



FLY TIMES



OCTOBER, 1995 - No. 15

Welcome to another issue of the Fly Times!
Because of a general lack of contributions to the newsletter, we are considering producing the Fly Times only once a year, perhaps coming out in April or May. At the current time we have about 250 'subscribers' but historically have received contributions from only a handful of our readers. If you have any thoughts in this regard (or contributions for the next issue!!), please write and let me know. Remember that even a one line submission tells your colleagues what you are up to.

Many of you will be pleased to see the undated version of the "Directory of North American Dipterists" included with this issue. We will be continuing to produce this in the coming years and remind you to update your data entries.

Issue No. 16 of the Fly Times will appear next April and all contributions should be sent by the end of March, 1996 to:

Dr. A. Borkent,
1171 Mallory Road,
R1-S20-C43,
Enderby, British Columbia,
VOE 1V0, Canada.

Those of you with short contributions may phone in your message at (604) 833-0913. FAXes may be sent to (604) 832-2146. And ya, ya, ya, I'm working on getting on the Internet. By next issue I'll provide an e-mail address!

NEWSInformal Conference - North American Dipterist's Society
1995 Entomological Society of America Meeting

The ESA meetings will be held this year in Las Vegas, Nevada. The Dipterists will be gathering for another conference on Dec. 17. Steve Marshall has put together a program as follows:

- 1:30 - Introduction. S. Marshall.
- 1:35 - Neotropical zoogeography and dipteran diversity. D. Souza de Amorim.
- 1:55 - Assessing crane fly (Tipulidae) diversity after C. P. Alexander: What do we really know? J. Gelhaus
- 2:15 - Phorid flies, malaise traps, and pan traps: collections in a tropical biodiversity survey. B. Brown.
- 2:45 - Diversity of the furry charismatic megafauna of the Diptera: Asilidae: What we know and what we don't know. C.R. Nelson.
- 3:05 - How much diversity is too much? The Diptera problem. T. Wheeler.
- 3:25 - Drosophiloid diversity. D. Grimaldi
- 3:45 - News, views and project reports.

Contact Steve Marshall if you want further information.

Notice for a Graduate Research Assistantship

Dr. Michael E. Irwin has submitted the following notice that will be of interest to graduate students.

GRADUATE RESEARCH ASSISTANTSHIP (DIPTERA SYSTEMATICS): Ph.D. candidate preferred. Monographic and phylogenetic systematics of the family Therevidae emphasizing morphological character assessment, as a component of an NSF Partnerships for Enhancing Expertise in Taxonomy (PEET) grant. Collaborative and interactive project based at the University of Illinois and Illinois Natural History Survey, involving Michael Irwin (Univ. Ill.), Donald Webb (INHS), Brian Wiegmann (N. Carolina St. Univ.), David Yeates (Univ. Qlds., Brisbane, Australia). Applicant with experience and knowledge of Diptera and modern

systematic methods is preferred. The successful applicant will have an opportunity to join one or more collecting expeditions, some to southern continents, and study molecular systematics theory and methods in Wiegmann's lab for 4 to 6 months. Funding augmentation likely for student currently holding PhD fellowship or scholarship that could be applied to this RA. Available Jan., 1996 start. Contact Michael E. Irwin, University of Illinois, 1101 W. Peabody Drive, Urbana, IL, 61820, USA; telephone (217) 333-1963, FAX (217) 333-6784, email [m-irwin2@uiuc.edu].

More Support for Graduate Students in Taxonomy!!

Norm Woodley sent in the following exciting announcement:

The Diptera Unit at the Smithsonian Institution has been awarded a \$500,000 grant from NSF in the "Special Competition in Systematic Biology: Partnerships for Enhancing Expertise in Taxonomy (PEET)" program. The grant is for training three Diptera systematists in comprehensive monographic methodology and phylogenetic systematics. Proposed monographs are a complete monograph of the Tanyderidae, a monograph of the genera of Rhagionidae, and a monograph of the species of the genus Aulacigaster. Darlene Judd is going to start a two year postdoc in January, 1996 on the tanyderid portion of the grant, and two PhD students will be addressing the other two taxa over the five year period of the grant.

Really, really old Fossil Diptera available for Study!!

Lebanese amber is about 127-130 million years old and has inclusions of a wide array of groups. At the current time, material is housed in three locations: American Museum of Natural History (under the care of David Grimaldi), the Staatliches Museum für Naturkunde in Stuttgart (under the care of Dr. D. Schlee) and the private collection of Fadi Acra. Mr. Acra indicated to me that he would be pleased to hear from professional Dipterists who are interested in working up his material. The collections include specimens of at least the following: Mycetophilidae, Cecidomyiidae, Sciaridae, Chironomidae, Scatopsidae, Psychodidae, Tipulidae, "scavenger fly" and Empididae. In addition, there are a number of specimens merely identified as "fly". Some of the taxa may be misidentified, as I found with the Ceratopogonidae. If you want to see some of specimens in the Acra collection write to:

Mr. F. Acra, 141 E. Main Street,
Pottstown, Pennsylvania, 19164, U.S.A.

BITING FLY WORKSHOP - 1996

MAY 15-16, 1996.

CHICOT STATE PARK

IN THE CENTER OF THE LOUISIANA GOLDEN TRIANGLE (BUNKIE, VILLE PLATTE, AND TURKEY CREEK)

NAME: _____

SMALL CABIN(\$45 ; 2 DOUBLE BEDS) _____

LARGE CABIN(\$60; 1 DOUBLE, 2 SINGLES, AND 2 DAY BEDS) _____

DATES TO RESERVE THE CABIN _____

NEW ORLEANS SYMPOSIUM

MAY 13-14, 1996

I PLAN TO ATTEND _____

MAYBE _____

NO WAY _____

MAIL TO:

Jimmy Wedincamp
 Department of Entomology
 402 Life Sciences, LSU
 Baton Rouge, LA 70803-1710



Jim Goodwin, Lane Foil, and Jimmy Wedincamp are hosting the 1996 Biting Fly Workshop in Louisiana. We will be holding our traditional portion of the workshop at Chico State Park in Central Louisiana, May 15-16. Informal presentations will be conducted there Wednesday and Thursday morning and collecting trips will be in the afternoons.

Cabins will be available at this location by reservation. To reserve cabins at Chico State Park, please contact Jimmy Wedincamp by 15 November, 1995. Prices are as follows: **Small 2 bedroom cabins** with 1 double bed in each room @ **\$45.00/night**. **Large 2 bedroom cabins** with 1 double bed and 2 single beds @ **\$60.00/night**. There are also 2 day beds in each large cabin.

A short drive away is Thistlewaite Wildlife Management Area, where Lane has conducted much of his research on tabanids. Collecting trips to this area will be arranged for Wednesday and Thursday afternoon. If participants will bring a pair of their favorite traps, we can play some electric grid games regarding trap efficiency. Please contact Lane if you have specific studies in mind. Arrangements can be made for those who would like to stay an additional day or so to conduct experiments or just have fun.

We also intend to host a formal symposium in New Orleans May 13-14, 1996, on host-seeking behavior of diurnally active dipteran pests of livestock. Lecturers who have accepted invitations to attend the symposium are Glyn Vale, John Hargrove, Steve Torr, Jerry Butler, Jim Sutcliffe, Gethin Thomas (tentative), and Martin Hall. There will be comprehensive 45 min to 1 hr. presentations on tsetse, tabanids, stable flies, black flies, horn flies, head flies, and screwworm. Then Glyn Vale will summarize the meeting and give us some thoughts on areas for future research. Having the symposium in New Orleans is about the only way we can get this group together and not have it interfere with the Workshop.

We hope some of the lecturers will want to attend the traditional Workshop. If you intend to attend the talks in New Orleans, please contact Jimmy as soon as possible. We will line up the meeting hotel after we get an idea of the potential attendance.

Bipolar migration

Brad Sinclair has returned to his center of origin from Australia and is working in the Dept. of Environmental Biology at the University of Guelph, Ontario.

Ogden Nash, you say? - from Art Borkent

I periodically have a morning cup of coffee with my 80 year old neighbour Hugh Hatfield (who may also be spotted during the summer months cruising the upper atmosphere in his ultralight plane). I was lamenting some of the difficulties of sorting out some species of ceratopogonids when he asked me, with a grin, if I knew of the poem by Ogden Nash describing the skills of Professor Twist. When I replied in the negative, he recited the following from memory:

I give you now Professor Twist,
A conscientious scientist.
Trustees exclaimed "Twist never bungles"
And packed him off to distant jungles.
Camped by a tropic river side,
One day he missed his loving bride.
She had, the guide explained, much later,
Been eaten by an alligator.
Professor Twist could not but smile
"You mean" he said, "a crocodile".

The Dipterology Fund
1996 Grants Competition

ANNOUNCEMENT

The Dipterology Fund is a non-profit fund for the support of dipterological research in North America. Each year up to four grants will be made to a maximum value of CAD\$1000 each. There are two categories of support available from The Dipterology Fund:

Student Research and Travel Grants. These grants, available to undergraduate, graduate, or postdoctoral students in dipterology, may be used to support travel to conferences or field meetings, travel to museums or other research institutions, or field work for collecting or study.

Development Grants for North American Dipterology. This category is for proposals in areas other than those described above. Funding in this category would include, but not be restricted to, grants to support field meetings or other activities of North American dipterological societies, to bring visiting scientists to North American Diptera collections, and to support research activities of individual dipterists who are not full-time students and who lack other conventional means of research support.

Applications for funding should include a one page research proposal or justification of the proposed activities and an estimated budget for the proposed research or activity (including consideration of funding available from other sources). Applications from individual dipterists should include a 1-2 page curriculum vitae.

Applications for the 1996 competition must be received by the Chair of the Grants Committee on or before **March 1, 1996**. Decisions will be announced by the end of March. Any questions regarding the application procedure or The Dipterology Fund should be directed to the Chair of the Grants Committee.

Eight copies of each application package should be submitted to:

Dr. Terry A. Wheeler
Chair, The Dipterology Fund
Department of Natural Resource Sciences
McGill University, Macdonald Campus
Ste-Anne-De-Bellevue
Québec H9X 3V9
CANADA

Telephone: 514-398-7937
FAX: 514-398-7990
email: wheeler@nrs.mcgill.ca

**The Dipterology Fund
Report on 1995 Grants Competition**

The first competition for grants from The Dipterology Fund was held in early 1995. Fifteen applications for funding were received and the Grants Committee is pleased to report that the following students were offered grants in support of their fieldwork and travel:

David Caloren (University of Guelph). Travel to North American Dipterists Society Field Meeting, Costa Rica.

Stephen Gaimari (University of Illinois). Systematics of Chamaemyiidae.

Katja-Sabine Schulz (University of Arizona). Evolution of mating behavior in Sepsidae.

John Swann (University of Toronto). Dipterological field research in northern Vietnam.

Details and deadlines on the 1996 competition are found elsewhere in this issue of Fly Times.

Terry A. Wheeler
Chair
The Dipterology Fund

Fourth NADS Field Meeting

The fourth field meeting of the North American Dipterists' Society was held this August in San Gerardo de Dota, Costa Rica. Located in a picturesque mountain valley south of San José, our meeting site was both pleasant and productive, thanks largely to the outstanding efforts of organizers Monty Wood and Manuel Zumbado.

The following papers were presented at the formal meeting:

- | | |
|------------------|---|
| Greg Forbes - | Asilidae of desert scrub of southern New Mexico |
| Elke Buschbeck - | Fly vision and neuroanatomical characters for phylogenetic analysis |
| David Caloren - | Clusiidae of Costa Rica |
| Dick Vockeroth - | A taxonomic study with practical results |
| Marty Condon - | Courtship and phytophagy in <i>Blepharoneura</i> (Tephritidae) |
| Al Norrbom - | Some interesting fruit flies from Costa Rica |
| Greg Dahlem - | Collection, preservation and identification of Sarcophagidae |

Additionally, we were addressed by an INBIO scientist involved in the proposed All Taxon Biodiversity Inventory (ATBI) to take place in Guanacaste National Park, Costa Rica. Clearly, the members of NADS need to become more involved in this project.

After the "formal" meeting, we split into two groups for field trips. The group I joined went south, near the Panamanian border, to the Las Alturas field station. Las Alturas is in an incredibly beautiful area, adjacent to extensive primary forest with abundant wildlife, including insects. Just about everyone had excellent collecting, and even a little excitement when Tom Pape didn't return to the cabin one evening! We went out searching for him the next day, but luckily by then he had reoriented himself after a night lost in the forest.

While in Costa Rica, I used my Global Positioning Unit to "collect" locality information for various sites. The following are readings for a number of locations, especially useful for those who were on the Las Alturas part of the trip. All were rounded off to the nearest minute; elevations are in meters:

San Gerardo de Dota: 9° 33'N, 83° 48'W, 2200m
 Las Alturas (research station): 8° 57'N, 82°50'W, 1500m
 Las Alturas (gravel pit, quarry): 8°57'N, 82°51'W, 1600m

- Brian V. Brown

Books and Publications

Kohler, R.E. 1994. Lords of the fly. xv + 321 pp. University of Chicago Press. \$45.00 US hardback, \$17.95 US paperback.

The story of the use of Drosophila in genetic studies, discussing more the scientists than the beasts. Of particular interest to those keen on the history and sociology of science.

Armitage, P.D., P.S. Cranston and L.C.V. Pinder (eds.). 1995. The Chironomidae Biology and ecology of non-biting midges. xii + 572 pp. Chapman and Hall, London.

This book has three main sections providing detailed analyses of a number aspects of this family: (1) Taxonomy, morphology and biogeography; (2) Biology, behaviour and ecology; (3) Interactions with humans.

Cumming, J.M., B.J. Sinclair and D.M. Wood. 1995. Homology and phylogenetic implications of male genitalia in Diptera - Eremoneura. Ent. Scand. 26:120-151.

For all you who are puzzled by the ins and outs of the male genitalia of Eremoneura and Cyclorrhapha, this is the paper for you! For the first time (supported by coloured plates) the different models interpreting the homology of the genitalia are cleared explained and illustrated (the Epandrial and Periandrial Hypotheses). A revised interpretation is presented, based on the examination of a wide array of taxa. The homologies are carefully described and it is certain that this work will provide the basis for all further analyses.

Burger, J.F. 1995. Catalog of Tabanidae (Diptera) of North America north of Mexico. Contributions on Entomology, International 1(1):1-100. Copies are available from the author.

Disney, R.H.L. 1994. Scuttle flies: The Phoridae. 467 pp. Chapman and Hall, London.

An overview of what we know about this family. Although somewhat weak in placing this knowledge in a phylogenetic context, the book provides a fascinating and detailed portrayal of the remarkable adaptations of this group.

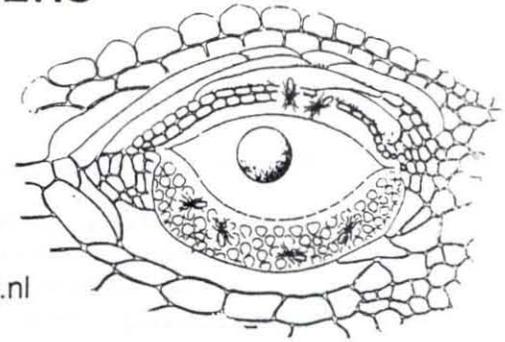
Amorim, D.S. and S.H.S. Tozoni. 1994. Phylogenetic and biogeographic analysis of the Anisopodoidea (Diptera, Bibionomorpha), with an area cladogram for intercontinental relationships. Revista brasileira de Entomologia 38(3/4):517-543.

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Just published:

Biting Midges in the Cretaceous Amber of North America (Diptera: Ceratopogonidae)

by

Art Borkent

Borkent, A., 1995. Biting Midges in the Cretaceous amber of North America (Diptera: Ceratopogonidae). 237 p., 27 b/w pls, f.piece. Hardbound
 ISBN 90-73348-40-4

NLG.106,00

This book provides the first full description and synthesis of a remarkable fossil record of biting midges from Canadian amber of Upper Cretaceous age (72-84 million years old). The midges are diverse in the amber, with 18 species recorded, and are preserved in exquisite detail. The midges are fully described, are put into a palaeoecological setting and their evolutionary significance is interpreted.

Study of the evolutionary relationships of the fossils shows that these are all early lineages within the family and that most diversification has occurred during the Tertiary period. It is striking that there is no evidence for extinction of any of the lineages. Comparison with fossil biting midges from elsewhere confirms this pattern of continuous diversification. Study of the mouthparts of the fossils provides exciting evidence that at least two of the species likely fed on the blood of dinosaurs; some others fed on other insects.

This book will be of value to all those who are interested in understanding the diversification of life. The interpretation of the fossils within the context of a modern understanding of phylogenetic relationships will provide a model for further studies of insect evolution.

ORDERFORM

.....
 Please send us: copy/copies of **Biting Midges in Cretaceous Amber**

Name.....

Address.....

City..... Country.....

Send your order to the above mentioned address. Price is in Dutch Guilders (fl.). We also accept payment in US\$, DM., FRF and GB £. Visa accepted. Postage and handling are extra. Books will be sent surface mail. For our E.C. customers: price does not include 6% VAT. Approx. exchange rates: 1 NLG. = US\$ 0.65 = DM 0,90 = FRF 3,14 = GB £ 0,40.

Tevens verkrijgbaar via de erkende boekhandel.

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 sent to Jeff Cumming at the following address:

Dr. J. M. Cumming,
Centre for Land and Biological
Resources Research,
Agriculture Canada,
K.W. Neatby Building,
Ottawa, Ontario,
K1A 0C6, Canada.

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

Full name: _____

Address: _____

Telephone Number: _____

FAX Number: _____

E-mail: _____

Projects and taxa studied: _____
