiae*; (C) *Aristocypha quadrimaculata*; (D) *Heliocypha biforata*; (E) *Agrionoptera insignis*; (F) *Amphithemis vacillans*. Photo credit: Prosenjit Dawn.

Table 1: List of species observed during the DragonflyIndia Meeting, 2016

| | | | |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------|
| Lestidae | <i>Lestes cf. garoensis</i> Lahiri, 1987 | Garo Spreadwing | |
| Calopterygidae | <i>Neurobasis chinensis</i> (Linnaeus, 1758) | Stream Glory | |
| | <i>Vestalis</i> sp. | Forest Glory | |
| Chlorocyphidae | <i>Aristocypha cuneata</i> (Selys, 1853) <i>Aristocypha quadrimaculata</i> Selys, 1853 <i>Heliocypha biforata</i> Selys, 1859 | | |
| Euphaeidae | <i>Anisopleura</i> sp. | | |
| Coenagrionidae | <i>Aciagrion hisopa</i> (Selys, 1876) | | |
| | <i>Agriocnemis clauseni</i> Fraser, 1922 | Pruinosed Dartlet | |
| | <i>Agriocnemis femina</i> (Brauer, 1868) | Milky Dartlet | |
| | <i>Agriocnemis lacteola</i> Selys, 1877 | Pygmy dartlet | |
| | <i>Agriocnemis pygmaea</i> (Rambur, 1842) | Coromandel Marsh Dart | |
| | <i>Ceriagrion coromandelianum</i> (Fabricius, 1798) | Orange-tailed Marsh Dart | |
| | <i>Ceriagrion cerinorubellum</i> (Brauer, 1865) | Rusty Marsh Dart | |
| | <i>Ceriagrion olivaceum</i> Laidlaw, 1914 | Azure Dartlet | |
| | <i>Enallagma parvum</i> Selys, 1876 | Golden Dartlet | |
| | <i>Ischnura aurora</i> (Brauer, 1865) | | |
| | <i>Mortonagrion aborense</i> (Laidlaw, 1914) | | |
| | <i>Paracercion calamorum</i> (Ris, 1916) | Lily Squatter | |
| | <i>Pseudagrion australasiae</i> Selys, 1876 | Indigo Dart | |
| | <i>Pseudagrion decorum</i> (Rambur, 1842) | Three Lined Blue Dart | |
| | <i>Pseudagrion microcephalum</i> (Rambur, 1842) | Blue Grass Dartlet | |
| | <i>Pseudagrion rubriceps</i> Selys, 1876 | Saffron faced Blue Dart | |
| | Platynemididae | <i>Coeliccia bimaculata</i> Laidlaw, 1914 | Two spotted Coeliccia |
| | | <i>Coeliccia renifera</i> (Selys, 1886) | Green Spotted Coeliccia |
| | | <i>Copera marginipes</i> (Rambur, 1842) | Yellow Bushdart |
| | | <i>Copera vittata</i> Selys, 1863 | Blue Bushdart |
| <i>Elatoneura campioni</i> (Fraser, 1922) | | Blue Threadtail | |
| <i>Onychargia atrocyana</i> (Selys, 1865) | | Black Marsh Dart | |
| <i>Gynacantha dravida</i> Liefstinck, 1960 | | Brown Darner | |
| Aeshnidae | | <i>Burmagomphus cf. sivalikensis</i> Laidlaw, 1922 | Sivalik Clubtail |
| | | <i>Ictionogomphus rapax</i> (Rambur, 1842) | Common Clubtail |
| | | <i>Nychogomphus cf. duaricus</i> (Fraser, 1924) | |
| Gomphidae | Unidentified Gomphidae1 | | |
| | Unidentified Gomphidae2 | | |
| Libellulidae | <i>Acisoma panorpoides</i> Rambur, 1842 | Trumpet Tail | |
| | <i>Aethriamanta brevipennis</i> (Rambur, 1842) | Scarlet Marsh Hawk | |
| | <i>Agrionoptera insignis</i> (Rambur, 1842) | Pygmy Bloodtail | |
| | <i>Amphithemis vacillans</i> Selys, 1891 | White-tailed Skimmer | |
| | <i>Brachydiplax chalybea</i> Brauer, 1868 | Rufous-backed Marsh Hawk | |
| | <i>Brachythemis contaminata</i> (Fabricius, 1793) | Ditch Jewel | |
| | <i>Bradinyopyga geminata</i> (Rambur, 1842) | Granite Ghost | |
| | <i>Crocothemis servilia</i> (Drury, 1770) | Ruddy Marsh Skimmer | |
| | <i>Diplacodes trivialis</i> (Rambur, 1842) | Ground Skimmer | |
| | <i>Hydrobasileus croceus</i> Brauer, 1867 | Amber Winged Glider | |
| | <i>Lathrecista asiatica</i> (Fabricius, 1798) | Asiatic Bloodtail | |
| | <i>Neurothemis fulvia</i> (Drury, 1773) | Fulvous Forest Skimmer | |
| | <i>Neurothemis intermedia</i> (Rambur, 1842) | Intermediate Skimmer | |
| | <i>Neurothemis tullia</i> (Drury, 1773) | Pied Paddy Skimmer | |
| | <i>Orthetrum chrysis</i> (Selys, 1891) | Brown Backed Marsh Hawk | |
| | <i>Orthetrum glaucum</i> (Brauer, 1865) | Blue Marsh Hawk | |
| | <i>Orthetrum luzonicum</i> (Brauer, 1868) | Tricolored Marsh Hawk | |
| | <i>Orthetrum pruinosum</i> (Burmeister, 1839) | Scarlet Marsh Hawk | |
| | <i>Orthetrum sabina</i> (Drury, 1770) | Green Marsh Hawk | |
| | <i>Orthetrum taeniolatum</i> (Schneider, 1845) | Little Skimmer | |
| | <i>Pantala flavescens</i> (Fabricius, 1798) | Wondering Glider | |
| | <i>Potamarcha congener</i> (Rambur, 1842) | Yellow-tailed Ashy Skimmer | |
| | <i>Rhodothemis rufa</i> (Rambur, 1842) | Rufous Marsh Glider | |
| | <i>Rhyothemis variegata</i> (Linnaeus, 1763) | Common Picturewing | |
| | <i>Tholymis tillarga</i> (Fabricius, 1798) | Coral-tailed Cloudwing | |
| | <i>Tramea basilaris</i> (Palisot de Beauvois, 1805) | Red Marsh Trotter | |
| | <i>Trithemis aurora</i> (Burmeister, 1839) | Crimson Marsh Glider | |
| | <i>Trithemis festiva</i> (Rambur, 1842) | Black Stream Glider | |
| | <i>Trithemis pallidinervis</i> (Kirby, 1889) | Long-legged Marsh Glider | |
| | <i>Urothemis signata</i> (Rambur, 1842) | Greater Crimson Glider | |
| | Macromiidae | <i>Ephthalma vittata</i> Burmeister, 1839 | Common Torrent Hawk |

Sri Lanka's First Annual Dragonfly Race

Nancy van der Poorten [nmgvdp@netscape.net]

Sri Lanka's First Annual Dragonfly Race was held on June 25, 2016. It was organized by the Butterfly Conservation Society of Sri Lanka (BCSSL) and sponsored by Sampath Bank and was held in conjunction with the First Annual Butterfly Race. The event was held at the Thalawathugoda Biodiversity Study Park in Sri Jayawardenapura near Colombo. There were 39 participants representing nine teams.

The winning team was the one that recorded the highest collective number of butterflies and dragonflies within the given time (7am to 9am). Each team was accompanied by a judge who validated the identifications. The race was followed by a field session on the identification of these insects conducted by Dr Michael van der Poorten, Mr Himesh Jayasinghe and Mr Amila Sumanapala.

The winning team was "Ingenium" representing a group of undergraduates from the University of Moratuwa; the runners-up were "Team YBA (Young Biologists' Association)". The winning team correctly recorded 21 out of a possible 33 species of odonates. The park is a typical lowland wetland and as such is home to species that are fairly common in Sri Lanka including *Ceriagrion coromandelianum*, *Trithemis aurora*, *Crocothemis servilia*, *Pantala flavescens*, *Orthetrum glaucum*, *Lathrecista asiatica*, *Diplacodes trivialis*, *Neurothemis tullia* and *Rhyothemis variegata*.



Figure 1. Thalawathugoda Biodiversity Study Park



Figure 2. Dragonfly racers. (5th from left): Himesh Jayasinghe, (6th from left): Amila Sumanapala, (7th & 8th from left): Nancy van der Poorten & Dr. Michael van der Poorten

The weather on the day of the race was lovely and sunny. This event was organized to celebrate the successful completion of the third year of BCSSL and to create awareness on urban biodiversity among the general public. The BCSSL, despite its name, is active in promoting the study and conservation of dragonflies and other insects as well. It sponsors monthly lectures on various topics as well as special sessions to educate students and it also conducts field trips and workshops. The Race was held so that the participants could learn more about butterflies and dragonflies and experience team work.

The Thalawathugoda Biodiversity Study Park encompasses 60 acres of urban wetland consisting of marshy areas, woody patches, and artificially created ponds. It is home to many different plants and animals, particularly migratory birds. More than 30 species of wetland birds, over 25 species of butterfly, 30 species of dragonflies, and many species of fish, mammals, amphibians, reptiles and other insects have been recorded. As well as being a biodiversity hotspot, this marsh also plays a critical role in urban flood control. Currently the park contains a study center, boardwalk trails, a butterfly garden, a bird hide and bird watching tower, a children's pond, a rush and reed pond and boat riding facilities. In the future, there will be a visitor center with a range of exhibits and interactive learning devices, a herbarium, a laboratory and a mini theater. Once the park is opened to the public it is expected to attract about 85,000 visitors per year.



Figure 3. *Trithemis aurora*, subadult male. Photo credit: George van der Poorten.

First Field Workshop on Sri Lankan Dragonflies

Nancy van der Poorten [nmgvdp@netscape.net]

The Butterfly Conservation Society of Sri Lanka (BCSSL) conducted the first ever field workshop on Sri Lankan dragonflies at Sinharaja World Heritage Forest Reserve during August 5–8, 2016. The main aim of this workshop was to popularize the study of dragonflies among undergraduates and other young people who are interested in natural history. Fifteen participants attended the workshop including undergraduates from five universities. Workshop sessions on identification, biology, ecology and conservation of dragonflies were conducted by Amila Prasanna Sumanapala, the current president of the BCSSL. Divanka Randula conducted a session on dragonfly photography and Salindra Dayananda conducted a session on field research methods. Prof. Dr Sarath Kotagama gave a talk on the value and conservation of the Sinharaja Forest Reserve.



Figure 1. Field Workshop on Sri Lankan Dragonflies, Sinharaja Forest Reserve, 5-8 August 2016. Photo credit: Rukmal Ratnayake.

Field excursions were held on all four days, both inside and outside the reserve. Fifty-one species of dragonflies and damselflies were recorded including one new record to the Sinharaja area (*Mortonagrion ceylonicum*) and 23 endemics. Apart from the Odonata, the workshop team recorded 90 species of butterflies and many species of other faunal groups. The participants also had quizzes to complete and a short dragonfly “race”.

The Sinharaja Forest Reserve was designated a UNESCO World Heritage Centre because it includes the last remaining extensive patch of primary lowland rainforest in Sri Lanka, covering 8,864 ha. It is a narrow



Figure 2. Group photo of participants at the First Field Workshop on Sri Lankan Dragonflies, Sinharaja Forest Reserve, 5-8 August 2016. Photo credit: Rukmal Ratnayake.

strip of undulating terrain with an elevation range of 300–1,200 meters and is crisscrossed by a network of streams. Annual rainfall over the last 60 years has been 3600–5000 mm with most of the precipitation falling during the southwest monsoon (May-July) and the northeast monsoon (November-January). It is considered an aseasonal forest as there is (usually!) never a month without some rain. The predominant trees are members of the Dipterocarpaceae. The forest is home to many endemic species of dragonflies, butterflies and other animals. Some notable Odonata that have been recorded here include *Lyriothemis defonsekai*, *Macromidia donaldi*, *Libellago corbeti*, *Archibasis lieftincki*, *Ceylonosticta anamia*, *C. brincki*, *C. lankanensis* and *C. bine*, *Heliogomphus lyratus*, *H. lankanensis*, *Cratilla lineata*, *Tetrathemis yerburii* and *Hylaeothemis frustorferi*.



Figure 3. (A) *Archibasis lieftincki*. Photo credit: Amila Sumanapala; (B) *Hylaeothemis frustorferi*, subadult male. Photo credit: George van der Poorten; (C) field trip participants; (D) *Libellago corbeti*, young male. Photo credit: George van der Poorten; (E) group photo of participants at the Sinharaja Forest Reserve, August 2016.

Country-based odonatological journals in Europe

Geert De Knijf [geert.deknijf@inbo.be]

In Europe, there are several national or regional odonatological societies and many of them publish their own journal or bulletin. Some of them have been doing so for 20 or 30 years, sometimes even longer. Others are fresh newcomers reflecting the increased interest in dragonflies in some countries.

Here we give an overview of the diversity of national or regional odonatological journals that exist in Europe, how you can subscribe to them, whether you can download published papers and how you can contribute.

Crenata - Finland

The journal *Crenata* has been published each year since 2008 but in future it will not be published in print format. The forthcoming issues will be made freely available for download at [www.sudenkorento.fi]. The older issues are not yet available for download but there are plans to make them available from the same site at [http://www.sudenkorento.fi/kwiki/Crenata]. No issue of *Crenata* has yet been published in 2016.



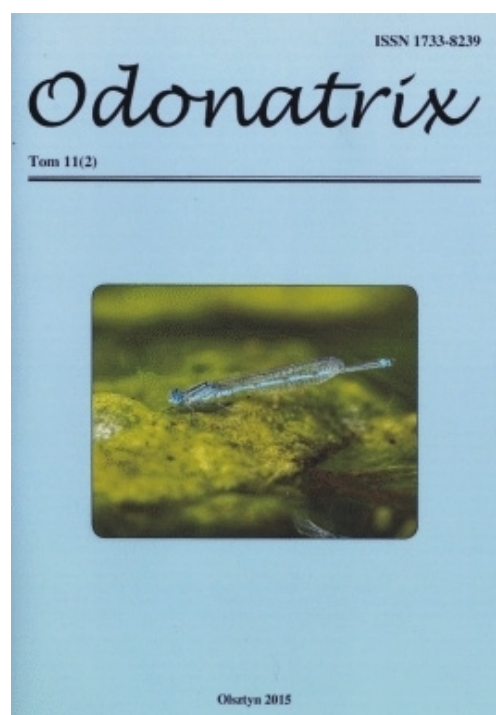
Odonatrix - Poland

Odonatrix is a journal devoted to the study of dragonflies and damselflies (Odonata) of Poland. The idea of the journal was initiated by Paweł Buczyński. The first issue was published in 2005. The intent of the editorial board was to facilitate the publication of faunistic data and establish a group of amateur researchers studying odonates. The publication of a further 11 volumes reached that goal. The group of contributors has significantly increased. For several years now there has been an active Odonatological Section of the Polish Entomological Society. Regular seminars and field meetings are held annually; already 13 meetings have been organised in various localities in Poland.

Contributions published in *Odonatrix* contributed to: 'A distribution atlas of dragonflies (Odonata) in Poland' published in 2009.

Until 2015 the journal was published twice a year and each volume consisted of two issues but in 2016 there was a single issue published. The journal has now switched entirely from the traditional way of publishing, in hard copy form, to digital online form only, with an assigned e-ISSN number. Old issues and new issues have been made available through the webpage [http://www.wazki.pl]. Each article has been uploaded as a separate 'pdf' file. In this way, a continuity of *Odonatrix* has been provided, freeing the publication of new issues from the number of submitted articles. The contributions published in *Odonatrix* are often cited in Polish articles, however they reach foreign authors as well.

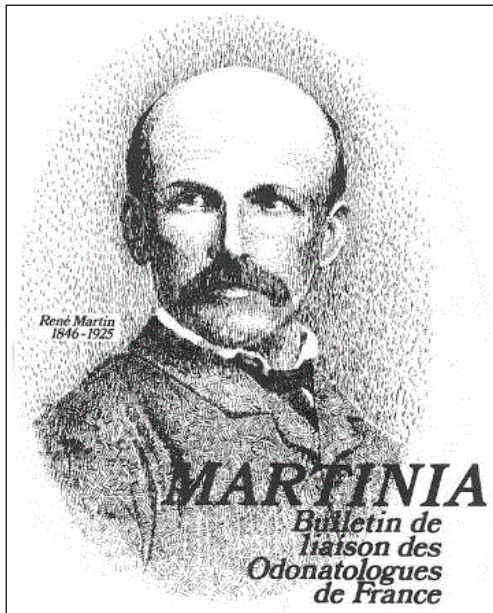
Odonatrix is a peer-reviewed journal and included in AGRO and Index Copernicus. More information can be found at [http://www.wazki.pl/odonatrix.html].



Martinia - Journal of the Société Française d'Odonatologie (SfO)

Philippe Lambret [martinia@libellules.org]
Editor, *Martinia*

The French odonatological society is an association born on 23 April, 1991. Thanks to professional and amateur odonatologists, French or foreigners, the SfO plays an expert role in odonatology. It aims to develop studies concerning this group of insects in collaboration with the National Museum of Natural History (MNHN), the French Ministry in charge of the Environment, the Office for the insects and their environment (Opie) and other institutions among which are wildlife managers. An example of such collaborations is the National Action Plan for Odonata [<http://odonates.pnaopie.fr/>]. The SfO organizes annual meetings but also international conferences, such as the 3rd European Congress on Odonatology which was held in 2014 in Montpellier (southern France). Targeting the conservation of dragonflies and their habitats, the SfO also offers education and training sessions and edits books and field guides.



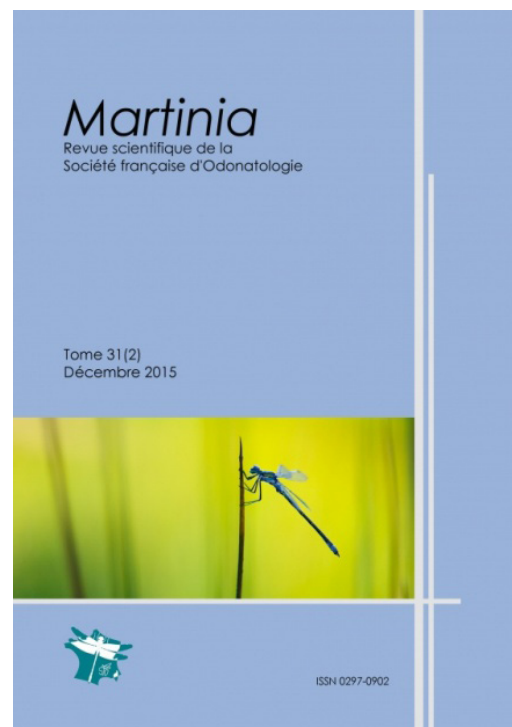
Another tool to spread the knowledge on dragonflies is *Martinia*, the association's scientific journal which is dedicated to the French odonatologist René Martin (1846-1925). *Martinia* is even older than the association itself and was created in 1985 by a small group of dragonfly enthusiasts, led by Jean-Louis Dommanget who was the first editor. *Martinia* was therefore the first journal providing information about dragonflies from France and helped substantially to organize and energize the national distribution survey of odonates which had been launched in 1982.

With two issues a year, *Martinia* aims to provide short communications and articles dealing with the ecology, behavior, distribution, conservation and management of the odonates of metropolitan France and the French overseas departments. Although preferably written in French, English texts are now accepted. All manuscripts should follow the instructions to the authors and be submitted to the Editor [martinia@libellules.org] for initial appraisal. If considered suitable for further

consideration, each of them is peer reviewed by volunteer referees.

From 1985 up to now, more than 810 papers have been published in *Martinia*, which represents 6,700 pages. A repository of these papers (1985-2011) is available on the SfO web site [www.libellules.org], section Publications / Revue Martinia). From the same web page, issues from 2010 onward are downloadable for free. Previous issues will be added soon, as the scanning of hard copies progresses.

Whether you have any odonatological observation regarding French territories, or other countries and you expect to publish in French, your contribution to the journal is welcome. Help in reviewing the manuscript would also be appreciated. You could also contribute to the journal's cover by proposing a picture of a French odonate: at each new issue SfO members have the opportunity to choose among three proposals. And feel free to join the SfO [<https://www.helloasso.com/associations/societe-francaise-d-odonatologie>]. For more information, do not hesitate to send an email to the Editor [martinia@libellules.org].



**Libellula - Journal of the GdO e.V.
(Gesellschaft der deutschsprachigen Odonatologen/
Society of German-speaking Odonatologists)**

**Dr Christoph Willigalla [christoph@willigalla.de]
Editor, *Libellula***

Libellula is the journal of the GdO (Gesellschaft der deutschsprachigen Odonatologen e.V./ Society of German-speaking Odonatologists). It has been published twice a year since 1981 and comprises scientific papers on biology, ecology, distribution, and conservation of Odonata.

For subscription, a membership with the GdO is obligatory. The annual membership fee is €35 plus additional shipping costs. Please contact GdO, Mr. Michael Post, Baden-Badener-Str. 8, D-69126 Heidelberg [gdo.post@web.de] or visit [www.libellula.org] for further details.

The membership fee also includes subscription to the *Libellula Supplement*, which is published at irregular intervals. For example, the *Atlas of the Odonata of the Mediterranean and North Africa* and the *Atlas of the Odonata of Germany* were published within this series.

Manuscripts intended to be published in *Libellula* have to be submitted in German or English to the Editor Dr Christoph Willigalla [christoph@willigalla.de].



Erjavecija - Bulletin of Slovene Odonatological Society

**Nina Erbida [nina.erbida@gmail.com] &
Damjan Vinko [damjan.vinko@gmail.com]**

Slovenia is a small, beautiful European country on the 'sunny side' of the Alps. Despite only two million inhabitants, it has a rich history of odonatological research, initiated in a systematic way, by Prof. Baastian Kiauta over six decades ago. The Slovene Odonatological Society has been active for more than two decades and issues its own odonatological bulletin - *Erjavecija*.

Erjavecija is a national odonatological bulletin, published since 1995. It is named after Fran Erjavec (1834–1887), a Slovene writer, naturalist and teacher. In 1864, he introduced the expression '*kačji pastir*' which was the name used for dragonflies in the first Slovene biological schoolbook. Since 1996 the bulletin has been edited by Matjaž Bedjanič. From 1995 until the end of 2016 31 issues of *Erjavecija* have been published. Until 2005 it was published twice a year but since then only one issue is regularly published, usually at the end of October each year. The main aim of *Erjavecija* is to record and publish all available odonatological information from our geographical area. Around 1,200 pages have been published thus far, including many different articles and reports covering numerous faunistic, ecological, nature conservation, historical, literary and other topics.

Each issue of *Erjavecija* also includes many citations of published odonatological works, including 'grey literature', which contain faunistic data for the territory of Slovenia, titled '*Additions to the Slovene odonatological bibliography*'. In this way, all known published records, information and knowledge on the dragonfly fauna of Slovenia from 1685 to 2016 have been systematically gathered. The Slovene odonatological bibliography currently totals of over 1,100 citations.

Also in the future the goal of Slovene Dragonfly Society is to maintain *Erjavecija* as a central repository of all kinds of information about dragonflies in Slovenia and its wider surroundings. All members of Slovene Dragonfly Society and authors of articles receive *Erjavecija* in printed form. You are kindly invited to contribute your field observations, stories or adventures regarding dragonflies to the editor of publications Matjaž Bedjanič [matjaz_bedjanic@yahoo.com]. Authors of articles receive *Erjavecija* in printed form and the membership fee is €10.

SLOVENSKO ODONATOLOŠKO DRUŠTVO
 Založništvo in štampa: M. Kitarac 2017

ERJAVECIA

Številka 1 bilten 25.10.1995
 Izbija spetila in oktobra pripravil M. Kitarac

5. Mrežkarček (Netzflieger, Nuarpteren)

169. Kadij puzar (ali grobnikarček Wasserjungfer, Agrion vienge) je lepje poznana zadržala, ima veliko glavno, pravi dolg, tanko telo in štiri črna mrežasta krila. Na glavi vidimo dveje velikih izbojenih očeh, kratki nitasti spuščaj in možna, dveje dolga tista za grizenje. Tudi na drugi strani glave ali pa nekoliko odroč. Pročena tista krila se od vsa močra ali pa le v sredni sredno-sredni ali razpoka.


Ta mrežkarček se vidi pogosto pri sušičarskih potokih, ali pa se nahaja nad vodo, ali pa počiva na rastlinah, ki rastejo nad vodo. Drugi kadij puzar letajo jako hitro sonar ter se, posebno kadar solnce sijejo preječa. Tako kot vse druge mrežkarčke, v katerih se hranijo in ker veliko tega mrežkarček pokončajo, se kotirata v mlakosti. Vred kadij puzarji v vodi. Jajca zasa namreč v krpah pod vodno ravnino. Njha žilnica se nekoliko starija podobno, samo da nimajo kril, podobno so in leve druge podobno različna. Večkrat se vidi in potam se spreminja v buho, na kateri se in vidi mlada krila. Tudi mlada buha se nahaja, kar buha skor vseh drugih mrežkarček, ampak vedno se giba in žo. Naspred stane in vodo, prave se za tako mrežkarček, koda na koda poldi in poldi kadij puzar se menja in leti, v podobni je le, ali, krila se mrežka in obično. Ali koda se obkroži ter se koda mrežkarček valjano v svoji koda, namreč v znak.

Periodika za ribe glavnice in reke
 Špaci A. Potomce, postavljeni Fr. Erjavec
 Celovec
 1884

SLOVENSKO ODONATOLOŠKO DRUŠTVO
 Založništvo in štampa: M. Kitarac 2017

ERJAVECIA

Številka 3 bilten 27.02.1997
 Izbija dvakrat na leto uredil: Matjaž Boljanič




JAVNIH E. E. PIVKA GRADČE 1880
 (MATEJ VARNICA VALANČIČA 1817 74. JAKO 1817)

SLOVENSKO ODONATOLOŠKO DRUŠTVO
 Založništvo in štampa: M. Kitarac 2017

ERJAVECIA

Številka 9 bilten 30.04.2000
 Izbija dvakrat na leto ISSN 1485-8180 uredil: Matjaž Boljanič




Matjaž Boljanič

SLOVENSKO ODONATOLOŠKO DRUŠTVO
 Založništvo in štampa: M. Kitarac 2017

ERJAVECIA

Številka 13 bilten 30.04.2002
 Izbija dvakrat na leto ISSN 1485-8180 uredil: Matjaž Boljanič




DR. LEOPOLD POLJANEC
 »Nadani list Poljanec slovenskih entomologov«

SLOVENSKO ODONATOLOŠKO DRUŠTVO
 Založništvo in štampa: M. Kitarac 2017

ERJAVECIA

Številka 16 bilten 31.10.2003
 Izbija dvakrat na leto ISSN 1485-8180 uredil: Matjaž Boljanič



DR. ROMAN PUSČENIG
 (1875-1862)

SLOVENSKO ODONATOLOŠKO DRUŠTVO
 Založništvo in štampa: M. Kitarac 2017

ERJAVECIA

Številka 23 bilten 31.10.2008
 Izbija dvakrat na leto ISSN 1485-8180 uredil: Matjaž Boljanič



Sloveniatram robici gen. nov., sp. nov.
 Zessin, Záhoun & Hiji, 2008

SLOVENSKO ODONATOLOŠKO DRUŠTVO
 Založništvo in štampa: M. Kitarac 2017

ERJAVECIA

Številka 25 bilten 31.10.2010
 Izbija dvakrat na leto ISSN 1485-8180 uredil: Matjaž Boljanič



GKB OBČINE
 LOG - DRAGOMER

SLOVENSKO ODONATOLOŠKO DRUŠTVO
 Založništvo in štampa: M. Kitarac 2017

ERJAVECIA

Številka 26 bilten 31.10.2011
 Izbija dvakrat na leto ISSN 1485-8180 uredil: Matjaž Boljanič




BOOM 2011
 FIRST BALKAN ODONATOLOGICAL MEETING
 PRVO MEDNARODNO SREČANJE ODONATOLOGOV BALKANA

SLOVENSKO ODONATOLOŠKO DRUŠTVO
 Založništvo in štampa: M. Kitarac 2017

ERJAVECIA

Številka 30 bilten 31.10.2015
 Izbija dvakrat na leto ISSN 1485-8180 uredil: Matjaž Boljanič



Deutsch-Slovenisches
Wörterbuch.
 Herausgegeben von Adolf von
 Godeffroy, herausgegeben von
 Anton Alois Wolf,
 Herausgeber des Zweiten Theils, Wien im Jahr 1861.
 Zweiter Theil.
 J. Neumann, Neudruck.
 Deutsch-Slovenisches Wörterbuch - Zweiter Theil.
 M. CIGALE, 1980

Boletín ROLA - Journal of odonatologists from Andalusia (Spain)
Free to download at: [<http://aeaelbosqueanimado.blogspot.be/p/boletin-rola.html>]

Florent prunier [aeaelbosqueanimado.info@gmail.com]
Editor, *Boletín ROLA*

Boletín ROLA is the journal of the network of dragonfly recorders and enthusiasts in Andalusia (southern Spain). It was launched in 2012 as a consequence of the activities of a freshly emerged group of local odonatologists. After a few years of existence, it is actually still a teneral: full of energy and potential, but also fragile and in need of a lot of care and dedication (that's the difference! Journals do not fly by themselves). In the next lines, I'll try to explain some of the reasons behind its existence and also some keys that allowed its good fortune. First of all, I have to say that 10 years ago, I wouldn't have believed it possible for me to be editor of an international and scientific - albeit tiny - journal! So for me, each paper we publish is a little shock and gem. I am deeply grateful to the authors for making it alive.

Why did we start *Boletín ROLA*? As with many of the good things we do, there is not just a single reason. In fact the project evolved into something which wasn't expected and the current result has been a bit of surprise.

Back in early 2010, some friends and I in Andalusia started a dragonfly recording scheme called ROLA. Andalusia is famous for its biodiversity within Europe and the Mediterranean. But actually, there are not so many naturalist vocations among the local population. Of course there are great Spanish amateurs and professional scientists and also a large network of protected natural areas, but overall there are few people going at the field to see species, and only a handful of them looking at dragonflies. And there is the issue of the collecting permits. Be aware that you need to apply for one annually from the regional civil service. This is much more tedious and time-consuming than you might think. As by way of example, I would just point out that we are currently waiting for a permit applied for six months ago. The good thing with European Odonata is that with a little experience you can identify your local fauna in the field, and many observers enjoy taking pictures with a digital camera. So you can do useful field work without a permit. But what about so many other insects which need close examination? Another point is that in reality they hardly ever ask for your permit in the field... but it is not a good idea to test the chances. Why do I mention this issue? It's because, in the application, you need to state what you caught during the previous season. I have to say, that is a great way to keep the database up-to-date. So basically we started producing a report with the sightings of the year in order to fulfil our obligation. As an organized group wanting to work for a long time, this was not an option. Although compulsory, reporting the captures is not sufficient. Applicants need to justify their interest (that's easy) and if they are not working as professional researchers in a public institution, it is compulsory to add a "letter of recommendation" by a university professor. I have to say that for anybody who has spent long years studying for a biology degree, or even a PhD, this is irritating! What exactly is the administration insinuating about biologists? And do they really think that ethics lie in a piece of paper? Can you imagine that it is forbidden without authorization to prepare a personal herbarium? We are reaching a situation where ten-year-old children knew more about basic biology fifty years ago than today. Anyway, that is saying more about the Spanish system than about its entomologists (how many of them?). So every year we have to manage the application with the help of a friendly and respected professor. Well, given that Spain has been left with hardly any academic scientist who are odonatologists, it is good we found one to be friends with!

At one point, we asked if our group, dedicated to the study of dragonflies and their conservation, could be considered in the same category as a few other amateur societies, whose president could give this "letter of recommendation" for their members. We did that because we want to keep friendly with our professor and avoid giving him unnecessary work. Apparently the administration believed we were pretending to be a university or something akin! Their reply was this couldn't be as long as we don't have a scientific committee, producing scientific papers, participating and organizing seminars and congresses, and editing a proper journal. Well, all that is the bread-and-butter of any scientific society after all... but just remember we are talking about a young group located in a country almost devoid of any natural history culture... So, this is it... if we could add some short papers along with the annual sightings' report (which we have to do, anyway), this could turn out to be considered a "journal" at least as far as the civil servants are concerned. I must say we did all the things on that list and are still considered as little boys and girls who don't really know what they are doing...

So far, so good, we had a start for a journal. For the worst reason ever on Earth! Quite an obligation, being no more than ten friends or so. That was not going to be easy to sustain. Well, the core of the publication would be the data, so that if we were (are) lacking for papers to publish that wouldn't be an issue (never better said in fact!).

After a little thinking, it appeared we had some advantages we could try to profit from and that the situation wasn't so dark. First of all, it was decided to work with a digital-only publication, so we don't have to manage all the costs and problems associated with a print publication. We are aware that paper-copies are an unparralled way to preserve works and digital-only is not the best approach in the world to reach the highest

standards of a scientific publication, but to be honest, we never pretended it would do so. In fact, trying to set up a traditional printed publication was a sure way of failure.

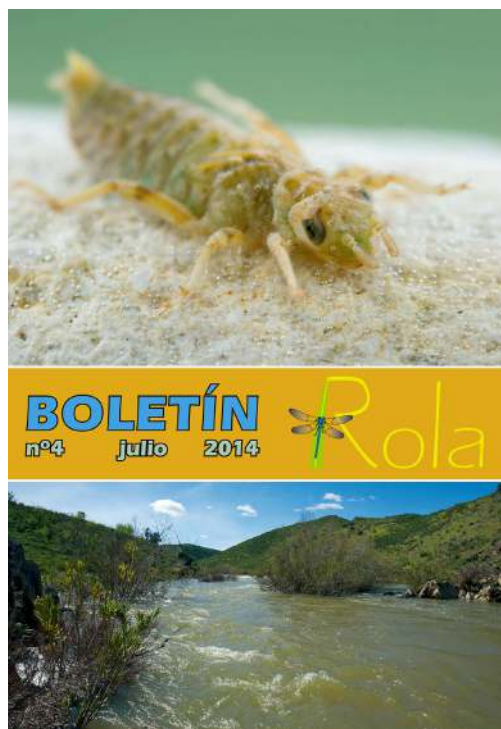
Secondly, as a consequence of not trying to emulate a traditional publication, we had the opportunity to take the best of digital facilities, especially to propose an attractive design with lots of colour pictures. Here is another connection with the modern naturalists and their powerful digital cameras: the possibility to access lots of high quality pictures. One of the ideas behind adding nice illustrations is that the journal could be interesting to the eyes of readers of the general public (even just looking at the pictures). So that from the start, it was clear we wanted to propose a hybrid of scientific journal and magazine. If the journal could appear to be interesting to some people only because it is nice; this was worth paying attention to its format.

Third point: because dissemination of digital archives is so easy, we wouldn't charge for a subscription: all contents are free. The good thing is that we have minimum work to do for distribution. No printing costs, no distribution cost, no accountancy cost, no control policy. That means that all this work is done voluntarily ... and that is a challenge for such serious work. In fact, each issue is only delaying the nearly logical end. There are other parallel issues with open data digital journals. Today the scientific edition is a huge market that many scientists find to be in crisis, with a situation where it seems that major scientific publishers are much more interested in profit than in disseminating science. Our publication is part of this wave of open data for better and more democratic distribution, which is intrinsic to proper science.

Fourth point. As stated before Andalusia is an attractive region. Every year we have visitors from - especially - northern Europe who travel to look at birds, butterflies, plants ... and dragonflies. From the beginning of *ROLA* we were clear about having the best collaboration we could with foreigners, so that we could also connect more easily with very interesting people. This proved to be right. And also we have foreign odonatologists who visit us very often and have become important partners of the project. Moreover, this was the perfect opportunity to give more impact to the project. We could even include some papers written in English. For instance, in the second issue of *Boletín ROLA*, Christophe Brochard and Ewoud van der Ploeg published a wonderfully illustrated paper on *Trithemis exuviae*. For sure, Andalusia was probably the best territory in Spain to attract collaboration from European odonatologists. The best proof is that most of the records of the website *Observado.org* are localized in Andalusia. Here we have a combination of climate and species which are of the highest interest for Northern Europeans. So the journal could be read and written by some of their representatives.

Fifth point. No such journal existed in Iberia, with the exception of Cataluña, whose journal (*Butlletí del Grup d'Estudis dels Odonats de Catalunya*) has been in diapause for some years. In the eighties, there was the intent to publish a Spanish dragonfly journal called *Navasia*, which lasted only a short time. Today, there are two very dynamic entomological journals in Spain, with traditional black and white lay-outs, and their contents include a fair number of Odonata works. So apparently, there are people interested in writing studies about Odonata. It is inevitable that some of them become interested in collaborating with our own journal. Our intent is not at all to become the Spanish journal of odonatology, but for sure, we cannot focus only on Andalusia; we need contributions from nearby regions/ countries with similar climate or the same cohort of species, like from other regions of Spain, Portugal and why not from other countries of the Mediterranean Basin, or northern countries with Andalusian species (a south western species such as *Coenagrion mercuriale* is present in the UK after all). Looking at it from a different angle, *Boletín ROLA* can be an opportunity for the colleagues neighbouring Andalusia to publish their results in a specific journal.

Six. After the first issues, it appears that papers attract papers. For the ongoing work of *ROLA*, we seriously need a revision of the bibliography in our region. So after a lot of hard work, we could summarize all this information into a preliminary atlas, which was handily the subject of an entire issue. Right at the same time, the European Atlas was in full bloom, so that it was easy for us to share our database with the rest of Europe and follow this good dynamic. More colleagues started to be aware of our project and wanted to collaborate. Because of the regional atlas work, we started to be in contact with more people and institutions, especially in order to check records and track the most detailed information. We were able to publish some important work on the collection of dragonflies in the National Museum at Madrid and the results of a survey from the famous National Park of Doñana. All those publications appeared naturally, thanks to the right moment and the good manners



of all participants. And the real genius of this situation is the positive feedback. Those authors who could have published their research into better valued journal were generous to “invest” in *Boletín ROLA*. Their good work is like capital, which can attract others more easily to publish in our *Boletín ROLA*.

Seven. As a personal note, more than ten years ago I was in very close contact with some prominent English naturalists, such as Nick Riddiford and Brian Eversham, with high interest in Odonata. Surely they fuelled my vocation for natural history and they have been models to emulate. This journal certainly owes them a great deal.

And what about the future? If we want *Boletín ROLA* to survive next season, we need to continue to work hard, (in the current Spanish socio-economic situation, this means no available funding); attract new authors and increase local and international collaboration; educate our members in dragonfly studies; be in touch with visitors. So we invite you to have a look at our website where you can download all issues of the *Boletín ROLA*.

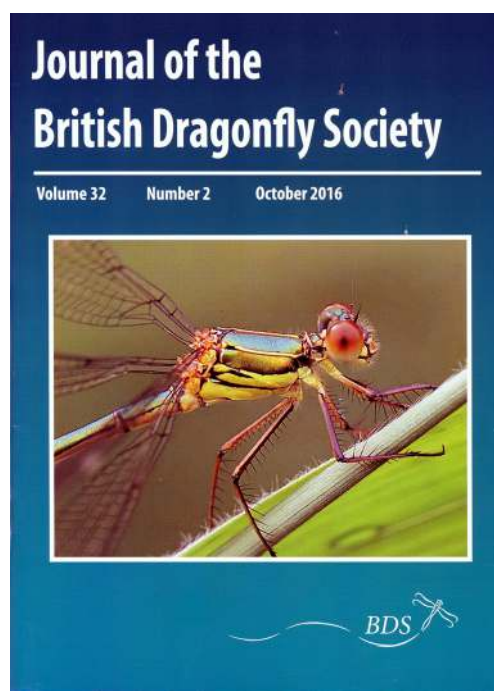
Journal of the British Dragonfly Society

Dr Peter J. Mill [gpmill@supanet.com]
Editor, *Journal of the British Dragonfly Society*

The *Journal of the British Dragonfly Society* is the official journal of the Society and is published twice a year, in April and October. It is internationally respected and contains some of the latest research into all aspects of dragonfly biology. It includes articles on odonates that have been recorded from the UK; also articles on European species written by members of the British Dragonfly Society (BDS). Species reviews are included and, to date, 10 have been published. The articles are all reviewed and help is provided to those who are not used to writing scientific papers. Instructions to authors are provided on the inside back cover of the journal.

The journal was first published in 1983. Each volume currently contains in excess of 100 pages; volume 32 (2016) contained nine articles. A full list of published articles can be obtained from the editor P. J. Mill [p.j.mill@leeds.ac.uk].

The journal is included in the membership of the BDS. Membership is open to anyone and costs £20 for those living in the U.K. and £25 for overseas members. In addition to the journal, members receive our newsletter (*Dragonfly News*) twice a year and the annual *Darter Magazine*, which is devoted to recording odonates in the U.K. We have a ‘Members Day’ each autumn. The membership application form can be found on the BDS website: [www.british-dragonflies.org.uk/].



***Brachytron* - Journal of the Dutch Dragonfly Society**

**Geert De Knijf [redactie@brachytron.nl]
Editor, *Brachytron***

Brachytron is the journal of the Dutch Dragonfly Society (Nederlandse Vereniging voor Libellenstudie, NVL) and the Flemish Dragonfly Society (Libellenvereniging Vlaanderen, LVV). It has been published twice a year since 1997 and includes to date 188 scientific papers on the distribution, biology, ecology and conservation of Odonata, chiefly concerning the fauna of the Netherlands and Belgium. But contributions from other parts of Europe are also very welcome. Most of the papers can be downloaded from [<http://www.brachytron.nl/Publicaties.html>].

Besides the regular two issues a year, supplements are irregularly published such as on the Odonata of Turkey, or field guides to the damselflies and dragonflies of New Guinea, or a special issue on *Sympecma paedisca*.

The journal is included in the membership of the Dutch or Flemish Dragonfly Society. The annual membership costs €20 or €22 outside Belgium or the Netherlands. For subscriptions please contact [ledenadmin@odonata.be] (Belgium) or [secretaris.nvl@brachytron.nl] (the Netherlands).

Manuscripts intended to be published in *Brachytron* have to be submitted in Dutch or English to the Editor: Geert De Knijf [redactie@brachytron.nl].



International Journal of Odonatology
Official Organ of the Worldwide Dragonfly Association

Editor, Dr John C Abott [jabbott1@ua.edu]

Aims and scope

International Journal of Odonatology (IJO) is aimed at providing a publication outlet for the growing number of students of Odonata. It addresses subjects such as ecology, ethology, physiology, genetics, taxonomy, phylogeny and geographic distribution of odonate species. Reviews will be by invitation, but authors who plan to write a review on a subject of interest to the journal are encouraged to contact the editor.

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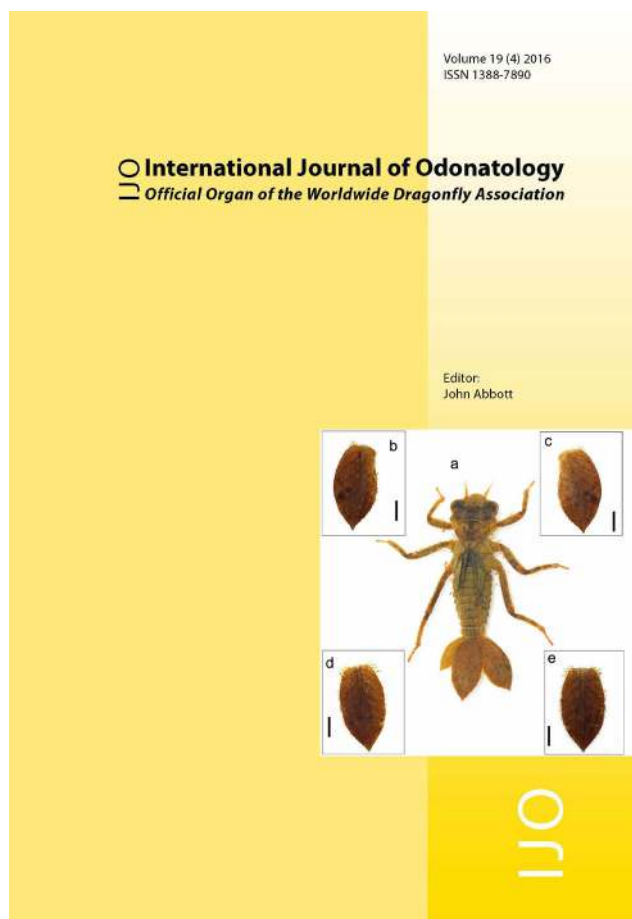
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Front and back covers of the latest volume of *International Journal of Odonatology* 19(4) 2016.

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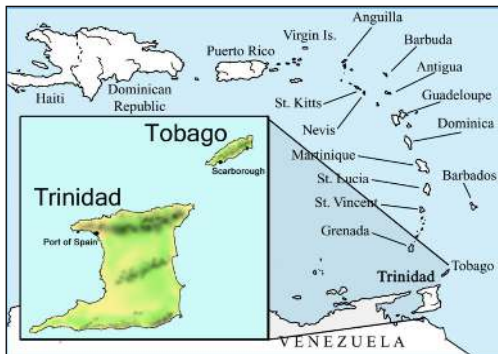
The Dragonflies and Damselflies of Trinidad and Tobago

Author: John Michalski with photos by John C Abbott

Published Sept 2015, Kanduanum Books, Morristown NJ
(ISBN: 97809887198208)

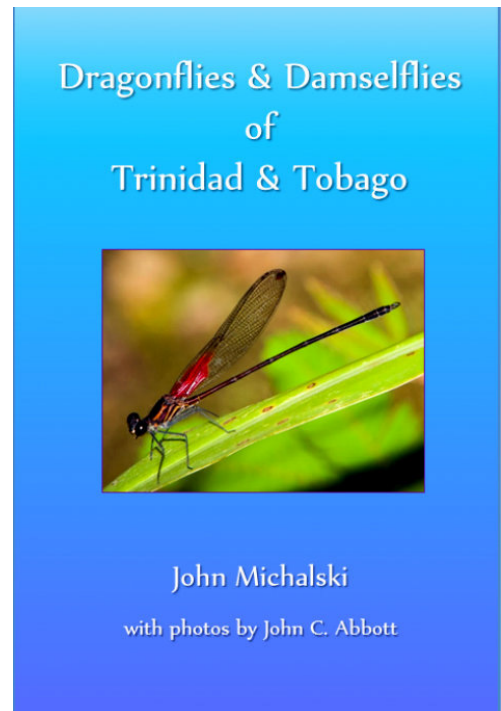
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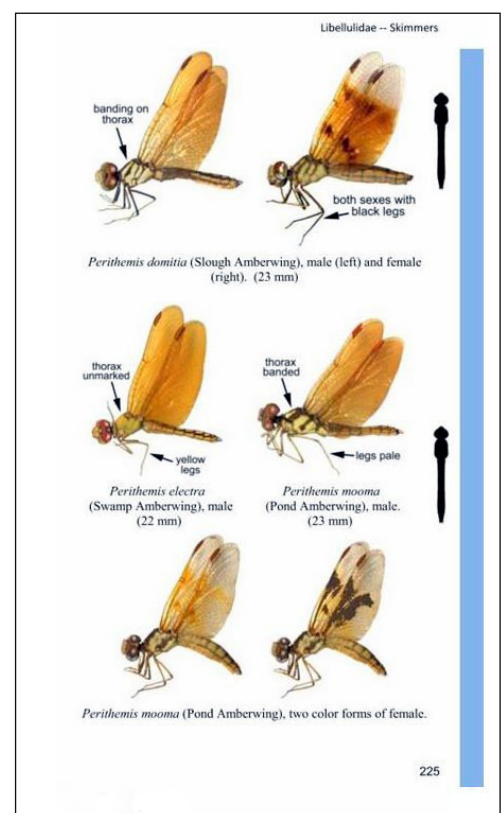
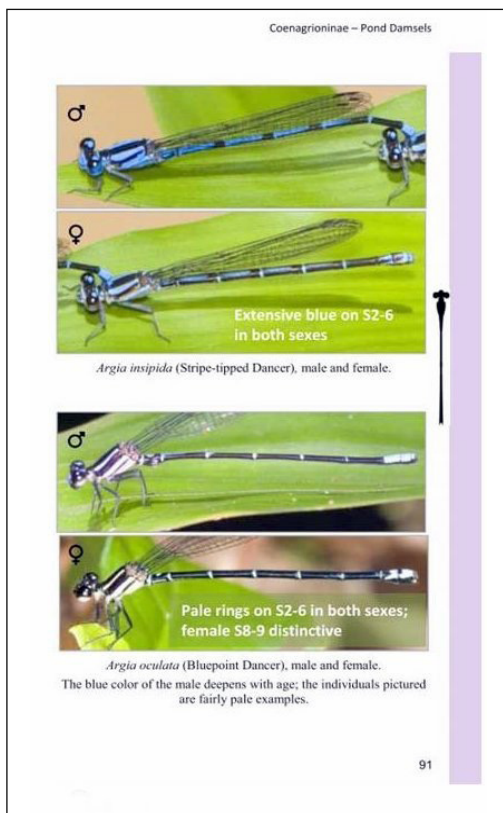


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In accordance with the WDA Constitution and By Laws, all members of the Board of Trustees, except for the President Elect, resign at the Biennial General Meeting following that at which they took up their posts although all (apart from the President and the Immediate Past President) are eligible for re-election. **Frank Suhling** has agreed to stand for election to the post of President Elect having been formally nominated (by Ola Fincke) and seconded (by Nancy van der Poorten). All other current board members have agreed to stand again except for Richard Rowe (Congress Coordinator); Richard has served on the board as Congress Coordinator since 2005 and is stepping down to take on other roles outside the WDA. Javier Muzon has been proposed and seconded for Congress Coordinator and is well-suited to the position, having organized the very successful ICO 2015 at La Plata.

Should you wish to nominate another member of the WDA for any position on the Board of Trustees (except for President and Immediate Past President) please e-mail the Secretary or complete the following nomination form and return it to the Secretary so that it reaches her **no later than 15 March 2017** after which no nominations can be registered. In the event of a vote being required for any position, email ballot slips will be emailed out and would need to be returned by May 15, 2017. Please confirm that any nomination is supported by two WDA members and by the person nominated.

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- President: Nancy van der Poorten
- Immediate Past President: Ola Fincke

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