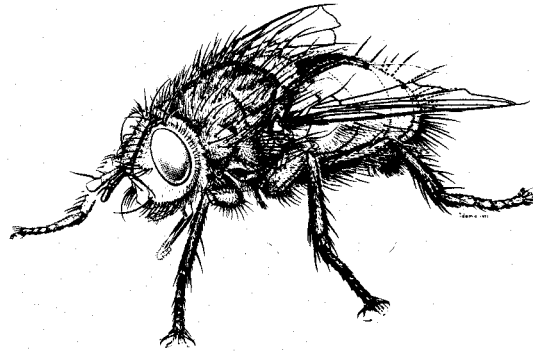


# The Tachinid Times

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By chance more than design, *The Tachinid Times* is becoming a once yearly newsletter with distribution in early February. I think I will try to stick with this schedule in the future because it seems to work well. Interest in the newsletter has grown since last year, but not enough to warrant a change in the frequency of issues. A regular mail-out in February may encourage some of you to send in news voluntarily without waiting for my annual prompting. The mailing list is now approaching 70, with most of the increase attributable to greater representation among researchers in applied entomology. It is my hope to keep *The Tachinid Times* going as long as the feedback is positive and there is news to print.

Report from the Second International Congress of Dipterology, Bratislava, 27-31 August, 1990 (by T. Pape)

Workshop R — Tachinidae.

Chairpersons: S. Gaponov and T. Pape.

The Tachinid workshop was attended by about 15 participants. No formal papers were announced in the program, but the following topics were presented and discussed:

Robert Belshaw gave an update on his progress in producing a revised handbook for the identification of British Tachinidae, and he expressed the hope that he would be able to finish in late 1990 or perhaps in early 1991. Also, he informed us that he has started a part-time Ph.D. program on ecology of the Tachinidae.

Stig Andersen presented an extensive paper on his ideas about homologies in phallic (aedeagal)

structures, especially with regard to internal (endophallic) configuration and bi- and tripartition of sperm-conducting structures.

I (Thomas Pape) gave a brief introduction to my ideas about family limits of the Rhinophoridae with special regard to *Malayia* (Oriental) and *Bezzimyia* (New World) which, in my opinion, should be transferred to the Rhinophoridae. Unfortunately, no information on immatures exists for these two genera. If, however, *Malayia* and *Bezzimyia* are considered as Rhinophoridae, shared character states may give some evidence of trans-antarctic phylogenetic relationships in this family, and more attention should certainly be paid to this. Verner Michelsen informed us that the question of trans-antarctic relationships in the Muscidae and Fanniidae are still unsettled, and we know already (as Monty Wood pointed out at the Congress in Budapest four years ago) that the kangaroo-botfly, *Tracheomyia macropi*, could have dispersed to Australia with marsupials from South America. Thus, we have no external evidence that the Tachinidae should not be old enough for trans-antarctic relationships.

Also, I presented a provokingly (I hope!) different subfamilial classification for the Tachinidae, lumping all species where females incubate — or are suspected to incubate — the eggs in the common oviduct (uterus) for at least some time before deposition, in a huge Tachininae. Still maintaining the Phasiinae (which may all be non-incubating), this leaves an ill-defined rest-group consisting mainly — or only — of the Winthemini and Exoristini, which I gave the name "The *Exorista* genus-group". This

means that the well corroborated Dexiinae becomes subordinate within the Tachininae. (Tachinid subfamilial classification is still very much in need of revision, and I encourage any discussion on this topic in this newsletter).

Finally, Hans-Peter Tschorsnig distributed handouts with information on the very extensive long-term database projects he has going on in Stuttgart, namely: 1) reared Palearctic Tachinidae and their hosts, 2) distribution and ecology of European Tachinidae, and 3) bibliography of world Tachinidae literature. It may be of interest to note that working copies of the host-parasite database and the literature database are available for anybody interested (dBase III or later version is needed). Please send floppy disks (3.5", 720 KB, preferably formatted) directly to Hans-Peter. At present, the host-parasite database will fit on 3 disks, the literature database on 4. If desired, the databases may be converted into text-files, readable by any word processor, in which case only 2 disks are required for each file.

The following presentations (papers of main sections, or posters) were of special interest to tachinidologists (page numbers refer to abstract in abstract volume):

PAPERS

- Gaponov, S. "Some cenogenetical peculiarities of tachinids egg morphology (Diptera, Tachinidae)" (p. 65).  
Gaponov, S. & L. Khitzova. "The comparative eggs morphology of Calliphoridae, Sarcophagidae, Tachinidae, Rhinophoridae" (p. 66).  
Pape, T. "Phylogeny of the Tachinidae family-group" (p. 174).

POSTERS

- Colless, D. "A new family of Australian Diptera". (This poster dealt with 3 as yet unnamed genera containing a total of 15 undescribed species from Australia and New Guinea. This group is very characteristic with an often strikingly bizarre development of the first flagellomere. Species are rhinophorid-like in some details, tachinid-like in others. Possible phylogenetic relationships are still quite obscure, but they are apparently members of the Oestroidea. No abstract was included).
- DeConinck, E. "The comparative morphology of male and female head structures in African Tachinidae and the taxonomic implications" (p. 335).
- Kolomiets, N.G. "Tachinid parasites of *Dendrolimus* and *Lymantria* (Lepidoptera) in the Soviet Union" (p. 116).
- Richter, V. "On generic classification of the tribe Clausicellini (Diptera, Tachinidae)" (p. 191).
- Tkachev, V.M. & A.M. Lapa. "Role of the tachinids (Diptera, Tachinidae) in biological suppression of orchard pests" (p. 241).
- Tschorsnig, H.-P. "Recent projects at the Naturkundemuseum Stuttgart concerning Tachinidae" [no abstract was included].

**Third International Congress of Dipterology**

The next Congress of Dipterology will be held at the University of Guelph in Guelph, Ontario, Canada, 15-19 August 1994. Plans for the Congress are progressing well. For further information contact the Congress organizer, Steve Marshall (address in mailing list).

**North American Dipterists' Society Meeting**

The 2nd meeting of the Society will be held at the Southwestern Research Station near Portal, Arizona, from 31 May to 2 June 1991. The Station, run by New York's American Museum of Natural History, is ideally situated at a moderate elevation in a canyon of the Chiricahua Mountains. The meeting will offer a blend of paper presentations, informal discussions, and group forays into the field for collecting. The last promises to be highly rewarding because the Chiricahua's are noted for their mix of tropical and temperate biota, spread throughout vegetation zones changing altitudinally from desert to spruce-fir forest. Anyone wishing to give a presentation should contact S. Marshall before the end of February 1991.

**A point of view about larval competition in tachinids (by K. Iwao)**

My interest in tachinid flies concerns their larval competitions, especially intraspecific competition within a single host. In many tachinid species, when two or more individuals infect a single host they coexist and share the host, often resulting in smaller-sized adults (scramble competition). Some species exhibit contest competitions, in which only one individual can complete its development in a host. Mechanisms governing such competitions have not been examined except in *Macquartia chalconota*, whose larvae fight each other using their mouth hooks (Mellini and Baronio, 1971). Thus it seems to be commonly accepted that contest competitions are rare in Tachinidae. I, however, found that *Epicamponocera succincta* parasitizing *Pieris* butterflies exhibits a contest type of intraspecific competition, as does an unidentified species parasitizing a tortoise beetle (*Deloyala gutata*), though in neither case did I directly observe the larval fights.

I determined the type of competition in a simple way. If two or more individuals completed their development in a single host, then they were considered as following a scramble competition. If always only one individual came out of a host, then I would dissect the host to look for defeated larvae.

Of course, in most cases only one individual emerged because there was only one parasitizing the host. But sometimes I found a dead body. If the dead larva had grown to some extent then the competition may have been scrambled, even though the outcome was of contest type. A scramble process means there is no direct interference between individuals and the dead larva was defeated simply because it could not get enough nutrition to mature. On the other hand, if the dead body was a young first instar larva then a contest type competition was likely, in that the first occupant of the host eliminated all the following individuals. A young first instar larva is recognizable by its mouth hook being very thin and its posterior part not well developed. Wounds on the dead body support the occurrence of fighting.

Contest and scramble competitions as parasitic strategies have been studied theoretically in hymenopterous parasitoids. However, such theories are probably not applicable to the Tachinidae because, unlike hymenopterans, tachinids in a single host are probably not siblings (since a female usually lays one egg at a time). Thus, there is no intrinsic benefit to sharing a host with others.

I suspect that contest type competition is not rare in the Tachinidae, though the scramble type may be dominant. I am curious about what determines the type of competition in each species. Unfortunately there is too little data about competitions and about tachinid ecology in general to construct hypotheses now. I hope this note stimulates the interest of some people and encourages someone to look at larval competitions in tachinids.

#### **Male postabdomen study translated (by J. O'Hara)**

Hans-Peter Tschorsnig's dissertation on the male postabdomen of the Tachinidae was published in 1985, in German, under the title "Taxonomie forstlich wichtiger Parasiten: Untersuchungen zur Struktur des männlichen Postabdomens der Raupenfliegen (Diptera, Tachinidae)" (Stutt. Beitr. Naturk. (A) 383, 137 pp.). ["Taxonomy of important parasites in forestry: investigations on the structure of the male postabdomen of the Tachinidae (Diptera)."] This important work has been translated into English by the Translation Bureau of the Government of Canada. I would like to make this translation available, but because of its length — nearly 200 pages — the cost of producing multiple copies for general distribution is prohibitive. However, I would be happy to send specific portions of the translation to anyone interested.

#### **Identification of beneficial insects and diseases (by W. Turnock)**

Alberta Agriculture is taking the lead in developing a publication on the identification of beneficial insects and diseases. This illustrated publication will be primarily for use by farmers, secondarily by extension workers, students and gardeners. Photos of these species are being solicited. Tachinid workers could help in this project by making photos available, particularly those of a tachinid parasitoid and its host. At present only a list of available photos is requested. Additional information can be obtained from, or a list of available photos (short descriptive title for each photo), can be sent to: Mr. Keith Price, Alberta Agriculture, Crop Protection Branch, 7000 - 13th Street, Edmonton, Alberta, T6H 5T6.

#### **Dictionnaire Universel d'Histoire Naturelle**

Tachinid systematists should be aware of the 1990 publication by N.L. Evenhuis and F.C. Thompson entitled "Type designations of genus-group names of Diptera given in d'Orbigny's *Dictionnaire Universel d'Histoire Naturelle*" (Bishop Museum Occasional Papers 30: 226-258). The authors list valid type designations for genus-group names of Diptera that are given in d'Orbigny's *Dictionnaire* (a generally overlooked work) and that predate type-species designations cited in the literature ("Catalog of the Diptera of the Australasian and Oceanian Regions excepted"). There are 12 such designations in the Tachinidae, namely for the following genera: *Acemya* R.-D., *Blondelia* R.-D., *Clelia* R.-D., *Dufouria* R.-D., *Gymnostylia* Macq., *Meigenia* R.-D., *Micropalpus* Macq., *Senometopia* Macq., *Smidtia* R.-D., *Sturmia* R.-D., *Winthemia* R.-D. and *Zenais* R.-D. Some of the type-species designated are the same as currently recognized but others are different, and a few are likely to be unacceptable because they would upset nomenclatural stability.

#### **Eggs of *Macroprosopa atrata* (Fallén) (Tachininae) (by S. Gapanov)**

The host of this species is unknown. However, the egg structure of *M. atrata* allows us to predict that such eggs are attached by the adult female on to the host's body. First of all, the egg of *M. atrata* is similar to typical exoristine macrotype eggs except that it has almost full incubation in the uterus. The chorion is divided into a dorsal (convex) and ventral (concave) surface. The dorsal part of the chorion

has a polygonal system and typical plastron. The aeropylar zone is situated on the anterior egg pole and contains round and oval cripts. There are no cripts and polygonal system on the ventral part of the chorion, which serves for the attachment to a host.

Such egg structure is not typical for membranous tachinid eggs and may represent a "transition-form" between exoristine macrotype and Tachininae eggs.

#### Assistance requested

Neal Evenhuis is compiling a database on all Diptera generic names. As part of this task Neal is researching the dates of various publications to ensure accurate dating. He is in the process of dating the fascicules of *Genera Insectorum* and would like to hear from anyone having notes about the dating of any of the fascicules or who can provide a list of library receipt dates for them.

#### International Organization for Biological Control (from IOBC leaflet)

This is the only worldwide Organization promoting biological and integrated control of noxious animals and plants. The IOBC is also a Commission of the International Union of Biological Sciences, with liaison status with the Food and Agriculture Organization of the United Nations, FAO. The goal of the IOBC is to stimulate the scientific activities around the world in order to develop effective and harmless methods of controlling pest species. The research operations concentrate on the use of biological control agents, whether alone or in combination with other control measures in the general frame of integrated pest management. To this end, IOBC is maintaining a number of activities, including: 1) publication of scientific literature (the quarterly journal *Entomophaga*, special Bulletins and Bibliographies, etc.), 2) dissemination of information through regular Newsletters and other relevant documents, 3) organization of Working Groups devoted to the study of a problem of particular importance and open to interested scientists of all continents, 4) provision of advice and training through courses, etc., 5) cooperation with national authorities as well as with non-government agencies, and 6) organization of scientific meetings and symposia. To join or to get more information, write: IOBC, The Secretary-General, J.P. Aeschlimann, CSIRO Biological Control Unit, 335 avenue Parguel, 34100 Montpellier, France.

#### A message from E.W. Classey Ltd.

E.W. Classey is now producing a series of special subject lists in addition to their regular catalogues. If interested, write E.W. Classey Ltd. (P.O. Box 93, Faringdon, Oxon SN7 7DR, England) and ask to be placed on their mailing list for literature about the Diptera (and other orders, if desired).

#### Wanted

Anyone having for sale a copy of the hard-to-come-by "Entomophagous Insects" by C.P. Clausen (1962), is asked to contact K.P. Lim (address in mailing list).

#### PERSONAL NOTES

John Amoroso is a graduate student at the University of Florida studying parasitism of *Scapteriscus* mole crickets by the tachinid *Ormia depleta*. Three species of *Scapteriscus* have become major pests of turf and pasture grasses in coastal areas of the southern United States since their introduction from South America. *Ormia depleta*, a native parasitoid of the three *Scapteriscus* species in South America, was first released in Florida in 1988 and has since become established. John is studying the rate of parasitism of *Scapteriscus* species by *Ormia depleta* and the geographic spread the parasitoid.

David Barraclough writes: I presently have a permanent post in the Entomology Department of the Natal Museum, where it is likely that I will work on both acalyptrate and calyptrate Diptera. My Ph.D. on the Australasian Dexiini was awarded at the beginning of April 1990 and a revised version was submitted for publication in *Invertebrate Taxonomy* in October. I have also had 2 other small papers on Tachinidae accepted for publication, one of these describing an economically significant new species of *Schembria* Rondani (parasitizing *Eldana saccharina*, the sugarcane borer) in Natal, South Africa. Plans for future work on the Tachinidae are likely to involve revisionary studies of genera of potential economic significance in southern Africa.

Bryan Cantrell has accepted a managerial position in the Entomology Branch of the Department of Primary Industries (Queensland, Australia) and has no further work planned on the Australian Tachinidae.

**Ronald Cave** writes: Inventories of natural enemies of several key pests are turning up many tachinids, especially those which attack noctuid larvae. Thanks to **Norm Woodley**, some of these have been identified; others remain to be examined by specialists. From the fall armyworm have come six genera and eight species. From the stripped grasshopper have come eight genera and nine species. Our collection currently contains about 900 specimens, of which about 50% are not identified to genus. The collection currently holds only 17 identified genera of Tachinidae. One of our holdbacks is literature; we welcome any literature on tachinids. Specimens are available for study, just write to me about your interests. For those wishing to visit the collection, excellent facilities (laboratory and housing) are available. Field collecting is good.

In our collections of stripped grasshopper larvae, we have observed a number of cases of successful (i.e. both parties develop to adulthood) multiparasitism involving tachinids. These associations include *Lespesia* with *Chetogena*, *Lespesia* with a sarcophagid and *Lespesia* with the gregarious ichneumonid *Scambus albitibia*. It appears that fewer *Scambus* per host are produced when *Lespesia* is present.

**Raúl Cortés** writes: I am now a Graduate Research Professor and an entomologist at the Instituto de Entomología, Universidad Metropolitana de Ciencias de la Educación, in Chile. I no longer teach, but do only taxonomic and biological research on Chilean and Neotropical Tachinidae and a bunch of other Calyptrate Diptera. I also direct at least one research thesis on Diptera every year (except none in 1990) and act as Editor of our revista *Acta Entomologica Chilena*. During 1990 I published only one short paper, "Voriini genera of Chilean Tachinidae", jointly with **Christian Gonzalez**, in *Memorias Instituto Oswaldo Cruz*, Rio de Janeiro, (1989) 1990 (in a volume honoring an old friend, Professor Dr. **Hugo de Souza Lopes**, on his 80th anniversary). In volume 16 (1990) of our *Acta Entomologica Chilena* appears a detailed review by myself on J.E. O'Hara's revision of the Siphonini. I also kept busy in 1990 by collecting in the north and south of this long narrow country, updating our Institute's Diptera collection, identifying tachinids brought to my attention, and performing other miscellaneous duties. Anyway, at the age of 75, my intention is to retire in August or September of 1991 after 52 years of active duty in Chilean Universities. I intend to concentrate my remaining years on my two hobbies, writing and reading.

**Roger Crosskey** writes: Although I had to retire from the British Museum (Natural History) in January, having reached the advanced age of sixty, I do not intend hanging up my microscope just yet. Having several uncompleted interests in the blackflies, however, means that I'm unlikely to be reactivated with the Tachinidae for quite a while. Still, my interest in them is alive and well, and my tachinidological diapause may one day be broken by the recollection that lots of interesting "undescribeds" are at my fingertips awaiting attention — new species, for example, among my New Guinea specimens and new southern African genera in the BM's unworked material. In the meantime, I should still like to receive reprints, especially of any taxonomic papers about Afrotropical and Oriental-Australasian tachinids.

**Angieszka Draber-Mońko** writes: I have just completed the compilation of a "Checklist of Diptera, Calypterae of Poland", which records 1305 species belonging to 401 genera and 13 families. Within the Tachinidae, 470 species and 209 genera are represented. I am now finishing a work on the Tachinidae of the Holy Cross Mountains (Góry Świętokrzyskie) in Poland. In this work 345 tachinid species are recorded (including 11 new to the Polish fauna), based on investigations carried out from 1980-1985 in twelve natural habitats.

**Claude Dupuis** writes: Je suis très occupé par ses fonctions de membre du Conseil scientifique et de membre du Conseil d'Administration du Muséum national d'Histoire naturelle. Il travaille depuis plusieurs années à un ouvrage pour une connaissance critique des méthodologies taxinomiques et de leurs bouleversements liés à la "révolution hennigienne". Néanmoins il s'intéresse toujours activement et attentivement à tout ce qui concerne la biologie et la taxinomie des Tachinaires et il poursuit chaque été à Richelieu (Indre et Loire, France), ses recherches, observations et expériences sur la biologie des Phasiinae. Il continue à lire et à utiliser les travaux des tachinologistes et apprécie toujours avec le plus grand intérêt la réception des separata de leurs travaux taxinomiques, faunistiques, biologiques en quelque langue que ce soit.

**Saul Frommer** writes: The identified Tachinidae in our collection occupy some 27.5 drawers, not all of which are filled to capacity. Regional strength is southern California. Most of the determinations can be attributed to Reinhard, Sabrosky and Guimaraes.

I have no estimate of the percent of reared material. We have several drawers filled with undetermined material but have no one sufficiently competent to sort it. Because I must take care of all curatorial chores as well as other obligations, it is difficult for me to attempt sorting our tachinids. I would be very happy to place such material on loan to anyone who might be capable of sorting it, even if only to genus.

Serge Gaponov writes: The subject of my research is tachinid eggs. The egg stage, to my mind, is important in the study of relationships among different groups of flies, in the study of fly ecology, etc. During the past four years I have been studying the chorion structure and special features of the egg surface and aeropyle.

My papers about tachinid eggs were published in the VINITI-system. (But note that papers in the Central Soviet journals are not published until 2-3 years after their submission.) These papers include a general review of microtype and macrotype eggs. I have prepared three papers about macrotype phasiine eggs (genera *Gymnosoma*, *Chytiomyia*, *Subclytia*, *Ectophasia*, *Heliozeta* and *Cistogaster*) and the eggs of *Lecanipa bicincta* Mg., *Winthemia* and *Nemorilla*. I am now going to write some papers about the eggs of the Exoristini, Eryciini, Blondeliini and Goniini. I have material ready for these studies. Egg descriptions will be illustrated with figures taken by a scanning electron microscope. Some egg transformations and features in the Tachinidae have affected the way in which tachinids parasitize their insect hosts.

Simon Grenier writes: In cooperation with French and Cuban scientists, I plan to conduct some studies about the genetics of *Lixophaga diatraeae*. I would be grateful for any information about the existence of different strains of *L. diatraeae*, or of other parasitoids of sugar cane borers.

During a recent visit to Cuba I discovered that *L. diatraeae* is widely used there in inundative releases in sugar cane fields. The tachinids are reared in 41 Centers for Entomophagous Reproduction, located in different parts of the island; 43 million flies were released in 1989.

Harry Gross writes: My primary objective is the advancement of alternative strategies for managing the seasonal dynamics of the corn earworm/cotton bollworm, *Helioverpa zea* and the fall armyworm, *Spodoptera frugiperda*, primarily through augmentation of tachinid parasitoids against the incipient seasonal

generation. Major emphasis is placed on *Archytas marmoratus* Townsend, with secondary interest in *Eucelatoria rubentis* (Coquillett) and *Eucelatoria bryani* Sabrosky. Supporting research includes: 1) the development of efficient and economical methods of mass propagating *A. marmoratus*, 2) defining pre- and post-release conditions that encourage maximum retention within targeted agroecosystems, and which enhance parasitoid performance against host species, 3) conducting field release and evaluation studies with selected laboratory-reared parasitoids, 4) defining parameters that influence seasonal population dynamics, and 5) understanding overwintering strategies.

Abel Henry wrote to correct an error I had made in the bibliography of issue 3 of *The Tachinid Times*. I cited the authorship of his paper as "Abel, H.G." instead of as "Henry, A.G." Sorry!!

Zdravko Hubenov continues to collect literature about the Tachinidae of East Asia for his work on Korean tachinids. He is hoping to publish a systematic list of the Tachinidae of Bulgaria in the near future. Unfortunately, the economic problems currently facing Bulgaria are affecting the funding of research and publications in that country.

Nikolai Kolomiets writes: During the past year, besides my journey to Bratislava, I have concentrated on three subjects:

- 1) The Novosibirsk entomologists organized and in August held the 5th recurrent allunion symposium on dipterology. More than 150 specialists enjoyed the four sections. There were 3 reports on tachinids. Most reports pertained to the problem of blood-sucking insects and Hypodermatidae in Siberia.
- 2) I have prepared for publication a small monograph on *Ectropis extersaria* Hbn. (Lepidoptera, Geometridae). This species had a major outbreak over a large area. The tachinids *Rhacodinella apicata* Pand. and *Peribaea fissicornis* Strobl were recorded among the natural enemies of *E. extersaria*.
- 3) The inventory of parasitic and predatory insects of the most important pests of the forests of the USSR was completed. This was published in the following three reports: 1987, "Insects - parasites and predators of the gypsy-moth (*Lymantria dispar* L., Lepidoptera) from the Asiatic part of the USSR"; 1989, "Insect parasites and predators of the pine moth (*Dendrolimus pini* L., Lepidoptera) of the USSR"; 1990, "Insects - parasites and predators of nun moth (*Lymantria monacha* L., Lepidoptera) of the USSR" [complete citations given in bibliography].

I have in my collection thousands of flies from different areas of Siberia. The majority of these are pinned and labelled.

**K.P. Lim** writes: I did my undergraduate degree at the National Taiwan University in Taipei, Taiwan. I then earned my M.Sc. and Ph.D. degrees in Entomology from McGill University, Montreal, Canada. In 1980 I worked for a short period as a Visiting Fellow with Agriculture Canada in London, Ontario. In July 1980 I became a Research Scientist at the Newfoundland Forestry Centre, working on biological control. Since that time I have been studying the biological mortality factors of important forest pests such as the spruce budworm, hemlock looper and blackheaded budworm. I initiated a biological control project in 1981 on the introduction of *Olesicampe geniculatae* Quednau & Lim (Hymenoptera: Ichneumonidae) for the control of the mountain-ash sawfly, *Pristiphora geniculata* Htg. (Hymenoptera: Tenthredinidae) in the city of St. John's. The parasite is now established and has kept the host under economically acceptable control. Part of my current and future research involves the study of the basic biology and field ecology of *Winthemia occidentis* Reinhard (Diptera: Tachinidae), a parasite introduced for the control of the hemlock looper.

**Steve Marshall** collected many tachinids in Brazil, Chile and Argentina last year but has had little chance to look at them because of more pressing commitments on sphaerocerid projects. He hopes to curate a portion of the Guelph tachinid collection this winter. The Guelph insect collection is moving from its current temporary quarters to new space, with new drawers and new cabinets, in February 1991. As noted elsewhere in this newsletter, Steve will be hosting the next Congress of Dipterology at the University of Guelph in 1994.

**Peter Mason** writes: Studies have been initiated on the ecology of tachinids belonging to the bertha armyworm (*Mamestra configurata* Walker) parasitoid complex. Interspecific competition studies on *Athrycia cinerea* (Coquillett) and *Panzeria ampellus* (Walker) and hymenopterous parasitoids are in progress. We hope to determine the efficiency of these tachinids as parasites of and competitors for the bertha armyworm and other host species.

**Jim O'Hara**: My first tachinid revision since joining the Biosystematics Research Centre is currently under review for publication — a revision of the North American species of *Actia* Rob.-Des.

Eight species are recognized, including four new. I am now working on revisions of the North American species of *Cyzenis* Rob.-Des. and *Ceromya* Rob.-Des. My plans to tabulate the tachinid taxa described by L.P. Mesnil and to begin a host-parasite database for Nearctic tachinids have not progressed much since last year. I hope to attend the 2nd Meeting of the North American Dipterists' Society in Portal, Arizona, this summer.

**Thomas Pape** has accepted a position as associate Professor at the Danish Bilharziasis Laboratory, University of Copenhagen. His main responsibilities are ecology and control of African mosquito vectors of malaria and lymphatic filariasis, though he is also involved with the teaching of African students in Denmark. Thomas continues his research on tachinoid flies as time permits (more about his tachinoid research in his report from the Bratislava Congress elsewhere in this newsletter).

**Stuart Reitz** writes: My work with *Eucelatoria* is coming along fairly well. I've found a couple of characteristics in the larval mouthparts to distinguish *E. bryani* and *E. rubentis* — at least I can distinguish them as second and third instars; the first instars are a bit more problematic at this point. [Ed. note: Stuart is interested in studying interactions between the larvae of *E. bryani* and *E. rubentis* in the same host.] As far as other research goes, I am continuing to study the courtship and mating behavior of *Eucelatoria* species. A paper by Peter Adler and I on the courtship and mating behavior of *E. bryani* is scheduled to be published in the January issue of the *Annals of the Entomological Society of America*. Currently I am working on a comparison of the courtship behaviors of *E. bryani* and *E. rubentis*. If time allows, I would like to extend this comparison of behaviors to some other members of the family.

**Knut Rognes** intends to devote the next several years to the study of *Pollenia* (Calliphoridae).

**Vicente Sánchez** works for the Forest Service of the U.S. Dept. of Agric. and is also pursuing a Ph.D. at the University of Massachusetts in Amherst. He writes: I am interested in tachinids of potential value to biological control of forest Lepidoptera. In particular, I plan to start a genetic study of enzyme polymorphism in populations of *Compsilura concinata* Meigen this spring as part of my dissertation research.



**Hiroshi Shima** writes: I had planned to attend the Bratislava Diptera Congress last summer, but instead had to go to Yunnan, China, again. I stayed in Yunnan for about 40 days from late July onward, traveling from the southernmost area of Yunnan, Men-la, toward the north, Si-mao, Pu-er, Jing-gu and Jing-dong. I collected some 2000 tachinid specimens during the trip. At Mt. Ailaoshan, east of Jing-dong, there is a natural reserve area where a vast native evergreen forest remains; five species of *Servillia* were found there at the same time and place. I really see that this genus is very diverse in China, though I have not studied my specimens yet. During my first trip to Yunnan in autumn of 1989 I collected about 2500 tachinid specimens. Almost all of them have been sorted except for those belonging to *Palexorista* and *Blepharipa* — genera comprising about 200 species. There seems to be a closer relationship between the tachinid faunas of Yunnan and Japan than I had expected. I am hoping to prepare a short paper on Yunnan *Winthemia* in cooperation with Professor Chao Chien-ming. My plans to revise Oriental *Carcelia* and *Blepharipa* have scarcely progressed. [Ed. note: Hiroshi is scheduled to present a paper about tachinids at the XVII Pacific Science Congress (Honolulu, Hawaii, 27 May to 2 June 1991) in a symposium entitled "Gondwanan-Pacific Diptera Systematics: the developing picture".]

**Hans-Peter Tschorsnig** writes: My projects are the same as the years before — completing keys for the Central European Tachinidae, compiling faunistic and ecological data of European Tachinidae, compiling host-data of Palearctic Tachinidae and building a bibliography of tachinid literature worldwide. The progress of my work is slow because I went to Spain twice (early spring and mid-summer) in 1990 to collect Tachinidae. I am now getting together the results of the last 10 years of collecting in Spain for a little publication. **Benno Herting** is currently revising the older host records of European Tachinidae in literature up to the year 1920. As soon as he has completed and published his results (maybe in 1991), I will put his data in the database.

**Bob Wharton** writes: The insect collection at Texas A&M University contains a large number of tachinids collected by H.J. Reinhard when he was curator of the A&M collection. The vast majority of this material is from Texas and currently occupies 25 Cornell-type drawers. The collection contains 197 genera and 382 determined species. There are 5 additional drawers of undetermined Tachinidae. Correspondence regarding tachinid loans or

availability of Reinhard reprints should be directed to the curator of the A&M collection, Dr. H.R. **Burke**. [Ed. note: The greater part of the Reinhard Tachinidae collection was purchased years ago by, and resides in, the Canadian National Collection in Ottawa.]

**Susan Wineriter**, a research assistant at the University of Florida, is responsible for developing a laboratory rearing method for the South American tachinid *Ormia depleta*, an introduced parasitoid being used in Florida for the attempted biocontrol of three South American species of mole crickets (*Scapteriscus* spp.) that are causing costly damage to turf and pasture grasses.

**Norm Woodley** is describing a new tachinid species parasitic on a pyralid moth, *Eoreuma loftini*, in Mexico. The pyralid has become a pest of sugarcane in Texas and the tachinid will be used in a biological control program against it. The new species of tachinid belongs to *Lydella* or to an undescribed genus near it.

**M. Wysoki** writes: I am working on biological control of insect pests, particularly pests of subtropical fruit. I consider tachinid flies to be very important in biological control; in a survey of the natural enemies of the most important avocado pest in Israel, the giant looper (*Boarmia (Ascotis) selenaria* Schiff., Geometridae), we find that several tachinids have an influence on the pest population: *Compsilura concinnata* Meigen, *Exorista* sp. (near *sorbillans* Wiedemann), *Strobliomyia* [Ed. note: *Peribaea*] *tibialis* (Robineau-Desvoidy).

**Joachim Ziegler** informs us that the political changes in Germany have resulted in great changes to his Institute, one of which has been the re-establishment of his Institute's historical name, the *Deutsches Entomologisches Institut*. The Institute had been called the Institut für Pflanzenschutzforschung Kleinmachnow for a number of years.

#### ADDENDA AND CORRIGENDA

Corrections to B.K. Cantrell and R.W. Crosskey's Tachinidae chapter of the "Catalog of the Diptera of the Australasian and Oceanian Regions" (1989, ed. N.L. Evenhuis):

- 1) p. 763, line 3, correct *Myothryia* to *Myoethryia*.
- 2) p. 778, correct *sorocula* to read *sororcula*.



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

1) p. 67, change "*Gymnophthalma* 1838, Lioy, 1864" to "*Gymnophthalma* Lioy, 1864".

Corrections to D.M. Wood's "A taxonomic conspectus of the Blondeliini of North and Central America and the West Indies (Diptera: Tachinidae)" (1985, *Mem. Ent. Soc. Canada* 132):

1) Abstract, p. 3, change "*Policheta crassisetosa*" to "*Polocheta crassispinosa*".

2) p. 23, 3rd line of description of thorax, change "Fig. 24" to "Fig. 25".

3) *Metarrhinomyia* Townsend synonymized with *Myiopharus* Brauer and Bergenstamm on p. 62 and with *Opsomeigenia* Townsend on p. 68. It is not known at this time which synonymy is correct.

#### TACHINID PUBLICATIONS OF C. W. SABROSKY

As in past issues of *The Tachinid Times*, I have included a section on the tachinid publications of an individual who has contributed significantly to the field of tachinid research. Curtis Sabrosky's tachinid publications are highlighted in this issue. Curtis has also published many papers on other groups of Diptera and is widely known for his nomenclatural expertise.

1947. A synopsis of the larvaevorid flies of the genus *Eudejeania*. *Proc. U.S. Natl. Mus.* 97: 141-156.
1947. The identity of *Winthemia tibialis* Reinhard (Diptera, Larvaevoridae). *Proc. Ent. Soc. Wash.* 49: 249.
1948. *Winthemia citheroniae*, new species, with notes on the correct name of *W. cecropia* (Diptera, Larvaevoridae). *Proc. Ent. Soc. Wash.* 50: 63-67.
1950. Notes on Trichopodini (Diptera, Larvaevoridae), with description of a new parasite of cotton stainers in Puerto Rico. *J. Wash. Acad. Sci.* 40: 361-371, 11 figs.
1951. Correction on *Acaulona peruviana* Tns. (Diptera, Larvaevoridae). *Proc. Ent. Soc. Wash.* 53: 210.
1952. The importance of associating reared adults with their immature stages. U.S. Dept. Agr., Bur. Ent. & Plant Quar., processed publ. ET-300, 2 pp.
1952. A new larvaevorid fly parasitic on tortoise beetles in South America (Diptera). *J. Wash. Acad. Sci.* 42: 325-327.
1953. Taxonomy and host relations of the tribe Ormiini in the western hemisphere (Diptera, Larvaevoridae). *Proc. Ent. Soc. Wash.* 55: 167-183.
1953. Taxonomy and host relations of the tribe Ormiini in the western hemisphere (Diptera, Larvaevoridae). II. *Proc. Ent. Soc. Wash.* 55: 289-305.
1955. The taxonomic status of the armyworm parasite known as *Archytas piliventris* (Van der Wulp) (Diptera:

- Larvaevoridae). *Fla. Ent.* 38: 77-83, 6 figs.
1963. [Sabrosky & P.H. Arnaud, Jr.] A holotype problem and a new specific name in *Pseudochaeta* (Diptera: Tachinidae). *Ent. News* 74: 155-156.
1965. Hosts of the tachinid tribe Eutherini (Diptera). *Proc. Ent. Soc. Wash.* 67: 61.
1965. [Sabrosky & P.H. Arnaud, Jr.] Family Tachinidae. In *A Catalog of the Diptera of America north of Mexico*. Pp. 961-1108.
1966. Opposition to the proposed designation of a type-species for *Phasia* Latreille. *Bull. Zool. Nomencl.* 23: 9-11.
1967. Notes on the tachinid genus *Cylindromyia* in North America (Diptera). *Proc. Ent. Soc. Wash.* 69: 60-63, 5 figs.
1967. Further comments on the type species of *Phasia*. *Bull. Zool. Nomencl.* 24: 68.
1967. Corrections to A Catalog of the Diptera of America North of Mexico. *Bull. Ent. Soc. Amer.* 13: 115-125.
1969. A review of the genus *Juriniopsis* Townsend (Diptera: Tachinidae). *Fla. Ent.* 52: 79-90, 10 figs.
1969. [Sabrosky & R.W. Crosskey.] The type-material of Tachinidae (Diptera) described by N. Baranov. *Bull. Brit. Mus. (Nat. Hist.), Ent.* 24: 27-63.
1970. [Sabrosky & C.J. DeLoach, Jr.] A new *Winthemia* parasitic on the tobacco hornworm (Diptera: Tachinidae). *Proc. Ent. Soc. Wash.* 72: 172-176.
1970. [Sabrosky & B.H. Braun.] A tachinid parasite of fireflies (Diptera, Tachinidae; Coleoptera, Lampyridae). *Ent. News* 81: 185-187.
1971. The type-species of *Siphona* Meigen, 1803, and *Haematobia* Lepeletier & Serville (Insecta: Diptera). *Bull. Zool. Nomencl.* 27: 234-237.
1971. Additional corrections to A Catalog of the Diptera of America North of Mexico. *Bull. Ent. Soc. Amer.* 17: 83-88.
1972. [Sabrosky & B.H. Braun.] Parasitism of milkweed beetles, *Tetraopes* (Diptera: Tachinidae - Coleoptera: Cerambycidae). *Proc. Ent. Soc. Wash.* 74: 129.
1973. Identification of *Winthemia* of America north of Mexico, with a revised key to the females (Diptera, Tachinidae). *Ann. Ent. Soc. Amer.* 66: 1035-1041.
1973. A revised key to the species of *Cordyligaster* Macquart (Diptera: Tachinidae). *Studia Ent.* 16: 217-222.
1974. In defense of Robineau-Desvoidy. *Mosquito Syst.* 6: 220-221.
1975. *Chaetophlepsis plathypenae*, a new parasite of the green cloverworm, with a key to *Chaetophlepsis* and *Parahypochoaeta* (Diptera, Tachinidae). *Ann. Ent. Soc. Amer.* 68: 43-50, 5 figs.
1976. [Sabrosky & R.C. Reardon.] Tachinid parasites of the gypsy moth, *Lymantria dispar*, with keys to adults and puparia. *Misc. Publ., Ent. Soc. Amer.* 10(2): 1-126.
1977. A new *Lespesia* confused with *L. aletiae* (Diptera: Tachinidae). *Proc. Ent. Soc. Wash.* 79: 142-145.
1978. Tachinid parasites of *Heliothis* in the Western Hemisphere (Diptera; Lepidoptera). *Proc. Ent. Soc. Wash.* 80: 37-42.
1978. A third set of corrections to "A Catalog of the

- Diptera of America North of Mexico". Bull. Ent. Soc. Amer. 24: 143-144.
1979. *Lespesia* Robineau-Desvoidy, 1863: Proposed designation of a type-species under the plenary powers (Diptera, Tachinidae). Bull. Zool. Nomencl. 35: 243-247.
1980. A revised key to the Nearctic species of *Lespesia* (Diptera: Tachinidae). Ann. Ent. Soc. Amer. 73: 63-73, 4 figs.
1981. A partial revision of the genus *Eucelatoria* (Diptera, Tachinidae), including important parasites of *Heliothis*. U.S. Dept. Agric., Tech. Bull. 1635, iv+18 pp, 14 figs.
1983. The type specimen of *Eusisyropa boarmiae* (Coquillett) and a new specific name for the species (Diptera: Tachinidae). Proc. Ent. Soc. Wash. 85: 251-255.
1988. Rapport sur les Myodaires du Docteur Robineau Desvoidy, 1826: proposed nomenclatural suppression. Bull. Zool. Nomencl. 45: 283-287.
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Abdul-Rassoul, M.S., Dawah, H.A., Othman, N.Y. and H.B. Al-Gailany. 1988. Records of insect collection, Part II, in Iraq Natural History Museum. [Paper not seen; language?] Bull. Iraq Nat. Hist. Mus. 8: 1-10.

Abel, H.G. [Issue 3 of The Tachinid Times incorrectly listed a publication under the name H.G. Abel instead of Abel G. Henry. The publication is repeated below under the proper surname, Henry.]

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