ISSN 1061-8503

ARGIA

The News Journal of the Dragonfly Society of the Americas

Volume 17 1 January 2006 Number 4

Published by the Dragonfly Society of the Americas

The Dragonfly Society Of The Americas

Business address: c/o T. Donnelly, 2091 Partridge Lane, Binghamton NY 13903

Executive Council 2005 – 2007

President	S. Krotzer	Centreville, Alabama
President Elect	J. Abbott	Austin, Texas
Immediate Past President	R. Beckemeyer	Wichita, Kansas
Vice President, United States	M. May	New Brunswick, New Jersey
Vice President, Canada	R. Cannings	Victoria, British Columbia
Vice President, Latin America	R. Novelo G.	Jalapa, Veracruz
Secretary	S. Valley	Albany, Oregon
Treasurer	J. Daigle	Tallahassee, Florida
Editor	T. Donnelly	Binghamton, New York
Regular Member/Associate Editor	J. Johnson	Vancouver, Washington
Regular Member	P. Catling	Ottawa, Ontario
Regular Member	S. Hummel	Lake View, Iowa

Journals Published By The Society

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 are best transmitted as attachments to e-mails, but can be submitted on floppy disks. The editor prefers MS DOS based files, preferably written in Word, Word for Windows, WordPerfect, or WordStar. **All files should be submitted unformatted and without paragraph indents**. Line drawings are acceptable as illustrations.

T. Donnelly (address above) and Jim Johnson are the editors 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 as e-mail attachments or on floppy disk, 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 $20 US for regular membership and $25 US for institutions or contributing membership, payable annually on or before 1 March of membership year. Dues for members in the Old World are $30 US.

Dues should be mailed to Jerrell Daigle, 2067 Little River Lane, Tallahassee, FL 32311

The **Bulletin Of American Odonatology** is available by a separate subscription at $20 US for North Americans and $25 US for non-North Americans and institutions.

Front cover: Everybody's favorite! The Splendid Clubtail (*Stylurus potulentus*) in Georgia. Photo by Giff Beaton.

In This Issue

Normally I start out by reviewing the weather and the dragonfly scene. The former is frigid, and the latter is but a memory of warmer times. The opener this time is a movie review. Not really; it is an admonition to go see "Pride and Prejudice". Not the 1940 one with Green Garson and Lawrence Olivier, nor one of the recent TV productions. I mean the new one with Donald Sutherland (you remember him from "The Dirty Dozen" zillions of years ago.). There is a scene in which Mr. Bennet (Sutherland) is having a serious chat with his daughter Elizabeth. While he talks, he looks idly at a pinned — you guessed it — dragonfly held in his fingers. I couldn't identify it, and I noted it had no label. What did I tell him again and again: "Always label your specimens!"

Next year we have a fine roster of trips awaiting us. We provide updated information on the annual meeting in Kentucky, and for the Northeastern meeting in New Hampshire. Other meetings (SE in Arkansas, etc.) were presented in the last issue. Be there!

We start off our fond memories of the past season with Mike Blust's account of a truly fine day in Vermont. Moving on, we creep through south Texas scrub as Dennis Paulson discovers daytime roosts of ***Gynacantha mexicana*** (Bar-sided Darner). We should look harder for this sort of thing.

Fred Sibley and Jerrell Daigle tell of their between-the-hurricanes trip to the Florida Keys, omitting only the part about Jerrell's breakfast preferences. Their really neat find is of the exuviae of a new species for the United States (***Remartinia secreta***), a large wooded swamp darner, evidently originating in Cuba. I guess all these tropical storms are bringing oodles of tropical insects to our southern frontier. What we need to find out is how efficient storm transport of odes really is.

Fred also tells us of his very successful trip to Nebraska, one of those very much undersurveyed states. The message is clear: Get out and look at the Great Plains (including southern Canada).

Steve Gordon and Cary Kerst remind us that not all the fun is on the east coast, with their account of the now-annual *Aeshna* Blitz in Oregon. Speaking of "blitzes", George Harp was so stimulated by Bryan Pfeiffer's Vermont BioBlitz last year, that he organized one in Arkansas. But they didn't find a single Ivory Bill. Call that a bioblitz!

Ken Tennessen takes us back to Ecuador, where one of the richest dragonfly fauna in the world occurs. His group continues to have great success, including this time the rediscovery of ***Archaeopodagrion***.

Julie Craven recounts a very successful trip to Panama. This is one of the first trips that I have heard of after the Canal Zone reverted to Panama. Evidently eco-tourism is a going thing down there.

Dennis Paulson raises an interesting question about dragonfly mortality, which quickly became a thread on the listserve he manages. All of us have had the experience of rarely seeing a dead ode in the field, but no one has really researched ode mortality.

Paul Novak described the first year of the New York Dragonfly and Damselfly Survey. He started off strong with many new state records, and, of course, there's Ginger's new state record — ***Celithemis verna***!

Steve Hummel has had one of those Kodak moments — watching an ***Aeshna*** and an ***Anax*** mismate. Alas, no Kodak! He asks if others have seen this. I have seen it three times, all with gomphids. It is an amazing sight to see how these graceful insects fumble when trying to put the key in the wrong door.

Derek Bridgehouse has now found ***Somatochlora brevicincta*** (Quebec Emerald) in Nova Scotia. As its common name implies, it was until fairly recently thought to be confined to that province. Now it occurs west to British Columbia and also in Maine!

Gord Hutchings and Dave Halstead extend the range of ***Somatochlora williamsoni*** (Williamson's Emerald) to northern Saskatchewan and wonder why it has not previously been found in the western boreal forest. The quick answer is that too few people have looked. We have scads of simple surveying ahead of us before we have a reasonably complete idea of ranges of all of our odes. The mid continent of both the U.S. and Canada are especially poorly surveyed.

Bailowitz and Stevens extend the range of Lavender

Dancer (***Argia hinei***) north to Utah and Rich Bailowitz adds the Marl Pennant (***Macrodiplax balteata***) to the Nevada list.

Mark O'Brien tells us that the Great Spreadwing (***Archilestes grandis***) has finally made it to Michigan. Almost as interesting as its rapid northward spread north to Ohio and Pennsylvania during the last century, is the long time required to move just a bit further north — to New York and Michigan. Food for thought.

The Stricklands report that ***Gomphus australis*** (Clearlake Clubtail) has made it west to Louisiana. I am afraid that their late summer dragonflying had to give way to surviving hurricanes, and we hope that 2006 will be less "interesting" for them.

Rob Cannings points out the regional characters of a race of ***Macromia magnifica*** (Western River Cruiser) in British Columbia and proposes its recognition as a subspecies. George Harp adds some records for Northern Michigan. Bruce Grimes describes the predation by a robberfly on an amberwing. Incidentally, robberfly predation on odes was a thread on the Odonata listserve this last month.

Paul Catling has given us another example of the zebra mussel clinging to a dragonfly larva. I fear that those dragonfly larvae that creep around the bottom of lakes and rivers are going to take a big hit from these damnable invasive mollusks.

Roy Beckemeyer tells us of his recent experience giving PowerPoint presentations to natural history groups. Having done several myself recently, I find his article very interesting. Roy leaves out the tough part — getting a projector! Perhaps we should pool our ideas to get through more effectively to the birding (and other natural history) world.

Jerrell Daigle reminds us that the DSA meetings is in serious need of input for both regional and "annual" (we can't call them "national", and "continental" sounds weird) meetings. We are definitely on a roll, and I expect to see our offerings increase in the future. We finish with the usual housekeeping notes. Stay warm, and get your notes on the 2005 season in shape! And label your specimens!

A word on the cover photos. The magnificent front cover photo speaks for itself, and the ***Gynacantha*** photo on the rear cover accompanies Dennis' story. The dasher-on-the-snake photo was taken by Kurt Mead under difficult conditions, as you can imagine. None of this "steady the camera and take a deep breath before pressing the shutter." I wondered at a dragonfly perching on a snake's head, but forgot I had seen a similar thing years ago. In my first field season in Guatemala, I was slowly climbing down the forested wall of a deep ravine in western Guatemala. My eyeglasses were fogged from exertion, so I couldn't really focus on much. I saw an unknown, large damselfly flit in front of me and land on a stick. Trying to steady myself, I reached towards it very slowly, trying to catch it with my fingers. When I was about 6 inches from it, it flew over the edge and disappeared. Then I saw that the "stick" was the head of a fer-de-lance, who must have thought dinner was creeping towards it! I am just as glad I missed my first ***Paraphlebia***, and I immediately switched to contact lenses for the field!

As we go to press, we have just received the very sad news that George Bick died on 28 November. We will have an obituary in the next issue.

A Message from the President

Steve Krotzer <rskrotze@southernco.com>

Several months ago, the Executive Council was asked to consider some revisions to the existing bylaws, in order to ensure that the bylaws more accurately reflect the current workings of the DSA as an organization. After some preliminary discussion, I asked Jim Johnson, John Abbott, and Mary Jane Krotzer to study the existing bylaws and to make specific proposals for any revisions or additions they deemed appropriate. They have submitted those proposed changes to the Executive Council, and we have approved them as submitted. In turn, the Executive Council is now submitting these proposed revisions to you, the membership, for formal approval/disapproval.

In this issue of ARGIA you will find each proposed revision (or addition) listed separately and a separate ballot. Each proposal will include the current wording in the bylaws of the point in question (if it's an addition, of course, there will be no current wording); the proposed new wording of the point in question; and a brief commentary explaining the reason for the proposed revision or addition to the bylaws. Each proposed change will be voted on separately. If you don't have a copy of the existing bylaws and would like to see one, you may find a copy at <http://odonatacentral.bfl.utexas.edu/dsa1/bylaws.htm>.

Please take the time to study these proposed revisions; vote Yes or No for each one; and return the completed ballot to our Secretary, Steve Valley, using the following address:

Steve Valley
1165 S.W. Lawrence Ave.
Albany, OR 97321
ATTN: DSA BALLOT

The deadline for returning the completed ballots is 15 March 2006. After the ballots are tabulated, the final results of the vote will be published in the next issue of ARGIA, and any revisions/additions that are approved will go into effect at that time.

If you have questions about any of the proposed revisions, you may contact me or Jim Johnson <jt_johnson@comcast.net>.

Thank you in advance for taking the time to study these proposals and submit your votes. Your participation ensures that the Society will continue to flourish.

Calendar of Events for 2006

Event	Date	Location	Contact
Ohio Odonata Soc.	11 Feb	Westerville, Ohio	Steve Chordas <schordas@odh.ohio.gov>
mini spring gathering	27 Mar–1 Apr	Tallahassee, Florida	Jerrell Daigle <jdaigle@nettally.com>
SE Regional	19–21 May	Glenwood, Arkansas	George Harp <glharp@astate.com>
Dragonfly Days	19–21 May	Weslaco, Texas	Valley Nature Center <http://www.valleynaturecenter.org/>
NE Regional	22–25 June	Twin Mtn., New Hamp.	Pam Hunt <biodiva@fcgnetworks.net>
DSA Annual	10–12 June	Cave City, Kentucky	Carl Cook <bugman@srtc.com>

DSA Kentucky Bound in 2006!

Carl Cook and **Ellis Laudermilk**

After some scheduling problems, plans for the 2006 annual meeting in Kentucky are essentially in place, so we highly recommend everyone make reservations for lodging at your earliest convenience to insure your needs will be met. As mentioned in the previous newsletter, Cave City, a small, leisurely, rural town located in Barren County will be our headquarters for the meeting 10–12 June 2006. Information on Cave City's attractions, lodging (including motels, bed & breakfasts, campgrounds, cabin rentals and pet boarding) and dining can be found on the Cave City web page at <http://cavecity.com>. A special rate of $52.00 + ~10% taxes/room has been negotiated with the Cave City Quality Inn (1-800-228-5151 or 270-773-3101), so be sure to tell them you are attending the DSA meeting to receive the special rate. By auto, Cave City is approximately 90 miles from Louisville, Kentucky and/or Nashville, Tennessee, via Interstate 65, and these two cities are the best air terminals for anyone planning to fly.

Preliminary Meeting Schedule

9 June (Friday): arrival in the afternoon/evening (note: arrival date was changed from 8 June in the last newsletter to 9 June).

10 June (Saturday): business meeting in the morning with presentation of papers in the afternoon.

11–12 June (Sunday & Monday): devoted to field activities — guided visits to Little Barren River, Green River, Big Brush & Lynn Camp Creeks, Hundred Acre & Sloans Crossing ponds, among others. Also "The Bug Works" (Carl's residence in Center, Kentucky) will be open to visitors. A cookout catered by the The Pit's Bar-B-Que is also planned for Sunday evening along the banks of the South Fork Little Barren River at Sulphur Well.

13–15 June: post-meeting collecting foray for anyone desiring to participate. Details are not firm at this point and we are open to suggestions. A possible scenario is two separate trips: (1) guided by Ellis to some of his favorite eastern Kentucky collecting locations. (2) guided by Carl to some of Tennessee's superb streams — Daddy's Creek, Clear Fork, Fall Creek and Little Swan Creek.

The Odonate Fauna

Approximately 159 odonate species have been reported from Kentucky. Two counties within a short drive of Cave City, Green (103 species) and Edmonson (101), have the

highest recorded number of species, respectively, in the state. Approximately 113 cumulative species have been recorded from Edmonson, Green, and Hart counties. The immediate area has several nice streams and rivers that should provide excellent collecting opportunities for lotic species, including ***Gomphus crassus***, ***G. fraternus***, ***G. lineatifrons***, ***G. quadricolor***, ***Ophiogomphus rupinsulensis***, ***Neurocordulia yamaskanensis***, etc. The Green River flows through Mammoth Cave National Park, and The Nature Conservancy ranks the Green as one of the top five most important streams in the United States for freshwater biodiversity. Also, within a few minutes drive are the Little Barren and South Fork Little Barren rivers where Carl cut his odonate teeth. Interesting lentic species that have been found nearby (some are very rare) include ***Anax longipes***, ***Rhionaeschna mutata***, ***Nannothemis bella***, ***Celithemis verna***, and ***Lestes eurinus***.

We look forward to seeing everyone in Kentucky next year! Check the following DSA link on John Abbott's OdonataCentral web site for additional meeting information and links, a sign-up sheet, and updates <http://odonatacentral.bfl.utexas.edu/dsa1/annual_meeting.htm>. If you have any questions or we can be of assistance, please contact Carl at <bugman@scrtc.com> or Ellis at <ellis.laudermilk@ky.gov>.

Northeast Regional Meeting of the DSA, Twin Mountain, New Hampshire, 22–25 June 2006

Pam Hunt <biodiva@fcgnetworks.net>, 26 Whitewater Drive, Penacook, NH 03303

Come to the center of New Hampshire's White Mountain Region to search for some of the area's northern specialties. These include ***Calopteryx amata***, ***Coenagrion*** (help find new locations for ***interrogatum***!), Gomphids, Corduliids (perhaps including some early ***Somatochlora***), and five species of ***Leucorrhinia***. Twin Mountain is conveniently located to the Pondicherry Wildlife Refuge, Franconia Notch, Crawford Notch, and the Kancamagus Highway, all of which host various combinations of northern bogs, swift rocky streams, and mountain ponds. Just to the south, and as an option for more distant Sunday excursions, is the Merrimack River Valley with a completely different set of Gomphids and two species of ***Neurocordulia***.

2006 will also mark the first official attempt to evaluate the conservation status of the Odonata in New Hampshire, and hopefully a small scientific program will focus on Odonata conservation in the broader New England region.

Further details are unavailable at this time, but both affordable hotels and camping are readily available in the Twin Mountain area. For more information feel free to contact Pam Hunt at the above addresses.

What a day!

Mike Blust

Even before we left the car for the short walk to Lily Pond, a large dragonfly, hovering above a roadside pool, caught my attention. Bryan Pfeiffer and I had ***Rhionaeschna mutata*** — the big, blue-eyed Spatterdock Darner — on our minds, though neither of us mentioned it. My 15-year-old daughter, Christine, grabbed a net as well, and the three of us piled out of the car.

It was 21 June — too early for most of our darner species to be flying, even in Vernon, where Lily Pond is nearly within spitting distance of Massachusetts. Only ten days earlier, Bryan and I had seen our first Spatterdock Darners, but that was at the famed Ten Acre Pond in Pennsylvania. This species had never been recorded in Vermont. But it beckoned us to Lily Pond.

Bryan swung his net, as the beast misjudged his long arms. But once this large dragonfly was out of the net, we both stared, momentarily confused because the ode in hand was not what we had expected. As Bryan turned the critter in puzzlement, suddenly his eyes brightened. Cyrano! The projecting frons fit, that was for sure. The books flipped open to ***Nasiaeschna pentacantha***. Not what we were expecting, but Lily Pond had nonetheless given us what we came for — a new dragonfly species for the state.

Last summer we had explored Lily Pond — described by a trusted botanist to be "the closest thing to a coastal plain pond in Vermont." We didn't get there until late in the season last year, but were convinced it "had huge potential." Each of us had opportunities to make the trip solo

this spring. But not wanting to usurp the other's shot at some fun, we waited for a day when we could meet and work together. Now that we were there, the fun had started early.

Christine, meanwhile, was not far away and called us over to something flying out of reach above her. Still mentally trying to fathom our good fortune, I did not stop to think about what this might be. A quick flip of the net and that wonderful rattle of wings sounded from within. As I pulled out the catch, we were suddenly looking into the blue eyes of a female Spatterdock Darner — not as blue as the male, but still impressive. Within about 25 feet of the car, and within only about five minutes, this spot had given us two state records. And we hadn't even checked the pond yet!

We continued working the area. Bryan and I waded into Lily Pond while Christine kept to the dryer areas. Occasionally she would catch a bluet and ask me to check it. Each and every one was ***Enallagma ebrium***. Christine expressed her frustration with the lack of bluet diversity. So I advised her to look for something that was a just bit different than the others (wishful thinking, but I didn't tell her that). After a while, she came over with a bluet she literally "picked-up" off the ground.

"How about this one?" she asked.

I fully expected another ***Enallagma ebrium***. But this one didn't look right. I have been fooled once too often by ***ebriums*** that have variations in their markings. But the cerci, which are diagnostic for this genus, were not those of ***ebrium***. Sure enough, Christine had hand-caught Vermont's first ***Enallagma laterale*** (New England Bluet), largely a coastal plain species. As I was double-checking, Bryan's voice came through the thick brush. "Hey, Mike," he said, "This looks good!" Without knowing for sure what Bryan was holding, I responded, "I think Christine beat you to it!" Bryan came wading over and yes, he had another New England Bluet. As we looked around, roughly five percent of the bluets in the area were ***E. laterale***. Three people — three state records. What a day!

The only gap that day was ***Epiaeschna heros***, the massive Swamp Darner. We had expected to find it at Lily Pond — perhaps more so than the three new species we did find that day. It had to be in Vermont. But where?

The next day, an e-mail arrived from the other corner of the state — Grand Isle in Lake Champlain. Dave Hoag, a new convert to Odonata, and a meticulous observer, has a simple statement: "two new county records, one new state record." His accompanying photos confirmed his find: ***Epiaeschna heros*** may have avoided us at Lily Pond, but it couldn't run — er, I mean fly and hide, for long. In approximately 24 hours, four new state dragonfly records. I don't think I will ever see that many state records fall in so short a period of time again.

Two more state records fell later this summer as Fred Morrison, who lives in Massachusetts and studies dragonfly exuviae along the Connecticut River, ventured upstream into Vermont. Fred found skins of the big-river species of Spine-crowned Clubtail (***Gomphus abbreviatus***) and Riverine Clubtail (***Stylurus amnicola***) within a few miles of Lily pond, at the very corner of Vermont.

"Go to the corner!" is usually a phrase issued in punishment. But this past summer, the corners of Vermont — Vernon and Grand Isle — offered us great rewards.

Gynacantha mexicana at Communal Roost in South Texas

Dennis Paulson <dennispaulson@comcast.net>

Since the first record of ***Gynacantha mexicana*** (Bar-sided Darner) as Santa Ana National Wildlife Refuge, Hidalgo County, Texas, in October 1998 (Behrstock, Eubanks, and Miliotis, Argia 11(2): 12–14, 1999), the species has been found again a few times in the same area, but always one at a time. Additional individuals have been found at Santa Ana, and one was found at nearby Weslaco in December 2004.

I visited Santa Ana on three occasions on 9–12 November 2005 to look for dragonflies. There is a pond next to a butterfly garden just outside the entrance kiosk at the refuge, and I have found this always to be one of the most interesting spots on the refuge. On this occasion, I found ***G. mexicana*** common in the adjacent woods. To see them, I had to duck among the low branches, and my first sighting would be an individual I flushed from its daytime roost. I saw several each day as I flushed them, and I could usually follow them to where they hung up again, typically at one to two meters above the ground. I got numerous photos of different individuals. Both sexes were present, and one male was fully mature, with bright green and blue mark-

ings. Most individuals, however, were obviously young, one of them just post-teneral. I also found two exuviae of this species on plants about 0.3 meters above the pond surface without having to search very hard.

I was quite surprised, when I followed one flushed individual deeper into the low branches of a shrub thicket, to find it at a communal roost with a total of eight individuals, four males and four females, in a space of about a cubic meter and about a meter above the ground. Six were hanging under branches, and two were perched vertically on a good-sized tree trunk. Several individuals were almost touching other individuals. I saw one additional individual, so at least nine were present near one side of the pond. I did not circumnavigate the entire pond.

Gynacantha "dormitories" have been reported before. Fraser (Revue Zoo. Bot. Afr. 65: 1–28, 1962) noted that individuals of ***G. hyalina***, an Asian species, were to be found regularly in such a roosting place whenever he visited it. To my knowledge, this has not been reported before for an American species of the genus. Such roosts may be difficult to find because the inhabitants of the roost I observed would fly only when substantially disturbed, and it would be possible to walk within a few feet of such a roost without seeing it.

It appears that this pond supported a substantial population of ***G. mexicana*** — at least this year! Emergence is apparently in the fall, and adults should be sought through the winter to see if they breed right away or hang around and breed the next summer. In their tropical range, it is typical of ***Gynacantha*** to go through the dry season as adults. The first discovery of the species in Texas was at this same pond, although Behrstock et al.

another in another part of the refuge not too far from the entrance. The species at present is well-established at the southern tip of Texas.

The weather was fine, and large numbers of Odonata of at least 15 species were seen on the three visits. They included ***Lestes sigma*** (Chalky Spreadwing), ***Ischnura hastata*** (Citrine Forktail), ***I. ramburii*** (Rambur's Forktail), ***Anax concolor*** (Blue-spotted Comet Darner; second record for the US), ***A. junius**** (Common Green Darner; impressively abundant and breeding everywhere), ***Erythemis simplicicollis**** (Eastern Pondhawk), ***Miathyria marcella*** (Hyacinth Glider), ***Micrathyria hagenii**** (Thornbush Dasher), ***Orthemis ferruginea**** (Roseate Skimmer), ***Pachydiplax longipennis**** (Blue Dasher), ***Pantala flavescens**** (Wandering Glider), ***Perithemis tenera*** (Eastern Amberwing), ***Sympetrum corruptum**** (Variegated Meadowhawk), ***Tramea lacerata**** (Black Saddlebags), and ***T. onusta**** (Red Saddlebags). Asterisked species were common.

I saw a total of 36 Odonata species in my four days in the Lower Rio Grande Valley — in November! I would say good dragonfly habitat is now more common there than at any time in recent decades, as is probably the case with the dragonflies themselves. Local people and government agencies have done a great job of preserving and enhancing habitats for wildlife and are continuing this process.

[Note: The back-cover picture shows two of these ***Gynacantha*** roosting in the scrub. ed.]

Return to Red October or Wilma Chases Fred and Barney from Paradise!

Fred C. Sibley, The Conservation Agency, 6 Swinburne St., Jamestown, RI 02835 with comments by **Jerrell (Barney) Daigle**, 2067 Little River Lane, Tallahassee, FL 32311

A previous article covered an April 2005 trip to the Keys (Argia 17(2): 10–12) and suggested that it should have been made in August or September. Jerrell Daigle expressed an interest and after many dates changes, Jerrell met me at the Miami International Airport on 12 Oct. and we headed to Middle Torch Key to spend most of a week at Skip Lazell's property. Many thanks to George Tegzes for his hospitality. What a fortuitous choice of dates! We arrived as the last of storm debris was being cleared up from Hurricane Rita and left a day ahead of the mandatory evacuation for Hurricane Wilma! The major object of the trip, as in April, was to find populations of ***Lestes spumarius*** and ***Nehalennia minuta***. A secondary objective was to sample the ***Orthemis*** populations and conduct a general survey of Stock Island and Big Pine Key.

Thanks to Jerrell's sharp eyes and previous knowledge of the two target species, we were more than successful. The ***Orthemis*** and the surveys were easy by comparison but equally interesting to me.

Let's keep this short and cut to the chase. One teneral female ***Nehalennia minuta*** was found at the small pond where Dennis Paulson (Argia 12(1): 12) had collected one in January 2000 (first US record) and Bob Behrstock (Argia 14(3): 10) had found a breeding population in

February 2002. Others were found in an area extending from here (end of the Fred Manillo Nature Trail) across the Jack C. Watson Nature Trail and on to a large pond along trail coming off Key Deer Boulevard from the north. They were most common and consistent at this northern pine-woods location. ***Lestes spumarius*** was found in this same oblong territory. They were most common and consistent in a flooded area of hardwoods with small shaded pools between the northern pond area and Jack C. Watson trail. Neither species was common and we spent two full days to obtain fewer than ten adults of each species although we saw many more ***Lestes*** than we caught. Neither species was conspicuous and without Jerrell's sharp eyes, many more would have been missed. There were a number of tenerals, particularly ***Lestes spumarius***.

Totally unexpected was the discovery of a ***Remartinia secreta*** exuviae on a clump of tall grass in one of the ***Lestes*** pools. This species is new for the Keys and the US although known from Cuba and Central America. Finding a resident population is very exciting, but only future visits will determine if this population is well established or just a short term colonization. Thanks to Nick Donnelly for checking the identification.

Some of this habitat was covered by Jerrell and Ken Tennessen in February 2004 (Argia 16 (1): 15–16), Jerrell earlier this January (Argia 17 (1): 10), and myself in April without finding the ***Nehalennia*** where Paulson and Behrstock had found it. That pool is not the most productive. It is probable there would be freshwater available at the prime sites even in dry season and perhaps ***Nehalennia*** and ***Lestes*** there all year.

Wetlands and Odonates

If the reader goes back to the April article (Argia 17 (2): 10–12) the new remarks will make more sense.

My feeling was that most species were less common than in April (see species list) while Jerrell felt they were more abundant than in January. There were a number of common south Florida species present this trip that were not there in April. The ponds that were productive in April were still productive and those borrow pits and pools that were seemingly brackish in April were still depauperate in October. The swale areas mentioned at the northern bend on Key Deer Boulevard and south of the east end of Watson Boulevard were very poor this time and evidently too brackish. Jerrell helped me find the small borrow pit on Kyle Boulevard and Coconut Palm Drive (north end of Key Deer Boulevard). This is very similar to the pond at Avenue B and South Street. Jerrell also showed me a very small borrow pit a short distance north of US 1 at junction of Pine Drive and Macs Blvd — the latter off Cunningham Drive. The pond is almost entirely full of cattails but has a great variety of common species. There are also some old cisterns (seasonally dry) just north and two of them held some water plus a similar variety of common species.

On Stock Island, the botanical garden had been hit by hurricane Rita and was closed prior to 14 Oct. The main ponds were covered with duck weed and had almost no odonates although ***Orthemis "ferruginea"*** was common perching on piles of storm debris/seaweed in the abandoned parking lots.

The golf course was good but with fewer individual odonates than in April. If you visit, the two ponds next to the club house are the most productive with a small, narrow, muddy, garbage filled, tree lined pool along the north side of the golf course being second. This latter site is right against the road with no fence so access is always possible.

Jerrell says watch out for the giant Bahama mockingbirds, land crabs and long-legged Keys raccoons. They have an attitude towards strangers! Eat at Coco's Caribbean Restaurant (Cuban) in the shopping mall off Key Deer Boulevard. You will not regret it! They have a good attitude toward dragonfly people.

Species List

++ — more common in October than in April
** — less common
— not found in April
r — rare
u — uncommon
f — fairly common
c — common
a — abundant

Lestes spumarius u-##, ***Ischnura hastata*** c-++, ***I. ramburii*** f, ***Nehalennia minuta*** r-##, ***N. pallidula*** r-##, ***Anax junius*** c-##, ***Remartinia secreta*** (one exuvia), ***Triacanthagyna trifida*** (one seen), ***Brachymesia furcata*** a, ***Brachymesia herbida*** f-** (see below), ***Brachymesia gravida*** f, ***Celithemis eponina*** a-##, ***Erythemis simplicicollis*** c-##, ***Erythemis vesiculosa*** f, ***Erythrodiplax berenice*** a, ***Erythrodiplax umbrata*** c, ***Macrodiplax balteata*** c, ***Orthemis "ferruginea"*** c-** (see below), ***Tramea carolina*** r-##, ***Tramea insularis*** u-++, ***Tramea onusta*** c-++.

The ***Orthemis "ferruginea"*** of the Keys (Donnelly, Argia 7[4]: 9–12) are separable as red (Antillean form/red abdomen) or purple (typical ***O. ferruginea***/purple abdomen).

Jerrell treats the ***Orthemis*** with a red abdomen as ***O. schmidti*** Buchholz, a common species known from Belize to Bolivia and with possible specimens from Cuba and Jamaica.

In April, the 20 ***Orthemis*** specimens were all red with one possible sighting of a purple individual. On this trip 29 ***Orthemis*** specimens were almost equally red (16) and purple (13). We have no explanation for this seasonal difference.

Brachymesia herbida. Found in April and at that time the first recent record for the Keys and a new record for Key West area. Reasonably common on Key West Golf Course this October.

Acknowledgements

Thanks to refuge personnel, who were helpful as always, James "Skip" Lazell for housing, George Tagzes for tolerating us with good humor, and of course Jerrell who made the trip a success despite a pinched nerve in his shoulder. This made driving and particularly netting very painful, but didn't reduce his netting success. Maybe I should experiment with a temporary pinched nerve as a way to improve my swing.

Nebraska Summer

Fred Sibley

Why are you going to Nebraska in July? Much the same question every Nebraskan asked us, with the assumption that our answer would be "visiting relatives." Evidently no one comes to Nebraska just to see Nebraska. Certainly not in the eastern two-thirds of the state we concentrated on.

To answer the "why" above you need only look at Nick Donnelly's dot maps (Bull. Amer Odonatology, Vol 7, no 1, Vol.8, No. 1–3) or Roy Beckemeyer's excellent paper on Midwestern odonates (Bull. Amer. Odonatology, Vol. 6, no 3). The gaps in odonate knowledge are huge. So huge, it's difficult to discuss the results of our trip. Before Peggy and I headed west from the Finger Lakes Region of New York there were about 850 county records for all of Nebraska. We added another 600 plus. Think odonates aren't neglected? The University of Nebraska alone has fossil elephant remains from 90 of the state's 93 counties. All the records of Nebraska odonates combined left 33 counties with 0 records and 31 more with fewer than 10 (now 9 and 18 respectively). No species was known from half of the counties.

We hit 44 counties in the month adding over 600 county records to the Nebraska database. ***Argia nahuana*** (Aztec Dancer—5 counties), ***Nasiaeschna pentacantha*** (Cyrano Darner—2 counties), and ***Stylurus plagiatus*** (Russet-tipped Clubtail) were new for the state list. The first two along the southern counties where they are matched by records in Kansas and the last in southeast corner where it is matched by records in Iowa and Kansas. Of the 55 previously recorded species encountered we at least doubled the number of records for 29 of them.

Only six counties have records for more than 30 species. We didn't visit any of those but increased the number of counties in the 21–30 range from 7 to 19.

This was, as planned, a quick and superficial survey of Nebraska odonates. We weren't quite sure what we would find despite having gone to the 1998 DSA meeting in Valentine. If you were there you remember how wonderful it was. The rest of the state isn't as productive, but still amply rewarding. We stopped in Iowa (Bridges of Madison County) to camp 30 June and by noon 1 July hit the southeast corner of Nebraska at Brownville. Wandering around the park and along the banks of the Missouri River while eating lunch we found ***Stylurus amnicola*** (Riverine Clubtail) and ***Stylurus notatus*** (Elusive Clubtail—2nd record). An hour later we pulled into Indian Cave State Park further south along the Missouri River and found ***Gomphus vastus*** (Cobra Clubtail—3rd record) along the Missouri River, and ***Ischnura hastata*** (Citrine Forktail—3rd record) in a horse pond next to camp. Not all days were that exciting, but there was no shortage of good finds and almost continuous sunny skies. We continued west along the Republican and Platte Rivers to Hitchcock County in the west and then north across the Platte at Gothenburg into the Sandhills and back through the Loup River drainage to Ponca State Park on the Missouri River north of Sioux City. We left the northeast corner of the state 29 July under a dismal overcast with only seven species to show for a morning at an odonate perfect fishing lake in Burt County.

The Republican and Platte Rivers and smaller tributaries are delightful. Wide, shallow enough to wade and no one else there. There were a variety of interesting ***Argia*** and the occasional gomphid. Small, spring fed, side streams were more productive and contained many ***Enallagma*** species.

My favorite river spot was just below the Harlan County Dam on the Republican River. There have been essentially no releases from the reservoir into the river for a long time, but springs feed a small marshy creek on one side and a shallow trickle for the main river. ***Argia plana*** (Springwater Dancer) was found on shaded seeps into marsh, ***Ischnura posita*** (Fragile Forktail—2nd record) in the marsh, ***Argia nahuana*** and ***Argia alberta*** (Paiute Dancer) along the small stream in main river—20 species in about an hour. Best diversity of the whole trip.

The Game and Parks department has aerated a number of sand pit lakes along I-80 (and elsewhere) to improve fishing and these were often as good as spring fed lakes, and an excellent place for the less common ***Enallagma***: ***basidens*** (Double-striped Bluet), ***geminatum*** (Skimming Bluet), and ***signatum*** (Orange Bluet).

Small streams through the untilled (dry) portions of the state are usually shaded, shallow, muddy and well vegetated—best place for ***Argia fumipennis*** (Variable Dancer), ***Enallagma antennatum*** (Rainbow Bluet) and ***Enallagma exsulans*** (Stream Bluet). In the sandhills the streams are clear, sandy, with little agricultural runoff. They have an abundance of odonates, but would be enjoyable even without dragonflies.

With the millions of acres of corn and soybeans in the farming areas, streams tend to be straight, steep-sided ditches with muddy bottoms, heavy agricultural (irrigation) runoff and little aquatic vegetation. Along with most other streams and rivers the banks support great stands of stinging nettle as high as an elephant's eye. Not nearly as much fun as the streams of the sandhills. In the northeast these ditches were dominated by ***Calopteryx maculata***, and one could often walk a quarter-mile and find no other species, although the abundance of ***Calopteryx*** was constantly obstructing one's vision.

We stopped at a minimal number of small, shallow, vegetated, seasonal(?) pools because they were rare. They were usually overrun with ***Lestes*** (spreadwings) and sometimes ***Ischnura hastata***. Our only ***Enallagma aspersum*** (Azure Bluet) was found in one of these pools.

One of the advantages of visiting so many counties on one trip (overdosing) is having comparable data from a large area. Admittedly, the species mix and abundance changed during the month but these factors are somewhat predictable. Much more striking was the change in species numbers and habitat as one moved into the drier western areas and into the northern areas.

You know some species are going to be common, but I would not have predicted that five dragonflies and four damselflies would be so abundant, with a large difference in numbers between these and the three dragonfly and three damselflies one would consider common. The other 20 dragonflies and 23 damselflies were uncommon to rare.

There were four damselflies that dominated: ***Ischnura verticalis*** (Eastern Forktail), the most habitat tolerant, was found in all 44 counties; ***Enallagma civile*** (Familiar Bluet) in 41; ***Argia apicalis*** (Blue-fronted Dancer) in 40; and ***Hetaerina americana*** (American Rubyspot) in 38. The next most common species—***Calopteryx maculata*** (Ebony Jewelwing) in 25, ***Argia fumipennis***, and ***Enallagma antennatum***, both in 17 counties, would not have been predicted to be the 5th, 6th and 7th most abundant species based on previous records. The rest of the 23 zygopterans have been recorded in 11 or fewer of the 44 counties.

Both ***Enallagma civile*** and ***Argia apicalis*** were found in almost every habitat ranging from the Missouri River, smaller rivers, and streams, to lakes and ponds. As we moved west and north ***Argia apicalis*** became less common and more restricted to streams and rivers, and ***Enallagma civile*** more restricted to lakes and ponds. ***Hetaerina americana*** was primarily a river species and ***Calopteryx maculata*** a stream species. The latter was also most common in SE and NE corners where we were near the Missouri. Although found in counties further west and north, it was seen in single numbers instead of the clouds of 100 or so on drainage ditches in the northeast. The blue areas on thorax and abdomen of ***Argia apicalis*** was often very dark on cold mornings, but more confusing was the dull thorax of the males in most mated pairs. [George Bick pointed out the color change in ***apicalis*** in 1965 but could not correlate it to either age or mating behavior. It remains one of the most intriguing observations on North American damselflies. ed.]

Argia alberta (5 + 8 new county records) was previously known only from western half of state. Since there are records from northern Kansas and western Iowa the new records just fill a gap in the range. It was uncommon in overhanging grass along Republican River and similar shallow, sandy streams. Similarly, ***Enallagma anna*** (9 + 5 new county records) was not previously recorded from the eastern half of Nebraska.

Argia moesta (Powdered Dancer) (4 + 11 new) is a slight range extension north. All our records were concentrated along the southern counties with the species becoming less common as we went west on the Republican River and almost non-existent to the north on the Platte River.

It is a species of wide shallow rivers, except in the extreme southeast where it was also on some of the small streams.

Argia tibialis (Blue-tipped Dancer) (3 + 3 new county records) is a slight western extension of range to Frontier County, but still just in the southern counties of Nebraska.

Enallagma aspersum: Previously one record from southeast corner. Our one record from the center of Nebraska (Custer County) is a considerable western extension.

Enallagma basidens (4 + 9 new county records) is on the northwestern edge of range but fairly common in sandpit lakes, while ***Enallagma geminatum*** (2 + 3 new records) at western edge of range is uncommon on same lakes.

Ischnura hastata (2 + 8 new) is locally common in its habitat of well vegetated shallow, seasonal(?) ponds.

Aeshnids (Darners) were surprisingly uncommon, particularly ***Aeshna*** in the southern counties. Even ***Anax junius*** (Common Green Darner) was often missed and rarely in any numbers on ponds.

The ***Nasiaeschna pentacantha***, mentioned earlier as new to the state, were found in small numbers along heavily shaded, spring fed streams in Gage and Jefferson Counties.

Progomphus obscurus (Common Sanddragon) was regular along the Republican River (8 new counties) and less so along Platte River. It was always on sandbars (some vegetated) and sometimes on small side streams, with pairs and tenerals fairly common.

Gomphus vastus (2 previous records) seemed restricted to banks of the Missouri River where they were regular and fairly common in Nemaha and Richardson Counties. A specimen was seen in the nature collection at Ponca State Park, northeast corner of the state.

The three species of ***Stylurus*** found were all young or teneral with ***amnicola*** and ***notatus*** found on banks of Missouri in Nemaha County, and ***plagiatus***, new for the state, found in Jefferson County on Rose Creek, a small, slow moving, muddy, steep sided stream.

The five abundant dragonflies were all Libelullidae and all found in 39 of the 44 counties. ***Erythemis simplicicollis*** (Eastern Pondhawk), ***Libellula luctuosa*** (Widow Skimmer), ***Libellula lydia*** (Common Whitetail), ***Libellula pulchella*** (Twelve-spotted Skimmer) and ***Pachydiplax longipennis*** (Blue Dasher). I think of them as pond species but they were common along streams and rivers as well in Nebraska. ***Libellula lydia***, usually dominant at the muddier puddles was replaced in this role by ***pulchella*** as we moved north. ***L. luctuosa*** dominated at sandpit lakes and was much less common than the other two along streams, while ***pulchella*** was the dominant stream species and common in those situations.

Perithemis tenera (Eastern Amberwing—28 counties), ***Sympetrum corruptum*** (Variegated Meadowhawk), and ***Sympetrum obtrusum*** (White-faced Meadowhawk—25 counties) could be called common. The various ***Sympetrum*** [***corruptum***, ***obtrusum***, ***rubicundulum*** (Ruby Meadowhawk) and ***semicinctum*** (Band-winged Meadowhawk)] were more common as we moved north, probably related to time of year, but rarely locally abundant.

Tramea onusta (Red Saddlebags) was seen in four southeast counties but too elusive for this netter. It was outnumbered at least 20-to-1 by ***Tramea lacerata*** (Black Saddlebags) at any given pond.

Nebraska still has huge gaps in knowledge of odonate distribution. Our trip only made a dent in this black hole. And of course there are always North and South Dakota with similar gaps. Break out the map and go for it.

2005 *Aeshna* Blitz—the Best Ever

Steve Gordon and **Cary Kerst**

The 2005 *Aeshna* Blitz (the 6th annual event) honored Steve Valley for his lifetime of work on the Oregon Odonata. Steve began his pursuit of dragonflies as a boy on his grandfather's ranch in eastern Oregon, and he has made Oregon's Odonata better known to all. Steve does not recommend chasing dragonflies on horseback, which he tried as a boy. We also passed out semi-official Oregon Dragonfly Survey Permits authorizing collecting of Odonates anywhere on the planet, featuring the visage of "The Godfather" of Oregon Dragonflying, Steve Valley.

The Blitz team, consisting of Steve Berliner, Steve Gordon, Jim Johnson, Cary Kerst, Steve Valley, and Josh Vlach, met this year on 5 August along the South Umpqua River near Myrtle Creek, Douglas County, Oregon while traveling to our destination in southern Oregon. Here we found

Ophiogomphus occidentis, ***Macromia magnifica*** (a new late Oregon date), ***Hetaerina americana***, and ***Argia agrioides*** (a new location for this species).

Our next stop was at Medford in Jackson County where we wanted to check a pond at Sportsmans Park near White City. There were hundreds of common dragonflies and dozens of Monarch butterflies here; the sheer numbers were impressive. It was a very hot day (temperature was 101° F) and dragonflies were seeking shade and obelisking when perched. Steve Valley and Steve Berliner both got great photos of this interesting behavior. ***Tramea lacerata*** were flying with their abdomens curved downward which must have been related to the heat.

We traveled on to our base camp destination which was Hyatt Lake in the Cascade Mountains in Jackson County. Nearby, we stopped at a ***Tanypteryx hageni*** site which Jim Johnson and Steve Valley had visited earlier in the year. While there were no adults flying, Steve Valley found the burrows and pulled out a larvae for us to view.

Then, it was off to set up camp for the weekend. Steve Gordon and Cary Kerst treated the group to dinner with salad from the garden, spaghetti and meatballs, Artisan bread, and Oregon and Washington wines. The stories told that night were great, and some of them might even have been true!

On Saturday the 6th, the group headed for Parsnip Lake. The lake was about dry, but areas of water remained. The ***Sympetrum pallipes*** were thick with mating pairs ovipositing above the vegetation. Other species collected here included: ***Aeshna palmata***, ***Sympetrum corruptum*** and ***S. obtrusum*** (new Jackson Co. record), ***Lestes disjunctus*** (new Jackson Co. record) and ***L. dryas***. On the road out, stops were made at Keene Creek crossing to chase ***Cordulegaster dorsalis*** with only a little luck. Here we also found ***Octogomphus specularis***. A stop at Jenny Creek proved very productive. Jim Johnson looked at the area and said that it seemed like perfect habitat for ***Aeshna walkeri*** which is only known from two areas in eastern Oregon. As usual, Jim was right and it was not long before Steve Gordon snagged the first male (new Jackson Co. record). This was a good range extension to the west of the previously known population. Steve Berliner observed a female ***Cordulegaster dorsalis*** ovipositing in the bank vegetation along the creek. In addition, we found ***Aeshna umbrosa***, (new Jackson Co. Record), ***Octogomphus specularis***, ***Calopteryx aequabilis*** (including many larvae), ***Argia agrioides*** (new Jackson Co. record), ***A. emma***, ***A. vivida***, and ***Enallagma cyathigerum***.

It was time to head back to the campground for a cold beer!

On Sunday the 7th, Steve Berliner fed us blueberry pancakes and bacon which has become a tradition on the Blitz, and one that we anticipate on the last day of the trip. The group headed north and east with a stop at Beaverpond Marsh in Jackson County. Here we found ***Aeshna canadensis*** (new Jackson Co. record), ***A. interrupta***, ***Anax junius***, ***Lestes congener***, ***L. disjunctus***, ***Enallagma boreale***, and ***Nehalennia irene***.

Our last stop was at Lake of the Woods, Klamath County, before heading home. Upon stopping, we were excited to see large swarms of darners hawking along the shore of the lake, over open areas, and above the road. It wasn't long before Jim "vacuum cleaner" Johnson was shouting.

The 2005 *Aeshna* Blitz crew: (left to right) Steve Berliner, Steve Valley, Jim Johnson, Steve Gordon, Josh Vlach, and Cary Kerst.

Jim has been so-named due to his netting of everything in the area including county records and best specimens. We later shortened this to "Hoover". Jim had netted a female ***Aeshna constricta*** (new Klamath Co. record) for which there was only a single record in Oregon in 1929. The specimen for that record is missing so the record has been in question. This was a great find and made the 2005 Blitz highlights list.

The winds shifted from time to time, and the swarm concentrated along different parts of the shoreline and adjacent wet sedge meadow. The team wandered around following them. This was Josh Vlach's first Blitz trip, and so he calmly finished his peanut butter sandwich while the rest of us ran around. Then, he climbed up on a log and with a short-handled net, caught the first male ***constricta*** while still holding his sandwich in his other hand. We may have found his nickname, "Jiff". Before long, everyone got into the act. In all, we found five species of darners in the swarms here including ***Aeshna canadensis***, ***A. interrupta***, ***A. palmata***, and ***Rhionaeschna multicolor***, as well as ***Somatochlora semicircularis*** (our only emerald for this late date trip), and ***Sympetrum occidentale***.

Two people were wounded on the trip and received Oregon Dragonfly Survey Purple Hearts in the pursuit of science. Josh Vlach was stung by a yellow jacket at Parsnip Lake, and Steve Berliner was wounded by a leech in Hyatt Lake. This was pretty minor given the broken toes and stepped-on glasses of previous expeditions.

The 2005 Aeshna Blitz was a great success with forty-two species recorded (almost half of Oregon's total 87 species), and an annual trip that we all look forward to throughout the year. This year we avoided the rain, but scored on darners with our successes with ***Aeshna walkeri*** and ***A. constricta***.

The Shirey Bay Rainey Brake WMA BioBlitz

George L. Harp <glharp@astate.edu>

I had never heard the term "BioBlitz" until Bryan Pfeiffer notified us of one he was organizing in Vermont, to be held 25–26 June 2004. It sounded like fun, so we participated. We had such a good time that, when we returned, I suggested to the Arkansas State University Department of Biological Sciences that we might do something similar. They said great, let's do it! Now, my idea was to provide a little advice (having become an expert on the subject), do the dragonfly part, and have a good time. Somehow, I suppose because I'm retired, by default I got to be the big cheese. I'm not making any more suggestions to them.

Anyhow, that's why during 9–10 May 2005 the Arkansas Game and Fish Commission and the ASU Department of Biological Sciences jointly conducted a BioBlitz at the Shirey Bay Rainey Brake (SB/RB) Wildlife Management Area. For those who don't know, a BioBlitz is a concentrated, 24-hour effort by professional biologists to identify as many plant and animal species in a target area as possible.

Wildlife management areas are established to manage wildlife species and to make those resources available to the public. Although management of fish, bird and mammal species is emphasized, all species of plants and animals are included. The SB/RB WMA, near Lynn in Lawrence County, was targeted because of its diversity of habitat. It straddles the Black River, has several oxbow lakes and a slough. Much of this WMA is covered by bottomland hardwood forest, but the northwest corner lies in the Ozark foothills.

Over 450 species of plants and animals are now listed for SB/RB. Included were 119 species of aquatic invertebrates, as well as 105 bird, 90 vascular plant, and 36 fish species.

The dragonfly list is not very long, only 24 species, because I have not as yet collected this area during all seasons. Common species included ***Lestes inaequalis***, ***Argia apicalis***, ***Enallagma civile***, ***E. geminatum***, ***E. signatum***, ***Ischnura hastata***, ***I. posita***, ***I. ramburii***, ***Anax junius***, ***Epiaeschna heros***, ***Nasiaeschna pentacantha***, ***Epitheca cynosura***, ***Erythemis simplicicollis***, ***Ladona deplanata***, ***Libellula cyanea***, ***Pachydiplax longipennis***, ***Perithemis tenera***, ***Plathemis lydia***, ***Sympetrum corruptum***, ***S. vicinum,*** and ***Tramea lacerata***. Less common species, at least in Arkansas, were ***Lestes vigilax***, ***Ischnura kellicotti,*** and ***Celithemis verna***. I collected teneral ***S. corruptum*** here in April. Phoebe wants you to know that she caught the ***L. vigilax*** and ***I. kellicotti***! Gomphids are conspicuous by their absence, but this is an artifact of collecting dates and sites.

Lists of several groups indicate that this is a pretty interesting area. Among the 45 butterflies known to occur, the discovery of the Appalachian Brown marks only the second population known to occur in Arkansas. The numbers observed indicate that the SB/RB population may be the larger one. Other than a few sites in Minnesota, the

Arkansas populations are the only ones known to occur west of the Mississippi River.

Jim Bednarz, our ornithologist, said finding 18 species of wood warblers and an American bittern speaks well for the area. Our plant taxonomist, Staria Vanderpool, noted that although the vascular plant list is short (one day of collecting), the species composition is that of a healthy bottomland forest.

While the species list for this WMA is far from complete, we have a good beginning. The BioBlitz information will be used by AGFC biologists to develop management plans. The BioBlitz report is posted on the ASU Department of Biological Sciences web site at <http://biology.astate.edu/>.

Ecuador Expedition V

Ken Tennessen

We couldn't believe it had been eight years. No wonder the names and "faces" were hard to remember — they were floating in the backs of our memories like long-forgotten ghosts. The last time Bill Mauffray, Jerrell Daigle and I were in Ecuador surveying Odonata was in 1997 and we were anxious to return, to see the Andes again with their spectacular waterfalls and myriad of streams. So we set out on 11 Sept., dreaming about lush mountainsides and rare, long-lost or new species of Odonata we might run across. It was dark when we landed at the Quito Airport. Quito sits at nearly 10,000 feet and on this clear night was sparkling below us like Denver. Ah, the clear sky bode well; we chose September as it is supposed to be within the "drier" season in a region that receives over 100 inches of rain per year. We got a room for the night at the Hotel Savoy, but in the thin cool air, with thoughts of Ode adventures ahead in the next eleven days, it was hard to fall asleep.

We weren't looking forward to conducting the first day's business. We needed to pick up our rental vehicle, collecting permits from the Catholic University (PUCE), which is in the crowded downtown part of Quito, gas up, and buy food and water, but all went smoothly and we were out of the city before noon. As we drove south through the Central Valley, my thoughts kept drifting to the lower, wet, forested slopes on the eastern side of the Andes. We were here to continue our studies on the Odonata biodiversity of Ecuador, and our goal on this trip was to get into some areas of the eastern Andes (just west of the Amazonian region) that we hadn't visited on previous expeditions, in particular the foothills around Puyo and Macas. Jerrell was hoping to find the genus ***Heteropodagrion*** (dwellers of small waterfalls), whereas I was bent on collecting and rearing as many larvae as I could, and Bill was intent on documenting adults of everything and anything. Our destination on this first day was to reach Baños (no, not bathrooms; it is a tourist destination known for its healing springs, hence "bathing place").

In the high mountains along the Pan Am Highway, we didn't see much in the way of decent aquatic habitats, mainly because this high area receives little rainfall and there is a lot of agriculture and other human disturbance. Around Baños we ran into less than ideal weather for odonates. It was cloudy and windy. We saw a few high-flying dark aeshnids that might have been ***Rhionaeschna biliosa***. Bill did nab one female of ***Rhionaeschna brevicercia*** and we saw lots of ***Erythrodiplax ines*** and a few ***Sympetrum gilvum***, two red species typical of high elevations.

The next day we headed for Macas (population 30,000), about 130 km south of Puyo; a light rain dampened our spirits most of the day. The road eastbound from Baños to Puyo and the road southbound from Puyo to the Rio Pastaza were like new and smooth sailing. But the stretch from Rio Pastaza to Macas was pothole city — we averaged less than 20 km per hr. So we got to Macas too late to collect. We made the Hotel La Orquidea our headquarters, and for $8/person/day it was quite comfortable, with hot water plus there were several nice restaurants within a couple of blocks. Macas is the type locality of ***Archaeopodagrion bilobata*** (an unusual genus of Megapodagrionidae, with only two species, both described by Kennedy in the 1930s); it hadn't been seen in over 60 years, and thoughts of finding it were overwhelming my thoughts.

Over the next four days, most of our forays in this area were to the west of Macas, into the foothills. It appears that most of this area has been cut and the forest we now see is second or third growth. Nonetheless, we found some beautiful small streams and had several hours of sunshine each day. In summary, we found two species of ***Heteropodagrion*** (a black-legged one we had gotten on a previous trip and a new red-legged one); Jerrell will be working on these. Other notable species were: the blackish, long-legged ***Teinopodagrion depressum***, ***Heteragrion*** (three

species), cryptically colored ***Philogenia*** and ***Palaemnema***, both of which blend perfectly into their shaded lairs, one blue and black ***Lestes apollinaris***, ***Polythore*** (probably four spp., although we admit to having trouble identifying these gorgeous big damselflies). We collected some very large individuals of ***Polythore procera***, which did not look large when they flew. I think the wide white bands on their wings create this delusion. We also saw ***Cora inca***, which has a sky-blue thorax, ***Aeshna cornigera***, two dainty, bright-green eyed ***Gomphomacromia fallax***, the white-and-black ***Brechmorhoga rapax crocosema*** and a number of other libellulids. Jerrell was delighted to observe numbers of the large black and orange ***Heteragrion aequatoriale*** on a shaded montane stream; he has submitted a manuscript to BAO discussing the taxonomic nomenclature of this species. The biggest disappointment was that we didn't find the ***Archaeopodagrion***.

We also collected north of Macas one day, searching small hilly streams near the Rio Pastaza. We found a few of the relatively rare ***Micrathyria dictynna*** along with beautiful red ***Telebasis carota*** at a small, pooled stream in the forest near the big river. Seepage streams contained many blue or purple ***Argia***, including ***A. variegata***, ***A. kokama***, and an undescribed species. I collected a corduliid larva from a small waterfall stream just south of the river; a male emerged several days later (yet to be identified). We were delighted to collect a couple males of ***Epigomphus obtusus***. This genus is strictly Neotropical, and males are odd-looking clubtails with their expanded abdominal segment 10. I also nabbed a male of an unknown ***Perigomphus*** species, which in the field at first sight can fool one into thinking it is a ***Progomphus***. In some of the small, forested mountain streams, huge black-and-white-winged ***Polythore neopicta*** females were laying eggs in dead woody debris lying in or suspended above very shallow water. ***Philogenia mangosisa*** was fairly common on some of the small tributaries. Bill found a very small shaded stream, nearly dried up, which yielded ***Hetaerina flavipennis*** (a rare metallic green species) and ***Teinopodagrion curtum***, probably the smallest ***Teinopodagrion*** known.

With only a few days left to our trip, we headed back north, to the Mera area between Puyo and Baños. Near the little town of Shell, we found a wonderful place to stay named "Los Copales". There are about 100 acres of virgin forest here, owned by Lucy and Roberto Kuges who rent out small cabins (cabañas) with hot water and comfy beds. Roberto makes delicious soups; the meals were varied and very tasty. The grounds are covered with beautiful flower plants, rich in red, yellow and lavender. The multitude of colorful orchids and butterflies was overwhelming. We stayed three days and collected with their permission and generous help.

Along the Rio Metolo and the nearby jungle, we saw several species we had not encountered on previous expeditions, including ***Teinopodagrion curtum***, ***Metaleptobasis amazonica***, ***Bromeliagrion fernandezianum***, ***Stenocora percornuta***, an unidentifiable ***Palaemnema***, and one river-cruising ***Phyllogomphoides brunneus***. Some old acquaintances of note included ***Mnesarete hauxwelli***, red-eyed ***Argia dives***, amber-winged ***Polythore concinna***, ***Philogenia redunca,*** and ***P. minteri***, ***Protoneura woytkowskii***, and ***Psaironeura bifurcata***, the latter a real treat if you can detect the little reddish dots floating over small seeps in the shady forest. ***Bromeliagrion fernandezianum*** breeds in bromeliads; it was known previously only from Venezuela. It is very elongate, the thorax mostly bright yellow with some dull green on the lower part. It either perches flat on shrubs like an ***Argia*** or perches on a liana like a ***Heteragrion***.

After a couple days, we realized we had saved only one day to search for Kennedy's other long-lost ***Archaeopodagrion*** (***bicorne***), so on 21 Sept. we took off for the Rio Anzu north of Mera. Without trouble, we found the river, which was fast and rocky. We spread out, looking for tributaries that might still harbor ***A. bicorne***, apparently not seen alive since the 1940s. After about an hour, Bill showed up with a teneral male that he had gotten at a small stream that went under an old bridge. He was right, it was ***A. bicorne***, and he thought that the little stream might be where William Clark-Mcintyre had gotten two males in 1935, so we went back to search for more. I dredged up a larva that could be ***Archaeopodagrion*** and Jerrell found another male, perched flat on a leaf with wings spread out, upstream at the road crossing, but that was all we could find. We were heartened to see no farming, clearing, or human habitation in this area. Our rediscovery of ***Archaeopodagrion*** was celebrated that night with a cold beer and lively conversation about what else lingered in the jungles of these wonderful mountains.

Our last field day was spent at Los Copales, walking the jungle trails with Roberto as he told us interesting things about the huge trees, plants and animals that live in this area. One highlight was watching the files of parasol ants carrying pieces they had cut out of the lavender flowers and green leaves; the alternating colors made their trail look like a miniature traveling circus. We saw large ground-dwelling bromeliads, in flower (yellow and red) at this time of year. Up in the trees were tank bromeliads (*Aechmea*), the microhabitat for the long-abdomen ***Bromeliagrions***. The orchids and other epiphytes were breath taking, but keeping an eye out for elusive Odonata took most of our attention.

Near the end of this last day, as Roberto and I started back toward the cabañas, a male ***Uracis fastigiata*** grabbed

a female over the muddy path we were on. I motioned to Roberto to stop so we could watch them. They stayed in copulo for about two minutes, perched very near to the mud, after which the female disappeared. I motioned Roberto to wait, and after a minute she returned and laid eggs in the wet mud. I asked him if this spot holds water when heavy rains come, and he said yes, it would have a few centimeters for a week or two, then dry up again. Perhaps ***Uracis*** larvae (as yet the larva of not a single species in this genus has been described) develop at record-setting pace, but it is more likely that the larvae can withstand being dewatered for periods of weeks. In such a temporary habitat, one wonders what they eat; perhaps mosquito larvae are their main diet. We talked more as we walked, and it seemed that Roberto hated to see us leave as much as we hated having to leave. Los Copales is one of those places you say to yourself, "Got to go back."

We are still working on identifying a few of the specimens we collected, and although we did not get large numbers of any species, some of the records are the first for Ecuador. We envision several more expeditions to this rich country before we will be able to produce a meaningful paper on its dragonfly diversity.

Odonata in Central Panama

Julie Craves

In early August my husband and I traveled to central Panama. It was primarily a bird-focused trip, but I lugged along my Canon EOS 350D and a 105 mm macro lens to photograph some Odonata. My primary goal was to see some Pseudostigmatidae, the helicopter damselflies. I was rewarded on one of my first days in the field, with a female ***Mecistogaster ornata*** at the Metropolitan Nature Park in Panama City. This 265 ha park is mostly dry lowland Pacific forest, and is the only natural forested park located in a major city in Latin America. We visited several times, and saw a good variety of Odonata, more than at any other location.

One of the best spots was a damp, grassy field behind the visitor center at the Metropolitan Nature Park which was bordered by a drainage ditch and a small running stream. Many dozens of ***Pantala flavescens*** (Wandering Glider), along with ***Tramea calverti*** (Striped Saddlebags) and ***Orthemis discolor*** (Carmine Skimmer) hunted over the field. A female ***O. discolor*** was ovipositing in a flooded tire track, flinging eggs and water nearly half a meter.

Smaller libellulids were also common. A spot of tall grass held many ***Erythrodiplax funerea*** (Black-winged Dragonlet). On our first day, there were a lot of ***E. fusca*** (Red-faced Dragonlet) present, many of them teneral. Several days later, most were flying with the ***Pantala*** and ***Tramea*** in good numbers. This race of ***E. fusca*** has both a red thorax and red abdomen. Dennis Paulson wrote, "Those on the Pacific coast from Costa Rica to Ecuador lack the blue pruinosity of most other populations. It remains to be seen if they are in fact a different species."

Guarding a water-filled depression was a single ***E. kimminsi***, midnight blue with opal-rimmed dark spots at the base of the hind wings. I saw a few more of these later in Gamboa, and thought they were beautiful. Along the footpath were a number of ***Uracis imbuta***; the males looked like dainty blue dragonlets with black wingtips. The related ***U. fastigiata*** was found elsewhere in the park near a slow stream, in shadier conditions. It was slightly larger, and had longer wings which were more extensively black. It flew with such a stiff-winged flight that the wings appeared thick and plastic. There is a small laguna near the park entrance adjacent to a plant nursery. A couple of ***Perithemis*** (***mooma*** or ***domitia***) were present, along with a setwing, ***Dythemis sterilis***.

Outside of Gamboa, we stayed at the Canopy Tower (www.canopytower.com), an ecolodge on a hill which juts over the forest canopy, made from a converted U.S. radar installation. Just below the Tower, along the old Plantation Trail, is the Rio Chico Masambi. It was there we found our second species of Pseudostigmatid, ***Megaloprepus caerulatus***, the largest odonate in the world. It was one of the major highlights of the trip! Undoubtedly, there are quite a few interesting Odonata to be found along the Rio Chico Masambi, but we were distracted by the tail end of an army ant swarm and the birds accompanying it. I was able to take many diagnostic photos of ***Argia adamsi***, as well as a shot of a perched ***Orthemis flavopicta*** near the trailhead. We found a male ***Megaloprepus caerulatus*** at nearly every stream crossing the famous Pipeline Road in Gamboa, an abandoned road along an unfinished oil pipeline through excellent primary forest. Canopy Tower and Pipeline Road are both located within the Soberania National Park.

Outside of Gamboa, along old Gamboa Road, we added a few more species. A number of pretty little dashers, later

identified as ***Micrathyria laevigata***, were around a small pond. I almost didn't bother taking a picture of a rather non-descript female libellulid with pale blue eyes, but those eyes helped identify her as ***Anatya normalis***. A male wedgetail, ***Acanthagrion trilobatum***, was cooperative and I was able to get good photos.

We also spent several days about two hours west of the former Canal Zone area, in El Valle de Anton. This little town is in the caldera of an ancient volcano. The town is at about 620 m, but there are trails at the Cerro Gaital Natural Monument that go up to 1000 m. Rio Guayabo courses through the area, and is shallow and rocky over much of the area above town.

Along one of the main roads through El Valle, we saw the strangest-looking ode of the trip. It was about the size of a dasher, entirely pruinose blue, appeared to be a libellulid, yet had a clubbed tail. Because we were walking into town we did not have a good camera with us, but took a few shots with a point-and-shoot. Nick Donnelly told me it was ***Macrothemis pseudoimitans***. That was one of my two guesses, although I admit to being entirely stumped at first! The weather was fairly uncooperative for Odonata searching while we were at El Valle, but there seems to be great potential along the Rio Guayabo. There is an extensive trail system along the river and near an 80 m waterfall, Chorro del Macho (you can take a zip line through the forest over the river and in front of the waterfall at the Canopy Adventure (www.canopyadventure. com), an enterprise that helps preserve the forest and employs local residents). In town, there are also some ponds, and an area where the river is slower and less rocky.

The owner of the Canopy Tower, Raul Arias de Para, is building another ecolodge, Canopy Lodge, (www.canopylodge.com) in El Valle. It was under construction during our visit, and is perched immediately adjacent to Rio Guayabo.

We took a side trip from El Valle over the lip of the old volcano and down near the Pacific coast to the little town of El Chiru. Sr. Arias de Para has an agreement with a friend in El Chiru to allow the Canopy Lodge guides and guests access to trails near a small stream. I believe it is either Rio Hato or one of its tributaries. It was along this stream we saw some various ***Argia***, a small libellulid that I was unable to track, several previously seen species, and a rubyspot caught by one wing in a spiderweb, which looked to be ***Hetaerina sempronia***.

I was surprised during the course of the trip not to find any ***Lestes*** or close relatives, but ***Argia*** were common. Many were similar, and identified by Nick Donnelly and Dennis Paulson as lumped into either ***A. oculata*** or ***A. difficilis***, groups that need closer examination. Species I was able to identify from my photos were ***A. indicatrix*** and ***A. pulla***. One small ***Argia*** I photographed stumped both Donnelly and Paulson. Dennis remarked, "Very interesting. I have no idea what it is."

In our ten days in Panama, we ended up seeing about two dozen Odonata species which we were able to identify. We do not hesitate to recommend Canopy Tower as a base of operations in the former Canal Zone area. It is a very popular destination for birders, but there were only a couple of other guests when we arrived because it was the "green season." We found nothing to deter us from a summer trip to the tropics. Rates are lower, there were virtually no biting insects, and rain events were primarily for brief periods in the afternoon. Canopy Tower deserves its excellent reputation: the accommodations were both beautiful and comfortable, the food was outstanding, and the guides were great. Canopy Lodge promises to be just as exemplary. We look forward to returning, perhaps next year.

Recommended Resources

Donnelly, T.W. 1992. The Odonata of Central Panama and their position in the neotropical odonate fauna, with a checklist, and descriptions of new species. Pp. 52–90 in Insects of Panama and MesoAmerica: Selected Studies. D. Quintero and A. Aiello, eds. Oxford Univ. Press.

Förster, S. 1999. The Dragonflies of Central America Exclusive of Mexico and the West Indies: A Guide to Their Identification. Gunnar Rehfeldt, Braunschweig, Germany.

Paulson, D. 2002. Neotropical odonata specimens. University of Puget Sound, Slater Museum of Natural History. Vers.2005. <http://www2.ups.edu/biology/museum/NeotropOdonata.html> (At the same web site, see also Odonata photos <http://www2.ups.edu/biology/museum/ODphotos.html>.

Wagner, D.L., D. Paulson, P. Naskrecki, C. Esquivel, and A Ramírez. 2000. The dragonflies and damselflies of La Selva. An illustrated checklist of the Odonata of the La Selva Biological Station, Costa Rica. <http://ghost-moth.eeb.uconn. edu/laselvadragons/>.

Dragonfly Graveyards

Dennis Paulson <dennispaulson@comcast.net>

Gord Hutchings (Argia 15(3): 9, 2003) wrote about seeing dragonflies dropping to the surface of a pond and dying there. This is something I've seen only a few times, but I'll bet by going out at the end of the flight season for common species, any of us might see it. On 25 August 1997 I saw dead male ***Enallagma*** scattered all over the ground next to Jameson Lake, Douglas County, Washington, I assume dead of old age. All I looked at closely were ***E. boreale*** (Boreal Bluet), but both it and ***E. carunculatum*** (Tule Bluet) were common there at the time. The flight season of ***boreale*** is a bit earlier than that of ***carunculatum***, and perhaps the dead ones were indeed all ***boreale*** at the end of their season. This is a lake that supports thousands of ***Enallagma***, so the dead ones I found represented a very tiny proportion of the population.

The only other time I have seen this phenomenon was at Takh Takh Meadows, Skamania County, Washington, on 7 August 2005. The meadow had dried up except for one small pond (about 2 meters in diameter and a few inches deep) that was full of salamander larvae and just metamorphosed frogs. ***Somatochlora semicircularis*** (Mountain Emerald) had been common there three weeks earlier when the meadow was flooded, but there were only a few males now, associated with the pond and the nearby sedge meadow. At least two females oviposited during our visit. More noteworthy, five individuals came down to the water while we were present and got stuck on the surface; one stayed, and we rescued the others and hung them on branches; a few flew away. There were at least seven additional individuals lying on the surface in various stages of decomposition, both right-side up and upside down. Both sexes were included, so these weren't just females attempting to oviposit and getting stuck (and that certainly wasn't the case for the female ***Aeshna*** that Gord saw land on the open water).

In addition, a male ***Lestes dryas*** (Emerald Spreadwing) that was flying over the pond was buzzed by a male ***Somatochlora***, dropped to the pond surface, and was unable to rise from it. Are these old individuals that don't have the strength to fly up, or are vigorous ones getting killed this way? I was struck mostly by wondering why I didn't see this phenomenon more often. Perhaps it is most likely when a small body of water is the only body present in the area. Do dragonflies go to the water to die, or do they merely attempt to get a drink and get stuck? It is noteworthy that it was quite warm in both of these localities, so end-of-season low temperatures played no part in this mortality.

New York Dragonfly and Damselfly Survey: An Update

Paul Novak, New York Natural Heritage Program, NYSDEC, 625 Broadway, 5th Floor, Albany, NY 12233-4757. <pgnovak@gw.dec.state.ny.us>

Included in the January 2005 issue of Argia (Volume 16, Number 4) was an article on "the emergence" of our New York Dragonfly and Damselfly Survey that began this year. While it is fair to say our project is still in the "teneral stage", with the majority of data for the 2005 field season only now being received, I would be remiss if the winter issue of Argia slipped by without a project update.

Work on the project did not begin in earnest until late March 2005 with New York Natural Heritage Program Database Manager Charlene Houle doing yeoman work on adapting a previously designed plant label database for the New York Dragonfly and Damselfly Survey. Concurrently, I was planning workshops, developing a Handbook for Workers, data sheets, a New York species list, and other materials for participants (based on the excellent manual developed by Paul Brunelle for the Maine Project) as well as contacting a running list of people that we knew had a long-standing, or newly developed, interest in odonates. The list of people was not long initially, but was certainly a lot longer than the list of New York DSA members supplied to me by Nick Donnelly.

On the last day of May, I picked Nick up at his house in Binghamton and we traveled to the southwest corner of the state, making a short and unproductive stop at the Allegany River at Portville en route to the Roger Tory Peterson Institute in Jamestown for an evening presentation as part of our first workshop. Jim Berry, Director of the RTPI and Tom LeBlanc of Allegany State Park, met us at the center. Tom had spearheaded the effort to line up some of the western New York people that he knew were interested and an enthusiastic group of eleven people were present. We covered basic odonate biology, family and genus identification, and background for the project.

The next day we spent some time at a small pond on the RTPI property and covered collection and preservation techniques. Highlighting the state of our knowledge with respect to odonates in western New York was the fact that we collected ***Gomphus descriptus*** (Harpoon Clubtail), a new county record for Chautauqua County. When we finished, Jim gave us a wonderful tour of the Institute including some of the fascinating Peterson collections. This was of course, very soon after the re-discovery of the Ivory-billed woodpecker and a mounted specimen was on display. We had a great time and thank Jim and Tom for getting us rolling.

Three subsequent volunteer workshops were held, two in Albany (featuring a county record on the SUNY campus for ***Enallagma vernale***, the Vernal Bluet) and one at the Rice Creek Field Station of SUNY Oswego. These were followed by a one-day workshop with staff of the various Audubon New York Nature Centers (coordinated by Richard Haley and Andrew Mackie of Audubon New York) and a presentation/workshop given by Fred St. Ours at the site of the Adirondack Museum of Natural History (AMNH) in Tupper Lake. This is going to be a fantastic museum in a lovely setting and I encourage anyone that visits the Adirondacks to find the time to check it out while in the area. It is slated for a July 2006 opening. Thanks to Fred and Valerie Trudeau for letting me join in and give a brief session on the background for the New York project and presenting our protocols, species list, etc. We spent a couple of hours at a single site along the Raquette River and had a species list of 26 species including just the 4th (and 5th!) recent record for ***Williamsonia fletcheri*** (Ebony Boghaunter) in New York and a teneral specimen of the ***Somatochlora elongata*** (Ski-tailed Emerald). One additional one-day workshop for Albany based NYSDEC staff was also held. Overall, a grand total of 90 people attended one of the various workshops.

A NYSDEC press release announcing the project was issued on 20 July, unfortunately well after the workshops were concluded. The announcement led to a flood of requests from the media and the public for more information. I gave a short interview on dragonflies and damselflies on the "In Your Backyard" program on WAMC public radio in Albany with the State Wildlife Pathologist Ward Stone. Interviews were held for newspaper articles in the Watertown Times and for an article in the Albany Times Union published in late August. Audubon New York Naturalist Larry Federman of the Rheinstrom Hill Audubon Center and I were interviewed for an article that appeared in The Journal News (Westchester, Rockland, Putnam Counties) in late September. Slide presentations were given at the Paul Smiths Visitor Information Center at Paul Smiths and to the John Burroughs Natural History Society Annual Meeting in Rosendale (near Kingston). As a result of this media attention, more than 75 members of the public called or e-mailed requesting additional information on the project and a number of these people have registered as participants in the project. All told, a total of 150 individuals have completed a Volunteer Registration Form and are now on an official mailing list for the project.

In late summer, the database to be used for the project was tested and finalized, and copies of the database on disk, along with additional project materials were mailed to all registered participants in late August. At present, I have received, or know that I will be receiving, records (specimens, photographs, or observations) from no less than 40 registered participants. These range from just a few observations from some people to approximately 200 specimens from Peter Rosenbaum and his students at SUNY Oswego. As far as I know, the biggest find for the year would almost certainly be the discovery of ***Celithemis verna*** (Double-ringed Pennant) at three separate ponds in Suffolk County. This is a new species for the state list, previously known as far north as central New Jersey. Ginger Brown discovered this species while conducting surveys for the three state threatened bluet species on Long Island (see ARGIA Volume 17, Number 3). In addition to the ***Williamsonia fletcheri*** records obtained at Tupper Lake, other records of note that I am aware of include the following:

Enallagma pictum (Scarlet Bluet), two new sites for this state threatened species in Suffolk County from Ginger Brown.

Progomphus obscurus (Common Sanddragon), ***Anax longipes*** (Comet Darner), ***Rhionaeschna mutata*** (Spatterdock Darner) all in Suffolk County from Ginger Brown and Skip Blanchard. This is the first Long Island record of ***Progomphus*** in nearly a century.

Libellula auripennis (Golden-winged Skimmer) from a couple of sites in Suffolk County from Ginger Brown and Steve Walter.

Stylurus plagiatus (Russet-tipped Clubtail) on a tributary to the Hudson River in Greene County from Larry Federman and Jesse Jaycox.

Hetaerina americana (American Rubyspot) on Catskill Creek also from Jesse Jaycox, and also in Greene County.

Gomphus quadricolor (Rapids Clubtail) near Stillwater Reservoir in Herkimer County from Jason Bried.

Cordulegaster erronea (Tiger Spiketail) in Schuyler County from John and Sue Gregoire.

Aeshna clepsydra (Mottled Darner) at Kings Flow in Hamilton County from Cookie Barker.

Lanthus vernalis (Southern Pygmy Clubtail) at Mohonk Preserve in Ulster County from Amada Mitchell, and the furthest north in the state.

Ischnura hastata (Citrine Forktail) at Minnewaska State Park from Hatti Langsford, also in Ulster County.

We expect that the Handbook for Workers, New York State Species List, and other materials for the project will be available on our New York Natural Heritage Program web site <http://www.nynhp.org> by mid-winter. We expect that three to six workshops will again be held in the summer of 2006, but exact dates and locations have yet to be determined. These dates and locations will be posted on the above web site and e-mailed to registered participants as soon as they are determined. We can't wait to receive the remainder of the 2005 data and have all the information entered so that we can produce some maps based on the first season's fieldwork!

Mistaken Identity

Steve Hummel, Lake View, IA

On the afternoon of 20 Sept., while collecting Monarch butterflies for a tagging project at the local middle school, I was walking along a dirt road west of Ida Grove, Iowa. There was also a large number of ***Sympetrum corruptum*** along the road as well as some aeshnids. After making a futile swing at an ***Aeshna*** (a stiff south wind didn't help), I heard a loud rustling of wings followed by a surprisingly load thump. I turned around to see two dragonflies tangled together in the middle of the road. I quickly dropped my net over the pair; they separated and flew up into the net. As soon as they separated I noticed that one was an ***Anax junius*** (a female) and the other was an ***Aeshna constricta*** (a male). I was rather surprised to see this combination. Could this have been an attempt at mating by the ***A. constricta*** with a very serious case of mistaken identity? There has been discussion of attempted mating between similar species in the past, but this seems pretty unusual. Has anyone else observed a similar situation?

Significant Range Extension for *Somatochlora brevicincta* (Quebec Emerald) in Nova Scotia

Derek W. Bridgehouse <d.bridgehouse@ns.sympatico.ca>

Somatochlora brevicincta is an early flying species of acidic fens and peatlands — one of the most interesting species to be found in Nova Scotia from a distribution standpoint. The Quebec Emerald is of great global conservation interest, and is now one of only a few odonates in Canada listed in the IUCN "Red List of Threatened Animals" (Moore, 1997). For years since its discovery in the 1950s (Robert, 1954), ***S.brevicincta*** was known only from its type locale at remote fens in central northern Québec.

In September 1997, Jim Edsall discovered and identified a single male specimen near New Scotland Bog, Westmorland County, New Brunswick. At the time, this discovery was our only indication that the species was to be found outside northern Québec, and greatly encouraged the search for the species in the Maritimes, and in collections.

During research for Brunelle (2000), four males of the species were discovered unidentified at the Canadian National Collection of Insects, Ottawa. They had been taken in the early 1980s by Biosystematics Research Center workers on ponded barrens near North Mountain, within Cape Breton Highlands National Park in Nova Scotia.

Given that the species was now known outside Québec, Dr. Oliver Flint's odonate collection at the Smithsonian Institution was reviewed, and a single male from Newfoundland was discovered, which had been collected in July 1990.

In July 1998, Paul Brunelle collected a young female on a woods road near to Long Lake Bog, Cumberland County, Nova Scotia. The Cumberland County record was at the

time the furthest south at ca. 4.33° of latitude south of Mistassini (Brunelle, 1999).

Although at the time the Québec Emerald was one of very few North American odonate species not known in the contiguous United States, Jeremiah Trimble collected a male on in June 1999 on Thousand Acre Heath, Twombly Township, Penobscot County, Maine, and a female on a wooded road nearby. This Maine record was, at ca. 45.26°N, the most southern locale for the species by about 48 km (Brunelle and deMaynadier 2000).

In 2000 it was discovered unexpectedly far to the west in valleys of the Rocky Mountains in British Columbia (Cannings 2002).

Here I report the capture of a male by Joseph Purcell on 2 September 2005 at a small roadside pond at West Porters Lake, Halifax County, Nova Scotia. This is unlikely to be a larval habitat for the species. The Halifax County record represents a further range increase to ca. 1,550 km from the type locale, and is the most southern locale for the species at ca. 44.73°N. The specimen is in the collection of the author.

It is probably a rare inhabitant of mossy fens right across the southern boreal forest of North America. Brunelle (2000) reports that this species should looked for at fens in peatlands, and particularly at young fens beside roads where water-saturated *sphagnum* moss surrounds standing deadwood.

I thank Paul Brunelle for stimulating my interest in the Odonata and for determining J.P.'s collection record.

References

Brunelle, P.M. 1998. The status of *Somatochlora brevicincta* Robert 1954 (Odonata, Anisoptera, Corduliidae) in Nova Scotia. Unpublished report to the Nova Scotia Museum of Natural History, Halifax : 10 p.

Brunelle, P.M. 1999. Additions to the lists of dragonflies (Odonata: Anisoptera) of the Atlantic Provinces, Canada. Northeastern Naturalist 6(1): 35–38.

Brunelle, P.M. 2001. Status of *Somatochlora brevicincta* (Odonata: Corduliidae), the Quebec emerald, in North America. International Dragonfly Fund Report 3(1/2): 1–8.

Brunelle, P.M and P. deMaynadier. 2000. The 1999 Season. Mainensis 1(1): 2–3.

Brunelle, P.M. and T.W. Donnelly. 1998. ***Somatochlora brevicincta*** in New Brunswick and Nova Scotia. Argia 9(4): 5.

Brunelle, P.M. 2000. Distribution of damselflies and dragonflies (Odonata) of Cape Breton Island, Nova Scotia, Canada. Parks Canada—Technical Report in Ecological Science; no. 24. pp iv + 52.

Cannings, R. 2002. Rare dragonflies of British Columbia. BC Conservation Data Centre <http://wlapwww.gov.bc.ca/wld/documents/dragonflies.pdf>

Moore, N.W. (Compiler) 1997. Status survey and conservation action plan dragonflies. International Union for Conservation of Nature and Natural Resources, Gland, Switzerland. IUCN/SSC Odonata Specialist Group. 28 p. ISBN 2-8317-0420-0.

Robert, Fr. A. 1954. Un nouveau *Somatochlora* subarctique (Odonates, Corduliidae). Canadian Entomologist 86(9): 419–422.

Tingley, S. 1998. More *Somatochlora brevicincta*. Argia 10(2): 8.

Southern Boreal Forest Observations of *Somatochlora williamsoni*: is their Range Extending Northward?

Gordon E. Hutchings and **Dave A. Halstead**, (GH) University of Victoria, Victoria, B.C. <odonatas@uvic.ca>; (DH) Saskatchewan Institute of Applied Science and Technology, Prince Albert, Saskatchewan. <halstead@siast.sk.ca>

The 2005 field season has yielded an interesting development: either ***Somatochlora williamsoni*** (Williamson's Emerald) has undergone a significant range extension or the species has been overlooked by previous surveys in Canada's western boreal forest. During the early evening of 12 July 2005, ***S. williamsoni*** adults were encountered in large numbers west of Stanley Mission in the Churchill River region of north central Saskatchewan. Males and females were observed moving back and forth across highway 915 at a small creek culvert crossing (approxi-

mately 55° 20´ N and 104° 45´ W). The feeding swarm was flying 3–5 meters above ground level. Several observations of ***S. williamsoni*** individuals were noted at other lakes and streams in the same area, and during a second dragonfly survey in the Missinipe region (55° 35´ N) to the northwest on 22 July. Both areas consist of dense boreal forest and numerous lakes and wetland drainages on rugged Precambrian shield.

S. williamsoni was first reported in Saskatchewan in 2003. Modest population numbers were encountered at that time just south of 54° N. Prior to 2003, the known westernmost distribution of ***S. williamsoni*** was at the Manitoba–Ontario border in the vicinity of 49° N latitude. We are wondering what might account for the sudden appearance of this species so far west and north of its previously reported distributional limits. Is it that no dragonfly expert has visited these areas in early to mid summer, or is this species extending its range northward? We would be interested if anyone in Alberta to the west or Manitoba to the east has encountered this species so we may better understand what is going on. Your assistance is greatly appreciated.

Argia hinei in Utah

R.Bailowitz and **L. Stevens**

The well-worked genus ***Argia*** is widespread in Arizona, there being 24 species recorded from the state. While several species extend into Arizona from the west (e.g., ***A. agrioides***), the north (e.g., ***A. vivida***), and the east (e.g., ***A. translata***), at least half of the species have their centers of distribution to the south in Mexico. ***Argia hinei*** is one of these tropically-rooted species, extending into the United States only in Arizona, southern California, southern Nevada, southern New Mexico, and western Texas (Donnelly 2004). We now add southern Utah to the mix.

Prior to current studies of odonate populations within the greater Grand Canyon region by Stevens & Bailowitz, northernmost populations of ***A. hinei*** were thought to be along Oak Creek near Sedona in southwestern Coconino County. However, within the last ten years, this species has been detected in Grand Canyon, both in Mohave and Coconino Counties, as far upstream as "Bert's Canyon" at Colorado River Mile 41.5. Mileage designations refer to distances downstream from Lee's Ferry, Arizona, which is near the southern end of Lake Powell on the Arizona/Utah border. Surrounding Lake Powell is Glen Canyon National Recreation Area (GCNRA), a popular recreation site in both Arizona and Utah.

Two researchers, Eric North and Brian Tritle, under the direction of L. Stevens and Dr. Steve Shuster (NAU Department of Biology), collected in Bowns Canyon, a tributary to Lake Powell, on 21 July 2004. This Kane County site is a "hanging gardens" with a large plunge pool. Two specimens of ***A. hinei*** were taken there, affirming its occurrence in Utah. The specimens are currently in the Museum of Northern Arizona collection in Flagstaff, Arizona. These specimens represent the northernmost populations of this species. The distribution of this species in a series of Colorado River tributaries through Grand Canyon and into Lake Powell indicates that the river has served as a low elevation corridor, allowing ***A. hinei*** to extend its range from southerly deserts northward into the southern Colorado Plateau. This distributional pattern is a clear example of a biogeographic "corridor effect", a landscape function characteristic of large, deep canyon ecosystems (Stevens and Huber 2004, Stevens and Bailowitz 2005).

References Cited

Donnelly, T.W. 2004. Distribution of North American Odonata, Part III: Calopterygidae, Lestidae, Coenagrionidae, Protoneuridae, Platystictidae. Bulletin of American Odonatology. 8: 33–99.

Stevens, L.E. and R.A. Bailowitz. 2005. Distribution of *Brechmorhoga* clubskimmers (Odonata: Libellulidae) in the Grand Canyon region. Western North American Naturalist. 65: 170–174.

Stevens, L.E. and R.L. Huber. 2004. Biogeography of tiger beetles (Cicindelidae) in the Grand Canyon Ecoregion, Arizona and Utah. Cicindela. 35: 41–64.

[Jim Johnson reported the finding of ***Argia hinei*** in Washington County, Utah in 2004 (ARGIA 16(3): 25–26). ed.]

Marl Pennant (*Macrodiplax balteata*) in Nevada

Rich Bailowitz

On 8 July 2005 while gathering data towards a possible "Annotated Checklist of the Arizona Odonates", Doug Danforth and I examined a small group of ponds on a golf course in extreme northwestern Arizona. The "Palms Golf Course" is located just inside the Arizona border in Mohave County, only a half mile northeast of Mesquite in Clark County, Nevada. Among other species there, ***Macrodiplax balteata*** was present in small numbers. It appeared to both of us that this species, of regular occurrence in the lower Colorado River Valley in Yuma County, Arizona, must follow the Colorado River and its significant tributaries northward. This would mean that it should occur in southern Nevada which is crossed by perhaps 20 or 30 miles of the Virgin River before the river enters Arizona. This species is not cited for Nevada by Donnelly (BAO, Vol 8, No. 1, 2004), by Biggs (Common Dragonflies of the Southwest, 2004), nor by Dunkle (Dragonflies through Binoculars, 2000).

Then in August, I had the chance to work on an invertebrate project at Ash Meadows National Wildlife Refuge in Nye County, Nevada. At Crystal Reservoir on the Refuge, two specimens of ***balteata*** were seen and a voucher collected on 13 August 2005. While this does not attest to the species' presence along the lower Virgin River, it does verify the species as a member of the odonate fauna for Nevada. It also extends the range of the species some 130 miles.

Archilestes grandis in Michigan

e-mail from **Mark O'Brien**

OK, you can now add ***Archilestes grandis*** (Great Spreadwing) to the list for Michigan. That dynamic duo from Wayne County, Julie Craves and Darren O'Brien, have collected not just one ***Archilestes grandis***, but seem to have found an established population!

First Record of *Gomphus australis* for Louisiana

Gayle & Jeanell Strickland, 1354 Brookhollow Drive, Baton Rouge, LA 70810

While visiting our favorite Damselfly lake in St. Tammany Parish on 15 April 2005, we were surprised to see several Gomphids on the fishing pier that extends about 60 meters into the lake. Three specimens were collected and others were photographed. They proved to be ***Gomphus australis***. According to Mauffray (1997), the species has not previously been taken in Louisiana. A voucher will be placed in Louisiana State Collection of Arthropods at LSU in Baton Rouge, Louisiana.

Hillcrest Lake is a 65-acre man-made impoundment about six miles NE of the town of Abita Springs in SE Louisiana. It is highly vegetated with abundant lilypads and a wide band of emergent vegetation along the shore in the vicinity of the fishing pier. There are many Cypress Trees growing in this part of the lake.

According to Abbott (2005), most records of ***G. australis*** are from Florida with two records each for North Carolina and Georgia and single records for South Carolina, Alabama, and Mississippi; this therefore, represents the westernmost occurrence of the species.

We would like to thank the management of Hillcrest Lake Villas for permission to collect Odonata on their property.

References

Mauffray, B. 1997. The Dragonflies and Damselflies of Louisiana. Bull. Amer. Odonatol. 5(1): 1–26.

Abbott, J.C. 2005. OdonataCentral: An online resource for the Odonata of North America. Austin, Texas. Available at http://www.odonatacentral.com. (Accessed: 12 June 2005).

New Subspecific Status for *Macromia rickeri* Walker

Robert A. Cannings, Paul M. Catling, and **Paul M. Brunelle**, (RC) Royal British Columbia Museum, Victoria, British Columbia, <RCannings@royalbcmuseum.bc.ca>; (PC) Agriculture and Agri-food Canada, Ottawa, Ontario. <catlingp@em.agr.ca>; (PM) Halifax, Nova Scotia. <as849@chebucto.ns.ca>

The Annotated Checklist of the Odonata of Canada published in the Bulletin of American Odonatology (9(1): 1–20 (5 April 2005) was a pre-review version published in error. We had proposed a new status for ***Macromia rickeri*** in the annotated list, but it was not included in the outdated version that was published. Here we provide the relevant notes.

With the following names we recognize two subspecies of ***Macromia magnifica***, one restricted to Canada:

M. magnifica McLachlan in Sélys 1874 — Western River Cruiser

M. magnifica magnifica McLachlan in Sélys 1874 — New Status

M. magnifica rickeri Walker 1937 — New status.

Recently, ***M. rickeri*** Walker (1937, see also Walker & Corbet 1975) has been treated as a synonym of ***M. magnifica*** (e.g. Needham et al. 2000, Cannings 2002); Dunkle (2000) called it the "northern form" of the species. We believe it is best treated as a subspecies. Although identical structurally to ***M. m. magnifica***, subspecies ***M. m. rickeri*** is a dark-coloured form endemic to southern British Columbia. The yellow bands on abdominal segments 3–6 of the nominate subspecies are reduced in ***M. m. rickeri*** and divided into two spots. ***Macromia m. rickeri*** is restricted to the Fraser River Valley (south coast) and Shuswap Lake region (south-central interior). Both of these regions are in the Fraser River drainage basin. These populations occur in cooler and wetter environments than the paler, more wide-ranging ***M. m. magnifica***, which inhabits the drier and warmer Okanagan and Kettle valleys of the southern interior of the province in the Columbia River drainage. The ranges of the two subspecies do not overlap. Additional support for subspecies rank has been accumulated by D. R. Paulson (pers. comm.) He examined specimens of ***M. magnifica*** from across its range and found considerable variation in the extent of pale markings, with those from interior British Columbia somewhat intermediate between more southerly US populations and those called ***rickeri*** in the Fraser River drainage of southwestern British Columbia. Those from drier climates have more extensive pale markings, as is the case with some other odonate species.

Acknowledgements

We thank Dennis Paulson for encouraging us to change the status of ***Macromia rickeri***, for supplying relevant information and for reading a draft of the manuscript.

References

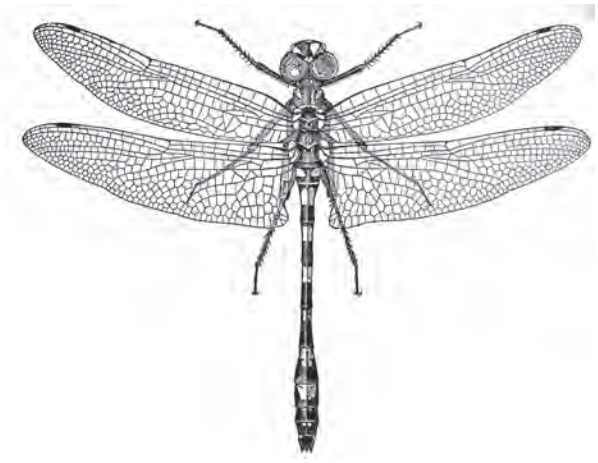
Cannings, R.A. 2002. Introducing the dragonflies of British Columbia and the Yukon. Royal British Columbia Museum, Victoria, British Columbia. 96 pp.

Dunkle, S.W. 2000. Dragonflies through binoculars: a field guide to dragonflies of North America. Oxford University Press, New York, New York. 266 pp.

Needham, J.G., M.J. Westfall, Jr. and M.L. May. 2000. Dragonflies of North America. Scientific Publishers, Gainesville, Florida, USA. 939 pp.

Walker, E.M. 1937. A new *Macromia* from British Columbia (Odon. Corduliidae). The Canadian Entomologist 69: 5–13.

Walker, E.M. and P.S. Corbet. 1975. The Odonata of Canada and Alaska. Volume 3, Part IV: The Anisoptera — three families. 1978 reprint with addenda and corrigenda: volumes I and 2. University of Toronto Press, Toronto, Ontario. 308 p.



C.H. Kennedy's rendition of *Macromia m. magnifica*.

Dragonfly Records from the Hiawatha National Forest, Michigan

George L. Harp <harppa@cox.net>

While returning home from the DSA meeting in Ontario, which, by the way, was a great event, Phoebe and I visited for five days in St. Ignace, Michigan. This is at the northern end of the Macinac Straits. While there, I discovered that Hiawatha National Forest was just a few miles to the northwest. We met with a district biologist, Steve Sjogren, and were reminded that Tim Vogt, Paul McKenzie and others had just held the 4th Hine's Emerald workshop there. After securing permission to collect, off we went.

During 18–19 July 2005, we visited seven sites within this Forest and recorded 26 species. The most unusual habitat was found at Rock Rapids on the Carp River. Here, the river has cut through a sedimentary deposit, perhaps sandstone, creating a nearly continuous riffle habitat for approximately 300 m. This was the only place that we found ***Dromogomphus spinosus***, ***Gomphus lividus***, ***Hagenius brevistylus***, ***Ophiogomphus colubrinus*** and ***Cordulegaster maculata***. Pointe aux Chenes River at US Hwy 2 provided the greatest diversity, which included ***Calopteryx aequabilis***, ***C. maculata***, ***Lestes disjunctus disjunctus***, ***Lestes forcipatus***, ***Argia fumipennis violacea***, ***Enallagma ebrium***, ***Aeshna*** sp. (sight ID), ***Gomphus spicatus***?, ***Ladona julia***, ***Leucorrhinia frigida***, ***L. glacialis***, ***L. intacta***, ***Libellula pulchella*** and ***L. quadrimaculata***. At Trout Brook Pond we found ***Enallagma hageni***, ***Ischnura verticalis***, ***Nehalennia irene***, ***Anax junius***, plus some others taken elsewhere. Other species taken included ***Boyeria vinosa*** on the Carp River, ***Dorocordulia libera*** at two bog sites, and ***Plathemis lydia*** at Round Lake.

The sites were scattered throughout two counties, Chippawa and Mackinac. If anyone wants more specific information, I will gladly provide it.

We were also tourists. Among other things, we visited Mackinac Island. We had been here once before and had vowed to return. The fudge shops are great. The five we saw in the late 1980s have expanded to more like 25. For those who do not know, no motorized vehicles are allowed on the island. Every one of the carriage drivers made it a point to inform us that the huge work horses, Belgians, generate about 10,000 lb. of waste daily. It is also documented that about 10,000 lb. of fudge are made every day. I saw one dragonfly on the island, but I can't remember what it was.

Talking about Dragonflies — Spreading the Word

Roy Beckemeyer

I know that many other members of DSA regularly give talks about dragonflies to general audiences. Kathy Biggs, our own "dragonfly lady" is particularly well known. I do so fairly regularly and thought it might be appropriate to briefly discuss some of the talks I have given and to offer to share material with others who like to do this sort of proselytizing for dragonflies.

Among the many places at which I have given dragonfly talks are botanical gardens, nature centers, high school eco-meets, continuing education summer classes on entomology for teachers, and elementary school classes (even first grade). The same basic visual material can be used in a variety of ways and covered in a variety of levels and with changes in emphasis to meet the needs and abilities of the audience. The one thing that my audiences invariably respond to is my having a great passion and enthusiasm for my subject. So my talks often entail telling them about dragonflies being the greatest insects in the world. One of my favorite talk titles is "So, What's So Great About Dragonflies?"

When I started doing these talks, I relied on 35 mm slides. I eventually moved to a mixture of Powerpoint and slide presentations, and ended up giving pure Powerpoint talks, with almost all of my slides now scanned into digital form. I borrow freely from others (with their permission, of course). So, for example, I have some of Takashi Aoki's great little video sequences of oviposition techniques used by various libellulids that I use to illustrate allocation of habitat, the complexities of dragonfly flight, mate guarding behavior, or whatever points seem to be appropriate for the audience. I keep one huge file of Powerpoint slides called "Dragonflies101.ppt" and adapt from that file for each talk, selecting enough material to fill the time available.

Some of the general subjects I might cover in a talk

include: How to tell dragonflies and damselflies apart; Dragonflies in folk cultures; Dragonfly eyesight; Thermoregulatory behavior; Dragonfly flight; Dragonfly mating; Dragonfly life histories; Dragonfly colors, Dragonfly biodiversity, Dragonfly endangered species.

I recently gave a talk on dragonflies as a keynote speaker at the annual meeting of the Kansas Association for Conservation and Environmental Education. In the section of the talk about "What's So Great About Dragonflies?" I listed the following reasons: 1) They are large, colorful, bold insects with interesting habits — so they are easy to observe. 2) They have been around a long time, having relatives back in the Carboniferous — so they have a very successful lifestyle. 3) They are among the most skillful fliers of the insect world, and have the best eyesight — so they are great examples of well-adapted predators. 4) They are aquatic insects that spend much of their life in ponds and streams — so they provide an excuse to wade, canoe, and hang around in beautiful places.

You can see how each of these themes can be expanded and illustrated by photos and videos of dragonflies. I always tell the audience that my goal is to get them sufficiently interested in dragonflies that when they see one fly by next summer or spring, they will stop and take a closer look. I have great responses, and most talks lead to additional invitations. The KACEE meeting led to invitations to talk to the docents at the Konza Prairie next January and to give a dragonfly walk at the Dillon Nature Center in Hutchinson, Kansas next summer.

When I talk about dragonfly life history, I always begin with a series of photos of a cicada nymphal shell and an adult cicada. Most members of any general audience will recognize the cicada, and then when I show a picture of dragonfly exuviae, they can better relate as you draw parallels and talk about how most insects live the larger portion of their lives in immature forms — cicadas under the ground, dragonflies under the water, and so on.

Most people have also seen dragonflies flying around in tandem, so the whole story of dragonfly mating is usually quite interesting to general audiences. Science fiction enthusiasts are always intrigued to find out that the extensible labium of dragonfly larvae were the original model for the extending second set of jaws in the monster from the "Aliens" series of movies. A pair of pictures of ***Calopteryx maculata***, one made with the sun behind me and the other looking into the sun let me talk about structural colors and their dependence on the angle of illumination (most people have observed this when watching mallards, so that is a good comparison to make).

I always end up my talks with pictures of people having fun with dragonflies, so photos of DSA members kneeling in the water taking pictures of dragonflies, people carrying huge nets and wading in the water, and other idyllic scenes from past DSA meetings help to tell the dragonfly story.

I hope that those of you who give talks to the general public about dragonflies will share your experiences and suggestions in these pages in the future, and I am always willing to share ideas and pictures for use in getting more folks converted into dragonfly nuts.

Zebra Mussels on Dragonfly Larvae — from Ontario

Paul M. Catling, Agriculture and Agri-food Canada, Ottawa, Ontario <catlingp@em.agr.ca>

Recently Mark O'Brien provided some interesting information on Zebra Mussels attached to ***Hagenius brevistylus*** larvae in Michigan and Nick Donnelly added a photo (from Fred Sibley) of an ***Epitheca princeps*** larvae with attached Zebra Mussels from New York. Mark suggested that additional observations would be of interest. There are several records of Zebra Mussels attached to dragonfly larvae in Ontario. The following is reprinted from Ontario Odonata vol. 6. 2005:

> A Zebra Mussel attached to an exuviae of ***Epitheca cynosura*** (Common Baskettail) was sent by K. Dewey. It was collected downstream from the Outlet River bridge in Sandbanks Provincial Park (43.89198° N, 77.21731° W) on 29 Aug. 2003. The mussel is 8 mm long and suggests that the larvae may have spent a relatively long time in the final stage. The specimen is now in the national collection (CNC). See also Catling, P.M. 2004. "Another record of Zebra Mussel attached to an exuvium of ***Epitheca princeps***, and inferences of effect". Ontario Odonata 4: 5

Robber Fly Predation on Dragonfly

e-mail from **Bruce Grimes**

In response to your request, I wanted to report a sighting from Henry County, Virginia at the City of Martinsville Reservoir on 15 July 2005. Clyde Kessler and I had gone to document (photographically) the presence of ***Dythemis velox*** (Swift Setwing) that he had found there two weeks previously. While I got photographs of these, Clyde saw a robber fly (species unknown) on the ground with prey. He called me over and I managed to get many shots of it. The prey was ***Perithemis tenera*** (Eastern Amberwing). I can send a photo if needed for the article, and for identification of the robber fly.

DSA National Meeting Sites Committee

Jerrell J. Daigle <Jdaigle@nettally.com> (850-878-8787)

DSA has a National Meeting Sites Committee, which selects places where the DSA membership can have their famous annual meetings.

The committee was established in mid-February 1996, by the then DSA president, Ken J. Tennessen, and was charged with the following responsibilities: propose a list of possible future annual meeting sites five years in advance; attempt to rotate the annual meetings among the five major regions of the United States; attempt to arrange one meeting outside the United States at least once every three to five years; find organizers for the annual meetings; decide on the procedure by which the membership will approve the annual meeting sites; suggest a replacement for themselves if they can no longer serve on this committee; and encourage regional meetings using the NE and SE regional meetings as examples and models.

The five regions and their coordinators are as follows: Midwest: Tim Cashatt; Southeast: Jerrell J. Daigle (Chairman); Northeast: Nick Donnelly; Southwest: Rosser Garrison; and Northwest: Steve Valley.

We just completed a fantastic meeting in Ottawa, which is in the Northeast region, so Nick Donnelly has time to propose a host and site for 2010. We also voted to accept the proposal of Carl Cook and Ellis Laudermilk to host the 2006 meeting in Kentucky. Future proposals are as follows: 2007: Arizona; 2008: Oregon or Yukon Territory; and 2009: Missouri. We would like to get a preliminary "ball park" attendance head count. Please let me know if you are thinking about attending any of these of these meetings. Thank you!

If you would like to host a future annual DSA or a regional meeting, please let me or the appropriate coordinator know of your wishes. Also, let me know if you have any questions. Thanks! See you in Kentucky!

An Annotated Checklist of the Odonata of Canada Update — November 2005

Paul M. Catling, **Robert A. Cannings,** and **Paul M. Brunelle,** (PC) Agriculture and Agri-food Canada, Ottawa, Ontario. <catlingp@em.agr.ca>; (RC) Royal British Columbia Museum, Victoria, British Columbia. <RCannings@royalbcmuseum.bc.ca>; (PM) Halifax, Nova Scotia. <as849@chebucto.ns.ca>

The following notes will serve as a update to the "An annotated checklist of the Odonata of Canada (Catling, P.M., R.A. Cannings, and P.M. Brunelle. 2005. Bulletin of American Odonatology 9(1): 1–20 and corrections made available since the pre-review version was published in error). Although much that is written about dragonflies in North America has a bearing on dragonflies in Canada, we have included reference below to those items which are relevant to names, geographic occurrence and status of Canadian species.

New Records and status changes

The status of ***Somatochlora williamsoni*** in Saskatchewan was not determined (table 1 of the annotated list), it being new to the province in 2003. Hutchings and Halstead (see publications below) have recently provided evidence that it is locally abundant and present at several localities in north central Saskatchewan.

Six new records of ***Arigomphus villosipes*** double the

known occurrences in Ontario as described by Rothfels (see below), but no change in status is required.

The distribution and status of ***Lestes disjunctus*** and ***L. forcipatus*** in British Columbia has been reviewed by Cannings and Simaika (see below), but no change in status is required.

Name changes and geographic variants

North American populations of the Northern Bluet, previously ***Enallagma cyathigerum*** (Charpentier), are now to be called ***Enallagma annexum*** (Hagen) as outlined by Turgeon et al., and by Paulson (see below). The name ***cyathigerum*** is correctly applied to old world populations.

Leucorrhinia proxima has the pale areas red and is truly the Red-waisted Whiteface in much of the west, but is pale yellow on the waist and elsewhere in much of the east (e.g. Donnelly 2004b). This interesting pattern of variation deserves more study.

Some Important Publications

Cannings, R.A., S.G. Cannings, L.R. Ramsay, and G.E. Hutchings. 2004. Four species of Odonata new to British Columbia, Canada. Notulae Odonatologicae 6(5): 45–49. (Previously listed as "in press" or "submitted" in Bulletin of American Odonatology 9(1): 1–20).

Cannings, R.A. and J.P. Simaika. 2005. An evaluation of *Lestes disjunctus* Selys and *L. forcipatus* Rambur (Odonata: Lestidae): a re-evaluation of status and distribution in British Columbia. Journal of the Entomological Society of British Columbia 102. In press.

Catling, P.M., C.D. Jones and P. Pratt, eds. 2004. Ontario Odonata, vol. 5 (including observations for the year 2004). Toronto Entomologists' Association, Toronto, Ontario, Canada. 145 pp. (Previously listed as "in press" or "submitted" in Bulletin of American Odonatology 9(1): 1–20).

Catling, P.M., C.D. Jones and P. Pratt. (eds.) 2005. Ontario Odonata, vol. 6. (including observations for the year 2004). Toronto Entomologists' Association, Toronto, Ontario, Canada, 202 pp. [Includes 7647 published records for Ontario as well as articles.]

Donnelly, T.W. 2004. Distribution of North American Odonata. Part II: Macromiidae, Corduliidae, Libellulidae. Bulletin of American Odonatology 8(1): 1–32.

Hutchings, G.E. 2004. A list of the Odonata (dragonflies) of Athabasca Sand Dunes Provincial Wilderness Park, Saskatchewan. Blue Jay 63(2): 87–91. (Previously listed as "in press" or "submitted" in Bulletin of American Odonatology 9(1): 1–20).

Hutchings, G.E. and D.A. Halstead. 2005. Southern boreal forest observations for *Somatochlora williamsoni*: is its range extending northward? Argia 17(3): 41. [see above].

Hutchinson, R. and G. Bélanger. 2004. Le marais salé comme habitat potential pour *Sympetrum danae* (Sulzer) (Odonata: Libellulidae). Fabrieries 29(1): 16. [This article relates to the possibility of a saltmarsh race of *Sympetrum danae*.]

Hutchinson, R. and P.M. Catling. 2005. The Canadian National Collection of Dragonflies. Pp. 31–39 in P.M. Catling, C.D. Jones and P. Pratt, eds. Ontario Odonata, vol. 6. Toronto Entomologists' Association, Toronto, Canada. [The Canadian National collection includes vouchers for much of the work on Canadian Odonata. History and composition of the collection are discussed in detail.]

Jones, C.D. 2005. Ontario Odonata Atlas web site. Argia 17(2): 20–21. [Describes a major development in distributional and status studies of Canadian Odonata based on 40,000 georeferenced records for Ontario.]

Oldham, M.J., C.D. Jones, and P.M. Catling. Shadowdragons in the dark: another new dragonfly for Ontario. Natural Heritage Information Centre Newsletter 10(1): 3–4. [see also DSA newsletter 16(3): 13–16.]

Ontario Odonata Atlas. 2005. Natural Heritage Information Centre, Ontario Ministry of Natural resources. http://www.mnr.gov.on.ca/MNR/nhic/odonates/ohs.html (updated 15 Feb. 2005).

Paulson, D. 2005. Northern Bluet separated from its Eurasian relative and assigned a new species name. Argia 17(3): 20–21. [see above]

Perron, J.-M., J.-D. Brisson, and M.-C. Desmarais. 2004. Découverte de deux autres esp?ces d'Odonates asiatiques au Québec: *Ischnura senegalensis* (Rambur) (Coenagrionidae) et *Anax guttatus* (Burmeister) (Aeshnidae). Fabreries 29(1): 17–22. [*Anax guttatus* and *Ischnura senegalensis* are reported from inside the growth facility building of an aquatic plant importer in Sainte-Foy, Québec.]

Perron, J.-M., L.-J. Jobin, and A. Mochon.2005. Odonatofaune du parc national de laYamaska, division de recensement de Shefford, Québec. Le Naturaliste Canadien 129(2): 17–25. [Useful information relating to status and distribution in Quebec.]

Ramsay, L.R. and R.A. Cannings. 2005. Determining the status of British Columbia's dragonflies. In T.D. Hooper (ed.), Proceedings of the Species at Risk 2004, Pathways to Recovery Conference. March 2–6, 2004, Victoria, British Columbia. Species at Risk 2004 Pathways to Recovery Conference Organizing Committee, Victoria, BC. On internet at: <http://www.speciesatrisk2004.ca/pdf/ramsay_edited_final_feb_28.pdf> (Previously listed as "in press" or "submitted" in Bulletin of American Odonatology 9(1): 1–20)

Sutherland, D.A., M.J. Oldham, C.D. Jones, and P. Pratt. 2005. Odonata of Ontario's Hudson Bay lowland. Pp. 1–11 in P.M. Catling, C.D. Jones and P. Pratt, eds. Ontario Odonata, vol. 6. Toronto Entomologists' Association, Toronto, Canada. [This is the first authoritative list for a vast area of Canada (325,000 km^2 and 3.5%) that has been poorly surveyed.]

Rothfels, C.J. 2004. Unicorn Clubtail (*Arigomphus villosipes*: Gomphidae): new records and summary of status in Ontario. Pp. 5–11 in P.M. Catling, C.D. Jones, and P. Pratt, eds., Ontario Odonata, vol. 5. Toronto Entomologists' Association, Toronto, Canada. [see above]

Simaika, J.P. and R.A. Cannings. 2004. *Lestes disjunctus* Selys and *L. forcipatus* Rambur (Odonata: Lestidae): Some solutions for identification. Journal of the Entomological Society of British Columbia. 101: 131–140. (Previously listed as "in press" or "submitted" in Bulletin of American Odonatology 9(1): 1–20)

Simaika, J.P. and R.A. Cannings. 2006. The Odonata of Hamilton Marsh, Vancouver Island, British Columbia, Canada. Notulae Odonatologicae 6(7): in press.

Turgeon, J., R. Stoks, R.A. Thum, J.M. Brown, and M.A. PcPeek. 2005. Simultaneous Quaternary radiations of three damselfly clades across the holarctic. The American Naturalist 165(4): 78–107. <http://www.journals.uchicago.edu/AN/journal/contents/v165n4.html> [see above]

Errata for An Annotated Checklist of the Odonata of Canada, by Catling, P.M., R.A. Cannings, and P.M. Brunelle. 2005. Bulletin of American Odonatology 9(1): 1–20 (5 April 2005).

Unfortunately the version of the annotated list published was not the one revised after review. Corrections are available on the DSA web site (http://www.odonatacentral.com/dsa1/default.htm) and may be printed and filed with the publication. Some update information is included in this issue of ARGIA. PMC, RAC, PMB."

Meeting of Ohio Odonata Society

The Ohio Odonata Society will have their annual meeting on Saturday, 11 February 2006. It will take place at the Spring Hollow Lodge within the Sharon Woods Metro Park (of the Columbus Metro Parks) in Westerville, Ohio (north side of Columbus). A link to Sharon Woods is <http://www.metroparks.net/ParksSharonWoods.aspx>. If you want to create a web map, the address is: Spring Hollow Lodge: 1069 W. Main St., Westerville, OH 43081.

Program agenda is still under development, but you can get more information by contacting VP/Program Chair Steve Chordas at <schordas@odh.ohio.gov> or President Bob Glotzhober at <bglotzhober@ohiohistory.org> or by phone at 614-297-2633. Or visit the web site of the Ohio Odonata Society at <http://www.marietta.edu/~odonata/index.html>.

Admission is free and all are invited. There will be a short business meeting and a variety of talks.

Tidbits from the IORI

Bill Mauffray

1. Damselflies of North America, second edition with companion color guide has been delayed till Spring 2006. All those who have already paid will be happy to know that the advanced price will go up by $10.00 as of today (8 Oct. 2005) for new orders, so your "early bird" investment has been protected.

2. This is membership renewal time for SIO/Odonatologica. If you are an existing member you should have received an e-mail already for renewal. If you are not a subscriber and would like to take your Odonata experience to a the next level, you might want to consider subscribing. If you would like information please e-mail me <iori@afn.org>. For first time subscribers there is a special incentive from the IORI. Ask about it . . .

Proposed Revisions to the Bylaws of the Dragonfly Society of the Americas

Each proposed revision to the DSA bylaws is presented below. For those proposals with revisions of wording, the current version is given with changes marked, followed by the new wording that will be used in the bylaws if approved. Deletions of language are indicated by ~~strikethrough~~; insertions are indicated by **bolded and underlined** type. For those proposals which are completely new only the new wording is presented. Use the ballot inserted into the front of this issue and return by 15 March 2006 to indicate your votes. The current bylaws of the Society in their entirety can be found at <http://odonatacentral.bfl.utexas.edu/dsa1/bylaws.htm>.

1. Section II, Part E (revision)

> **Current**: Honorary membership, ~~without~~ **exempt from payment of** dues, may be conferred to **any Society member** for exceptional service to the Society or to the study of Odonata. ~~Criteria for honorary membership shall be developed, and may be changed, by the Executive Council, subject to approval by the membership at the next annual Business Meeting.~~ **Candidates for honorary membership may be proposed at any time by majority vote of the Executive Council or by petition of at least ten members of the Society, and will be subject to approval by the membership at large at the following annual Business Meeting.**
>
> **New**: Honorary membership, exempt from payment of dues, may be conferred to any Society member for exceptional service to the Society or to the study of Odonata. Candidates for honorary membership may be proposed at any time by majority vote of the Executive Council or by petition of at least ten members of the Society, and will be subject to approval by the membership at large at the following annual Business Meeting.
>
> **Commentary**: 1) the EC does not wish to develop criteria for this status; 2) the bylaws are an inappropriate place for such a directive; 3) it was suggested that the power to grant this status should be with the membership.

2. Section III, Part A (revision)

> **Current**: The Treasurer shall be responsible for establishing the Society's bank checking account and/or savings account, except as noted in Paragraph C**,** below shall be the only person empowered to endorse instruments made payable to The Dragonfly Society of the Americas, and shall keep the bank account books current and available for inspection by the Executive Council upon notice.
>
> **New**: The Treasurer shall be responsible for establishing the Society's bank checking account and/or savings account, except as noted in Paragraph C below, shall be the only person empowered to endorse instruments made payable to The Dragonfly Society of the Americas, and shall keep the bank account books current and available for inspection by the Executive Council upon notice.
>
> **Commentary**: addition of a comma.

3. Section V, Part C, Paragraph 1 (revision)

Current: The terms of all officers shall be two years, beginning at the Business Meeting of odd-numbered years, except as noted ~~in Paragraph 2 below~~ **elsewhere in this section**.

New: The terms of all officers shall be two years, beginning at the Business Meeting of odd-numbered years, except as noted elsewhere in this section.

Commentary: change to comply with added paragraph (5) regarding officers who may serve indefinitely.

4. Section V, Part C, Paragraph 3 (revision)

Current: ~~Officers, except for President, Editor-in-Chief, and the Regular Members whose terms have not expired, shall be nominated by a Nominating Committee consisting of all members of the Council. The President shall appoint one Regular Member to chair this committee.~~ **A Nominating Committee shall nominate one candidate for each office to be filled during the next election.** Nominations for Vice Presidents shall ~~be of three or more persons, including at least one from Canada, one from a Latin American country, and one from the United States.~~ **ensure that the Executive Council includes one Vice President representing Canada, one representing the United States, and one representing Latin American countries.** The President Elect shall automatically become President for the succeeding two year period.

New: A Nominating Committee shall nominate one candidate for each office to be filled during the next election. Nominations for Vice President shall ensure that the Executive Council includes one Vice President representing Canada, one representing the United States, and one representing Latin American countries. The President Elect shall automatically become President for the succeeding two year period.

Commentary: 1) allows the Nominating Committee to make nominations for any position which becomes available at the end of a term; 2) removes some language about the Nominating Committee which is expressed in the new section on committees; 3) the current paragraph states that the Nominating Committee will be composed of the entire Council which is not desirable; 4) clears up awkward language about nominations for Vice President which implies that we must always have at least three nominations; 5) language about the formation of the committee is outlined in the new committee section.

5. Number current final paragraph of Section V, Part C, as Paragraph 4.

Commentary: this paragraph is unidentified. It is presumed to be Paragraph 4.

6. Section V, Part C, Paragraph 5 (addition)

Members may serve as Editor-in-Chief, Secretary, Treasurer, or Vice President for an indefinite number of consecutive terms with consent of the Society membership.

Commentary: this is already in practice although the bylaws do not state that any officers may serve indefinitely.

7. Section V, Part C, Paragraph 6 (addition)

In the event that the office of President Elect becomes vacant during the first 12 months following an election, a ballot of nominee(s) will be prepared by a Nominating Committee and delivered to the Society membership in the next feasible issue of ARGIA; members shall have at least 60 days from the publication date of the issue of ARGIA to return their ballots to the Secretary, who shall record the vote and publish the result in the next issue of ARGIA. In the event that the office of President Elect becomes vacant after the first 12 months following an election, the Executive Council will function for the remainder of the term without that officer and the membership shall elect both a President and President Elect at the next election.

Commentary: gives the Executive Council guidelines to follow in the event that the office is vacated.

8. Section V, Part C, Paragraph 7 (addition)

Additional officers needed to carry out the functions of the Society may be appointed at any time by the Executive Council and shall take office immediately upon notification of appointment. Appointed officers shall not have voting privileges. The term of office for appointed officers shall be determined by the Council, but in no case shall the term exceed that of other officers. Appointed officers may serve for an indefinite number of consecutive terms with approval of the Council.

Commentary: addresses a suggestion that the Council should have a web master as an officer. This will give the Council the power to create positions such as this.

9. Section V, Part D, Paragraph 1 (revision)

Current: PRESIDENT: Shall preside at all meetings and other functions of the Society; shall be Chairman of the Executive Council; **may appoint interim officers to fill the offices of Vice President, Secretary, Treasurer, Editor-in-Chief, and/or Regular Member, should any of these positions become vacant prior to the prescribed end of their term;** and shall be empowered to call special meetings of the Society and/or Executive Council.

New: PRESIDENT: Shall preside at all meetings and other functions of the Society; shall be Chairman of the Executive Council; may appoint interim officers to fill the offices of Vice President, Secretary, Treasurer, Editor-in-Chief, and/or Regular Member, should any of these positions become vacant prior to the prescribed end of their term; and shall be empowered to call special meetings of the Society and Executive Council.

Commentary: gives the President the power to appoint officers when positions are vacated before the end of the term. The language leaves the option to fill vacant offices to the discretion of the President (e.g. it may not be deemed necessary if an election is coming up anyway).

10. Renumber Section VI (Change of Bylaws) to Section VII.

11. Section VI. Committees (addition)

A. Standing committees may be formed by the Executive Council or the membership. The duties of newly formed standing committees shall be established by standing rule.

B. Special committees may be formed by the President, the Executive Council, or the membership. Charges to special committees shall be in writing.

C. Except as provided elsewhere in these bylaws, the President shall appoint the chairmen and members of standing and special committees with the approval of the Executive Council.

D. The President shall appoint a Regular Member to chair a Nominating Committee for one election period. The chairman shall select at least two additional committee members, at least two of which shall not be members of the Executive Council. Once a ballot of nominees is distributed to the Society membership in ARGIA, the Nominating Committee shall be dissolved until the President appoints a chairman for the following election period.

Commentary: 1) the bylaws currently have no provision for the creation of any committees by the Executive Council, excluding the Nominating Committee. 2) standing rules are procedures, guidelines, and policies which are under the control of the EC. The items in these documents are minor enough to not be in the bylaws (so it does not require a vote of the membership to change them). 3) typically, Nominating Committees are composed entirely of members outside of the Executive Council, however with an organization of our size we don't see it as a problem if one or more officers are on the committee as long as there is participation by members outside of the Council which this provision requires.

ARGIA

Binghamton, New York Vol. 17, No. 4, 1 January 2006

Back cover: (upper) The New World's first *Gynacantha* dormitory. *Gynacantha mexicana* (Bar-sided Darner) in south Texas. Photo by Dennis Paulson. (lower) Is this Chutzpah or what? Blue Dasher (*Pachydiplax longipennis*) finds the best perch on the pond. Photo by Kurt Mead.