



FLY TIMES

ISSUE 31, October, 2003

Art Borkent, co-editor
1171 Mallory Road,
Enderby, B.C.
Canada, V0E 1V3
Tel: (250) 833-0931
FAX: (250) 832-2146
Email: aborkent@jetstream.net

Jeffrey M. Cumming, co-editor
Invertebrate Biodiversity
Agriculture & Agri-Food Canada
C.E.F., Ottawa, Ontario, Canada, K1A 0C6
Tel: (613) 759-1834
FAX: (613) 759-1927
Email: cummingjm@agr.gc.ca

Welcome to the latest *Fly Times*! In many areas of our continent we've endured some unusual weather patterns this past summer and fall and here in British Columbia, there were an unprecedented number of large forest fires (with record breaking temperatures and lack of precipitation). Hard to collect when there is wood ash drifting down from the skies! It certainly brings to mind the importance of the work we are doing on Diptera. Biodiversity patterns are changing all over our globe and whether we are appreciated now or not, the reality remains that as a community, we have a huge amount of knowledge pertaining to this biodiversity. Hopefully user groups will start paying more attention to the need for change and increase their requests for information!

As you all know, the electronic version of the *Fly Times* has moved from its previous location to the new North American Dipterists Society website at <http://www.nadsdiptera.org/News/FlyTimes/Flyhome.htm> We will, of course, continue to provide hard copies of the *Fly Times* to those without web access. We would greatly appreciate your independent contributions to this newsletter. We need more reports on trips, collections, methods, etc. Feel free to share your opinions about what is happening in your arena or ideas on how to improve the site.

The *Directory of North American Dipterists* has recently been updated and is currently available at the above website. Please check your current entry and send all corrections to Jeff Cumming. A variety of other Diptera links, including a number of sites restricted to a particular family and the type holdings of some museums, are also available at the above website

Issue No. 32 of the *Fly Times* will appear next April. If possible, please send your contributions by email or disc to either editor. Those of you with hard copy contributions (last possible choice) may fax, or mail your message. All contributions for the next *Fly Times* should be in by the end of March, 2004.

NEWS

The Second Annual Meeting of the North American Black Fly Association Archbold Research Station, Lake Placid, FL, Jan 31 - Feb. 3, 2004

by John McCreadie

Department of Biological Sciences, University of South Alabama
Rm 124 Life Sciences Building, Mobile, AL 36688, USA

jmccread@jaguar1.usouthal.edu

This is to announce the second annual meeting of the North American Black Fly Association (NABFA). The meeting will be held at Archbold Biological Station in Lake Placid, Florida. The meeting will start on the evening of Saturday, Jan 31 /04 with a welcome reception. Talks will take place on Feb. 1 and 2. Everyone interested in Simuliidae and especially students are encouraged to participate.

PRESENTATIONS:

If you plan to present at the meeting please email me a concise title, authors, and author's affiliation by January 2, 2004. The program will be set the following week. Talks can range from 10-20 minutes, however, we'd prefer they be in the 12-15 minute range. Please specify your requested time allotment with your response. For those wishing to present in an electronic format please note that we can accommodate PowerPoint on CD's only. Please burn your presentation as either a PowerPoint presentation (ppt) or PowerPoint show (pps) -- PowerPoint show is the preferred format. There will be no zip-drives available. For those who wish to use slides a projector will be available. However, I encourage everyone to use PowerPoint so we can load the talks on the computer before the start of each session.

REGISTRATION AND LODGING

On site lodging will be bunkhouse/cabin style, which by all accounts at our previous meetings, is reasonably comfortable and very convenient. Each cabin has a bathroom, small kitchen area and a living room. Linens are provided. Meals will be served through the station's dining room. Lodging, which includes the reception, the bar barque on Sunday, meals from Saturday dinner (Jan. 31) to breakfast Tuesday (Feb. 3). Registration and lodging will be about 150 / (US funds) / person. This is a deal. Should you prefer private room lodging there is a Ramada Inn approximately 5 miles north of the station on Highway 27.

Ms. Penny DeVane, the facilities coordinator for the Archbold Station, has kindly agreed to coordinate the registration, lodging and meal arrangements. She can be reached at (863) 465-2571 ext. 260 or by email at pdevane@archbold-station.org. The preregistration date for the meeting is JANUARY 16, so please fill out a registration form which can be obtained from either Penny or myself, and FAX it to the attention of -- Penny De Vane, Facilities Coordinator, (863) 699-1927, ASAP. Advanced payment is not required. However, registering early will assure you lodging on site.

**North American Dipterists' Society & Biting Fly Workshop
(NADS/BFW) Joint Meeting
Hocking Hills State Park, Ohio; May 16-20, 2003**

by Greg Dahlem
Department of Biological Sciences, Northern Kentucky University
Highland Heights, KY 41099, USA; Dahlem@nku.edu

The 2003 joint meeting of NADS/BFW took place at Hocking Hills State Park in southeastern Ohio. Participants arrived on a warm, sunny afternoon and were soon engaged in setting up traps and exploring the surrounding woods and ravines. Permits were obtained for the park itself, as well as several nearby areas including Deep Woods (associated with Ohio State Univ.) and Crane Hollow Nature Preserve. We did have one sunny day during our meetings. Everyone was impressed with what showed up when the sun finally came out. Several of us went to a hilltop and associated firetower in Hocking Hills when the sun emerged.



The NADS/BFW group at Hocking Hills, May 2003

Top Row: Holly Covert, Dianne Mathis, Bill Grogan, Lisa Westbury, Thomas Pucci (?), Joe Keiper, Jeff Freeman. Middle Row: Thomas Pape, Gary Covert, Jim Goodwin, Mark Breidenbaugh, Dan Dobbert, Brian Wiegmann, Jariya Chanpaisaeng (?), Jeff Cumming, Greg Courtney. Bottom Row: Greg Dahlem, Ben Foote, Frank French, Wayne Mathis, Jim O'Hara, Stephanie Boucher, Marjolaine Giroux, Terry Wheeler. [Not in picture: Steve Murphree, Jumnonjitt Phasuk, Chad Schone, Guilherme Schnell e Schühli, Trevor Stamper, Chris Thompson, Charles Watson, Paul Weaver]

The 2003 meeting was truly international in scope, with participants from Brazil, Thailand and Sweden in addition to our North American group. Hocking Hills State Park, Crane Hollow Nature Preserve, and Deep Woods all made us feel very welcome in the area. The owner of Crane Hollow even treated us to a catered dinner as a “thanks” for investigating this unique and interesting preserve. I would like to personally thank Dave Horn (Ohio State) for his work in making Deep Woods available to us, Joe Keiper (Cleveland Museum of Natural History) for all his help in setting up the meeting and getting the permit

for Hocking Hills, and (especially) to Gary and Holly Coovert for their work on collecting specimens before the meetings, helping people find productive sites to collect at Crane Hollow, inviting participants to visit their nearby home, etc. Even though the weather was not the best, the meeting was wonderful and I hope even more people will be at the next joint meeting in 2005.

In closing, both Crane Hollow Nature Preserve and Deep Woods are running ATBI's on their land and would be very interested in getting some help with identifications of Malaise trap specimens. If you are interested in specimens from this part of the world, please send me an email and I will give you more information. I also have some Malaise material from remnant prairies at the edge of the Appalachians in Ohio (a side trip that was rained out at the meeting) that I would like to have people look at. The specimens were collected from the Edge of Appalachia Preserve, an area of land that is jointly overseen by the Nature Conservancy and the Cincinnati Museum Center. The next joint meeting of NADS/BFW is tentatively scheduled for Oregon with Greg Courtney as the host.

**Informal Conference of Dipterists -
2003 Annual Meeting of the Entomological Society of America
October 28 , 2003**

by Greg Dahlem (Moderator & Organizer)
Department of Biological Sciences, Northern Kentucky University
Highland Heights, KY 41099, USA; Dahlem@nku.edu

It was great to see so many new faces at this year's Informal Conference of Dipterists. I hope that many of you are reading this and are thinking about getting more involved with NADS, BFW and other Diptera groups around the continent. It was also great to see many familiar faces at this meeting. I believe that this meeting serves an important role in establishing and renewing links between entomological researchers who have a love for flies.

The conference centered on Diptera resources, groups, major projects, and upcoming meetings. The NADS web site and its associated Dipterists' Directory and the *Fly Times* newsletter were highlighted. Chris Thompson provided information on the SEL's "The Diptera Site" and changes that will soon be coming to make the site even better. We talked about the upcoming "Diptera of Central America" book, Will Reaves gave an update on the Diptera TWIG of the Great Smoky Mountain National Park ATBI, and Brian Wiegmann provided information on his new "Tree of Life" funding. We also talked about the last NADS/BFW meeting held at Hocking Hills State Park in Ohio last May, the International Congress of Dipterology in Brisbane, Australia last year, and plans for the 2005 NADS/BFW meeting tentatively planned for Oregon that Greg Courtney is considering hosting and the 2006 International Congress of Dipterology currently being planned for Japan. Many thanks to Paul Arnaud, Jr. for the copies of *Myia* that he sent for participants of this meeting.

Johannsen Diptera Collection at Cornell University

by Torsten Dikow

Department of Entomology, Cornell University, Comstock Hall 2144C
Ithaca, NY, USA; torsten@tdvia.de

The Cornell University Insect Collection, which is the largest insect collection at a land grant university in North America, has an important Diptera collection of about 1000 drawers that is primarily Nearctic in focus. In an effort to make this collection more easily accessible to the research community a web site with information on the collection was launched and can be found at: <http://www.entomology.cornell.edu/CUIC/index.html>

Recently, the Diptera slide-collection compiled by Oskar Augustus Johannsen has been databased and curated. It represents an important collection of imagines, many larvae and pupae from rearings, or parts thereof. There are some 1944 slides of mostly nematoceran taxa, especially Chironomidae and Sciaridae, but also preparations of Stratiomyiidae, Syrphidae, Ephydriidae, and many other taxa. The collection contains mostly material from the Nearctic Region with an emphasis on the area around Ithaca, NY and New York State. Some specimens, however, were collected in South America, China, Europe, Kenya, or Sumatra. With the help of this database we want to make this important collection of Diptera more easily accessible to the Diptera community. The database can be accessed through the main insect collection web site. Furthermore, the holdings of other Diptera taxa will be added and so far the Asilidae and Tabanidae holdings can be searched on the web sites. There is also a database available that contains information on type specimens deposited at Cornell University.

If you are interested in borrowing material from the main collection or the Johannsen slide-collection please don't hesitate to contact the curator James Liebherr (jk15@cornell.edu), the collections manager Rick Hoebeke (erh2@cornell.edu), or myself.

New Address and Workplace for Peter H. Kerr

Peter Kerr (formerly Peter Hibbs) submitted his doctoral dissertation entitled "Revision of the Genera of the Rhagionidae of the World (Diptera: Brachycera)" to the Graduate School of the University of Maryland and has begun a three-year postdoctoral appointment at the California Department of Food and Agriculture, Plant Pest Diagnostics Branch. He will now direct his research focus on the phylogenetics and population biology of Tephritidae, using molecular methods. His new contact information is:

CDFA, Plant Pest Diagnostics Branch
3294 Meadowview Rd.
Sacramento, CA 95832-1448 USA
Phone: 916-262-1148; Fax: 916-262-1190

Email: pkerr@cdfa.ca.gov

Website: <http://www.cdfa.ca.gov/phpps/ppd/Entomology/EntBios/PKerr/Kerr.htm>

US National Science Foundation Funds Dipteran "Tree of Life"

by Brian M. Wiegmann

Department of Entomology, Box 7613, North Carolina State University
Raleigh NC 27695, USA; bwiegman@unity.ncsu.edu

We are pleased to announce the funding award of a project proposal to the US National Science Foundation's Assembling the Tree of Life program entitled, "Building the Dipteran Tree: Cooperative Research in Phylogenetics and Bioinformatics of True Flies (Insecta: Diptera)". The project team has endeavored to make this a true community-wide effort toward increased resolution of the fly tree. This 5-year project involves more than ten collaborating laboratories. The major organizing contributors to the project are: Brian Wiegmann (NC State Univ.), Rudolf Meier (Natl Univ. Singapore), David Yeates (CSIRO), Markus Friedrich (Wayne St. Univ.), Greg Courtney (Iowa St. Univ.), Andy Beckenbach (Simon Fraser Univ.), F. Christian Thompson (SEL USDA), Gail Kampmeier (Univ. of Illinois), Thomas Pape (Swedish Museum, Nat. Hist., Lund), Jeff Skevington (Ag. Canada). Many additional collaborators are part of the project and there will be significant input from across dipterological subdisciplines.

The goals of the project include the following:

- 1) Generate a robust family-level phylogenetic hypothesis for Diptera based on a character matrix consisting of morphological characters and molecular sequences.
- 2) Build a Diptera supertree for more than 1500 species based on new and published trees.
- 3) Compare the phylogenetic utility of the mitochondrial and nuclear genomes at multiple taxonomic levels and test different techniques for estimating times of divergence.
- 4) Test different sampling strategies for reconstructing relationships within megadiverse taxa and assess the efficiency of competing analysis techniques in large-scale phylogenetics.
- 5) Expand the 'Diptera Web' (www.diptera.org) as a central website for Diptera providing links to a comprehensive compilation of information on Diptera.

The phylogenetic components of the project are organized by three tiers of analysis: Tier 1: A 42 taxon framework phylogeny for the order, including most of the major dipteran model organisms, full mitochondrial genomes, 30kb of nucleotide sequence data, and a comprehensive morphological data set; Tier 2: A phylogenetic analysis of Diptera that includes representatives of all fly families scored for a large amount of molecular and morphological data; Tier 3: Syntheses of individual detailed phylogenetic studies within the dipterological community, new studies funded by the project, and a "supertree" analysis to summarize the findings of multiple laboratories. A major effort will be made to coordinate results and associated taxonomic and biological information on flies through the Diptera web.

The project will officially begin in January 2004. There are several postdoctoral and PhD-level graduate assistantships available for molecular and morphological phylogenetic projects. For additional information about the project, to learn how to contribute to the effort, or to apply for a position, contact: Brian M. Wiegmann, phone: 919-515-1653, fax: 919-515-7746, or send an email.

Biosystematic Database of World Diptera

by F. Christian Thompson

Systematic Entomology Lab., USDA c/o Smithsonian Institution, MRC-0169 NHB,
PO Box 37012 Washington, DC, 20013-7012, USA; cthompso@sel.barc.usda.gov

The Biosystematic Database of World Diptera is about to TAKE-OFF. After years of little or no funding, the BDWD has received a grant and recognition. We have also almost reached our first major milestone. The Global Biodiversity Information Facility (see <http://www.gbif.org/>) selected the BDWD as one of 10 international projects to receive “seed-money” awards in their Electronic Catalog of Life program (ECAT). With the new funds, we advertised for a post-doctoral fellow and have selected Dr. Irina Brake of Germany. She will begin work on or about 1 November.

The first major milestone for the BDWD will be the completion of the data capture of all Diptera name records from secondary sources, such as the various regional Diptera catalogs. Only 3 families remain incomplete today (Bombyliidae, Cecidomyiidae and Sarcophagidae), with an estimated 7,000 names to be added. The BDWD, however, is now far more comprehensive than these out-dated sources, as we have added new species records from the Zoological Record (volumes 111-139). When version 6 is released at the end of the year, there will be more than two hundred thousand names and virtually all the Diptera names found in secondary sources.

With the completion of the data capture phase for names, focus will shift to 1) completion of a bibliography of Diptera, 2) expansion of the Diptera WWW site (see <http://www.diptera.org/>); and 3) completion of various family fascicles and production of further MYIA volumes.

The bibliography of Diptera will be built the same way as the Nomenclator. References will be first taken from secondary sources, but all will eventually be verified against the original publications. Over eleven thousand are now included and we hope to have completed the initial data capture by the end of 2004.

The Diptera WWW site will be the major focus. In addition to the current Nomenclator and reference file, we will add a species interface to allow for queries by geography, economic and conservation status. We will also put up our tools, including files with information on authors, collections, serials, etc. As an added service to working systematists, we plan to add a Digital Diptera Type database, based on Piotr Naskrecki's MCZ model (<http://mcz-28168.oeb.harvard.edu/mcztypedb.htm>). Thus images of Diptera types will be available directly or linked to name records in the BDWD. Likewise, species web pages will be linked to the BDWD also.

Plans are underway to produce another MYIA volume in early 2004 which will include a number of small Diptera families as well as an up-dated project description and data standards and protocols. Other MYIA volumes on acrocerids and syrphids are also in the works. The goal for the GBIF grant is to have another 20,000 names and associated information peer-reviewed, published in MYIA, and online by May 2005.

So, please come visit us at the Diptera WWW site. Complete documentation on the Biosystematic Database of World Diptera is available there. Be sure to visit the site regularly, as this coming year will

be one of MAJOR changes. PS: For all our team members, there will be a mailing this fall shortly after Irina is in place. We appreciated your patience and ask just for a little more of it. Thanks.

Settling Back into Ottawa

by Jeff Skevington

Invertebrate Biodiversity, Agriculture & Agri-Food Canada
K.W. Neatby Building, 960 Carling Avenue
Ottawa, ON, K1A 0C6, Canada; skevingtonj@agr.gc.ca

I have moved to take a new position in the Diptera Unit at the Canadian National Collection of Insects from my position with the California Department of Food and Agriculture in Sacramento. My new position allows me to continue my research on systematics of Pipunculidae and phylogenetics of Eremoneura and will also entail responsibilities for identification and research on phytophagous Diptera. Along these lines, I have made plans to work on *Meromyza* (Chloropidae) and chloropine phylogenetics with Terry Wheeler. If you have any pipunculids or chloropids, I would be happy to look at them. We are particularly keen to obtain chloropids in 95-100% alcohol for molecular work.

Additional contact details are as follows:

Phone: 613-759-1647, FAX: 613-759-1927
Alternate e-mail: jeff_skevington@yahoo.ca

Passing of Antony Downes

We regret to inform you that J. Antony Downes, predeceased by his wife Sheila, died in his sleep on 24 June 2003 at age 89. He was born in Wimbledon, England, and came to Canada in 1953 to join the Veterinary & Medical Entomology Unit. For 11 years he was the head of the Experimental Biology Section of the Entomology Research Institute in Ottawa. Antony was the general secretary at the 10th International Congress of Entomology in 1956. He was a Fellow of the Entomological Society of Canada, received the Gold Medal Award of the Entomological Society of Canada, and was an Honorary Member of the International Congresses of Dipterology. Antony was an expert in Ceratopogonidae, Empididae, and Lepidoptera and he had a broad knowledge of dipteran behaviour, ecology and evolution.

Dipterology Fund

by Terry A. Wheeler

Department of Natural Resource Sciences, McGill University, Macdonald Campus,
Ste-Anne-de-Bellevue, QC, H9X 3V9, CANADA; wheeler@nrs.mcgill.ca

Report on 2003 Grants Competition

Two student travel grants were awarded in 2003.

Scott Fitzgerald (Oregon State University) received a grant for field work in the western United States to collect larvae of the bibionid genus *Bibiodes* for use in an analysis of higher level phylogenetic relationships within the family.

Mike Spironello (University of Toronto) received a grant in support of field work in the western United States and eastern Canada to collect larvae of three genera of basal simuliine black flies for use in a total evidence phylogenetic analysis of relationships.

In addition to the above grants, some support from the Dipterology Fund was also made for the construction of the NADS website (www.nadsdiptera.org).

Call for Applications - 2004 Grants Competition

Applications will be accepted for the 2004 competition of the Dipterology Fund until 01 March 2004. Up to four grants of CAN\$1000 each will be awarded. Details on applications for the 2004 Dipterology Fund competition may be found at www.nadsdiptera.org If you are interested contact Terry at the address above.

Books and Publications

(with thanks to Chris Borkent for completing a literature search)

Anderson, M.S. and Stephen D. Gaimari. 2003. Raman-atomic force microscopy of the ommatidial surfaces of Dipteran compound eyes. *Journal of Structural Biology* 142:364-368.

Collins, K.P. and B.M. Wiegmann. 2002. Phylogenetic relationships and placement of the Empidoidea (Diptera: Brachycera) based on 28S rDNA and EF-1alpha sequences. *Insect Systematics and Evolution* 33:421-444.

Collins, K.P. and B.M. Wiegmann. 2002. Phylogenetic relationships of the lower Cyclorrhapha (Diptera: Brachycera) based on 28S rDNA sequences. *Insect Systematics and Evolution* 33:445-456.

- Griffiths, G. C. D. 2003. Anthomyiidae. Flies of the Nearctic Region 8 (2), No. 14. Pp. 2289-2484. This issue treats the genera *Egle* (catkin flies) and *Lasiomma* in a wide sense (including species listed under *Acrostilpna*, *Crinurina* and *Macrophorbia* in North American catalogs).
- Grimaldi, D.A., D.S. Amorim and V. Blagoderov. 2003. The Mesozoic family Archizelmiridae (Diptera: Insecta). *Journal of Paleontology* 77:368-381.
- Krzeminski, W. and E. Krzeminska. 2002. Rhaetaniidae, a new family of the Diptera from the Upper Triassic of Great Britain (Diptera: Nematocera). *Annales Zoologici Warsaw* 52:211-213.
- Machado, C. A. and J. Hey. 2003. The causes of phylogenetic conflict in a classic *Drosophila* species group. *Proceedings of the Royal Society Biological Sciences, Series B* 270 (1520): 1193-1202.
- Meier, R. and B.M. Wiegmann. 2002. A phylogenetic analysis of Coelopidae (Diptera) based on morphological and DNA sequence data. *Molecular Phylogenetics and Evolution* 25:393-407.
- Moulton, J.K. 2004. Can the current molecular arsenal adequately track rapid divergence events within Simuliidae (Diptera)? *Molecular Phylogenetics and Evolution* 27:45-57.
- Schmitt, M. 2003. Willi Hennig and the rise of cladistics. pp. 369-379 *In* The New Panorama of Animal Evolution. A. Legakis, S. Sfenthouraskis, R. Polymeni and M. Thessalou-Legaki (eds.). Proc. 18th Int. Congr. Zoology.
- Sun, X-k. and S.A. Marshall. 2003. Systematics of *Phasia* Latreille (Diptera: Tachinidae). *Zootaxa* 276: 1-320.

Submission Form for Directory of North American Dipterists

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

The information can be emailed, or the form completed and faxed or sent to the following address:

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

FAX: (613) 759-1927

Email: cummingjm@agr.gc.ca

Full name: _____ **Address:** _____
 _____ **Telephone Number:** _____

FAX Number: _____ **Email:** _____

Projects and taxa studied: _____

