



Selysia

A NEWSLETTER OF ODONATOLOGY

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FOURTH INTERNATIONAL SYMPOSIUM OF ODONATOLOGY

The Fourth International Symposium of Odonatology will be held August 1-5, 1977 at the University of Florida in Gainesville, Florida, U.S.A. The International Society of Odonatologists (S.I.O.) extends a cordial invitation to all individuals and their families interested in Odonata throughout the world to join us for this symposium.

All individuals planning to attend who have not yet received an Enrollment Form and the Final Circular should write to the Secretary of the Organizing Committee, Dr. M. J. Westfall, Jr., Department of Zoology, University of Florida, Gainesville, Florida 32611 for them. The Enrollment Form should be filled out and returned to the Secretary not later than April 1 for those contributing papers and not later than May 15 for non-contributors.

As at previous odonatological symposia there are three categories of members: Full Membership open to all - Fee: \$10.00. Student Membership open to bona fide students, but a student member must have the Enrollment Form signed by his or her supervisor - Fee: \$4.00. Associate Membership available to families of full or student members - Fee: \$4.00.

These membership fees are for the Symposium only, not for S.I.O. dues. All members have the right to participate in all Symposium meetings and other events.

Air-conditioned rooms, each with a small refrigerator, will be available in university dormitories. The cost, excluding meals, has been given as \$5.50 per person, per night in a double room, double occupancy, or \$7.00 for single occupancy. Meals will be available in the cafeteria of the Florida Student Union building at moderate cost.

SOME COLLECTION NOTES ON THE ODONATA OF RALEIGH COUNTY, WEST VIRGINIA

by

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The fifty species of dragonflies collected in Raleigh County will be reported in detail in the Redstart (vol. 43, 1976). The present notes are limited to the collection sites that proved most interesting, and the species unusual in West Virginia. The collection sites are three; namely, (1) Shady Spring Reservoir which lies a few miles south of the village and is bisected by U. S. Highways 19 and 21,

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Issued at intervals as available
news and information warrant

This newsletter is designed to disseminate facts and news about the activities of Odonatologists and Odonatology. It is not intended as a journal nor an organ for the publication of articles or technical papers. The name is based upon that of the "Father of Odonatology," Baron Edmond de Selys Longchamps.

(2) Little Beaver Creek Lake; the Creek above the Lake, and (3) Crooked Run. Other observers are publishing extensive data on the ecology of Raleigh County in the Redstart, therefore, in this note ecology is limited to items of particular interest to the odonatologist.

Raleigh County is on the western slope of the Appalachian Mountains. Collecting sites are above 2,000 feet (650 meters). The largest city and county seat is Beckley which has a population of 20,000. Four distinct seams of coal are mined in the region. However, collecting sites were little affected. Since coal is fossilized vegetation, it contains all the elements necessary for life. Normal slow erosion of coal deposits has resulted in soils of unusual richness in Raleigh County.

Collections were made in Raleigh County on August 13, 1968; during the first and last weeks of June, 1975,

and during the last three days of August, 1975. The 1968 collections were made over the Shady Spring Reservoir. Nearly 30 species of Odonata were taken, and one, a light blue *Aeshna*, seemed of special interest, but the few males flying over the reservoir seemed unapproachable. About one mile north of the reservoir, a female was found flying over a shallow roadside pond. When taken, this specimen was labelled *A. constricta* and assumed to be of the same species as the males. When examined in the laboratory, it proved to be *A. tuberculifera*, the first of the species captured in West Virginia. Males have been taken in two other counties. Over the same pond, two unusual species of damselflies were taken, namely, one male of *Lestes eurinus* and several ovipositing pairs of *L. forcipatus*. This pond has now been developed into an artificial lake. The reservoir was again visited June 6, 1975 when a male of *Didymops transversa* was taken from a group of several patrolling the shore line.

Little Beaver State Park includes a large artificial lake used for recreation (swimming and fishing) and the upper waters of Little Beaver Creek. The land is in a second growth forest dominated by oaks, but hemlock is frequent near the stream. *Tetragoneuria cynosura* was emerging on June 1 when the lake was first visited. More than one hundred specimens were examined for evidence of the less common species of the genus, but none was found. On June 7, two teneral of *Dromogomphus spinosus* were taken. In shallow water near the inlet stream two interesting dragonfly nymphs were taken. The collection site was ankle-deep water over a rocky ledge that supported a thin growth of sedges. A single nymph of *Neurocordulia yamaskanensis* was dredged up; attempted rearing failed. This species was identified by Byers who had access to material collected by James G. Needham in 1930 near Justice, W. Va. The second interesting species is represented by two half-grown nymphs that were recognized as interesting aeshnids at the time of collection. However, several interesting nymphs were taken that day, and these two were

preserved in the field. According to the available literature these are *Aeshna interrupta*, but this species is not recorded nearer than the Adirondack Mountains of New York. Therefore, the determination must be regarded as tentative. I was eager to search the collecting site again when I returned to the area in late June. However, a murder had occurred in Beckley, and the authorities were hopeful the murder weapon might be found in Little Beaver Creek Lake. The lake was drained, and all hope of collecting additional material vanished.

Repeated collecting trips were made to Little Beaver Creek, and two new state records were established. *Gomphus (Stylurus) scudderi* was represented by two nymphs taken June 6, and by one large nymph taken June 30. The first two nymphs died in a rearing attempt; the large nymph died in transit to Ohio, and was preserved. Little Beaver Creek has steep short rapids and long deep pools between. This habitat is described succinctly by Walker (1958). Eight nymphs of *Gomphus (Gomphurus) rogersi* were taken from Little Beaver Creek June 2 and 4, 1975. None were found in the last week of June nor in August. No adults of these two species were found. Identification was possible because of the excellent description by M. J. Westfall and Trogon (1962).

Crooked Run is a small tributary of Beaver Creek. It is perhaps two miles long and rises at a considerable elevation. Its upper reaches are small rocky pools separated by long dry intervals of gravel or rubble. As the gradient becomes less precipitous, Crooked Run flows into an abandoned pasture on the James Farm, through an artificial lake of three to five acres, and below the James Farm through a forest dominated by white oaks where the pools are long and separated by gravel bars.

The most interesting dragonflies of Crooked Run are the *Cordulegaster* spp. In the abandoned pasture, the run is overgrown with blackberries (*Rubus alleghaniensis*) wild roses (*Rosa* spp.), alders (*Alnus rugosa*),

and willows (*Salix* spp.). As I straightened up after sieving a pool under this canopy, less than a meter ahead, perched beneath a flower cluster of blackberry, was a male of *Cordulegaster diastops*. Shrinking slowly at first back under the canopy, I soon raced for my camera. However, it was gone when I returned, and search did not discover its new resting place. One *Cordulegaster* nymph that proved to be *C. diastatops* was taken in the abandoned pasture. Walker (1958) describes the habitat of this species as "spring runs..." typically in bushy pastures. Many of the small shallow pools of the forested upper portions of Crooked Run harbored at least one large nymph of *C. erronea*. Small nymphs of the species were very numerous, and were returned to the pools. Twelve of the large nymphs were collected, and other large nymphs returned to the pools. If forested densely, other smaller tributaries of Crooked Run also harbored this species. I saw only one adult of *C. erronea* although much time was spent in the search, and I was unable to net that one. The only previous record of this species in West Virginia known to me is a single male in the University of Michigan collections. It was taken by Williamson, but all other data are lost. *C. maculata* was the only species of the genus taken below James' Lake, and it was taken in this portion of the run only. This is the most common species of the genus in West Virginia, where it occurs in large streams as well as small. One specimen of *C. obliqua* was taken from Crooked Run where the forest lies on one side of it and the pasture on the other side. This species seems quite rare in West Virginia.

Two species of gomphines were abundant in Crooked Run August 27 and 28. The more common, *Lanthus parvulus* was lightly sampled, and one of 12 nymphs taken molted during transit to Ashland, Ohio. Under the dissecting microscope, its blood showed dark blue. I have never noticed such a color in odonate blood before and wonder if it was (1) confined to the specimen, (2) limited to the species, or (3) limited to specimens of the species from this area. Only additional observations can

determine this. *Gompus (Gomphurus) rogersi* was found in the lower reaches of the run only. Twenty-one specimens were collected and many were placed in a pond in Ashland for rearing. Muskrats or raccoons raided the cages in my absence and all nymphs from Crooked Run were lost.

References

- Walker, E. M. The Odonata of Canada and Alaska. University of Toronto Press. vol. 2. 1958.
- Westfall, M. J. Jr. and R. P. Trogdon. The true *Gomphus consanguis* Selys (Odonata: Gomphidae). The Florida Entomol. 45(1): 29-41. 1962.

RECORDS OF ODONATA FROM ARKANSAS

Dr. William H. Cross recently sent me a small collection of Odonata which he took in Yellow County, three miles west of Havana, Arkansas, April 26, 1976. Among them were several to be expected: 1 ♀ *Didymops transversa* (Say), 1 ♂ *Plathemis lydia* (Drury), and 1 ♀ *Lestes disjunctus australis* Walker. Of special note was a beautiful ♀ of the recently described species, *Gomphus (Gomphurus) ozarkensis* Westfall. While describing this new species in 1975 I pointed out that the two specimens reported as *fraternus* (Say) by Calvert in 1901 and in 1956 said by me to be *hybridus* Williamson were in reality this new species. I said that *hybridus* as based on them should be removed from the Arkansas state list until authentic specimens were collected. Dr. Cross collected 6 ♂ and 1 ♀ of undisputed *G. hybridus* along with the single ♀ of *ozarkensis* and so I now restore this species to the state list. *G. ozarkensis* should also be sought in neighboring states. If anyone has questionable specimens of this group I would be glad to check them. The nymph of *ozarkensis* is still unknown.

M. J. Westfall, Jr.

URGENT REQUEST FROM EDITOR IN CHIEF OF ODONATOLOGICA

The editorial staff of *Odonatologica* has been experiencing difficulty in getting abstracts of current papers prepared by those persons on the board responsible for this. A few have cooperated, but most have contributed very few abstracts. These persons are urged to redouble their efforts in carrying out this assignment. Prof. Dr. B. Klauta has had to write most of the abstracts and has requested that all of us without fail send him reprints of our current papers on Odonata as they appear, whether we are members of S.I.O. or not. His present address is Department of Animal Cytogenetics and Cytotaxonomy, University of Utrecht; Padualaan 8, Utrecht, The Netherlands.

CELLOPHANE ENVELOPES FOR ODONATA

In the Proceedings of the Colloquium on the Odonata held at Purdue University in 1963, George H. and Alice Ferguson Beatty of State College, Pennsylvania described the 3x5 envelopes which many of us have been using to store our Odonata. Some have been experiencing difficulty in getting them recently. DuPont discontinued making the K202 and K203 moisture proof film, but now a substitute has been found. They may be obtained from Bob Herold, 3063 Hazelwood, Santa Clara, California 95051 for \$21.00 per 1,000, plus postage and California residents must add 6% sales tax. BioQuip Products, P.O. Box 61, Santa Monica, California 90406 is offering a 3x5 envelope but with a different cut and flap for \$26.50 per 1,000 or \$240.00 per 10,000. For further details see their catalog.

MONOGRAPH STILL AVAILABLE

Rosser W. Garrison has written that Fraser's monograph of the Fissilabioidea (Part I-Cordulegasteridae, Mem. Ind. Mus., 9(3):69-167, plates IX-XII(1929), and Part II-PetalIIDae and Petaluridae and appendix to Part I, Mem. Ind. Mus. 9(6):205-260(1933) is available from: The Director, Zoological Society of India, 34 Chittaranjan Ave., Calcutta 12, INDIA. The price of

Part I is Rs. 4.37 plus Rs. 8.80 (Surface mail) or plus 80.30 (air mail), and of Part II, Rs. 2.12 plus postage. As of March 1, 1977 the exchange rate was 100 Rs. = \$11.60.

EXCHANGES DESIRED

Western U.S. Odonata (including nymphs and/or exuviae) in exchange for Odonata of the world. Particularly desire some of the non-North American families such as Hemiphlebiidae, Lestoideidae, Perilestidae, Synlestidae, Hypolestidae, Amphipterygidae, Dictyeriastidae, and Synthemidae. I can send a list of what I have available and would appreciate any *offerta* lists in return.--Rosser W. Garrison, 201 Wellman Hall, Division of Entomology and Parasitology, University of California, Berkeley, Calif. 94720.

REQUEST FROM CURTIS NIMZ

The following note has been received. "I am doing my research for my master's on a computer model of the bioenergetics of a dragonfly. It is primarily based on the published data of J. H. Lawton. I hope to make some predictions from the model and see if dragonflies in Idaho will fit the model. However, I have need of additional data on the relationship of bioenergetic parameters, respiration, consumption, assimilation and production, to dry weight and temperature." If you wish to correspond with Mr. Nimz regarding this, his address is Department of Biology, Idaho State University, Pocatello, Idaho 83201.

NOTES FROM HAL WHITE

Each year or two since 1966 I have summarized my Odonata field notes in 3 or 4 pages and distributed copies to interested Odonatologists. These summaries include the location and dates of all my collecting trips along with a list of all the species seen or collected. For the most part these records are from the well-studied North-eastern U.S. and consequently few records are worthy of formal publication. On the other hand, the information

contained in these summaries may be important to persons interested in the biology of certain species or interested in knowing where and when to collect certain species. A limited number of summaries from past years are available on request.

Anyone wishing to use data from these summaries in their own publications is welcome to do so provided that the specific data to be used are verified by me. Notable records in the 1975 summary include *Williamsonia fletcheri* from N.H. on July 8th (a new state record and the latest date known for this species) and *Coenagrion interrogatum* from Vt. (a new state record and only the second record from New England).

It must seem a rather trivial and uninteresting task to work up a list of Delaware Odonata to anyone familiar with the state, all three counties of it. It is; however, I happen to live here and very little has been done here before. Interspersed between trips to the mountains of New England and West Virginia and the Pine Barrens of New Jersey, I have been accumulating data on the Odonata of Delaware. The number of documented species is now around 90. I would appreciate hearing from anyone who is aware of published or unpublished records of Odonata from the state.

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DROPPINGS OF ADULT ODONATA DESIRED

Dr. D. A. L. Davies of England has been doing important medical research in which he uses the droppings of adult Odonata as a good source of friable chitin for the assay of chitinase. If you collect Odonata and keep them alive for a time during which the droppings are collected, please save them for him. He expects to attend the Symposium in Gainesville in August. If you are coming and can bring your accumulation or can send it we might get a supply together for him at the meetings.

NOTES FROM KENNETH W. KNOPF
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DRAGONFLY COLLECTING IN TRINIDAD

In July and August of 1975 I spent two weeks collecting Odonata in Trinidad, W.I. I had the pleasure of staying at the C.I.B.C. laboratory at Curepe, directed by Dr. Fred Bennett. The area around Curepe is heavily populated and not at all productive for dragonflies. Most of my effort was concentrated in the area of Valencia, a small town in the northeastern sector of the island.

In a small reed-choked pond just south of town I encountered my first *Zenithoptera americana*. They were one of the most abundant libellulids in this habitat. Males perch (during bright sunshine) on the needle sharp tips of the reed stems with their spectacular iridescent black wings held at a very depressed angle, perhaps serving a thermoregulatory shading function. When challenged by another male or approached by the collector, they would gradually raise their wings until held upright over the thorax in a posture more reminiscent of a damselfly than a dragonfly. This posture when threatened might help make for a faster takeoff since the wings are then poised for maximum thrust. It also serves as an obvious intra- and interspecific signal. Other species associated with the *Zenithoptera* and abundant at this site were: *Nephepeltia phryne*, *Erythrodiplax famula famula*, and species near *Micrathyria eximia*, and *M. mengeri*.

One of my major objectives was to rear nymphs of *Uracis*. Although this primary goal was not achieved, the search yielded many unexpected benefits. In an effort to sample all conceivable habitats I spent considerable time checking in the leaf bases of large bromeliads. Here I found the most agile and tenacious damselfly nymphs I have ever collected. As I peeled off each outer leaf the nymphs would scurry up the plant and down into the next inner leaf axil. When

finally isolated and picked up in the fingers I tried, by force of habit, to wash them off into a jar of water for transport. This proved impossible, they simply run up your arm! The best way I found for handling them was to coax them on to a small piece of bromeliad leaf and throw the whole thing in a jar. They apparently represent an undescribed species of *Leptagrion*. This, and 2 or 3 other species which were reared but not collected as adults, points out the importance of collecting nymphs for any faunistic survey attempting to establish a list of taxa from a particular region.

I took only a one day trip to the southern end of the island and found collecting to be difficult. Oil fields predominate and travel is restricted in many areas. Security guards tend not to trust foreigners, especially those carrying 6-foot nets!. One day's collecting did yield some species I did not collect in the north and I feel sure a more thorough search would produce a number of records.

My most varied collecting was on the numerous streams that drain the mountain range along the northern coast towards the central lowlands. These streams were for the most part clear and free flowing, with sand and gravel bottoms and numerous riffles. Each stream seemed to have something special to offer but in terms of diversity, I had the best luck at the Arima River at the Churchill-Roosevelt Highway (about 2 1/2 mi. S.S.E. of Arima). Four hours collecting produced 25 species of Odonata. Of particular interest were *Neoneura bilinearis* and *N. esthera* in the Zygoptera, and *Dythemis carmacrioides* in the Anisoptera.

In a government forest reserve west of Cumuto I found a small clear stream, less than a meter wide. The Odonata in and around this site would have been enough by themselves to have made the trip worthwhile. I collected nymphs and adults of *Protoneura tenuis*, *Gomphoides cornitifrons*, *Phyllocycla anduzei* and *Aeschnosoma forcipula*. In addition, many nymphs of *Progomphus dorsopallidus* were taken and reared out after return to Gainesville.

In summary, I collected about 2000 specimens in 90 species. Publication of the important findings will be undertaken over the next couple of years. All holotypes and allotypes as well as representative immature stages described will be deposited in the Florida State Collection of Arthropods.

I have available a list of localities collected which I would be happy to provide to anyone strongly contemplating a trip to Trinidad. Anyone having odonate records for Trinidad and interested in participating in an update paper listing the fauna should contact Dr. Westfall or myself at our University of Florida addresses listed above.

DRAGONFLY ELECTROPHORESIS

As a major part of my dissertation research I have been studying protein variation in the genus *Gomphus*. I am interested in finding out to what extent (if at all) electrophoresis has been used in the study of Odonata. I would greatly appreciate any information on levels of heterozygosity or percent of loci polymorphic. I hope to finish my work early this summer so any reply would be most helpful if executed at your earliest convenience. I can be reached at the University of Florida address above or at my home address: Kenneth W. Knopf, 4100 SW 31st Street, Apt. #13, Gainesville, Florida 32608. Telephone: 904-373-5947.

SPECIMEN EXCHANGE AT S.I.O. MEETINGS

In the interest of strengthening my personal collection I propose that fellow odonatologists willing to exchange specimens bring them along to the S.I.O. meetings here this August. I have an extensive list of species available from North and South America and would be willing to set up an exchange prior to the meetings if that is desired. I welcome specimens from anywhere in the world.

IMPORTANT PUBLICATIONS TO APPEAR SOON

Mr. Robert A. Cannings, whose present address is 3-725 Vancouver St., Victoria, B.C., V8V 3V4 has written recently that he has in press a book on the Odonata of British Columbia. He says it will be available from the B.C. Provincial Museum, Victoria, "sometime around Christmas". He states further that it is in a small fieldguide format (about 250-300 pages) but is quite comprehensive.

The doctoral dissertation, "A revisionary study of the genus *Acanthagrion*" by J. W. Leonard, is now in press and should be available from the Secretary of the Museum of Zoology, University of Michigan, Ann Arbor, Michigan 48109 within a month.

AN APPEAL FOR INFORMATION ON FOLKLORE NAMES

The first appeal of Dr. B. E. Montgomery for information concerning folklore names of Odonata for both adults and nymphs used in any part of the world, appeared in his article "Common (folk) names for Odonata" (*Selysia* 3(2):1 & 3). Now almost 12 years later in a recent letter to me he wrote: "Just now I am publishing a series of papers on the common (folk) names and folklore of the Odonata. If you did not send me a list of names in response to the questionnaire in *Selysia*, December 1, 1965, or if you know of additional names, I would appreciate receiving a list of such names. If it can be given I would be glad to know the meaning, if any, in English (or standard French or German): many of the names are obsolete or dialectic words and cannot be found in standard dictionaries."

There is still time to send Dr. Montgomery any name you may have learned about in your travels or in books. It might be a new addition to his list. His address is 906 Chauncey Avenue, West Lafayette, Indiana 47906. ---L. K. Gloyd.