

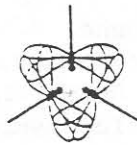
# ARGIA

THE NEWS JOURNAL OF THE DRAGONFLY SOCIETY OF AMERICA

VOL. 1, NO. 1-4      CENTER, KENTUCKY      DECEMBER 30, 1989



PUBLISHED BY THE DRAGONFLY SOCIETY OF AMERICA



AN AFFILIATE OF THE  
SOCIETAS INTERNATIONALIS ODONATOLOGICA

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ARGIA accepts manuscripts (preferably under 2,500 words) on nearly every aspect of odonatology. Exceptions are taxonomic revisions, species descriptions and presentations more suitable for such journals as ODONATOLOGICA. All Ms. contributions for DSA publications, inquiries and applications for membership, and other society business should be addressed to the business office of the society at:

The Dragonfly Society of America  
469 Crailhope Road  
Center, KY 42214, USA

## WELCOME TO THE DRAGONFLY SOCIETY OF AMERICA

Carl Cook, President  
469 Crailhope Road, Center, KY 42214

Since the earliest beginnings of entomology, wherever entomologists have gathered together they have demonstrated a propensity for forming societies to provide a means for exchanging information and ideas about their particular science, and to publicize the findings of their studies.

The first entomological society in the Americas that I have found any record of was the ENTOMOLOGICAL SOCIETY OF PENNSYLVANIA, formed in 1842, with the pioneer American entomologist Dr. F. E. Melsheimer as the first President. Apparently the society existed for only a short period, and never established its own journal. I believe the oldest American society in continuous existence is the AMERICAN ENTOMOLOGICAL SOCIETY (first organized as THE ENTOMOLOGICAL SOCIETY OF PHILADELPHIA in 1859) and it is publisher of the important series Transactions. In 1863 the ENTOMOLOGICAL SOCIETY OF CANADA appears to have been the first society organized in Canada, it has continued since 1870 as THE ENTOMOLOGICAL SOCIETY OF ONTARIO, and publishes the Canadian Entomologist.

Perhaps the first attempt to form an international society of odonatologists was the "CONCILIUM ODONATOLOGICUM", conceived by a group of odonatists from five different countries who were attending the TENTH INTERNATIONAL CONGRESS OF ENTOMOLOGY, held at Montreal, Canada, in 1956. However, the idea seems to have been ahead of its time, and the society never formally organized.

The Japanese, a people who have admired dragonflies since ancient times, were not surprisingly the first to successfully organize a society devoted solely to the study of these insects, THE SOCIETY OF ODONATOLOGY, formed in 1957, and publisher of Tombo Acta Odonatologica. Another effort to organize an American dragonfly society was Prof. B. Elwood Montgomery's PURDUE COLLOQUIUM in 1963. While no formal American association materialized from that meeting, Prof. Montgomery's efforts in founding the newsletter Selysia was surely one of the foremost intervening factors that brought world odonatists closer together and provided an interest in founding an international society and the many regional associations which have been formed in the last two decades.

The next milestone was the UTRECHT COLLOQUIUM in 1970 and EUROPEAN SYMPOSIUM in 1971, organized

by Dr. B. Kiauta, and resulted in the formation of SOCIETAS INTERNATIONALIS ODONATOLOGICA, which with its truly international membership, and splendid journal Odonatologica, has evolved into one of the preeminent scientific societies in the world in its relatively short period of existence. S. I. O. is certainly unique among entomological societies by its spawning almost a dozen affiliate national groups. THE DRAGONFLY SOCIETY OF AMERICA is very proud to become the latest member of these associated societies.

The need for a society to serve the interests of Western Hemisphere odonatologists was recognized long ago by some of our pioneer workers such as Prof. Montgomery. Some of the members-to-be of D.S.A. carried on preliminary discussions prior to the Johnson City S.I.O. Symposium in preparation for bringing the question of a new national society before the S.I.O. membership. Expanded discussions occurred at the Symposium during several late-night meetings, and an overwhelmingly favorable response was received from potential members of the new society, and also from officers of the S.I.O. The organizational meeting was held in the lobby of Luntsford Apartments, East Tennessee State University, on the evening of August 11, 1989, Carl Cook presiding. Floor discussions ensued regarding the purpose, objectives, officers, and business aspects of establishing the new society. Each item was decided by simple majority vote of members, a slate of officers was elected, and the President empowered to draft a Constitution and Bylaws subject to approval of the membership.

Among purposes for which the society was organized, and objectives for which it shall strive are: 1) comradeship among all odonatologists; 2) interchange between amateur and professional disciplines; 3) establishment of the society's own newsletter; 4) support for wetlands and habitat conservation as the most effective means of species preservation; 5) support for enlightened moderation of restrictions on scientific collecting in countries where it is imposed, and governmental recognition of the essential role scientific collecting plays in systematics and the census of species populations; 6) the establishment of a species recording scheme for North, Central, and South America, with the annual publication of a

"Season Summary" volume of species lists and collecting data submitted by members, and its ultimate compilation in the form of a comprehensive catalog (see related article in this issue); and, 7) establishment of an organization with basic dues affordable to student and amateur, and provision for some gratuitous memberships in countries with fiscal policies which prohibits sending funds abroad.

The society shall assume the sponsorship of, and continue holding annual "collectors' gatherings" which have become such popular mid-summer meetings for collecting and comradeship. In conjunction with these the society shall hold a brief (Scouts' Honor!!) business session. The 1990 gathering will be held in Arkansas, and hosted by George H. Harp. (More details in the next issue).

As the first President of DSA, it gives me a great deal of pleasure to welcome you, one and all, to membership in our brand new society. I feel that we have a wealth of worthy goals set out for the society, and I know some of them will not be easily accomplished. Any organization is only as strong as its active membership-- no slate of officers can build a dynamic and enduring organization without the support of its members. We solicit your support through sending us your news items and articles for ARGIA, and also by enlisting your friends and associates as members-- the larger our membership-- the stronger our voice is in all matters that concerns odonatology.

## SOCIETY'S NAME REVISED

In SELYSIA (18:2) the formation of this society was announced. The name of the society was given as The American Dragonfly Society. That name had been selected by a voice vote of founding members at the organizational meeting (although there was a vigorous dissenting faction of Canadian members). There is an adage that states "the squeaky wheel will get the most oil". The chosen name was still generating a considerable volume of squeaks long after, so a series of phone consultations with the several different factions interested, resulted in the name The Dragonfly Society of America being chosen as a suitable compromise. It is, perhaps, a little less "yankeefied" and does have a more aesthetic acronym.

The name ARGIA for the society's news journal is very appropriate because it may be the only odonate genus found in all mainland countries of the Western Hemisphere.

## DSA RECEIVES GRANT FROM SIO

The Dragonfly Society of America is the recipient of a \$600.00 grant from Societas Internationalis Odonatologica. This generous gift from our parent society will enable DSA to accomplish two of the objectives that the organizing committee in Johnson City believed should be of primary concern to our new society. Firstly, we recognized that persons desiring to become members from some countries outside of North America could face problems in paying their dues in U.S. funds, and we wanted to offer these persons the opportunity for membership by providing for subsidized dues payments in instances of special need. Secondly, we believed that a modest program of advertising would help increase our membership.

The S.I.O. grant will be used exclusively for these purposes. Our projections are that DSA may receive applications for between 10 and 20 gratuitous memberships, and we have committed the funds to support these for the calendar years 1990-91. Funds for continuing the subsidies permanently are anticipated to accrue from Sustaining Memberships and/or further grants from various sources. A computer data base has been established listing both professional and amateur odonatologists from the Western Hemisphere, and other countries, if they have an interest in New World Odonata. DSA is in the process of direct-mailing informative literature about the society, along with our prospectus for membership, to each person in our data base who is not presently a DSA member.

Our goal is a five-to-tenfold increase in membership over the next five years to provide the society with a self sustaining financial structure for its basic publications ARGIA, and the SEASON SUMMARY ANNUAL, and to cover costs of the annual business meeting.

Our society is very grateful to S.I.O. for this financial assistance, which has permitted us to devote dues income to the production of ARGIA and other routine costs, and even end our first year of existence with a small surplus account.

## PAULSON NEW DIRECTOR AT SLATER

Dr. DENNIS R. PAULSON has recently accepted the position of Director of the Slater Museum of Natural History, University of Puget Sound, at Tacoma, Washington. Dennis was formerly associated with the Burke Museum of University of Washington, in Seattle. Dennis is well known for his extensive contributions in the field of Ornithology, as well as his Odonatological research. Congratulations on the new position, Dennis.



# NORTH AND CENTRAL AMERICAN CATALOGUE OF ODONATA - A PROPOSAL

Thomas W. Donnelly  
2091 Partridge Lane  
Binghamton, NY 13903

In comparison with many other parts of the world, North and Central America stand out for the relatively long neglect of their Odonate faunas. The striking exception to this bold statement is Canada, which received an excellent comprehensive treatment from Walker a few decades ago. For the remainder of North and Central America we have books with ranges of Odonates listed by state only (U.S.), or country (Mexico and Central America). I propose that an important activity of the DSA is to do better.

Recently, especially at Johnson City, our attention has turned to rare and endangered species. We have, unfortunately, somewhat neglected our common species. Not only are ranges poorly understood, but attention to regional variations and relationships among closely related sibling species has largely been neglected.

I propose that we attempt to assemble a catalog list of North and Central American Odonata. For the U.S., the county level is convenient for the assembly of information. I suppose this would be a similarly convenient level in Canada, but my road maps of Canada do not include counties, and I am personally at a loss to place my relatively few Canadian species in their proper county. The situation in Mexico and Central America is comparable. The States of Mexico seems somewhat large for an ambitious catalog of the sort I envision, but I do not possess a map of Mexico with a finer subdivision. For Central America the Departamentos and Provincias seem to be about the proper level. The larger Caribbean islands have reasonably well known subdivisions; the smaller islands need no subdivision. I propose that we catalog the common species with the same vigor as the rarer. For the truly rare species or unusual (disjunct) records, details of the occurrence will be necessary. For more common species a simple county tabulation should suffice.

The output of our efforts might be a map with spots showing county (or comparable) records. Notice, I do not propose to list individual records.

Some interesting patterns might fall out of this. Sample questions: 1) is Pachydiplax longipennis

disjunct in the western U.S.? 2) how many records of Anax amazili are there beyond the humid tropics? 3) is Ischnura posita really absent in the Adirondacks and some other northern areas? The results of this effort might force us to look closely at some sibling species that remain unexamined: Perithemis tenera and mooma; Progomphus clendoni and obscurus; Macromia georgina and illinoensis.

There are important questions as to the method of attack (assuming that there will be support for this effort).

1) Should the work be parceled out by area or taxonomic group? I argue that a geographic assignment makes much more sense. For example, I have done New York already, and I could try my hand at Texas if no one else volunteers.

2) How do we assemble and collate the data? this is tricky. I have my U.S. and Canadian records (at least back to 1953) in computer files, using Microsoft WORD. My Mexican, Central American, and Caribbean data still exists only in notebooks. I have not used a data-base system. I could easily copy off the appropriate states so as to send the information to others. What systems do others use? Should or could we standardize on some common system so as to swap floppy disks? Or is this not viable? 3) At some point we will have to bite the bullet and discuss both systematic and nomenclatorial problems. I believe there are sibling species that that might not stand the pressure towards reduction to subspecies, and there may well be species that need to have some regional subspecies - or even new species - created for part of their present membership. A good catalog provides the stimulus for this sort of study. We will and should never have systematics by consensus, but we should at least have a good mutual understanding of what is present.

Therefore, I solicit your comments and, I hope, your acceptance of this idea, at least in principle. Please me know, if you agree, 1) your geographic areas of expertise, and 2) how you collate your own data (computer or otherwise), and how much you might be willing to expand your system?

# U.S. ENDANGERED SPECIES - A REQUEST FOR INFORMATION

Thomas W. Donnelly  
2091 Partridge Lane  
Binghamton, NY 13903

At the Johnson City meeting of Societas Internationalis Odonatologica our group had a productive session discussing the threatened U.S. species of Odonata. Recently I have had an enquiry from Mr. Chris Engano, a U.S. Fish & Wildlife Service entomologist about one of these species, Tanyteryx hageni. He further expressed interest in our Johnson City meeting and requested that I send the F & W Service a resume of our findings. At the same time he sent me the latest version of the Federal Register (6 Jan. 1989) with the latest list of Odonata (and every thing else). There is only one odonate now listed as "threatened or endangered" (Megalagrion pacificum.) Many are in category 2. I quote from the text: "Category 2 comprises taxa for which information now in possession of the Service indicates that proposing to list as threatened or endangered is possibly appropriate, but for which conclusive data on biological vulnerability and threat are not currently available to support proposed rules. The Service emphasizes that these taxa are not being proposed for listing by this notice, and that there are not specific plans for such proposals unless additional information becomes available. Further biological research and field study may be needed to ascertain the status of taxa in this category, and it is likely that many will be found not to warrant listing. The Service hopes that this notice will encourage investigation of the status and vulnerability of these taxa, and consideration of them in the course of environmental planning".

I feel that a strong case for Category 1 can be made for two species: Ischnura gemina and Cordulegaster savi. The F&WS has received a study by John Hafernik on the Ischnura and I believe it constitutes a strong case for elevation to category 1. (Hafernik cites, among other things, the occurrence of this species in modified habitats or in habitats that are strongly threatened in the San Francisco bay area, and he also cites its vulnerability through hybridization with I. dentifrons. This last idea will no doubt raise a few systematist eyebrows, but this is not the place to debate that disturbing idea). I feel that a similar case can be made for the Cordulegaster.

What I seek from you is 1) your comments on species discussed at Johnson City which might be relevant to species on this list, and 2) your comments on species that are not on this list

(such as Gomphus lynnae and Williamsonia fletcheri. I also intend to comment on two species on American Samoa.). I propose to collate the replies into a coherent document, and then send it back to the people who respond, for their comments prior to forwarding it to the F&WS.

In addition, we might consider some special problems faced now or potentially in the future by several species with numerous present occurrences. As an example, although Enallagma recurvatum has been reduced to category 3 because of its numerous occurrences, can a case be made that its range is almost entirely in a rapidly growing part of the Megapolis, and, thus, special attention should be paid to it in the future?

## APPENDIX:

The Category 2 List (the asterisks are not explained in the text; presumably they mean "possibly extinct")

Argia baltimorhea (nom.nud.), sabino (nom.nud.)  
(in the list as Baltimorhea damselfly and Sabino Canyon damselfly)

Ischnura gemina  
Megalagrion adytum, amaurodytum fallax (\*),  
a. peles (\*), a. mainanum (\*), leptodermus,  
molokaiense, nigrohamatum, nigrolineatum,  
cahuensis, oceanicum, xanthomelas

Cordulegaster savi  
Neurocordulia clara  
Somatochlora hineana, margarita  
Williamsonia lintneri  
Gomphus consanguis, sandrius, septima,  
parvidens carolinus

Stylurus notatus, townesi  
Ophiogomphus edmondo (\*), anomalous, howei,  
incurvatus allegheniensis, westfalli  
Progomphus bellei  
Macromia wabashensis

Species no longer being considered for various reasons are:

Megalagrion jugorum and neaiotes ("persuasive evidence of extinction")

Enallagma recurvatum ("more abundant and wide-spread than previously thought")

Gomphus adelphus (brevis was its synonym all along)

## ODONATE COLLECTING IN THE PERUVIAN AMAZON

Sidney W. Dunkle  
International Odonata Research Institute  
P.O. Box 1269  
Gainesville, FL 32602-1269

I collected odonates at the facilities of the Explorama Tours near Iquitos, Peru in a lowland rainforest area in the summer of 1989. Explorama operates three facilities: Explorama Inn 25 mi NE of Iquitos on the Amazon River, Explorama Lodge 50 mi NE of Iquitos at the junction of the Amazon and Yanamono Rivers, and the Explornapo Camp further NE of Iquitos on Sucusari River near its junction with the Napo River which is a large tributary of the Amazon. I prepared a report on my activities for Earthwatch and I thought that ARGIA readers would be interested in the extracts which follow.

The most-used Peruvian name that I heard for odonates sounds like it would be spelled "Chinchilejos" and is pronounced "Cheen-chee-lay-nose." I surveyed for these insects with the help of Earthwatch Grant volunteers, who were primarily working on a study of the Orthoptera and Isoptera of the area, from August 13 to September 1, 1989. We collected on 6 days at the Inn, 12 days at the lodge, and 3 days at the Camp. Although August is one of the driest months here, we still experienced considerable clouds and rain. Our catch included representatives of 3 Families of Anisoptera and 8 of Zygoptera. Of the 48 species of Zygoptera we found, 21 occurred only at the Lodge, 10 only at the Camp and Hetaerina caja only at the Inn. Thus 67% (32/48) of the Zygoptera occurred at only one place illustrating the amazing microhabitat specificity of tropical odonates. I classified most of the 32 Zygoptera species unique to a site as rare (1 to several specimens) or scarce (several to about 10 specimens). The only exceptions were Aeolagrion flammeum, a tiger-striped blue and brown damselfly with bright red eyes and face, which was common along certain forest streams at the Lodge, and Helveciagrion chirihuanum, a black-and-blue damselfly common at the pasture pond near the Lodge boat landing. Eight (17%) of the Zygoptera occurred at all three locations we sampled, half of them classified as common, half classified as scarce. All of the remaining species, found at two locations, were found at the Lodge and the Inn or at the Lodge and the Camp.

Of the 54 species of Anisoptera collected, 50% (27/54) were found at only one location, including 18 at the Lodge, 7 at the Inn, and 2 at the Camp. Thus more Anisoptera were habitat specialists at the Inn than the Camp, the reverse of

the case for Zygoptera. Of the 27 Anisoptera species unique to a site, nearly all were rare (21), scarce (3), or uncommon (2). The exception was Tauriphila australis, a hard-to-catch black and red dragonfly that patrolled the Lodge boat ramp pond. Seven (13%) of the Anisoptera species occurred at all three locations, in all numerical categories-- 1 rare, 1 scarce, 2 uncommon, 2 common, and 1 abundant. Most of remaining species, found at 2 locations, were found at the Inn and the Lodge or at the Camp and the Lodge. The exceptions were 2 species of Perithemis, electra and an undescribed species, which for unknown reasons were found at the Inn and Camp but not at the Lodge.

Some comments about individual groups or species might be apropos at this point. We found only 2 species of the stream-dwelling, broad-winged damselflies of the genus Hetaerina. Of these, H. sanguinea was common at all three Explorama localities. For instance, the males conspicuous with their bright red basal wing spots, perched on sticks over the stream behind the bar at the Lodge. In hillier areas with faster flowing streams, we could expect several Hetaerina species to occur on one stream. Lestes are inconspicuous dull-colored damselflies that perch on the sides of stems with the wings partly spread. I found a few specimens of L. helix, a species which is very rarely collected, near a slow stream in the forest at the Lodge. Two species of Polythore, large butterfly-like damselflies with white, yellow, or black wing patches were found only at the extreme upper ends of streams at the camp. The family Megapodagrionidae included 2 genera, the yellow and black Heteragrion with three species, 2 of them undescribed, and the large brown Philogenia with 2 species, 1 undescribed. The megapodagrionids live along streams or seepage areas in deep rainforest, where they perch with spread wings like a Lestes. We found three species of Perissolestes, exceptionally long and thin brown damselflies which also perch like a Lestes. All Perissolestes are difficult to see in the gloom along rain-forest streams, are seldom collected, and are very poorly known. The most spectacular odonates in South America are the giant damselflies of the family Pseudostigmatidae. We found 4 species, all with yellow wingtips. As they flap slowly through the forest, the wingspots give the

## COLLECTING IN COSTA RICA

Sidney W. Dunkle  
International Odonata Research Institute  
P.O. Box 1269  
Gainesville, FL 32602-1269

I visited Costa Rica, primarily in pursuit of wily Odonata, for 10 days in February-March 1987. I rented a car and drove a 500 km loop, collecting at 22 locales, in the north-central part of the country, including parts of two mountain ranges and both Atlantic and Pacific slopes. Unfortunately, as I found out, the time of my visit was the height of the dry season, which probably did not improve my results. The Pacific Slope of northwestern Puntarenas Province was indeed dry and sunny, but of the 21 species of odonates I found there, none were particularly desirable. Except, that is, for single specimens of a Progomphus and a Phyllogomphoides, both of which were too wary to catch. These were the only gomphids seen on the whole trip. I could find no shade-dwelling forest odonates on the Pacific Slope, with the exception of a few Neoneura esthera and Perithemis domitia. The Neoneuras oviposit in floating debris, so the best way to find these is to look for a swirl of floating leaves in a shady eddy near the bank, then look for pairs in tandem on this material. On one occasion I saw such an eddy way down river with binoculars, and may I smugly say I was right-- it was full of Neoneuras!

The next area visited was cloud forest on the crest of the Tilaran Mountains at the much-touted Monteverde. Here, the scenery was great, but the collecting was worse. In a day and a half of strenuous effort, I could find only 6 species of odonates. Again the most desirable, two specimens of apparently a Neocordulia, could not be caught.

Figuring that the Atlantic Slope had to be better, I descended from the mountains over some awesomely bad roads. It would have been much better to have rented a high-clearance vehicle. I shudder to think what these "roads" must be like in the wet season, because they were like boulder-filled stream beds when I was there. I might also mention that, although I had 6 maps of Costa Rica, some roads were not shown on any of them, and other roads which were shown did not exist. It was somebody's idea to print maps good for the future, when such roads might be built! While still high in the mountains, the North American reader may sympathize as I collected such exotica as Enallagma civile, Ischnura hastata, and Ischnura ramburii!

The Atlantic Slope was much moister, in fact it was mostly cloudy during my visit. Near the famous La Selva Biological Reserve in the Atlantic lowlands I found a few interesting species, but collecting was not great. I was not allowed to collect in the reserve itself. The staff told me that there were usually pseudostigmatids flapping at the windows of the lab, but none were present when I was there. In fact, no pseudostigmatids were seen on the whole trip.

Traveling on to the southeast, after 7 days of hard searching, I finally hit the jackpot at Rio Santa Clara at Guapiles. On this clear, rocky stream I found 19 species of Odonata. These included, at last, numbers of shade-dwelling Zygoptera, and this circumstance allowed productive collecting to occur even under cloudy and rainy conditions. Found here were 3 species of Heteragrion. These usually sit quietly on the tips of twigs with the wings spread, like a Lestes. However, males are much more colorful than lestids, because erythrogastrum has a bright red abdomen, the others here had orange or yellow abdomens. The females are brown and very inconspicuous; the best way I found to look for them was to look on the tips of twigs back a little from the stream. A twig-tip with wings was probably a female Heteragrion! Two Argia spp. attracted attention. A. nr. cypraura with red eyes, copper thorax, and sky-blue abdomen, perched on rocks in the stream whenever the sun tried to peer through the clouds. Argia adamsi, strikingly marked with turquoise blue and black and with amber-tinted wings, occurred at only one grassy spot on a tributary. They were remarkably fast and wary. In the forest were some of the few aeshnids of the trip. All that I caught proved to be the common Gynacantha nervosa. The only Cora of the trip, 3 female marina perched on high twig tips, were also taken here. Some of my favorite odonates of the trip were Hetaerina. These could usually be found under cloudy conditions when nothing else was out, and they were usually easy to catch. Two species were at the Rio Santa Clara, H. miniata which I found only here, and H. occisa which was common on many streams.

The reader may gather from the above that, except for the Rio Santa Clara and a couple of other localities, totalling about 3 days out of my 10, my impression of collecting in Costa Rica



DUNKLE: COLLECTING IN PERU, continued

illusion of rotation, like a pinwheel or helicopter, a sight as grand, in my opinion, as that of a Morpho butterfly careening through a glade. I think the wingtip spots make these damselflies hard for birds to catch, as the spots confusingly appear and disappear to the left and right with each wingstroke, while the black body itself remains undetected. Another family of damselflies, the Protoneturidae, were quite diverse with 5 genera and 3 species. These are pin-thin small damselflies that hover over shady forest streams. They live unseen and uncollected unless a careful effort is made to search them out. The remaining family of damselflies, the Coenagrionidae, are in most aquatic habitats the most numerous in species and individuals. Half the species of Zygoptera we found, 24 of 48, were in this family. The taxonomy of this family is difficult because of the many species, and some genera that seem to blend together. I was unable to identify 12 of the species we collected. At least some of these are certainly new to science, for instance, a small olive-green species of Chrysobasis which was so common at the Lodge boat ramp pond that I thought it surely was of no great significance. Another notable thing about the coenagrionids we collected was the lack of numerous species of the genus Argia, which has probably well over 100 species in South America. We found only 2 species, whereas in an area with faster flowing streams we could expect many.

By far the dominant family of Anisoptera in the tropics is the Libellulidae. For example 72% of the anisopterous species we collected were libellulides. Thus it was so refreshing to observe and collect some dragonflies other than libellulids, including 9 species of Aeshnidae and 6 of Gomphidae. I have previously taken 2 week collecting trips in the tropics and caught no gomphids at all. Probably most of these live in the forest canopy and thus are seldom encountered, but we saw lots of large black gomphids flying far out over the Amazon River. I tried to catch them from the front of the Explorama moterized canoes, but without success. I only found out that they were Phyllogomphoides selysi when two came to the lighted sheet at the Inn. In fact, many of the most rarely collected dragonflies were taken by unorthodox dragonfly collecting methods. One of the things I enjoyed very much was the nightly hunt for dragonflies, when a large green and blue aeshnid, Neuraeschna harpya, would fly high and fast from about 6:00 to 6:10 PM near our rooms at the Lodge. On a good night we might actually catch

one or two of them! Strangely, all we caught were males, which apparently get most of their daily food ration from one short burst of hyperactivity at dusk. A fourth family of anisopterous dragonflies which occurs in lowland Peru is the Corduliidae, mostly metallic brown dragonflies with green jewel-like eyes. These proved so elusive that we saw none at all. By the process of elimination any Peruvian dragonfly that is not an Aeshnid, Gomphid, or Corduliid must be a Libellulid! Four species of libellulids were the most conspicuous dragonflies in clearings around houses, including the red and blue Erythemis peruviana, the small black-winged Erythrodiplax attenuata, the black-and-white E. unimaculata, and the large pink Orthemis ferruginea. In the forest, another libellulid, Uracis fastigiata, gray-blue with black wingtips, was perhaps the most conspicuous of all dragonflies seen.

In summary, I count this project a great success. We documented what species of odonates were present at each site, including some that have been rarely encountered by anyone. Specimens of many species have been distributed to other odonatologists and museums. Fourteen species (14%) are still unidentified. The eggs from several rare species have hatched and the young larvae preserved for future study.

Still to be done are further surveys of the Odonata in the area, especially at different times of the year. Behavior studies and population studies should be done, more eggs could be obtained, and more species should be photographed. Finally, the aquatic larval stages remain essentially untouched.

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DUNKLE: COLLECTING IN COSTA RICA, continued

is considerably less glowing than that given by Belle in SELYSIA 16(1). I attribute most of my frustration to not being able to find good forest habitat outside of reserves and accessible from roads, no matter how bad the road. This is of course due to rampant deforestation, even in Costa Rica, one of the most progressive countries in the neotropics. The soil of Costa Rica also seems to me to be exceptionally loose and liable to erode away during the frequent hard rains. If one could get to undisturbed forest, the fauna of Costa Rica is fabulously rich, and I wish you good luck in finding those places, or in getting permission to collect in the reserves. The visiting odonatist should also be prepared for bad footing in the

streams: the rocks there are some of the slipperiest I have ever encountered.

In spite of the deforestation, I saw more large birds than I usually do in the neotropics, such as 2 species of Tiger Herons, Sun Bitterns, Ospreys, 2 species of Toucans, Laughing Falcons, Swallow-tailed Kites, and many unidentifiable Parrots and Parakeets. No Macaws though. I also saw a couple of large tree squirrels, and a couple of racer-type snakes, some spectacular land iguanas, and a couple of small caimans. Particularly interesting were the Basilisk Lizards, a large brown crested species on the Pacific Slope and a small green one on the Atlantic Slope. Small specimens of these could easily run across the surface of the water, even rippling water. Large insects were not common, but I did see a few Morpho butterflies. Pest arthropods such as mosquitoes were also not common, except for chiggers. One can avoid most of the latter by wading in the water occasionally. I might also mention here that the Costa Rican people's reputation for friendliness is well deserved. However the visitor should speak Spanish fairly well if he expects to get about very easily.

On this trip I collected 77 species of odonates and saw 5 others. of these, 20 species were represented by only 1 specimen and 14 were present at only 1 locality, but I was happy to see 24 species in life that I had not seen before. The most speciose genera were Hetaerina with 7 species, and Argia with 14. I investigated quite a few habitats, including seepages in forest, where I thought some exotic odonates should live, but found no odonates at most of them. After re-reading Philip Calvert's book A Year of Costa Rican Natural History, I noted that he had the same experience even in 1909--habitats where one would expect something great had perhaps nothing at all. Calvert also collected on the Rio Santa Clara at Guapiles in May for several days. He states (p. 285): "There were few dragonflies flying and those seen were not particularly rare." Calvert did of course find fabulous Odonata in Costa Rica at other places, such as Thaumatoneura, Staurophebia, and Megaloprepus, and I hope to follow his example some day.

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PLEASE REMEMBER WE NEED YOUR CONTRIBUTION OF DATA FOR THE SEASON SUMMARY AS SOON AS POSSIBLE. If you have not already sent your collecting records for the 1989 season to your area coordinator please do so as soon as possible.

## RESEARCH IN PROGRESS

Rosser W. Garrison  
1030 Fondale Street  
Azusa, CA 91702

The synopsis of the Hetaerina is finished and should be published in early 1990. The work contains descriptions of four new species, gives keys to all known species of both sexes, and has almost 150 illustrations. The paper is not a revision, but only a synopsis.

Other research includes:

1. Species resolution among partially sympatric neotropical dragonflies using ordination techniques. This paper will be a chapter in a book dealing with multivariate techniques in entomology. The MS concerns Tramea binotata and T. insularis and will probably be completed in late 1989.

2. A monograph on the genus Erotopogomphus. I hope to finish this work in 1990. All illustrations and a few descriptions are done. The paper will discuss the phylogeny of the genus using cladistics. Four new species are described.

3. A synopsis of the genus Mnesarete. This will be a companion work to Hetaerina. I currently have seven new species and have seen examples of all described species.

Although I live in the western United States, my primary interest is in the systematics of neotropical Odonata. I believe that region represents the greatest challenge to the Odonate systematist, as it is the least known area and probably contains the greatest wealth of new species. There is a great need for work to be done in Latin America, and I have been trying to build a voucher or synoptic collection from the region. In order to help me understand the species of the region, I have been preparing an "atlas" of all described species. This includes traced illustrations of all known species of each genus, with appended notes for some. This allows me to comb through all species rapidly, at least those illustrated in the literature, to determine the specificity of a questionable species. Thus far, I have made up "atlases" for the following genera: Phasmoneura, Peristicta, Minagrion, Telagrion, Leptagrion, Epipleoneura and Telebasis. They are available to interested persons.

## SEASON SUMMARY PROJECT Carl Cook, Editor

It was proposed at DSA's organizational meeting that a needed function the society should attempt to originate, is a species recording scheme for the Odonata of North, Central and South America, patterned after a similar recording scheme being done in the order Lepidoptera, the results published in an annual "season summary", from data submitted by participating field collectors.

Elsewhere in this issue Prof. T. W. Donnelly has proposed taking the project a step further by organizing the cumulative data into an open-ended catalogue that will initially cover Canada, the US, and Central America. Conceivably this might be extended to cover South America as well, when our knowledge of that regions' Odonata fauna reaches a sufficiently mature state. This is a little awe-inspiring for me to think about-- that our society, even though less than one-year old is already having grandiose ambitions. But, it is a very appealing and worth-while undertaking that I support and ask the membership to support.

I am willing personally to devote the time and effort necessary to raise the funds for us to undertake this important project. I feel that DSA is very fortunate to have an odonatologist of Nick Donnelly's stature willing to devote the enormous amount of time that the editorship of this project will entail.

At this point we need some commitments from the membership. I know that many of you are compiling state and local lists. As Nick and myself are doing, for New York and Kentucky. DSA needs to know how many are willing to become part of this project, and we also need your ideas on how best to accomplish and enhance it.

Our geographical coverage should comprise the whole of the Western Hemisphere. This has been divided into several zones, each with a Coordinator, who will receive the field reports from collectors within his zone. The Coordinator will collate all data submitted from his zone and furnish it to the Editor. Zone boundaries have initially been set rather arbitrarily to divide the work load equitably between Coordinators. Faunistic boundaries have not been taken into consideration.

### THE FOLLOWING ZONES HAVE BEEN ESTABLISHED AND COORDINATORS APPOINTED

ZONE ONE, EASTERN CANADA: New Brunswick, Newfoundland, Nova Scotia, Ontario and Quebec.  
COORDINATOR: DONALD J.F. HILTON, Dept. Biological Sciences, Bishop's University, Lennoxville, Quebec J1M 1Z7, CANADA.

ZONE TWO, WESTERN CANADA: Alberta, British Columbia, Manitoba, Northwest Terr., Saskatchewan, Yukon (and Alaska).

COORDINATOR: ROBERT A. CANNINGS, Royal British Columbia Museum, 675 Belleville St., Victoria, B.C. V8V 1X4, CANADA.

ZONE THREE, NORTHEASTERN US: CT, DE, IA, IL, IN, KY, MA, MD, ME, MI, MN, MO, NH, NJ, NY, OH, PA, RI, VA, VT, WI, WV.

COORDINATORS: FRANK L. CARLE, 146 Mountain View Rd., Warren, NJ 07060 & TIM VOGT, 414 W. Chestnut St., Pardeeville, WI 53954.

ZONE FOUR, NORTHWESTERN US: ID, OR, MT, NB, ND, SD, WA, WY.

COORDINATOR: DENNIS R. PAULSON, Slater Museum of Nat. History, University of Puget Sound, Tacoma, WA 98416.

ZONE FIVE, SOUTHEASTERN US: AL, AR, GA, FL, LA, MS, NC, SC, TN, (and Caribbean Islands).

COORDINATORS: KENNETH J. TENNESSEN, 1949 Hickory Ave., Florence, AL 35630 & R. DUNCAN CUYLER, 3706 N. Garrett Rd., Durham, NC 27707.

ZONE SIX, SOUTHWESTERN US: AZ, CA, CO, KS, NM, NV, OK, TX, UT.

COORDINATOR: ROSSER W. GARRISON, 1030 Fondale St., Azusa, CA 91702.

ZONE SEVEN, CENTRAL AMERICA: Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama.

COORDINATOR: RODOLFO NOVELO G., Instituto de Ecologia, A.C., km 2.5, Antigua Carretera a Coatepec, Apartado Postal 63, 91000 Xalapa, Ver., MEXICO.

ZONE EIGHT, SOUTH AMERICA: Argentina, Bolivia, Brazil, British Guiana, Chile, Colombia, Ecuador, French Guiana, Paraguay, Peru, Surinam, Uruguay, Venezuela.

COORDINATOR: Position Open.

Contributors may present their reports in as elaborate, or brief, form as they wish. We welcome reports of a single noteworthy capture, as well as fully detailed itineraries for a complete collecting season. For widely distributed common species county locality and an approximated date range is sufficient (e.g. KY: Green Co., May 15-June 30). Unusual records should include more complete data: Exact locality and date, pertinent comments about habitat, weather conditions, anything noteworthy.

## MEMBERSHIP LIST

### CANADA

Barten, Jo  
3152 Wachna Drive  
Windsor, Ontario N8T 1Z8  
CANADA

Sondy, Mr. Peter  
12633 Riverside Drive E.  
Tecumseh, Ontario N8N 1A7  
CANADA

Jannings, Dr. Robert A.  
Royal British Columbia Museum  
675 Belleville Street.  
Victoria, B.C. V8V 1Y4, CANADA

Jannings, Dr. Sydney G.  
Dept. of Zoology  
Univ. of British Columbia  
Vancouver, B.C. V6T 2A9, CANADA

Hellebuyck, Mr. Victor  
1277 Lincoln  
Sherbrooke, Quebec J1H 2H8  
CANADA

Hilton, Dr. Donald F. J.  
Dept. Biological Sciences  
Bishop's University  
Lennoxville, Quebec J1M 1Z7, CANADA

Hutchings, Gord E.  
1537 Hampshire Road  
Victoria, B.C. V8R 5T4, CANADA

Pratt, Paul D.  
7100 Matchette Road  
LaSalle, Ontario N9C 2S3  
CANADA

Wigle, Mr. Michael  
Box 643  
Bella Coola, B.C. V0T 1C0  
CANADA

Zolty, Jack  
Dept. Biolg. Scien., Univ. of Calgary  
2500 University Drive NW  
Calgary, Alberta 2TH 1N4, CANADA

### MEXICO

Gonzalez-Soriano, Dr. Enrique  
Instituto de Biologia, U.N.A.M.  
Apartado Postal 70-153  
C.P. 04510, Mexico, D.F.

Hovelo G., Dr. Rodolfo  
Instituto de Ecologia, A.C., km 2.5  
Antigua Carretera a Coatepec  
Apartado Postal 63  
91000 Xalapa, Ver., MEXICO

### THE NETHERLANDS

Klaauw, Dr. Bastiaan  
P.O. Box 256  
3700 AG Bilthoven  
THE NETHERLANDS

van Tol, Dr. Jan  
Rijksmuseum van Natuurlijk Historie  
Postbus 9517, 2300 RA Leiden  
THE NETHERLANDS

### UNITED KINGDOM

Corbet, Prof. Dr. Philip S.  
The Old Manse, 45 Lanark Road  
Edinburgh EH14 1TL  
UNITED KINGDOM

### UNITED STATES

Artus, Mr. Scott  
2136 Liberty Drive  
Fort Collins, CO 80521

Aycock, Mr. James F.  
5490 Stirling Road  
Davie, FL 33314

Belshe, Dr. John F.  
Biology Department  
Central Missouri State Univ.  
Warrensburg, MO 64093

Bick, Dr. George H. (& Juanda)  
1928 S. W. 48th Avenue  
Gainesville, FL 32608

Borkin, Susan Sullivan  
2119 E. Wood Place  
Shorewood, WI 53211

Carle, Dr. Frank Louis  
146 Mountain View Road  
Warren, NJ 07060

Carpenter, Ms Virginia A.  
Cape Cod Museum of Nat. History  
Drawer R, Brewster, MA 02631

Cook, Mr. Carl  
469 Crailhope Road  
Center, KY 42214

Cuyler, Mr. R. Duncan  
3706 N. Garrett Road  
Durham, NC 27707

Daigle, Mr. Jerrell J.  
2166 Kimberley Lane  
Tallahassee, FL 32301

Donnelly, Dr. Thomas W.  
2091 Partridge Lane  
Binghamton, NY 13903

Dunkle, Dr. Sidney W.  
International Odonata Research  
Institute, P. O. Box 1269  
Gainesville, FL 32611-1269



Evans, Dr. Mary Alice  
 Department of Entomology  
 Colorado State University  
 Fort Collins, CO 80523

Flint, Dr. Oliver S., Jr.  
 Entomology - Stop 105  
 National Museum of Natural History  
 Washington, DC 20560

Garrison, Dr. Rosser W.  
 1030 Fondale Street  
 Azusa, CA 91702

Glotzhofer, Robert C.  
 c/o Ohio Historical Society  
 1982 Velma Avenue  
 Columbus, OH 43211-2497

Harp, Dr. George L.  
 606 Maplewood Terr.  
 Jonesboro, AR 72401

Holzbach, Mr. John E.  
 229 Maywood Drive  
 Youngstown, OH 44512

Johnson, Dr. Dan M.  
 Department of Biological Sciences  
 East Tennessee State University  
 Johnson City, TN 37614

Kauer, Kim O.  
 471 Berkeley Drive  
 Clemson, SC 29631

Koenig, Mr. Walter D.  
 Hastings Natural History  
 Reservation, Star Route Box 80  
 Carmel Valley, CA 93924

Kondratieff, Dr. B. C.  
 Department of Entomology  
 Colorado State University  
 Fort Collins, CO 80523

May, Dr. Michael L.  
 Dept. of Entomology, Cook College  
 Rutgers Univ., P.O. Box 231,  
 New Brunswick, NJ 08903

Miller, Mr. Kelly B.  
 2314 Bennett Avenue  
 Glenwood Springs, CO 81601

Orr, Richard L.  
 12535 Province Point Drive  
 Houston, TX 70015

Paulson, Dr. Dennis R.  
 Slater Museum of Nat. History  
 University of Puget Sound  
 Tacoma, WA 98416

Pippenger, Dr. Mark  
 6108 Kenwood  
 Little Rock, AR 72207

Shiffer, Mr. Clark  
 254 S. Gill  
 State College, PA 06405

Smith, Mr. William  
 Wisconsin Dept. Nat. Resources  
 Bureau of Endangered Resources  
 GEF2, ER-4, Madison, WI 53707

Soltész, Mr. Ken  
 P.O. Box 62  
 South Salem, NY 10590

Strom, Mr. Douglas G.  
 1772 Mansfield Street  
 Port St. Lucia, FL 34952

Tennessen, Dr. Kenneth J.  
 1949 Hickory Avenue  
 Florence, AL 35630

Valley, Mr. Steven A.  
 1165 S. W. Lawrence  
 Albany, OR 97321

Wogt, Mr. Tim  
 414 West Chestnut St.,  
 Pardeeville, WI 53954

Westfall, Dr. Minter J., (& Margaret)  
 Department of Zoology,  
 University of Florida  
 Gainesville, FL 32611

## SURVEY OF OHIO ODONATA PLANNED

An independent group representing several universities and agencies around Ohio is in the beginning stages of a five year inventory of the dragonflies and damselflies of Ohio. Goals include establishing an updated species list for the state, comparing current species and populations with historic records, and eventually setting recommendations for selection of endangered and threatened species in Ohio.

Anyone with information on material collected in Ohio, or interested in helping with current collections in Ohio, is asked to contact:

ROBERT C. GLOTZHOBER, Assistant Curator Natural History, Ohio Historical Society, 1982 Velma Avenue, Columbus, OH 43211-2497

## BOOK REVIEWS

### The Dragonflies of Europe

ASKEW, R. R., 1988. The Dragonflies of Europe. 294 pp., 31 color pls., 502 text figs., 116 maps. ISBN 0-946589-10-0. Publishers: Harley Books, Martins (Essex), UK. - 29x22 cm, hard covers. Price about UK 52-. (Authors' address: Dept. Zoology, Univ. Manchester, Manchester, M139PL, UK).

This is certainly the most elegant book to appear on the European Odonata since W. J. LUCAS' British Dragonflies. The color plates depict both sexes, and the different color forms, of almost every West European species. The plates are nearly all from watercolor drawings, well executed, and attest to the superb artistic skill of the author.

The book is certain to become the standard identification guide for European Odonata. The Foreword has been written by Prof. Philip Corbet. The Introductory chapters cover history, life history, larval biology, adult behaviour, distribution and adult morphology. Systematics are covered by keys to each genus and species for both larvae and adults; outline figures are given of diagnostic structures for larvae and adults; distinguishing characteristics are described; information provided on biology, phenology, and details about distribution (including distributional maps for each species). An extensive bibliography of about 600 titles is provided.

Only by interduction of a new subfamily name, "Mehalenniinae", without citing the evidence in support thereof, does this Reviewer find cause for mild criticism.

This book will be indispensable to every serious odonatologist, also the authors' unique way of describing the characteristics of each species seems to make their identification unusually easy, and this feature will undoubtedly have high appeal to beginning students and amateurs as well.

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### Dragonflies of the Florida Peninsula, Bermuda and the Bahamas

DUNKLE, SIDNEY W., 1989. Dragonflies of the Florida Peninsula, Bermuda and the Bahamas. X+158 pp., 129 color figures from photographs, soft covers 15x23 cm, ISBN: 0-945417-23-3, Publishers:

Scientific Publishers, Gainesville, FL 32604, Price US \$12.95. (Authors' address: Bureau of Entomology, D.P.I., P.O. Box 1269, Gainesville, FL 32602-1269).

The format of this delightful book is of the familiar "field guide" type. However, the similarity ends there between this book and most "popular field guides" written on natural history subjects. The reason may be because Sid Dunkle is both an extremely knowledgeable and preceptive odonatologist, and a master of the difficult art of macro-photography of living dragonflies. The text is scientifically accurate, but not so technical that it is not easily understood by those just beginning to study Odonata.

The Introduction section of the book has chapters covering-- what is a Dragonfly?, Naming and Classifying Dragonflies, Distribution, Dragonfly Anatomy, Life History, Photographing Dragonflies, Collecting Dragonflies, Dragonflies in Education, and Dragonfly Conservation. The accounts of each species are somewhat unorthodox, no keys or structural descriptions are given. The identification of species relies on the larger-than-life photos, but those photos have excellent resolution and the dragonfly models were positioned to show each species' distinguishing characteristic to best advantage. By restricting the books' coverage to species which occur in Peninsular Florida it was possible to eliminate the few Floridian species (e.g. some gomphids of the Panhandle region) that can not be certainly identified by color patterns alone. There is evidence of expanding interest in this country of the new sport of dragonfly watching which seems to have originated in Western Europe in response to restrictions on collecting there. Now the dragonfly watcher, at least in Florida, with this book and a good pair of binoculars can enjoy the new sport, and put names on the different species he has seen. The rest of us can enjoy the superb photos and read some of the interesting facts about dragonflies that we have failed to observe ourselves because we have been so busy looking at hamules through a microscope.

Already announced is the companion volume-- DAMSELFLIES of FLORIDA, BERMUDA, and the BAHAMAS by the same author and publisher. The expected publication date is about June 1990.

## CONSTITUTION OF THE DRAGONFLY SOCIETY OF AMERICA

WHEREAS, The Dragonfly Society of America was formed on August 11, 1989 as an affiliate of the Societas Internationalis Odonatologica, and for the purpose of promoting the interests of the science of Odonatology and its devotees in all disciplines by:

1. Publishing one or more periodicals, and/or non-serial publications concerning Odonata.
2. Promoting interchange, comradeship and goodwill amongst all Odonatologists.
3. Facilitating scientific study, conservation, and asthetic and recreational enjoyment of Odonata.

## CONSTITUTION

### ARTICLE I: NAME

A. This organization shall be known as The Dragonfly Society of America.

### ARTICLE II: PURPOSE

A. The purpose of the Society shall be to initiate and promote activities that will advance scientific knowledge of all Odonata; to provide public information and promote progressive and enlightened legislation in all instances where Odonata are concerned; to advocate further educational advances and opportunities in all fields of Odonata research; to facilitate the exchange of information and specimens among both professionals and amateurs in our science; to publish periodicals and other literature in furtherance of scientific knowledge; to provide opportunity for social comradeship and field collecting for devotees.

B. Wetlands and Odonata habitat preservation will be a primary objective of the Society. The Society shall endeavor to furnish testimony reflecting majority opinion of its membership on all legislation potently affecting Odonata conservation, when deemed appropriate by Executive Council. The Society shall strive to direct Odonata conservation efforts toward more effective methods through habitat preservation, rather than such ineffectual methods as restrictions on scientific collecting.

### ARTICLE III: MEMBERSHIP

A. Any person, or organization, interested in Odonata and the objectives of the Society shall be eligible for membership. There shall be three classes of membership: Regular, Sustaining, and Institutional. All persons who joined the Society before January 1, 1990, shall be deemed Charter Members.

B. Regulations covering dues, resignations, arrears, and removal from membership shall be set by stipulations of the By-Laws.

### ARTICLE IV: FINANCIAL

A. The Dragonfly Society of America shall be strictly non-profit, organized for educational and scientific purposes only.

B. The Society's income shall be derived from membership dues, sales of publications, gifts, grants, and interest on savings. The Society shall be empowered to apply for and accept grants from any legally constituted entity.

C. The Society shall have no salaried employees, and the officers shall perform their duties of office with compensation for expenses only, and without salaries.

D. The Society shall be empowered to disburse funds for goods and services in accordance with stipulations of the By-Laws.

E. The Society may, when funds on hand exceeds anticipated operational expenses, authorize grants to individuals or organizations for exceptional services rendered the Society, or for furtherance of the Society's objectives, in accordance with stipulations of the By-Laws.

### ARTICLE V: BUSINESS ADMINISTRATION

A. The Society's officers will perform the duties necessary to carry out all functions and purposes of the organization. The Executive Council shall establish, or amend, the duties of each office and shall set out guidelines in the By-Laws for their performance.

### ARTICLE VI: OFFICERS

A. The Officers of the Society shall consist of President, President Elect, Immediate Past President, three Vice Presidents (not more than one Vice President shall reside in the same country, and at least one must also belong to Societas Internationalis Odonatologica and serve as liaison with that organization), Secretary, Treasurer, and Editor in Chief.

CONSTITUTION, continued

B. Candidates for office shall be nominated by a committee of three members appointed by the President, or by write-in nominations signed by at least ten members. Nominations shall cease on December 15, for offices to be filled in the ensuing year, ballots shall be mailed in January, and must be voted and returned by March 15. All newly elected officers will take office at the first Annual Meeting following their election, the term of office shall be for two years, and shall terminate at third Annual Meeting following their election. The office of President shall be restricted to one term for each incumbent. Other officers, except President Elect and Immediate Past President, may succeed themselves as many times as elected. The President Elect shall assume the duty of President in event of death, resignation, disability or absence of incumbent President.

ARTICLE VII: EXECUTIVE COUNCIL

A. The members of the Executive Council shall consist of the elected officers, plus three regular members; the regular members shall be nominated from the floor, and elected by voice vote at the first Annual Meeting occurring after a Council vacancy. The term of office for regular Council members shall be two years, and incumbents shall be limited to one term in order to bring wider experiences and views of different members to participate in Society business affairs.

B. It shall be the duty of the Executive Council to uphold the CONSTITUTION of the Society, to interpret the provisions of that CONSTITUTION, and to render all decisions in accordance with these provisions.

C. The Executive Council shall approve, amend, or establish, By-Laws for the conduct of all the Society's business, and shall regulate authority of the Society's officers to transact all Society business in accordance to constitutional provisions by means of the By-Laws.

D. The President shall be Chairman of the Executive Council, when not present, another Council member shall be elected to fill in. Three Council members shall be deemed a quorum to transact Society business at all meetings.

ARTICLE VIII: PUBLICATIONS

A. One primary purpose of the Society shall be for publishing periodicals and non-serial publications.

B. Editorial and publication policies shall be administered by the Editor in Chief in accordance with stipulations of the By-Laws.

ARTICLE IX: MEETINGS

A. Annual Meetings shall be held to conduct business and other affairs of interest to the membership, with special consideration to collecting devotees.

B. All Annual Meetings shall be held in appropriate New World locations.

C. Special meetings may be called at the direction of the President.

ARTICLE X: PROHIBITIONS

A. The Society shall always aspire for the highest ideals, and impeccable integrity among the scientific community and peer organizations. It shall not engage in any discriminate, illicit, inequitable, or derogatory activities, nor permit its name to be used in support of any organization advocating such activities.

ARTICLE XI: BY-LAWS

A. It shall be the duty of the Executive Council to approve, amend, or repeal the By-Laws, by majority vote of quorum of the Council, at any Annual Meeting of the Society.

B. All By-Laws shall comply with, and shall be superseded by ARTICLES of the CONSTITUTION.

ARTICLE XII: CONSTITUTIONAL AMENDMENTS

A. The CONSTITUTION may be altered, amended, or repealed by a two-thirds majority of members voting by mail ballot. Proposals for constitutional amendment must be supported by not less than ten members' signatures, and shall be submitted to the President.

B. The amendment proposed shall be published in ARGIA, and mail ballots sent to the membership not earlier than three-months, or later than six-months, after its publication date.



## EXCHANGES AND NOTICES

EXCHANGE WANTED: I am interested in all families and material from all geographical areas. I have on hand approximately 1,000 - 1,200 different species at all times available for exchange. Particular wants are the several Nearctic species I lack: Ophiogomphus edmondo, Somatochlora brevicincta and S. septentrionalis, plus males of Coenagrion angulatum, Macromia margarita and M. rickeri, and ANY Gomphidae from ANYWHERE.

CARL COOK, 469 Crailhope Road, Center, KY 42214

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EXCHANGE WANTED: Wants to exchange Odonata from North and Central America, and the Caribbean Islands.

JERRELL J. DAIGLE, 2166 Kimberly Lane,  
Tallahassee, FL 32301

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LOAN WANTED: I am working on the Progomphus group from the Caribbean area. I would like to borrow for examination adult Progomphus specimens. They will be returned very soon. I would like to see Progomphus integer and Progomphus serenus from Cuba, Dominican Republic, Haiti, and Jamaica. Loans will be acknowledged in any work.

JERRELL J. DAIGLE, 2166 Kimberly Lane,  
Tallahassee, FL 32301

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LOAN WANTED: I am looking at Hypolestes, Heliocharis, and Aeolagrion. If anyone has pertinent specimens I would like to examine them. These include Hypolestes from Haiti, particularly southern Haiti, Heliocharis from anywhere except perhaps the standard collecting locales, and the new Aeolagrion from Ecuador.

SIDNEY W. DUNKLE, International Odonata Research Institute, P.O. Box 1269, Gainesville, FL 32602-1269

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MICROSCOPES: All types of compound and stereomicroscopes, accessories and optical components sold, bought, and swapped. Antique microscopes wanted. Send for price list of items available.

CARL COOK, 469 Crailhope Road, Center, KY 42214

DATA WANTED: I have been collecting more or less intensively in Kentucky and Tennessee for over 40 years, but I am continually amazed that new records still turn up (e.g., Ophiogomphus howei, and Phanogomphus sandrius). It has always been my intention to publish a catalog for these two states, now I am eager for this project to become part of DSA's Nearctic Catalog scheme announced elsewhere in this journal. I invite everyone who has collected Odonates in Kentucky or Tennessee to participate by sending me their records. If you have unidentified or doubtfully identified specimens, I will be glad to determine them.

CARL COOK, 469 Crailhope Rd., Center, KY 42214

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I AM INTERESTED in corresponding and exchanging with anyone interested in neotropical Odonata. My collection for the U.S., Canada, and Alaska is almost complete. Lacking is: Enallagma laurenti, Ophiogomphus edmondo, Somatochlora brevicincta and S. georgiana. Lacking from the Antilles are: Enallagma truncatum, Telebasis corallina, Gynacantha ereagris, Progomphus zephyrus, and Scapanea archboldi.

ROSSER W. GARRISON, 1030 Fondale St., Azusa, CA 91702-0821

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DATA WANTED: Collecting data records wanted for the state of New York.

THOMAS W. DONNELLY, 2091 Partridge Lane, Binghamton, NY 13903

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NEW BOOK AVAILABLE: A new book, published in 1989, has color photos of all species of dragonflies (Anisoptera) that occur in the Florida Peninsula, including vagrants. It is Dragonflies of the Florida Peninsula, Bermuda and the Bahamas, By Sidney W. Dunkle. The Book covers 94 species, a third of the North American fauna, with 129 photographs. It is available for \$14.95, plus \$1.50 postage (plus 6% sales tax for Florida residents) from:

SCIENTIFIC PUBLISHERS, P.O. Box 15718, Gainesville, FL 32604.

## GENERAL INFORMATION ABOUT THE DRAGONFLY SOCIETY OF AMERICA (DSA)

DSA is a non-profit society, under regulations of Federal and State statutes, with its own Officers, Executive Council, and Editorial Staff. It was organized under the auspices of SOCIETAS INTERNATIONAL ODONATOLOGICA, as an independent affiliate of that society's family of regional organizations. The society's purposes are to encourage scientific research, habitat preservation, and aesthetic enjoyment of Odonata by: 1- cooperation and comradeship among the Odonatologists of all countries; 2- expanded interchange between the amateur and professional disciplines; 3- the establishment of the society's own series of publications to disseminate information in our fields of interest; 4- support for wetlands and habitat preservation as the most effective way for conservation of odonates; 5- cooperation with organizations orientated toward common goals of environmental preservation; 6- our society supports international recognition of the essential role of scientific collecting in biological research, proliferation of governmental restrictions may allow thousands of undiscovered species to become extinct without becoming known to science, and total prohibition of scientific collecting practised in some countries may be counterproductive to species conservation because it hinders effective population monitoring; 7- the society has commenced a season summary data recording scheme for Odonata collected in North, Central and South America, the seasonal data to be published in an annual volume, and also to form the basis for a new distributional catalogue; 8- the society will hold an annual business meeting in conjunction with the well known informal "collectors' gatherings" that have become so popular in recent years; 9- the society shall strive to maintain a basic dues rate affordable to amateurs and students, with professionally orientated publication series optional and priced separately.

PUBLICATIONS furnished with membership are ARGIA, a quarterly news journal, devoted to news about society affairs, informal articles on collecting, and news and views on Odonatology in general; and an ANNUAL SEASON SUMMARY, devoted to collecting records submitted by persons doing field work anywhere in North, Central or South America. As demand develops, other serial and separate publications are planned, including the distributional catalogue already announced, and a refereed journal accepting original research papers.

MEMBERSHIP in DSA is open to any person interested in the objectives of our society. Dues and membership are for the calendar year, without regard for the month in which you join, dues are initially payable with enrollment application, and on or before March 1 of each succeeding year. All members will receive the current calendar year issues of ARGIA (including a Membership List Supplement containing members' addresses, special interests, and exchange information), and the SEASON SUMMARY ANNUAL. Members will receive a 20% discount on all society's separately priced publications. Cancellation of current year membership and/or removal of name from current membership list cannot be considered.

SPECIAL NOTICE: A grant-in-aid from the SOCIETAS INTERNATIONAL ODONATOLOGICA provides for a limited number of FREE memberships for colleagues residing outside of North America in countries with soft currency, or fiscal policies which prevents US funds being sent abroad. PLEASE APPLY.

DUES FOR 1990: REGULAR MEMBER..\$3.00      SUSTAINING..\$10.00      INSTITUTIONAL..\$10.00  
AIR MAIL delivery of ARGIA outside of US..\$10.00      FIRST CLASS delivery in US...\$7.00

Please remit in United States funds by bank check, bank money order, or international money order made payable to The Dragonfly Society of America.

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Business Mailing Address:

The Dragonfly Society of America, 469 Crailhope Road, Center, KY 42214, USA  
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