

ISSN 1061-8503

ARGIA

THE NEWS JOURNAL OF THE DRAGONFLY SOCIETY OF THE AMERICAS

VOLUME 8

1 APRIL 1996

NUMBER 1



PUBLISHED BY THE DRAGONFLY SOCIETY OF THE AMERICAS

an affiliate of the

SOCIETAS INTERNATIONALIS ODONATOLOGICA

THE DRAGONFLY SOCIETY OF THE AMERICAS

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

EXECUTIVE COUNCIL 1995-1997

President	K. Tennessen	Florence AL
President Elect	R. Garrison	Azusa CA
Past President	G.L. Harp	Jonesboro AR
Past President	T.W. Donnelly	Binghamton NY
Past President	C. Cook	Center KY
Vice President, SIO Affairs	M. Westfall, Jr.	Gainesville FL
Vice President, Canada	R. Cannings	Victoria, British Columbia
Vice President, Latin America	R. Novelo G.	Jalapa, Veracruz
Secretary	S. Dunkle	Plano TX
Treasurer	J. Daigle	Tallahassee FL
Regular member	T. Cashatt	Springfield IL
Regular member	S. Krotzer	Helena AL
Regular member	C. Shiffer	State College PA

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** should preferably be submitted and hard copy and (if over 500 words) also on floppy disk (3.5" or 5.25"). The editor prefers MS DOS based files, preferably written in WORD, WORD for WINDOWS, WordPerfect, or WordStar. Macintosh WORD disks can be handled. All files should be submitted **unformatted and without paragraph indents**. Each submission should be accompanied by a text (=ASCII) file. Other languages should be submitted only as text (=ASCII) files. Line drawings are acceptable as illustrations.

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

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

MEMBERSHIP IN THE DRAGONFLY SOCIETY OF THE AMERICAS

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

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

Cover: *Ophiogomphus anomalus*, by Peter Burke. I have a vision of Peter standing in a raging rapids, holding a drawing book, arm extended, pencil held upright. . .

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

IN THIS ISSUE

It is especially difficult to believe Spring is just around the corner, but the calendar assures me that it will get warmer. This has been a difficult winter for most of us, with heavy snows and very low temperatures. But the geese have been flying north for a few weeks, and we even saw a flock of snow geese cruising over Binghamton.

Spring means our thoughts turn to our beloved odonates, and our first attention turns to the field trips. The Spring Southeastern DSA trip will have occurred by the time you receive this and we will provide the sordid details in the next ARGIA.

The annual meeting is not until the end of June, but that date will be here before most of us realize it. Make your plans now.

Last month I heard the news that Paul Harwood had died. Paul was not a member of this society -- it came into existence well after his active days -- but he had been an enthusiastic observer and collector and photographer of dragonflies. I enclose a brief obituary notice. However, because several of us who knew Paul had only met him at the 1963 Purdue symposium, I have enclosed a brief reminiscence of that wonderful meeting.

And a note on the Purdue meeting gives me a segue into my next topic - the expansion of graphics in ARGIA. I have recently acquired a scanner and found it a wonderful device. I have decided to inflict the membership with it, starting with a reproduction of a photo of the participants at the Purdue meeting. This is the only photo of Paul Harwood I have, and it will provide some amusement to the membership to see some of the DSA members as they were then. If there is anyone out there who is experienced with a HP ScanJet 4C I would appreciate some tips! I would also appreciate your photos and drawings for future issues.

Our fabulous trip of the quarter is the Tennessean - Mauffray - Dunkle expedition to Ecuador. The first part of the story appears in this issue and shows that collectors are indomitable above all.

Steve Walter contributes an important contribution on a long study of dragonfly migration. This account shows vividly how much can be accomplished by dedicated people with little previous commitment to dragonflies.

Jerrell Daigle adds some new dragonfly records for the Dominican Republic, including one record for the country. Steve Roble adds important damselfly records from Virginia. Ginger Carpenter found *Libellula axilena* in Rhode Island - a northern record. This last should have been in the previous issue, when records of the species were noted elsewhere in the east. Sorry, Ginger.

I have added a few tidbits from NATURE, which I scan regularly. One of these really caught my eye!

Ken Tennessean contributes a tip on the immobilization of small specimens being studied under the microscope. Many of us have had this problem. Another problem - the well-known wet net from sweeping specimen close to the water surface - is addressed by Bob Muller, who originally submitted this tip from ODE NEWS.

A poem by Lisa Smith reminds us that we must act on the common name selection process. We are attaching a ballot to this issue for the final voting on common names. Several species had alternative names proposed for them, and we must select the favored name. Regardless of your feeling about common names, we urge each of you to vote on each of the names. Only through the broadest possible participation can we promote these names as "common".

=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=

HAPPY BIRTHDAY MINTER!

On 28 January Minter Westfall, the dean of New World odonatists celebrated his 80th birthday. It has been a year of milestones - the previous autumn he and Margaret had their 50th wedding anniversary. Just ten years ago Ken Tennesen wrote a biography that appeared in *ODONATALOGICA* (1986, 15(1):5-17). All of us join in wishing you many more!

=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|

IT'S TIME TO MAKE YOUR PLANS TO ATTEND THE NEW BRUNSWICK FIELD GATHERING!

When? 28 to 30 June, 1996

Where? St. Stephen, New Brunswick, which faces Calais, Maine across the St. Croix River, which is the boundary between the US and Canada. By the way, the natives pronounce it "Callis". The site is close to the site of the first European attempt to colonize North America (we will be more comfortable than they were!).

How to get there? From Maine, the easiest crossing is at Calais, which is reached by highway 9 from Bangor or US 1 from coastal Maine. There is also a crossing further north at Houlton, Maine, on Interstate 95. The border crossing is generally rapid, even if there is a line of cars. It would be wise to avoid peak times.

Legalities? Customs formalities are quite simple on both sides of the border. Do not bring firearms into Canada under any circumstances.

There are no permits necessary to collect insects in Canada nor are there rules against carrying dead insects across the border. There are no Canadian regulations prohibiting the taking of any Odonata species in eastern Canada. If you anticipate transporting live insects, then you should contact Paul-Michael Brunelle as soon as possible, so that he may assist you in obtaining a permit.

Visitors from the US should be familiar with US Fish and Wildlife regulations. Contact Nick Donnelly for further information. In Maine there are several species that have been proposed for

protected status, but as of now there are no officially threatened species.

Meeting Hotel? The **St. Stephen Inn**, 99 King Street, E3L 2C6, will be the official meeting place. The rates are \$60Cdn for a single and \$72Cdn for a double. If there are a sufficient number of bookings, then a lower rate might be negotiated. The telephone for the motel is 506-466-1814; FAX 506-466-6148. **BOOK NOW!**

The St. Stephen Inn is located immediately adjacent to the Visitor's Center, where additional information, and good provincial maps, may be obtained.

In the event that the St. Stephen Inn is booked, there are other suitable motels nearby:

Winsome Inn, 198 King St., E3L 2E2 (800-400-7111)

White Swan Motel, 186 King St., E3L 2E2, (506-466-2031)

For those staying on, the Loon Bay Lodge on the St. Croix River about 30 minutes drive from St. Stephen is very well situated. Contact David Whitingham (506-466-1240) if you are interested.

How Expensive? Less than you might think. Remember that the Canadian dollar is currently worth \$0.74 US. It is definitely a good idea, however, to fill your gas tank on the US side of the border. Major credit cards are widely accepted.

St. Stephen has many grocery and other sorts of stores.

Camping? There are a number of provincial camping sites near the St. Croix River. They are rough, but serviceable, with privies and water from the river.

Further Information? For further information relating to the US side of the border, contact Nick Donnelly (607-722-4939; e-mail address tdonnel@bingsuns.cc.binghamton.edu)

For Information on pre- or post-meeting collecting on Canada, or on camping in Canada, contact Paul-Michael Brunelle (902-422-6490) *prior to 1 May, when he will be in the field.*

Tentative Schedule Note that because one of the main foci of this meeting is an undescribed species of *Neurocordulia*, and because New Brunswick is on Atlantic time, the sought-after species will first appear about 10 PM. Therefore, there will be no evening meetings. On the other hand, the early morning is very suitable for meetings, because activity of most odonates does not begin very early.

Friday 28 June

12 Noon and following. Early registration at St. Stephen Inn. Maps and instructions will be provided.

6 PM to dusk. Collecting on **Canoose Stream**, about 30 minutes drive from St. Stephen. This stream is the type locality of the new species.

Saturday 29 June

8:30 to 9:30. Business meeting, St. Stephen Inn

9:30 to 10:00 Briefing on the area and meeting collecting plans (Brunelle)

11:00 Collecting on the **St. Croix River** (bring a lunch), which is somewhat less than 1 hour from St. Stephen. This locality has *Ophiogomphus anomalus*. In the afternoon some of the group may want to proceed to Canoose Stream.

5:00 to 7:00 Cook-out dinner on banks of **Canoose Stream**. At dusk the *Neurocordulia* will start flying.

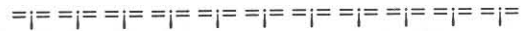
Sunday 30 June

10:00 - 4:30 **Mohannes Stream** (bring a lunch). This is a slower stream with some beaver dams. 26 species were found at a meeting there last year.

5:00 - ? Dinner and presentations by members, or return to Canoose?

Because of the special interest attached to a dusk and night flying insect, we might omit a slide presentation. Bring slides and tall tales anyway - it could even rain.

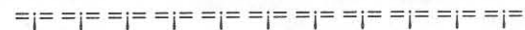
The field localities are very beautiful but far from food. Therefore, bring your own food or ensure that you are registered and will be provided for at the cook-out.



BOOK NOTICE

Natürliche Feinde, Parasiten und Fortpflanzung von Libellen [Predators, Parasites and Reproductive Behavior of Dragonflies] By Gunnar E. Rehfeldt, 173 p., numerous figures; German with English summary. For further information contact Dr. Gunnar E. Rehfeldt, Zoologisches Institut der Technischen Universität Braunschweig, Pockelsstr. 10a, D- 38106, Braunschweig, Germany. The price of the book is 57 DM plus 3 DM for postage and handling.

We hope to have a review of this book in the next issue.

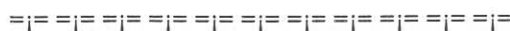


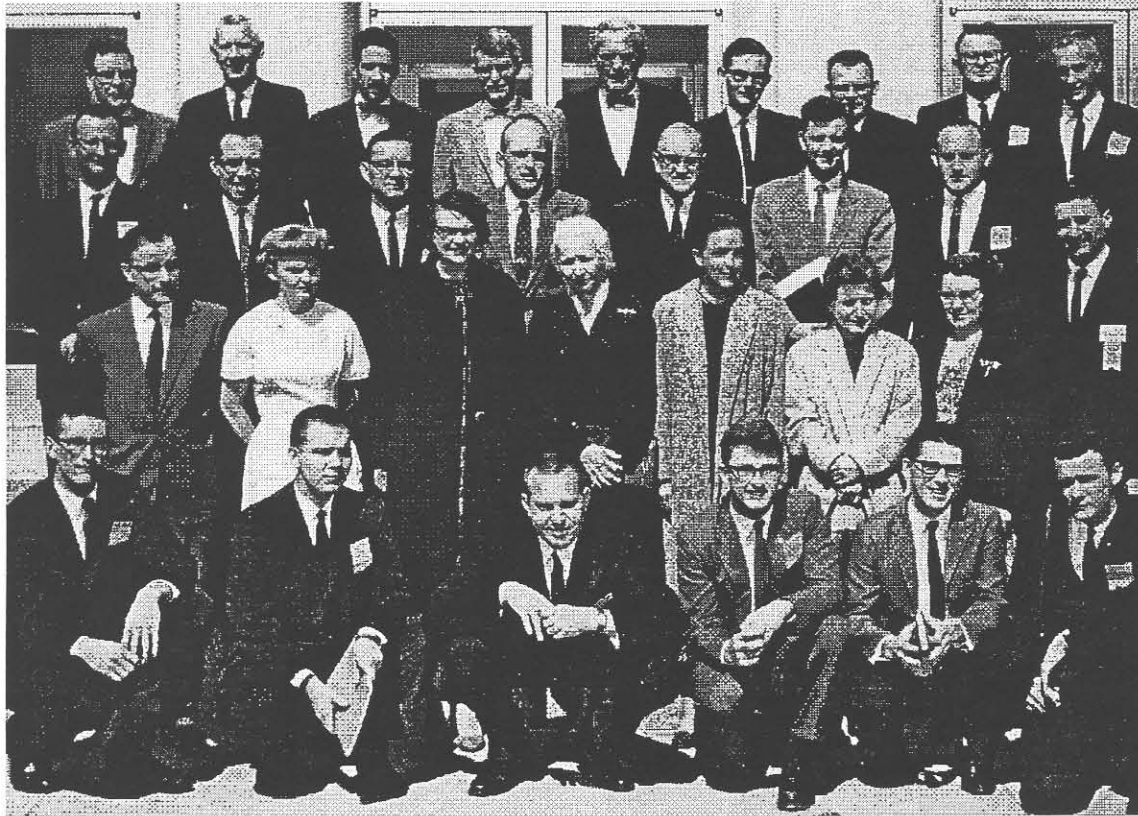
PAUL HARWOOD - A BRIEF OBITUARY

Minter Westfall and Bob Glotzhofer both passed on the sad news that Paul Harwood, of Ashland, Ohio, died on 30 December at his home following a long illness. Paul was born in 1906 in Newfane, New York, received a bachelor's degree in 1928 at Cornell and a PhD in Parasitology at Rice [then Institute] in 1931. He worked in the Pharmacology Department of Vanderbilt University and then for the U.S. Government as a parasitologist in College Park, Maryland. In 1940 he and his wife Jessie moved to Ashland, where he became research director at Hess and Clark Laboratory, from which he retired in 1971.

Paul was a very interested dragonfly hunter and photographer, specializing in odonates of Ohio and West Virginia. Several of us remember him at the 1963 symposium at Purdue which was organized by the late Monty Montgomery. Unfortunately, for most of us it was our only encounter with this energetic and enthusiastic man.

We express our condolences for his surviving family members and wish that we had gotten to know him better.





Participants at the Purdue Meeting: Back row, left to right): Carsten Ahrens, George Bick, George Beatty, Donald Borrer, Paul Harwood, Clifford Johnson, Robert Cummings, Paul Lutz, Gerald Eller. Second row: Nick Donnelly, Robert Alrutz, Minter Westfall, Oliver Flint, Monty Montgomery, Philip Corbet, Charles Jenner, Jerry Macklin. Third row: Merle Jacobs, Neva Curtis, Emily Alward (Monty's daughter), Leonora Gloyd, Alice Ferguson Beatty, Juanda Bick, Mary Davis Ries. Front row: Harold White, James Ettman, Duncan Cuyler, Tony Watson, William Lease, Charles Boehms.

THE 1963 COLLOQUIUM ON THE ODONATA

Nick Donnelly

B. Elwood (Monty) Montgomery convened what was probably the first national Odonata meeting in 1963 in conjunction with a regional meeting of the Entomological Society of America. When he first proposed the meeting, the organizers doubted that there would be enough interest. However, 30 participants convened in Lafayette, Indiana, for what turned out to be a lively meeting; the accompanying photo shows them shivering in the cold March sun.

Most of the participants met each other for the first time I flew up from Texas with Bob Cumming,

then at Austin. The two of us stood with two other people in a tiny cold room in the Chicago Airport waiting for our milk-run flight to Lafayette. No one spoke. It was not until we arrived in Lafayette that I realized that the two were Merle Jacobs and Philip Corbet!

The topics at the symposium ran a gamut that included systematics, behavior, genetics, migration, literature, and, most of all, prospects for the future. In his introduction to the published papers, Monty said prophetically, "Perhaps, we shall soon be able to make the Odonata as popular

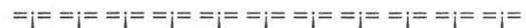
a group as the beetles and butterflies. Alrutz has used them for all the students in his summer institute for exceptional high school students the last two years, Westfall is about to publish the second volume of the dragonflies of North America, so that everyone can easily identify any species he finds, and Borrer is providing common names, so the amateur can talk about them without the use of Latin. Maybe we can soon have as many dragonfly chasers as there are bird watchers."

The contributions were very stimulating -- especially as most of us were introduced to topics which were somewhat new to us. The topic with the most contributions was photoperiodism and development of larval stages. Corbet -- in Canada at that time -- led an interesting discussion of migration which planted in many of us the notion

that migration might be purposeful and important. It was the first that I had heard of northward spring migration of *Anax junius*, which is now regarded by many as possibly essential to maintaining the species in the northern United States.

Tony Watson, fortunately for us on a post-doc in Cleveland, made a strong impression on the group, and some of us maintained a close relationship until his untimely death a few years ago.

It was not until 1977 that a large group again assembled -- at the SIO meeting in Gainesville. This was the last meeting at which most of us saw Monty, who continued to maintain his great enthusiasm for all things odonatological.



ESCAPADE IN ECUADOR

Part 1. The Winch, ah, in Pichincha

Ken Tennessen

Temperate Zone winters are the spawning grounds for tropical excursions, even for those of us living in the southern United States. Early in 1995, Sid Dunkle, Bill Mauffray and I decided to go to Ecuador for excitement and interesting dragonflies. Bill took the lead in planning the trip, and after many phone calls and immunizations, we were more than ready to depart. We flew into Quito late (8:00 PM) on Saturday, June 3, with visions of exotic dragonflies dancing in our heads. Quito is just south of the equator, but is nestled between the eastern and western slopes of the Andes Mountains at about 9000 ft. above sea level, and therefore has a very moderate climate. Our main destination was Yasuni National Park, in the Oriente, to our knowledge not yet visited by any odonatologist. About all we could accomplish this night was to find someplace nearby to stay.

We got a room at the Aeroport Hotel, just in time for a wedding reception, with all the singing, percussion, and hoopla of such a festive occasion. Bill called his contact at the Catholic University (PUCE) and learned that our collecting permits would not be ready the next day, so we planned a one-day foray west toward Santo Domingo Los Colorados. The excitement of the trip and the

celebration below made it difficult to get to sleep, an unrecognized harbinger of things to come.

On Sunday morning we picked up our rental vehicle, a 4-wheel drive Mitsubishi Montero, got some directions at the hotel desk, bought some food and drinks at a Maximart, careened through Quito, and started bouncing up Mt. Pichincha. Sid had some information on how good the birding was along Chirriboga Road on the way to Tinalandia; our idea was that this area might also be good for odonates. Now, Chirriboga Road has every imaginable and unavoidable pothole and teetering curve in its narrow, winding path up Pichincha, but nothing can deter 3 adventurous odonatologists, right? We stopped at a few small trickles and pools, but the weather was mostly cloudy, cool, and even misty, not unusual above 10,000 feet altitude. At one small pool along the road we saw an *Aeshna* patrol for a short period when the sun appeared, but did not get a swing at it. We drove on, through the small village of San Juan, shortly after which we came to a fork in the road. We took the right fork, not quite sure if it was still Chirriboga Road, as it kept climbing. About 11 miles up this road, at a rather sharp turn, the road changed to a very muddy, ominous

consistency, and Bill stopped the vehicle. We decided to go forward a little to see what was ahead, and saw a steep downslope, lots of clay and mud, and no vehicle tracks. Sid and I walked down the hill to another turn; the road, under construction here, ended just before the small village of Victoria. When we got back in the vehicle to turn around, we discovered we were stuck. Unknown to us at the time, going around that first turn for just that short distance was only Mistake #1.

Some local residents came to see what was happening. They informed us that the road was under construction here, and that work had been postponed because of the rainy season. It seemed logical to us that a caution sign or warning should have been put up; road signs are rarer than rare in Ecuador. No one here owned a vehicle; if you ever want to live along a road without traffic, we know the place. Two very congenial fellows, Marco and Jose, helped us try to push the vehicle out. Pushing was futile, so we thought of driving down the hill, turning around and then getting a straight run up the hill -- this was Mistake #2. After a few tries at getting back up the hill, even with throwing gravel under the tires from the side of the fresh road cut, the vehicle was now firmly implanted at the bottom of the hill at a second curve, and daylight was rapidly waning (the sun sets at 6:00 PM). We resigned to the likelihood that we would have to spend the night here. Jose offered us shelter in his small shack at the top of the hill, but noticing the frequency and freshness of the chicken droppings (the "F & F of CD" factor), we decided to reside in our vehicle.

Not expecting cold on this trip (after all we were at the Equator), I had worn only a T-shirt this first day (Mistake #3). Jose was kind enough to lend me an old jacket for the night. Sid stretched out in the back seat while Bill and I sat up in the front seats. It must have gotten into the low 40s that night, but the cold and chattering of Bill's teeth weren't the only things keeping me awake. The flimsy jacket I borrowed must have been bedding for chickens or some other animals; the stench was over stimulating. Plus my left Achilles tendon was really aching (I had injured it playing soccer in May, but unbeknownst at the time, I actually had ruptured it). I did not sleep a wink. I think I have never been so happy to see a sunrise as that next morning, though its duration was the longest I can remember since Vietnam.

In the dim light of dawn we stepped out into the cold air and the wet, slippery mud, with a plan contrived the night before to get our vehicle out. One of the fellows helping us, Marco, from Quito, was there visiting his friend Jose. He helped us carry some large, hand-hewn planks from a pile at the top of the hill and place them under the tires. This was one of those near super-human efforts, as each plank was wet and must have weighed about 80 lb., and the footing was treacherous. The plan was to drive the vehicle up on planks; then we would inch forward and keep moving planks ahead to keep driving onto. The major problem was that our tire treads were so packed with the slick clay that they kept slipping off the wet planks, especially with the slope of the curve. After three futile hours at this, all the while slipping further down around the curve, I proposed that we start walking, get back to Quito and hopefully engage a wrecker with a winch. Marco said it was a 2.5-hour hike back to the village of San Juan, but would take us gringos longer over the mountainous terrain. While Sid and Bill were arguing about whether to continue with the planks versus walking, I started walking, hoping we could catch a ride. I was unsure I could make it that far with my leg, but I feared that staying any longer would be Mistake #4. The walk was arduous -- 11 limping, painful miles of thin-air ups and downs back to San Juan. We did not see a single vehicle. Hailing from south Louisiana, "Lowland Bill" had difficulty going uphill but would pass me on the downhill. I think the main thing that kept us going was an occasional *Aeshna* to swing at. I missed a couple, but Bill and Sid each bagged one or two, which turned out to be *A. marchali*. The anis, black thrushes and hummers, butterflies, and orange-red bumblebees were fantastic sideshows. I was impressed with Marco's stamina and his knowledge of nature and living things. When we finally got to San Juan six hours later (a new record according to Marco), it started to rain hard. We sat down with Marco, poured down a soda, and waited for a ride to Quito.

The cantina we entered for shelter was small; by the doorway a local fellow lay passed out on the dirt floor, two empty tequila bottles by his side and dogs sleeping on top of him. He came to shortly. Seeing three strange gringos in front of him, while still on a buzz, he launched into a verbal tirade, all the while entertaining two children and having quite a time joking and laughing in garbled

Spanish (undoubtedly at our expense). We finally caught a ride on an oil company pickup truck, just before 5:00. With a small piece of plastic for protection from the cold rain, we hopped into the back, but before we could situate our bottoms, the driver popped the clutch. Bill and I grabbed onto the roll bar at the back of the cab, and Sid grabbed onto me. Judging from the speed of the truck, that driver certainly knew the road, and my guess is that the tires were in the air about as much as they touched the road. This equated to our bottoms being airborne about the same amount of time. Bill remarked that it was as scary as any thrill ride he had ever been on in his life. Sid said you had to be there to know what it was like. I had only my skimpy T-shirt, as I gave the smelly jacket back to Jose. I was so cold when we got to Quito, my thoughts were garbled, but they somehow combined skiing and roller coaster experiences. Dumped at the outskirts of Quito, we took a cab to the rental car office, explained what happened, and got help arranging to meet a wrecker truck the next morning. We then went to the Savoy Inn, where we had made a reservation for Sunday night (which seemed like a week ago), but were lucky to get a room for this night. The plan for Tuesday (June 6) was for Sid and I to go with the wrecker to get our vehicle out, while Bill would go to PUCE to get our permits, acetone, directions to the Yasuni Scientific Research Station, etc. The meal that night and the warm bed were greatly treasured luxuries. It was a good thing we did not know how hard it was raining on Pichincha.

Sid and I met Mr. Juan Tapia, the wrecker man, at 7:00 AM, exactly on time (quite surprising in Latin America). We explained as best we could how difficult getting the vehicle out would be, and Sid drew a map showing him the two curves, the steep downhill slope, and the "lodo". I remarked that it was "todo lodo." He drove back to his base and got an extra man, some different equipment, and what sounded like some advice also. Up Chirriboga Road we went; it was in much worse condition than the day before. Several kilometers before we got to the site, Mr. Tapia got too close to the edge of the road and got stuck; I could hear Sid's sigh of relief over mine as he gunned it and backed out. That was when we realized he did not have 4-wheel drive. I swear I could sense his respect for the situation increasing. Before he neared the "Mud Hole" at the dreaded curve he stopped, and we walked around where he could look down the

hill and see our vehicle; the look on his face was less than one of confidence.

Several local folks were present that we hadn't seen the day before, and they greeted us with advice I don't think we quite comprehended. The winch cable, about 100m long, was just long enough to reach the front bumper of our vehicle. Because of the curve, the Montero could not be pulled straight forward, so the men drove a large metal rod into the middle of the curve and placed the cable to the outward side of the curve. The cable then exerted a pull along the axis of the curve instead of toward the inside of the curve. I got in the Montero to provide power to the wheels. I had to rely on my aching left leg and the hand signals of Sid and the locals for accurate timing on the clutch, as I could not see the wrecker. Forward progress was agonizingly slow. Several times the metal rod was pulled over by the cable and had to be redriven into the clay. But we cleared the lower curve and finally got going up the hill. The metal rod had to be repositioned at the top of the hill as we neared the first curve, as the cable was eating into the edge of the hill. After we were out of the clay, Mr. Tapia pulled forward and immediately got stuck; I had to pull him backwards for about two meters, which put us dangerously close to the hungry mud hole again. The total extracting process took slightly over an hour. Sid and I were very relieved to get it out, so when the local folks started asking for Bill's diet Cokes, we started handing out what was left. Apparently we left the vehicle unlocked the day before, and little of our perishable items were left. This really was not of concern to us; we just said good-bye. I left the 4-wheel drive engaged for the trek back to Quito, as the wrecker was already out of sight. A few km down the road we remembered that we left the heavy planks in the mud, but we convinced ourselves not to go back. We reminisced driving slowly through San Juan, and stopped at the small pool east of there to net a few *Aeshna marchali*. We also saw the larvae, which occasionally swam to the surface of the water; it was fun speculating on the reason for this strange behavior, and feeling free again. It would have been good to find a new species here and name it *marco* or *tapia*.

We met Bill at the Savoy Inn and related our experiences to each other. That's when Bill dropped two bombs on us. First, our permits were not prepared; we would have to get them at the end of our stay in Ecuador. Secondly, the gallon of

acetone we requested cost \$100, for which he had to get a special permit just to possess it! We then told Bill about the struggle we had and the cost of the wrecker service, which was \$180. With all the other expenses and problems we'd already incurred in the three days, it didn't take us long to figure up that the 5 or 6 specimens we caught were each

worth about \$100. As Bill put it, we had to get out of Quito and head for the Oriente before we ran out of money!

[Stay tuned for Part 2 of our escapade, "Going Looney in Yasuni", in the next issue of ARGIA]

FORT TILDEN DRAGONFLY MIGRATION WATCH
Results of a three year study, 1993-1995

Steve Walter

Origin: Fort Tilden has been the site of a formal hawk watch since the fall of 1990. For this reason - - and because of its position along the coast -- I was contacted in early September 1992 to participate in the dragonfly migration data gathering project conducted under the auspices of the Cape May Bird Observatory. The recording of data began in mid September. The most significant results during that season were to introduce me to dragonfly identification and to light a spark within me. The following summer I began studying dragonflies in the field in preparation for that season's migration, an endeavor I believed needed to be started earlier in the season than the effort in 1992.

Location: Fort Tilden is part of the Gateway National Recreation Area. It is located on the Rockaway peninsula, which is part of the county of Queens and the city of New York. The Rockaway peninsula forms the westernmost extension of the Atlantic shore of Long Island, a long known flyway for migratory birds. Rockaway Inlet borders the peninsula on its north side. The width of the peninsula where observations were done is about 600 yards. Fort Tilden itself stretches from about four to three miles east of Breezy Point, the western tip of land. Consequently, there is no milling about or congregating of dragonflies at Fort Tilden due to an imminent water barrier. Migrants tend to continue moving in the direction of migration, only slowing because of feeding activity or weather changes. That direction is to the west-southwest.

Methods: Dragonfly observations were conducted from ground level. Observations done in conjunction with or incidental to the hawk watch

were done from a 50 foot high former gun battery or bunker. These were generally done from mid September on, with the advent of significant hawk flights. The ground level observations of the early season proved important, as a number of species showed themselves to be low fliers. It was also possible to spot a bit sooner the approach of small dragonflies, facilitating a better chance for identification. Observations were done at times from the Fort Tilden parking lot, at times from the roadway leading to the parking lot, and at times from the beach. This depended on where the flight appeared more active and upon the amount of human and vehicular activity on a particular day. No matter the choice of observation spot, the background for spotting low flying individuals was better at ground level than from the bunker. Identification was done by sight and with the use of binoculars. Most species were captured at some point to confirm the observers' call of in-flight dragonflies. Random capturing of reddish appearing immatures of *Anax junius* was also employed, in an effort to determine if *Anax longipes* appeared in migration situations (it did not). All individuals were released. In addition, a small fresh water pond, about one-half mile east of the observation site, was often checked as well for the effect of a flight.

Data was recorded in a similar fashion to that done for the hawk watch, with readings taken at the start of each hour of coverage. The data gathered included wind direction and speed, temperature, and percentage of cloud cover. Dragonflies were counted individually when possible -- that being when they passed close enough for identification and when the spotting of hawks did not take priority. Unidentified dragonflies were not recorded. The hordes of *Anax junius* and *Tramea lacerata* flying simultaneously with significant

hawk flights were not counted -- just labeled abundant, common, etc. It should be noted that the numbers given as maxima represent a cross section of the flight. Because of their small size, dragonflies must pass close to the observer to be visible and identifiable. Moreover, there is a bias toward the larger or more distinctive species such as *Epiaeschna heros* or *Libellula pulchella*. The actual numbers migrating through Fort Tilden would be significantly higher as the flight often occurred over the width of the peninsula.

Dates: Observations were begun with the first available cold front in August. In 1993, this was 15 August. In 1994, this was 6 August. With both these outings successful, it was apparently necessary to continue pushing the early date. In 1995, a significant front passed through the northeast United States on 30 July. Observations on this date not only showed that southbound dragonfly migration could occur as early as the month of July; but it was the most spectacular flight observed, excluding those dominated by *Anax junius*. There was some indication of movement prior to this date; this needs to be explored in the future. Because of the hawk watch operation at Fort Tilden, there was no "official" end to the dragonfly watch season -- dragonflies were recorded as long as temperatures allowed them to stay active. *Anax junius* was always the last species to appear -- to 14 November in 1993, 13 November in 1994, and 26 October in 1995. The greatest species diversity occurred in August, with 12 species recorded. 11 species were recorded in September, though many in reduced numbers. In fact, only *Anax junius* increased in numbers in September. *Sympetrum vicinum* was the only species not recorded before September. 7 species were recorded in October, 6 of these regularly.

Weather: Migration was most often associated with the passage of a cold front and winds from a northerly component, the most common after a front. These kinds of winds stimulate migration in two ways. For a southbound animal, they are favorable tail winds. Consequently, instinct has evolved to promote migration on northerly winds. However, favorable winds may at times be long in coming. In fact, the peak flight (excluding those dominated by *Anax junius*) of 1994, on 27 and 28 August, occurred on a southwest wind. Many of the species peaking with this flight were scarce after August in all three years, suggesting that the

lateness of the date provided an urgency to move on. Interestingly, a substantial movement of birds, most notably Eastern Kingbird (*Tyrannus tyrannus*) and Bobolink (*Dolichonyx oryzivorus*), also occurred on these two days. Light to moderate wind speeds appeared to be preferable to strong winds, but this is not conclusive. Certainly, the dragonflies responded to lighter winds than would be necessary to trigger hawk movements (on the coast). One situation that was definitely and without exception unfavorable was the onset of onshore winds. With the onset of the sea breeze, migration activity came to a screeching halt. As would be expected, the best migration days were those with an abundance of sunshine. In fact, migration was seen to slow with the obscuring of the sun by clouds and improve with the return of sunshine. However, a substantial flight (of mostly *Anax junius*) occurred on 8 September 1995 under mostly overcast conditions.

The temperature required to allow migration activity was something I was constantly trying to determine. This was difficult for the early migrating species since temperatures in August seldom dropped below their tolerance level. One such occurrence came on 6 August 1994, with morning temperatures dropping to about 55 degrees Fahrenheit. With an active wind from the north to northeast, few dragonflies were seen -- until mid-day when the temperature rose above 60. Recall that this was the first front of the season. Did the day have to warm up to trigger the flight or did the dragonflies need time to reach the coast for the first time? This question may have been answered with the flight of 30 July 1995. Despite this so called "cold" front and an active wind from the northwest, temperatures only lowered to 84 degrees (and rose to 94). Even though few dragonflies had been noted on the coast prior to this day, the flight was already in high gear by 0800 hours. After August of course, opportunities for measuring the effect of temperature on dragonfly migration were more numerous. Unfortunately, only *Anax junius* and *Tramea lacerata* appeared in a significant enough sample. The temperature required to trigger significant migration among these species appeared to be about 60-62 degrees Fahrenheit. *Anax junius*, however, was occasionally spotted at temperatures below 50.

Flight Mannerism: Two types of migration flight were observed. One was of a direct, purposeful nature to the west-southwest. This was the type normally exhibited by *Epiaeschna heros*, *Libellula* sp., and *Erythemis simplicicollis*. The second type was of a swarming nature. This flight mannerism was usually, though not always, engaged in by *Anax junius*, *Pantala* sp. and *Tramea* sp. In this flight, numbers of dragonflies could be seen feeding in swarms and every few minutes advancing in waves. This is one reason I advise against extrapolating counts on a per-minute or per-hour basis. *Pachydiplax longipennis* distinguished itself from other species by landing frequently and by often appearing to avoid flying over paved areas. *Anax junius*, *Epiaeschna heros*, *Pachydiplax longipennis*, both *Pantala* species, and *Tramea lacerata* were observed flying in from the ocean, likely having been steered onto the ocean by strong winds.

Age And Sex Of Migrants: As noted above, identification was made mostly by sight. In the species accounts, I describe specifically how each species was identified. Both mature and immature patterns are described, as all species with recognizable age (or sex) variations did, in fact, appear in those variations. Tandem flight was observed occasionally for *Anax junius* through the three years and for about 75 pairs of *Pantala flavescens* on 30 July 1995. *Anax junius* and *Libellula pulchella* were occasionally observed egg laying at the pond. On one occasion, an *Anax junius* was observed eating a *Pachydiplax longipennis* at the pond.

SPECIES ACCOUNTS

Anax junius, although the best known migrant, proved to be atypical of migrant dragonflies. Some of the ways in which it differed or distinguished itself from other species have been noted above. The highest recorded daily total was 1055 on 25 August 1995. However, this species was often much more numerous, numbering into the thousands. No attempt was made to count these larger flights as they occurred during the month of September, coinciding with significant hawk flights. At these times, they were heavily preyed upon by American Kestrel (*Falco sparverius*) and Merlin (*Falco columbarius*). This species was recorded as early as 30 July (1995) and as late as 14 November (1993). *Anax junius* was easily

identified, even at a distance or altitude, by its large size and moderately slender build. At close range, its green thorax coupled with the bluish or reddish-brown abdomen added to the distinguishing characteristics.

Epiaeschna heros was identified by its slender and dark appearance, very large size, and often drooped abdomen. This species was recorded as early as 30 July (1995) and as late as 24 September (1993). The maximum count was 151 on 27 August 1994. This occurred in a year in which the species was locally scarce prior to migration. Conversely, in 1995 the species was very common in the New York region. After a count of 125 on 30 July, numbers dropped to 14 on 13 August, to single digits thereafter, and completely disappeared after 1 September. It seems likely that the drought that affected the northeastern United States during August was responsible for this quick downward spiral. In suitable habitat away from Fort Tilden I observed a good amount of egg-laying into August, with one individual egg-laying as late as 28 August. This was done in the muddy edges of vernal ponds whose water was only receding. Thus the availability of juveniles of this and other vernal pond breeders to the fall migration was no doubt reduced. Consequently, the fall 1995 migration of the spring's invaders failed to live up to expectations.

Libellula semifasciata was identified by its medium size, stout build, and reddish-brown body and wing patches. Although never common, its flight in its few appearances was direct and unquestionably that of a migrant. The daily high count was only 9, on 27 August 1994. This was an early migrant, recorded as early as 30 July (1995) and only as late as 30 August (1994). Harder to quantify at Fort Tilden is this species' status as a spring migrant. In May 1993 it became numerous in the New York area, even appearing on Manhattan streets. It might have been expected that a notable southbound migration would have followed. The fact that only one was recorded that fall may have had several contributing factors. With this study in its infancy, this was not a species that I was on the look out for nor did I realize that its flight could bypass me on a southwest wind. In addition, its flight, direct and low to the ground, did not make it conspicuous.

Libellula pulchella was the only member of its genus to appear with any frequency. The high

count was 155 on 27 August 1994 and this was followed by 154 on 28 August. The peak flight in 1995 was 112 on 13 August. In all years, numbers dropped off sharply after August. Migration dates ranged from 30 July (1995) to 28 September (1995). This species typically exhibited a direct flight. *Libellula pulchella* was readily identified by its distinctive wing pattern consisting of three large dark spots on each wing and, in mature males, alternating white spots.

Libellula vibrans was first recorded on 6 August 1994 and recorded six times that season through 15 September. The maximum count was 2 on 28 August 1994. In the wake of a large northward irruption in the spring and summer of 1995, I looked forward to a more significant flight. However, only two were observed migrating. The hope to further substantiate this species as a fall migrant may well have been done in by the drought in the northeast. So far, this has been the only species found migrating that exhibits dark wing tips and otherwise inconspicuous wing markings when in flight. At least 2 of the 1994 individuals were mature males, lending their color to the identification process.

Sympetrum vicinum still remains an enigma at this point. A high count of 7 was taken on 22 October 1994 and these were moving in the direction indicative of migration. But such movements were too sporadic to be conclusive. In fact, in 1995 none were noted migrating. Only one individual appeared at the hawk watch. That came on 28 September and provided the earliest sighting for Fort Tilden, quite a contrast from every other species. This species is notorious in the New York area for its lateness, breeding in October and continuing to mid November in mild years. Nonetheless, it appears no more active in cold weather than other species. The fall of 1995 featured cold weather setting in and becoming entrenched earlier than normal, a possible contributor to the species' near absence at Fort Tilden. *Sympetrum vicinum* was distinguished by its small size and bright red body.

Celithemis elisa A single mature male was captured on 23 August 1995. I do not suggest based on one individual that this species is migratory. Upon interruption of this one's flight, even its intentions could not be gauged. A couple of points are worth considering, however. There are no known breeding sites nearby. Second, the

previous published late date for New York State was 18 August. Because of the concentrating effect of migration, many species' late dates are extended beyond what would result from the chance finding of individuals of these species in normal habitats.

Pachydiplax longipennis was distinguishable by its small size and, in the case of closely seen mature individuals, black tipped blue abdomen. Helping ensure identification was the fact that this species was found to land quite often, a stark contrast to other species. In conjunction, it was usually, though not exclusively, observed close to the ground. Also of interest, this species, more than any other, seemed to avoid flying over paved areas. Nonetheless, movement was too consistently to the south and represented by too many individuals to dispute its migratory intentions. The high count was 150 on 30 July 1995. This is a relatively low total for a species regarded by many as the most abundant dragonfly in the northeast United States. Two reasons may be responsible. First, its small size required close passage to the observer for detection. Second, it is possible that the species may be partially migrant, evacuating only the more northern portions of its range where it may be less able to overwinter. A similar situation appears to exist for the butterfly *Nymphalis antiopa* (although well known in the New York area for appearing on the wing with the first mild spell of the spring or even winter, it may not be able to survive winters in areas to the north). It has also been suggested for spring migration (Soltesz, Barber, Carpenter ARGIA, Dec. 1995) that this species is more of a habitat generalist than other migrants and it is the populations that employ vernal ponds that undertake movements due to drought conditions. This species appeared at the fresh water pond in greater numbers than any other species. Following the flight of 7 August 1994, about 50 were found where only a couple had been before. Coupled with the fact that most were mature, it provided additional proof (at a time when I still needed it) that this species was migratory. *Pachydiplax longipennis* was recorded as early as 30 July (1995) and as late as 8 October (1995).

Erythemis simplicicollis was almost always seen close to the ground and, due to its relatively small size, within twenty feet of the observer. As such, immatures and females could be seen to exhibit their distinctive green coloration. Blue males were

also identified, fitting in between *P. longipennis* and *L. vibrans* in size. This species was seen as early as 13 August (1995) and as late as 2 September (1994). The maximum count was 9 on 28 August 1994, rather low considering the species' general abundance. The same reasons cited for *P. longipennis*' rate of occurrence apply here.

Pantala flavescens was identified by its medium size and stout build and by its yellow to orange abdomen and clear wings. This species was not particularly common in 1993 and 1994, with no daily counts reaching 20. 1995 was another story. On 30 July, 2,420 were recorded. Thereafter, the highest count for 1995 was 56 on 13 August, with much lower numbers the rest of the season. Migration dates ranged from 30 July (1995) to 13 October (1995).

Pantala hymenaea was identified by its darker coloration than *P. flavescens* and by the diagnostic spot at the base of the hind wing. With practice, the spot proved to be more detectable than advertised and quite apparent in individuals directly overhead. This species was quite common in the New York area in the summer of 1994 and this translated into a strong migration showing. The maximum count was 164 on 28 August 1994. It was less abundant, though still common, in 1995, peaking at 62 on 30 July. The species was seen in migration as early as 30 July (1995) and as late as 29 October (1994), although numbers dropped off sharply after the first week of September.

Tramea lacerata was readily identified by its mostly black abdomen and the large black patches at the base of the hind wings. This species was observed as early as 30 July (1995) and as late as 25 October (1995). The highest count taken was 251 on 28 August 1994. In 1993, the high was 103 on 29 August and, in 1995, 195 on 25 August. My notes show it to be common to abundant as late as 24 September, but (because of having to deal with hawks) with no numbers to compare it to the early season flights.

Tramea carolina was identified by its red abdomen and wing patches. It is likely that this species was undercounted since the brown winged immatures were difficult to distinguish from *lacerata* except upon close passage. Nonetheless, this was a relatively uncommon species as it is near the northern limit of its range. The maximum count was only 11, on 30 July 1995. Still, it appeared consistently on days when other species were moving. The late date was 22 October (1994).

Future efforts: In addition to continuing fall migration efforts, I would like to see similar methods employed for spring migration. The best locations to check would be north pointing peninsulas and barrier islands, as well as water barriers to the north or east. Sandy Hook, New Jersey should receive attention. The western shore of Chesapeake Bay may be worth a look, as would the southern shores of the eastern Great Lakes. Cape Cod and Plum Island, Massachusetts are properly oriented but may be too far north for some of the species of interest. Subsequently, we could attempt to correlate spring and fall movements, as well as summer abundances of migratory species. The fall of 1995 proved a disappointment in this respect, most likely because of the drought in the northeastern United States. I had hoped to prove *Libellula axilena* a migrant by catching it in the act -- in addition to the circumstantial evidence from appearances north of its normal range -- but was unable to. Perhaps in a future year that opportunity will present itself. Certainly, every year is different, as the years 1993, 1994, and 1995 have shown. Future observations may yield more knowledge regarding fluctuations from year to year as well as the dynamics of daily flights.

Acknowledgments

Thanks to Skip Blanchard for reviewing this paper and special thanks to Dusan Rysula for the many hours of helping me with the field work.

Species	Earliest Date	Latest Date	Daily High	Date
<i>Anax junius</i>	30 July	14 Nov	1055	25 Aug 1995
<i>Epiaeschna heros</i>	30 July	24 Sept	151	27 Aug 1994
<i>Libellula semifasciata</i>	30 July	30 Aug	9	27 Aug 1994
<i>Libellula pulchella</i>	30 July	28 Sept	155	27 Aug 1994
<i>Libellula vibrans</i>	6 Aug	15 Sept	2	28 Aug 1994
<i>Sympetrum vicinum</i>	28 Sept	22 Oct	7	22 Oct 1994

<i>Celithemis elisa</i>	23 Aug	23 Aug	1	23 Aug 1995
<i>Pachydiplax longipennis</i>	30 July	8 Oct	150	30 July 1995
<i>Erythemis simplicicollis</i>	13 Aug	2 Sept	9	28 Aug 1994
<i>Pantala flavescens</i>	30 July	13 Oct	2420	30 July 1995
<i>Pantala hymenaea</i>	30 July	29 Oct	164	28 Aug 1994
<i>Tramea lacerata</i>	30 July	25 Oct	251	28 Aug 1994
<i>Tramea carolina</i>	30 July	22 Oct	11	30 July 1995

=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|

NEW RECORDS OF ODONATA FOR THE DOMINICAN REPUBLIC

Jerrell Daigle

I wish to place on record the following new Dominican Republic Province records. The data was submitted to me by Ollie Flint (USNM), who sampled the local Odonata cuisine last May and had a great time doing so!

The number of species found in several provinces has increased and that new total is included below.

Azua (7); Barahona (18); El Seibo (8); La Vega (46); Monseñor Nouel (18); Pedernales (4); Puerto Plata (15)

Idiataphe cubensis is a new country record and maybe a new record for the island of Hispaniola, as well. Readers can refer to my Dominican Republic Checklist (**BAO** 1:4, May 1993) for historical information.

ZYGOPTERA

Enallagma civile (Hagen) Puerto Plata
Enallagma coecum (Hagen) El Seibo, Pedernales, Puerto Plata
Hypolestes trinitatis (Gundlach) Puerto Plata
Ischnura ramburii (Selys) Azua, La Vega
Neoerythromma cultellatum (Hagen) Barahona
Protoneura viridis Westfall El Seibo, Puerto Plata
Telebasis vulnerata Hagen El Seibo

ANISOPTERA

Progomphus n. sp. Daigle; La Vega
Brachymesia furcata (Hagen); Barahona
Cannaphila insularis Kirby; Barahona, Puerto Plata
Dythemis rufinervis (Burmeister); Barahona
Erythemis plebeja (Burmeister); Azua

Erythemis simplicicollis (Say); Barahona
Erythrodiplax berenice (Drury); Pedernales
Erythrodiplax fervida (Erichson); Barahona
Idiataphe cubensis (Scudder); Azua: (New Country record for the Dominican Republic).
Macrothemis celeno (Selys); Monseñor Nouel, Pedernales
Micrathyria didyma (Selys); El Seibo
Orthemis ferruginea (Fabricius); Barahona, Pedernales
Perithemis domitia (Drury); Pedernales

Further expeditions to the Dominican Republic will undoubtedly uncover new records and more surprises!

=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|

FIRST RECORDS OF *TELEBASIS BYERSI* FROM VIRGINIA, INCLUDING A NEW NORTHERN RANGE LIMIT

Steven M. Roble and Dirk J. Stevenson
Virginia Department of Conservation and Recreation, Division of Natural Heritage
1500 E. Main Street, Suite 312
Richmond, VA 23219

The known damselfly fauna of Virginia consists of 53 species (Roble, 1994). Eight hypothetical species were also discussed in this paper. One additional species that was inadvertently omitted from the hypothetical list is *Telebasis byersi*. In his original description of this species, Westfall (1957) listed records from Alabama, Florida and Merchants Mill, Gates County, North Carolina. The latter site, which lies within Merchants Millpond State Park, remains the northeasternmost documented record from *T. byersi*. The nearest collection site (one specimen) in North Carolina is three counties to the south (Duncan Cuyler, pers. comm.). Despite the proximity of the Merchants Mill site to the Virginia border (approximately 13 km.), neither we nor Dr. Westfall (pers. comm.)

an animal cannot have the same generic name, of course. I thought it would be interesting to take a photo of an *Ictinogomphus clavatus* sitting on a *Gomphus clavatus*. No such luck. It turns out that *Gomphus clavatus* is an "ectomycorrhizal ectoparasitic" fungus living on the roots of certain ericaceous plants. Why "*Gomphus*" at all? I remembered that the word "*gomphus*" does not mean club, as many think, but instead, "peg" and might well be appropriate for a fungus seen under a microscope. Still, it would have been a neat photo. . .

=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=

SPECIMENS MOVING IN YOUR ALCOHOL DISH?

Ken Tennesen

Preserved nymphs and exuviae of aquatic insects move around quite readily when placed in a dish of alcohol. This is maddening if you are trying to draw or count setae. Evaporation of the alcohol and minute, unavoidable vibrations of the microscope shift the specimen out of line, especially when viewed through a camera lucida. I stick insect pins in a plastic foam bottom to secure specimens to the bottom of an alcohol dish.

I use plastic dishes of two sizes (a 5.3 cm diameter x 1.4 cm high petri dish and an 8 cm diameter x 2.5 cm high custom made dish), although glass dishes also work. The material for the pinning bottom is Plastazote foam, a material used for dry pinned specimens. Plastazote is available in a 16" x 18" x 3/8" sheet for \$4.90 from BioQuip Products, 17803 LaSalle Ave., Gardena, CA 90248-3602, USA; e-mail: bioquip@aol.com; Fax 310-324-7931. Cut a circle of this material the diameter of your dissecting dish and then slice off a 3 or 4 mm thickness. Press this slice into the bottom of the specimen dish. The circle must be cut the exact diameter to hold firmly in the dish--if cut too small, it will tend to float. Small petri dishes are shallow; therefore the foam must be sliced thin so that thick specimens can be covered with alcohol to prevent glare. Plastazote foam provides a white background; I have not used it long enough to see if it will be degraded by continuous and repeated exposure to different types of alcohol.

Securing specimens with insect pins will not damage the foam. For drawing small parts that have been removed from a specimen, such as a gill or prementum, minuten pins can be inserted in the foam using a forceps. I try not to stick pins through any part of a specimen, especially damselfly gills. It is better to place several pins on the outside edges of the specimen to prevent damage. Nick Donnelly told me that he uses glycerin to immobilize small parts, such as penes, although clean up (in alcohol) is necessary.

=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=

AVOIDING WET NETS

Bob Muller (submitted to ODE NEWS)

I am sure that at one time or another every one has come up with a soaked net bag while attempting an over-the-water catch, and then spending a half hour or more swinging the net to dry it. The following is a simple method to avoid the problem.

While in the field take along a small roll of masking tape, a few large paper clips, and some twine or mono-filament fishing line (10-15 pounds).

Before attempting to collect over water, fold a 2" or so piece of masking tape over the end of your net bag, tie a length of line to the closed end or a large paper clip, cut the line 2 to 3 feet longer than your net handle. Place the paper clip on the masking tape. Then tape the other end of the line to the end of the handle. The above will allow you to keep the net bag out of the water. Pull back on the net bag as you approach, holding the line against the handle. The net ring can now be lowered within inches of the water's surface. As you make your catching sweep, release the line and find a dragonfly in the bag, which is bone dry. You could sew a bit of cloth to the end of the bag rather than using tape.

=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=

HERE'S A GOOD ONE

From Lieftinck (1955) on his new species, *Lanthanusa donaldi*:

"This fine new insect is dedicated to Mr. Donald E. Kimmins, of the British Museum, who kindly permitted me to describe it and whose helpfulness in various ways is gratefully acknowledged."

In a later publication, Liefertinck is obliged to settle a certain amount of confusion over the new species, since it "was indeed destined to be named in honour of my distinguished colleague Mr. DOUGLAS E. Kimmins."

OOPS!

[There is a mineral named davidsonite, originally intended to honor a Mr. Denison. Ed.]

=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|

COLLECTION INVENTORIES

Dennis Paulson

How many odonate collections, institutional or private, are inventoried? An inventory would consist of a species list with the number of individuals of each species at the minimum, or it might be a database with more information yet. You can write me or e-mail me with the information (whether yea or nay and what sort of information is inventoried), and I can summarize it for ARGIA.

Hope you're surviving the eastern winter just fine. It's in the 20s here, with fresh snow, quite beautiful. [Beautiful? The man is sick. . .]

Telephone: (206) 756-3798; e-mail:
dpaulson@ups.edu

=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|

MORE ODONATA WEB SITES

Roy Beckemeyer

Web sites of interest to the Odonatological community are proliferating fairly rapidly of late. In addition to the *Megalagrion* site at the Bishop Museum that I discussed last month, there are now sites with faunal lists, great photos, lists of type specimens in museum collections, and lots more. This is a quick guide. Hopefully as more data is

put out on the internet, the authors will alert us here.

Begin your surfing at the IORI home page that Bill Maufray has under construction at <<<http://www.afn.org/ht-free/iorimenu.html>>>. He has links to SIO, DSA, and Florida Collection of Arthropods pages, as well as to Terry Morse's assemblage of Odonata collecting and preserving hints, and to the E-mail directory of Odonatists.

The British Dragonfly Society is located at <<<http://www.rfhsm.ac.uk:81/golly/bds.html>>>.

Dave McShaffrey of Marietta College in Ohio has a great site with summaries of current research, and access to the Computerized Database of Ohio Odonata at

<<<http://www.marietta.edu/Mc.d/Mchp.d/faculty.d/mcshaffd/odo/washco.html>>>.

For Jurassic dragonflies, go to <<<http://ucmp1.berkeley.edu/arthropoda/odonatoida.html>>> for a nice picture of *Protolindenia* in Solnhofen Limestone. From there link to University of Michigan Museum of Zoology (UMMZ) for a great set of photos that include *Phyllogomphoides stigmatus*, *Libellula croceipennis*, and *Macromia annulata*, among others. You can go directly to this location at <<http://insects.ummz.Isa.umich.edu/Images/Odonata/Odo_picts.html>>.

Zip across the Pacific Ocean to Australia to visit Richard Rowe's site at the Paluma Research Station, where you will be greeted by a photo of a male *Diphlebia euphaeoides* at <<<http://www.jcn.edu.au/dept/Zoology/auxillry/dragonfl.html>>>.

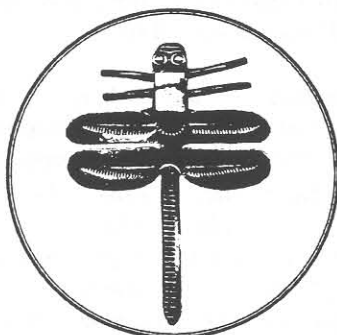
Return to the University of Michigan at <<<http://insects.Isa.umich.edu/fauna/fauna.html>>> to get to the Faunal Lists for the Great Lakes Region home page, with links to Checklists of Michigan Odonata, and to the Illinois Natural History Survey's Checklist of Illinois Odonata. You can also wend your way around the UMMZ site and locate a list of all Misc. Publ's. and Occas. Papers of UMMZ, including which are still in print and what copies cost. Most of the Odonata publications of Williamson put out at UMMZ are still available.

Carlos Esquivel has pages under construction at the Rara Avis web site describing the Odonata families of Costa Rica. Check it out at: <<<http://www.inbio.ac.cr/papers/isnsectoscr/Odonata.html>>>.

Dennis Paulson has faunal lists for Odonata of Mexico, Central America, South America, and more at the Slater Museum gopher: <<gopher://biodiversity.ups.edu:70/1D-1%3A1738%3Adragonflies>>.

And there are more out there to be covered at a later date. In the meantime, as you come across valuable information floating out there in hyperspace, let the rest of us in on it.

=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|



With this Zuni silver and Turquoise pin came a story, When Indians of the Southwest traveled from home, they took with them their brightly colored pet parrots, and when they needed to locate water, they set the parrots free to find their favorite food, the dragonfly. The Indians were able to keep the parrots in sight as they led them to the watery habitat of the dragonfly. Submitted by Jean Held

=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|

A PLEA FOR NEWS!

Jerrell Daigle

Would you like to know what your fellow DSA colleagues are working on these days? Are they exploring foreign countries and studying endemic Odonata? Describing new species? New taxonomic changes and revisions?

I am compiling a handout list of such personal projects for distribution at the DSA meeting in

New Brunswick this June. If you would like others to know what you have been up to these days, please send me a brief short list of your personal projects.

My E-mail address is "Daigle_J@DEP.STATE.FL.US" and my snailmail address is "Jerrell J. Daigle; 2166 Kimberly Lane; Tallahassee, Florida, 32311."

Drop me a line anytime and let us know what you have been up to!

=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|

THE (UN)COMMON DRAGONFLY
(poem)

Lisa M. Smith, PO Box 45136, Seattle WA 98145-0136

Rainpool, mesquite spread wings
Like sweetflags and dash away blue,
Bog Bluet, ebony boghaunter,
The bayou's clubtail (elusive clubtail),
Hyacinth glider, wandering glider, wandering...
River jewelwing, Appalachian jewelwing, superb
In dainty thread-tails, grappletail, fragile
Forktail, firetail in duckweed.

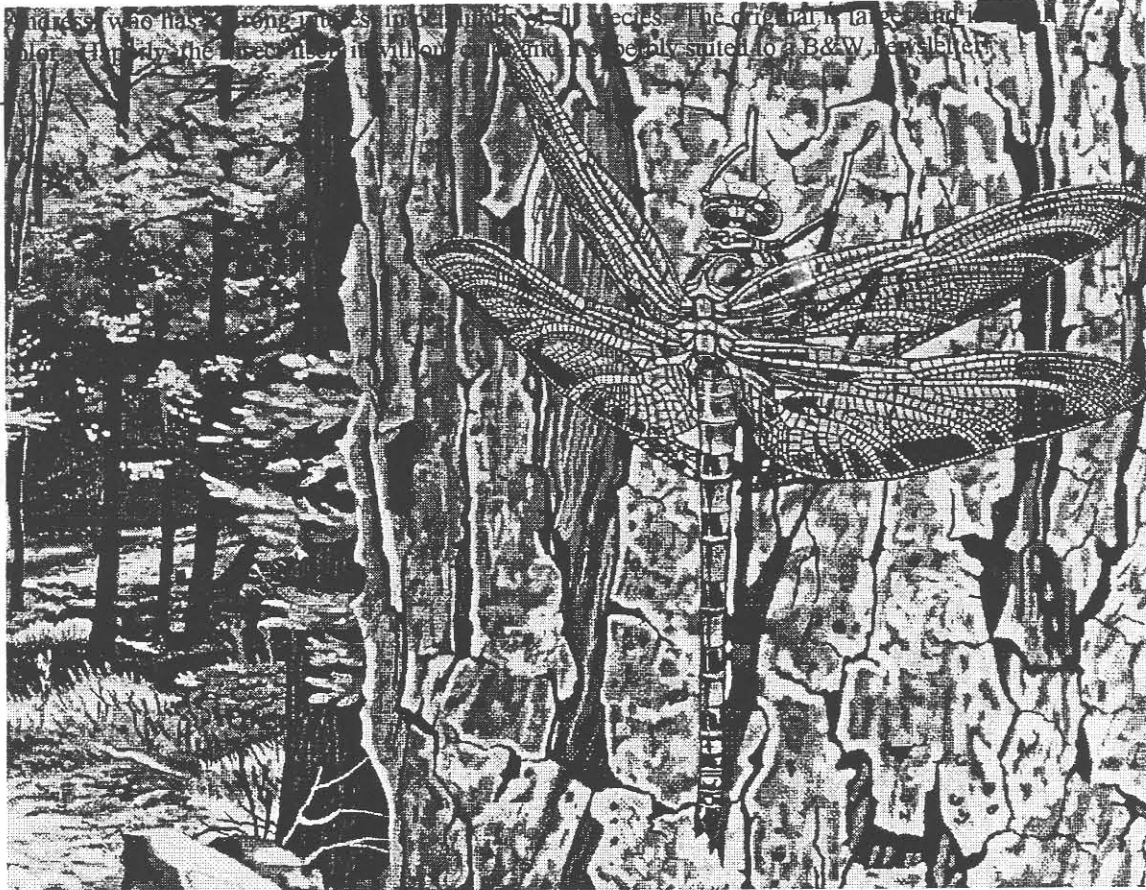
Darner of shadows, zig-zag, spatterdock
Darner, dusky dancer, cinnamon shadowfly,
Smoky rubyspot and candleflame skimmer
In scarlet, red pennant, twelve-spotted
Skimmer of evening, maidencane cruiser,
Slender sylph, Southern sprite,
Sprite of sphagnum and sedge,
O, dragonhunter....

"Although we appreciate the viewpoint that most serious students of Odonata will learn scientific names, we think there are uses for common (English) names for the group...."
from *The Odonata of North America*, with English names by Dennis R. Paulson and Sidney W. Dunkle.

=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|

SOME ODONATE BOXES AVAILABLE

Bob Glotzhober has informed me that he has purchased some of the "shoe boxes" that several of



Tachopteryx uhleri, detail of a color drawing by Ray Andress. When Ray sent me this drawing, I couldn't help but notice that a gray and black insect would be admirably suited to a B&W publication. The original drawing is larger and in full color. Ray has a special interest in petalurids.

us use for odonate specimens mounted in 3x5 envelopes. These are archival quality material and cost \$8.75 each. If you would like some of these, contact Bob:

Robert C. Glotzhober
 c/o Ohio Natural Historical Society
 1982 Velma Ave.
 COLUMBUS OH 43211-2497, or e-mail him at
rglotzhb@infinet.com

=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|

NEW DRAGONFLY POSTER

A new poster, "**Dragonflies and Damselflies (Insecta: Odonata) of Ohio**" is hot off the press. The 20" x 28" poster includes 12 full color photographs of assorted Odonates at various points in their life histories. Each photograph is identified, and a brief text at the bottom provides some basic life history information about the order. The photographs come from six different photographers, including DSA members Sid Dunkle and Bob Glotzhober. If you were at the

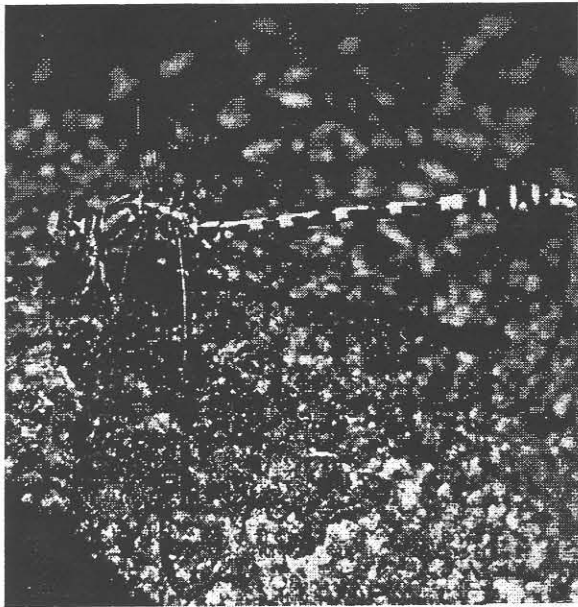
DSA annual meeting in Silver City, you saw the poster on Caddisflies that preceded this new poster.

The poster was published by the Ohio Biological Survey, with financial assistance from the Ohio Department of Natural Resources, Division of Wildlife. Posters are available at \$5.00 each (including tax) plus \$1.50 for postage and handling (up to 2 posters, for greater quantities call O.B.S. at 614-292-9645 for shipping rates). To order, send checks payable to: Ohio Biological Survey, 1315 Kinnear Road, Columbus, Ohio 43212-1192.

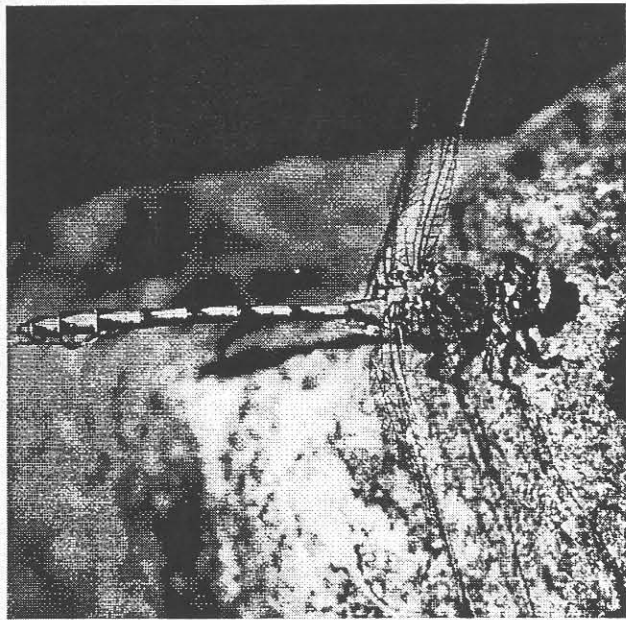
=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|=|

On the following page are several pictures from the Silver City meeting. (photos by Clark Shiffer and Carol Flint)

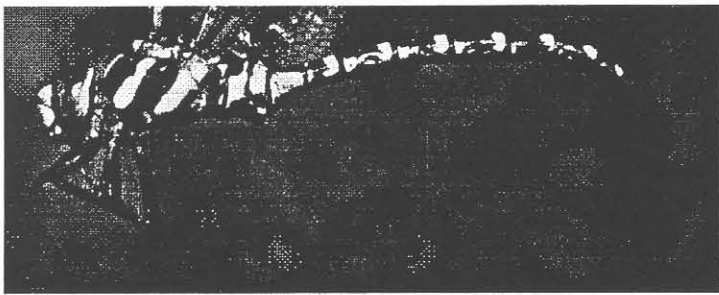
STOP PRESS There will be an Identification Workshop for Northeastern Odonates at the Univ. of Connecticut on 8 June 1996. Contact Dave Wagner for information (203-486-2139; or DWAGNER@UCONNV.M.CONN.EDU



Erpetogomphus natrix



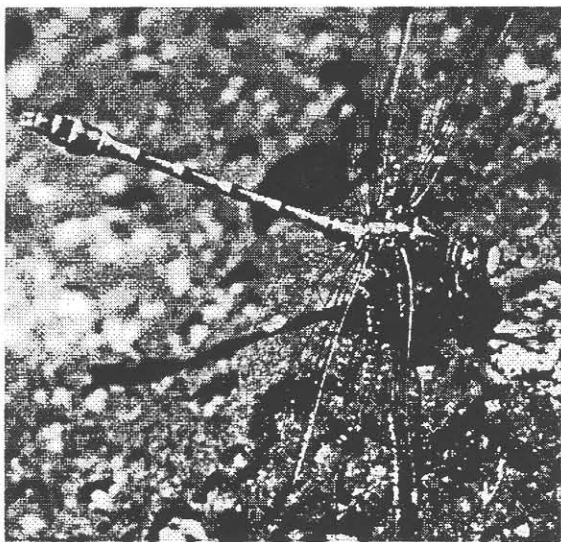
Ophiogomphus arizonicus



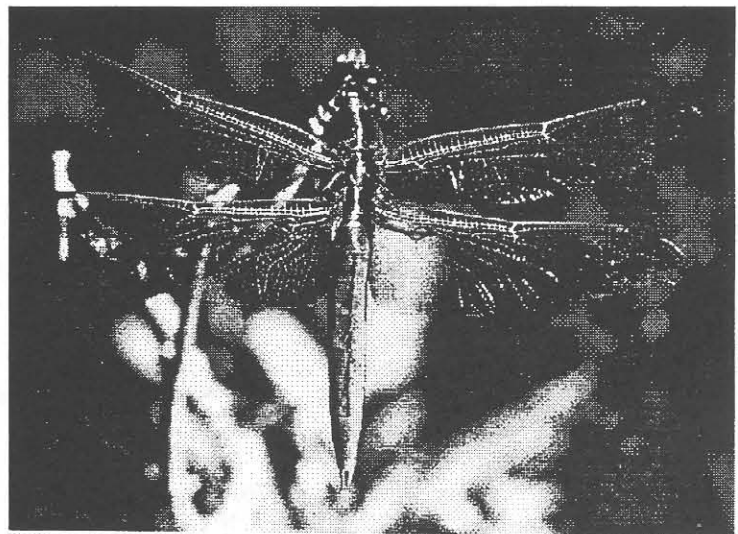
Aeshna persephone



Benjamin Lane



Erpetogomphus heterodon



Libellula saturata

BACK ISSUES OF ARGIA AND THE BAO

The editor is able to provide back issues of **ARGIA**. Several of the issues will be xeroxed, as original copies of many issues have been exhausted. Please contact T. Donnelly, 2091 Partridge Lane, Binghamton NY 13903. Each of the previous volumes of **ARGIA** has at least one issue that requires duplication. Because of high mailing and duplicating costs, the back issues cannot be sent at the old price. The present price schedule takes into account the different costs of duplication of each number of **ARGIA**. In the event that an issue becomes exhausted, then xerox copies will be sent. **Prices do not include postage; see below.**

Volume 1 all	\$1.80*	Volume 4_2	\$1.80	Volume 6_3	\$2.00
Volume 2 all	\$4.20*	Volume 4_3	\$2.20	Volume 6_4	\$2.00
Volume 3_1	\$3.00*	Volume 4_4	\$1.70*	Volume 7_1	\$2.00
Volume 3_2	\$3.40*	Volume 5_1	\$2.30	Volume 7_2	\$2.00
Volume 3_3	\$2.80	Volume 5_2	\$2.60	Volume 7_3	\$2.00
Volume 3_4	\$3.20	Volume 5_3	\$2.00	Volume 7_4	\$2.00
Volume 4_1	\$2.10*	Volume 5_4	\$2.00		
Volume 4_1	\$2.10*	Volume 6_1-2	\$2.00		

* xerox copies only available

Back Issues of the **BULLETIN OF AMERICA ODONATOLOGY** can be furnished at the prices given below. **Prices do not include postage; see below.**

1(1) THE ODONATA OF NEW YORK, Thomas W. Donnelly	\$3.00
1(2) DISTRIBUTION OF DRAGONFLIES AND DAMSELFLIES IN FLORIDA, Sidney W. Dunkle	\$2.50
1(3) MORPHOLOGICAL AND ECOLOGICAL DIFFERENCES AMONG SPECIES OF <i>LADONA</i> , Michael L. May	\$1.75
COMPORTAMIENTO REPRODUCTIVO Y POLICROMATISMO EN <i>ISCHNURA DENTICOLLIS</i>	
Burmeister, Alejandro Córdoba Aguilar	
1(4) ODONATA DE LA SIERRA DE HUAUCHINANGO, PUEBLA, MEXICO, José A. Gómez Anaya and Rodolfo Novelo Gutiérrez	\$1.25
A CHECKLIST OF THE ODONATA OF THE DOMINICAN REPUBLIC BY PROVINCE, Jerrell James Daigle	
2(1) LA NAYADE DE <i>ARCHILESTES LATIALATUS</i> DONNELLY, 1981	\$1.25
(ZYGOPTERA: LESTIDAE) [The naiad of <i>Archilestes latialatus</i> Donnelly, 1981], R. Novelo-Gutiérrez	
DESCRIPCIÓN E HISTORIA NATURAL DE LAS LARVAS DE ODONATOS DE COSTA RICA.	
III. <i>GYNACANTHA TIBIATA</i> (KARSCH 1891) (ANISOPTERA, AESHNIDAE) [Description and Natural History of the Odonata Larvae of Costa Rica. III: <i>Gynacantha tibiata</i> (Karsch 1891)(Anisoptera: Aeshnidae)],	
Alonso Ramírez	
2(2) DESCRIPTION OF THE NYMPH OF <i>EPITHECA (TETRAGONEURIA) SPINOSA</i> (HAGEN)	\$1.75
(ODONATA:CORDULIIDAE), K. J. Tennessen	
THE LARVA AND ADULT MALE OF <i>SOMATOCHLORA GEORGIANA</i> WALKER (ODONATA:CORDULIIDAE), Jerrell J. Daigle	
2(3) <i>MACROMIA ILLINOIENSIS</i> AND <i>GEORGINA</i> : A STUDY OF THEIR VARIATION AND APPARENT SUBSPECIFIC RELATIONSHIP (Odonata: Corduliidae), T.W. Donnelly, K.J. Tennessen	\$3.00
2 (4) THE SUBGENUS <i>TETRAGONEURIA</i> (ANISOPTERA: CORDULIIDAE: <i>EPITHECA</i>) IN NEW JERSEY, Michael L. May	\$1.25
3 (1) THE ODONATA OF OHIO - A PRELIMINARY REPORT, Robert C. Glotzhober	sub*
3 (2) FOUR DECADES OF STABILITY AND CHANGE IN THE ODONATA POPULATIONS AT TEN ACRE POND IN CENTRAL PENNSYLVANIA, Clark N. Shiffer and Harold B. White	sub*
DESCRIPCIÓN E HISTORIA NATURAL DE LAS LARVAS DE ODONATOS DE COSTA RICA. IV: <i>MECISTOGASTER ORNATA</i> (RAMBUR, 1842) (ZYGOPTERA, PSEUDOSTIGMATIDAE). [Description and Natural History of Odonata larva of Costa Rica. IV. <i>Mecistogaster ornata</i> (Rambur, 1842) (Zyoptera, Pseudostigmatidae)], Alonso Ramírez	
3 (3) THE DISTRIBUTION OF ODONATA IN ALABAMA, Kenneth J. Tennessen, James D. Harper, R. Stephen Krotzer, P. 49-74	sub*

* subscription

Mailing and Handling Costs:

	SURFACE		AIR MAIL	
	1st number	each additional	1st number	each additional
United States	\$1.25	\$1.00	---	---
Canada, Mexico	\$1.25	\$1.00	\$1.50	\$1.25
Western Hemisphere	\$1.50	\$1.25	\$2.00	\$1.50
Europe, Asia, etc	\$1.50	\$1.25	\$3.00	\$2.50

ARGIA

Binghamton, New York

Vol. 8, No. 1, 1 April 1996

IN THIS ISSUE	1
HAPPY BIRTHDAY MINTER!	2
IT'S TIME TO MAKE YOUR PLANS TO ATTEND THE NEW BRUNSWICK FIELD GATHERING!	3
BOOK NOTICE	3
PAUL HARWOOD - A BRIEF OBITUARY	
THE 1963 COLLOQUIUM ON THE ODONATA	Nick Donnelly 4
ESCAPADE IN ECUADOR, Part 1	Ken Tennessen 5
FORT TILDEN DRAGONFLY MIGRATION WATCH	Steve Walter 8
NEW RECORDS OF ODONATA FOR THE DOMINICAN REPUBLIC	Jerrell Daigle 13
FIRST RECORDS OF <i>TELEBASIS BYERSI</i> FROM VIRGINIA, INCLUDING A NEW NORTHERN RANGE LIMIT	Steven M. Roble and 13 Dirk J. Stevenson
NEW RECORDS OF <i>ISCHNURA PROGNATA</i> IN VIRGINIA	14
<i>LIBELLULA AXILENA</i> NEW TO NEW ENGLAND	Ginger Carpenter 15
DRAGONFLIES IN THE NEWS AND NOT QUITE IN THE NEWS	Nick Donnelly 15
SPECIMENS MOVING IN YOUR ALCOHOL DISH?	Ken Tennessen 16
AVOIDING WET NETS	Bob Muller 16
HERE'S A GOOD ONE	16
COLLECTION INVENTORIES	Dennis Paulson 17
MORE ODONATA WEB SITES	Roy Beckemeyer 17
ZUNI JEWELRY (Illustration)	Jean Held 18
A PLEA FOR NEWS!	Jerrell Daigle 18
THE (UN)COMMON DRAGONFLY (poem)	Lisa M. Smith 18
SOME ODONATE BOXES AVAILABLE	18
TACHOPTERYX UHLERI (Illustration)	Ray Andress 19
NEW DRAGONFLY POSTER	19