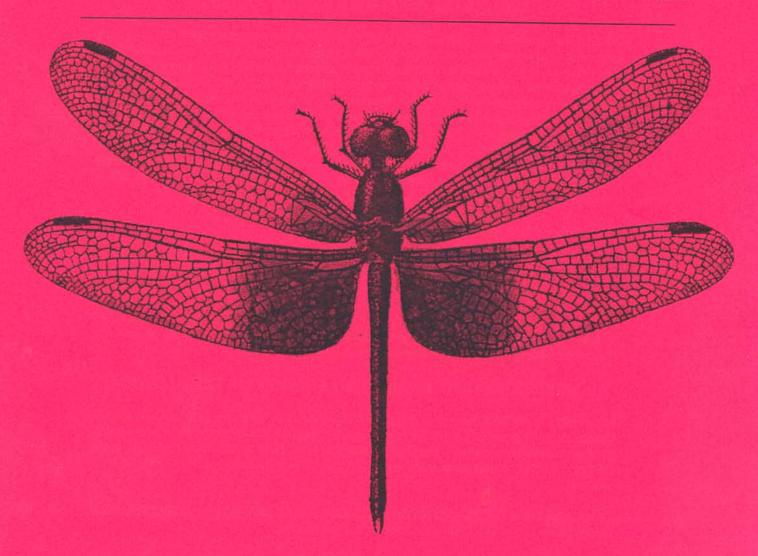
ARGIA

THE NEWS JOURNAL OF THE DRAGONFLY SOCIETY OF THE AMERICAS

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THE DRAGONFLY SOCIETY OF THE AMERICAS

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ARGIA, the quarterly news journal of the DSA, is devoted to non-technical papers and news items relating to nearly every aspect of the study of Odonata and the people who are interested in them. The editor especially welcomes reports of studies in progress, news of forthcoming meetings, commentaries on species, habitat conservation, noteworthy occurrences, personal news items, accounts of meetings and collecting trips, and reviews of technical and non-technical publications. Articles for publication in ARGIA should preferably be submitted and hard copy and (if over 500 words) also on floppy disk (3.5" or 5.25"). The editor prefers MS DOS based files, preferably written in WORD, WORD for WINDOWS, WordPerfect, or WordStar. Macintosh WORD disks can be handled. All files should be submitted unformatted and without paragraph indents. Each submission should be accompanied by a text (=ASCII) file. Other languages should be submitted only as text (=ASCII) files. Line drawings are acceptable as illustrations.

T. Donnelly (address above) is the interim editor of ARGIA.

BULLETIN OF AMERICAN ODONATOLOGY is devoted to studies of Odonata of the New World. This journal considers a wide range of topics for publication, including faunal synopses, behavioral studies, ecological studies, etc. The BAO publishes taxonomic studies but will not consider the publication of new names at any taxonomic level. Enquiries and submission of manuscripts should be made to BAO editor T. Donnelly, 2091 Partridge Lane, Binghamton NY 13903. Final submissions (after review) should be made on floppy disk, as above, with illustrations in final form and preferably adjusted to final size.

MEMBERSHIP IN THE DRAGONFLY SOCIETY OF THE AMERICAS

Membership in the DSA is open to any person in any country. Dues for individuals in the US, Canada, or Latin America are \$15 for regular membership and \$20 for contributing membership, payable annually on or before 1 March of membership year. Dues for members in the Old World are \$20. ARGIA is mailed Air Mail outside of the US and Mexico, and First Class in those countries.

The BULLETIN OF AMERICAN ODONATOLOGY is available by a separate subscription at \$15 for members and \$18.75 for non-members and institutions.

Cover: Tyriobapta torrida, taken from W.F. Kirby, "Revision of the Libellulidae" (1889). Nick and Ailsa Donnelly saw many of these sunning themselves on the trunks of jack fruit trees in Sarawak

ARGIA - The News Journal of the D.S.A.

IN THIS ISSUE

This has been a most successful season for many of us. As the number of interested persons continues to increase, the number of interesting finds seems to increase even faster. Even more heartening is the number of reports of small meetings among members, several of which are mentioned in this issue. We did not prepare a separate article for the very successful small meeting five of us had in Valentine, Nebraska, which produced a westernmost record for *Boyeria vinosa*. Instead, Roy Beckemeyer refers to some of the results in his article on the 1998 meeting.

The Annual Meeting of the **DSA** always merits an important place in the third issue of the year. This year's meeting, which honored Minter Westfall, the dean of American Odonatologists, had a record turnout and was immensely successful. We also mention briefly the May meeting of the Michigan Odonata Survey, the NABS meeting in San Marcos, Texas, the various meetings of the Ohio group, and the Atlantic Dragonfly Inventory Project meeting in Prince Edward Island.

Next year's plate promises to be equally full. The Valentine, Nebraska, meeting will probably require more aggregate travel miles for members than any previous meeting, but it also will introduce members to a truly beautiful and fascinating part of the country. I can guarantee to those who do not know this place that your vision of the Great Plains and its dragonflies is due to be immensely and positively changed. The area is very popular as a vacation place (especially for river sports such as canoeing and tubing), and you should book early.

Two late season field trips will have already happened or about to happen as you receive this issue. At least you know what's going on., even if it is too late to participate.

A somewhat mysterious notice indicates that all is not well with our major international society, the S.I.O. At its biennial meeting in Maribor, Slovenia, the society dissolved, a new one (the W.D.A.) immediately was constituted to take its place, and then the old society reappeared with a new name.

Keep posted, and, if you find out anything substantial, send it along so that I may put it in a future issue.

Many of us met Cindy and Peter Allen, who came to the Gainesville meeting from England. Peter has contacted us with an invitation to **DSA** members to join the British Dragonfly Society.

We have an obituary notice for Richard Forster, who died tragically this Spring. His work with the group was all too brief, but his influence in this short time was immense. A video by Dick Walton reviewed below is narrated by Forster.

Following this are two accounts of trips: Jerrell Daigle's latest trip to Hawaii, and Ailsa and Nick Donnelly's latest trip to southeast Asia.

Paul Catling and Paul Pratt call our attention to the apparent spread of *Enallagma aspersum* in southern Ontario. Intriguingly, new localities for this species are not restricted to the fishless ponds that the species seems to generally prefer. I attempt to whet your interest in a abundant but commonly overlooked genus - - *Sympetrum* (meadowhawks), which seems to hybridize more frequently than any other New World odonate.

Dick Walton sent in a note from the internet about kestrels eating *Anax junius* during migration. This brings back vivid memories of watching bat falcons in Guatemala eating evening-flying aeshnids.

I continue my account of the history of the study of Odonata, with emphasis on North America, but I find that the third episode barely makes it past Selys and Hagen! So much to say - so little time.

Our "records" section is very long, as is always the case in the fall issue. This has been a busy season, especially in the northern US and eastern Canada. Probably the most spectacular finds were *Somatochloras: georgiana* in Massachusetts (the second record for the state) and *hineana* in Michigan (the first, of course).

Several regional North American societies have their own newsletters: the Cape Cod Group (Ode News), Ohio group (The Dragon-Flier), and the Michigan group (WILLIAMSONIA). I report on the many activities of these three groups in this issue.

There are reviews of an Ontario damselfly report by Paul Catling and a video of northeastern dragonflies by Dick Walton. There are also notices of a list of Cuban odonates and a list of Atlantic Provinces (Canada) odonates.

A few notices of Odonata in the popular press will interest the older members especially. Time was when you never saw anything at all in the popular press about these insects. Recently they seem to have caught on.

Book notices include a new publication on the Odonata of Québec and the status of the reprinting of the three Walker volumes. There is an announcement for software which might be of interest to readers assembling their field data. Bob Glotzhober has sent in a request for information on *Cordulegaster erronea*, which he seems to have been uncommonly lucky in finding in Ohio.

Roy Beckemeyer has sent in another poem. I should add that poetry is also appearing in other newsletters, such as WILLIAMSONIA.

Finally Jackie Sones keeps us up to date on the wonders of the web, with its ever-growing resources.

DSA MEETING IN GAINESVILLE

Jerrell Daigle

The 1997 **DSA** meeting was held on the evenings of 6 & 7 June 1997, at the Florida Division of Plant Industry (DPI) in Gainesville, Florida. It was hosted by William and Carol Mauffray with assistance from Michelle Faniola. The DPI building is the home of the Florida State Collection of Arthropods (FSCA) and the International Odonata Research Institute (IORI), so some of the world's best facilities were available to attendees. Bill Mauffray and Jerrell J. Daigle organized the local field trips.

A record breaking crowd of 64 participants attended the meeting. Alabama sent Steve and Mary Jane Krotzer, Lennette Graham, Pam Guy, and Ken Tennessen. George and Phoebe Harp arrived from Arkansas. From California came Rosser Garrison and Ron Lyons. Florida sent the largest contingent of George and Juanda Bick, Doug and Brenden Butler, Michael Cushing and Rebecca Eads, Jerrell J. Daigle, Dana Denson, Michelle Faniolia, John, Marina, and Vanessa Heppner, Bill and Carol Mauffray, John Milio, Marc Minno, Susan Moss, Bob

Parcelles, Laura Sirot, and Gary Sprandel. The guest of honor, Dr. Minter J. Westfall, Jr. and his son, David, arrived from Georgia. Tim Cashatt and Tim Vogt came from Illinois followed by George Smolka and Beth Hoff from Indiana. Roy Beckemeyer rode in from Kansas. Rhonda and Marietta Froggett, Benjamin and Nicholas Lane, Carlie Coe, Jr., and Ellis Laudermilk arrived from Kentucky. Czaplak and Nayeem Hoq came down from Maryland followed by Blair Nikula from Massachusetts. Michigan sent Mike Kielb and Mark O'Brien. Duncan Cuyler drove down from North Carolina followed by Mike May of New Jersey plus Nick and Ailsa Donnelly from New York. Ohio sent a group consisting of Bernie Counts, Bob Glotzhober, Dave McShaffrey, Jan Trybula, Scott Roush, and Alice Phillips. Steve Valley rode down from Oregon. Clark Shiffer came from Pennsylvania followed by Sid Dunkle from Texas. Sandy Garrett and Dave Wagner arrived from West Virginia. From across the Atlantic came Cindy and Peter Allen from England.



The DSA group gathered by the Doyle Connor Building in Gainesville prior to going on our annual field trip to Gold Head Branch State Park. Photo by Blair Nikula.

Special thanks go to Blair Nikula, the Molasses Man, for taking the **DSA** group photos and to Bill and Carol Mauffray for cooking our tasty traditional Cajun dinners of Shrimp Jambalaya, Sausage Jambalaya, and Acadian Eclair Chocolate Pie! Special thanks go to #1 son David Westfall, M.D. for bringing down our "guest of honor" from Georgia!

Collecting during the meeting days was made difficult by almost continuous cloud cover (sometimes known as the "Donnelly Effect"), record-breaking cool (for Florida) temperatures, and attacks by the "flu" bug. Nonetheless, some collectors did obtain a few specimens of *Libellula jesseana, Progomphus alachuensis, Coryphaeschna ingens*, etc., and some people also got some (hopefully) good photos.

All in all, it was a memorable record-breaking meeting and we look forward to seeing everybody next year in Nebraska!

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MINUTES OF DSA MEETING, 1997

Sid Dunkle, DSA Secretary

Business and Presentation meetings were held on the evenings of 6 & 7 June 1997, at the Florida Division of Plant Industry (DPI) in Gainesville, Florida, hosted

by William and Carol Mauffray, assisted by Michelle Faniola. Jerrell Daigle and Bill Mauffray organized the field trips.

The meeting on 6 June was presided over by outgoing President Ken Tennessen, who handed the reins over to the new President Rosser Garrison on 7 June. The meeting honored Minter Westfall, who was "roasted" by Jerrell Daigle (the "Great Bear Chase"), George Bick ("Forget what the key says, it is still *Macromia illinoiensis*"), Ken Tennessen ("How to clobber your major professor while swinging at a *Macromia*"), and Mike May ("Thanks, I think, for getting me into odonatology").

Minter was also presented with a plaque commemorating his major contributions to American odonatology. Jerrell Daigle presented the Treasurer's Report, noting that **DSA** is in good financial shape with \$11400 currently in its Suntrust Bank account in Tallahassee, Florida. So far in 1997, 96 members have paid dues to the **DSA**. Buttons from past DSA meetings are still available for \$2 each from Jerre

Thomas (Nick) and Ailsa Donnelly were applar for the good work that they continue to do in ed the Society's publications. Bill Mauffray, manage IORI, reported that the IORI gained \$502 from sale of materials from its store during the mee John Heppner, owner of Flora and Fauna Books, had brisk sales from his large display. Four Wes & May Damselfly Manuals donated by Flora

Fauna Books were raffled off for the benefit of the IORI, and the first winner was Mike May!

It was announced that the 1998 SE Regional Meeting of **DSA** will survey the Conasauga River area of NW Georgia and Tennessee, hosted by Steve and Mary Jane Krotzer, and Ken Tennessen. The 1998 **DSA** Meeting will survey the Niobrara River near Valentine, Nebraska, hosted by Roy Beckemeyer. The possibility of a **DSA** meeting in Mexico was discussed.

There was also some discussion of having two meetings a year, a winter one emphasizing presentations, and a summer one including collecting. A winter meeting could be held at a major collection (first volunteer was Mark O'Brien of the University of Michigan Museum of Zoology). A summer meeting could be held for more days than at present to reduce cramping of the schedule, and to allow for other activities such as Posters and Workshops. A possible compromise would be a winter meeting of all DSA members, with regional summer meetings by smaller local groups. Readers of these notes are urged to send comments and ideas on DSA meetings to ARGIA for public consumption.

Presentations given were: 1) Taxonomic Manuals of Freshwater Organisms by Jerrell Daigle, 2) Collecting Permits for Mexico and Ecuador by Bill Mauffray, 3) Odonata in Education by Susan Mott and Laura Sirot, 4) Computer Scanning of Odonata Wings by Rosser Garrison, 5) Measuring Larval Characters by Ken Tennessen, 6) Evolution of the Orthemis ferruginea complex by Nick Donnelly, 7) Dragonfly Identification Video by Richard Walton, narrated by Richard Forster, presented by Nick Donnelly, 8) Damselfly Behavior Video by George and Juanda Bick, 9) Methods for Behavioral Studies by Laura Sirot, 10) How NOT to Photograph Dragonflies by Sid Dunkle, 11) Palaemnema in Arizona by Rosser Garrison, and 12) Thailand Odonata by Rosser Garrison. An election was held to select a new DSA President, with the nominees being Mike May and Dennis Paulson. Mike garnered the majority of votes and is the new President.

A new Publications Committee to determine what future course **DSA** publications should take was established. The committee consists of Everett (Tim) Cashatt, Nick Donnelly, Mike May, Ken Tennessen, and Steve Valley. Group photos were taken by Blair Nikula. Bill and Carol Mauffray cooked a tasty traditional Cajun dinner for us of Shrimp Jambalaya, Sausage Jambalaya, and Acadian Eclair Chocolate Pie.

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ODONATES AT NABS

Dan M. Johnson

Thanks to several DSA members, Odonata were well represented at the 45th annual meeting of the North American Benthological Society in San Marcos, Texas, 27-30 May 1997. A special session of "Odonate Biogeography and Conservation" attracted an audience of 55-75 Thursday morning. Sid Dunkle presented an overview (with nice slides!) of "Problems in conserving North American Odonata." His paper was followed by two others-by Tim Vogt & Tim Cashatt and by Dan Soluk--on the only federally listed "endangered" odonate, Somatochlora hineana. (Intense discussion of alternative common names, "Hook-tipped Emerald" (see ARGIA 8(2)) vs. "Hine's Emerald" followed in the hallways.) Mike May reported on Anax junius migrations. Nick Donnelly discussed evolution of Orthemis ferruginea/discolor complex. Finally, Enrique Gonzalez & George Harp provided "Notes on the Odonata from Chamela, Jallisco State, Mexico."

Several posters featuring odonates were displayed on Thursday afternoon. John Hoekstra's observations of Argia sabino led to long discussions with Nick Donnelly who collected the same area many years ago. John Trevino suggested that dragonfly naiads are potential indicators of non-point source pollution. John Abbott & Ken Stewart summarized distributions of Nearctic and Neotropical odonates with special emphasis on the Texas/Mexico border region. (Unfortunately, John left due to illness before many of us got to see him.) Rae Osborn & Jim Robinson presented her M.S. research (with Mike Samways) on niche partitioning among three species of Trithemis from South Africa. Tom Valencia, Paul Chippendale & Jim Robinson drew plenty of attention with their preliminary phylogeny of Ischnuran damselflies. And, despite their inability to attend in person, Rodolfo Novelo, Jose Antonio Gomez & R. Arce-Perez arranged with Enrique Gonzalez to deliver their poster, "Ecology of odonate larvae related to hydropower facilities in Zimapan, Hidalgo, Mexico.

On Friday morning a contributed paper session, "Odonate Ecology and Evolution," attracted an audience of 30-50. Due to two cancellations we held a brief discussion of odonate biology before

the formal presentations began. The remaining four papers included two from Dan Soluk's Hine's Emerald research team at the Illinois Natural History Survey--one on adult Hine's habitat use presented by Brian Swisher, and one on dragonfly mortality caused by automobile traffic. We were intrigued to learn that Tramea lacerata experienced very little mortality despite being very abundant and flying low over roadways. Two studies of functional morphology added ecological interest to some key characters. Frank Johansson showed from field observations and lab experiments that the presence of fish induces longer and broader dorsal and lateral spines in larval Leucorrhinia dubia. Marvin Price & Jim Robinson presented a study of jet propulsion and swimming speed for dragonfly larvae with contrasting morphology causing different amounts of drag.

This is the fourth time--at five-year intervals--that I have organized odonate sessions at NABS meetings. They provide opportunities to display odonate research to interested aquatic biologists, and to introduce odonate colleagues to one of the best professional societies in our field. By assembling a critical mass of odonate specialists we can attract even more colleagues to such meetings and benefit from both formal and informal exchange of information. I hope that NABS, and its journal J-NABS, will increasingly be identified as appropriate homes for odonate colleagues and their research.

MAY MEETING OF THE MICHIGAN ODONATA SURVEY

from an e-mail by Mark O'Brien

The MOS workshop on 18 May went very well, with a total of 22 people in attendance. We covered a range of topics, concentrating on the how-to's for most of the meeting. Unfortunately, we had a downpour when we were to sample Fleming Creek. So, no field work that day. However, my 9-yr old daughter got one up on me when she collected the first adult odonate of the season while the rest of us were inside...a teneral *Nehalennia irene*. Ethan, Mike and I thank all who attended for making the event a success.

The MOS Collector's Handbook is ready, and is available for \$5 by mail; \$4 if you pick it up at the

museum. Make checks payable to the UM Museum of Zoology.

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ADIP '97

Robert Harding

The weather was warm and dry as a dozen or so dragonfly enthusiasts converged on the Morell River, Prince Edward Island, in mid-July. It was the 1997 field collecting meeting of the Atlantic Dragonfly Inventory Project (ADIP), and we were ready. (PEI is Canada's smallest province, and is a mere 200 miles northeast of the site of last year's DSA Annual Meeting in New Brunswick.) PEI has been largely under-collected, and first provincial records were on our minds. Paul Brunelle set the mood at the outset: "Don't try to determine a species on the wing ... if it looks even remotely like a dragonfly, NET IT. We can always let it go later."

The group covered a series of collecting sites ranging from a sand-bottomed lake to a gravel-bottomed stream. At a floating-margined bog pond, Joe Purcell was even nice enough to demonstrate the perils of such terrain by nearly disappearing through the mat. Not only did he retrieve the exuvia he was after, he gave us the new collecting term 'joe hole', as in something to avoid making while collecting. Thanks Joe.

There were many interesting specimens collected, and we were actually fortunate enough to net two firsts for the province: *Epitheca spinigera* and *Somatochlora franklini*. We were treated to a veritable riverside feast (thanks to my wife Karen) and, when it grew too dark to collect, interesting slide shows (thanks to Stu Tingley, Joe Purcell, and Paul Brunelle).

Special thanks to the Morell River Management Coop who made their facilities available to us, and John Michalski who motored in from New Jersey with his highly entertaining video of the New Brunswick **DSA** meeting in '96. John has captured on tape some very strange crepuscular activities - of **DSA** members!

For the record, Paul Brunelle has been scouting the wilds of Cape Breton Island, Nova Scotia, and it now appears we may be headed there next summer for ADIP '98.

OHIO ACTIVITY; SUMMER 1997

Bob Glotzhober

A lot of Odonata activity took place in Ohio this summer, some organized and some unorganized. The newly formed Ohio Odonata Society will be sending out a fall newsletter shortly which will cover these in more detail, but a brief summary here is appropriate. The OOS (rimes with ooze, and reminds us of some interesting collecting sites) has set dues at \$5.00 per year, to cover newsletter mailings and copying.

We planned three group field meetings for the season. The first convened the weekend of May 16 - 18 at Punderson State Park in northeastern Ohio. Our goal was to seek out some of the early season, rare northern species which frequent bogs and wetlands in Geauga county and adjacent areas. Ah, the never ending quest for rare early northern species! You guessed it: cold and dreary weather predominated. Two highlights of the trip included a new site for most us, the very fascinating Koellicker Fen - which was marvelous, but nothing was flying. A repeat visit for some and first visit for others in our 8 person crew was Triangle Lake Bog. Eric Chapman, Steve Chordas, Bernie Counts, Lou Gardella, Bob Glotzhober, Alice Phillips, Bob Restifo, and Scott Rousch made up the entourage. The sun actually broke out, and several of us caught and released Ischnura verticalis - all very teneral. The only other Odonate finds were both caught by Bob Restifo -- a very teneral Leucorrhinia (perhaps frigida!) and one Chromagrion conditum. That was about it -- despite seeing interesting habitats and having a fine time with good folks.

In June (20 - 22) a slightly smaller group journeyed to Shawnee State Park near the Ohio River, including Eric Chapman, Steve Chordas, Bernie Counts, Bob Glotzhober, Scott Rousch and his botanist friend Issac (whose last name I lost), and Jan Trybula. We had two potential goals: Ohio River Odonates were one -- this river has been cleaned up a lot in recent years and we have had a few interesting records including several Stylurus Neurocordulia molesta. and Unfortunately, heavy late winter rains that caused disastrous flooding greatly pushed back the season here, and no Odonate activity was seen along the Ohio River itself -- just mud covered banks with flotsam and jetsam. Our other goal had been to find

more Neurocordulia molesta. Our first state record of an adult was collected several years ago at the lights above a tennis court at the state park lodge by Kip Miller -- the lodge by the way is a short distance from a small lake, but a couple of miles as the crow flies from the Ohio River. Nothing was seen on this front either. We did work a couple of beautiful small streams in the park and the adjacent state forest, and a nice pond way back in the woods. These were all common specimens, but did include a new county record for the common Calopteryx maculata -- which now joins our list of species collected in all 88 counties in Ohio. I'd credit the collector of this gap-closing record, but I forgot who collected it and have not seen data sheets from folks yet for our database. On Sunday, Steve Chordas, Eric Chapman and myself worked our way back towards Columbus stopping at Scioto Trails State Park. Again, nice common species, but only one truly great find by Eric Chapman, who snagged the one, lone Anax longipes seen, his second for the week! Ask Eric about his "Longipes Summer."

Our last group trip has not occurred as of this writing, but will be the weekend of September 20th. We will camp in northeastern Indiana at Pokagan State Park, a few miles across the border from Mud Lake Nature Preserve -- made famous by the legendary Homer Price for his phenomenal Odonate records long before this became a preserve. Our goal is fall aeshnids -- and we are hoping for the fine, warm, sunny, late September weather that can put so many aeshnids on the wing. We hope our previous experiences mean this will be hot trip!

Other activities known by the author so far include Dwight Moody spending the entire month of July working on Somatochlora hineana in Illinois with the two Tims. He loved it, and will include a longer report in the Ohio Dragon Flier newsletter. Dan Riggs began his master's thesis study on the larval habitats of Cordulegaster erronea in Ohio's Hocking Hills, and aided Bob Glotzhober with his malaise trap mark and release study of adults of this same species. To say more than, "it is going very well," would become much too lengthy at this point, especially since neither study is completed. Crane Hollow, a privately owned nature preserve surrounding a 3-mile long hollow in the hills was the center for this work -- a more beautiful place may exist in Ohio, but I'm not sure where! Bernie Counts made a couple of trips after Neurocordulia molesta along the Scioto River, again without success this season.

THE DRAGONFLY SOCIETY OF THE AMERICAS' 1998 ANNUAL MEETING TO BE HELD IN VALENTINE, NEBRASKA, JULY 17-19

Roy Beckemeyer and Steve Hummel

Steve Hummel of Iowa, and Roy Beckemeyer of Kansas are co-hosting the DSA's 1998 Annual Collectors' Meeting. They were joined for a combination collecting site scouting trip and organizational planning trip the week of August 10-19, 1997, by Nick and Ailsa Donnelly and by Ralph Charlton. Despite some cool, cloudy weather and the lateness of the season, there was enough sun, and enough dragonflies and damselflies, to keep things interesting. As a result, we are forecasting that DSA members can look forward to some exciting times in the Nebraska Sandhills next year! (See the Nebraska Sandhills web site at:

http://nesen.unl.edu/csd/illustrations/rr4/rr4.htm l

for some interesting information on this unique geographical area.) Let's begin by recounting some of the action the team encountered during our foray into Nebraska.

Roy Beckemeyer began by spending a couple of days at the University of Nebraska-Lincoln's Cedar Point Biological Station. (See their web site at: http://www.unl.edu/cedarpt/research.html).

Overcast skies and rain slowed down collecting, but he was able to acquire some very basic education on the gregarine (protozoan) parasites of Odonata, a subject being studied intensely by professors John Janovy of UNL and Rich Clopton of Peru State University and their students. John Abbott and Sid Dunkle have been working with these parasitologists and identifying larval and adult odonate specimens for them. There are some quite intriguing questions that arise about odonate and parasite co-evolution and population dynamics that should interest many of our members. There are also likely to be some interesting tools here for studies that would lead to better understanding of odonate phylogenetics, populations, dispersal, and so on. Both John and Rich and possibly some of their students will likely attend the 1998 meeting, and Rich has promised to give a talk about his work at our meeting. (For more information on their research, try linking to Rich's web site at: http://www.peru.edu/gregarina/)

Steve Hummel had visited Valentine in mid-July (13-17), and had 20 species of odonates at the Valentine Fish Hatchery. He had a rewarding time this trip as well, taking the first record of Boveria vinosa for Nebraska at the Nature Conservancy's Niobrara Valley Preserve on his way out to Valentine. (This preserve has a great set of accommodations for research and education and we will be taking advantage of it in a post-meeting activity - more later in this article). Nick Donnelly, as many of you will recall, had collected both Stylurus amnicola and intricatus here a few years ago. The team managed to repeat that feat this trip. with Steve Hummel taking S. intricatus at the Smith Falls State Park, and Ralph Charlton taking S. amnicola at a lovely little stream, Boardman Creek, on the McKelvie National Forest / Merritt Earlier in the week, Roy Reservoir site. Beckemeyer had taken several Somatochlora ensigera males on this sand-bottomed marvel of a Nick collected at least 6 species of Sympetrum in the area, and managed to take a number of interesting and atypical examples of several species including what are apparent hybrids. Ophiogomphus severus was everywhere in the vicinity most of the week. One day, as we worked our way along the Niobrara, we found more Boyeria vinosa along streams that fed into the river from the north, finally ending up with the aeshnid in Minnechaduza Creek in the Valentine City Park, a Cherry County record, and possibly a westward range extension for the insect. All this was done late in the year and with somewhat cloudy, cool weather, so we expect much more activity next year in July!

The Niobrara River is quite popular with canoeists, so **DSA** members planning to attend the July event are urged to make their motel reservations NOW. The motels fill up quickly in Valentine, especially on weekends. We have included a list of motels for you. Prices are generally consistent from motel to motel, and we suggest that the Super-8 Motel be used as the central place for the meeting. No matter which motel you do choose, though, please let either Roy Beckemeyer or Steve Hummel know

where you will be located and when your arrival and departure dates will likely be. AND MAKE THOSE RESERVATIONS EARLY! There is a beautiful City Park in Valentine It has hot showers (25 cents) and primitive camping (no hook-ups), but is located on Minnechaduza Creek, which has odonates and otters on the entertainment list (limit of 5 nights in succession for camping). There is a KOA campground south of Valentine on the Niobrara, and there are campgrounds at Merrit Reservoir also, though the latter is a half hour drive from Valentine.

Preliminary schedule of events:

Thursday, July 16:

Early arrivals gather for area familiarization and collecting.

Friday, July 17:

Continued collecting and meeting up with old and new friends. Check in and get area info and maps.

Dinner arrangements TBA.

DSA Meeting 7:00pm - 11:00pm, Cherry County Office Building Meeting Room.

Saturday, July 18:

Formal collecting trips:

Smith Falls State Park
Fort Niobrara National Wildlife Refuge
Valentine National Wildlife Refuge
Niobrara River and streams that feed into it
Merrit Reservoir area, including Boardman Creek
Nature Conservancy Niobrara Valley Preserve
Valentine Fish Hatchery
Friday, July 18 (Continued):

(Collecting permits will be arranged for ahead of time; some areas such as Boardman Creek will not accommodate large numbers of collectors at one time and will have to be visited by smaller groups.)

DSA Meeting 7:00pm - 11:00pm, Cherry Co. Office Bldg, Mtg. Room.

Sunday, July 19:

Continued collecting trips.

Monday, July 20:

DSA Group Canoe trip down the Niobrara. (Approximately \$15.00 per person canoe rental.) Get those gomphids by having them land on the gunwales of your canoe!)

Informal meeting to plan the Tuesday "Odonate Larval Stomp" - The Nebraska Game and Parks Department personnel from the Valentine Fish Hatchery will be emptying a fish rearing pond, either on the Hatchery or on the Fort Niobrara National Wildlife Refuge, and we will be collecting the larvae as a probably unique approach to larval sampling that may never have been done before. (We are soliciting volunteers to lead this effort and the Nature Conservancy Odonate Larval Workshop as well - if you are interested please contact Roy or Steve ASAP!)

Tuesday, July 21:

The DSA "larval sampling team" will conduct the sampling of the pond at the state fish hatchery, collecting larvae for subsequent sorting and use in the Workshop on the Nature Conservancy grounds (Niobrara Valley Preserve). The team members will be staying at the preserve for three nights (Tuesday through Thursday). There are two cabins, each holding five bunks and therefore ten people. There is a kitchen available and separate men's and women's bath facilities. Since there is only room for 20 folks, you need to sign up early. (There are motel facilities in Ainsworth - 29 miles from the Preserve - and a small, private campground -Fairfield Campground - adjacent to and just upstream from the Preserve Headquarters if more than 20 people are interested in participating in these post-meeting activities.)

Wednesday, July 22 & Thursday, July 23:

Using the larval material collected at the pond on Tuesday and specimens that we will obtain from the Nature Conservancy property (Niobrara River and its feeder streams), we will all participate in an Odonate Larva Workshop. We will also be assembling a display box of spread Odonata specimens to leave as an educational aid for the Conservancy.

Friday, July 24:

End of post-meeting activities.

THINGS TO DO NOW:

Decide on your itinerary and make motel reservations with the Super-8 or the motel of your choice. Do so very soon, as many canoeists are making their reservations for next summer now, and the motels do fill up quickly.

Look up the Valentine web site (At: http://www.valentine-ne.com/main/) to see what other activities are going on and what other things there are to see and do in the area. For example, there is a Casino on the Rosebud Sioux Reservation just 9 miles north of Valentine on U.S. 83 for those inclined to do some gambling. The Black Hills are only about 200 miles further to the west, and this might be a good time to add them to your plans.

Once you have made your plans, let Roy Beckemeyer or Steve Hummel know of your intentions so that we can stay on top of the arrangements.

Let one of us know of your wishes regarding the canoe trip: number of canoeists, and whether you want to rent one or bring your own. Again, let us know soon so we can get the canoes reserved.

Let one of us know if you wish to give a talk or paper and what you will need in the way of audiovisual equipment.

Let one of us know if you are willing to help lead the larval collecting/study activities.

Let us know if you wish to participate in the postmeeting activities with the Game and Park Department and with the Nature Conservancy. Remember that if you wish to stay on the Conservancy Preserve in the cabins, you need to get your request in early, as there is only room for 20 people overnight (we could accommodate more during the day).

If you would like to help with the display case and/or the collection and preparation of specimens for the case, let us know that as well.

Roy Beckemeyer 957 Perry Wichita, KS 67203-3141 (316) 264-0049 royb@southwind.net Steve Hummel P O Box 121 Lake View, IA 51450 (712) 657-2180 mshummel@netins.net

CHERRY COUNTY, NEBRASKA SERVICES:

(Note that Valentine is on Mountain time):

MOTELS

Valentine:

Motel Raine AAA (402) 376-2030; 1-800-999-3066 (34 units)
Trade Winds AAA (402) 376-1600; 1-800-341-8000 (32 units)
Valentine Motel (402) 376-2450; 1-800-376-2450 ext. 10 (12 units)
Dunes Motel (402) 376-3131 (24 units)
Ballard Motel(402) 376-2922 (10 units)
Super 8 Motel AAA (402) 376-1250; 1-800-800-8000 (44 units)
Fountain Inn 7 (402) 376-2300 (24 units)
Comfort Inn (402) 376-3300; 1-800-478-3307
"Your Own Home" (402) 376-1662; 1-800-376-1662

Ainsworth (45 miles east of Valentine on U.S. 20):

Lazy "A" Motel (402) 387-2600 (21 units)
Remington Arms Motel (402) 387-2971 (23 units)
Skinners Motor Court (402) 387-2021 (12 units)
Super 8 Motel (402) 387-0700; 1-800-800-8000 (35 units)

Mission, SD (32 miles north of Valentine on U.S. 83 and on central time):

Antelope Country Inn (605) 856-2371

Merriman (61 miles west of Valentine on U.S):

Sand's Motel (308) 684-3467 (8 units)

RESORT & HUNTING

Merritt Resort (402) 376-3437 Alkali Fish Camp (402) 376-3479 Albert's Pheasant Inc. (402) 823-4394 Boardman Springs Ranch (402) 376-1498 Heartland Elk Ranch (402) 376-1124 Berry Bridge Camp (402) 376-3548 Twisted Pine Ranch (308) 684-3482 Verde Valley Guest Ranch Bed and Breakfast (308) 458-2220

Double R Ranch (308)546-2314

BED & BREAKFAST

Valentine:

The Town House (Previously Town & Country Inn) (402) 376-2193 Lovejoy Ranch Bed & Breakfast (402) 376-2668; 1-800-672-5098 Elysian (402) 376-3210 Stone House Inn (402) 376-1942

Crookston:

Two Rivers Ranch (402) 425-3353

Gordon:

Meadow View Ranch (308) 282-0679

RV HOOKUPS

Valentine:

Valentine Motel (402) 376-2450 KOA Campgrounds (402) 376-1162 Merritt Resort (402) 376-3437 Dryland Aquatics (402) 376-3119 Heartland Elk Ranch (402) 376-1124

Wood Lake: City Park

Cody: City Park

RIVER OUTFITTERS

A & C Canoe Rentals (402) 376-2839
Little Outlaw Canoe & Tub Rental (402) 376-1822;
1-800-238-1867
Niobrara River Resort (402) 966-3321
Sharp's Tubes & Canoes (402) 376-2506
Dryland Aquatics (402) 376-3119; 1-800-337-3119
Graham Canoe Outfitters (402) 376-3708; 1-800-322-3708
Sunny Brook Camp & Canoe Outfitters (402) 376-1887
Rocky Ford Outfitters (402) 497-3479; (712) 642-4422 (off-season)
Super Tubes (402) 376-2956; (402) 376-1789
Brewer's Canoers & Tubers (402) 376-2046; 1-800-346-2046

CAMPING

Anderson Bridge

Ballard Marsh
Big Alkali Lake (402) 376-3479
Cottonwood Lake SRA
Steer Creek at McKelvie National Forest (402) 823-4154
Valentine City Park
Merritt Reservoir (402) 376-3437
Smith Falls State Park (402) 376-1306
Cody City Park
Wood Lake City Park
Shady Spot Campround in Merriman
Sparks Store

NIOBRARA RIVER CAMPGROUNDS

Berry Bridge Campground
Sharp's Campground
Graham's Campground
Conner's Campground
Sunny Brook Camp
Rocky Ford Camp
Valentine KOA
Fairfield Campground (402) 722-4494 or 387-1407

*Some campgrounds require a fee

**Dump station located on Green St. in Valentine near ball park.

DINING in Valentine:

Home Cafe (402) 376-3222

Koffee Pot (402) 376-3145 Chat'n Chew Cafe Peppermill (402) 376-1440 Celebrity Steak House (402) 376-3222 Pizza Hut (402) 376-3303 Frosty Drive In (402) 376-2786 Dairy Sweet (402) 376-3506 Taco Stop (402) 376-3506 Daylight Donuts (402) 376-2664 Subway (402) 376-2112 Amigos Express (402) 376-2818 Rosebud Casino 1-800-786-7673

Jordan's Fine Dining (402) 376-1255

There are also places to eat in nearby Cody, Woods Lake, and Merriman.

Cody:

American Legion #319 (402) 823-4202 Cody Bar & Grill (402) 823-4110 Double D Cafe (402) 823-4303

Merriman:

Sands Cafe (308) 684-3389

Wood Lake:

Hitching Post Cafe (402) 967-3327

SEPTEMBER MICHIGAN ODONATA SURVEY MEETING - YOU MISSED IT!

Modified from an e-mail from Mark O'Brien

The MOS held a meeting and field trip at Lake Erie Metro Park Visitor's Center on Saturday, Sept. 13, at 1 pm. Unfortunately this issue of **ARGIA** was scheduled to appear just after this meeting; we will now have to wait to find out what happened.

OHIO ODONATA SURVEY / FALL FIELD TRIP GROUP

Bob Glotzhober

Plans are formulating for our field trip to northwest Ohio and environs for the weekend of September 19-20-21.

Camping and the center of our activity will be out of state at Pokagen State Park in northeastern Indiana. Dwight tells me this is only 16 miles away from Mud Lake, and the cost is only \$7/night/site. As with most places, it is first come/first serve. I will try to arrive Friday afternoon, set up my tent and "try" to hold a few adjacent spots, marked with our dragonfly logo in case I'm out chasing critters when you arrive. I understand the campground has showers etc.

If any of you wish to motel-it, Dwight has identified the following:
Holiday Inn; St. Rt. 15 in Montpelier
419/485-5555
Exit 2 Motel; St. Rt. 15 Montpelier
419/485-3139
Potawatomi Inn; Pokagon St. Park, Angola, IN
219/833-1077

These are not in any recommended order, nor with any precise knowledge of their cost or quality.

Typically Friday evening is sit around and talk Odonates or other natural history items in the campground. Saturday am we'll head for Mud Lake Nature Preserve, and/or Lake LaSuAnn Wildlife Area, Fish Creek, or whatever. Weather on Saturday morning will dictate our decision -- we hope to find various aeshnids. If you stay nearby, or arrive Saturday morning, check at the campground to find out what our plans are. If it is typical, we'll probably head out about 9 - 10 am ---Ohio time! Likewise, Sundays itinerary will be planned on the spot, subject to personal interests and schedules and weather.

Pokagon State Park can be reached by taking the turnpike to I69 south. Go to Exit 154 off I69, and turn west into the park, follow the signs. If you need a map, contact me and I'll fax or mail one off the DeLorme on the computer.

See you there!

Bob Glotzhober 614/297-2633

Fax 614/297-2233

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1997 DSA FINANCIAL REPORT

Jerrell J. Daigle

At the request of Nick Donnelly, I have prepared a short summary of the **DSA** financial account from early 1997 to present. Dues for **ARGIA** and the **BAO** are combined together in one savings account at the SunTrust Bank in Tallahassee, Florida. We began the 1997 year with a 1996 balance forward amount of \$7,922.34.

Presently, our current account is \$10,884.60. So far, we have received 1996 dues/interest totaling \$3,553.06. Our only expenses are \$2,639.12 for ARGIA 8:4, 9:1, 9:2, BAO 4:3, and Dr. Westfall's honorarium plaque.

A brief current financial report was presented at the June **DSA** meeting in Gainesville Florida and a few copies of the report was distributed to the media.

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THE SIO AND THE WDA - WHAT IS GOING ON?

Brief comments by Nick Donnelly

As many of you are aware, the S.I.O. meeting at Maribor, Slovenia, in July of this year ended very unhappily. A majority of participants appeared to have terminated their affiliation with the S.I.O. (The International Odonatological Society, which is 25 years old and is most familiar to us through publication of Odonatologica). These participants declare that S.I.O. is "dead" and they have formed a new organization, called the Worldwide Dragonfly Association (W.D.A.) They informally call their society "Phoenix", noting the symbolization of "rising from the ashes."

At the same time, another group has declared that S.I.O. has simply reorganized and will continue to function as before, perhaps with a minor name change. They have declared their intention to continue publishing Odonatologica.

Because I was not at Maribor and have only sifted through letters and e-mail messages, I will not offer an opinion nor take sides. I suggest that the most convenient (For North Americans, at least) source of information for the W.D.A. is:

Vicky McMillan, Biology Dept, Colgate University, Hamilton, NY 13346, USA.

(e-mail: vmcmillan@center.colgate.edu).

I also note that the W.D.A. has planned an international symposium on Odonata at Colgate University, Hamilton NY, probably in July, 1999. Vicky is the host and is also the source of information on this meeting.

Prof. Henri Dumont, Institute of Animal Ecology, University of Ghent, Ledeganckstraat 35, 900 Gent, Belgium) (Henri.Dumont@rug.ac.be) has informed me that he is planning to edit a new Journal, provisionally named Pantala, under the auspices of the W.D.A. He is earnestly seeking manuscripts. For further details you should contact him. (e-mail: Henri.Dumont@rug.ac.be)

A useful source of information about the new **S.I.O.** is Reinhard Jödicke, for whom I have only an email address (r.joedicke@t-online.de) (His. E-mail program mistakenly lists his name as "Goedicke".)

For those of you who want some further information, there is correspondence on the Web. I suggest you access Bill Mauffray's site to see this: http://www.afn.org/~iori/

I regret having to be so uninformative, and I hope that you will contact these people to find out for yourself what is going on.

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IN MEMORY: RICHARD FORSTER, 1944-1997

Blair Nikula

On the first of April 1997, a major spring blizzard claimed one of New England's finest naturalists when Dick Forster, at the age of 52, was stricken with a heart attack while shoveling snow and died almost instantly. Though long-known primarily for his exceptional birding skills, Dick's interests spanned all aspects of natural history, and in recent years he had become quite occupied with odonates.

Dick was a graduate of Boston University and served in Vietnam, where he barely survived a land mine explosion. He worked from 1971-1986 as an ornithologist for the Massachusetts Audubon Society and led natural history tours throughout the world. He co-authored or contributed to several books on birds and served for several years as a regional editor of American Birds. His insatiable curiosity, intense passion, endless enthusiasm, phenomenal memory, and finely honed observational skills made him a tremendous resource, one whose counsel was sought by many.

In July of 1994, Jackie Sones and I accompanied Dick on the Concord, MA, butterfly census. Our developing interest in dragonflies piqued his curiosity and we ended up spending nearly as much time that day watching odonates as butterflies. Dick attacked this new fascination with characteristic intensity, and in no time he evolved from student to teacher - indeed, a treasured mentor. He had a grand time at the DSA meeting in New Brunswick last year, pumping the experts for every piece of information he could glean. In just the last two years he made significant contributions to odonatology in Massachusetts and would have made many, many more. His untimely passing leaves an incomprehensible void. Dick is survived by a son, a daughter, and three brothers.

HAWAII CALLS!

Jerrell J. Daigle daigle_j@dep.state.fl.us

The sounds of the TV "Hawaii 5-O" repeats and Steve McGarrett were too much for me this summer! I soon found myself disembarking in Honolulu! I spent a few days in Oahu around the 4th of July, followed by a couple of days at Gordon Barker's ranch on Kauai.

Wouldn't you know it! The "Donnelly Effect" followed me in the form of Hurricane Dolores and all I found was rain, rain, and strong winds on Oahu! By pure luck, I found a couple of waterlogged *Nesogonia blackburni, Megalagrion leptodemas*, and *M. oceanicum* huddled in the mountain rain forests. That was it! However, the tourist shopping was terrific and the local restaurants served fantastic cuisine and sumptuous luaus!

I had much better luck the following week on Kauai. By then, the hurricane passed by the islands and I had perfect balmy beach weather! One day, I went to the lookout at Kokee State Park hiked the Pihea Trail for about 2 miles! Almost immediately, I flushed out a flock of "Nene", the flightless Hawaiian Goose. kinda sauntered around and I was able to get to feet of this spectacular giant bird!! Other birds seen were francolins and native red Further down the trail, I saw a honeycreepers! pair of a stocky red Megalagrion perching on the rusty dirt trail. I did not recognize this species! I quickly scooped them up and looked at them with my hand lens. OH MY GOSH!! They were the bromeliaceous Megalagrion canopy-flying,

kauaiense! I have never seen this species before! It was truly a "gift from heaven!" They would be the only two seen on this trip. Later that day, I saw Anax strenuus and Megalagrion paludicola at the boggy Alakai Swamp! Did you know that "paludicola" means "swamp-loving?" At Makaleha Springs at appropriate! How Kapaa, the water level was too high for collecting. I didn't want to risk jumping from boulder to boulder in this deep canyon, so I went to the seaside cliffs of the Na Pali Coast. Here the collecting on the world famous Kalahau Trail was fantastic!! I found several new seepage streams loaded with Megalagrion vagabundum and my new species, M. mauka! I also found a hidden, unworkable waterfall area that had many M. eudytum, all less than a mile from the beach trailhead. Sprinkle in a few M. oresithrophum, M. heterogamias, and Nesogonia blackburni and you had a Hawaiian paradise! I promised myself I would come back soon!

Along these lines, Gordon has offered the complete use of his B & B ranch to DSA next year for about \$2,000 a week. There are 4 big bedrooms and one cottage plus a couple of couches in the two living rooms. We could get 4-5 couples plus a couple of people on the couches. The summer or fall would be the best time to go for excellent collecting and fantastic balmy beach weather! If anyone is interested, please let me know and I will coordinate the venture! Book 'em, Dano!

THROUGH DARKEST BORNEO [and MALAYSIA] WITH NET AND CAMERA

Nick Donnelly

Ailsa has this list. It resides in her head, and only she knows what is on it. But it is there. And every year she extracts another item from this list and announces to me, "This year I think we ought to visit _____. I really want to see ____."

This year we were preparing to return to southeast Asia - hopefully Thailand and Vietnam. In the Spring we received the unhappy news that Brother Amnuay Pinratana was not able to accompany us this year, and we cast about for a new place to visit. On the plane to Hanoi last year she had chatted with

a fellow passenger who passed on the name of a travel agent specializing in southeast Asia. And, thus a trip was born. Or Borneo, as it turned out. (pun)

"I want to see an orangutan", she announced in a voice that did not invite discussion. Seeing orangutans turns out to be more difficult than you might imagine. There is a population of wild orangutans in Borneo, but the facilities where hundreds of tourists see them each year are two "rehabilitation centers", which is the official name for petting zoos. Well, nearly. Anyway, seeing a wild orang is very chancy, and we had no interest in these semi-domesticated specimens.

Even though we decided that orangs were out of the question, we were hooked on Borneo. At this point I should remind you that this huge island consists of four parts: Brunei (tiny, upper left), Sarawak (medium size, middle left), Sabah (also medium size, top), and Kalimantan (huge, the rest). Sarawak and Sabah are ex-British with thriving tourist trades. We decided to try Sabah first and then Sarawak, for a week each. In Sabah we booked at the Sukau Rain Forest Lodge. We should have known. "Rain Forest Lodge" is a term having little to do with forest and almost nothing to do with rain. It is on a par with "Mom's Apple Pie". It should have been called "Sukau Dry Secondary, Scrubby Forest Lodge", but the owners preferred the shorter version. The Lodge itself was, however, very comfortable and full of the usual interesting tourists - mainly bird watchers. We enjoyed our stay there very much.

The big feature of the lodge is the local animal life. And the way to see it is touring the local rivers in small boats. Everyone saw numerous long-tailed macaques and proboscis monkeys, the latter being one of the oddest and most interesting monkeys that I have ever seen. There were five-foot monitor lizards relaxing on branches over the water, and five-inch squirrels running up the trees. The birds were spectacular -- Rhinoceros Hornbills posed on limbs. Long-tailed, white Paradise Flycatchers flew across our bow. Three types of kingfishers - each more lovely than the other - perched along the way and darted across the rivers as colorful streaks. The broadbills were a special treat. One was so colorful that it would have been rejected by Walt Disney as too improbable even for a cartoon bird. Foot-long flying lizards whizzed past our noses. Whew!

Why am I not mentioning dragonflies? They were there, but not in the numbers, novelty, or variety that I would have liked. One of the most common damselflies on the river was *Libellago hyalina*, a small black damselfly that perches on twigs and lily pads, and flexes its wine-red abdomen upwards as a display. Also present were two species of the violaceous damselfly genus *Archibasis*, the brilliant red *Rhodothemis rufa*, and a *Teinobasis* that I can't yet name and may be new.

My favorite on the river was *Epophthalmia vittigera*, which you can think of as a large *Macromia*. A very large *Macromia*. A *Macromia* with attitude. These patrolled the river constantly, and were impossible to net while sitting in the boat. Finally I despaired and stood up, managing finally to net a few. I worried about falling in, especially when I spotted a crocodile near the boat. Our guide cheerfully assured me that the local people are not afraid of crocodiles, which they believe are vegetarians. Anyway, I didn't fall in. I still remember my father's words, "Never stand up in a boat, even for an *Epophthalmia*." Those were his very words. . .

One day we visited the famous caves (of bird's nest soup fame) at Gomantang. A stream there provided the stunning, large, black and yellow *Gomphidia maclachlani* and the blue and red spotted *Libellago phaethon*. This is truly a beautiful damselfly - the abdomen has basal red spots and apical blue spots!

I should pause here briefly to introduce American readers to some of the Old World tropical Without such an introduction my damselflies. apparently enthusiastic comments may mean relatively little. The Chlorocyphidae are a family of damselflies which somewhat resemble the Polythoridae of the New World. They are stream dwellers and generally have colorful bodies or colorful wings, or both. They have relatively short abdomens, which they often raise slightly when perched in a display fashion. The most common genus is Rhinocypha, which has been divided by many into several other genera. Many of these have uncommonly beautiful wings, which are often black with "windows" of bright color which flash when they fly. Also when they fly, they seem to mimic the behavior of wasps, holding their legs forward in a mildly menacing manner. Libellago is the second most common genus. It is fairly small, generally has clear or slightly spotted wings, and seems even more wasp- or bee-like. Many species have brightly colored bodies. A second family unrepresented in the New World is the Euphaeidae, a calopterygid-like group of large insects generally with colored wings. The most common genera are Euphaea and Dysphaea, which perch along A third Old World family is the streams. are like large Platycnemididae, which coenagrionids, and which are most commonly also associated with streams. The three most common genera in the Orient are Copera (which is rather plain, but with conspicuous, long legs), Calicnemia (which is often bright red, or red and black), and Coeliccia (which is large and which contains species strikingly marked with either blue or vellow). The Calopterygidae (which are well known in North America with Calopteryx and Hetaerina) are very well represented in the Orient. Vestalis is the genus most often seen; the species are like Calopteryx. Neurobasis is a common, somewhat odd stream species which often flies with its front wings only, holding the hind wings still for display. You now know why streams in tropical Oriental forests are so much fun!

We finished off our stay in Sabah with a short visit to Kinabalu National Park. Our one day there was marred with a heavy rain, but I did find an odd coenagrionid that I still can't place to genus. And I saw, but failed to catch, the largest calopterygid in the island: *Neurobasis cyaneipennis*., which looks like a huge, floppy *Calopteryx maculata*.

We moved on to Sarawak, where we had arranged a visit to a "long house". This is the traditional home on poles occupied by several tribes, of which the largest is the Iban, (sometimes called "Sea Dyaks") who have stopped their traditional headhunting trips and started entertaining tourists Each long house is an extended family unit of about 200 people and is located about as far upstream on a small tributary as you can penetrate with a small boat. We spent a day in the forest with an Iban guide who showed us one of the most beautiful and wadeable sandy streams I have ever seen. The damselflies were especially exciting - Dysphaea dimidiata, Euphaea impar, Rhinagrion borneense, Heliocypha biseriata, Rhinocypha cucullata, and the very beautiful, tiny, yellow and red Libellago stictica. There were no less than six species of Protoneurids, each thin as a needle and colored mainly with red and black. Elattoneura analis was common on the main river, and five Prodasineura still unnamed and probably species (two

undescribed) were found mainly on tiny side streams.

Driving back to Kuching we stopped at several streams. We added a few protoneurids and the lovely red *Libellago aurantiaca* to our list (look at John Michalski's description of this gem in ARGIA 4:4). We were fascinated to find the odd libellulid *Tyriobapta torrida*, which perches languidly on tree trunks, sometimes for hours. We later saw this species in Peninsular Malaysia, behaving more actively, like normal libellulids.

Serian is a popular park about an hour from Kuching. It was crowded with people on the Sunday that we visited, but there were many odonates of interest. We found two species of *Coeliccia*, a *Drepanosticta*, and a *Protosticta* (Asia's equivalent of *Palaemnema*), and *Devadatta podolestoides*, a very dark, visually uninteresting damselfly. I saw one very teneral *Peristicta*, a damselfly with a very long abdomen that breeds in tree holes and looks for all the world like a *Mecistogaster*. There are pseuodstigmatid - like damselflies in several other families in the Old World, and it might be that the very long abdomen is an adaptation for laying eggs in tree-hole cavities.

Returning to peninsular Mayalsia, we divided our remaining week between the Cameron Highlands and the vicinity of Taiping, a city on the west coast. Cameron Highlands were somewhat disappointing, mainly because of the gloomy weather that kept odonates up in their trees, or wherever they go in the gloom. On a forest path near Tanah Rata Ailsa found Calicnemia rectangulata, one of the oddest damselflies we have ever seen (black, except for a bright red mid section). Aside from this and numerous Devadatta argyroides, the odonate count was zippo. The two days we spent here were more or less saved for me by spectacular ferns, including the marvelous antfern, Leccanopteris.

The road below this town had numerous streams with many interesting odonates. Our best find there was a large *Onychogomphus castor*. Ailsa netted this one with what she described with her characteristic modesty as "the all-time great shot of the century". Another great find was the fiery red libellulid *Lyriothemis biappendiculata*. I hesitate to repeat my customary question - "Why are there so many red libellulids in the tropics?"

I was unnerved many times while wading in the streams along this road by the huge Rajah Brook's Birdwing butterflies flying by - often very close to me. It is difficult to concentrate on the orange-winged *Euphaea ochracea* and black and purple winged *Rhinocypha fenestrella* when these gorgeous butterflies zoom by right under your nose.

Taiping was a real adventure. We went here on the advice of Professor C.E. Yong of Kuala Lumpur, who furnished us with abundant good advice. We had no idea where the good bugs were; the area seemed rather too agricultural for us. (Malaysia is heavily agricultural - palm oil, rubber, pepper, and many other tropical crops.) Trying a road almost at random we found several small streams of interest and had a great day. Damselflies were the best finds, including the blue and black Prodasineura notostigma, Rhinagrion macrocephalum (much like the Borneo species borneense), Drepanosticta sharpi, Mortonagrion arborense, and the surprisingly similar but smaller Agriocnemis minima, which I identified with the help of Matti Hämäläinen. This looks to me like a very small and challenges the generic Mortonagrion distinction between these small damselflies. Once more my loving wife came through with a large gomphid. "Don't come closer," she called, "I see a big green gomphid right in front of me." Thus we ended our trip with Megalogomphus sumatranus, one of the choice gomphids of the tropics.

Our trip was fairly hectic, with four destinations by airplane, three car rentals, and numerous stops along the road for snacks, information, or for bugs.

The food was not up to Thai standards, but the people were uniformly cheerful and very helpful. Luckily for us, most people are comfortable in English. Will we go back? You bet!

And, yes, we did see wild orangutans. Walking along a path in Sabah, our guide suddenly motioned us to be quiet - and come up. Sitting close to us in a tree and nonchalantly munching fruit was a family group: a huge female with a tiny baby on its chest, and a previous year's offspring (the "teenager") following along on another branch (The young stay with the female for 7 years, we are told.). In addition to the lack of concern they showed, I was amazed by the large size of the female and the deep red color of their fur. We were both too stunned to even try a photo, but some things are easily remembered without photos.

Footnote: Names for dragonflies in Malaysia and Borneo.

The common name in Malaysia for all odonates is patung-patung (a plural construction). Most people recognize this term. It is also given as pepatung, which is pronounced more like poe-patung. In Sarawak you can try the word Keyawir. Actually, you had better not, both because it is restricted to the Iban (=Sea Dyak) and is not otherwise understood, and also because it does not sound quite like this! The Iban guide who told me this term did not know of any explanation for the word.

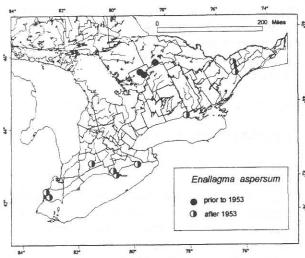
AN EXPANDING "RACE" OF THE AZURE BLUET, ENALLAGMA ASPERSUM IN ONTARIO?

Paul M. Catling 2326 Scrivens Drive R.R. 3 Metcalfe, Ontario K0A 2P0

Although Walker (1953) reported *Enallagma* aspersum in Ontario only from bog-margined lakes in the Muskoka and southeastern Nipissing regions (Catling & Brownell 1997), he noted that it occurred in other habitats elsewhere in its range, and he also noted occurrences in clear lakes "not of the sphagnum bog type" in Quebec. Since Walker reported a restricted distribution for this species in Ontario, there have been at least 4 reports in the literature from southwestern Ontario (Fig. 1). One was from a sphagnum-bordered pond in Byron

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(Sifton) Bog in London (Judd 1967), but another was from an "artificial" (man-made) pond in Haldimand-Norfolk (Judd 1968). More recently it has been found in calcareous and alkaline gravel pit ponds in 4 locations in eastern Ontario and associated with sewage lagoons in Essex County. These are interesting habitats for an insect formerly called the "Bog Bluet". In some of the recently discovered localities it is scarce and consequently easily overlooked among the more abundant bluets. However it appears to have a relatively long flight



season in Ontario, which would increase the likelihood of observing it wherever it occurs. The earliest date for Ontario is 10 June from Long Point (Falls 1996) and the latest is 20 Sept. (Catling) from Trenton.

The Azure Bluet is probably far more common and widespread in Ontario at present than suggested by Walker in 1953, based on its broad habitat utilization and generally widespread occurrence in the southern part of the province (Fig. 1). The interesting question though is whether or not it was really restricted to smaller bog lakes of the Canadian Shield during the first half of the century. Considering that the early survey of damselflies was fairly comprehensive (Catling & Brownell 1997), there is reason to suspect that that a race adapted to man-made ponds may have moved into Ontario relatively recently. With many biological questions all one can offer is a "best guess", but with more observations, and additional material in collections, it may be possible to provide an even better guess.

LITERATURE CITED

Catling, P. M. and V. R. Brownell. 1997. Damselflies (Zygoptera) in Ontario from 1900 to 1952: an atlas of E. M. Walker's distributional data for monitoring, and biodiversity and biogeography studies. Metcalfe, Ontario, Canada. 53 pp.

Falls, J. B. 1996. The Odonata of Long Point. Ontario Insects 1(3): 42-43, 46.

Judd, W.W. 1967. Studies of the Byron Bog in southwestern Ontario XXXII. Observations on the seasonal distribution of Odonata in the bog. Proc. Ent. Soc. Ont. 98: 45-48. Judd, W. W. 1968. A collection of damselflies and dragonflies (Odonata) from DunnTownship, Ontario. Ontario Field Biologist 21: 1-6.

Walker, E. M. 1953. The Odonata of Canada and Alaska, volume 1, part 1: General. part 2: The Zygoptera - Damselflies. University of Toronto Press. 292 pp.

THE HUNT FOR RED SYMPETRUM

Nick Donnelly (title by Richard Orr)

Sympetrum is a much neglected bug. In my experience the Meadowhawks command about as much interest as meadow muffins. Perhaps part of the problem is that very often Sympetrum thrives in unattractive places. My best locality of a recent western trip was a shallow, warm, slightly saline pond along a railroad track in Montana. Wading gingerly on slippery black clay through the dark, hot water, I found that one of the places that the five Sympetrum species of this pond liked to perch was on the carcasses of sheep that foolishly wandered through the broken fence to drink the deadly water. Momma mia - how did it come to this?

This summer Ailsa and I drove to Montana and managed to make this an 8-species trip. I took internum (MI, WI, NE, SD, WY, MT, ND, MAN), rubicundulum (NE), obtrusum (MI, WI, NE, SD, MT, ONT), costiferum (MI, NE, SD, MT, WY, ND, MAN, ONT), vicinum (NE, ONT), occidentale (NE, MT, ONT), corruptum (NE), pallipes (WY, MT), danae (MT, ONT).

We first thought that it was a 9-species trip. However, I have decided that what I had taken in the field to be semicinctum in Ontario is really a small occidentale. Walker's (1951) paper separated the two species on the basis of size, face color, and presence or absence of black on the thorax. None of these criteria seem very convincing. In fact, the sister species S. costiferum shows a similar variation in thoracic dark markings (related, as you might expect, to climate), and internum shows a range of face colors, even at the same locality. On this trip I took small "occidentale" in both the Kenora and Sudbury districts of Ontario, which is in the range of Walker's semicinctum. These two species may well be distinct and overlap, but I

suspect that they have been mainly identified on the basis of range, and that there is really only one species after all. If there are two, I don't see a convincing difference.

Several people in the Society are aware that I have been studying these insects for several years. My studies were initially spurred by the discovery of several instances of hybridization between two common eastern species: *internum* and *obtrusum*. (Several of you may be familiar with *internum* under the more recent name *janeae*, but I have been unable to convince myself that this "species" is really distinct. This is yet another problem.)

More interesting on this trip was the evidence of hybridization between *rubicundulum* and *internum*. In brief collecting around Valentine NE I found two specimens which are apparent hybrids between these species (one given to me by Ralph Charlton), and two instances of nascent miscegenation in mating pairs! What is going on here? This seems somewhat like the blue-wing and golden-wing warbler problem. Have you no decency, sir? Those of you with behavioral interests might do well to study the behavior of the species in the group *obtrusum - rubicundulum - internum* where they co-occur.

This short note is also a teaser for the 1998 meeting in Valentine. The genus is well represented here, and those of you who come to Valentine in 1998 will have the opportunity to see this phenomenon for yourselves.

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KESTRELS AND DRAGONFLIES

e-mail from Dick Walton

".... Legendary hawk-spotter Frank Nicoletti reported his recent observations on the synchronous timing of American Kestrel and green darner (dragonfly) migration in the fall. This indefatigable gentleman actually counted 1,106 American Kestrels and 10,330 green darners heading south past his watch point in Deluth during September, 1995, providing a mobile chow line for the Kestrels."

From "Eastern Massachusetts Hawk Watch" - Fall 1997 Newsletter

I knew we needed a "dragonfly counter" on the platform at Cape May!

HISTORY OF THE STUDY OF ODONATA (PART 3)

Nick Donnelly

In this issue I continue with a discussion of the history of the study of Odonata, emphasizing the New World and especially North America.

THE THIRD PHASE; Exploration of the American West; Selys and hagen

The Pope Expedition -- To understand North American Natural History, it is necessary to understand the explorations of the American West. Politically, the explorations were the manifestations of the three powers (Great Britain, the United States, and Spain) to claim and occupy the vast territory west of the Louisiana Purchase

The Lewis and Clark expedition (1804 - 06) was the opening U.S. shot in this struggle and was followed by numerous expeditions to present-day Colorado and New Mexico, of which the most famous were those of Zebulon Pike (1805 - 07) and Stephen

Long (1819 - 20). Thomas Say, the Father of American odonatology (and nearly everything else in the animal world!) was a member of the Long expedition, but there is no evidence that he collected any of the numerous Odonata species he later named. Of course, the west of Canada and much of the northwest of the present United States was also explored by largely French-Canadian "Voyageurs" under the direction of the Hudson's Bay Company.

Prior to 1840 the emphasis was on survival, hunting, and discovery of the wondrous West. After that date the doctrine of Manifest Destiny dictated that Americans should find land routes to link the Midwest with the Pacific coast. Two railroad routes were surveyed - the Central (Union) Pacific and the Southern Pacific. (The Northern Pacific came later.) Critical for these surveys were the discovery of passes through the Rocky

Mountains, and much of the survey effort was directed to Colorado and New Mexico for this purpose. Much of the exploration was done by a detachment of the U.S. Army called the Corps of Topographical Engineers. These were elite officers; one must recall that at this time the only engineering taught in the United States was at West Point and was Civil Engineering. Among the junior officers assigned to this small corps was brevet second lieutenant John Pope. His first task was to explore in 1853 a route from near Denison TX to near Las Cruces NM for the intended major railroad route. (The Southern Pacific later was built south of this route.) His report of this survey was very enthusiastic, but his superiors regarded him as somewhat of a free spirit and evidently did not trust his judgment, especially his view that there would be adequate water in very dry western Texas (the "Llano Estacado"). Pope was sent on a second expedition to explore for water, and later on a third. His water wells were not productive, and he lapsed into military obscurity, until emerging a few years later as a Major General for the Union in the Civil War. His main distinction was losing the Battle of the Second Bull Run (which was not entirely his fault, of course), and he was banished to Minnesota for the remainder of the war. He did win a small battle on one of the Confederate fortified islands on the Mississippi near New Madrid MO. Militarily, he is an obscure character. However, the zoological results of his second expedition (1854 - 56) dazzled the young Smithsonian Institution, which said, in the Annual Report for 1856, of his expedition,

"But the results of most interest here consist in a very extensive collection of the animals of that little known region, embracing full series of its vertebrata and insects. The collection, in respect to the latter, is of hitherto unexampled extent in the history of government expeditions; Captain Pope having directed attention to specimens in this obscure department of American zoology. The result is to be found in sixty boxes of pinned insects of all orders, in excellence of preservations, furnishing, not only ample material for the study of geographical distribution, but likely to throw much light on the character, habits, and changes of many species of western insects, already possessing a painful prominence for their devastations of plants of both wild and cultivated growth."

The Pope expedition in 1854 to 1856 provided no less than 21 new species of North American

odonates. Among the familiar North American odonates first taken on this expedition were the widespread Argia moesta, Aeshna multicolor, Epicordulia princeps, Tramea lacerata, and Sympetrum corruptum, all later described by Hagen. The trip was especially successful with gomphids, and six of the most common southwestern species (Erpetogomphus compositus and designatus, Gomphus externus and militaris, Dromogomphus spoliatus, and Phyllogomphoides stigmatus) were first taken by this expedition (locality given as Pecos River misspelled as "Peros" in the MONOGRAPHIE DES GOMPHINES of Selys and Hagen.)

Later expeditions, especially the famous expeditions to the Yellowstone under the direction of Ferdinand V. Hayden (beginning in 1871), yielded about half a dozen additional new species of odonates.

Baron Michel Edmond de Selys-Longchamps (1813 - 1900) was the father of the study of Odonata. Born to a wealthy family in the Belgian nobility he devoted his career to studying the Odonata of the World. He published a series of



Baron Michel Edmond de Selys-Longchamps



Hermann August Hagen

monographs and synopses of most damselfly groups, and also the dragonflies except for libellulids.. His 253 species (mainly damselflies) are the most described by anyone for the New World fauna. However, relatively few of these were libellulids; this family was left to Ris, who produced a magnificent monograph on the family based largely on Selys' huge collection in Bruxelles. Selys was also an accomplished ornithologist, an avocation successfully pursued by a great many subsequent students of dragonflies.

Selys was largely responsible for the interest of several other odonatists, such as Hagen and M'Lachlan, with whom he collaborated on several papers. He became a senator in the newly independent Kingdom of Belgium and was for a time the president of the Senate.

Herman A. Hagen (1817 - 1893) was born in Köningsberg in East Prussia (This has been Kaliningrad since WW II). Educated in the local university where his father was a professor, Hagen became a physician but devoted his life to insects, mainly Odonata, but also including a major monograph on termites. While living in Köningsberg he was sent a large collection of

Odonata by the Smithsonian Institution for the purpose of preparing a monograph on the North American Odonata. The largest lot was from the Pope Expedition (above), but there were older specimens from John Abbott from Georgia, and many odonates collected by the dipterist Baron Carl Robert Osten Sacken, who traveled widely throughout the United States. The manuscript was submitted to the Smithsonian in Latin, but it was obligingly translated by Philip Uhler of Baltimore, who also had an interest in the order. (Just try submitting a manuscript in Latin today!) Of the new odonate species described in his Synopsis of the Neuroptera of North America (1861), 81 are considered valid today, and no less than 62 were North American. This is the single most seminal publication devoted to American Odonata.

Louis Agassiz of the Museum of Comparative Zoology in Cambridge was so impressed with Hagen's work that he invited him to come to Cambridge in 1867. Hagen took a post at the M.C.Z. and remained there until his death in 1893. One of my sources states that he joined a western expedition in 1882, and another assures the reader that he never visited the West. I have not learned the truth.

Hagen had an immediate and direct influence on American as well as European Odonatists, and he may well have been the mentor of more odonatists than any other person. Philip Calvert was a young man in the twilight of Hagen's life. A few years before his death, he sent Calvert an unpublished manuscript on *Leucorrhinia* and gave Calvert permission to publish it, with Calvert as author. Calvert is reported to have said, "None but a generous man would have done so."

Hagen never became fluent in English. John Henry Comstock (later the founder of the Entomology Department at Cornell University) recalled a conversation with Hagen that went this way:

H: "Do you shbeak Cherman?"

C: "No sir."

H: "Do you shbeak French?"

C: "No sir."

H: "Do you shbeak Latin?"

C: "No sir."

H: "Vell den, I guess ve vill have to shbeak English. Come now I vill tell you some tings vot I know about entomolochy." Hagen made a significant impact on Odonata, publishing in all groups. He added 199 species to the New World fauna and was the first major contributor to the fauna of the western United States. After Say, Selys, and Hagen, the North American fauna was fairly broadly known.

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MICHIGAN ODONATA RECORDS - NEWS FROM WILLIAMSONIA

The third (summer) issue of WILLIAMSONIA brings us news from Michigan. Dragonfly records include several records of for Michigan Gomphaeschna furcillata from the Upper Peninsula. (The previous record had been from far south, and the species was not considered a resident of the state at all.) Stylurus spiniceps was found on the Huron River - the first firm record with a detailed locality. Paul Pratt saw numerous Tramea onusta near the Detroit River mouth. Although his records are technically from Ontario, the species was found in full sight of Michigan across the river. The most interesting record is the find of Somatochlora hineana (a.k.a. Hine's Emerald) by Wayne Steffens near St. Ignace, on the Upper Peninsula. This is a considerable range extension for the only Federally listed dragonfly in the U.S.

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SEVERAL NOTEWORTHY ODONATES FROM MASSACHUSETTS AND NEW BRUNSWICK

excerpts from a letter and an e-mail from Blair Nikula and Company

Letter: "Local highlights this year included two more Massachusetts records, though one eluded capture regretably. The first was *Gomphaeschna antilope*, which we collected in Holliston (about half way between Boston and Providence) in early July. We caught at least four individuals, so the species appears to be established there. The second species was *Tramea calverti*, which we discovered while doing a butterfly census in Eastham. . We've seen the species in both Florida and Texas and had good looks at this individual, both perched and in flight, so are confident of its identification, but it hurts not to have a specimen!"

"We spent a few days in northern New Brunswick last week with Stu Tingley (and Paul Brunelle

briefly). . . we still managed to collect one new species for the province: *Aeshna juncea*." [Stuart Tingley later supplied the data: Mount Carleton Provincial Park in northwestern New Brunswick, 28 July 1997.]

E-mail: "We just got in from a day in the field...our last stop was in Holliston (where we found G. antilope), traditionally a great spot for Somatochloras. There were some small bugs flying around with the more typical S. williamsoni, S. tenebrosa, S. walshii, and S. linearis. We were wondering about their identity and when Blair finally caught one were we surprised...SOMATOCHLORA GEORGIANA!!!

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CAPE BRETON ISLAND AND MAINE

condensed from e-mails from Paul Brunelle

[Maine] This past Wednesday I collected a female *Williamsonia lintneri* in Oxford County, Maine, at 44 degrees north latitude. It seems to be the highest latitude recorded for the species in New England.

My work in Maine was very successful from the standpoint of *Somatochlora incurvata* - we added about 6 sites to the state, most somewhat inland and roughly between Augusta and Bangor. The typical sites we added were not exactly as Hal described them; they were domed sphagnum (peat) bogs with little or no visible surface water (8" diameter 'pools' in animal paths through the bogs at most) and with sphagnum 'pillows' perhaps a meter in diameter with cracks in between.

[Cape Breton Island] My first pleasurable experience was finding a sizable flight of Aeshna subarctica in a little sphagnum bog a 20' squelch from the highway. This is the first CBI record and only the third for NS. The site is one where it is difficult to determine if you are on sphagnum saturated with water or water saturated with sphagnum. The species was later found on the west plateau as well, in a slightly firmer bog patrolling a slightly quaking pond margin.

Also at the squelch bog I observed an Aeshna sitchensis male behaving typically, the second record for NS. But the triumph with this species was at the sphagnum-margined (soft-edged) ponds

of Everlasting Barren where a large number were patrolling for females. Two wheels were taken and a solo female as well. One of the females was mildly homeochromatic. These ponds in the barren are on an inclined plane and have an immediate surrounding of graminous sphagnum, with the dwarf forest less than 50m away. The males were not observed to perch on the ground but were seen to fly in the direction of the forest where they presumably hung up and perched flat in typical fashion.

Lastly at the squelch bog I took a single male *Somatochlora incurvata*, probably the furthest east the species has been taken. He was patrolling over a fen-like area at the margin of the bog where grasses were emergent from shallow standing water.

Also at the squelch bog I took two male S. danae in advanced coloration, guarding at the small sphagnum-choked peripheral pools.

Another species of interest at the barrens was *Pantala flavescens*, recently taken for the first time in the province on one of the dirt roads leading to the plateau. Males were found territorial at the bog ponds and a wheel followed by laying while towing was observed.

At the Everlasting Barrens I took (usually in distinctly different pond types) Aeshna eremita, Somatochlora cingulata (larger pools) and fruitlessly pursued male Somatochloras (infuriatingly difficult to get to). I eventually took a female Somatochlora septentrionalis at a larger pool, the only one with a quaking sphagnum margin in the complex. Previously there was a specimen taken by McDunnough (July 24, 1941) in the 1930's at 'the mountains above Pleasant Bay' which would have been in the highlands.

NEW BRUNSWICK NEWS

from an e-mail from Stuart Tingley

Hello Friends,

While certainly not unexpected, it was still exciting today to find New Brunswick's first *Aeshna subarctica*, and lots of them!! In light of their occurrence on Mount Desert Island, Maine and at several sites in Nova Scotia it was perhaps one of the more overdue species for the province.

subarctica was common today at a small roadside bog on Route 108 in York Co. This bog is familiar to several of you as the site where I found sitchensis and Coenagrion interrogatum earlier in the summer and where Jeremiah Trimble found the provinces' second Nannothemis bella. sitchensis was still the dominant Darner at this bog today, outnumbering subarctica by about two to one. I covered perhaps a fifth of the bog and sitchensis and 20 subarctica. estimated 40 Females were hard to come by although I did see several wheels of sitchensis perched on standing dead trees and eventually found a female subarctica perched and ovipositing in a wet sphagnum mat, in much the same manner as sitchensis. While male sitchensis were frequently perching on dead trees in the bog, with no particular preference for vertical, diagonal or horizontal trees, I never once saw subarctica land on any of the trees in the bog though I did see several head off into the adjacent spruce forest. Also present in the bog were Lestes forcipatus, d. disjunctus and congener, Aeshna canadensis (only noted one), Sympetrum costiferum, danae (1), internum and obtrusum. Conditions were not great as it was cloudy with a cool westerly breeze and a temperature just below 20C (upper 60'sF) but it didn't seem to slow the Darners. I then backtracked about 10 kms. east on Route 108 and 10 kms. north on the Holmes Lake Road to check a large bog with ponds that I had visited at the end of July. Not surprisingly, subarctica was present here as well, patrolling the sphagnum-lined edges of the many ponds in this bog. During my two-hour survey in cool drizzly weather I saw about 15 subarctica, 10 canadensis, 6 interrupta and 1 sitchensis. Several Somatochlora elongata were also present here including at least three females ovipositing along the edge of the ponds by alternately tapping water and wet spagnum.

To give those of you unfamiliar with the province an understanding of where these sites are located, if you drew a line from the geographical centre of NB to the northwestern extremity of the province, these sites would be approximately one-third of the way along that line.

Happy Odeing!

Stuart

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HETAERINA AMERICANA IN VERMONT.

Condensed from an e-mail from Don Miller

"Incidentally, I just became aware that I have an apparent new Vt. State odonate record, the rubyspot damselfly [Hetaerina americana], which I collected and photographed in Addison Co. last year and before. I wasn't aware it was a new record until I read the recent Ode News."



NEW CONNECTICUT RECORDS

condensed from a letter from Bob Muller

The is my second full year of collecting and I have picked up two new state records, along with some other great species. My first record was a female *Ischnura prognata* taken on 28 May at a small cat tail pond in Stratford CT. Dave Wagner (Univ. of Connecticut) made the identification.

The second record was *Libellula axilena*. [Bob dramatically described the hour-long pursuit and final netting.]

Some of the others taken this year which I consider to be great first catches are Libellula vibrans, Aeshna mutata, Cordulegaster diastatops, C. maculata, C. obliqua, Macromia illinoiensis, Ladona deplanata, L. exusta, Celithemis martha, and Enallagma minusculum.



LIBELLULA FLAVIDA IN STATEN ISLAND

condensed from a letter from Paul Lederer

On 19 July 1997 a female *Libellula flavida* was captured in a field in a section of Staten Island known as Charleston. This protected area contains a mixture of habitats (wetlands, fields, spring-fed streams, woodlands) and has some areas unique or rare for New York City, such as sandy barrens and sphagnum bogs. It was in one such area that the specimen was captured.

[Paul contacted me later to say that an apparently stable population was present. Ed.]

NEW LOCALITY FOR THE EVERGLADES SPRITE. NEHALENNIA PALLIDULA

Bill Mauffray

I was asked to identify some Odonata collected in Indian River County, Florida for a "trial biodiversity survey" conducted by the St. John's Water Management District. Included were several vials containing 7 males and 9 females of *Nehalennia pallidula* Calvert. Locality data: Florida, Indian River County, Blue Cypress Marsh, Panicum site, sweep sample. There were 4 vials with collection dates ranging from 7 May to 11 May 1996.

This makes the ninth county for Florida's only endemic Damselfly. It has been previously reported from Collier, Dade, Glades, Levy, Polk, Orange, and Seminole counties by Dunkle (1992) and Monroe County by Daigle (1997). The significance of this discovery, as well as that of Daigle (1997) is that there are still viable populations of this species, which has become difficult to find due to habitat destruction. Hopefully the still undescribed larva will be found at this location. Other species collected at that site were: Ischnura hastata, Ischnura ramburii, Enallagma civile. Brachymesia gravida, and Celithemis eponina collections included Erythemis Larval simplicicollis, Pachydiplax longipennis, Coryphaeschna ingens.

Dunkle, S. W. (1992) Distribution of Dragonflies and Damselflies (Odonata) In Florida. B.A.O. p-29-50

Daigle J.J. (1997) Snowbirds Sighted in the Sunny Everglades. ARGIA 9:2 p.13

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PACHYDIPLAX FROM MAINLAND BRITISH COLUMBIA

condensed from an article by Rex Kenner.

The December 1996 issue of **DISCOVERY**, (a journal of Natural History and Conservation in British Columbia) documents the finding of *Pachydiplax longipennis* (the Blue Dasher) in the mainland portion of British Columbia. Listed among ten "threatened and endangered" species in BC, this dragonfly was previously known only from Vancouver Island. Kenner found the species in 1996 in Burnaby Lake Regional Park, Crippen

Regional Park, Stanley Park, and John Hendry Park. Although Kendry feels that the species has moved recently into the mainland part of the Province, he also correctly notes that very few people have been studying these insects until recently. [It does seem odd to someone who lives in the main part of the range of *Pachydiplax* that it ever could be considered threatened anywhere! Ed.]

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OLD SPECIMENS, NEW RECORDS

George H. Bick 1928 SW 48th Ave., Gainesville FL

The following specimens, all in the FSCA and some well hidden, seem to represent new state records:

Ischnura denticollis (Burmeister) WA, Pend Oreille Co., 2 mi. N. of Locke, (1975 ft.), 27 July 1941. A considerable distance north of the previous northern-most record in central OR, and close to the Canadian border.

Arigomphus maxwelli (Ferguson). TN, Hardin Co., 1.8 mi. W. of Walkerton, 17 June 1984, Coll. M. Westfall. This species was expected in TN because of its occurrence in southern IL and eastern AR.

Lanthus parvulus (Selys) MI, Ingham Co., East Lansing, 29 May 1949, V. Cole, 1 badly damaged male. This is the northwesternmost record for the species. [Mark O'Brien has cautioned that this locality could represent a student collection from Michigan State University. It is possible that the locality is not East Lansing at all. Ed.]

Macromia alleghaniensis Williamson. MS, Wayne Co., Clara, no date, C. Williams, 1 male. Tennessen et al. record this in their Alabama list from nearby counties.

Celithemis bertha Williamson. MS, Hancock Co., Kiln, 3 July 1967, W. Mauffray, 1 male. Tennessen, et al, record this from a nearby Alabama county.

Dythemis fugax Hagen. AZ, Pima Co., Santa Rita Mts., Box Canyon, 14 Sept. 1978, P. Cogley, 1 male. This locality on south-central AZ is a considerable western range extension; the previous westernmost locality is in eastern NM.

Erythrodiplax minuscula (Rambur). NY, Essex Co., Whiteface Mt., 11 Juily 1990, J. Huether, 1 female. This locality in northern NY extends the range of this widespread eastern species well north of its previous limit in central PA.

Orthemis ferruginea (Fabricius). GA, Chatham Co., US 17 and Little Ogeechee River, 13 Sept. 1957, W. Cross, 1 male; Chatham Co.; Tybee Is., 15 Sept. 1957, W. Cross, 4 males. Remarkably, I could find no published GA record for this species, which ranges across the southern US from NC to southern CA.

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NEWS FROM ODE NEWS

extracts from ODE NEWS, June 1997

The latest ODE NEWS (Cape Cod and most of the rest of New England) is full of interesting bits. Their schedule of summer field trips is enticing too bad that they have all happened. We will await their reports for a later **ARGIA**.

Their 1996 summary has many notable records. Calopteryx dimidiata has a new northeastern-most record: Fort Pond Brook on the Acton / Concord MA town line. Argia translata has reappeared after a decade or more (Sudbury Reservoir MA). Aeshna mutata has now been found in "substantial populations" is four sites in Hampden and Hampshire Counties MA. Aeshna subarctica, found for the first time in MA by Dick Forster is back at Ashburnham MA in small numbers. Several gomphids which are scarce in the east were found: Gomphus ventricosus, G. vastus, and Stylurus amnicola were all taken in Deerfield MA. Several other notable species are listed and discussed.

An article on Gomphids by the late Dick Forster tells us how observant a naturalist he was. [Knowing my interest in hybrid dragonflies, he had sent me some hybrid *Ophiogomphus* specimens that I am still puzzling over. Ed.]

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DAMSELFLIES (ZYGOPTERA) IN ONTARIO FROM 1900 TO 1952: An Atlas of E.M. Walker's Distributional Data for Monitoring, and biodiversity and Biogeographic Studies

P.M. Catling and V.R. Brownell

\$10 (C) from authors at 2325 Scrivenor Drive, R.R. 3, Metcalfe, Ontario, Canada K0A 2P0

reviewed by Nick Donnelly

The bulk of this handsome publication is a series of dot maps showing occurrences in Ontario of Zygoptera recorded by E.M. Walker. Much of the information here could be reconstructed from Walker's two major publications covering Ontario: his provincial list (1941) and the first volume of his "Odonata of Canada and Alaska" (1953). However, the authors have searched for additional records in several minor publications that might be overlooked, producing a complete account for this large province.

The only drawback of this work is the omission of post-Walker records. For example, three additional species have been found in the province since Walker's work: *Enallagma basidens, E. traviatum westfalli*, and *Hetaerina titia*. These species are listed here but no hint is provided as to their localities. Presumably these, and other subsequent records, will be provided in a subsequent work. A minor problem is the mis-printing of some longitude notations in the latitude margins of the maps.

Workers will find this visual presentation of Walker's records very attractive and useful.

OLIVER FLINT AND CUBAN ODONATA

Oliver Flint and Wayne Mathis, of the Smithsonian, have written a paper on a recent collecting trip to Cuba. They document a recent trip to the island, but the main feature of the paper is an up-to-date list of the odonata of Cuba. It appears in COCUYO, a Cuban Newsletter on invertebrate research, which many of you probably do not receive. The reference is Number 5, September 1996, pp. 17-20. [Cocuyo is the Spanish for firefly, a term the editors apparently intend metaphorically.]

ODONATES OF THE ATLANTIC PROVINCES

Paul Brunelle has recently published "Distribution of dragonflies and damselflies of the Atlantic Provinces, Canada" in the Northeastern Naturalist (1997, 4(2): 61-82). (The "Atlantic Provinces" are the Maritimes plus Newfoundland and Labrador.) He lists 19 Odonata species wholly new to this important region. The total fauna now stands at 130 species.

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PRESS EXPOSURE OF DRAGONFLIES

Hal White

I'm not accustomed to seeing color photos of dragonflies in high circulation publications so when I had two such encounters within 24 hours I took note. The May 30th 1997 issue of SCIENCE [276:1341] displays the green darter (*Anax junius*, fam. Aeshnidae) from an Internet digital gallery of Texas dragonflies [www.our-town.com/dragonfly/Welcome.html] developed by Forrest Mitchell.

The Chronicle of Higher Education for June 6th 1997 [43(39):A6] illustrates several pinned Odonates from the insect collection of the late Rev. Charles V. Reichard, a professor at Providence College who willed his 30,000 specimens to the While the collection features Smithsonian. primarily exotic Hemiptera, the illustrated species appear to be local Odonata, not "true bugs" as the news item implies. In the photograph are two nymphs, Hagenius brevistylus and an aeshnid. The adults featured are probably Epiaeschna heros, both sexes of Calopteryx maculata, and another Aeshnid. I guess we should be happy for the exposure and be tolerant of the mistakes. After all, darners are aquatic.

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SNAKETAIL HITS THE NEW YORK TIMES

Nick Donnelly

"All the news that's fit to print" evidently includes dragonflies! Several **DSA** members (and some family friends) called my attention to an article that appeared on Tuesday, 12 August 1997 in the "Science Times" section by Jane Brody. The main

focus of the article was on Bill Smith's discovery of the recently described *Ophiogomphus susbecha* (a.k.a. St. Croix Snaketail), adding that he and Tim Vogt have another new bug on the way. The article also includes quotes from Donald Huggins (Kansas State Univ.) and John Haarstadt (Univ. of Minnesota) regarding larval ecology and role of dragonflies in aquatic conservation. Illustrated with a series of huge sketches depicting dragonfly life history, and a superb photo by Bill Smith of a pair of mating *O. susbecha*, the article is both informative and interesting, as well as being remarkably accurate. It would be a treat to see the color version of that photo.

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COMMON DRAGONFLIES OF THE NORTHEAST

Video by Richard K. Walton and Richard A. Forster

\$24.95 from NHS, 7 Concord Greene #8, Concord MA 01742, MA residents add 5% tax, checks made out to "NHS":

This superb 30-minute VHS video contains stunning footage of many common species of Anisoptera of the northeastern United States. The video will help to identify many species and shows also their habitats and behavior. Because there has not yet appeared a comprehensive field guide to dragonflies, this video will be especially useful for beginners. I hope that there will be a second video showing damselflies.

The video also shows several odonatists in action, including several members of the "Somatochlora Swat Team", whom we met at the St. Stephens last year. The video is narrated by the late Dick Forster, who we remember as one of the members of this team.

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BOOK NOTICE: LES ODONATES DU QUÉBEC

Entomofaune du Québec Inc. has announced the December publication of Les Odonates du Québec, by Jean-Guy Pilon and Denise Lagace. This book details the distribution of 138 species in the province, presents keys for the determination of these species, and contains an exhaustive bibliography.

The pre-publication price is \$75 (Canadian), which includes postage. The address is: Entomofaune du Québec Inc., 637, Boulevard Talbot, Suite 108, Chicoutimi, Québec G7H 6A4 Canada.

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STATUS OF WALKER VOLUME REPRINTS

We are still waiting for the announced publication of the Walker three-volume set of the Odonata of Canada and Alaska. The price has been set at \$175 Canadian (well worth it for us in the northern US as well as Canada).

For information contact T.E.A., c/o Alan Hanks, 34 Seaton Drive, Aurora, Ontario L4G 2K1 Canada. e-mail: nmg.vanderpoorten@sympatico.ca

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PRODUCT NOTICE: LANIUS SOFTWARE

LANIUS software has released a database application designed to manage field data on dragonflies and damselflies. The CLUBTAIL 1.0 relational database is designed for 32-bit Windows operating systems. This product 1) Maintains specific information on each census you conduct, to include details on the date, time, location, observers, and weather for each census that is entered; 2) Maintains lists of all dragonfly species that are found on each census, to include the state and county in which each observation was made and the number of individuals observed and/or collected; and 3) Maintains detailed data, at a variety of scales, on the specific sites at which dragonfly surveys are conducted.

For more information contact John C. Robinson, LANIUS Software; e-mail: 73121.1502@Compuserve.Com

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REQUEST FOR *CORDULEGASTER* LARVAE OR EXUVIAE

Bob Glotzhober

As I believe you all know, Dan Riggs and I have been working vigorously on *Cordulegaster erronea* in Ohio. I had fantastic success this summer with capturing, marking, releasing, and

recapturing them using modified malaise traps. Dan has begun his work on evaluating the parameters of the larval habitat. Each of us has made observations of females ovipositing -- once I counted one dipping her abdomen pogo-stick fashion for 370 x before flying off.

One thing that has bewildered each of us is that we have never been able to find any exuvia, and have never captured an adult which we would label as teneral. Have any of you ever found exuvia of this species, or other *Cordulegaster* species -- where do you find them? Any clues as to where the tenerals go? Any observations and comments you can pass along would be appreciated.

Bob Glotzhober Associate Curator, Natural History Ohio Historical Society 1982 Velma Avenue Columbus, OH 43211-2497 (614/297-2633) fax 614/297-2233 e-mail: rglotzho@winslow.ohio.gov

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REBIRTH: THOUGHTS ON OBSERVING DRAGONFLY LARVAE

poem by Roy Beckemeyer

Early instar larvae, lurking, lying still in murky waters, hidden, waiting, dreaming of prey.

Do they

dream as well of births to come?

Of being born twelve times over?

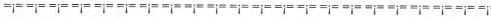
Of giving birth to themselves, after a fashion?

Of spilling out from within themselves, struggling to escape the confining shell that once was all that gave them shape?

Do they anticipate the most difficult birth of all?

As they climb
toward the light,
leaving behind
the dark, wet world
that is all they have known,
do they foresee
that final rebirth?
That struggle?
That change so tremendous
that they will truly be reborn:
Gaining grace,
gaining wings,
gaining the air,
becoming as angels?

Will heaven and earth be as different for us as air and water for them?



TRAMEA

by Jackie Sones

What do ARGIA readers really want to know about dragonflies and the Web? That is the question that has been running through my head since I volunteered to write this column. If anyone out there has a specific interest, please let me know! For now I'll continue to update you with the newest odonate-related web sites I've encountered. The sites listed below have caught my eye for different reasons...read on!

For me one of the most interesting things about the Web are the photographs it offers. I will never forget the first odonate pictures I saw online... *Diphlebia euphoeoides* and *Petalura ingentissima* from Australia. Both were incredibly striking and sparked my imagination... I started wondering, what else is out there? Now I am thinking seriously about organizing a world-wide photographic reference list, e.g., an alphabetical list of odonates, with links to their images at different web sites. What do you think? Do you know of any sites that display good photographs? If so, send me an e-mail and I'll try to start pulling something together.

Just a reminder: If you don't feel like typing these URL addresses, you may access all of the sites mentioned in this column from links at the Ode News web site: http://www.capecod.net/~bnikula/odenews.htm

Photographs.

For photographs of species from the Pacific Northwest, try Dennis Paulson's Dragonfly Biodiversity site. He has created a Northwest Odonata Photo Gallery where you can discover images such as *Octogomphus specularis* and *Tanypteryx hageni*. These are large, scanned images (up to 576K), which means they load slowly (some took over 6 minutes!). However, it's a terrific resource!

http://www.ups.edu/biology/museum/UPSdragonflies.html

Forrest Mitchell has opened a Digital Dragonfly Museum, which offers access to a list of Damselflies of Texas. Maps, photographs, and scanned images are provided for many of the 65 species listed. http://stephenville.tamu.edu/~fmitchel/dragonfly/

Just in case you haven't seen these Japanese photographs yet, take a look at *Sieboldius albardae* perched along a clear, rocky stream...a *Rhipidolestes hiraoi* larva clinging to a wet, rock wall...*Sympetrum maculatum* in tandem flight...or a *Rhyothemis variegata imperatix* feeding flight...WOW! http://www.justnet.or.jp/home/t aoki/EHABITAT.HTM

Specimen Collections.

Also new at Dennis Paulson's site is a partial list of his specimens. For a beginner like me, it is interesting to learn about new families, such as Polythoridae and Dicteriadidae, and new genera, such as *Sundacypha* and *Echo*, and to learn a little about their distributions. [See link above.]

Checklists.

Elliot Pinhey compiled a list of dragonflies and damselflies from South Africa. The list includes information about distribution and flight periods.

http://www.ru.ac.za/departments/zooento/Martin/odonata.html

You can review a short abstract from a survey done in the Szigetkoz in Hungary. Fifty-four species were documented, including species such as *Coenagrion ornatum*, *Hemianax ephippiger*, *Orthetrum coerulescens*, and *Leucorrhinia pectoralis*.

http://origo.hnm.hu/danube_dg/sziget/e5ambrus.html

I have to mention the Dennis Paulson's site again, for the checklists he offers now include Washington, Idaho, Alaska, Mexico, Middle America, South America, the West Indies, and Costa Rica. [See link above.]

Recent Sightings.

I've been checking two sites regularly to find out about recent sightings. Stu Tingley updates recent sightings in New Brunswick almost daily! What fun it is to read about his discoveries across the Province. http://www.geocities.com/Yosemite/8425/recentodes.html

Also, I've been drooling over Steve Walter's migration sightings at Fort Tilden, New York. Steve updates his odonate report up to 4 times per month. In conjunction with the text there are photographs of relevant species. Hints are also given about identification, habitats, and destinations to explore.

http://members.aol.com/pondhawk/mulberry/mulberry.htm

Current Research Projects/Interests.

Have you heard about some of the research being coordinated by Mike Siva-Jothy? Projects focus on calopterygid reproductive biology in three different countries: France, Spain, and Japan. Brief text is highlighted by images, including an exceptional photograph of an ovipositing female *Mnais pruinosa pruinosa*.

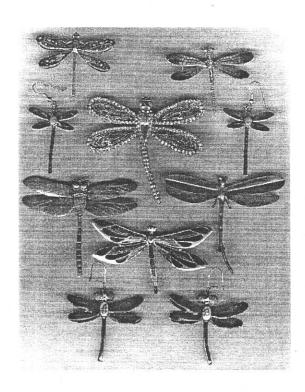
http://www.shef.ac.uk/misc/personal/zo1mts/

Review an abstract describing the larval habitat of *Hadrothemis camarensis* in treeholes in Kenya, authored by Robert Copeland, Wilberforce Okeka, and Philip Corbet. http://www.swets.nl/sps/journals/ai1803.html

Publications.

Just the other day I came across SymNet, the newsletter of the *Sympetrum* Network (otherwise known as the Aka-Tombo Network). Two issues are accessible as of this writing. SymNet features short articles about various aspects of the genus *Sympetrum*, e.g., "On the migratory flight above the sea of *Sympetrum frequens*." Most of the articles *discuss S. frequens*, but other species are mentioned throughout. A brilliant photograph of *Sympetrum pedemontanum elatum* illuminates one article. http://symnet.ishikawa-c.ac.jp/index-e.html

If you have any questions or comments, please don't hesitate to send e-mail to: odenews@capecod.net. Happy odonatological surfing! ©



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