



## EDITORIAL

Readers may have noticed that our ISSN has recently changed and wondered why. The answer is that we were automatically given a new number when we changed the name from *WDA's AGRION* to *AGRION*.

Thank you to those who sent me their reminiscences – you will notice that there are one or two “late entries” on this theme in the following pages.

I would like you to have a look at an article starting on page 8. Fred SaintOurs posted a message on the Internet, which I liked so much that I asked him if I could quote from it in a future article – he agreed. The article changed several times before taking the form in which you now find it and it has occurred to me that the theme is worth expanding. Using the same format, I would like to publish similar records of yard/garden odonate visitors from all parts of the world so that we can compare what is flying, for example, in a Japanese (or Queensland) garden with what is flying in a Venezuelan (or Canadian) one – thus producing another thematic number of *AGRION*, this time with the title “**Our Own Backyard**”. Of course, as usual, **your cooperation is vital** and I will need contributions from members living in all countries (and parts of each country) – so please let them roll in. Since it will take more time than usual to set up such a number, I'd like to make the deadline **1 May 2003** but the earlier you can send them the better. It is an opportunity for everyone, including members who are loath to submit articles in the ordinary way, to contribute to our newsletter – **PLEASE GRAB IT!!**

## WDA HAS A PATRON – Philip Corbet

In June 2002 the Board unanimously approved two proposals: (1) that, if all Board members agreed, WDA would seek a Patron; and (2) that, if all Board members agreed, our choice of Patron would be Professor Edward O. Wilson FRS, whom I should then invite to accept appointment as Patron of WDA. We were delighted and honoured when Professor Wilson cordially accepted our invitation.

Professor Wilson was our choice for several reasons. He is of course one of the most distinguished living biologists. He is also an entomologist of international standing, renowned in particular for his pioneering work on communication among ants by the use of pheromones. He has studied ants in depth, elucidating both their taxonomy and social behaviour, for many years and in 1990, with Bert Hölldobler authored the book “The Ants” which, like his earlier book “On Human Nature” (1979) was awarded the Pulitzer Prize. The scope of his contributions, as entomologist, biologist, ecologist and philosopher, has been very wide and his insights have been penetrating. Two of his major works have been “The Insect Societies” (1971) and “Sociobiology: The New Synthesis” (1975), both of which have had a major impact on biological thinking and debate. It is partly Professor Wilson's well-known commitment to in-depth taxon-focused biology that makes him such an appropriate choice to serve as Patron of WDA. Nowadays taxon-focused biology is not among the most fashionable of pursuits and so can benefit from advocacy from an impeccable source.

There is a great deal more that could be said about Professor Wilson's contributions and accomplishments but this is no place to duplicate the biographies that have appeared elsewhere. A thoughtful analysis of his contributions to biological theory appears in the 15<sup>th</sup> edition of *The Encyclopaedia Britannica* and a list of the many honours he has received is included in *Marquis Who's Who in The World* (1996). Professor Wilson is currently University Research Professor Emeritus and Honorary Curator in Entomology at Harvard University, Cambridge, Massachusetts.

Professor Wilson accepted our invitation cordially and graciously. In his letter to me he wrote “I consider it a special honor indeed to be invited to serve as Patron of the Worldwide Dragonfly Association, particularly since, as you point out, our commitment to in-depth taxon biology is so closely matched. So I accept gladly.” This generous endorsement of WDA from so distinguished a scientist should give us added encouragement to strive to meet the objectives to which we are committed.

## **SUPPORTING CONSERVATION: A CULTURE OF COORDINATION**

**Dorothy Gennard (with co-operation from Martin Schorr).**

The most exciting and important activity that any scientific society can undertake is the support of research – in WDA's case into odonatology and odonatological conservation – and the exchange of scientific information on both a formal and informal basis to further that research. The *International Journal of Odonatology* (IJO), together with WDA's biennial international Symposia, achieves the latter objective in a very effective way. This is thanks to the current and past Editors and the Editorial Board, and the stalwarts who have hosted our Symposia (Vicky McMillan, Janet Rith-Najarian and Göran and Anna Sahlén to date). Continuation of the former aspiration – the encouragement of new areas of research and continuation of present research – is supported by the financial contributions made by WDA members and by its benefactors.

In times past many of the benefactors of the causes we now espouse were wealthy industrialists or hobby scientists who were willing to underwrite expeditions or the study of particular organisms. (The late Cynthia Longfield, the well-known odonatologist, was one such person.) In today's world this is seldom the way in which natural history activities are funded.

The WDA, like most other scientific societies and registered charities, depends for its funds primarily on the generosity of its members. Many WDA members make additional donations specifically to the Conservation Fund (CF) and, many thanks to such members for their very generous donations which were sent with subscriptions this year). WDA has also obtained money from the sale of the Erich Schmidt papers (kindly organised by Wolfgang Schneider) and also from various small items sold on behalf of WDA at meetings and Symposia. This money plus the donations, is supplemented from WDA Available Funds, when there is a shortfall. Available Funds is the name given to the overall pool of money that WDA has from all sources, after deducting that part of the subscriptions (£17) set aside for payments to the publisher of IJO. This pool of money includes money allocated under a number of budget headings for specific purposes; one of these is the CF (currently standing at about £2000).

The amount that is allocated to the Conservation Fund (and also to the Sponsorship Fund) within the Available Funds is derived from two sources. When an individual subscription is paid, additional money is often sent which is specified as a contribution for this Fund. This is one source of money for the Conservation Fund (or the Sponsorship Fund). The second source is from money in the Available Funds that is left after the bills and obligations (such as payment for *Odonatological Abstracts* and the printing etc. of AGRION have been met and resources for the following year have been set aside. This *ad hoc* arrangement of disbursements of money from general funds, on the agreement of the Executive, (By Laws **(3 (v); 8b and c)**) will remain in place until such time as WDA is on an improved financial footing where capital is not used for grant awards. As WDA membership grows and interest rates rise, the possibility will exist of being able to use a named investment bank account, the interest from which can be used by funds such as the Conservation Fund that would then no longer have to use capital to fulfil its grant-awarding role.

Though costly, the process of awarding grants is exciting because it furthers scientific investigation. One of the latest WDA awards was for a conservation project for the Mount Mlanje Damselfly - *Oreocnemis phoenix* Pinhey in Malawi. This project was also supported by a research grant from the International Dragonfly Fund (IDF). The recipient also sought additional grant aid from societies in The Netherlands, to supplement these grants. Frequently researchers assemble their money for research on dragonflies, by seeking grants from several sources. This is because the amount from each source is typically quite small.

The IDF has been a major player in providing support for odonatological research and in providing effective, rigorous, peer evaluation of applications. It has co-operated with WDA to ensure that research of a publishable standard is effectively supported. IDF was founded in 1996 with the aim of supporting the work of the former *Societas Internationalis Odonatologica*. In the early years IDF benefited greatly from financial support from the Aluminiumhütte Rheinfelden, as well as from the sale of books, reprints and other odonatological material. The IDF, and both odonatological research and WDA, owe a great deal to the principal architects of IDF, including Martin Lindeboom, Klaus Reinhardt and Martin Schorr. Co-operation between IDF and WDA, enhanced by the energetic activities of Jill Silsby in the first few years of WDA's existence, ensured that grant applicants were considered, and that research was supported. Examples of topics of grant applications that benefited from such co-operation are studies on Botswana Odonata carried out by Jens Kipping from Germany and work on the vertical distribution of the bromeliad-dwelling species *Mecistogaster modesta* Selys, presently being carried out by Michael Melnychuk and Diane Srivastava.

The report of the work on Botswana Odonata by Jens Kipping was published as a report for IDF in June **2002**, and will be submitted for consideration for publication by WDA in IJO shortly. The first volume of the 2002 issue of IJO contains three papers that were either funded by IDF or resulted from joint grant aid by both WDA and IDF. Such funding support for projects demonstrates clearly the level of co-operation between IDF and WDA. (The submission of work for publication in IJO is a requirement of an IDF grant award, as it is for a CFC grant award). IDF recognises several priorities in terms of awarding its grants for funding research. IDF's interest focuses on the biogeographical regions of the eastern west-Palaeartic (the former USSR) and the African continent. For example IDF is currently supporting a survey of the Odonata of Benin. Another example of research recently supported by IDF has increased knowledge of Bulgarian Odonata. This research led to the discovery of a hitherto undescribed species of European cordulid – *Somatochlora borisii* Marinov – and has thereby supplemented the knowledge of the genus contained in publications by Hansruedi Wildermuth.

A further area of co-operation between IDF and the WDA is the support of the Odonatological Abstract Service (OAS). The WDA gives the OAS £2 a year per member of WDA (equivalent to £1 per issue of the abstracts). This allows WDA members' access to an information source essential for research on Odonata. Production of the OAS is due solely to the dedication, skill and painstaking work of Martin Lindeboom and Martin Schorr and collaboration with Wolfgang Schneider, who ensures that



## BUYING COLLECTIONS VIA INTERNET??? Viola Clausnitzer

The Internet has its black sides, one of which is the amount of unwanted rubbish entering mailboxes (I am getting loads of business proposals from West and Central Africa with tempting money promises). Recently I got an e-mail from Russia, asking "Are you interested in insects? Then you should check out our site 'Russian Butterflies'". Well, I am interested in insects and checked the website. Instead of some serious information I found long price lists for all types of species, including e.g. loads of Apollo butterflies (which are CITES listed). The website advertises that "there are more than 3,000 insects listed in our price list: Lepidoptera, Coleoptera, Diptera, Hymenoptera, Hemiptera, Odonata and others from Europe, Russia, China, Pakistan, Taiwan, Thailand, Nepal, etc." There is also a huge online information database of Russian butterflies. Luckily dragonflies are not the prime group for collectors and they were "only" offered in boxes with 10 species and the promise, that there is a maximum of three specimens of each species per box. Only recently I was asked by two young Tanzanians in the Usambara Mts, Tanzania, if I want to buy insects. When I discussed the matter with the conservator of the Amani Nature Reserve I learned that this illegal trade is a big problem for some groups already, specially for Chameleons, Rose Beetles and Butterflies. I want to urge all WDA members not to buy any collections (unless they are old ones) or to stop buying them (!) however tempting an "offer" is for a "real collector" (which I never understand). Buying such collections enhances an uncontrolled and illegal collecting for which only the buyer can be blamed. Now one might argue that such boxes could include new locality records or even new species and that we should not lose such important scientific information. This is nonsense. If one is really interested in a region, the first step is to cooperate with local institutions (however difficult this might be) and to collect or get collections in the legal way.

### THANKS – Dorothy Gennard

I'd like to express my thanks to Jill Silsby and John Trueman, the authors of the CD-ROM *Dragonflies of the World; Interactive Identification to Subfamilies* for their generosity in donating the royalties from the sale of this work to WDA. Clearly, the more copies of the CD that are sold, the better it will be for WDA funds. Details can be found on our Website: <http://powell.colgate.edu/wda/dragonfly.htm>. I also wish to thank all other members who have sent us donations.

### NEWS from MEMBERS

**Jens Kipping** (Germany). Since writing his article in WDA's AGRION Volume 5 Number 2 in July 2001, Jens has made two further trips to the Okavango Delta in Botswana – he is collecting data for his Master's thesis on the Odonata of northern Botswana. He is also preparing an annotated checklist for the German Dragonfly Society's journal and would be glad to hear from any member who has visited and recorded in the area.

**Mike Parr, Philip Corbet and Peter Allen** (UK) attended two meetings held on West Sedgemoor, Somerset (in June and July 2002) which were arranged by WDA's UK National Group and the British Dragonfly Society. West Sedgemoor is a low-lying area some 6km by 2km, its height above sea level is approximately 6m and it is subject to annual flooding during the winter months. It is part of the extensive area in Somerset known as the Levels – a series of very low-lying tracts of country separated by low lines of hills, a large part of which is owned by the Royal Society for the Protection of Birds (RSPB). Mike writes: "As far as possible the RSPB controls the water levels in the drainage channels and ditches (rhynes), and in the fields to encourage the maximum numbers of over-wintering water birds and breeding waders. Many of the different moors that constitute the Levels are notable for being strongholds for the damselfly *Coenagrion pulchellum* Vander Linden, which has a scattered and discontinuous distribution in England. The species is common on most of the moors surrounding West Sedgemoor but it has been rare or absent for at least 14 years until recently from West Sedgemoor itself." The chief aim of the meetings was to record the distribution of *C. pulchellum* in the chosen areas. Philip, Peter and Mike were grateful to the Sedgemoor RSPB staff for their detailed maps of the area, information relating to previous records and help in planning suitable routes for the surveys. Enquiries as to reasons for the encouraging results (an increase in abundance and range) are continuing.

**Tom Williamson** (France). I'm working at present at the French Odonatology Association (SFO), for a 4 month-long job, ending in December 2002. The job entails recording data (field observations of French odonatists) onto specific database for species mapping. I also act as a secretarial Man Friday and am enjoying the experience.

### LORENZ'SCHE PRÄGUNG – Richard Seidenbusch

I am a nature lover and all animals are dear to me - so, as I have often asked myself, what made me choose, exclusively, dragonflies upon which to hang my heart - why not frogs or snakes, spiders or bumble bees? After reading the last number of AGRION, which contained so many interesting reminiscences from my fellow WDA members, I began to search my memory for early clues that might have led to my lifelong fascination – or may I say, "back to the moments of *Lorenz'sche Prägung*". Many such moments are indelibly fixed in my mind – moments that have occurred from the earliest days of my life.

My mother hurried with my birth because she wished to give me the name "Richard". Had I arrived only a few hours later my name would, perforce, have been "Adolf" – in 1944 Germany this would have been almost inevitable for a male child born on "*Führer's Geburstag*" – or parents could expect dispatch to "Dachau-gulag". Of course the day of my birth had no bearing on pointing me in the direction of dragonflies; this began in early post-war days when I was between five and seven years old. Poverty and hunger forced us to collect anything and everything: bottles, papers, tins, pinecones, wood, mushrooms, berries – anything that would bring in a few

pennies when they were sold. And so we frequented our surrounding woods, coming into everyday contact with nature: flies, wasps, mosquitoes – and here I recall my first key-adventures involving dragonflies.

- On expeditions into the big woods (Wagensass and Fronberg Forests) with my uncles Ludvig and Wolfgang, we would have to cross a lot of small ditches and a number of *Sphagnum-carex* puddles, all filled with water throughout the year. On these I caught my first “red needle” (*Ceriagrion tenellum*) with my hands, and wondered at its fragility.
- When accompanying my aunts Babette and Anne, I would undoubtedly have preferred to sit in the puddles and I vividly remember observing for the first time a multitude of black/blue pruinosed darters (*Leucorrhinia albifrons*) ovipositing over the water’s surface and resting on the sunny side of pine trunks.
- When wandering one Sunday with my parents I caught my first *Ophiogomphus cecilia*. I used my jacket and carefully avoided direct contact with this frightening animal. Over the next few years I came across colonies of this, and other, species beside clear running streams in sunny forest glades: *Calopteryx* spp. and *Onychogomphus forcipatus* with its terrifyingly erect forked tail. Sadly the demands of fisheries near the sources of these streams destroyed such lovely habitats.
- During summer holidays with my Uncle Andreas in the village of Saal, situated near the River Danube, I joined the village children playing in the Feckinger Brook. I well remember my aunt Fanny warning me to beware the stinging “Bachschneider” (*Calopteryx virgo*) – and I was thus more afraid of this beautiful creature than of wasps and bees.
- On the muddy banks of a small backwater of the Danube there was positioned a small wooden boat which we happily used as a bridge, springing from the top of the boat to the opposite muddy bank – not infrequently landing in the muddy “pie” to the detriment of everything we wore below the waist . . . and always observed distrustfully by *Stylurus flavipes* as it rested on the rim of the boat or on the vegetation on the banks.
- A few hundred meters upstream at Herrensaal lay the landing stage of a big wooden ferry that crossed the Danube, transporting horses, cattle and carts laden with corn and hay. Thanks to the ferryman, we children had permanent free transport from one side of the river to the other and spent many happy hours constructing fish traps in the broad sandy-pebbled shores – carefully watched by an army of *O. forcipatus* sitting around on pebbles, with highly erected claspers.

All this could have been just yesterday – but in reality it was over 50 years ago. Today I fear, but maybe it would be better to say, I am convinced these early experiences were *Lorenz’sche Prägung* to me, **imprinting dragonflies on my brain** and condemning me to spend the rest of my life with these wonderful insects – **in much the same way as Konrad Lorenz’s newly hatched goslings accepted a human being as their Mother, in lieu of a goose**. The importance of first impressions can surely not be ignored. (Acknowledging the help of Jill Silsby in the use of the English language!)

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## A REMINISCENCE - PHOTOGRAPH on p 66 *DRAGONFLIES of the WORLD* – *Peter Allen*

**T**wenty-five years of dragonfly photography have produced many memorable moments; the joy of photography is that such occasions can be recaptured simply by viewing a slide.

In 1993, Cindy and I made a visit to the south-eastern USA, travelling through south-east Georgia and ending in our first meeting with Minter Westfall and Bill Mauffray in Gainesville, Florida. We spent several days at Waycross GA, using it as a base to explore some of the Okefenokee Swamp - most of which is only accessible by canoe along one of the various canals which were dug between 1891 and 1895 with the intention of draining the swamp (luckily, unsuccessful) to produce fertile farming land. To this end we went to the canoe-hire centre where canoes could be rented by the day or longer. We parted with our precious dollars for a day’s hire and were directed to the point where we would embark. As we arrived there, a party of school children who had been camping at one of the camp sites in the Park was disembarking with all their gear and tales of their adventure – particularly alligators, real and, no doubt, imaginary, that they had encountered. There is always one know-all in every group (it seems) and the twelve or thirteen year old individual in this party insisted on telling us that we would be quite safe as long as we didn’t bang the sides of the canoe with our paddles. This noise would attract 'gators.

The morning was dull and overcast - not good dragonfly weather - so our spirits were already not very high. Neither of us had canoed before and so we set off with some trepidation - straight into the trees on the opposite bank and with a fair amount of banging with the paddles and rustic language. We "progressed" like this for some while, gradually getting the gist of paddling in a straight line and all the time keeping a weather eye on the numerous alligators which would submerge on our approach; knowing they were there, but not being able to see them was quite unnerving - especially as we continued to beat a tattoo with our paddles! Cindy said she'd had enough and wanted to return to dry land; I said I'd paid for a day's canoe and I was having a day's canoe. We argued this to and fro along the main canal, the Suwanee Canal, taking a few uninteresting, poorly lit photographs and still watching for alligator attack.

And then, miraculously, the sun came out! Dragonflies and damselflies appeared. The Swamp Cypress along the banks were beautifully lit. The day was transformed. Alligators posed for pictures. They were our friends! (Perhaps I'm getting carried away there!) But we were suddenly involved with the dragonflies we'd come to see and the dangers (both real and imaginary) receded. The photograph, which appears on page 66 of Jill Silsby's *Dragonflies of the World*, was taken by a newly

confident Cindy, actually standing up in the canoe. We did spend the whole day on the water; we did quite regularly bang the sides of the canoe with our paddles; we weren't eaten and we did live to tell the tale - and reminisce.

## A BRIEF ODONATOLOGICAL EXCURSION TO NAMIBIA – Philip Corbet

Between 12 and 26 February 2002 I was privileged to stay with the odonatological research team from Braunschweig Technical University at its base in Tsaobis Leopard Nature Park in Namibia. The research team comprised Frank Suhling, the camp leader, Professor Otto Richter, a biomathematician and modeller, who is Vice-President of Braunschweig University, and three students, Kamilla Schenk, Nadine Habekost and Sandra Giere. Frank Johansson, from Umeå University, Sweden was another visiting odonatologist. After Frank Johansson and I returned to Europe, Andreas Martens, from Braunschweig University, took over from Frank Suhling as camp leader. The research programme centred on strategies exhibited by migrant dragonflies that enable them to develop and compete in ephemeral bodies of water. This work is a component of a comprehensive survey of the Odonata of Namibia and their ecology, which is itself part of a large pan-African project BIOTA (“Biodiversity Transect Analysis in Africa”) funded by the German Ministry of Science (BMBF). At Tsaobis, observations of adults, larvae and eggs are made at a set of eight small, shallow, artificial ponds, some with surrogate rooted plants and some without. I could hardly have been more fortunate regarding the timing of my two-week visit because my first week was the last of the long dry season and my second was the first of the rainy season; so I could witness this all-important seasonal transition at first hand. I found it exciting to experience the arrival of the rains. From one day to the next the sky changed from a cloudless glaring blue to a dark steely grey, framing a horizon streaked by vertical curtains of rain.

Over the dry veld scattered pools suddenly appeared, each with one or two adults of *Pantala flavescens* localising above it. The energy and persistence of this species as it dashes around over a pool, seemingly for hours at a time, under the fierce sun, is remarkable to behold, especially when, for the human observer, even a brief exposure to such conditions turns one’s thoughts compellingly toward the early acquisition of a cold beer. And then, at sunrise and sunset, one would be treated to the magical, darting aerobatics of *Tholymis tillarga*, its hind wings sporting blue-grey UV-reflecting patches that twinkle in the half light, as males and females make their brief, frenetic visits to water.

Such rewarding encounters with old friends among African dragonflies and with new friends among members of the team at Tsaobis will find a place in my rich store of happy memories.

12/04/02

## DRAGONFLY DREAMING in WESTERN AUSTRALIA - Jan Taylor

One of the joys of dragonfly hunting is that it takes you to some wonderful places. Soon after arriving in Western Australia we decided to buy a block of bush in the country where there were to be water, dragonflies, hills, rocks and trees. After looking over a wide area we found what we were looking for; it had everything – but for one drawback: it took more than five hours to drive there. We eventually settled on somewhere nearer to Perth, but happily, the block came on the market again and some dear friends bought it instead. Over the years we have had many delightful times staying there.

It is near Pemberton in the far southwest, the last fifteen minutes of the drive being along rough tracks through majestic forested National Park land and re-growth. One enters the 100 ha property via an open paddock on a high point overlooking the winding Warren River, with a tall, forested hill beyond. Emus and kangaroos dotted over the paddock pause in their activities to watch us drive past, and Splendid Wrens scurry through the fence. The cottage overlooks a billabong by the river and going out at night one can hear the waves of the Southern Ocean seven kilometres away (if the frogs are not too noisy), and see amazing starscapes through the clear ocean air. Beyond the river the land rises steeply from the river flats with tall eucalyptus forest – huge Marri trees giving way to magnificent Karri forest on the top of the hill. These trees have canopies rising up to 80m above the ground where the branches ring with the calls of lorikeets too high up to see. During winter the river floods the flats, and the billabong becomes the home for many water birds, long-necked turtles, frogs and fish. As summer approaches the water level falls and the air begins to glint with the wings of emerging dragonflies.

Australia’s southwest is the home of many endemic species that originated from Gondwanaland ancestors, and they hang on in remaining relatively cool temperate areas, despite Australia having moved north into a more harsh weather zone. They share the common origin with many other species of insect, such as tanyderid flies (often associated with alpine streams), various caddis flies, alderflies, and a species of aphid normally associated with southern beech, which used to grow there in more temperate times.

Gomphids are one of the first groups to appear in numbers – especially *Armogomphus armiger*. These unique little dragonflies spend most of the time resting on Karri Cedar (*Agonis juniperina*) logs strewn across the river. Later more gomphids appear with *Austrogomphus collaris*, usually settling on logs or at the side of the river, often mating in the low vegetation dominated by Penny Royal in the paddock. The introduced brambles form tiers of cover tangled with Sward Sedge beside the river and provide ideal places for the delicate *Argiolestes minimus* to rest with their wings open, inconspicuous apart from their white pterostigmas. Common Australian species patrol the river, especially *Hemianax papuensis*, *Aeshna brevistyla* and *Hemicordulia australiae*, while blue male *Orthetrum caledonicum* and red *Diplacodes haematodes* dart from their vantage points. I have looked in vain for *Petalura hesperia* around the spring-fed soaks and winter streams, but have seen *Synthemis leachii* there, drifting overhead with its slightly smoky wings, while the dark, crepuscular *Austroaeshna anacantha* are often disturbed from their resting places on tree trunks. The red *Trapezostigma stenoloba* are sometimes seen drifting over the paddocks or resting on the barbed wire fences, exhibiting their ‘saddlebags’ wing-markings.

I have often looked for the elusive *Lathrocordulia metallica* without success – it must surely be there; also the little *Synthemis cyanitincta*. It is all part of looking in the right place at the right time and recognising the small differences in behaviour or looks which might indicate a new species – trying not to ignore those that appear to be common and familiar. This was brought home to me one time recently when sitting by the river, looking out for *Lathrocordulia* with little more distraction than watching a trout leap to catch an *Austrogomphus* in flight. After a while I kept getting a view of a dragonfly quickly flitting around the overhanging brambles. There didn't seem to be anything special about it – perhaps it was a *Hemicordulia tau* hawking over the meadow beyond. I found it very difficult to follow, having a fast erratic flight, having colours matching the background. Like many Corduliidae, it was difficult to spot when it went to settle, taking a fast dash to land under some vegetation. I was lucky enough to see it settle and took careful note where it was, gingerly walking over to have a look, trying not to disturb it – or tread on a tiger snake which frequented the bramble bushes! It turned out to be something quite different: it had bright eyes, a long body banded in deep orange-brown and richly tinted wings. It was *Hesperocordulia berthoudi* (Gomphomacromiinae) – only the second specimen I have ever seen.

After that I took more note of dragonflies flying over the brambles and found there were some other smaller ones with fast erratic flight. I watched for hours without much success – they all disappeared before I could see what they were. Then one suddenly came to settle very close-by and stayed put while I had a close look at it – in fact it was so reluctant to fly that I was able to take several photos. It was a new species for me: *Procordulia affinis* – another endemic, more brightly yellow-orange flecked than *Hemicordulia australiae*. It pays to take careful note of any dragonfly – even if it looks familiar.

Later when watching over a large dark pool, the home of giant crayfish (known locally as marron), I saw many *Hemicordulia australiae* patrolling different sectors. A dragonfly came by with similar habit, but exhibiting an unusual metallic glint the length of its body. It was gone before I had a good look – was it the elusive *Lathrocordulia*? I don't know – maybe I shall have to go there again!

## THOUGHTS on ODONATES in TROPICAL RAINFORESTS – Dennis Paulson

In the past two years, I have made dry-season visits to undisturbed rain-forest sites in southern Venezuela and southern Peru, and it got me thinking about dragonflies and their use of three-dimensional space in forests. We know very little about this. When we see them in forested areas, it's either at or near ground level or - if in clearings or light gaps - perhaps in flight well above us, cruising around after flying insects.

These recent visits are the first ones during which I have actively searched for dragonflies in the tropical rain-forest canopy. Unfortunately, I could do so only from ground level, as neither of these sites had canopy access, so I was limited to what I could see by scanning with binoculars. I knew that many odonates perch on tips of leaves and twigs, so I spent time scanning such potential perches, and if conditions were right, I could sometimes see they were occupied.

It's well known that productivity is higher where there is sunlight, and of course there is much more sunlight at the upper levels of the canopy than down on the forest floor, where the aquatic breeding habitats for most dragonflies are located. Thus dragonflies feeding in rain forest should tend to move upward into the canopy, all other things being equal. In Venezuela, where the forest was fairly open, we saw numerous anisopterans perched high in the trees, usually on twigs. They varied in size but were obviously libellulids, including at least *Erythrodiplax*, *Micrathyria*, and *Orthemis*. The most easily identifiable were the little black-winged beauties of the genus *Zenithoptera*, which perch with wings drooped and form tiny black parasols at the tips of vertical twigs and vines. The pale line through midwing distinguishes them easily from *Diastatops*, a related genus with all black or black and red wings, which I saw once in a similar situation.

In Peru, we saw *Zenithoptera* again in the same sort of places, as well as *Micrathyria*, *Misagria* and *Orthemis* well up in the trees. However, *Erythrodiplax* in that forest usually perched low. At least some of these dragonflies were surely spending the dry season as immatures, delaying reproductive activity until the rains began, but others were probably reproductively active. While watching odonates at a sun-drenched grass bed in a small forest swamp completely surrounded by trees, I saw several *Zenithoptera fasciata* drop vertically out of the canopy like falling leaves, land in the sun on the grass with wings closed, then droop them suddenly to catch the sun with their brilliant blue upper surfaces. Each of these individuals stayed for only a minute or two, then suddenly ascended back into the canopy, disappearing as mysteriously as it appeared. I assume they were visiting the mating *rendezvous* site, although surprisingly briefly.

I spent time along a small sandy stream in the Peruvian forest, and at one place the stream was wide enough to present a vertical wall of foliage on either side, well insulated at midday. I scanned this foliage wall with binoculars and found *Argia* and *Hetaerina* spread all across it, perched on leaf tips. I saw none more than about ten meters above the ground, but it surely became more difficult to see them at higher levels if they were up there. Among them I spotted a female *Heteriagrion* and a female of the rare *Heliocharis amazona*. As I watched, one after another launched itself out into the open at intervals after flying insect prey. . Open air, sunshine, and abundant perch sites combined to make this an ideal spot for a damselfly picnic.

These odonates all forage by sallying forth to capture flying insects, as far as I know, and their perches, right out in the open, are just as appropriately situated for them as they are for flycatchers, jacamars, and other sallying birds of the same habitat. One morning it was exceptionally windy, with tall canopy trees swaying and creaking, and this was the final bit of evidence that convinced me the canopy was full of odonates. There were more individuals and more species in evidence along the trail than I saw at any other time, and I could explain their presence only by the thought that winds had forced them down to lower levels.

With limited evidence, I believe that rain forests are full of dragonflies at all levels, especially during the dry season when they're not breeding. They may be there as well during the wet season.

I know people who have observed dragonfly behaviour in and above rain-forest canopies from canopy walkways and towers, but I've not been so fortunate – it remains a dream I hope to fulfil sometime, somewhere. [dpaulson@ups.edu](mailto:dpaulson@ups.edu)

## COMPARING DRAGONFLY VISITORS to a MASSACHUSETTS BACK YARD with those to a SURREY GARDEN – Frederick SaintOurs & Jill Silsby

Over the past few years I (Fred) have become quite familiar with changes within the "dragonfly season" by simply observing the insects in my backyard. Though this is not ground-breaking science, over time it does have much to reveal about weather and dragonflies. I have only recently realized how lucky I am to live in one of the most diverse states, with more species per acre than almost anywhere else in the country (over 100 species live within a few minutes' drive from my home).

Although a comparison is difficult to make between gardens in two such very different parts of the world, there ARE similarities. Whereas Fred can find over 100 species living in his immediate vicinity, I (Jill) would be lucky to find seven in addition to the eight that used to visit our garden with its small fibre-glass pond – BUT each month heralds the arrival of its own species and those that we see flying in May have all been replaced by a totally different selection by the end of July and, above all, there is an identical sense of delight when either of us sees the first individual of the year.

### Massachusetts Back Yard

First it's the Forktails (*Ischnuras*) in **early May**, blending in among the yet-to-be-cut grass blades. By the **end of May** the little Pygmy Clubtails (gomphids) show up, wandering only a few meters from their tiny natal stream.

Then there are the Harlequin Darners (*Gomphaeschna furcillata*) patrolling the edges of the yard, perching on tree trunks and Rhododendrons. Of course, it wouldn't be **June** without the Common Basket-tails (*Epithica*), and by the end of the month the yard is littered with Eastern Pondhawks (*Erythemis*).

Spot-winged Gliders (*Pantala hymenaea*) mark the coming of **July**, and of course Blue Dashers (*Pachydiplax longipennis*) have made their appearance in droves by now. At this point I can practically set my clock by the Green Striped Darners (*Aeshna verticalis*) that come out of the shadows at about 8 pm, to patrol the edges of the lawn as if trying to stay low profile even though one can hardly see them so late in the evening.

As if to reinforce the late-summer reign of the *Aeshna* kingdom, the Shadow Darners (*A. umbrosa*) show their faces just in time for **August**. By this time the Clamp-Tipped Emeralds (*Somatochlora tenebrosa*) have taken to my little patch of sky, and seem to have a sense of ownership as they chase away anything else that comes to investigate our domain.

Then come the Ruby and Yellow Legged Meadowhawks (*Sympetrum rubicundulum* and *S. vicinum*) which dominate the scene from **September** well into **October** and beyond. And last but not least is the Spotted Spreadwing (*Lestes congener*), which apparently makes its way from the Maple swamp next door every September to scour the garden for fruit flies and other little pests.

### Surrey Garden

The Large Red Damselfly (*Pyrrhosoma nymphula*) was always the first to emerge from our small garden pond followed swiftly by Azure Damsels (*Coenagrion puella*) in larger numbers.

By **June** we were having visits from Blue-tailed Damsels (*Ischnura elegans*) and Broad-bodied Chasers (*Libellula depressa*), though neither bred in the pond. The Chasers provided prominent spots of colour as they basked in the sun.

Throughout **July** Southern Hawkers (*Aeshna cyanea*) could be observed most mornings climbing the flag iris stems upon which they emerged from their larval skins - but we seldom saw them again until the end of the month.

Once **August** arrived, Southern Hawkers were joined by two congeners, Migrant and Brown (*mixta* & *grandis*). Throughout the day all three flew vigorously up and down the length of the garden, taking lengthy breaks - surely with hopeful photographers in mind.

Finally Common Darters (*Sympetrum striolatum*) made their appearance and, together with the Hawkers, stayed around in lessening numbers until well into **October**: in 1989 I even found a single Southern Hawker in a sheltered outhouse on **December 16<sup>th</sup>**.

Imagine, if we all wrote down the date on which each species first showed up at our property each year, what useful data could be accumulated. And the best part is that we wouldn't have to leave our yard or garden! <http://efg.bio.umb.edu/Fred.html>

## THE RULES WORK, OR A STORY HOW AESHNA MIXTA WAS FOUND IN FINLAND - Matti Hämäläinen

In the previous issue of AGRION (p. 19-20) I presented three rules to follow if one wants to add a new species to the Finnish dragonfly list. Those of you who thought that these rules were just some kind of joke were wrong, or how do you explain the following?

A couple living in Pellinge Island, on the southern coast of Finland, are broadly interested in the wildlife and nature of their home island. In mid-July 2002 a wife buys Sami Karjalainen's new dragonfly book and shows it to her husband (Rule 3). Fascinated with the fine images in the book he starts to take photos of dragonflies with a digital camera. On 7 August he walks to a sunny spot at the forest edge, just 50m away from his house (Rule 1), and sees a strange looking small aeshnid hanging in a tree. He immediately takes some photos of it (Rule 2; modified to a gentler method). Hurrah - the first record of *Aeshna mixta* in Finland has been documented!

Later in August and September migrant individuals of *A. mixta* were found in many other places along the south coast of Finland. A preliminary report of this migration was published in Nordic Odonatological Society Newsletter and a more detailed article is in print in *Sahlbergia*.

For dessert, here is a "backyard record" traced from the literature. Arthur Wheeler caught a male damselfly in the garden of his home in Butterworth (Malaysia) on 24 November 1935. The specimen ended up being the holotype of *Mortonagrion arthuri* Fraser, 1942. Nothing special, except the age of the collector: Arthur happened to be four years old! "Surely a record in the annals of entomology" wrote F.C. Fraser.

### Welcome to New Members:

<b>Canada</b>	Paul Brunelle	6044 Compton Ave., Unit 1, Halifax, Nova Scotia B3K 1E7
<b>Germany</b>	Dr Heike Hadrys	Tieraeerztliche Hochschule Bunteweg 2, D-30559 Hannover
<b>Japan</b>	Mrs Yoko Watanabe	4-14, Nishida-cho, Nishinomiya City, Hyogo prefecture, 662-0034, Japan.
<b>USA</b>	George L. Harp	3202 Maplewood Terrace, Jonesboro, Arkansas 724-1-1873
	John T. McBride Jnr	PO Box 78483, Shreveport, LA 71137-848
	James McMasters	251 10 <sup>th</sup> St., Apt. 137 Atlanta, Georgia

### Reviews.

**Introducing the dragonflies of British Columbia and the Yukon** – Robert A. Cannings. Royal British Columbia Museum. ISBN: 0-7726-4637-6 (limpback). 96 pp. Available from The Royal Museum Shop, Royal British Columbia Museum, 675 Belleville Street, Victoria, British Columbia V8W 9W2 Canada. An order should be accompanied by a cheque or money order for Canadian \$ 9.95, payable to "The Royal Museum Shop"; or payment can be made by credit card (Visa, Mastercard, American Express). In North America send Canadian \$ 5 to cover postage and handling for the first book ordered and \$2.50 for each additional book; from overseas, add \$10 for the first book and \$5 for each additional book. In Canada add 7% GST to the total, including postage and handling.

The printing and layout of this compact (14 X 21.5 cm), attractive book attain a high standard. Its production was funded by Forest Renewal B.C. As its title conveys, it is a regional handbook. It excels within this genre. The text comprises three main sections entitled: *Introducing Dragonflies* (19 pp.), *How to Find and Identify Dragonflies* (5 pp.) and *The Dragonflies of British Columbia and the Yukon* (65 pp.). Also included are a Glossary (3 pp.), a list of sources for Recommended Reading (8 titles and 6 web sites) and an Index to Species, featuring both English and scientific names (2 pp.). The first three sections are liberally illustrated by colour photographs of high quality, taken by well-known odonatologists, including the author, and by clear, detailed drawings. The first section treats life history and behaviour, habitats in the region covered, how to study dragonflies, and conservation, appropriately laying emphasis on the need to conserve habitats. This section also emphasises the value of odonates as flagships for introducing people to "the exciting world of insects", and persuasively conveys the author's reverence for nature. The account of the life history benefits from the precision and accuracy we have come to expect from Rob Cannings.

British Columbia and The Yukon embrace a remarkable diversity of habitats, extending in latitude from 49°N to beyond the Arctic Circle and tree-line. An illustrated account of "range types" on pages 26 and 27 provides a valuable backcloth for the distribution records given in the species accounts. Indeed, a significant contribution the book makes, for any odonatologist, is that it documents an odonate fauna of this fascinating transitional region. In the third main section, each species account features a useful photograph, diagnostic characters of colour and external morphology, a brief description of the habitat and behaviour, and information about the flight period and range.

There is a key to families. There are no keys to species of adults but specific determination within genera, where necessary, is made possible by clear line drawings of diagnostic features in the text. Throughout the book English names take precedence, although the scientific equivalent is given in each species account.

For what it provides, this book is remarkably good value for money. It is not to be regarded as a replacement for the earlier book "The Dragonflies of British Columbia" (Cannings & Stuart 1977; reviewed by Corbet 1978), now long out of print and out of date. The 1977 book is much more detailed (containing keys to larvae, synonymies for species, and detailed distribution

maps showing the distribution of each species within British Columbia), but it lacks the results from a subsequent Yukon survey (Cannings et al. 1991).

This beautiful book does not readily invite suggestions for improvement. Nevertheless if, as I confidently predict, a second edition will soon appear, I record my hope that the latter edition will give more attention to the study and identification of larvae, and to the high information content of final-stadium exuviae as indicators of breeding status. Studying larvae can be fun and very informative, both for young, aspiring naturalists and for experienced odonatologists. I realise that larvae may well have been omitted in order to achieve simplicity of presentation in what will clearly become a popular handbook; but a book like this provides an excellent opportunity to offset the Cinderella-like status often accorded to larvae and exuviae. Although to say so may resemble tilting against windmills, I should also record my regret that the equivalence between the term "Dragonflies" and Odonata, long hallowed by tradition, should have been rendered ambiguous by its alternative use to denote Anisoptera. The author recognises this ambiguity by referring to Anisoptera as "true dragonflies" but I retain the view that life is made less confusing for readers of an introduction to the order if the term "dragonfly" is allowed to retain its original meaning. I believe also that whoever started to use the term "dragonfly" to mean Anisoptera has much to answer for! He or she would surely be no favourite of Linnaeus who devoted his life to introducing exactitude into nomenclature. Likewise the omission of scientific names in the key on pages 23 and 24 may puzzle those novices who may legitimately wonder why some names (e.g. Snake-tails, Grappletails, Pondhawks, Meadowhawks) find no place there. A solution would be to include both scientific names and their English equivalents in the key to families, whereupon all would become clear. I suggest also that the inclusion of page references in the key and for Figure references in the text would enable the reader to locate places in the book rapidly, a desirable attribute in any book, but especially in a handbook for use in the field. The habitat photographs on pages 14 and 15 are breathtakingly beautiful, reminding one of the value of being able to visualise the surroundings in which a dragonfly community lives. If, in a second edition, these photographs could be larger, their impact would be even greater.

The author is to be congratulated unreservedly for sharing his expertise and enthusiasm in this thoroughly splendid book. Odonatologists, wherever they may be, could benefit from possessing it. Odonatologists, aspiring or experienced, who wish to study odonates in Canada, will need it.

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 Corbet, P.S. (1978). Book review. *Notulae Odonatologicae* 1: 32-34.

Philip S. Corbet. 12 July 2002

#### **Oaks, Dragonflies and People – creating a small nature reserve and relating its story to wider conservation issues.**

Written & illustrated by Norman W. Moore. Published by and obtainable from Harley Books Ltd., Martins, Great Horkeley, Colchester, Essex CO6 4AH, England. E-mail: [harley@keme.co.uk](mailto:harley@keme.co.uk). ISBN 0 946589 71 2. 148pp., including 36 colour plates, 12 text figures and 9 tables. Paperback. £15.95

Dr Moore's gentle, unassuming character and lifelong dedication to nature conservation in all its aspects shine through on every page of this lovely book. Divided into two distinct parts, the first tells the story of how he purchased an arable field backing on to his Cambridgeshire garden and, over some 40 years, transformed it into a small but flourishing nature reserve. In the second part Norman discusses nature conservation more generally, dealing with the hidden as well as the more obvious problems that rear their heads today and will increasingly threaten the future of the planet.

The tale of the field's transformation begins by looking at its surroundings and then by an examination of its history. 150 million years ago we find the field was part of a "great muddy sea"; much later, following the most recent Ice Age, it was under forest which was cleared and farmed by early inhabitants; more recent history has been traced through Ordnance Survey maps and other local material. From the moment the field became his (in 1961), the goal of a nature reserve on his land was in the forefront of the author's mind and we are with him as he faces problems, makes mistakes and finally overcomes them all. Development is recorded simply and informally and photographs, tables and sketches illustrate his progress perfectly. Not only does the reader mourn the devastating results of Dutch Elm Disease and, later, of the Great Storm, but we rejoice in the relatively rapid increase in species of wildlife: birds, small mammals and insects. The icing on the cake was undoubtedly the excavation of what Norman had always wanted: a pond purpose-built for dragonflies which when completed became known as The Mere.

Chapter 8 (the last in Part I) is a long one and deals comprehensively with the colonization of the Reserve by animals: birds, mammals, reptiles, amphibians and fish, butterflies; dragonflies and, finally, what Norman refers to as "the unrecorded majority" which includes, for example, slugs and snails, crickets and grasshoppers, worms, spiders, beetles, bugs and ants. It makes fascinating reading.

In Part 2, Norman relates his small-scale practical experiences to the much wider issues he has had to deal with in his professional life. He examines the pros and cons of created habitats; he looks at nature conservation in Britain today and, from there, at nature conservation around the world. He lists some of the more terrible threats to a viable future: disappearing rainforests, over-fishing of the oceans, the potential hazards posed by growing genetically modified crops, the devastation that can be caused by terrorism; the pollution of the atmosphere and climate change. "Care for the future in the present" is what Norman suggests should be our aim.

This easy-to-read book provides abundant food for thought and is thoroughly recommended.

Jill Silsby – 1/11/2002



## DRAGONFLY WORKSHOP in WINNIPEG, MANITOBA - 9 OCTOBER 2002 :

### Philip Corbet

At the joint meeting of the Entomological Societies of Canada and Manitoba an extremely productive workshop on North American dragonflies was organized and moderated by Terry Galloway and Jim Duncan of the University of Manitoba. Talks in the morning described: results from field surveys of Odonata in northern British Columbia, and plans for future work (Rob Cannings), the odonate fauna of Alberta (John Acorn), Manitoba (Brent Elliott) and two northern rivers - the Horton and the Thelon - (Donna Giberson and Michelle Dobrin), the acquisition and management of data for conservation study (Paul Brunelle) and latitude-dependent mechanisms for seasonal regulation in northern dragonflies (Philip Corbet). The afternoon was devoted to an intensive working session, attended by at least one representative from each Canadian Province except Quebec. This session, expertly chaired by Jim Duncan, reviewed the conservation status of each of the 208 species known from Canada and remarkably reached a consensus on all of them. I was much impressed at the level of odonatological knowledge concentrated in one room and called upon to such good effect.

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#### Two final reminders:

1. Please re-read the Editorial. Contributions for "Our Own Backyard" will be awaited with eagerness – from all over the world.
2. And please make immediate arrangements for the payment of your 2003 subscriptions!!!!

Finally, to all of you attending the Australian WDA Symposium – ENJOY YOURSELVES. I wish I could be with you.

Editor

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#### Methods of payment:

**UK members, or members with UK bank accounts**, should send sterling cheques direct to the Secretary; **OR** to WDA Account (see note 2)

**USA members, or members with US bank accounts**, should send US\$ checks direct to Vicky McMillan, Biol. Dept, Colgate Univ., Hamilton, NY (Note 2). An alternative for **members in parts of the Americas outside the USA** can send US banknotes

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Members in **Australia, Belgium, Finland, The Netherlands, etc** may find it easiest to choose a member from among themselves to collect their subscriptions and forward them all together by one Sterling Draft drawn on a UK bank.

#### NOTES

- 1) Cheques, Eurocheques, Sterling Drafts, etc should be made out to "Worldwide Dragonfly Association".
- 2) **UK** Account (01048068) is with Lloyds Bank Plc, 942 Brighton Rd, PURLEY, Surrey CR8 2XD U.K. (Sort Code 30-91-72)  
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- 3) Subscriptions run from **January 1st to December 31st**.

**NB** If subscriptions are not renewed before the end of **MARCH**, a surcharge of **£1** or equivalent will be levied.