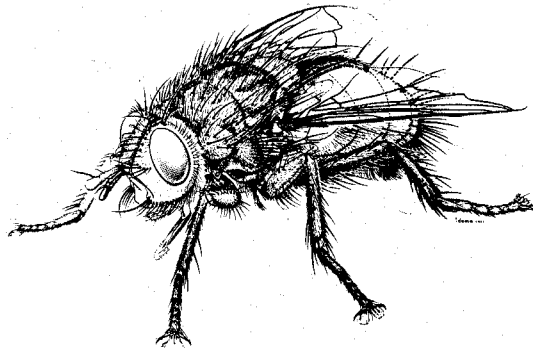


# The Tachinid Times

ISSUE 3

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Jim O'Hara, editor

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Canada, K1A 0C6.

This issue of *The Tachinid Times* is the first from my new address, the Biosystematics Research Centre in Ottawa. I have been hired to work on the systematics of the Tachinidae, which means this newsletter can continue on more solid footing than it had been on formerly — assuming the readership finds it useful and I can find the time and energy to keep it going. Which brings me to a point I wish to emphasize: the content of this newsletter is largely dependent on what you send me. The more of you who contribute, the more informative will be the newsletter and the less work I will have in producing a well-rounded issue. Issue 4 is planned for 10-12 months from now, so be sure to send me your next contributions in plenty of time for inclusion.

## THE SECOND INTERNATIONAL CONGRESS OF DIPTEROLOGY

The Second International Congress of Dipterology will take place in Bratislava, Czechoslovakia, from August 27 to September 1, 1990. It is not too late to register for the Congress, though the deadline for submission of abstracts has passed (December 20, 1989).

The Second Circular lists a workshop on the Tachinidae, though neither Monty Wood nor I have any information about it. Possibly, the workshop has not been organized and will not take place.

Monty Wood will deliver the Plenary Address at the Congress. The tentative topic will be male genitalic homologies in the Nematocera and "orthorrhaphous" Brachycera, thus setting the stage for Monty's workshop on "Homology and Phylogenetic Origins of the Muscomorpha" [title subject to change].

I cannot provide a list of tachinidologists planning to attend the Congress. From here (the BRC), Monty Wood will be attending but I will not.

## M.Sc. AND POSTDOCTORAL POSITIONS (by Steve Marshall)

I would like to encourage non-Canadian applicants for M.Sc. and postdoctoral positions studying parasitic Diptera at the University of Guelph. We have excellent facilities, and faculty interested in biological control, parasitoid physiology and Diptera systematics. Postdoctoral applicants are eligible for the NSERC International Fellowships Program and M.Sc. applicants are eligible for joint CIDA-University of Guelph Training Awards. The M.Sc. Awards are not available to students from Europe or U.S.A.

## PERSONAL NOTES

**Peter Adler** writes: Stuart R. Reitz has joined me as a Ph.D. student whose doctoral dissertation involves a detailed study of the reproductive behavior of *Eucelatoria bryani*. Stuart has been in the Entomology Department [of Clemson University] for one year now and has accomplished much toward understanding the mating behavior of *E. bryani*.

Using *E. bryani*, we are hoping to provide a general model of tachinid mating behavior, and perhaps we will eventually figure out the evolutionary significance of some of the sexually dimorphic characters, such as large pulvilli in the males. As Stuart has indicated [see Stuart's note], there is little published about courtship and mating behavior of tachinids. Therefore, we are particularly interested in knowing about anyone who is working on mating behavior or is familiar with studies that have been published on tachinid mating behavior.

**Stig Andersen** vacationed in Thailand and collected in Morocco during the past year, but I have no further details about those trips. Stig continues work on his book on Scandinavian tachinids (for *Fauna ent. scand.*).

**Paul Arnaud** writes: I have completed short articles on "Parasitism of the scorpions *Anuroctonus phaiodactylus* (Wood) and *Vaejovis spinigerus* (Wood) (Scorpiones: Vaejovidae) by *Spilochaetosoma californicum* Smith (Diptera: Tachinidae), and a review of parasitism in scorpions" by Stanley C. Williams, Paul H. Arnaud, Jr. and Graeme Lowe, and "Historical account and illustrations of the specimen identified as the male of *Lespesia ciliata* (Macquart) by Robineau-Desvoidy, in 1863" by P.H. Arnaud. Both articles are awaiting publication in "Myia".

**Susana Avalos** is a biologist who has been working on the systematics and biology of tachinids of Argentina for over four years. Her major study is a revision of the Argentinian species of the Goniini using numerical techniques. In addition to the two papers listed in the bibliography, Susana has two other papers nearing publication: (1) Tachininae in the Blanchard collection: tribes Juriniini, Macromyini, Tachinini and Voriini, and (2) The tachinid flies of the Collection of Research Centre of Cordoba. Two papers are in preparation: (1) Goniinae in the Blanchard collection [including geographic distribution, hosts and biological data], and (2) The description of a new species of *Uramyia* Robineau-Desvoidy, a parasitoid of *Megalopyge chacoma* Sch. (Lepidoptera: Megalopygidae).

**Bryan Cantrell** relates news from Australia: My own role in QDPI [Queensland Dept. of Primary Industries] continues to move more towards a supervisory one, but I am still enjoying the change. As a result my hands-on time with insects is small. At last Hiroshi Shima and I are coming close to the end of our project on PNG [Papua New Guinea] *Chaetophthalmus*; I hope I

have made the last changes to the manuscript and Hiroshi is working on the illustrations. I have no further plans for work on tachinids at the present time, and any research I am able to do will be directly related to other branch projects – e.g. distinguishing between larvae of two genera of noctuid moths, *Helicoverpa* and *Neocleptria*, to enable their recognition in field ecology studies. **David Barraclough** has submitted his Ph.D. thesis on the systematics of Australian Dexiini and is returning to South Africa in January. I expect he will be re-employed by the Natal Museum, but have no idea on what group of flies he will choose to work on. **Don Colless** has, of course, retired and I doubt that he will find time for any taxonomic work on tachinids; his time is devoted to phylogenetics. So tachinid taxonomy in Australia is treading water for the time being.

**Chao Chien-ming** writes: I have just completed the compilation of "The insect fauna of the Hengduan Mountains Region", which reports the results of the expedition carried out by the Comprehensive Scientific Expedition to the Hengduan Mountains Region, Academia Sinica, 1981-1984. The Hengduan Mountains Region is a transitional zone from the Qinghai-Xizang plateau to the Yunnan Gunizhou plateau and Sichuan basin, located at 26-34°N and 90-104°E. The special topography of this region accounts for the diversity of the insect fauna, which presently totals 4822 species belonging to 1994 genera, 236 families and 20 orders (including 24 genera and 806 species new to science). Within the Tachinidae, 266 species and 88 genera are recorded, including 36 new species.

Word has it that **Roger Crosskey** retired from the British Museum (Natural History) at the end of January 1990. Best wishes are extended to Roger for his retirement years. Roger can be justly proud of his major contributions to dipterology, especially those relating to black flies and tachinids. It is fitting that Hiroshi Shima and Chao Chien-ming named a new genus, *Crosskeya*, after Roger in 1988 (Syst. Ent. 13: 348).

**Keith Harris** tells me that **Ian M. White** is now working on tachinids: Ian will be well known to many dipterists because of his work on Tephritidae, which has included interactions with North American entomologists on the use of European species as biocontrol agents against weeds in Canada and the USA. He is now widening his specialisations in Diptera by working up an involvement in tachinids, which will be mainly in Afrotropical and Oriental genera and species that are relevant to crop protection, especially integrated pest management and biological control.

**Benno Herting**, retired from the Staatliches Museum für Naturkunde in Stuttgart (and replaced by Peter Tschorsnig), continues work on Palearctic Dexiinae.

**Zdravko Hubenov** had no tachinid papers published in 1989 but has three due out in 1990. He had an opportunity to collect tachinids in the north part of the Korean Peninsula last August and September. He writes: The Tachinidae were mainly collected from the blossoms of *Sorbaria*, *Cornus*, *Fagopyrum*, *Erigeron*, *Angelica* and *Senecio*. 550 specimens of approximately 130 species were collected, among which were some Oriental genera (e.g. *Alophorophasia*). Work on this material is of interest because the tachinid fauna of the Korean Peninsula is insufficiently researched (only about 30 species of tachinids are recorded from North Korea). I would be grateful for any information about the Tachinidae of this region.

**Keisuke Iwao** left graduate school at Kyoto University to seek a Ph.D. in the Department of Zoology at Duke University. His main interest now is the evolution of host range (involving herbivores and plants), which developed during his tachinid studies on *Epicampocera succincta* and *Compsilura concinnata*. Keisuke has published one paper on his tachinid work and plans to

complete a couple more in one or two years.

**Newel Jorgensen** has collected extensively in New Mexico, USA, and has over 7000 tachinids from the state and nearby areas. Newel would welcome help with the identification of his tachinid collection.

**Steve Marshall** is best known for his systematic work on the Sphaeroceridae. However, he has been improving his knowledge of the Tachinidae over the past few years and hopes to start formal studies on the family in the not-so-distant future. Steve is building an impressive tachinid collection, enhanced by enviable trips abroad. Steve spent the last several weeks of 1989 collecting in Chile (also spending some time with Raúl Cortés) and at this writing is collecting in Brazil.

**William Nettles** writes: About one year ago I was transferred from College Station, Texas to Weslaco, Texas to work in the Biocontrol of Pests Research Unit, United States Department of Agriculture, Agricultural Research Service. This new unit is the only one in the USA devoted to research on large-scale production *in vitro* and *in vivo* of parasitoids and predators. Dr. Edgar King is the laboratory director for the Subtropical Agricultural Research Laboratory and also is the Research Leader for the Biocontrol of Pests Research Unit. Part of my research is to develop media and methods for the *in vitro* production of tachinids. My main tachinid interests are *Eucelatoria bryani*, *Palxorista laxa*, and *Archytas marmoratus*. I hesitate to mention in *The Tachinid Times* that my colleagues and I are also working on the *in vitro* production of *Trichogramma pretiosum* and *Trichogramma minutum*.

Scientists from Professor Mellini's group at the Department of Entomology, University of Bologna in Italy come to Weslaco to conduct research on the *in vitro* rearing of tachinids. Dr. Alessandro Bratti visited this past summer and Dr. Paolo Fanti will arrive in December [1989]. We are very optimistic about the future use of tachinids reared *in vitro* for augmentation programs.

Professor Mellini of the University of Bologna has what is probably the best collection in the world of tachinid reprints.

**Jim O'Hara:** After a couple of years working with face flies and nematode eyeworms (see first of two papers on this subject: *J. Parasit.* 75: 803-806, 1989) and seeing my Siphonini revision through the press (see bibliography), I was hired in October 1989 by the Biosystematics Research Centre to resume studies on the Tachinidae. My program of study has yet to be fully developed, but my immediate plans call for revisions of the North American species of *Actia* Rob.-Des. and *Cyzenis* Rob.-Des. I am also compiling a list of all taxa named by the late Louis P. Mesnil, with names of the type species of his genus-group taxa and type depositories for his species-group taxa. The main impetus behind this project is to document the Mesnil types in the Canadian National Collection. I also have a tentative long-range plan to update Paul Arnaud's (1978) "Host-parasite catalog of North American Tachinidae" from published and collection-based records.

**Jens Roland** is a Postdoctoral Fellow with the Department of Botany, University of Alberta. He has been researching ecological aspects of the *Cyzenis albicans* – *Operophtera brumata* (winter moth) pair since the early 1980's. Jens is currently investigating chemical cues that attract female *Cyzenis albicans* to foliage and stimulate oviposition (see Jens' first paper on this subject in *J. Ins. Behav.* 2: 487-503, 1989).

The role of *Cyzenis albicans* in the decline of winter moth populations in Nova Scotia has become a classic and frequently-cited example of successful biological control (Embree 1966, *Can. Ent.* 98: 1159-1168). However, in a paper by Jens Roland (1988, *J. Anim. Ecol.* 59: 523-531), a re-analysis of the data suggests parasitism by the winter moth parasitoids *Cyzenis albicans* and

*Agrypon flaveolatum* (an ichneumonid) did not directly cause the collapse of winter moth populations. Instead, predation (possibly by carabid or staphylinid larvae) on winter moth pupae is advanced as the primary cause of mortality, with the pattern of interaction between predation and parasitism being the key to winter moth decline. An important message is to be gleaned from this, as stated in the conclusion: "Measurement of the direct effect of parasitoids (parasitism) may belie their total impact by ignoring the possible indirect interaction with other mortality factors. In selecting potential control agents, absolute levels of parasitism may not be the main factor determining their potential for success." (p. 530)

**Stuart Reitz** writes: I am currently working on a doctoral thesis [at Clemson University, under the supervision of Peter Adler] in which I am examining aspects of the reproductive behavior of *Eucelatoria bryani*. I am interested in mating behavior including the role various courtship elements play in mating success and what types of mate preferences may exist. Another area of interest is oviposition behavior and strategies individual females use in allocating progeny relative to host quality. There has not been a great deal of literature published on the reproductive biology of tachinids, so I would appreciate receiving any information on the subject anyone may have available.

**Vicente Sánchez** is an entomologist with the USDA Forest Service with research interests in biocontrol and population dynamics. Vicente writes: Currently I am developing a research proposal to investigate the relationship of the introduced tachinid *Compsilura concinnata* Meigen to low density populations of its alternate host, *Lymantria dispar*, and how this may correspond to the parasitoids' genetic variability.

**Hiroshi Shima** received a grant from the Japanese Government to collect for a month in the Yunnan Province of southern China. He originally planned to collect in the summer of 1989, but delayed his trip until the end of September, when conditions in China were more agreeable for travel. I have no report about the outcome of the collecting trip.

Congratulations are in order to **Peter Tschorsnig**, who is now a permanent member of the research staff at the Staatliches Museum für Naturkunde in Stuttgart. Peter's time is not devoted entirely to tachinids though, as he is in charge of coordinating all plans for new entomological displays in the Schloss Rosenstein Museum; the museum is closed during the renovation period and is due to reopen in spring 1993. Peter continues to build a dBase computer file on tachinid literature — this monumental task is expected to include all references on the systematics, faunistics and biology of the Tachinidae and may take five years or longer to complete. Additions are still being made to a host-parasite data base.

Peter published a major work in 1985 on the male genitalia of the Tachinidae, entitled "Taxonomie forstlich wichtiger Parasiten: Untersuchungen zur Struktur des männlichen Postabdomens der Raupenfliegen (Diptera, Tachinidae)" (Stutt. Beitr. Naturk. (A) 383, 137 pp.). This work is of great significance to those interested in the classification and phylogeny of the Tachinidae, yet is difficult to fully comprehend without a good command of the German language. To solve this problem, I have submitted Peter's publication to our translation service for translation into English. Translation could take a year or longer. I hope to be able to make copies of the translation available to other interested workers.

**Monty Wood** visited the British Museum (Natural History) twice last year, primarily to study van der Wulp's types of Central American Tachinidae (in connection with his Checklist of Nearctic Tachinidae). At the end of his last trip to the BMNH he ventured over to Copenhagen to meet

with the dipterists there. When back on home turf in the BRC, Monty is kept busy planning for the Bratislava meetings and answering all my queries about our large Canadian National Collection of Tachinidae and other matters relating to tachinids and my new duties as the BRC tachinidologist.

**Joachim Ziegler** was a hobby-tachinidologist until the beginning of 1990. In 1990 he started employment at the Institut für Pflanzenschutzforschung Kleinmachnow in Eberswalde, GDR (he is a certified agricultural engineer). Joachim writes: I became interested in tachinids in 1977 after rearing and collecting butterflies for ten years. My studies and collections have been carried out in my spare time. My private collection comprises about 6000 specimens representing more than 300 species. My interests include host-parasite relationships, ecology, distribution and systematics of European Tachinidae.

During my holidays in May 1989 I collected in Soviet Middle Asia. Unfortunately, the weather was bad. In the Karakum desert (Turkmenia) I observed relatively common *Phasia mesnili* and *Cylindromyia brassicaria* and rare *Cylindromyia gemma*, *Cyrtophleba eremophila*, *Gymnosoma*, *Exorista*, *Chaetogena*, *Amphicestonia* and *Dexia* spp. At lower elevations in Uzbekistan, I found common *Triarthria legeri* and rare *Baumhaueria frontalis*, *Tachina rohdendorfi*, *T. casta*, *Servillia*, *Gonia*, *Linnaemyia* and other spp.

## TACHINID STUDIES AT AGRICULTURE CANADA RESEARCH STATIONS

Soon after I joined the Biosystematics Research Centre, I asked researchers at Research Stations of Agriculture Canada about their involvement with tachinids. My intent was to use the information to help set goals for my own research program, but since the responses may also be of interest to other tachinid workers I have included them here.

**Sheila Fitzpatrick** (Research Station, Agriculture Canada, 6660 N.W. Marine Drive, Vancouver, British Columbia, V6T 1X2): At present, two *Operophtera* species are of concern to the blueberry industry. *Operophtera bruceata*, the native Bruce spanworm, is usually parasitized by a native *Cyzenis* species [*C. pullula*] and is not of economic concern. However, populations of the imported winter moth, *O. brumata*, are increasing and are reducing blueberry yields. *Cyzenis albicans*, the tachinid found in the winter moth's European habitat, has been effective as a biological control agent in Nova Scotia and Victoria, and will probably be released here [Vancouver] next year [1990]. Surveying for the winter moth, the spanworm and their associated tachinids would be easier if there was some means of keying out the tachinids. Specifically, we need to know if the native tachinid attacks winter moth or winter moth-spanworm hybrids.

**Elmer Hagley** (Research Station, Agriculture Canada, Vineland Station, Ontario, L0R 2E0): At the moment I am not working with any tachinids although I am interested in determining the species and their hosts that are present in apple orchards in southern Ontario. My efforts have been concentrated on spring feeding Lepidoptera, especially the oblique-banded leafroller, *Choristoneura rosaceana* Harris, which occasionally assumes pest status in localized areas. Although two tachinids (*Actia interrupta* Cn. and *Pseudoperichaeta erecta* (Coq.)) have been recovered from *C. rosaceana* in the Niagara region, I have not attempted to use either species in biological control programs.

**Peter Mason** (Research Station, Agriculture Canada, 107 Science Crescent, Saskatoon, Saskatchewan, S7N 0X2): I am shifting my research program to biological control and will be

studying parasitoids of canola pests (bertha armyworm, diamondback moth and clover cutworm) in the immediate future. There are numerous tachinids that are parasitoids of bertha armyworm and clover cutworm. In addition, we may study tachinids that parasitize grasshoppers in the future.

**Rob Smith** (Research Station, Agriculture Canada, Kentville, Nova Scotia, B4N 1J5): Rob is attempting to rear *Triarthria setipennis*, a parasite of the European earwig, for field releases.

**Jeff Stewart** (Research Station, Agriculture Canada, P.O. Box 1210, Charlottetown, Prince Edward Island, C1A 7M8): I am not working with any tachinids at present. I may undertake a study of the effectiveness of *Myiopharus aberrans* (Townsend) and *M. doryphorae* (Riley) as biocontrol agents for the Colorado potato beetle in the future.

**Bill Turnock** (Research Station, Agriculture Canada, 195 Dafoe Road, Winnipeg, Manitoba, R3T 2M9): Currently I am completing the writing up of studies of life history, diapause induction and coldhardiness of the Nearctic *Athyrcia cinerea* and the Palearctic *Eutheria consobrina*. We released *E. consobrina* against *Mamestra configurata* (1985-1987) but have not yet confirmed establishment, possibly because host numbers have been low since the release.

Bill is also studying intersex finding in the Tachinidae. Specifically, Bill is attempting to test Monty Wood's hilltopping hypothesis, reproduced here from Volume 2 of the "Manual of Nearctic Diptera":

"The behavior of hilltopping male tachinids is of two types, evidently depending on whether they use their eyes or their antennae predominantly in recognizing a potential female. ... Those species that seem to rely on vision have a narrower frons, i.e. larger eyes, than the female of that species, while their antennae usually do not differ appreciably from those of the female. These males can be seen resting on foliage or on tree trunks in an apparently alert stance, always head down if on a vertical surface. Each male chases any passing object, including other males of their species or other insects, even those much larger than themselves. Bright sunlight seems to be a prerequisite for this activity. If the object pursued proves not to be a female of the same species, the male usually returns to his original perch or to another leaf or portion of tree trunk nearby, and again takes up a waiting stance. Those species that apparently do not rely on vision have their eyes and frontal widths essentially the same as those of their respective females; their antennae, however, specifically the third flagellomeres, are demonstrably longer than those of the female. ... Males of these species do not aggregate at a waiting station and consequently are much more difficult to collect or study. Nevertheless, several species have been observed and collected as they visit specific sites, usually tips of prominent branches, tops of isolated shrubs and other landmarks, hilltops, or prominent isolated tree trunks. ... Bright sunlight may not be as important to this group of species as it is for the visually oriented ones." (p. 1199)

The suggestion that hilltopping male tachinids can be segregated into two groups based on mate searching behavior, and that these behaviors are correlated with eye and antennal sizes, can be tested by measurement of the frons and antennae of males and females of species with known mate searching habits. Bill's interest in this subject stems from a desire to determine if mate searching behavior might affect the success or failure of tachinid importations. If it does, the predictiveness of Monty's hypothesis might prove useful in the choice of tachinid biocontrol agents. Unfortunately, the mate searching behavior of few tachinids is recorded in the literature, so Bill would appreciate help from anyone who can supply such information for specific tachinid species.

## RECENT BOOKS

**Evenhuis, N.L., ed.** 1989. *Catalog of the Diptera of the Australasian and Oceanian Regions.* 1155 pp. (Bishop Museum Special Publication 86. Bishop Museum Press and E.J. Brill.)

Neal Evenhuis is to be commended for production of such a high quality, valuable reference work. One special attribute of this catalog is apt to make it popular among systematists generally. I am referring to the "Literature Cited" (by N.L. Evenhuis, F.C. Thompson, A.C. Pont and B.L. Pyle), which provides issue dates for most of the publications listed. These issue dates will make it possible for researchers to determine the date priority of some works without the time-consuming task of checking library date stamps.

The Tachinidae chapter, written by B.K. Cantrell and R.W. Crosskey, basically extends the coverage, and up-dates the literature, of Crosskey's (1973) "Conspectus of the Tachinidae (Diptera) of Australia".

**Ferrar, P.** 1987. *A guide to the breeding habits and immature stages of Diptera Cyclorrhapha.* Entomograph 8. E.J. Brill and Scandinavian Science Press. Volume 1 [text], pp. 1-478. Volume 2 [figures], pp. 479-907.

Ferrar presents a good, thoroughly referenced, review of the immature stages of the Tachinidae (pp. 367-384), with an extensive compilation of previously-published figures (pp. 853-880). This work is an excellent starting point for anyone beginning a study involving immature tachinids.

**McAlpine, J.F. (ed.) and D.M. Wood, coordinators.** 1989. *Manual of Nearctic Diptera.* Volume 3. Agriculture Canada Monograph 32, pp. 1333-1581.

The third, and final, volume of the *Manual of Nearctic Diptera* is now available. The book contains three separately authored chapters: (1) Phylogeny and classification of the Nematocera, by D.M. Wood and A. Borkent, pp. 1333-1370, (2) Phylogeny and classification of the "Orthorrhaphous" Brachycera, by N.E. Woodley, pp. 1371-1395, and (3) Phylogeny and classification of the Muscomorpha, by J.F. McAlpine, pp. 1397-1518. Corrections and addenda to Volumes 1 and 2 of the *Manual* are given on pp. 1519-1520. Completing Volume 3 is a composite index to the taxonomic names and morphological terms appearing in Volumes 1-3 (pp. 1521-1581). The cost of Volume 3 is \$75.95 in Canada and US\$91.15 outside Canada.

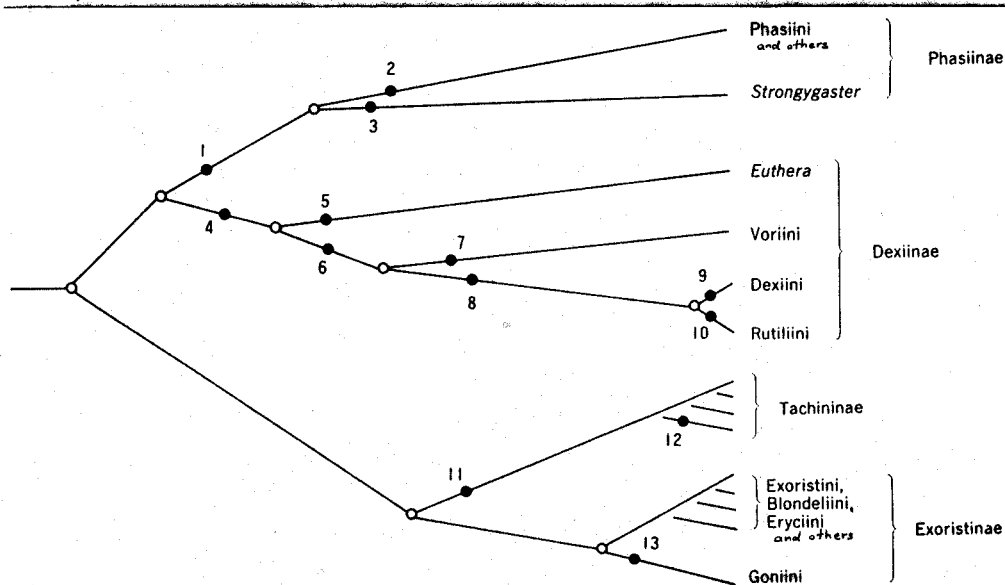
The coordinators of the *Manual of Nearctic Diptera*, namely J.F. McAlpine, B.V. Peterson, G.E. Shewell, H.J. Teskey, J.R. Vockeroth and D.M. Wood, were awarded recently the first annual Thomas Say Award by the Entomological Society of America. The Award is "given for significant and outstanding work(s) in the fields of insect systematics, morphology, or evolution". Of the six coordinators of the *Manual*, only Vockeroth remains a staff member of the Biosystematics Research Centre. McAlpine, Shewell, Teskey and Wood are currently Research Associates of the BRC while Peterson now works for the Systematic Entomology Laboratory (at the USNM) in Washington, D.C.

## RELATIONSHIPS WITHIN THE TACHINIDAE

One of the problems facing tachinid classification is our inability to resolve the evolutionary history of the major lineages of the family. One of the ways in which this problem can be



addressed is through examination of host-related adaptations. A good example of this approach is the cladogram reproduced below, from a recently-published paper by Hiroshi Shima (1989, *Insectarium* 26: 125). The paper gives a popular account of the way of life of tachinids, written for amateur entomologists in Japan (hence the text is in Japanese). Hiroshi kindly translated the figure caption into English for use herein. (Note that some of the inferred relationships are controversial.)



"Fig. 3. **Inferred phylogenetic relationships among major groups of Tachinidae.** A black circle and number indicate ovipositing habit and/or main hosts of each clade (this does not always mean synapomorphy in the sense of cladism). 1: oviparous, 2: parasitoids of hemipterous bugs, 3: parasitoids of ants and carabid beetles, 4: ovoviviparous, 5: parasitoids of bug genus *Eysarcoris*, with hard egg shell, 6: searching first instar larvae, 7: ovoviviparous directly on host body or searching first instar larvae for short distances, 8: searching first instar larvae for long distances, 9: parasitoids of beetle larvae, 10: parasitoids of scarabaeid grubs, 11: ovoviviparous, 12: waiting first instar larvae, 13: microtype eggs."

#### ADDENDA AND CORRIGENDA

Do you have minor additions or corrections you would like to mention concerning a recent publication (preferably your own)? Send them in and I will print them.

Corrections to J.E. O'Hara's, "Systematics of the genus group taxa of the Siphonini" (1989, *Quaest. Ent.* 25: 1-229):

- 1) Homonymy in *Siphona s. lat.*: *Siphona (Aphantorhaphopsis) laticornis* (Malloch 1930) (p. 96) has priority over *Siphona (Siphona) laticornis* Curran 1941 (p. 116). Since I did not catch this homonymy in time to change the latter name in my revision, I have decided to leave the names as they are for a future reviser of *Siphona (Aphantorhaphopsis)* or *Siphona (Siphona)* to deal with.
- 2) p. 108: On the third and fourth lines from the bottom of the page, change "*Stomoxys minuta* Fabricius, 1805" to "*Musca geniculata* De Geer, 1776".
- 3) p. 170: Remove "Book Review" at top of page.

Corrections to Monty Wood's Tachinidae chapter in the "Manual of Nearctic Diptera, Volume 2"

(1987, Agric. Can. Monog. 28):

- 1) The genus *Trismegistomyia* Reinhard (with a single species, *T. pumilis*, known only from Portal, Arizona) was unintentionally overlooked during preparation of the key. Characters for recognizing the genus are given in the original description (1967, Jour. Kans. Ent. Soc. 40: 100-101).
- 2) p. 1210, couplet 42: Delete "15" from among the cited figures in the second half of the couplet.
- 3) p. 1260, couplet 291: "*Campylochaeta* Robineau-Desvoidy" should read "*Campylocheta* Rondani".
- 4) p. 1265, couplet 336: First half of couplet should begin, "Scutum with only one pair of postsutural acrostichal bristles..." instead of "Scutum with only one pair of presutural acrostichal bristles..."

Special note: Easily overlooked in Monty's tachinid key are numerous new generic synonymies. These are proposed in footnotes, usually in the form: "Included here are all species formerly placed in...". The format is regrettably vague, as a result of editorial constraints imposed upon the contributors to the "Manual of Nearctic Diptera". Nevertheless, the indication of new synonymies is clearly implied and should be recognized as such.

## WANTED!!

If anyone has an extra copy of Townsend's Manual of Myiology for exchange or sale, please contact Steve Marshall, Dept. of Environmental Biology, University of Guelph, Guelph, Ontario N1G 2W1.

## PUBLICATIONS OF L. P. MESNIL

I hope to include in each issue of *The Tachinid Times* a listing of the publications of a major tachinidologist. These listings may be particularly useful to readers who do not have access to abstracting journals, computer searches or an extensive library. In this issue I highlight the publications of the late Louis Mesnil, whose long and distinguished career came to an end in 1986 after nearly half a century of publishing on Old World tachinids (see obituary by Benno Herting in Jh. Ges. Naturkde. Württ. 142: 314-316, 1987). As I have mentioned elsewhere in this issue, I am planning to publish a compilation of Mesnil's tachinid names along with information about the type depositories for his species-group taxa. To date, I have checked through the publications below for names proposed by Mesnil (including replacement names and new taxa) and checked the list against the *Zoological Record*. Mesnil names are not always clearly presented in his publications so my list may need a few more additions, but my totals thus far credit Mesnil with one tribe, three subtribes, 168 genus-group names and 824 species-group names!

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- 1950d. Critiques et suggestions à propos de récents travaux concernant les Protachinides d'Afrique. Bull. Ann. Soc. ent. Belg. 86: 104-117.
- 1950e. Tachinidae, Larvaevoridae ou Echinomyidae. Bull. Soc. ent. Fr. 55: 30-32.
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