FLY TIMES

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Welcome to the latest *Fly Times*. This issue contains our regular reports on meetings and activities, opportunities for dipterists, as well as information on recent and forthcoming publications.

The electronic version of the *Fly Times* continues to be hosted on the North American Dipterists Society website at http://www.nadsdiptera.org/News/FlyTimes/Flyhome.htm. We will, of course, continue to provide hard copies to those without web access. We would greatly appreciate your independent contributions to this newsletter. We need more reports on trips, collections, methods, etc., with associated digital images if you provide them. Feel free to share your opinions about what is happening in your area of study, or any ideas you have on how to improve the newsletter and the website.

The *Directory of North American Dipterists* is constantly being updated and is currently available at the above website. Please check your current entry and send all corrections to Jeff Cumming.

Issue No. 36 of the *Fly Times* will appear next April. If possible, please send your contributions by email, or disc, to either co-editor. Those of you without internet access may fax, or mail hard copy contributions. All contributions for the next *Fly Times* should be in by the end of March, 2006.

NEWS

Informal Conference of Dipterists - 2005 Annual Meeting of the Entomological Society of America, November 8, 2005

by Gary J. Steck
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The North American Dipterists Society will be gathering Tuesday, November 8, 2005: 7:30 PM-11:00 PM in Room 304 of the Convention Center (Third Floor) in Fort Lauderdale, Florida. The following individuals will be giving talks or presentations.

- 7:30 PM Welcoming Remarks by organizer Gary J. Steck.
- 7:40 PM Steps toward a dipteran "Tree of Life" by Brian M. Wiegmann, North Carolina State University, Department of Entomology
- 8:00 PM Fossils, molecular clocks, and evolution of Therevidae by Martin Hauser, University of Illinois, Dept of Entomology
- 8:20 PM Atmospheric CO_2 levels and detritus consumed by *Culex* mosquitoes by Joe Keiper, Cleveland Museum of Natural History
- 8:35 PM ATBI of Great Smoky Mountains National Park by Gary J. Steck and Bruce D. Sutton. Florida State Collection of Arthropods
- 8:50 PM Trolling for tabanids, tephritids and other Diptera in tropical north Queensland by Bruce D. Sutton and Gary J. Steck. Florida State Collection of Arthropods
- 9:05 PM What's new in Washington D.C. by Christian Thompson, Systematic Entomology Laboratory, USDA, Smithsonian Institution

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North American Dipterists Society, Field Meeting 5-9 August 2005 Malheur Field Station, Oregon

by Greg Courtney
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The NADS 2005 field meeting was held 5-9 August at Malheur Field Station (MFS) in SE Oregon. The meeting brought together nearly 30 dipterists (and dipterists to be?) from throughout North America to discuss and collect flies, focusing on taxa from the northern Great Basin and on an area that most

delegates had not previously visited. MFS is adjacent to Malheur National Wildlife Refuge and near Steens Mountain and the Alvord Basin. The area contains a variety of terrestrial, wetland, and aquatic habitats, including sagebrush- and greasewood flats, cattail marshes, lowland reservoirs, alpine lakes, cold- and hot springs, a large river, and many small streams. These diverse habitats provided excellent opportunities for collecting flies and other arthropods.

Friday, 5 August, was essentially a travel day, with delegates finding their way to MFS and getting checked in. It also was the warmest day of the week, with afternoon temperatures exceeding 100˚F (but it's a dry heat!). Evening activities in our air-conditioned conference room included an informal mixer, a "welcome" slide presentation by Duncan Evered, co-director of Malheur Field Station, and an overview of Malheur Wildlife Refuge, Steens Mountain, and the Alvord Basin by Greg Courtney, Iowa State University. Later in the evening, several delegates jumped right into the collecting, via a black-light set at MFS.

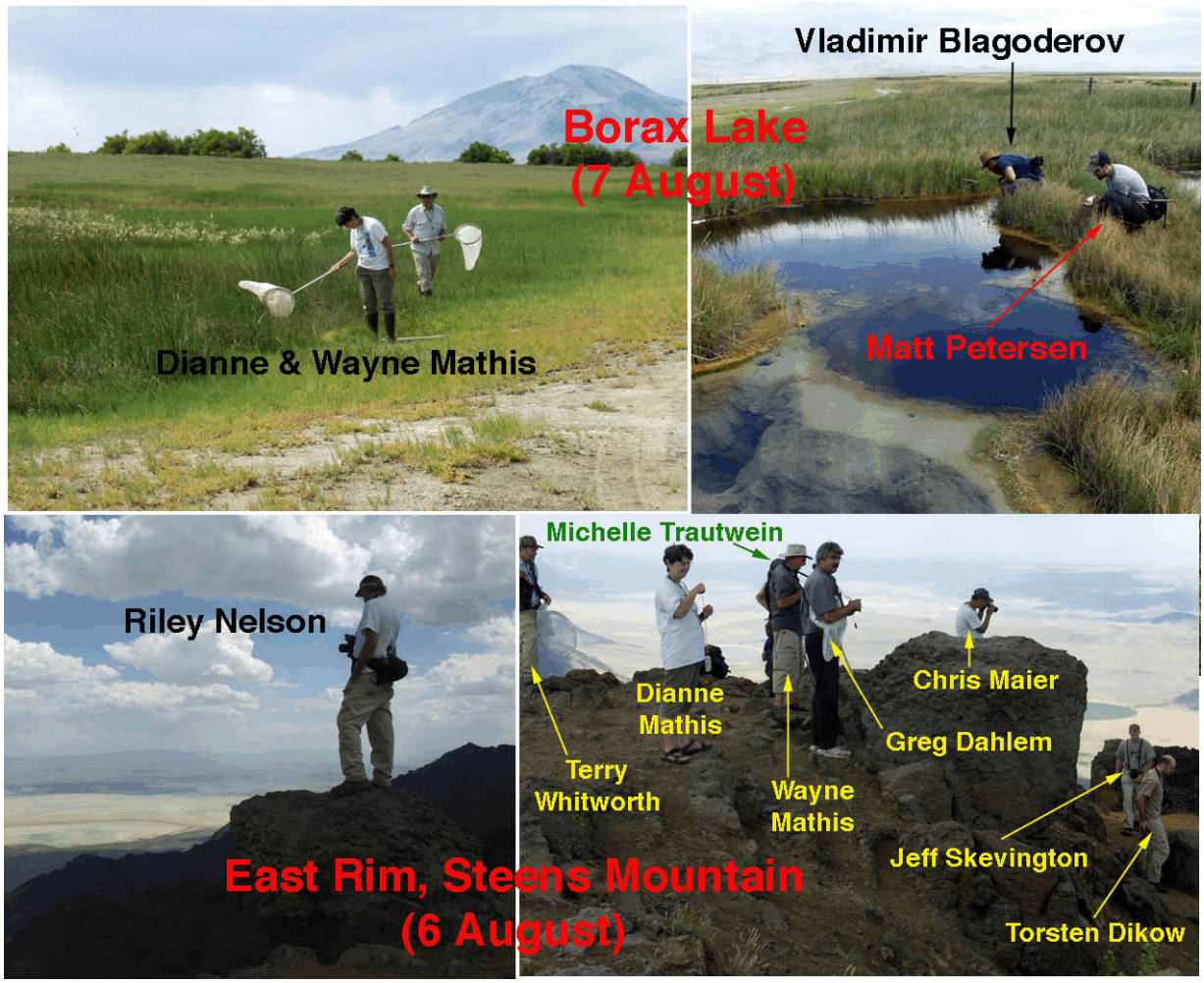

Fig. 1. From left to right (top): Dianne and Wayne Mathis at Borax Lake, Aug. 7; Vladimir Blagoderov and Matt Petersen at Borax Lake, Aug. 7. From left to right (bottom): Riley Nelson, Steens Mountain, Aug. 6; Terry Whitworth, Dianne Mathis, Michelle Trautwein (mostly hidden), Wayne Mathis, Greg Dahlem, Chris Maier, Jeff Skevington, Torsten Dikow, Steens Mountain, Aug. 6

Saturday, the first full day of the meeting, was devoted to collecting on Steens Mountain, a 30-mile long fault-block mountain that exceeds 2900 meters a.s.l., or approximately 1650 meters above the surrounding landscape. The tilting of the block resulted in a steep eastern face (i.e. East Rim) that rises abruptly above the Alvord Desert. Pleistocene glaciers dug trenches about a half-mile deep in the mountain's major stream beds, creating several spectacular gorges (e.g., Kiger Gorge, Little Blitzen Gorge, Big Indian Gorge). Other stops on the mountain included the Blitzen River, Fish Lake, and the Steens Mountain "high point." Along the way, we ascended from the dry, sagebrush zone, through the juniper zone, a subalpine zone of mixed aspen groves, sagebrush grasslands and wetlands, and eventually to the windswept alpine bunchgrass/tundra zone that dominates elevations above 2400 meters. The mountain's many alpine meadows, aspen groves, hilltops, coldwater springs, snow-fed streams and wetlands provided many interesting flies. Malaise traps placed on the mountain a week prior to the meeting provided additional specimens. Wayne Mathis may have set the day's record for diversity (taxon richness), collecting 19 genera and 30 species of ephydrids, including 17 genera at the Blitzen River alone. Evening activities included several presentations, sorting of the day's catch, and a black-light session at MFS.

On Sunday we caravanned to the southeast side of Steens Mountain, where we visited several locations in the Alvord Basin. During the Pleistocene this basin was filled by Pluvial Lake Alvord, but now contains mostly sagebrush and desert shrub communities, an assortment of playa lakes, and numerous hot springs. Our first stop in the basin was Borax Lake, a hot lake that harbors the endangered Borax Lake Chub. Although the lake, now a Nature Conservancy reserve, was off limits to collecting, we found many interesting flies on adjacent Bureau of Land Management land. Riley Nelson, Torsten Dikow, and Michelle Trautwein were especially pleased with the asilid and bombyliid collecting. We also explored some of the area's many hot springs, which contained mostly dead (scalded) odonates and beetles and numerous living stratiomyiids. After a brief lunch and milkshake stop in Fields, we continued north to the low-lying Alvord Desert on the eastern flank of Steens Mountain. The flat, vegetation-free "Desert" is an ancient playa that occasionally holds water during wet years (the north end, by Alvord Ranch, contained water during our visit). The final stop of the day was Pike Creek, which is adjacent to the Alvord Desert and drains the eastern escarpment of Steens Mountain. Although several interesting flies were collected by NADS delegates, the highlight may have been the discovery of several vespid wasps that were parasitized by strepsipterans. Ah, but the latter are merely aberrant flies, right? Or at least some might espouse this view. After a rushed trip back to MFS (barely making it back in time for supper), we devoted the evening to more presentations, sorting of specimens, and another black-light session.

Monday, the final full day of the meeting, was open for delegates to go wherever they wanted. Some returned to the Alvord Basin or Steens Mountain, and a few headed the other direction (north) to Malheur National Forest or Strawberry Mountain Wilderness. The latter gave delegates a chance to collect in the coniferous forests of the southern Blue Mountains. This also gave Riley Nelson the chance to visit his namesake, Riley, Oregon, for a number of photo ops (some embarrassing). Except for the Strawberry Mountain crew, which stayed late to run a black light, the final evening at MFS was spent swapping stories of the day's travel, continued sorting of collections, and organization for the Tuesday departure. There was also brief discussion of where to hold the next meeting and who would host it. Motions were made to nominate Jeff Cumming and various other dipterists who weren't present to decline, but eventually we decided it best to wait for a willing volunteer. [See contribution by Jim O'Hara below-editors].

On Tuesday, the delegates had a final MFS breakfast before departing for home or for post-NADS expeditions (e.g., I took a small group to H.J. Andrews Experimental Forest, in the Cascade Range). As promised at the meeting, I plan to set up a website with images, links, etc. from NADS 2005.

Although I have not yet started to load these items, I can give you a URL: http://www.ent.iastate.edu/fieldtrips/NADS2005/. I'll send out a general announcement when there's actually something to see, hopefully before the end of the semester.

Finally, here's a list of NADS 2005 presentations (on Saturday & Sunday):
- Masahiro Sueyoshi, National Museum of Natural History: How does secondary succession of temperate forest affect dipteran species diversity.
- Irina Brake, National Museum of Natural History: Status of the BioSystematic Database of World Diptera.
- Matt Bertone, North Carolina State University: Molecular phylogenetics of the lower ("nematocerous") Diptera with reference to the Tipuloidea.
- Torsten Dikow, American Museum of Natural History: The genera of Leptogastrinae (Asilidae) - a study of the speciose *Leptogaster* and the remaining sixteen genera.
- Michelle Trautwein, North Carolina State University: Bee flies and their relatives.
- Terry Whitworth: Keys to the blow-fly species of North America north of Mexico.
- Riley Nelson, Brigham Young University: An update on the flies of Mongolia.
- Vladimir Blagoderov, Iowa State University: Helicon Focus software for reconstructing high-resolution images of Diptera.

Fig. 2. Attendees at NADS 2005: Front row: Amanda Jacobson, The Skevington's (Angela, Alexander, Jeff), Greg Courtney, Greg Dahlem, Riley Nelson. Middle row: Masahiro Sueyoshi, Irina (and Leo?) Brake, Dianne Mathis, Kay Whitworth, Becky Brown, Vladimir Blagoderov, Matt Petersen, Torsten Dikow Back row(s): Peter Brake, Greg Curler, Wayne Mathis, Matt Bertone, Monty Wood, Terry Whitworth, Michelle Trautwein, Kaye Nelson, Grace Wood. Not pictured: Chris Maier

Sixth International Congress of Dipterology
Fukuoka, September 2006

The ICD6 will be held from the 23rd to the 28th of September, 2006 in Fukuoka, Japan. For more information about the Congress visit the new ICD6 website at http://apollon.nta.co.jp/6icd. This site can also be accessed through our NADS website at http://www.nadsdiptera.org/ICD/ICDhome.htm.

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16th International Chironomid Symposium
Madeira, Portugal, July 25-28, 2006

Further information on this meeting can be obtained at www.uma.pt/chiro.symposium/

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Aquatic Macroinvertebrate Identification Workshop
Black Rock Forest, Orange County, NY, February 15-17, 2006

For more information go to http://www.hudsonbasin.org/macroprogram3day.htm

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First Announcement for the 2007 Field Meeting of the North American Dipterists Society

by Jim O'Hara
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The next NADS field meeting is tentatively scheduled for Silver City, New Mexico, in August 2007. Silver City is a small university town, population about 11,000, located in the southwestern part of the state. It is nestled in the southern foothills of the huge 3.3 million acre Gila National Forest, about one hour's drive north of Interstate 10 and a few hours drive from Tucson (to the west) and Las Cruces and El Paso (to the east). It is situated at 5900 feet in the pinyon-juniper zone, almost sitting on the Continental Divide that separates the watersheds of eastern and western North America. At this elevation, Silver City has a slightly cooler climate than that of the Chiricahuan desert to the south.

I have passed through the Silver City area about ten times on various collecting trips over the past 25 years, and usually stop there for a few days on each trip to revisit familiar localities and investigate new ones. The area is extremely rich in my group of flies, the Tachinidae, and I suspect that it is similarly

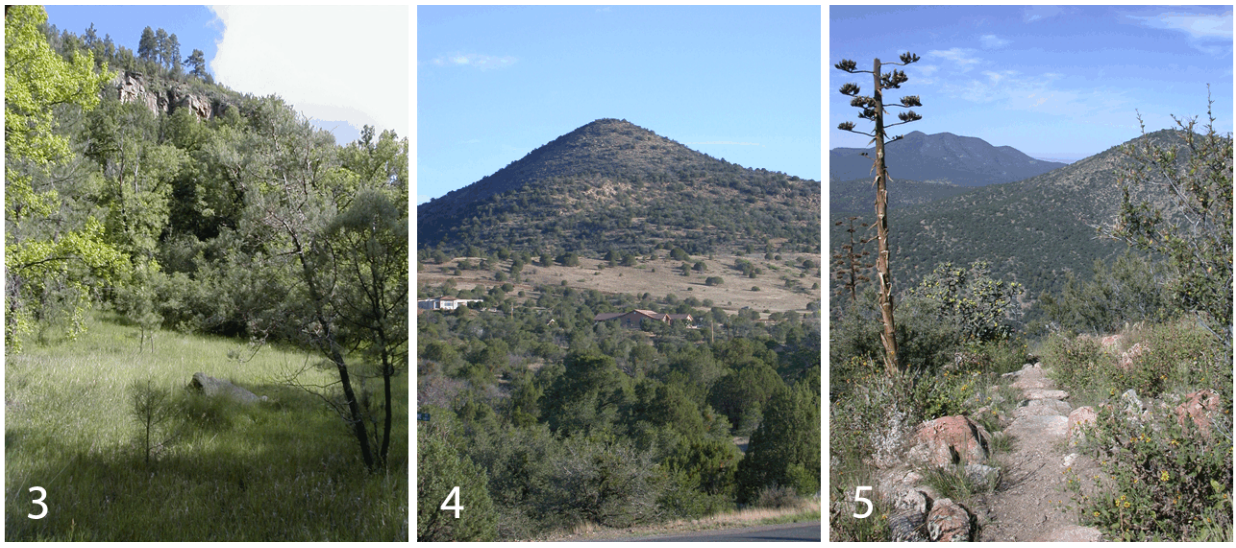
rich in many other dipteran families, particularly those that are generally diverse in the American Southwest. Broadly speaking, the Southwest is a diversity hotbed because of the unique biota that has developed there in association with the region's deserts and mountain ranges, and because of its position at the southern edge of the Nearctic Region and proximity to the northern edge of the Neotropical Region. Contributing to the development of its diversity is a complex weather system, which provides the western part of the region with winter and early spring rains, the eastern part with late summer rains (the intense "monsoons"), and the area in the middle with rains in both seasons. This rainfall pattern has greatly influenced the development of the unique characteristics of the region's three southernmost deserts: the Mojave in the west, Chiricahuan in the east, and Sonoran in the middle. Silver City lies just to the north of the northwestern edge of the Chiricahuan desert and well to the east of the northeastern edge of the Sonoran desert.

Figs. 1–2. Cherry Creek campground, Gila National Forest, New Mexico. **1.** *Pararchytas* sp. (Tachinidae), possibly *P. apache* Woodley (type locality Cherry Creek campground), on flowers of *Ceanothus fendleri*. **2.** Malaise trap in small meadow.

The Silver City area is less well known to most entomologists than some locations in southern Arizona, but in my view its insect fauna is just as diverse. It is also in close proximity to a variety of habitats, which is preferable for a NADS field meeting in order to offer good choice for participating dipterists. To the south is the Chiricahuan desert; to the north is the Gila National Forest with its canyons, meadows, hilltops, forests and lakes, and the dramatic life zone changes so characteristic of the mountains of the Southwest. Within a relatively short distance, one passes from the desert through a pinyon-juniper zone, to a rich transition zone dominated by ponderosa pine, to coniferous forest.

There are four sites in particular in the Silver City area that bear mention as exceptional collecting localities. Foremost is Cherry Creek campground, fourteen miles north of Silver City on Hwy. 15. This location, at 7400 feet, harbours a mixed xeric and mesic habitat. My colleagues in Ottawa in the Diptera, Hymenoptera, Lepidoptera and Coleoptera Units have been impressed with material from Cherry Creek, so my assessment of this site is not based solely on its tachinid fauna. A few miles beyond Cherry Creek are good gravel roads leading to a high hilltop (Signal Peak, 8900 feet) and a meadow of wildflowers with a damp sedge-dominated area at one end (Meadow Creek, 7100 feet). Very close to Silver City is Gomez Peak, el. 7300 feet; the best hilltop I know of in the Southwest for tachinid collecting. I am less familiar with aquatic habitats, but the Gila river is not far to the west of Silver City, Lake Roberts is about 35 miles to the north, and the Mimbres river is to the east. I plan to scout out new collecting

localities in the Silver City area next summer, particularly for aquatic Diptera. For further information about collecting in the Silver City area, see my article, "An account of a collecting trip to the mountains of southern Arizona and New Mexico" (*The Tachinid Times* 13: 4–7, 2000).



Figs. 3–5. 3. Meadow at Cherry Creek campground; note wall of Cherry Creek Canyon in background. **4.** Gomez Peak, several miles north of Silver City. **5.** Trail to top of Gomez Peak, dead century plant (*Agave* sp.) to left.

Our venue in Silver City for oral presentations, sorting of specimens, and general discussions, will likely be a new facility called the Besse-Forward Global Resource Center. This Center is close to the historic downtown of Silver City, on the campus of Western New Mexico University (WNMU). The Center has meeting rooms available for low cost (approx. US$40 per day) and would likely serve our needs very well. There is a good assortment of motels, hotels, B&Bs and restaurants spread around town, and camping areas nearby in the national forest. I have not enquired about the availability of dorm rooms, but this might be possible if we hold our meeting before the beginning of classes at WNMU in the third week of August.

For most Diptera, the best time to collect in the vicinity of Silver City is late July to early September, during or shortly after the monsoon season. Though this timing carries with it the threat of rain during our meeting, it also coincides with the greatest insect activity. Generally speaking, rain is more likely in the afternoon, and is more prevalent at higher elevations. On days when rain looks likely, it can usually be avoided by collecting in the desert. We would likely meet in August before classes begin to accommodate those who teach or take classes at universities.

Information about Silver City and vicinity can be found on the Internet at http://www.silvercity.org. For a map of Silver City and Grant County, or the brochure "Historic Silver City Scenic Tours" (which nicely reviews the natural and human history of the area), contact the Silver City Grant County Chamber of Commerce at the aforementioned website or call the toll-free number 1-800-548-9378. The headquarters of the Silver City Ranger District is located in Silver City and has numerous brochures on the birds and other wildlife of Gila National Forest, as well as maps of the Forest and guides to popular local hiking trails (including trails to potential collecting sites). Contact the Silver City Ranger District at (505) 388-8201 or through their website at http://www2.srs.fs.fed.us/r3/gila/about/distmain.asp?district=silver.

For those who would like to visit other mountain ranges in the southern portions of Arizona and New Mexico before or after our NADS meeting, I recommend (from west to east) the Santa Catalina Mtns. (just north of Tucson, with Mt. Lemmon at the top), Santa Rita Mtns. (south of Tucson, incl. Madera Canyon), Huachuca Mtns. (incl. Ramsey Canyon), Graham Mtns., Chiracuhua Mtns. (incl. Southwestern Research Station, site of our 1991 meeting), and Sacramento Mountains (incl. Cloudcroft). All of these locations are less than four hours drive from Silver City. Although the Silver City area is not as well known as most of these other locations, I think it is every bit as faunistically diverse and offers great access to a variety of habitats.

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Dipterology Fund

by Terry A. Wheeler
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The Grants Committee has noticed a steep decline in the number of applications submitted for support from The Dipterology Fund in the past two years. Very few applications have been received overall, and of those received, many have been: a) in areas outside the scope of the Fund; or b) not very well-written or justified.

We know that there are excellent students and post-docs out there doing some great work on Diptera and whose research program is not currently supported by millions of real cash dollars. Where are they?

If you are:

1) a North American dipterist working on the systematics, biodiversity or ecology of Diptera (especially at the whole-organism level),

2) in need of financial support to conduct fieldwork, visit a museum or other research institution, or attend a major Diptera conference,

3) willing to put the effort into crafting a simple, short application that is both well-justified and proofread,

please consider applying for support. Details on The Dipterology Fund may be found on the NADS website (www.nadsdiptera.org). The deadline for the 2006 competition is March 1, 2006.

Photography by Total Immersion

by Dean Hansen
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In situ underwater photographs (see below) were taken on Kodak E100VS slide film with an Olympus OM4T, two T32 flashes, and Olympus macro lenses mounted on a bellows, all in a home-made Plexiglas housing. The OM 80mm/f4 lens was used for the Blephariceridae shot, while the OM 38mm/f2.8 macro lens was used for the *Deuterophlebia* shot.

Fig. 1. Blephariceridae shot: Rock Creek, about 4 miles SSW of Red Lodge, Montana, 14 Sept., 2002. Alt. 1900m. The larvae were on a rock in water about 30 cm deep. Current velocity, while not measured, was slow enough to allow for reasonably easy wading; larvae were not in a raging torrent. *Deuterophlebia* pupae, but no larvae, were also found in similar conditions here (in fact, on the same rock).

Fig. 2. *Deuterophlebia* shot: East Rosebud River at Jimmy Joe Campground, about 10 miles SW of Roscoe, Montana, 5 Sept., 2005. Alt. 1700m. Pupae were fairly common on certain light-colored rocks; larvae were more difficult to find. This larva, beside two black fly larvae, was in water about 15 cm deep; current velocity was moderate. It was interesting to follow the larva through the camera view finder as it grazed on the rock. The larva was constantly swinging its head and thoracic segments from side to side, covering an arc of 150 to over 180 degrees as it grazed.

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Request for Information about Emblemasomatini

by Reinhard Lakes-Harlan
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For a review of the group of Emblemasomatini (Sarcophagidae), we would be very grateful for any information on the biology of the parasitoid – host relationship, including occasional observations or information about which cicada species serve as hosts. If you have ever collected Emblemasomatini, please let me know. Also, any surplus specimens would be very welcome.

Blast from the Past

submitted by Art Borkent
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Those of you with an interest in entomological history may enjoy the following photo, taken on Nov. 15, 1967 in Diptera Unit at the Canadian National Collection of Insects in Ottawa.

Back row (left to right): Frank McAlpine, Herb Teskey, Guy Shewell. Seated (left to right): Monty Wood, Dick Vockeroth, Bob Peterson, Willi Hennig.

For the record Dick Vockeroth no longer smokes but still drinks coffee, Monty Wood has new glasses and Bob Peterson's tie is still being used to hold up Malaise traps.

If there are others of you who have photos of historical interest, consider sending them in.

A Call to Action!

Brian Brown recently published the following paper which provides a thought-provoking and challenging perspective on our work as taxonomists. Give it a read and send us your comments. Or at least discuss it over a coffee break with your colleagues.

Brown, B.V. 2005. Malaise trap catches and the crisis in Neotropical Dipterology. American Entomologist 51:180-183.

It is available via the web at: http://www.phorid.net/phoridae/pdf/CrisisNeotrDipt.pdf

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New Edition of Merritt & Cummins (& Berg)

by Greg Courtney
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As some of you know, there is a new edition of *An Introduction to the Aquatic Insects of North America* (editors: Merritt, Cummins, and [new editor] Berg) in the works. Being the lead author on the chapter pertaining to larval Diptera and the section including ecological tables for most Diptera, I am busy working on updates. These updates will include a few obvious additions (e.g., Oreoleptidae [see April 2005 issue of *Systematic Entomology*]) and several perhaps less obvious additions (e.g., after collecting hundreds of axymyiid larvae from saturated wood in Appalachian streams, I've decided that they qualify as "aquatic"). Regarding many other taxa, I will rely partly on the expertise of co-authors (Rich Merritt, Ben Foote, Don Webb, and Ken Cummins) and the community of Dipterists out there. Consequently, if any of you have recommendations, especially pertaining to information for the ecological tables, please send it. In particular, I would appreciate any help in updating generic names and diversity within the listed genera. Please send any recommendations or changes to me at the above address. Thanks.

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Terminalia - Time to Party!

Some of you may not know that the ancient Romans celebrated a feast in honour of their god Terminus, the god of boundaries, on a day called Terminalia, the name of the last day of their year, Feb. 23. They hosted religious rites of renewal. So perhaps if you're still perplexed about those cyclorrhaphan homologies or wondering what a ventral plate really does, this is the time to get together with your taxonomist buddies and share a cold one. Who else but Dipterists and ancient Romans could celebrate the festival of the Terminalia?

Major New Contribution to Dipterology

David K. Yeates and Brian M. Wiegmann, (eds.) 2005. The Evolutionary Biology of Flies. Columbia University Press, NY. 440 pp., ISBN: 0-231-12700-6. $94.00 US.

This volume brings together major lines of research in comparative biology of Diptera to highlight and review key aspects of fly phylogeny, life histories, behavior, and genetics, as well as their impact on humans and environments.

Contents:

- Phylogenetic Position of Diptera: A Review of the Evidence. **Michael F. Whiting**
- Phylogeny and Evolution of Diptera: Current Status, Recent Insights and New Perspectives. **David K. Yeates and Brian M. Wiegmann**
- The Role of Dipterology in Phylogenetic Systematics: The Insight of Willi Hennig – **Rudolf Meier**
- Biogeographic Patterns in the Evolution of Diptera. **Peter Cranston**
- Dipteran Genomes. **Michael Ashburner**
- Evolutionary Developmental Biology (EDB) of the Diptera: The "Model Clade" Approach. **Rob DeSalle**
- Transposable Elements and the Evolution of Dipteran Genomes. **Margaret G. Kidwell**
- The Evolution of Fly Sex Chromosomes. **Neil Davies** and **George Roderick**
- The Evolution and Development of the Dipteran Nervous System. **David J. Merritt**
- Fossil History and Evolutionary Ecology of Diptera and their Associations with Plants. **Conrad C. Labandeira**
- Invasive Diptera: Using Molecular Markers to Investigate Cryptic Species and the Global Spread of Introduced Flies. **Sonja J. Scheffer**
- Sexual Selection and the Evolution of Mating Systems in Flies. **Gerald S. Wilkinson** and **Philip M. Johns**
- The Ecological Genetics of Host Use in the Diptera. **K. E. Filchak,W.J. Etges, N.J. Besansky**, and **J.L. Feder**
- Guild Analyses of Dipteran Assemblages: A Rationale and Investigation of Seasonality and Stratification in Selected Rainforest Faunas. **R. L. Kitching, D. Bickel**, and **S. Boulter**

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Manual of Central American Diptera

This major undertaking is nearing completion. All chapters are in the hands of the editor, Brian Brown (there are only 3 families yet to be submitted in final form), and the plates are presently being organized for publication. The end is in sight.

Australasian Therevidae Website

by Shaun Winterton
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'Austherevid', a website devoted to the study of Australasian Therevidae, is now up and running as of the end of January 2005. This website contains an online, interactive key to genera written in Lucid3, which can be run in any operating system and on any platform (e.g. PC, Mac, Linux).

'Austherevid' is a joint publication by myself, Jeff Skevington (Canadian National Insect Collection) and Chris Lambkin (Australian National Insect Collection).

The link to the website is: http://www.cdfa.ca.gov/phpps/ppd/therevidopen.htm

or http://www.cdfa.ca.gov/phpps/ppd/Entomology/EntBios/SWinterton/Winterton.htm

The 'Austherevid' website and key are continual and ongoing projects, updatable at any time as taxonomy changes and new taxa are described. Subkeys to species in individual genera are planned and will be inserted as they are completed. Moreover, this is the first in what is hoped will be a gradual development of Lucid keys to Therevidae, ultimately culminating in a online key to World Therevidae genera and species.

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New Tipulid Website

by Chen Young
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A new website entitled “The Crane Flies (Diptera: Tipulidae) of Pennsylvania” can be found at http://iz.carnegiemnh.org/cranefly

Currently the website is mainly about the crane flies of Pennsylvania and northeast North America, but eventually it may very well evolved into a larger website about Tipulidae.

Books and Publications

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

Adler, P.H. 2005. Insular black files (Diptera: Simuliidae) of North America: tests of colonization hypotheses. Journal of Biogeography 32:211-220.

Brändle, M., S. Knoll, S. Eber, J. Stadler and R. Brandl. 2005. Flies on thistles: support for synchronous speciation? Biological Journal of the Linnean Society 84:775-783.

Brooks, S.E. and T.A. Wheeler. 2005. *Ethiromyia*, a new genus of Holarctic Dolichopodinae (Diptera: Dolichopodidae). Proceedings of the Entomological Society of Washington 107: 489-500.

Brown, B.V. 2005. Malaise trap catches and the crisis in Neotropical Dipterology. American Entomologist 51:180-183. [see article above]

Carvalho, C.J.B. de, M.S. Couri, A.C. Pont, D. Pamplona and S.M.Lopes. 2005. A Catalogue of the Muscidae (Diptera) of the Neotropical Region. Zootaxa 860: 1-282.

Darsie, R.F. and R.A. Ward. 2005. Identification and geographical distribution of the mosquitoes of North America, North of Mexico. 2nd edition. University Press of Florida. [$70 US. ISBN 0-8130-2784-5]

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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:

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Projects and taxa studied:_____
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