FLY TIMES

OCTOBER, 1990 - No. 5

This issue of the Fly Times is rather sparse. We have had only a few contributions to the current issue. On the whole, we have the coeditors talking to each other!! Please, Dipterists, let's hear your news of meetings, travels, recent publications, and good collecting spots. Without such input the Fly Times will not be much of a vehicle for communication amongst our rather scattered community!

We've included an updated version of the Directory of North American Dipterists with this issue of the Fly Times, compiled by Jeff Cumming and Brian Brown. The phone numbers of most workers have been added to the information in the list.

We would again extend our invitation to you who have not yet done so, to send a brief description of your interests on the form at the end of this newsletter. In addition, if any of you want to make changes to your entry, write and let us know for the next version of the Directory.

All contributions to the next issue of this newsletter should continue to be sent to the following address. Deadline for the next issue is March 31, 1991.

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

NEWS

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Announcing a New Cooperative Effort by Dipterists:

"The Phylogenetic Relationships of the Diptera"

The recent publication of Volume 3 of the Manual of Nearctic Diptera and of the Catalog of the Diptera of the Australasian and Oceanian Regions have both contributed to making the Diptera one of the best understood of the major insect orders. However, it is obvious to all who study these wonderful animals, that large

gaps yet exist in our knowledge.

We, as a coeditorial group, are undertaking another major initiative in our understanding of the Diptera, a project entitled "The Phylogenetic Relationships of the Diptera". This international effort will attempt to provide the most up to date knowledge and synthesis of the cladistic relationships within each family of Diptera. Furthermore, all available fossil evidence will be incorporated to provide minimum dates for various nodes on proposed cladograms.

Experts in each family have been contacted in the past year and there has been a very positive response. We already have authors agreeing to write chapters for the majority of families of Diptera.

Although there will undoubtedly be many gaps in our understanding of the cladistic relationships within most families, this compilation-synthesis will attempt to give a state of the art interpretation. Not only will it provide a synopsis of what is already known, in many families there will be new hypotheses of relationship. The resultant publication will provide, for the first time for a major order of insects, a detailed account of what is known of the cladistic relationships at the intrafamilial level.

Dr. Art Borkent (Managing editor)
Dr. Jeff M. Cumming (Coeditor)
Dr. Neil L. Evenhuis (Coeditor)
Dr. Steve A. Marshall (Coeditor)
Dr. D. Monty Wood (Coeditor)

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First International Symposium on Tipulomorpha - Sept. 16-20, 1991

Tipulomorpha, one of the most primitive Dipteran groups, play a special role in the considerations on the evolution of the whole order. However, the phylogenetic relationships within the group are still unclear in what is expressed in the existence of two taxonomic systems: that of Hennig (1973) and that of the Manual of Nearctic Diptera (1981).

We hope that during our meeting some essential questions will be solved (as: the importance of larval characters, or wing venation characters, or the role of recent versus fossil materials ...).

We do not hope to find and accept one universal taxonomic system. But the discussion can be interesting.

All the materials will be published, as well as the conclusions of the discussion. (submitted by W. Krzeminski).

This meeting will be held on Sept. 16-20, 1991 at the Institute of Animal Systematics and Evolution, Polish Academy of Sciences at Krakow, Poland. If interested in attending and/or in

receiving the second circular (which provides info on costs and accommodation), write to:

Ewa and Wieslaw Krzeminski,
Institute of Animal Systematics and Evolution,
Polish Academy of Sciences,
ul. Slawkowska 17, 31-016 Krakow, Poland.
Phone: Office - 22-19-01; Home - 55-27-41.

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Informal Conference and North American Diptera Society Conference and Business Meeting - 1990
Brian Wiegmann - Organizer and Moderator

Dipterists will be gathering at the next Entomological Society of America meeting in New Orleans, Louisiana this December. The Diptera conference will be held on Monday, December 3, 1990 in the Jasperwood Room at 7:00 PM. Attendents are encouraged to bring their news, share updates on their work, collections, travel or natural history to this informal gathering. Arrangements can be made to project slides by contacting the moderator before the meeting.

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FIRST ANNOUNCEMENT: THE THIRD INTERNATIONAL CONGRESS OF DIPTEROLOGY WILL BE AT GUELPH, ONTARIO, AUGUST 15-19, 1994.

Guelph's bid for ICD3, submitted on the advice of the participants at the first meeting of the North American Dipterists Society, was accepted. I'm counting on full support from my North American colleagues and would welcome suggestions, proposals for workshops, symposia, etc. A first circular on the congress, naming an organising committee, will be mailed out in spring. If you are coming to New Orleans for the ESA meetings, there will be discussion of ICD3 at the time of the dipterists workshop at the meetings.

Steve Marshall

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The Center for Insect Identification

The Center, organized by Dr. G.A. Dahlem, has recently moved to a new location as follows:

The Center for Insect Identification,
P.O. Box 9527,
Cincinnati, Ohio,
45209, USA.

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Report on The Second International Congress of Dipterology

by Steve Marshall

ICD2 was held at Comenius University, Bratislava, Czechoslovakia from August 27 to September 1, 1990. The organizing committee, chaired by Dr. Rudolf Rozkosny, is to be congratulated for putting together an excellent meeting. There were a few initial problems due to the great distance between the hotels and the meeting area, compounded by unforseen interruptions to normal public transit between the hotels and the university. This was beyond the control of the organizing committee, and more than compensated for by full and well organized academic and social programs. Both the ideas and the good local Pilsner flowed freely each day of the meeting, making it a memorable and educational experience.

It is hard, and perhaps unfair, to specify highlights of a meeting characterized by so many superb talks (a veritably gluttony of dipterology!) but I would like to be a bit nationalistic and point to contributions by some of my Canadian colleagues as particularly memorable. Monty Wood's talk, the first of the meeting, opened up a controversial can of worms with his "Tales told by tails: Homology and phylogenetic implications of male genitalia of Diptera". Talks on the following days included alternate interpretations by Graham Griffiths and support for Monty's interpretation from Brad Sinclair and Jeff Cumming. Discussion of these talks and related presentations by Chvala, Wiegman, Michelson and others seemed to me to be an exciting dominant theme of the whole meeting, but that is only my individual perspective. This was a large meeting, with around 300 delegates, and all interest groups were well served. Other major sections in the scientific program included Advances in Biosystematics of Nematocera, Morphology and Ultrastructure, Physiology, Semiochemical Communication, Genetics, Ethology, Ecology and Population Dynamics, Control of Phytophagous Diptera, Control of Blood-sucking Diptera, Pathogens of Diptera, Vectors of Human and Animal Disease, Medical and Veterinary Dipterology, Synanthropic Diptera, Diptera as Bioregulators, and Forensic Entomology.

In addition to the above formal sessions, there were excellent workshops for most of the "well serviced" families such as Sphaeroceridae, Tachinidae, Syrphidae, Chironomidae, Cecidomyiidae, etc. (Art: taxa are listed in some sort of order here!).

As at any meeting, there were some superb talks and some duds, but rather than stick my neck out with some of my own opinions (which would lead to accusations of a Guelph bias), let me offer some other peoples' general comments on the meetings. The following comments were heard frequently in discussion with colleagues in Bratislava.

1) Too much systematics. I couldn't agree with this comment, but several people did say that they found slides of genitalia boring and would have preferred more behaviour, ecology etc.

2) Similar symposia frequently concurrent. This is unavoidable at a meeting with hundreds of people, but people always complain about it anyway.

3) Great hostesses. Seriously, this was the aspect of the meeting most often commented on. The organizers had the foresight to engage a number of charming young language majors to solve every little problem from finding a taxi to finding tacks to put up posters. Everybody appreciated it.

4) Superb "mixers". We all had adequate opportunities to hobnob with our colleagues from USSR, Australia and almost everywhere else at two mixers which offered spectacular food and other refreshment.

5) In general, congratulations and thanks are due to our Czechoslovakian colleagues for hosting such an important and successful event.

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redacted Far Side, 5/30/1989

redacted Far Side, 9/7/1987

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Moves

Dr. Gregory Courtney has accepted a Smithsonian Postdoctoral Fellowship. He will be working on the systematics of Nymphomyiidae, Blephariceridae, Deuterophlebiidae and related taxa.

Dr. Douglas C. Currie has accepted a two-year Killam Postdoctoral Fellowship at University of British Columbia (Vancouver). He will be working on the systematics of Cnephia-grade Simuliidae of the Nearctic Region. His new address and telephone number are:

Dept. of Zoology,
University of British Columbia,
2075 Wesbrook Place,
Vancouver, B.C.,
V6T 2A9, Canada.
(604) 228-6979.

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1991 Dipterists' Society Meeting

Southwestern Research Station,
Portal, Arizona

May 31- June 2 1991

The next field meeting of the North American Dipterist's Society (NADS) will be held from Friday May 31- Sunday June 2, 1991, at the American Museum of Natural History's Southwestern Research Station (SWRS). The organizing committee for this meeting consists of Brian Brown (chairperson), David Grimaldi, and Steve Marshall. We will be following the same informal format used at the first meeting at Archbold Station, Florida, with Saturday and Sunday mornings reserved for collecting, afternoons for presented papers, and evenings for beverage-enhanced mixers. A general get-together will also be held Friday night. Anyone wishing to give a talk should send a title to Steve Marshall (Dept. Environmental Biology, University of Guelph, Guelph, Ontario, Canada, N1G 2W1) by February 31, 1991. If there is enough time, we will have 20 minute presentations in addition to the normal 10 minute slots, so let us know your preference. Reservations for accomodation should be sent to SWRS, Portal, Arizona, but the deadlines for this have not been worked out yet. Further anouncements will be in the next *Fly Times*. Anyone with suggestions, questions, or who needs an invitation to speak to get funding should get in contact with me (Brian Brown) or one of the other organizers.

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Some Diptera Journals noted at the 2nd International Congress of Dipterology.

"*Dipterists' Digest* is a popular journal aimed primarily at field dipterists in the UK, Ireland andd adjacent countries, with interests in recording, ecology, natural history, conservation and identification of British and NW European flies" Volumes 1-3, 5, 6(1990) available for £3 each, Volume 4 (Key to Moth Flies, Psychodidae) available for £6. Payment in Pounds Sterling to "Derek Whiteley" please. Available from Derek Whiteley, 730 Ecclesall Road, Sheffield, S11 8TB, UK.

Dipterological Research is a new journal apparently publishing papers on Diptera systematics. Papers are in English. For more information contact Dr. S. Yu. Kuznetzov, Entomologist, Latvian Museum of Nature, 4. Kr. Barona Street, 226050, Riga, LATVIA.

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Collecting in Thailand.

This spring I was fortunate to be able to collect for six weeks in Thailand, southeast Asia, and I believe that the experience I gained there will be of use to others.

First of all, by all means go to Thailand. It is a safe, friendly country, with beautiful national parks and wildlife refuges. Travel is easy and well organized there. Before you go, be sure to consult the following books:

Dobias, R.J. 1982. The Shell Guide to the National Parks in Thailand. The Shell Co. of Thailand, PO Box 345, Bangkok, Thailand. This book is invaluable; unfortunately it is also out of print. Apparently, there are a few copies still on the shelves in Bangkok, and I got one free copy by writing to the above address.

Round, P.D. 1988. Resident forest birds in Thailand: their status and conservation. 225 pp. £8. Available from International Council for Bird Preservation, 32 Cambridge Road, Girton, Cambridge, CB3 0PJ, UK. Although this book is about birds, it has an excellent summary of all of the protected forests in Thailand, including maps of their location. It is required reading for planning your trip.

General travel in the country is made easier by consulting one of the many travel guides available. One thing that we found absolutely invaluable was learning a few words of the Thai language; even if we pronounced them badly, the Thai people really appreciated the effort and opened up to us.

Permission must be obtained to collect in protected areas, and if you need to collect in undisturbed forest, you pretty well have to collect in protected areas. Outside (and sometimes inside) the parks, the natural habitats are completely trashed. I suggest that you apply for permission to collect AT LEAST one year in advance, as there can be problems and bureaucratic slowness. We had trouble with our permits, but such problems would not have occurred, we were told, if proper channels had been used. You must apply to "The Director, National Park Division, Royal Forest Department, Paholyothin Road, Chatuchak, Bangkok 10900, Thailand". Say that you want to do research in whatever parks that you want to visit, and ask for a place to stay while there. Send along your research proposal, and say that you know that it is not allowed to collect animals in the parks, but that you would like to apply for the academic exemption. Once you get permission, you will be given free lodging at one of their cabins, and probably will be offered the opportunity to eat with the park staff (which you have to pay for, but which is extremely inexpensive).

We collected in two National Parks: Khao Yai and Doi Inthanon. Khao Yai is 180km NE of Bangkok, a four hour direct bus ride. The habitat there is basically undisturbed moist, semi-evergreen forest, with fantastic wildlife including macaques, gibbons, elephants, asian wild dog, wild pigs, tigers, leopards, hornbills, gaur, sun bears, three species of deer, civets, and so on. The collecting was excellent for me, but one of my companions, who was collecting click beetles, found it rather slow. We were there at the end of the hot, dry season (mid April), so I imagine it would have been even better a few weeks later (mid May) when the rains started. There is an extensive trail system through the forests at Khao Yai, as well as some open areas that are burned yearly to attract deer and elephants for the tourists.

Our second site, Doi Inthanon, is in the north of Thailand. We flew to the northern city of

Chiang Mai, a twenty minute trip costing about $100 return (a great time saver and bargain!). At the Chiang Mai airport, we were greeted by a person whose sole responsibility was to arrange taxis to the city for people. This was a great example of the Thai's organization and helpfulness: we told her we wanted to go to the buses to Chom Thong, she told us how much to pay the taxi driver, and told him where to take us. At Chom Thong, we caught another bus to the Park headquarters. Doi Inthanon is the tallest mountain in Thailand, and there is a 47km road from the park entrance in the lowlands to the summit. The habitat at lower elevations (500-1000m) is dry dipterocarp forest, which rises through middle elevations (which are almost totally trashed by the indigenous hill tribes that inhabit the park) to beautiful oak forests at about 1700m and above. At the summit there is a sphagnum bog surrounded by rhododendron trees. The fauna of the lowlands is somewhat similar to that of Khao Yai, but the upper oak forests have a fauna with many Holarctic Region taxa, including species originally described from the now inaccessible Burma. Travel in the park, if you don't have a vehicle (we didn't have one) is easily accomplished, thanks again to the generous Thai people, by hitchhiking.

Besides Doi Inthanon, we spent one day visiting a nearby park called Doi Suthep, a mountain only one hours drive from Chiang Mai. The habitat was similar there, although the mountain is not as high, and comparison of the fauna with that of Doi Inthanon would be interesting.

Two areas that we did not visit, but which would also have been of great interest, are peninsular Thailand and the extreme north. Peninsular Thailand, the southernmost part of the country, has many Malaysian birds, and likely flies, that are restricted to that area in Thailand. Similarly, the extreme north has some Burmese birds that don't make it as far south as Doi Inthanon.

While I was in Thailand, I collected many Malaise trap samples (we had a total of 8 traps originally operating, 7 after an elephant stomped one at Khao Yai), which will be deposited at the Canadian National Collection of insects in Ottawa.

I highly recommend Thailand as a place to travel and collect. If anyone wants further information, including recommended places to stay and more information on travel, feel free to write to me.

- Brian V. Brown

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Acquiring Collection Permits for Canadian Provincial and National Parks: Not an Onerous Task

During the course of my research, I have had occasion to collect simuliid and thaumaleid larvae in Provincial and National Parks in Alberta. I thought a short note about the refreshingly little hoop-jumping required to obtain collection permits might incite others to collect in the Canadian Provincial and National Parks, while the parks are still relatively untainted.

Provincial

Regulations may differ between the provinces, therefore, this account pertains only to acquiring a collection permit in Alberta Provincial Parks. To obtain an application form, you should contact Alberta Recreation and Parks @ (403) 427-9429.

The application form consists of one 8.5 X 14 inch sheet (you will appreciate the brevity of this application form after experiencing the National Parks form). Specific details requested include: Title of project, Project purpose and overview, Proposed methodology, Specimens to be collected and ultimate fate of those specimens, Information regarding logistics (where you will be staying, date of field operations, etc.), and finally, What vehicle(s) will be used in the park.

This form is short and easily completed. You are asked to send it to the Regional Office nearest to the Park you will be collecting in. I was interested in collecting in the Peter Lougheed Provincial Park (within the confines of the greater Kananaskis area), hence I sent my form to the Canmore Office. Unfortunately, I had to follow up on my application because the Regional Office neglected to advise me of the status of my application. In speaking with the Canmore Office personnel, I found that they were very receptive to researchers seeking collection permits. This helpful attitude was also present in the Park Rangers I met with while in the Park. It is necessary to check in with the Park Ranger before commencing your collection activities. In many cases the Rangers are extremely familiar with the terrain and can be a valuable source of information regarding accessibility to certain areas and the ever important status of bear activity in the park.

You are required to submit one (1) copy of any report or publication resulting from your activities in the park to the Regional Director. Students need not submit a copy of their thesis provided they supply a reprint of any publications arising from this work. It may be necessary to deposit rare or extraordinary specimens with the Regional Director. Depositing voucher specimens in a recognized museum or national collection will usually suffice.

Overall, obtaining a Provincial Park collection permit is quick and easy, provided you are specific about the insects you are interested in collecting and what collection methods you will be using.

Federal

Applying for a collection permit in the National Parks is somewhat more difficult, but not prohibitively so. An application form may be acquired by calling

the Director General, Environment Canada-Parks, of the region responsible for the National Park you are interested in. The number for the Western Region (responsible for Banff, Jasper, etc.) is (403) 292-4401. You will receive a **six** page application form. The federal government recently combined all classes of research permit into one application. This has resulted in the large form now required to be completed in excruciating detail. Each application must undergo an Environmental Assessment and Review Process. Therefore, I recommend that you apply at least three months in advance of when you hope to begin collecting.

The form itself consists of seven sections: Title, Subject Definition and Selection, Justification for Research, Environmental Impacts, Study Approach and Situation (?), Timing and Logistics of Study, and Researcher/Sponsor Specifics. Under Justification for Research you must justify the need for collecting in a national park. This can be a "catch 22" (ie: if it is so rare as to be found only in the park, then you cannot collect it, and if it is not found only in a park, go somewhere else). If your beasts are restricted to a particular montane habitat or funding restricts your travel, you should be able to convince the authorities of your need to collect in the park.

The section on environmental impact requires you to detail the impact you will have on the substrate you will be collecting from. In my case it entailed convincing them that lifting and replacing rocks in streams will, in no way adversely affect the environment.

You will be notified by mail as to the status of your application, and, if successful, you pick up the permit from the Warden at the park you will be collecting in. As with the Provincial permit, you must submit reprints of publications resulting from collections made in the park. In addition you must supply a progress report within thirty days of the expiry of the permit. Deposition of voucher specimens in a museum or similar collection will satisfy their requirements regarding specimen disposition. I will warn you that if you intend to loan specimens to colleagues outside of Canada, this must be explicitly stated in your application. Everything collected is considered to be on "loan" to you and may be reclaimed by the government at any time.

Although it may appear the federal permit is too much trouble, it is expressly more convenient to collect at will within a park than to have to skulk around clandestinely. You will find the Rangers and Wardens helpful and a good source of information regarding the terrain within the park. Considering the difficulty that may be encountered acquiring collection permits for foreign parks, I consider the one or two phone calls and the comparatively small effort to complete the application forms for Canadian parks insignificant and the benefits of unencumbered collecting worth the effort.

Kenneth M. Fry
Department of Entomology
University of Alberta
Edmonton, Alberta
T6G 2E3

I appreciated seeing Steve Marshall's comments about the University of Guelph critical point drier in the last *Fly Times* (4: 8). I have used this machine, as well as a more sophisticated model at the University of Alberta, and would like to offer the following additional suggestions:

1 At Guelph, the cooled CPD chamber is filled with 100% ethanol before the specimens are placed inside and the lid bolted on. This excess alcohol is totally unecessary, as the samples will not dry out or shrivel in the few seconds it takes to bolt on the lid and turn on the gas. The number of purges needed will be decreased if the alcohol is omitted.

2 Better results are obtained if the soaking periods are longer than three minutes. I leave mine for at least one soak of thirty minutes.

3 Steve didn't mention his own trick for knowing when the sample was ready for heating. During a purge, collect some of the exhaust "ice" and drop it on the table. If small pools of liquid are formed as it sublimates, more purges are necessary. The ice should sublimate without leaving a liquid pool before the CPD is ready for heating.

4 After heating, I strongly recommend leaving samples for 20-30 minutes to allow thorough heating, instead of the 5-10 minutes Steve recommended. Some of my samples at Guelph still had liquid in them when left for only this short period of time.

5 If something goes wrong during a CPD run (such as a leaking seal), you must vent the sample to atmospheric pressure *extremely* slowly to prevent specimens from exploding from pressure change. Some will explode anyway, despite your best efforts, which is one reason I like using Peldri II (see *Fly Times*, 4: 6).

- Brian V. Brown

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Books and Publications

Teskey, H.J. 1990. Horseflies and deerflies of Canada and Alaska (Diptera: Tabanidae. The Insects and Arachnids of Canada - Part 16.

This detailed contribution to our knowledge of tabanids in Canada and Alaska provides descriptions of both sexes of 149 species known or presumed to be present in the area.

Keys in English and French are provided for adults.

The text is well illustrated and distribution maps are included for each species. Introductory chapters treat the life history, distribution, methods for collection and preservation, and adult morphology.

If you'd like a copy the price is CAN $25.95 from within Canada or US $31.15 from outside Canada. Shipping costs are extra: CAN $5.40.

Send your order to the following address:

Canadian Government Publishing Centre,
Ottawa, Ontario,
K1A 0S9, Canada.

Castner, J.L. 1990. Rainforests: a guide to research and tourist facilities at selected tropical forest sites in Central and South America. Feline Press, P.O. Box 7219, Gainesville, Florida, 32605. xxxvi + 380 pp. US $21.95 + $1.50 shipping in the US, Canadian orders add $2.50 shipping.

This book is an excellent aid in planning collecting trips to the New World tropics.

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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 sent to Dr. J.M. Cumming, Biosystematics Research Centre, Agriculture Canada, Research Branch, 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.

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Full name: _____

Address: _____

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Telephone Number: _____

Fax Number: _____

BITNET: _____

Projects and Taxa Studied: _____

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