



# ***FLY TIMES***

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This issue of the *Fly Times* includes our regular reports of meetings past and future, interesting publications, and miscellaneous reports. Please pay particular attention to the notice sent in by Neal Evenhuis regarding the state of support for the Bishop Museum; we as editors encourage everyone to respond to this distressing news.

As indicated in other issues, this newsletter is also available through the ECORC website as follows:  
<http://res.agr.ca/ecorc/program2/entomology/flytimes/flytime.htm>

The *Directory of North American Dipterists* is on the web and can be accessed at the following address:  
<http://res.agr.ca/ecorc/program2/entomology/diptera/dipteras.htm>

Issue No. 23 of the *Fly Times* will appear next October as both hard copy (for those of you without Internet access) and on the Web. If possible, please send either editor your contributions by email, or on disc; electronic contributions make putting the *Fly Times* together much faster. Those of you with hard copy contributions (last possible choice) may fax, or mail your message to Art Borkent at the above listed address. All contributions for Issue No. 23 should be sent by the end of September, 1999.

## NEWS

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### 1998 Dipterists Informal Conference

by Stephen D. Gaimari  
National Museum of Natural History, Smithsonian Institution

The Informal Conference of the North American Dipterists' Society was held at the Las Vegas Hilton on the Monday evening of the Annual Meeting of the Entomological Society of America. There were three very interesting talks dealing with dipteran taxonomy and ecology. Scott Fitzgerald, a doctoral student of Darlene Judd at Oregon State University, reviewed the distributional patterns of New World Bibionidae. Scott is the organizer for next year's meeting. Martin Hauser, a doctoral student of Mike Irwin at the University of Illinois, discussed the interesting, very rare, Palearctic genus *Exochostoma* (Stratiomyidae), which was recently rediscovered. Dr. Joe Keiper, a postdoc at the University of California at Riverside, and a former graduate student of Ben Foote at Kent State University, discussed the biology of Ephydriidae in man-made marsh habitats. Brian Wiegmann gave a report on the activities at the recent International Congress of Dipterology in Oxford, and also announced the meeting place for the NADS field meeting, to be held in North Carolina this May. In addition, NADS participation in the Great Smoky Mountains ATBI was discussed, and those attending the NADS field meeting will have the opportunity to collect in the Great Smokies at the end of the meeting.

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### Black Fly Workers Gather - Third Annual SERA-IEG Meeting (1999)

by John R. Wallace  
Department of Biology, Millersville University, PA

Flamingo Lodge, nestled in the heart of Everglades National Park, Florida was the location for the third annual Southern Extension and Research Activities - Information Exchange Group meeting on black fly biology, economic problems and management. This year's meeting was co-organized by John R. Wallace and Alison H. Hyder. There were approximately 29 registrants representing three continents and six countries including Sweden, England, Canada, Columbia, Brazil, and the United States.

The meeting included three subsections: Population Management and Water Quality; Ecology and Behavior and; Genetics and Systematics. The meeting culminated with a business discussion on Monday, February 15.

*Population Management and Water Quality (Feb. 14, 10 am. - 12 pm)*

The first session on population management and water quality included the following speakers: Dan Arbegast (PA DEP); Elmer Gray (Clemson); Alison Hyder (SC Army Pest Management); Jay Overmyer (Univ. GA); Richard W. Merritt (Michigan State University).

Dan Arbegast (PA DEP) discussed black fly suppression programs in Pennsylvania. Approximately 1700 stream miles in PA are treated with Bti. The focus of his talk was on small stream (Yellow Breeches) treatment with cooperation of fly-fishing groups enabling PA Fish & Game to use Bti in future projects. Elmer Gray (Clemson University) presented a paper on projected costs of black fly management in Argentina. Elmer mentioned several factors that may affect cost, e.g., frequency of larvacide applications, flight range, larval habitat and whether vector or nuisance pest. Alison Hyder (South Carolina Army Guard) presented her research on bioindicator studies with black flies and new toxicology testing methods. Alison examined 24 and 48h LC50 of chlorpyrifos with three species of black flies and found 1) older larvae may be less susceptible and sensitive to chlorpyrifos than younger larvae and; 2) none of the species examined were more susceptible than any other in her trials. Jay Overmyer (University of Georgia) presented a preliminary information using black flies as biomonitors of environmental contamination. Rich Merritt (Michigan State University) concluded the first session with a presentation on the Black Fly International Workshop held recently in Sweden and the current status of black fly control programs in Michigan. The workshop in Sweden focused on the generation of funding opportunities and possible collaborations for future black fly research. Michigan black fly programs e.g., Copper Harbor and Betsie River are still active.

*Ecology and Behavior (Feb. 14, 1:30 pm. - 4:30 pm)*

The afternoon session on Sunday, February 14 included talks by: Roger Wotton ( University, London, UK), Christie-Lee Hazard (Brock University), Fiona Hunter (Brock University), Bjorn Malmquist (Sweden), John McCreadie (Clemson University), Will Reeves (Clemson University), and Claudia Velasques (Brazil).

Roger S. Wotton (University College London, UK) presented a paper on the processing of organic matter by black fly larvae. The fate of organic material from labral fans to faecal pellets was discussed as well as the importance of faecal pellets in streams and rivers. Christie-Lee Hazard (Brock University) examined four diets for engorged female flies and discussed the effects of sugar meals on the development and transmission of *Leucocytozoan* sp. Fiona F. Hunter (Brock University) presented research on black fly saliva, blood-feeding and sugar-feeding. Salivary gland protein differences among species and their recycling were discussed. In addition, Fiona discussed on-going plans to hold an International Black Fly meeting at Brock University, June 17-21, 2000 (tentatively). Any thoughts or comments regarding this meeting should be directed to Fiona Hunter (hunterf@spartan.ac.BrockU.CA). Bjorn Malmquist (Sweden) presented a talk on the importance of black flies in North Sweden ecosystems. He discussed the importance of engineering of faecal pellets and increases in carbon output and included studies on lake outlet streams, large free-flowing rivers and chalk streams. John McCreadie (Clemson University) presented a talk (co-authored with Maria Grillet and Neusa Hamada) on the effects of El Niño on black fly communities. Using Monte Carlo simulations, John discussed the species richness of black flies during wet and dry seasons in Venezuela. Will Reeves (Clemson University) discussed new records of black flies in unique cave habitats. Two species of simuliids were found in his cave systems, *Simulium parnassum* and *Prosimulium saltus*. Claudia Velasques (Brazil) presented a talk on the microhabitat of *S. goeldi* and *Simulium* "6B1" in Central Amazonia, Brazil. Claudia discussed differences in head capsule width among black fly larvae inhabiting five streams differing in substrate type. To conclude this session, Doug Craig (University of Alberta) waxed hydrologic commenting on one of Bjorn's recent papers regarding "why a river ends up the way it is?" If there are any questions, ask Doug to elaborate.

*Genetics and Systematics (February 15, 9:00 am. - 11:30 pm)*

The final session of the meeting included talks by: Peter Adler (Clemson University), Doug Craig (University of Alberta), Doug Currie (Royal Ontario Museum), Alison Stuart (University of Toronto), Neusa Hamada (Brazil) and Guest Presentation by Kenneth W. Cummins (South Florida Water Management District).

Peter Adler (Clemson University) presented a compilation of recent advances in black fly systematics. Peter provided data from North America Black Fly fauna on polytene chromosome mapping, species numbers, new natural enemies of black flies, as well as blood-feeding strategies. Doug Craig (University of Alberta) presented an update on Polynesian/Pacific black flies. Several new species were collected on Doug's most recent visit which have contributed interesting aspects to the Polynesian clades. Doug Currie (Royal Ontario Museum) co-authored a presentation with Art Borkent on the discovery of the female of *Parasimulium (Astoneomyia) melanderi* with discussion of the phylogenetic position of *Astoneomyia*. This species of black fly was discovered in a cave on Vancouver Island. Doug stated that *Astoneomyia* may be more closely related to other black flies, both *Astoneomyia* and *Parasimulium* were monophyletic but that the former may have a similar habitat as the latter. Alison Stuart (University of Toronto) presented a paper on the phylogenetic placement of *Ectemnia* based on cocoon spinning behavior. Based on data collected on six spinning stages and the following behavioral synapomorphies 1) the method of spinning structures and; 2) lack of pull front/back stages, Alison concluded that *Ectemnia* is a sister group to the *Simulium* and *Eusimulium* clade. Neusa Hamada (Brazil) co-authored a talk with Peter Adler and Maria Grillet on news on the chromosomes of black flies in the *S. perflavum* Group. Neusa provided new cytological and geographical information on this group emphasizing the gill pattern similarities as well as chromosomal arrangement. Ken Cummins (South Florida Water Management District) was invited as a guest speaker to conclude this year's meeting. Ken presented a summary of the WHO black fly control program in West Africa. Ken highlighted the ecological aspects of the *S. damnosum* complex relative to Onchocerciasis (river blindness), control strategies, medical treatment strategies for Onchocerciasis, and future directions and impacts of humans on these systems.

*Business Meeting (February 15, 11:30 am - 12:00 pm)*

Fiona Hunter discussed the format of the international black fly meeting to be held in June, 2000 at Brock University, Ontario. She stated that the meeting will cover the population management, ecology/behavior, and genetics/systematics themes with plans to publish the proceedings. It was suggested that the 2000 SERA-IEG meeting should be rescheduled for 2001 in lieu of the international meeting to be held at Brock University. The work group unanimously decided that the 2001 meeting will be held the first week in February at the Archbold Field Station in central Florida. Dan Arbogast and Elmer Gray volunteered to co-organize the meeting.

I would like to acknowledge the hard work and organizational efforts of my co-organizer, Alison Hyder. In addition, I would like to thank everyone who traveled distances near and far to participate in the 1999 SERA-IEG meeting.

**North American Dipterists Society Biennial Field Meeting Combined with the Annual Biting Fly Workshop - Mountains of Western North Carolina, USA, May 24-27, 1999**

from Brian Wiegmann and Frank French

**NADS:** The meetings will be held at Camp Broadstone, Valle Crucis, NC. Camp Broadstone, located in the Blue Ridge Mountains, six miles west of Boone. The camp is located near the Blue Ridge Parkway, Linville Gorge, Grandfather Mtn., and the Pisgah and Cherokee National Forests.

Further details were given in the last issue of the *Fly Times* and/or you can check out the following website regarding NADS at: [http://www4.ncsu.edu/unity/users/b/bwiegman/public\\_html/ncflies99.html](http://www4.ncsu.edu/unity/users/b/bwiegman/public_html/ncflies99.html) or contact:

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**BFW:** We pass along herewith the announcement Frank French mailed out to Biting Fly Workshop participants. You may see the announcement for the BFW 1999 on the following website at: <http://www2.gasou.edu/facstaff/hagan/bfw99.html>

Dear BFW Participants: This year we'll have an exceptional gathering. Brian Wiegmann, N.C. State Univ., meeting chair for the 1999 North American Dipterists' Society (NADS), has magnanimously agreed for us to meet with NADS this year. Many of our BFW participants are also members of NADS.

Brian and NADS have a great show planned. You may submit a title for a presentation up to 20 minutes. On the morning of the 27th, you may relocate to the Great Smoky Mountains National Park to participate in a one day Diptera inventory blitz for GSMNP ATBI. Let's make the Diptera the most prominent in the All Taxon Biotic Inventory (ATBI). Tremendous potential for interactions this year, so PLAN TO ACT NOW!

Arrive at Camp Broadstone, Valle Crucis (Near Boone) N.C., the afternoon of May 24th. There are LIMITED accommodations for 50 in bunk-house style lodges at the Camp Broadstone (\$53).

Some of us accompanied by our spouses, have reserved rooms at the Holiday Inn Express in Boone NC (double occupancy, \$54/ per night with breakfast). The number is 828-264-2451; prices are subject to change. The meals at Broadstone are \$50 and registration is \$20.

For additional info regarding the Biting Fly Workshop portion contact:

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## **Ceratopogonid Web Page**

by Dan Hagan

I would like to announce a new Web Site dedicated to the communication of information on Ceratopogonidae.

The site includes bibliographies, checklists, catalogues, an on-line version of the Ceratopogonidae Information Exchange (CIE) Newsletter (with archived copies for the past 6 issues), listing of the name, mailing address, phone, Fax, and e-mail address for the more than 100 subscribers to the CIE = the Directory of Ceratopogonid Workers, a Gallery of Ceratopogonid Workers (with photos of some notable scientists), links to the CV's of notable scientists working on ceratopogonids, a What's New/ Planned section and 8-10 useful WWW Links to sites with biological information.

URL: <http://www2.gasou.edu/facstaff/hagan/cie.html>

If you have any suggestions regarding how the site might be improved, please e-mail or contact me at:

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## **European Web Sites on Diptera**

by Fritz Geller-Grimm

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I would like to inform your readers about the new web page of the journal *Studia dipterologica*. The URL is: <http://www.studia-dipt.de>

There is a new listing of addresses of the European Dipterists, the URL is:  
<http://www.geller-grimm.de/address/europe.htm>

The URL of the homepage of robber flies is now: <http://www.geller-grimm.de/asilidae.htm>

## Internet Resources on the Tachinidae on the ECORC Website

by Jim O'Hara

For the past several years I have been developing Internet products for the ECORC (Eastern Cereal and Oilseed Research Centre) study *Identification Systems for Biocontrol Insects*, with particular emphasis on the Tachinidae. From time to time I have announced these Tachinidae products in *The Tachinid Times*, but not in *Fly Times*. For the sake of North American dipterists who do not subscribe to *The Tachinid Times* but may have occasion to use online Tachinidae resources, I outline here the products available. I also encourage those of you who know of useful Tachinidae links to contact me so that these may be posted on my Tachinidae homepage.

**Tachinidae homepage:** <http://res.agr.ca/ecorc/isbi/dipt/tachhom.htm>

***The Tachinid Times*:** <http://res.agr.ca/brd/tachinid/times/index.html>

An informal international newsletter for persons interested in the Tachinidae. Issued once a year in February.

**Tachinid Bibliography 1980 - Present:** <http://res.agr.ca/ecorc/isbi/biocont/biblio.htm>

A non-definitive but extensive bibliography currently comprising close to 2000 references. It is updated each year shortly after publication of *The Tachinid Times*. References can be viewed in list format or searched using keywords. Plans are in progress to upload the bibliography in database form using ProCite© and Reference Web Poster© for interactive searches.

**Tachinidae types in the CNC:** <http://res.agr.ca/brd/tachinid/tacheng.html>

Primary types of more than 1000 nominal species of Tachinidae in the Canadian National Collection of Insects are documented. This catalogue represents Part 4 of a series on the Diptera types in the CNC. Entries can be searched by taxon, author, keyword, etc. Hardcopies are still available from the authors.

**Checklist of Tachinidae of America North of Mexico:** <http://res.agr.ca/ecorc/isbi/cat/cathom.htm>

This online checklist by Monty Wood and myself provides an up-to-date listing of tachinid genera and species and their synonyms for America north of Mexico. It incorporates all the nomenclatural changes published since the 1965 Diptera catalogue, most significantly those of Wood (1987) in *Manual of Nearctic Diptera Volume 2* (these changes summarized in O'Hara & Wood, 1998, Can. Ent. 130: 751-774). The checklist does not contain suprageneric categories because we do not want to publish such information on the Web prior to hardcopy publication of our *Catalogue of Tachinidae of America North of Mexico*, which is currently in progress.

**Tachinid Parasitoids of Bertha Armyworm:** <http://res.agr.ca/ecorc/isbi/bert/tach/title.htm>

An identification key is provided to the tachinids of bertha armyworm along with taxonomic and life history notes on each tachinid species and habitus images digitally created from pinned specimens. This web product formed part of a project on the insect parasitoids of bertha armyworm funded in part by the Manitoba Canola Growers Association and the Matching Investment Initiative Program of Agriculture and Agri-Food Canada.

## **NADS Publication Program**

by Chris Thompson

As most should know by now, NADS now has a publication program. As announced in a recent mailing to all, NADS has entered into a co-publishing arrangement with Backhuys Publisher of the Netherlands to continue the MYIA series. Myia was a journal originally started by Paul Arnaud and California Academy of Sciences. Two new volumes have now been published and are available from Backhuys to NADS members at 30% discount when using our special order form.

The first new volume (9) is the Fruit Fly Expert System and Biosystematic Information Database by Ammon Friedberg, Allen Norrbom, Ian White and others. The other volume (10) is the late Curt Sabrosky's catalog of family-group names in Diptera. Naturally I feel that there are lots of good stuff in these volumes and believe EVERY dipterists should want one. And we have tried to keep the costs low to NADS members. Both these books are over 500 pages but cost \$68.60 & \$66.50 after NADS members deduct their 30% discount.

Depending on the success of these volumes, NADS hopes to publish more MYIA volumes on a regular schedule of at least a volume per year. At the present NADS can only afford to publish volumes that are partially subsidized. However, this should not discourage the submission of any large manuscript of quality as funds can probably be found. And as noted below, we will also publish World Catalogs of any Diptera family, regardless of size. Treatments of small families will be combined to form a full volume of Myia, so there may be delay in publishing them.

NADS has also taken a bold leap into the 21st Century by producing one of the first digital scientific journals, the Diptera Data Dissemination Disk. The first volume include the above two MYIA volumes as Adobe pdf documents as well as many other things, like the Dipterists' Directory, a working release of the BioSystematic Database of World Diptera (see below), a digital key to the mosquito genera of the world, etc. This journal is available either through Backhuys or directly from NADS. As a special introductory offer, the first TWO volumes are available to NADS members for the price of one (\$20). Address orders to F. Christian Thompson, NADS, c/o Dept. of Entomology, Smithsonian Institution, Washington, D. C. 20560

Chris Thompson, Editor, NADS

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### **A Seven Year Plan for an Inventory of the Diptera of Costa Rica**

by Art Borkent

For its size, Costa Rica must have one of the most diverse faunas of any country in the world. However, the taxonomy of most of the families of Costa Rican flies is not well developed, especially among families in which the flies are very small. We estimate that there are between 20000 and 30000 species



of flies in Costa Rica, but scarcely 900 of these have been recorded in the literature. For example, a recent survey of the tachinid literature by one of us (MZ) revealed that fewer than 5% of the expected species of Tachinidae have been mentioned from Costa Rica, and the same is true for most other families, of which there are almost 90 so far recorded in Costa Rica. Mosquitoes (Culicidae) may be an exception, however, because the group is well known in the Neotropical Region, but even for mosquitoes it is not possible at the present time to state precisely how many species are found in Costa Rica.

INBio (Instituto Nacional de Biodiversidad) is a private, non-profit scientific institution in Costa Rica which is supported by both government and non-governmental organizations. Its goal is to interpret and suggest rational uses of the biodiversity found in their country. At present it has a substantial staff studying both the fauna and flora of Costa Rica and has a large contingent of support staff. Their collection, housed in a climate-controlled environment, is large. You can check out further information about INBio at: [www.inbio.ac.cr](http://www.inbio.ac.cr)

The present 7 year project at INBio is called the Biodiversity Resources Development Project and is funded by the Global Environment Facility of the World Bank. There are three working groups involved in the entomological portion of the project: Diptera, Hymenoptera and Coleoptera. The organizing committee for the Diptera portion first met at the Estacion Biologica Monteverde on May 25-28, 1998. Present were: Carlos Mario Rodriguez, (INBio); Dan Bickel (Australian Museum, Sydney); Art Borkent, (British Columbia, Canada); Brian Brown, (Los Angeles County Museum, California); Jeff Cumming, (Canadian National Collection, Agriculture & Agri-Food Canada, Ottawa); Eric Fisher, (California Department of Food and Agriculture, Sacramento); Darlene Judd, (Oregon State University, Corvallis); Steve Marshall, (University of Guelph, Ontario, Canada); Monty Wood, (Canadian National Collection, Agriculture & Agri-Food Canada, Ottawa), and Manuel Zumbado, (INBio). Several other dipterists that had planned to attend, but had to decline at the last minute, sent comments, suggestions, and promised support for the inventory. On May 29, the Diptera and Hymenoptera TWIGs met together to agree on sampling and curatorial protocols to maximize the data to be obtained for both TWIGs by the parataxonomists.

The Diptera unit at INBio is presently composed of two curators (Manuel Zumbado and Guillermo Chaverri), two technicians (Elvia Zumbado and Xinia Fernandez) and 8 parataxonomists (Annia Picado, Braulio Hernandez, You Cardenas, Jose Daniel Gutierrez, Elias Rojas, Milady Alfaro, Manuel Lobo, Duvalier Briceno).

Several scientists have been to Costa Rica during the past year to help in the training of the Diptera Unit at INBio. The parataxonomists can now identify all (or nearly all) families of Diptera found in their country (including difficult Acalyprate families). Malaise traps have recently arrived and fresh material will be collected and processed in the near future.

There are 17 key groups that will see in depth systematic analysis during the next few years. Here are the specialists and their groups:

- Al Norrbom, Tephritidae
- Norm Woodley, Stratiomyidae
- Eric Fisher, Aubrey Scarborough, Riley Nelson, Asilidae

- Art Borkent, Ceratopogonidae
- Darlene Judd, Culicidae
- Larry Quate, Psychodidae
- Brian Brown, Phoridae
- Jeff Cumming, Empididae
- Dan Bickel, Dolichopodidae
- John Burger, Tabanidae
- Steve Marshall, Sphaeroceridae
- Thomas Pape, Sarcophagidae and Rhinophoridae
- Chris Thompson, Manuel Zumbado, Syrphidae
- Monty Wood, Manuel Zumbado, Tachinidae
- Monty Wood, Oestridae
- John Vargas, Calliphoridae

The group was unanimous in proposing that a Manual of the Diptera of Central America, modelled after the Manual of Nearctic Diptera and the Hymenoptera of Costa Rica, would go farther than any other contribution we could make towards enabling Costa Ricans not only to realize and appreciate the biodiversity of flies in their country, but also to recognize and identify the common species as well. The manual would also be useful for workers in other Central American countries, and for dipterists in other parts of the world interested in Neotropical flies.

This Manual will treat ALL the families of Diptera known to occur in Costa Rica, at different levels of complexity depending on present knowledge. It will include a chapter for each family, comprising what is now known and what will be discovered during the course of the inventory. Other chapters likely to be included are: Introduction, Morphology, Natural History, Economic and Medical Importance, and A Pictorial Key to the Families of Diptera.

The Editorial Committee will be headed by Brian Brown who will act as chief editor. It is the hope of organizing committee that further systematists will become involved with the project, both in terms of specialized systematic analysis and in contributing to the Manual of Central American Diptera.

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### **Bishop Museum Under Threat - Your Help is Needed**

from Neal Evenhuis

The following information was sent out to everyone on taxacon, entomo-l, and a couple of other email lists. All letters of support are welcome and responses should be sent by email to Dr. Allen Allison <allison@bishopmuseum.org> who will forward them to the appropriate legislators. Thanks for your assistance!

To all: As you may have heard, the Bishop Museum Friday 26 February laid off approximately 20 staff and reduced time for another 12 people. Six of these staff were employed in natural sciences.

The Bishop Museum is a privately funded institution that derives the great majority of its operating funds through admission fees, contributions, trusts, bequests, grants and contracts.

Because of a stagnant Hawaiian economy, lower-than expected returns on investments, delays in expecting large grants and contracts, and a significant reduction in state subsidy, the Museum has had to implement a cost-reduction plan involving the elimination or reduction of some of our activities.

For the next four months (until the new fiscal year), no collections transactions (accessions, deaccessions, and loans) will be carried out and no access will be provided to collections by researchers and scholars unless specifically funded or obligated through existing grants or contracts. Basic maintenance (care and preservation) of all collections will continue.

For those of you that have already made plans to come and use our collections, we will honour those obligations. For all others, this restricted access will unfortunately be in force until further notice.

These reductions will in no way affect our current grant and contract-funded obligations, nor will it lessen our commitment to the care of collections. The activities that have been reduced were those that we normally funded through museum operating funds, which have now been severely cutback.

In the meantime we are working with our state legislature to try to increase our state appropriation (during the past few years it has been reduced by more than \$2.1 million to \$381,000 today). Many of you wrote letters of support last year and this helped us to retain some state support (last year our allocation was reduced from ca. \$800,000 to \$381,000). If you would again like to write in support of Bishop Museum please send your letters to Dr. Allen Allison, Vice President for Science, Bishop Museum, 1525 Bernice Street, Honolulu, Hawaii 96817. Fax 808-847-8252, e-mail [allison@hawaii.edu](mailto:allison@hawaii.edu). We will distribute letters to key legislators and state officials.

Many thanks for your concern and for your support.

Allen Allison  
Vice President, Research

Neal Evenhuis  
Chair, Natural Sciences

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### **BioSystematic Database of World Diptera**

by Chris Thompson

To the Diptera community, I again offer my apologies for the failure to get the Checklist of North America Diptera as well as the larger BioSystematic Database of World Diptera out in a timely manner.

The problem largely has been the lack of support from USDA for the project. Years ago the Systematic Entomology Laboratory was willing to support projects like the Nearctic Diptera Checklist, Coleoptera Catalog, BIOTA Checklist of Insects, etc. But with the change of administration, etc., these projects

were abandoned. Some individuals, like Bob Poole, carried on despite the lack of support in hopes of community support. My approach was to **keep a low profile and try to develop new solutions that might attract the funding needed to revive the Nearctic Diptera Checklist (NDC) and the BioSystematic Database of World Diptera (BDWD) projects.** Unfortunately, this has been difficult, if not impossible, as to get funding today one needs to demonstrate that one can produce the desired end product first!

After having shopped our Diptera data and projects to groups like Species2000 and ITIS for years and getting no support, I decided we had to produce the best product we could with what resources we had. The result will be found on both the new Diptera Data Dissemination Disk (our CD-ROM journal) and the Diptera WWW site (at <http://www.sel.barc.usda.gov> under Diptera). The DDDD contains two separate databases: Fruit flies of the World and the BDWD. The fruit fly database is a finished product, existing as a traditionally printed volume in the serial MYIA (volume 9) and as a database on the Diptera Data Dissemination Disk. The BDWD is merely a promise of what we want to deliver, containing only raw data (but that includes some 100,000 names, see below). Now there is a real product to demonstrate what we want to do and what we can do now.

The BioSystematic Database of World Diptera is now just a digital catalog of the names that apply to flies (order Diptera). This database will be available on the annual volume of the Diptera Data Dissemination Disk and at the Diptera WWW site. The version on the WWW site will be up-dated as frequently as necessary to provide the most current version. The DDDD version will be an archival once a year version. The BDWD will be based on published catalogs, but will also include corrections, additions, etc., as soon as they are available. While BDWD will not be a traditionally printed catalog, the BDWD editorial group will work with authors to get their contributions printed. For example, we see MYIA as a good source for publishing Diptera catalogs, and we will be working with Norm Woodley to see that his stratiomyid catalog is published shortly.

The BioSystematic Database of World Diptera now contains some 4,300 family-group, 20,500 genus-group and 80,000 species-group names. The family-group names are from the long-term study by Curtis W. Sabrosky (MYIA 10). All the genus-group names in the various regional Diptera catalogs have now been entered into the database, and have been compared against Neave (*Nomenclator Zoologicus*) and other sources. There are now some 4,000 more genus-group names in our data file than are in the various regional Diptera catalogs. By the end of this year, all the genus-group names will be ready for review by interested specialists. While species-group names are not being actively captured, more than 80,000 are in the database. The Tephritidae of the World have been completed, peer-reviewed and published separately on the Diptera Data Dissemination Disk. All these names are available as working files as we believe that they may be useful to specialists. USERS, however, must be aware that these names have not been peer-reviewed and many have not even been reviewed by the editors!

What's next for us? First, to finish the Nearctic Diptera Checklist. We have an agreement with Backhuys Publishers to print this as a MYIA volume. So over the next few months, we will be sending to contributors their names with a revised set of guidelines. Then together we may finally get the Checklist done! Then Neal and I will concentrate on finalizing a treatment of the genus-group names. And along the way we want to encourage all to considering doing a world catalog of their favourite groups. Contact us, we will help you by providing working tools (computer programs and data files) as well as

helping you find a publisher for a printed version. In return, we hope you will share your data for the BioSystematic Database of World Diptera.

Neal L. Evenhuis & F. Christian Thompson, editors, BDWD

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### Council for International Congresses of Dipterology

from Graham Griffiths and Adrian Pont

Graham Griffiths wrote to point out a small error in the last issue of the *Fly Times*. Both he and Antony Downes were appointed "Honourary Members of the Congresses". Graham is no longer on the council which is now made up of the following persons (kindly sent by Adrian Pont):

#### List of council members and fields of interest (September 1998)

- Milan Chvála (Chairman), Department of Entomology, Charles University, Viničná 7, CZ-128 44 Praha 2, Czech Republic. Email: mchvala@natur.cuni.cz Systematics, ethology (esp. Empidoidea).
- David J. de C. Henshaw (Vice Chairman), 34 Rounton Road, Waltham Abbey EN9 3AR, Essex, UK. Email: djhagro@aol.com Systematics (esp. Agromyzidae), ecology, databases.
- Adrian C. Pont (Secretary/Treasurer), University Museum of Natural History, Parks Road, Oxford OX1 3PW, UK. Email: pont.muscidae@btinternet.com Systematics (esp. Muscidae).
- Paul L. T. Beuk, Institute for Systematics and Population Biology, Zoological Museum, Department of Entomology, Plantage Middenlaan 64m NL-1018 DH Amsterdam, The Netherlands. Email: beuk@bio.uva.nl Systematics (especially Empidoidea), phylogeny, biogeography.
- Claudio J. B. de Carvalho, Departamento de Zoologia, Universidade Federal de Paraná, Caixa Postal 19020, 81531-970 Curitiba, Paraná, Brazil. Email: cjbcarva@garoupa.bio.ufpr.br Systematics (esp. Muscoidea), medical/veterinary dipterology, cladistics.
- Daniel V. Hagan, Department of Biology, Institute of Arthropodology and Parasitology, Georgia Southern University, Statesboro, GA 30460-8042, USA. Email: dhagan@GaSoU.edu Bionomics, ecology, behaviour, ultrastructure, (Ceratopogonidae, Chloropidae).
- Ipe M. Ipe, School of Entomology, St John's College, Agra 282 002, India. Email: obtusa@nde.vsnl.net.in Systematics (esp. Agromyzidae), medical dipterology.
- Mary Owaga, Kabarsiran Avenue, P. O. Box 53695, Nairobi, Kenya. Ecology and ethology of *Glossina*.
- Rudolf Rozkošný, Department of Zoology and Ecology, Masaryk University, Kotlářská 2, 611 37 Brno, Czech Republic. Email: rozk@sci.muni.cz Systematics (esp. Stratiomyidae).
- John Stoffolano, Department of Entomology, University of Massachusetts, Fernald Hall, Amherst, Massachusetts 01003, USA. Email: stoff@ent.umass.edu Physiology (esp. Calliphoridae).
- Hans Ulrich, Zoologisches Museum und Forschungsinstitut A. Koenig, Adenauerallee 150-164, D-53113 Bonn, Germany. Morphology (esp. Empidoidea).
- Brian M. Wiegmann, Department of Entomology, 104 Research Annex West-A, Box 7630, North Carolina State University, Raleigh, NC 27695-7630, USA. Email: bwiegman@unity.ncsu.edu Molecular systematics (Brachycera, Cyclorrhapha).

David K. Yeates, Department of Entomology, The University of Queensland, Brisbane, Queensland 4072, Australia. Email: [d.yeates@mailbox.uq.edu.au](mailto:d.yeates@mailbox.uq.edu.au) Classification, phylogeny (Brachycera), behaviour, computer-based identification, molecular sequence data.

Junichi Yukawa, Entomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka-shi, Japan 812-8581. Email: [jyukawa@agr.kyushu-u.ac.jp](mailto: jyukawa@agr.kyushu-u.ac.jp) Cecidomyiidae (systematics, ecology).

Vadim F. Zaitsev, Zoological Institute, Academy of Sciences, St Petersburg 199034, Russia. Email: [soa@zisp.spb.su](mailto:soa@zisp.spb.su) Systematics (esp. Bombyliidae), morphology, databases.

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### **New Editor of the Memoirs of the American Entomological Society**

from Norm Woodley

Norm Woodley writes to tell us he is now the editor of *Memoirs of the American Entomological Society*. This is an irregular serial that publishes larger works of suitable scope. Most previous volumes have been taxonomic monographs of 80 printed pages or more. Anyone with a possible manuscript for submission is actively encouraged to contact:

Norman Woodley  
Systematic Entomology Lab., USDA  
Smithsonian Institution  
Washington, D. C. 20560 USA

email: [nwoodley@sel.barc.usda.gov](mailto:nwoodley@sel.barc.usda.gov)  
phone: (202) 382-1802  
FAX: (202) 786-9422

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### **Famous People Pictures on the Web**

by Dan Hagan

I have an put up on the web some photos of the 1997 NADS meeting. The photos can be found at the URL <http://www2.gasou.edu/facstaff/hagan/Photos.html>

I have included a photo of Monty Wood presenting the C.P. Alexander award to Dick Vockeroth at the 1997 NADS meeting (it is photo letter D) on the photos Web page above.

The legend for the photo is: Presentation of The C.P. Alexander - NADS Award to Dr. J. Richard Vockeroth, by Dr. D. Monty Wood, at the Spring NADS meeting (May 1997), Ebenezer Retreat, Rincon, Georgia, USA. Dr. Vockeroth was presented the prestigious award at the 5th Biennial NADS meeting. The C.P. Alexander Award recognizes the generous and self-less entomological contributions of its recipient over a life-time of service. Dick worked for many years, and has retired from the Biosystematics Research Institute, Agriculture Canada, Ottawa, Ontario, Canada. Congratulations to Dick Vockeroth for this well deserved recognition.

**Great Smoky Mountains National Park -  
All Taxa Biodiversity Inventory**

from Chris Thompson

A mailing was dispatched to all registered on the NADS directory as well as some 300 additional dipterists known to us as residing in Canada, Mexico or the USA. After more than two months, we have received 75 returns from the post office for bad addresses and only 20 completed questionnaires. Of these, two indicated their inability to participate in the GSMNP ATBI due to age, the rest are willing to join our effort.

What is truly sad is how few of the active dipterists appear to be interested. Apparently the allure of exotic localities (Costa Rica?) has distracted American systematists from their own backyard. Or maybe they have not had the time to read and respond to their mail. **WHAT EVER THE EXCUSE**, please join us. Take a moment to fill out our questionnaire or just send an e-mail message.

AND most importantly, if all the above sound strange to you because you did not get a letter from us, please contact us. Forgive us for either losing your address or worst, because we do want to communicate.

Progress is being made on setting up a initial kick-off of the Diptera TWIG this May at the end of the NADS field meeting. Some of us will spend the weekend collecting in GSMNP. Also, the Discover Life in America group has made an initial grant of \$4,000 available to the Diptera TWIG to get us up and rolling.

Chris Thompson, Peter Adler & Steve Marshall  
Co-ordinators for the Diptera TWIG, GSMNP ATBI

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**An Early Record of the Influence of No-See-Ums**

From E. Spenser's Faerie Queene, Book II, Canto 9, St. 16. Published 1596.

As when a swarme of Gnats at euentide  
Out of the fennes of Allan do arise,  
Their murmuring small trompets souden wide,  
Whiles in the aire their clustring army flies,  
That as a cloud doth seeme to dim the skies;  
Ne man nor beast may rest, or take repast,  
For their sharpe wounds, and noyous iniuries,  
Till the fierce Northerne wind with blustring blast  
Doth blow them quite away, and in the Ocean cast.

## Books and Publications

- Chandler, P. (ed.). 1998. Checklists of insects of the British Isles (New Series). Part 1: Diptera (incorporating a list of Irish Diptera). Handbook for the Identification of British Insects. Vol. 12. xx + 234 pp.
- Deonier, D.L. 1998. A manual of the common North American species of the aquatic leafmining genus *Hydrellia* (Diptera: Ephydriidae). *Memoirs on Entomology, International* 12: 368 pp. \$65.00 US
- Gilbert, F. and M. Jervis. 1998. Functional, evolutionary and ecological aspects of feeding-related mouthpart specializations in parasitoid flies. *Biol. J. Linn. Soc.* 63:495-535.
- Grimaldi, D and J. Cumming. 1999. Brachyceran Diptera in Cretaceous ambers and Mesozoic diversification of the Eremoneura. *Bulletin of the American Museum of Natural History* 239: 121 pp, 65 figs, 6 tables. (May 1999)
- Nilson, A. (ed.). 1997. Aquatic insects of North Europe. A taxonomic handbook. Vol. 2. Odonata and Diptera. 440 pp.
- Oosterbroek, P. 1998. The families of Diptera of the Malay Archipelago. *Fauna Malesiana Handbook* 1. xii + 227 pp.
- Papp, L. and B. Darvas. 1998. Manual of Palaearctic Diptera (with special reference to flies of economic importance). Volume 3 - Higher Brachycera. Science Herald, Budapest. Available from E.W. Classey. £148. This volume contains 880 pages and consists of an Introduction and General Index by the editors and covers 55 families by 32 authors. The text is in English.
- Sabrosky, C. W. 1999. Family-group names in Diptera. *Myia* 10: 1-360.
- Stark, J., J. Bonacum, J. Remsen, and R. DeSalle. 1999. The evolution and development of dipteran wing veins: a systematic approach. *Annual review of Entomology* 44:000.
- The Biology of Mosquitoes. Volume 2: Sensory reception & behaviour. 752 pp. US\$165.00. Order from: E.W. Classey Ltd
- Thompson, F.C. (ed.). 1999 (imprint 1998). Fruit Fly expert identification system and systematic information database. A resource for identification and information on fruitflies and maggots, with information on their classification, distribution and documentation. 532 pp. CD-ROM disk, hardbound MYIA vol. 9.
- Thompson, F. C., C. W. Sabrosky & N. L. Evenhuis. 1999 (1998). Bibliography of the Family-group names in Diptera. CD-ROM disk, hardbound *Myia* 10: 360-573.
- Yeates, D.K. and B.M. Wiegmann. 1999. Congruence and controversy: toward a higher-level phylogeny of Diptera. *Annual review of Entomology* 44:397-428.



# Submission Form for Directory of North American Dipterists

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For those who have not yet sent in a synopsis of their interests for the Directory of North American Dipterists, the following form is provided. Please restrict yourselves to no more than 20 words when listing the titles of your major projects and the animals you work with.

The completed form may be faxed, emailed or sent to the following address:

Dr. J. M. Cumming,  
Systematic Entomology Program, ECORC  
Agriculture & Agri-Food Canada,  
K.W. Neatby Building, C.E.F.  
Ottawa, Ontario, CANADA, K1A 0C6

*FAX:* (613) 759-1927

*Email:* cummingjm@em.agr.ca

Should any of you like to expand or modify your entries from the last list, use the form to indicate the changes.

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**Full name:** \_\_\_\_\_ **Address:** \_\_\_\_\_

\_\_\_\_\_ **Telephone Number:** \_\_\_\_\_

**FAX Number:** \_\_\_\_\_ **Email:** \_\_\_\_\_

**Projects and taxa studied:** \_\_\_\_\_

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