



FLY TIMES



OCTOBER, 1996 - No. 17

This issue of the Fly Times includes a number of major contributions, from reports on meetings past and future, to a complete bibliography and list of species published by the late Guy Shewell, to the Costa Rican TWIG project, and more. Enjoy!

Dipterists on the internet will be interested to learn that the "Directory of North American Dipterists" will be going on the web within a few weeks (if it isn't already there by the time you're reading this). We don't have a specific site yet but it will be under the auspices of Agriculture Canada which may be contacted at: <http://res.agr.ca/ecorc/crop2.htm>

We are also considering putting the Fly Times itself up on the Internet in the near future but this is being negotiated. For those of you not entangled in the web, don't worry! We'll keep producing both the Fly Times and Directory in hard copy so that no matter where you are, no matter what you're doing, you can have your copy with you.

Issue No. 18 of the Fly Times will appear next April and all contributions should be sent by the end of March, 1997 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 (250) 833-0913. FAXes may be sent to (250) 832-2146.
NOTE NEW AREA CODE!!

Due to a server not serving I've had to change my email address to the following:

aborkent@jetstream.net

NEWSInformal Conference - North American Dipterist's Society
1996 Entomological Society of America Meeting

The ESA meetings will be held this year in Louisville, Kentucky on Dec. 8-12 and the North American Dipterists Society will be gathering on Monday, September 9, 1996 at 7:00 PM for another informal conference. Jon Gelhaus is this year's organizer and he notes that he is looking for any other talks or presentations of interest to the Dipterist community, e.g. updates on the progress of the Nearctic checklist, info on the next NADS field meeting, the Diptera section of the ATBI (Costa Rica), etc. to add to the schedule. Two talks are already slated as follows:

- 1) Mike Irwin and David Yeates, Illinois Natural History Survey Spermathecae and associated tissues of the female terminalia hold promise for constructing a higher-level classification of the Therevidae (Diptera: Brachycera)
- 2) Mark Metz, University of Illinois Differential variation of body and genitalia size using a species in the nanella group of Ozodiceromyia (Therevidae) as a model

For further information (and especially if you want to contribute to the conference!!) contact Jon through any of the following routes:

Dr. J.K. Gelhaus,
Dept. of Entomology,
Academy of Natural Sciences,
1900 Benjamin Franklin Parkway
Philadelphia, Pennsylvania,
19103-1195, USA

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Cladograms and Chianti: A Report from the XX International
Congress of Entomology - Florence, Italy August 25-31, 1996

by Brian M. Weigmann

The beautiful, Renaissance city of Florence was a superb backdrop for the recent gathering of world entomologists. As with most international meetings, there were many opportunities for scientific exchange and for sharing fine food and drink in a rich cultural setting. Dipterology was well represented at the meetings with dipterists attending from many nations and a full

day was devoted to the symposium "Higher-level phylogeny of the Diptera: morphological and molecular evidence". Symposium participants and their titles are listed below and abstracts are available from any participant who lugged home the hefty Congress Proceedings. Participants in the symposium and associated posters represented approximately 15 countries. The symposium itself was a mix of research aimed at many areas of dipteran phylogenetics. This was the first time that both morphological and molecular phylogenetic studies on Diptera were included in the same symposium. The current focus on integrating the two sources of information makes such exchanges critical to improving understanding of fly relationships, and focuses attention on questions of common interest to Diptera systematists. Among the many highlights of the symposium were several reports of recent findings. Verner Michelsen presented details of recently published new evidence from cervical musculature leading to a revised proposal for higher-level classification of nematoceran clades and a new taxon --Neodiptera-- for Bibionomorpha + Brachycera [1996. Zool. J. Linn. Soc. 117:71-102; see full citation below under 'Books and Publications']. Marion Kotrba also summarized her exploration of new characters from the female genitalia in acalyptrates, their distribution, and utility for phylogenetic analysis. Rudolph Meier presented a wealth of larval characters useful for phylogenetics of the Sepsioidea, but highlighted their difficult interpretation in Sciomyzoidea. Progress continues to be made on the phylogeny of the Empidoidea and interpretation of the male genitalia as reported in talks by Jeff Cumming, and new studies of individual groups presented by Milan Chvala and by Mark Pollett. Knut Rognes, using analyses of oestroid relationships, demonstrated important differences in how the phylogenetic programs PEEWEE and PAUP implement character weighting to arrive at best-fitting trees. Many molecular phylogenetic studies of flies are still in their infancy, but sequence data are currently being applied to questions at every level. Of particular interest are studies aimed at helping resolve controversial relationships among nematoceran clades at the base of the Diptera. Reports by Varuni Kulasekara and Markus Friedrich indicated the promise such molecular data hold for resolving these questions especially as sampling of taxa and genes is improved with increased effort. The same is true for our growing, higher-level, molecular study of Brachycera-- new data are being collected, but the sample sizes are still low. The strength of molecular data was highlighted in several presentations of work using mitochondrial genes below the family and genus level. Talks by Bill Ballard (Streblidae), Jan Conn (tahitian blackflies), Rob DeSalle (Hawaiian Drosophila), and Jim Smith (Rhagoletis) demonstrated the utility of mitochondrial genes for intermediate and low-level phylogenetics. Although full integration of morphological and molecular data is a worthy goal-- and great progress should be made before the next international congress in Brazil-- it's clear that a great deal of data collection within both systems remains ahead of us.

There's still plenty of work for dipterists! The meetings were also extremely rich in studies of behavior, physiology and ecology of flies, including individual symposia on dipteran mating systems and chironomid biology. Of great interest to all dipterists should also be the growing molecular evidence for a possible sister-group relationship between Strepsiptera and Diptera-- this was hotly debated at the meetings in presentations by Jarmila Kukalova-Peck, Michael Whiting and Jim Carpenter. Within another symposium, David Yeates and Mike Irwin presented strong morphology-based phylogenetic hypotheses for Apioceridae and Mydidae and explored the strong congruence the trees show relative to Gondwanan biogeographic hypotheses. Finally, among many posters of interest were new analyses of nematoceran phylogeny using thoracic sclerites by D.S. Amorim, and a phylogenetic analysis of the Sciomyzidae by L. Marinoni, Curitiba, Parana, Brazil. Of course, there were many fine posters and presentations involving Diptera research making these meetings particularly rich in fly science.

The following provides a list of participants and titles at the symposium:

XX International Congress of Entomology, 29 August 1996 Florence, Italy Program Symposium IS-4 "Higher-level Phylogeny of the Diptera: Morphological and Molecular evidence" Brian M. Wiegmann, Verner Michelsen and Milan Chvala (organizers)

Oral Presentations

1. J. William O. Ballard, Bruce D. Patterson and Rupert L. Wenzel
Title: Phylogenetics of Streblidae (Diptera) with a preliminary assessment of their coevolution with bats (Chiroptera)"
2. Milan Chvala Title: "A phylogenetic interpretation of Palearctic species of Hilara and the tribe Hilarini (Diptera: Empididae)"
3. J. E. Conn and K.B. O'Brien Title: Molecular systematics and population genetics of in polynesian black flies: Preliminary mitochondrial DNA data.
4. Jeff Cumming and Brad Sinclair Title: "The higher-level phylogeny of Eremoneura (Diptera: Brachycera)"
5. Rob DeSalle Title: "Using Drosophila as a paradigm in systematics: At the interface of development and evolution"
6. Markus Friedrich and D. Tautz Title: "Molecular phylogenetic analysis of Dipteran phylogeny based on 28S ribosomal DNA sequences"
7. Marion Kotrba Title: "Phylogenetic analysis of characters of the female reproductive tract of acalyptrate Schizophora (Diptera)"
8. Varuni Kulasekera and Rob DeSalle Title: Phylogenetic utility of nuclear genes in the study of Nematocera relationships
9. Rudolph Meier "Adult characters versus larval characters in

- phylogenetic studies of the Sciomyzoidea (Cyclorrhapha)"
10. Verner Michelsen Title: "Cranefly phylogeny: A cladistic assessment of morphological characters of the adult head and thorax (Diptera: Tipuloidea)"
 11. M. Pollet Title: "Phylogeny and geographical distribution of Achaalus (Dolichopodidae, Diptera)"
 12. Knut Rognes Title: "The phylogenetic relationships of the Calliphoridae and Mystacinobiidae (Diptera: Oestroidea)"
 13. James J. Smith and Guy L. Bush Title: "Phylogeny and evolution of the genus Rhagoletis (Diptera: Tephritidae)"
 14. Hans Ulrich Title: "Proposals for the phylogenetic classification of the Empidoidea, or Orthogenya (Diptera, Eremoneura)"
 15. Brian Wiegmann, David Yeates, and Shun-Chern Tsaur Title: "Phylogeny of the lower Brachycera (Diptera): Morphological and molecular evidence"

POSTERS = Higher-level Phylogeny of the Diptera: Morphological and Molecular Evidence

1. D.S. Amorim, F. Brava, and E. Collucci Title: "Thoracic sclerites: Additional information concerning the basal evolution of Diptera (Insecta)"
2. C.J.B. Carvalho and A.P. Palka-Rocha Title: Cladistic analysis of the genus *Hydrotaea* Robineau-Desvoidy (Diptera: Muscidae)
3. D. Gleeson Title: "The phylogenetic position of the bat-fly family (Diptera: Mystacinobiidae) from New Zealand"
4. S. Glumac and A. Vujic Title: "The phylogenetic values of the different approaches in the hoverflies (Diptera: Syrphidae) classification"
5. L. Marinoni Title: Cladistic analysis of Sciomyzidae Fallen, 1820 (Diptera)
6. B.R. Miller, M.B. Crabtree, and H.M. Savage Title: "Phylogenetic relationships within the Culicomorpha inferred from 18S and 5.8S Ribosomal DNA sequences (Diptera: Nematocera)"
7. T. Okadome Title: "Phylogenetic relationships among the Genera of the Japanese Heleomyzidae (Diptera)"
8. D. Pamplona Title: "A new characterization of *Cytoneurina* Giglio-Tos 1893 (Diptera: Muscidae)"
9. B. Rossaro and M. Framarin Title: "The phylogenetic tree of Holarctic genera of Diamesinae and Prodiamesinae"

Dispersed and/or Modified Dipterists

There have been some recent moves and changes in address as follows:

Dr. E.M. Fisher
 California Dept. of Food and Agriculture,
 Plant Pest Diagnostics Lab.,
 3294 Meadowview Road,
 Sacramento, California,
 95832, USA.
 Tel: (916) 262-1154
 FAX: (916) 262-1191
 email: efisher@smtp1.cdfa.ca.gov

Dr. Brad Sinclair is now in northern Quebec; distant but still very active! Here's his new address:

Dr. B. Sinclair,
 Box 43,
 Tasiujaq, Quebec,
 J0M 1T0.

Riley Nelson email: capnia@uts.cc.utexas.edu

Art Borkent: new email address: aborkent@jetstream.net
 new area code for phone number and FAX : (250)

Rob Cannings: new area code for phone number and FAX : (250)

On Sabbatical (lucky guy!)

Ian Walker will be on sabbatical from Aug. 3, 1996- Aug. 1, 1997 at the University of Bern, Switzerland. Here's how you can get hold of him:

Dr. I.R. Walker,
 c/o Dr. A. F. Lotter,
 Geobotanisches Institute der Universitaet Bern,
 Abt. Palaeoekologie,
 Altenbergrain 21,
 CH-3013 Bern, Switzerland.

Tel: 031-631-4932
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How then shall I pierce thee?

by Graham Griffiths

"I am rather taken aback by Steve Marshall's statement in the April issue that "dipterists generally prefer specimens firmly glued to a point or to the body of a pin". I have regularly instructed collectors not to use these methods. My experience is that all too often specimens mounted in this manner have the abdomen, as well as the thorax, firmly glued, with the result that the abdomen cannot be separated and it may be necessary to cook the whole mount in order to dissect the terminalia. Unfortunately Steve did not explain the reason why he found it difficult to remove the abdomens of the minuten-mounted sphaerocerids he received. This should not be difficult after specimens have been held in humidified containers for about 45 minutes. In principle there is no difference between mounting flies with minuten (micropins) and larger pins. The flies should be pinned through the thorax when fresh, so that the internal tissues grip the pin as they dry out and contract. If flies are pinned after they have dried out or with a pin of too small a diameter in relation to their size, they may work loose on the pin and be difficult to dissect without damage. Perhaps this was Steve's problem.

Use of minuten is strongly recommended by specialists on Agromyzidae, particularly since the stage supporting the minuten serves as a surface upon which the empty puparia of reared specimens may be glued (puparia should not be pinned since they work loose). Most agromyzids are in the 2-3 mm size range, too small for pinning with larger pins. I recommend glueing agromyzids to card points only if the specimens have been allowed to dry out, so might not bind firmly to minuten. Flies in the 2-3 mm size range should never in my opinion be glued to the side of large pins, since it is difficult to do this without glueing the abdomen".

Newly Retired

Dr. Raymond Gagné retired from the Systematic Entomology Laboratory, USDA, Washington, D.C. on September 30, 1996. Ray is well known for his research on Diptera, primarily on gall midges. His 151 publications include two books; The Plant-Feeding Gall Midges of North America and The Gall Midges of the Neotropical Region. Ray plans to continue his research on Cecidomyiidae at the USNM and he and his wife Sally will continue to live in Silver Spring, Maryland.

1997 Biting Fly Workshop

The next Biting Fly Workshop will be held on June 4-6, 1997 at the Niobrara Valley Preserve located east of Valentine, Nebraska on the Niobrara river. Housing will be available on the site. Otherwise the nearest motel is at Ainsworth - 25 miles away. This section of the Niobrara valley is very interesting from an ecological standpoint. Rocky Mountain pine forest, eastern deciduous forest, northern boreal forest, mixed grass prairie, sandhills prairie, and tallgrass prairie all exist within a 1-2 mile proximity of each other. The 54,000 acre preserve is owned and managed by the Nature Conservancy. More information will be included in the next Fly Times and/or you can contact Wayne at the following:

Dr. W.Kramer,
State of Nebraska Dept. of Health,
301 Centennial Mall South,
P.O. Box 95007,
Lincoln, Nebraska,
68509-5007, USA.

email: wkramer@unlinfo.unl.edu

Considering the recent report in Science that there may be (or was) life on Mars, Dipterists will be excited to learn, on the basis of the report below, that major funding from NASA might be expected for our community!!



Hot on the Trail of Syrphids by Gary. A. Coovert

After a rather long hiatus, I'm finally beginning to get back to work on syrphids. My revision of *Pipiza* has finally been published. Entitled "A Revision of the Genus *Pipiza* Fallén (Diptera, Syrphidae) of America North of Mexico, with Notes on the Placement of the Tribe Pipizini," it was published by the Ohio Biological Survey as OBS Bulletin New Series Vol. 11, no. 3 (68 pp.). Eleven species are recognized, including two new species. A key to species is presented, along with a discussion of the placement of the tribe, and an explanation of important taxonomic and key characters. For each species, a complete description or redescription of the type, a species description (showing intraspecific variation), a comparison with other species, notes on distribution, a range map, flower records, and comments are presented. Illustrations of the hind femora and male genitalia are included for all species, as are illustrations of the head and abdomen of selected species. I regret that I have no reprints available, but it is available from the Ohio Biological Survey, 1315 Kinnear Rd., Columbus, OH 43212-1192, phone (614) 292-9645. Cost is \$15 plus \$1.50 postage and they do accept credit card orders!

In the meantime I've gotten back to work on the *Microdon* material that I have on loan, and will hopefully soon have that finished (with apologies to everyone that I have material from - you will be hearing from me!). I hope to be able to put together a paper, describing the new species I have, with revisionary notes on the *globosus* complex, and a new key to the entire genus (N. Am. n. of Mexico).

Things had not been conducive to doing research here at the Museum for a rather long time, but we now have a new director who is very supportive. So I now sit poised on the verge of really seriously getting back into meaningful syrphid research. I still want to eventually produce a complete revision of the Ohio fauna. But my problem always was, and still is, lack of time, specimens, and literature. If I could fill in gaps in the collection here, it would be far, far easier to work on revising keys, etc. And there is still a fair amount of literature that I lack. Lack of time is a problem that plagues us all. [A nice quote that I saw on an office door at the Museum of Biological Diversity, Ohio State: "So many species . . . , so little time," seems particularly appropriate in my case. Besides working with syrphids, I spent the last 14 years on a revision of the higher classification of the marine snail family Marginellidae worldwide. The paper, published last fall in The Nautilus, is the largest journal article published in the international quarterly's 109 year history! And I just recently initiated a state-wide faunal survey of the ants (Formicidae) of Ohio. In addition, my wife and I have purchased a beautiful piece of property in Hocking Co., Ohio where we've built a small house entirely by ourselves. So I haven't been entirely idle lately.]

I have resumed serious insect collecting, especially from Hocking Co., ultimately working toward a complete biotic survey of our property. The insect collection here at the Dayton Museum of Natural History is likely the second largest in the state. It is housed in 517 Cornell drawers and consists of ca. 95,000 specimens, largely from SW and S central Ohio, and is, of course, well represented by Diptera.

I would be pleased to hear from my fellow dipterists, and hope to be a better correspondent.

BIBLIOGRAPHY AND LIST OF TAXONOMIC NAMES OF DIPTERA PUBLISHED BY
GUY EADEN SHEWELL (1913-1996), BETWEEN 1938 AND 1996.

Paul H. Arnaud, Jr.

California Academy of Sciences, Golden Gate Park, San Francisco, California, USA 94118

Guy Eaden Shewell was born in Newcastle-on-Tyne, England, on 16 July 1913, and died at age 82, in Ottawa, Canada, on 19 February 1996, after suffering a stroke. In 1931, at the age of 17, he moved to Canada, because the Canadian Government was willing to sponsor him to study agriculture at MacDonal College, Ste. Anne de Bellevue, Quebec. In those Depression Years such assistance was not available to him in England. Graduating with an M.Sc. in 1937, he began his nearly 40 year employment, (1937 to 1976), as Dipterist of the Entomology Branch of Canada Agriculture in Ottawa. Between 1939 and 1945, his Diptera work was interrupted by service in the Royal Canadian Artillery, 51st Anti-Tank Battalion, where he rose to the rank of Major with action in Italy. After 1949, with the employment of a larger staff of Dipterists, Guy Shewell became a part of a dedicated team that developed the Ottawa Diptera collection into one of the world's largest research collections and that produced the indispensable *Manual of Nearctic Diptera* (1981-1989). He authored the sections to the families Lauxaniidae, Calliphoridae and Sarcophagidae.

Between 1938 and 1996, Guy Shewell published forty-one articles relating to Diptera and named eighty taxa (of which ten are genus-group names and seventy are species-group names). The new taxa are published in the following families: Empididae (1 taxon), Ephydriidae (10 taxa), Lauxaniidae (49 taxa), Odiniidae (3 taxa), Otitidae (1 taxon), Sarcophagidae (4 taxa) and Simuliidae (12 taxa). Guy Shewell coauthored new taxa with F. J. H. Fredeen in the Simuliidae and with W. N. Mathis in the Ephydriidae. In addition to the multiple authorship in the *Manual of Nearctic Diptera* he coauthored two papers with J. W. Boyce on the Cytotaxonomy of Bombyliidae (1973A) and Calliphoridae (1975A).

Following his retirement in 1976 Guy Shewell was appointed an Honorary Research Associate with Agriculture Canada. He was honored by being selected as a Fellow of the Entomological Society of Canada in 1995. The CanaColl Foundation has established the Guy E. Shewell Memorial Fund to which donations made be made.

BIBLIOGRAPHY OF DIPTERA PUBLICATIONS

- 01.--1938A. The Lauxaniidae (Diptera) of southern Quebec and adjacent regions. *The Canadian Entomologist*, 70(5):102-110, figures 1-15; (5):111-118, figures 16-34; (7):133-142, figures 35-64.
- 02.--1939A.--A revision of the genus *Camptoprosopella* Hendel (Diptera, Lauxaniidae). *The Canadian Entomologist*, 71(6):130-144, figures 1-38; (7):145-153.
- 03.--1939B.--New North American species of *Homoneura* Wulp (Diptera, Lauxaniidae). *The Canadian Entomologist*, 71(12):264-266.
- 04.--1940A.--Preoccupied names in the genus *Homoneura* (Diptera, Lauxaniidae). *The Canadian Entomologist*, 72(4):86.
- 05.--1947A.--The male of *Dichlorus ferrugatus* (Fabr.). *The Canadian Entomologist*, 79(2):32.
- 06.--1950A.--A new species of *Sarcophaga* reared from the Columbian ground squirrel (Diptera: Sarcophagidae). *The Canadian Entomologist*, 82(12):245-246, figures 1-2.
- 07.--1952A.--New Canadian black flies (Diptera: Simuliidae). I. *The Canadian Entomologist*, 84(2):33-42, figures 1-4.
- 08.--1952B.--[Book Review.] A generic revision of the family Agromyzidae (Diptera) with a catalogue of New World species, by Kenneth E. Frick. *The Canadian Entomologist*, 84(12):382.
- 09.--1953A.--[Obituary.] Brother Joseph Ouellet, C.S.V. 1869-1952. *The Canadian Entomologist*, 85(2):79-80.
- 10.--1953B.--Notes on the types of some American Agromyzidae (Diptera). *The Canadian Entomologist*, 85(12):462-470, figures 1-7.
- 11.--1954A.--First record of the family Deuterophlebiidae in Canada (Diptera). *The Canadian Entomologist*,

- 86(5):204-206, figures 1-4.
- 12.--1955A.--A new species of *Hilara* from arctic Canada (Diptera: Empididae). *The Canadian Entomologist*, 87(1):45-46.
 - 13.--1955B.--Identity of the black fly that attacks ducklings and goslings in Canada (Diptera: Simuliidae). *The Canadian Entomologist*, 87(8):345-349.
 - 14.--1955C.--[Book Review.] *Terricole Dipterenlarven*, by Adolph Brauns. *The Canadian Entomologist* (1994), 86(12):561.
 - 15.--1955D.--Interim report on distributions of the black flies (Simuliidae) obtained in the northern insect survey. Defense Research Board, Department of National Defence Canada, Directorate of Personnel Research, Environmental Protection Technical Report, 7:1-3, plates 1-47.
 - 16.--1956A.--[Book Review.] *The blowflies of California* (Diptera: Calliphoridae), by Maurice T. James. *The Canadian Entomologist*, 88(2):92.
 - 17.--1958A.--Classification and distribution of arctic and subarctic Simuliidae. *Proceedings Tenth International Congress of Entomology*, 1:635-643, figures 1-3.
 - 18.--1958B.--Two new black flies from Saskatchewan (Diptera: Simuliidae). *The Canadian Entomologist*, 90(12):733-738, figures 1-20. [by G. E. Shewell & F. J. H. Fredeen.]
 - 19.--1959A.--New Canadian black flies (Diptera: Simuliidae). II. *The Canadian Entomologist*, 91(2):83-87, figures 1-9.
 - 20.--1959B.--New Canadian black flies (Diptera: Simuliidae) III. *The Canadian Entomologist*, 91(11):686-697, figures 1-42.
 - 21.--1960A.--Notes on the family Odiniidae with a key to the genera and descriptions of new species (Diptera). *The Canadian Entomologist*, 92(8):625-633, figures 1-13.
 - 22.--1961A.--Notes on three European Diptera recently discovered in Canada. *The Canadian Entomologist*, 93(11):1044-1047.
 - 23.--1962A.--A new Canadian species of *Stenopterina* Macq. with notes on the species allied to *brevipes* (Fab.) (Diptera: Otitidae). *The Canadian Entomologist*, 94(2):194-200, figures 1-18.
 - 24.--1966A.--An oriental species of *Homoneura* Wulp apparently introduced into southeastern United States (Diptera: Lauxaniidae). *Proceedings of the Entomological Society of Washington*, 68(3):212-213.
 - 25.--1967A.--Two records of Agromyzidae from Chile and Easter Island (Diptera). *The Canadian Entomologist*, 99(3):332-333.
 - 26.--1971A.--On the type of *Agria*, with description of a new Nearctic species (Diptera: Sarcophagidae). *The Canadian Entomologist*, 103(8):1179-1191, figures 1-7.
 - 27.--1971B.--Ergebnisse der zoologischen Forschungen von Dr. Z. Kaszab in der Mongolei. 264. Diptera: Lauxaniidae. *Stuttgarter Beiträge zur Naturkunde*, 224:1-12, figures 1-15.
 - 28.--1973A.--Cytotaxonomy of Bombyliidae (Diptera). *Canadian Journal of Genetics and Cytology*, 15(1):21-37, figures 1-49. [by J. W. Boyes and G. E. Shewell.]
 - 29.--1975A.--Cytotaxonomy of Calliphoridae (Diptera). *Genetica*, 45(4):435-488, figures 1-157. [by J. W. Boyes and G. E. Shewell.]
 - 30.--1976A.--*Colcondamyia auditrix* nov. sp. (Diptera: Sarcophagidae), a parasite which is attracted by the mating song of its host, *Okanagana rimosa* (Homoptera: Cicadidae). *The Canadian Entomologist*, 108(1):61-68, figures 1-10. [by R. S. Soper, G. E. Shewell, and D. Tyrrell.]
 - 31.--1978A.--Studies of Ephydrinae (Diptera: Ephydridae), I: Revisions of *Parascatella* Cresson and the *triseta* group of *Scatella* Robineau-Desvoidy. *Smithsonian Contributions to Zoology*, 285:1-44, figures 1-62. [by W. N. Mathis and G. E. Shewell.]
 - 32.--1979A.--Calliphoridae, Sarcophagidae. Pages 416-418. In Danks, H.V. (editor), *Canada and its insect fauna. Memoirs of the Entomological Society of Canada*, 108:iv + 573, figures.
 - 33.--1981A.--[Chapter] 1. Introduction. Pages 1-7. In McAlpine, J. F., B. V. Peterson, G. E. Shewell, H. J. Teskey, J. R. Vockeroth, and D. M. Wood (coordinated by), *Manual of Nearctic Diptera. Volume 1. Agriculture Canada Monograph*, 27:i-vi, 1-674, figures. [by J. F. McAlpine, B. V. Peterson, G. E. Shewell, H. J. Teskey, J. R. Vockeroth, and D. M. Wood.]
 - 34.--1981B.--*Manual of Nearctic Diptera. Volume 1. Agriculture Canada Monograph*, 27:i-vi, 1-674, figures. [coordinated by J. F. McAlpine, B. V. Peterson, G. E. Shewell, H. J. Teskey, J. R. Vockeroth, and D. M. Wood.]
 - 35.--1986A.--New American genera of Lauxaniidae, based on species of earlier authors, and a note on *Lyciella rorida* (Fallén) in North America (Diptera). *The Canadian Entomologist*, 118(6):537-547.

- 36.--1987A.--[Chapter] 87. Lauxaniidae. Pages 951-964, figures 87.1-87.71. In McAlpine, J. F., B. V. Peterson, G. E. Shewell, H. J. Teskey, J. R. Vockeroth, and D. M. Wood (coordinated by), Manual of Nearctic Diptera. Volume 2. Agriculture Canada Monograph, 28:i-vi, 675-1332, figures.
- 37.--1987B.--[Chapter] 106. Calliphoridae. Pages 1133-1145, figures 106.1-106.54. In McAlpine, J. F., B. V. Peterson, G. E. Shewell, H. J. Teskey, J. R. Vockeroth, and D. M. Wood (coordinated by), Manual of Nearctic Diptera. Volume 2. Agriculture Canada Monograph, 28:i-vi, 675-1332, figures.
- 38.--1987C.--[Chapter] 108. Sarcophagidae. Pages 1159-1186, figures 108.1-108.116. In McAlpine, J. F., B. V. Peterson, G. E. Shewell, H. J. Teskey, J. R. Vockeroth, and D. M. Wood (coordinated by), Manual of Nearctic Diptera. Volume 2. Agriculture Canada Monograph, 28:i-vi, 675-1332, figures.
- 39.--1987D.--Manual of Nearctic Diptera. Volume 2. Agriculture Canada Monograph, 28:i-vi, 675-1332, figures. [coordinated by J. F. McAlpine, B. V. Peterson, G. E. Shewell, H. J. Teskey, J. R. Vockeroth, and D. M. Wood.]
- 40.--1989A.--*Sapromyza lopest* sp. n. from Brazil: a species related to *S. duodecimvittata* (Frey, 1919) (Diptera: Lauxaniidae). Memorias do Instituto Oswaldo Cruz Rio de Janeiro, 84(Supplement 4):483-485, figures 1-2.
- 41.--1996A.--Validation of *Neosarcophaga* Shewell *nomen nudum* (Diptera: Sarcophagidae). Proceedings of the Entomological Society of Washington, 98(2):375.

LIST OF NEW DIPTERA TAXA

Names are listed alphabetically by family, genus and species. Each name is followed by the surname(s) of its author(s) and year-page citation. For species-group names the following additional information is given: sex of holotype, "TL:" - the type locality, date of collection and collector, and "TD:" - the type depository with acronym of institution in which the holotype is deposited, followed by the type number if it is given.

The acronyms for collection depositories are:

CNC--Canadian National Collection of Insects, Canada Agriculture, Ottawa.

DEI--Deutschen Entomologischen Institutes, Berlin.

HNHM--Hungarian Natural History Museum, Budapest.

IML--Instituto Miguel Lillo, Universidad Nacional de Tucuman, Tucuman.

USNM--National Museum of Natural History, Smithsonian Institution, Washington, D.C.

Family EMPIDIDAE

Hilara nearctica Shewell, 1955A:45; holotype, male. TL: Chesterfield, Northwest Territories, Canada, 25 Jul. 1950 (J.G. Chillcott). TD: CNC, 6169.

Family EPHYDRIDAE

Parascatella apicalis Mathis and Shewell, 1978A:16; holotype, male. TL: Coyaquayma, 4,100 m, 7 km S Mina Perquitas, Jujuy, Argentina, 4 Nov. 1968 (Peña). TD: CNC, 15234.

Parascatella balioptera Mathis and Shewell, 1978A:21; holotype, male. TL: Aguas Calientes, 4,200 m, 10 km Rosario de Coyaquayma, Jujuy, Argentina, 5 Nov. 1968 (Peña). TD: CNC, 15237.

Parascatella brunnea Mathis and Shewell, 1978A:25; holotype, male. TL: Laguna Azul, Magallanes, Chile, Jan./Feb. 1956 (no collector cited). TD: IML.

Parascatella glabra Mathis and Shewell, 1978A:14; holotype, male. TL: Cienquillas, 3,650 m, Jujuy, Argentina, 28 Oct. 1968 (L. E. Peña G.). TD: CNC, 15232.

Parascatella hirticrus Mathis and Shewell, 1978A:17; holotype, male. TL: Chorillos, 3,800 m, 23 km S San Antonio de Los Cobres, Salta, Argentina, 6-7 Nov. 1968 (Peña). TD: CNC, 15235.

Parascatella lanicrus Mathis and Shewell, 1978A:9; holotype, male. TD: La Quiaca, 3,500 m, Jujuy, Argentina, 23 Oct. 1968 (L.E. Peña G.). TD: CNC, 15232.

Parascatella penai Mathis and Shewell, 1978A:24; holotype, male. TD: Puritama, Antofagasta, Chile, 14 Oct. 1955 (L.E. Peña G.). TD: CNC, 15238.

Parascatella semicinerea Mathis and Shewell, 1978A:20; holotype, male. TD: Banos Morales, southern Chile, 18 Dec. 1940 (G.H. Schwabe). TD: DEI.

Parascatella semipolita Mathis and Shewell, 1978A:19; holotype, male. TD: Cerrillos, Jujuy, Argentina, 31 Oct. 1968 (L.E. Peña G.). TD: CNC, 15236.

Parascatella spinicrus Mathis and Shewell, 1978A:11; holotype, male. TL: Tumbre, E of Atacama Salt Lake, 3,600-3,800 m, Antofagasta, Chile, 6-9 Dec. 1965 (L.E. Peña G.). TD: CNC, 12532.

Family LAUXANIIDAE

- Camptoprosopella acuticornis* Shewell, 1939A:150; holotype, male. TL: South Dakota, USA, [? date] (J.M. Aldrich). TD: USNM.
- Camptoprosopella angulata* Shewell, 1939A:147; holotype, male. TL: Plummers Island, Maryland, USA, 21 Jul. 1912 (H.L. Viereck). TD: USNM.
- Camptoprosopella borealis* Shewell, 1939A:143; holotype, male. TL: Ottawa, Ontario, Canada, 20 Jun. 1938 (G.E. Shewell). TD: CNC.
- Camptoprosopella confusa* Shewell, 1939A:148; holotype, male. TL: Ottawa, Ontario, Canada, 20 Jun. 1938 (G.E. Shewell). TD: CNC.
- Camptoprosopella cruda* Shewell, 1939A:143; holotype, male. TL: Cacao, Trece Aguas, Alta v. Pazo, Guatemala, 14 Apr. (Barber & Schwarz). TD: USNM.
- Camptoprosopella cubana* Shewell, 1939A:138; holotype, male. TL: Havana, Cuba, [? date] (Baker). TD: USNM.
- Camptoprosopella decolor* Shewell, 1939A:149; holotype, male. TL: Boerne, Texas, USA, 7 Oct. 1905 (F.C. Pratt). TD: USNM.
- Camptoprosopella equatorialis* Shewell, 1939A:140; holotype, male. TL: Manao, Brazil, [? date] (Miss H.B. Merrill). TD: USNM.
- Camptoprosopella gracilis* Shewell, 1939A:145; holotype, male. TL: Maywood, Alexandria County, Virginia, USA, 4 Jun. 1922 (McAtee). TD: USNM.
- Camptoprosopella hera* Shewell, 1939A:140; holotype, male. TL: Ayutla, Guatemala, Apr. 1913 (J. M. Aldrich). TD: USNM.
- Camptoprosopella imitatrix* Shewell, 1939A:147; holotype, male. TL: Mexico City, Mexico, [? date] (J. Muller). TD: USNM.
- Camptoprosopella inaequalis* Shewell, 1939A:148; holotype, male. TL: Tyler, Texas, USA, 5 May 1906 (F. C. Pratt). TD: USNM.
- Camptoprosopella longisetosa* Shewell, 1939A:142; holotype, male. TL: Ecuador, 1914 (H. A. Parish). TD: USNM.
- Camptoprosopella mallochi* Shewell, 1939A:146; holotype, male. TL: Glen Echo, Maryland, USA, 2 Jul. 1922 (Malloch). TD: USNM.
- Camptoprosopella media* Shewell, 1939A:150; holotype, male. TL: Tampico, Mexico, 6 Dec. (F.C. Bishopp). TD: USNM.
- Camptoprosopella pallidicornis* Shewell, 1939A:139; holotype, male. TL: Higuito, San Mateo, Costa Rica, [? date] (P. Schild). TD: USNM.
- Camptoprosopella setipalpis* Shewell, 1939A:145; holotype, male. TL: District of Columbia, USA, Jun. (Coquillett). TD: USNM.
- Camptoprosopella slossonae* Shewell, 1939A:146; holotype, male. TL: Mount Washington, New Hampshire, USA, [? date] (Mrs. Slosson). TD: USNM.
- Camptoprosopella texana* Shewell, 1939A:151; holotype, male. TL: Victoria, Texas, USA, 15 May 1907 (J. D. Mitchell). TD: USNM.
- Camptoprosopella varia* Shewell, 1939A:142; holotype, male. TL: San Pedro de Montes de Oca, Costa Rica, 11 Jun. 1933 (C. H. Ballou). TD: USNM.
- Hirtodeceia* Shewell, 1986A:537; type species: *Sciomyza picta* Wiedemann, 1830, by original designation. Brazil.
- Homoneura armata* Shewell, 1939B:264; holotype, male. TL: Edmonton, Alberta, Canada, 24 Jun. 1937 (E. H. Strickland). TD: CNC, 4902.
- Homoneura cactifera* Shewell, 1940A:86. New name for *Homoneura armata* Shewell, 1939, not *H. armata* Malloch, 1925.
- Homoneura kaszabi* Shewell, 1971B:7; holotype, male. TL: Tosgoni ovoo, 10 km N of Ulan-Baator, 1,700-1,900 m, Central Province, Mongolia, 23-24 Jul. 1967 (Z. Kaszab). TD: HMNH.
- Homoneura patella* Shewell, 1971B:8; holotype, male. TL: 8 km N of Burenchaan on Delger River, 1,450 m, Chövsgöl Province, Mongolia, 20 Jun. 1968 (Z. Kaszab). TD: HMNH.
- Homoneura praeapicalis* Shewell, 1939B:264; holotype, male. TL: Lethbridge, Alberta, Canada, 9 Jun. 1926 (J. E. Revell). TD: CNC, 4901.
- Homoneura setitibia* Shewell, 1940A:86. New name for *Homoneura praeapicalis* Shewell, 1939, not *H. praeapicalis* Malloch, 1925.
- Homoneura severini* Shewell, 1939B:265; holotype, male. TL: Cameron Bay, Great Bear Lake, Northwest Territory, Canada, 22 Jul. 1937 (T. N. Freeman). TD: CNC, 4903.

- Homoneura spinidorsum* Shewell, 1971B:10; holotype, male. TL: About 20 km W of Bajannuur, 1,100 m, Bulgan Province, Mongolia, 18 Jun. 1966 (Z. Kaszab). TD: HMNH.
- Marmarodeceia* Shewell, 1986A:538; type species: *Pseudogriphoneura (Neodeceia) marmorata* Malloch, 1926, by original designation. Costa Rica.
- Minettia americanella* Shewell, 1938A:108; holotype, male. TL: Joliette, Quebec, Canada, 16 Jul. 1918 (J. Ouellet). TD: CNC, 4261.
- Minettia lobata* Shewell, 1938A:108; holotype, female. TL: Fairy Lake, near Hull, Quebec, Canada, 6 Jun. 1927 (G. S. Walley). TD: CNC, 4259.
- Minettia lyraformis* Shewell, 1938A:109; holotype, male. TD: Abbotsford, Quebec, Canada, 14 Jun. 1937 (G. E. Shewell). TD: CNC, 4260.
- Oncodometopus* Shewell, 1986A:539; type species: *Sapromyza umbrosa* Loew, 1863, by original designation. District of Columbia, USA.
- Pachyopella* Shewell, 1986A:540; type species: *Pachycerina ornata* Melander, 1916, by original designation. Mexico.
- Poecilolycia* Shewell, 1986A:542; type species: *Sapromyza quadrilineata* Loew, 1861, by original designation. Pennsylvania, USA.
- Sapromyza aspinosa* Shewell, 1938A:116; holotype, male. TL: LaTrappe, Quebec, Canada, 30 May 1936 (J. Ouellet). TD: CNC, 4255.
- Sapromyza atrivena* Shewell, 1971B:4; holotype, male. TL: Ulan-Baator, Nucht Valley, Bogdo ul Mountains, 1,750 m, Mongolia, 10 Jun. 1966 (Z. Kaszab). TD: HNHM.
- Sapromyza currani* Shewell, 1938A:118; holotype, male. TL: Aylmer, Quebec, Canada, 18 Jul. 1924 (C. H. Curran). TD: CNC, 4257.
- Sapromyza fusca* Shewell, 1938A:113; holotype, male. TL: Hemmingford, Quebec, Canada, 17 Mar. 1927 (G. H. Hammond). TD: "returned to Dr. Curran."
- Sapromyza lopesi* Shewell, 1989A:483; holotype, male. TL: Nova Teutonia., 300-500 m, Brazil, Nov. 1958 (F. Plaumann). TD: CNC, 20704.
- Sapromyza novaescotiae* Shewell, 1938A:118; holotype, male. TL: Kentville, Nova Scotia, Canada, 8 Jul. 1923 (R. P. Gorham). TD: CNC, 4258.
- Sapromyza ouelleti* Shewell, 1938A:115; holotype, male. TL: Sully, Quebec, Canada, 24 Jun. 1936 (J. Ouellet). TD: CNC, 4253.
- Sapromyza pseudovirilis* Shewell, 1971B:6; holotype, female. TL: Tosgoni oovo, 6-10 km N of Ulan-Baator, 1,700 m, Central Province, Mongolia, 4 Jun. 1968 (Z. Kaszab). TD: HNHM.
- Sapromyza spatulata* Shewell, 1938A:116; holotype, male. TL: Abbotsford, Quebec, Canada, 2 Jun. 1937 (G. E. Shewell). TD: CNC, 4254.
- Sapromyza subserrata* Shewell, 1938A:117; holotype, male. TL: Abbotsford, Quebec, Canada, 14 Jun. 1937 (G. E. Shewell). TD: CNC, 4256.
- Sciasminettia* Shewell, 1971B:2; type species: *Sciasmomyia dictaetophora* Hendel, 1907, by original designation. Amur.
- Trisapromyza* Shewell, 1986A:543; type species: *Sapromyza vittigera* Coquillett, 1902, by original designation. Georgia, USA.
- Xeniconneura* Shewell, 1986A:545; type species: *Xenopterella costalis* Curran, 1942, by original designation. Colorado, USA.

Family ODINIIDAE

- Neoalticomerus seamansi* Shewell, 1960A:629; holotype, male. TL: Lethbridge, Alberta, Canada, 6 Jun. 1923 (H. L. Seamans). TD: CNC, 7125.
- Odinia brevitibia* Shewell, 1960A:632; holotype, male. TL: Nova Teutonia, 300-500 m, Brazil, Sep. 1958 (F. Plaumann). TD: CNC, 7126.
- Paratraginops plaumanni* Shewell, 1960A:626; holotype, male. TL: Nova Teutonia, 300-500 m, Brazil, Feb./Mar. 1959 (F. Plaumann). TD: CNC, 7124.

Family OTTIDAE

- Stenopterina foxleei* Shewell, 1962A:197; holotype, male. TL: Robson, British Columbia, Canada, 7 Jun. 1948 (H. R. Foxlee). TD: CNC, 7602.

Family SARCOPHAGIDAE

- Agria housei* Shewell, 1971A:1187; holotype, male. TL: Enderby, British Columbia, Canada, 9 Mar. 1964 (no collector cited), ex *Silpnotia salicis*. TD: CNC, 9431.
- Concondamyia auditrix* Shewell, 1976A:61; holotype, male. TL: 4 mi e of Searchmont near Whitman Dam, Algoma District, Ontario, Canada, 8 Apr. 1970 (R. S. Soper), reared from *Okanagana rimosa* (Say). TD: CNC, 13474.
- Neosarcophaga* Shewell, 1996A:375; type species: *Sarcophaga occidentalis* Aldrich, 1916, by original designation. [*Neosarcophaga* Shewell, 1987C:1168; *Nomen nudum*, no type species among included 9 unnamed species.]
- Sarcophaga citellivora* Shewell, 1950A:245; holotype, male. TL: Vavenby, British Columbia, Canada, 7 Aug. 1950 (no collector cited), reared from Columbian ground squirrel (*Citellus columbianus* Ord.). TD: CNC, 5921.

Family SIMULIIDAE

- Cnephia eremites* Shewell, 1952A:36; holotype, female. TL: Coral Harbour, Southampton Island, Northwest Territories, Canada, 22 Jul. 1948 (G. E. Shewell). TD: CNC, 5988.
- Cnephia saskatchewan* Shewell and Fredeen, 1958B:733; holotype, female. TL: Shell River, Prince Albert, Saskatchewan, Canada, 12 May 1949 (H. Fredeen). TD: CNC, 6644.
- Eusimulium furculatum* Shewell, 1952A:40; holotype, male. TL: Goose River, Churchill, Manitoba, Canada, 9 Jul. 1947 (C. R. Twinn). TD: CNC, 5990.
- Eusimulium innocens* Shewell, 1952A:38; holotype, female. TL: Bell's Corners, Ontario, Canada, 2 Jun. 1950 (G. E. Shewell). TD: CNC, 5989.
- Prosimulium caudatum* Shewell, 1959B:688; holotype, female. TL: Nile Creek, Qualicum, Vancouver Island, British Columbia, Canada, 12 Jun. 1955 (G. E. Shewell). TD: CNC, 6926.
- Prosimulium formosum* Shewell, 1958B:692; holotype, female. TL: Bowser, Vancouver Island, British Columbia, Canada, 13 Jun. 1955 (G. E. Shewell). TD: CNC, 6927.
- Prosimulium fulvithorax* Shewell, 1958B:694; holotype, female, and pupa. TL: Bowser, Vancouver Island, British Columbia, Canada, 7 Jun. 1955 (G. E. Shewell). TD: CNC, 6928.
- Prosimulium vernale* Shewell, 1952A:33; holotype, female. TL: Bell's Corners, Ontario, Canada, 9 May 1950 (G. E. Shewell). TD: CNC, 5987.
- Simulium (Hellichia) johannseni duplex* Shewell and Fredeen, 1958B:734; holotype, female. TL: Shell River, Prince Albert, Saskatchewan, Canada, 26 May 1955 (F. J. H. Fredeen). TD: CNC 6645.
- Simulium (Hagenomyia)* Shewell, 1959A:83; type species: *Simulium pictipes* Hagen, 1880, by original designation. New York, USA.
- Simulium (Hagenomyia) longistylum* Shewell, 1959A:84; holotype, male. TL: Outardes River, Baie Comeau, Quebec, Canada, 21 Jul. 1955 (L. S. Wolfe). TD: CNC, 6695.
- Twinnia biclavata* Shewell, 1959B:686; holotype, male. TL: Bowser, Vancouver Island, British Columbia, Canada, 3 Jun. 1955 (G. E. Shewell). TD: CNC, 6925.

ACKNOWLEDGMENTS

Sincere thanks to J. R. Vockeroth for reviewing an earlier copy of the bibliography and for furnishing the titles of omitted articles, and to M. M. Arnaud, H. K. Court, and A. Borkent for editorial assistance. For library assistance at the California Academy of Sciences I would like to thank L. W. Currie and P. Shea-Diner.

All Taxa Biodiversity Inventory (ATBI) of Costa Rican Diptera

by Jeff Cumming

Monty Wood and I, in collaboration with Manuel Zumbado of the Instituto Nacional de Biodiversidad (INBio), will be coordinating the Diptera TWIG (or Taxonomic Working Group) of the ongoing ATBI initiative in Costa Rica. The ATBI is being conducted throughout the Area de Conservacion Guanacaste (ACG) in northwestern Costa Rica. The ACG is a species-rich area of approximately 100,000 hectares, made up of a mosaic of wet and dry forests with a variety of lowland and lower montane habitats. In several unrelated elements of the Costa Rican fauna such as birds, butterflies, and pimpline ichneumonids, approximately 65% of the total Costa Rican fauna occurs in the ACG, so an ATBI of the Diptera will undoubtedly be a large undertaking involving an inventory of probably well over 10,000 species. In preparation for this, the three of us attended an organization meeting in Beltsville, Maryland on September 21-22, 1996 for TWIG coordinators and Costa Ricans from INBio, the ACG, and the national government. One result of this meeting was to establish Diptera as the next TWIG to be started, joining the first group of eight TWIGS (including Hymenoptera and Coleoptera) which have already completed the initial planning process. A group of approximately 12-15 key dipterists (those with expertise in species-rich groups, considerable experience in Costa Rica or Mesoamerica, etc.) will meet in ACG in late July/ early August to conduct a planning workshop for the Diptera portion of the ATBI, contingent upon the next stage of funding being received by INBio (apparently in the final transfer phase from Norway). Some of the participating dipterists may elect to stay on during the second week of August to help train 65 parataxonomists in the sampling and rough-sorting of Diptera as part of a separate prescheduled course. The dipterists who will be attending the planning workshop in ACG will form the *primary Diptera contacts* of the TWIG. They will be approaching interested colleagues with expertise in allied groups, for additional contributions that will allow complete coverage of the Diptera within the allotted seven year time frame. If you are interested in collaborating in the Diptera TWIG in some way, please contact one of the three coordinators listed below.

Jeff Cumming - cummingjm@em.agr.ca

Monty Wood - wooddm@em.agr.ca

Manuel Zumbado - mzumbado@rutela.inbio.ac.cr

Notice of Change of Venue

It was determined that the next International Congress of Dipterology will be held in Oxford, England, two years from now in 1998. More info will be provided in the next issue.

The Dipterology Fund 1997 Grants Competition ANNOUNCEMENT

by Terry A. Wheeler

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. 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 1997 competition must be received by the Chair of the grants committee on or before March 1, 1997. 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, Quebec,
H9X 3V9 CANADA.

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

The Dipterology Fund Report on 1996 Grants Competition

by Terry A. Wheeler: Chair Of The Dipterology Fund

The 1996 competition for grants from the Dipterology Fund has concluded. The Grants Committee is pleased to report that the following students were offered grants in support of their fieldwork and travel:

- Scott Fitzgerald (Colorado State University). Support for studies of Bibionidae in European entomological collections
- John Wallace (Michigan State University). Attendance at the VI Latin American Congress of Entomology, Mexico.

Details and deadlines on the 1997 competition are found elsewhere in this issue of Fly Times.

Diptera Catalogues on the World Wide Web!!

by Neal L. Evenhuis

The "Catalog of the Diptera of the Australasian and Oceanian Regions", originally published in 1989, is now available for viewing on the World Wide Web. Family chapters on the web are updated incorporating the latest published information. Thus far, about 75% of the families originally published in the catalog are now on the web; the remainder are currently being prepared for uploading onto the web as soon as they are updated. You can see the web version of the catalog at:

<http://www.bishop.hawaii.org/bishop/ento/aocat/>

Authors of papers updating taxa occurring within the regions covered by this catalog are encouraged to send me reprints or photocopies of relevant papers so that the information on the web is as current and accurate as possible.

Also ... The "Catalogue of fossil flies of the world (Insecta: Diptera)" is now on the web. Currently, the web version of the fossil fly catalog is in its infancy. There are not many chapters on the web and many are currently being prepared for uploading as soon as they are updated. The web version of the fossil fly catalog can be seen at:

<http://www.bishop.hawaii.org/bishop/ento/fossilcat/>

The same request as above applies here for fossil Diptera papers. They can be sent to me at the following address. Thanks.

Dr. N.L. Evenhuis,
Bishop Museum,
1525 Bernice Street,
P.O. Box 19000A,
Honolulu, Hawaii,
96817 0916, USA.

tel: (808) 848-4138
fax: (808) 847-8252
email: neale@bishop.bishop.hawaii.org

Forthcoming book

After over a dozen years of research, the bibliographic work, "Litteratura Taxonomica Dipterorum", by Neal L. Evenhuis is due to be published in December, 1996 by Backhuys Publishers, Leiden. This 2-volume work enumerates the non-periodical literature dealing with Diptera taxonomy since Linnaeus' 1758 "Systema Naturae". Over 2,000 separate volumes and fascicles are listed with accurate authorship, titles, and dates of publication; plus detailed publication information is given for each (such as separate editions, translations, reprintings, etc.). Also included in this work are updated lists of references to the biographical, bibliographical, and types and collections information on over 400 authors listed in this bibliography. Portraits and signatures of most of the authors plus title pages of selected works illustrate the 872-page bibliography. For ordering information, contact:

Backhuys Publishers
P.O. Box 321,
2300 AH Leiden,
The Netherlands



PROOF THAT DICK
KNOWS HIS FLIES

North American Dipterists Society Field Meeting
May 3-7, Georgia.

by Dan Hagan

The next NADS Field Meeting will be hosted by Georgia State University. The selected site has a variety of comfortable cabins (dorms or private cottages); the retreat facility can accommodate 40 to 100+ in attendance. Food will be catered at reasonable costs (\$5, 6.50, 7.50: breakfast - lunch - supper) similar to the Archbold NADS meeting. The meeting site is historic in that a colony of settlers sailed up the Savannah River by sailing ship 250 yrs. ago with Gen. James Oglethorpe and landed at the site (Old Ebenezer Settlement), in a grand experiment sponsored by good King George (i.e., state of Georgia is named for George). The site has pool, tennis, basketball and volleyball courts and playing fields.

Dates are set for May 3-7, 1997. This is a nice time to host the meeting (considering factors, e.g., weather, insect activity, flowering plants blooming, etc.). We (Frank French, Sturgis McKeever and myself) will be hosting the meeting. We'll begin on Saturday afternoon, May 3, hold the meetings (with various field trips off to various habitats) and end on Wed., morning May 7. As you may see, we are trying to tie the meeting around a Saturday (overnight), since so many "cheap" rates for airlines require that.

The site is only about 20-30 mins. from Savannah International Airport, and is a short distance off Interstates 95 and 16.

We will be announcing the specific details (costs for registration, food, lodging, field trips, etc.) by mailings ASAP. Furthermore, I hope to put the info on our GSU-BIO homepage (see address below) as soon as we get this nailed down, so the info may be disseminated and accessible.

We hope to have particularly good contingents from both Canadian and U.S. colleagues.

For further information contact Dan at the following:

Dr. D.V. Hagan,
Dept. of Biology,
Institute of Arthropodology and Parasitology,
Georgia Southern College,
Statesboro, Georgia,
30460-8042, USA.

e-mail: dhagan@GaSoU.edu
Phone: 912-681-5495
FAX: 912-681-0845

WWW at <http://www.bio.gasou.edu>

Books and Publications

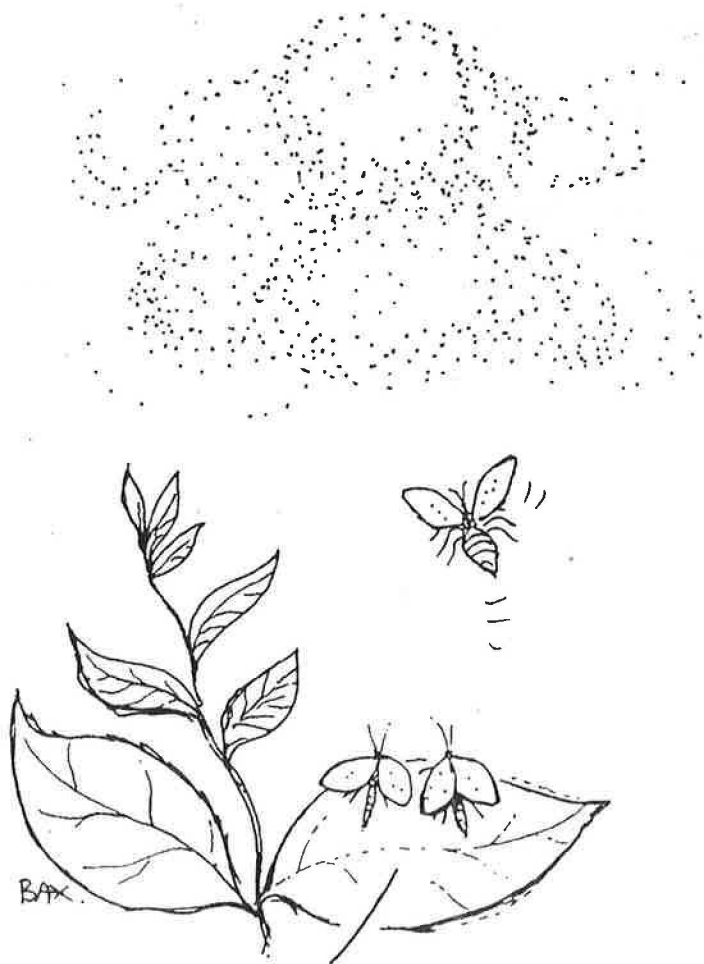
Balschke-Berthold, U. 1994. Anatomie und Phylogenie der Bibionomorpha (Insecta, Diptera). Bonner zoologische Monographien No. 34, 206 pp.

Griffiths, G.C.D. 1996. Review of the papers on the male genitalia of Diptera by D.M. Wood and associates. *Studia dipterologica* 3(1):107-123.

Michelson, V. 1996. Neodiptera: new insights into the adult morphology and higher level phylogeny of Diptera (Insecta). *Zoological Journal of the Linnean Society* 117:71-102.

An important new contribution using skeleto-muscular character states of the adult thorax to examine phylogenetic relationships between the families of Nematocera.

Nagatomi, A. 1996. An essay on phylogeny of the orthorrhaphous Brachycera (Diptera). *The Entomologist's Monthly Magazine* 132:95-148.



FANCY HER GOING DRINKING
AND DANCING IN HER CONDITION.

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,
Crop Protection Program,
Eastern Cereal and Oilseed Research Centre,
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: _____
