

FLY TIMES



OCTOBER, 1992 - No. 9



As you will see, this edition of the Fly Times is rather sparse. Like the last few issues, Fly Times No. 9 depends mostly on the contributions of a handful of regulars (mostly Canadians). If the readership does not provide a more consistent level of contribution I am concerned that there is a reasonable chance that the Fly Times will become moribund and follow the route of other nonproductive Fly Paper: useless for capturing anything of significance and thrown into the waste bin of life!

As the Fly Times is entering its fifth year of production (and hopefully not its last!), I would ask you all to consider writing even a very brief note providing information of your work or anything else of potential significance to your fellow Dipterists. Alternatively, I would be interested in hearing your opinions as to whether you believe the Fly Times still serves as a vehicle for information exchange within our community.

In keeping with this more somber commentary, only one 'Far Side' cartoon is included with this issue of Fly Times (will this drastic action provoke more contributions???)

Issue No. 10 of the Fly Times will appear next April and all contributions should be sent by March 31, 1993 to:

Dr. Art Borkent,
2330 - 70th St. SE,
Salmon Arm, British Columbia,
V1E 4M3, Canada.

NEWS

North American Dipterists' Society Informal Conference
to be held at ESA meetings
in Baltimore, Maryland, Dec. 8, 1992

Terry A. Wheeler - Organizer and Moderator

The next meeting of the North American Dipterists's Society will be held on Tuesday, December 08, 1992 at the annual meeting of the Entomological Society of America in Baltimore. As in previous years, we will meet as an informal conference in the evening session. The ESA program will provide details on location and exact times of the conference. This year's meeting is being organized by Terry Wheeler. The 'formal' part of the meeting will include the following titles:

1. Revision of the Clinocerinae and its impact on higher classification of the Empidoidea (Diptera). (B.J. Sinclair)
2. From flat feet to swollen heads: phylogenetic relationships of the 'Aschiza'. (J.M. Cumming)
3. Sister group relationships in the Chloropidae family group. (T.A. Wheeler)

(I realize that the Ottawa bias in the list of speakers leaves me open to charges of nepotism. In my own defense, however, these were the only people to give me titles in time to get them into the program).

An informal business meeting will follow the presentations and should include reports on the Third International Congress of Dipterology, the Phylogenetic Relationships of Diptera project, next year 's NADS field meeting in Texas, and other topics of interest to dipterists. If anyone has additional subjects that they would like to discuss, please contact me before the meeting. Also, if anyone has news of research, travel, collecting trips, etc. over the past year that they would like to talk about please let me know.

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CHIRONOMUS Lives!

This newsletter for chironomid specialists is being revived after a lapse of a few years. The editor is Dr. Ulrike Nolte, University of Mato Grosso, Brazil. If you want to keep up with the latest in midge news write to the following regional representatives to get on the mailing list (there is a subscription fee of \$15 US which will cover the cost of a number of issues of the newsletter for an indeterminate period of time):

For Americans: Dr. L.C. Ferrington,
State Biological Survey of Kansas,
University of Kansas,
2045 Ave. A. Campus West,
Lawrence, Kansas,
66044, U.S.A.

For Canadians: Dr. D.R. Oliver,
Centre for Land and Biological
Resources Research,
K.W. Neatby Building,
Agriculture Canada,
Ottawa, Ontario,
K1A 0C6, Canada.

Conopidae Reveal All

If you are interested in becoming intimate with the private parts of conopids the following may be of interest to you.

An unpublished Master's thesis by D.W. Steffeck, "A preliminary study of the male genitalia of the North American Conopidae", 1977, 98 pp., 58 figures, is available from Dr. Sid Camras for the small sum of \$5.00 at the following address:

Dr. S. Camras,
4013 N. Milwaukee Ave., #313,
Chicago, Illinois,
60641, USA.

Sid notes that "The illustration of the genitalia in the Manual shows only one subfamily. The other subfamilies are quite different and different from each other."

The Andersson Method for Mounting Genitalia

Fenja Brodo

While on leave in Sweden I came across a different method for handling and storing insect genitalia. I have found it to be so convenient that I would like to share it with you.

I had been looking through the many boxes of undetermined or partially sorted tipuloids in the Zoological Institute in Lund and wondering who had snipped off the genitalia from so many of the specimens and where and how might they be stored? Why weren't they in genitalia vials with the specimen!!? I almost missed the small capsule-like pieces of tubing pinned beneath the specimen, almost hidden by the label. For rough sorting, the genitalia were adequately visible in these tubes. I was impressed.

Hugo Andersson has developed and used this method for over 20 years, primarily for Chloropidae. His recently deceased colleague, Bo Tjeder, had also used this method very effectively on the smaller limoniines. It is more fully illustrated and described in *Ent. scand.* 7:152-153 (1976).

The genitalia are encased in small microvials made of polyethylene tubing (LD polyethene, inexpensive & bought in long rolls from laboratory suppliers), filled with glycerine and heat sealed at each end. The pin goes through one end. Because of the narrow diameter of this tubing (about 2 mm), this method works only for tiny genitalia but is also useful for such delicate items as 1st instars, eggs, and larval mouth parts.

There are many advantages to using these little vials. They take up almost no extra space because they are small enough to hide under the specimen and label. No special stabilization is needed when shipping because the tubes are so light and the plastic hugs the pin very well. The tubes, if sealed properly (check under the microscope), do not leak and can be immersed in alcohol to make contents more clearly visible. A snip of the scissors opens the tube for retrieval of the specimen if closer inspection is necessary. However, unless the original tube was quite long, a new one will be necessary for the replacement of the specimen. The tubes can even be left open at the free end while study is in progress, and heat sealed later once the project is finished.

My first attempts at heat-sealing the tubes were not successful so I was delighted to get a first hand demonstration from the master. I even contributed a minor improvement.

I watched as Hugo Andersson, using a narrowed pipette, filled a length of tubing (about 25 cm.) with glycerine and then snipped that length into small segments (@ 12 mm). The glycerine stayed in place. Then he heated flat stamp collector's forceps in the flame of an alcohol lamp: one second one edge, one second the other edge and another second the first edge again. He paused a moment before grasping one end of a cut piece of tubing with the hot forceps and plunging both into a small dish of cold water.

The sound of the water as the hot forceps hit is a clue to the success of the operation. It takes a few tries before one achieves a good seal of the correct thickness. The forceps must be dried between each plunging into the water and for this, Hugo used his shirt front. I prefer paper towelling.

Specimens prepared and stored this way have stood up for over 20 years. The tubing does not get brittle and is apparently not affected by freezing (the best way for controlling dermestids). It is a very inexpensive and convenient method if one is set up for it, but if not, the contents of a snipped tube can be replaced in a conventional genitalia vial. I am using this method now for all my tiny specimens.

Books and Publications

Catalogue of Palaearctic Diptera. Volume 2. Psychodidae - Chironomidae. 1990. Eds. A. Soos and L. Papp. Elsevier Science Publishers, Amsterdam.

This volume continues the coverage of the Palaearctic fauna, treating at least the following families: Psychodidae, Dixidae, Chaoboridae, Culicidae and Chironomidae.

I was unable to examine an original copy of this volume (or talk to anyone else who had!) and therefore cannot be certain of all the families covered, nor of the total number of pages in the volume.

Vockeroth, J.R. 1992. The flower flies of the subfamily Syrphinae of Canada, Alaska, and Greenland. The insects and arachnids of Canada, Part 18. 450 pp.

The colorful and delightful syrphids catch the eye and interest of many. This wonderful volume will provide a major impetus to stimulate further research on this important group of pollinators and larval predators.

Keys, descriptions, and distributions are provided for all the included species. The book covers 170 species and is beautifully illustrated.

The cost of this volume is \$22.95 CAN for Canadians and \$27.55 US for all other countries. In addition, there is a shipping cost \$3.50 CAN. To order contact the following:

Canada Communication Group,
Publishing,
Ottawa, Ontario,
K1A 0S9, Canada.

Sinclair, B.J. 1992. A phylogenetic interpretation of the Brachycera (Diptera) based on the larval mandible and associated mouthpart structures. Systematic Entomology 17:233-252.

This paper provides a detailed and clearly illustrated synthesis of Brachyceran larval mouthparts and a discussion of their cladistic implications for phylogenetic relationships within both the Nematocera and Brachycera.

This is an important and wonderful contribution to our understanding of Diptera systematics and we desperately need more of this type of careful analysis.

Ramsey, J.W. and T.K. Crossby. 1992. Bibliography of New Zealand Terrestrial Invertebrates 1775-1985, Guide to the Associated Information Retrieval Database BUGS. Bull. Ent. Soc. N.Z. 11:1-440.

This paper includes a 32 page section with citations dealing with Diptera.

Lawrence, P.A. 1992. The Making of a Fly. The genetics of animal design. Blackwell Scientific, Cambridge, MA, xiv + 228 pp. Paperback: \$29.95 US.

This book, many sections of which are based on Lawrence's firsthand research and experience, provides an in depth account of the genetics and development of Drosophila.

redacted Far Side, 7/1/1992

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

Should any of you like to expand on your interests and projects, feel free to send in a contribution that can be inserted into the next newsletter as a separate item.

Full Name: _____

Address: _____

Telephone Number: _____

Fax Number: _____

BITNET: _____

Projects and Taxa Studied: _____
