The Tachinid Times

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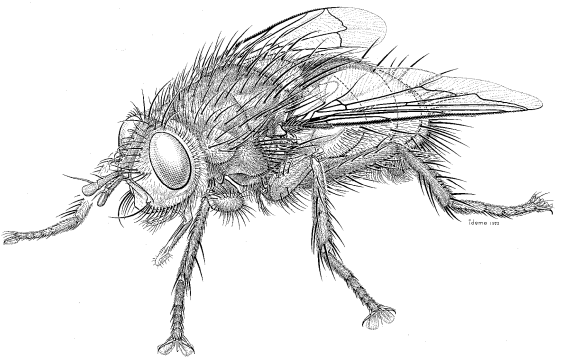

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This issue marks the fifth anniversary of *The Tachinid Times*. Not a long time, but long enough for the newsletter to settle into a comfortable (for me anyway) and steady pattern. It still seems to fulfil a purpose by providing a forum for communication among tachinid workers, especially for those who have only a peripheral knowledge of current work being conducted on the Tachinidae. With this in mind, I encourage readers who have not contributed to this newsletter in the past to think about writing a note about their research, or writing a brief article, for the February 1993 issue. Your contribution may not benefit you, but it might be useful to someone else.

This year has certainly been one for name changes. I have tried to use herein the current names for former Republics of the USSR, and I am keeping a watchful eye on city name changes too, like Leningrad to St. Petersburg. Even the Centre to which I belong, formerly the Biosystematics Research Centre and now the Biological Resources Division of the Centre for Land and Biological Resources Research, caught the name change fever. Our name changed because our former Centre merged with another Centre to create a larger Centre with some reduction in administrative staff. There has been no change in our duties or our mandate. A suggestion for naming our Division the Biosystematics Research Division of CLBRR, which would have given a little familiarity between our old and new names, was vetoed by Administration.

Third International Congress of Dipterology (by J. O'Hara)

The next Congress will be held in Guelph, Ontario, Canada, from August 15-19, 1994. Though the Congress is still a long way off, it is already beginning to take shape. An Organizing Committee has been formed and a rough draft of Sections (subject-based and taxon-based) and Section Organizers has been drawn up. I have agreed to act as Section Organizer for a taxon-based Section on the Tachinidae. It is my understanding that each Section will be able to accommodate any number of speakers, so in theory no one will be excluded from presenting a talk within the Section of their choice. Tachinid workers will have the option of speaking in my Section or in a subject-based Section such as Diptera Ecology, Ethology of Diptera, etc. Some systematists might want to spend some time in Ottawa (only a six-hour drive from Guelph) before or after the Congress to study the Tachinidae collection of the Canadian National Collection. Further information about the Congress can be obtained from Steve Marshall, the Chairman of the Congress (address in mailing list).

Significant collection of Tachinidae comes to Yale University (by C.L. Remington)

The Northeastern Forest Experiment Station, Hamden, Connecticut, has presented its systematic collection of insects, totalling about 85,000 specimens, to the Peabody Museum of Natural History at Yale University. It is especially rich in parasitoids obtained from intensive rearings from Lepidoptera larvae during several decades of efforts targeted at biological control of the gypsy moth and other forest pests. The collection includes about 16,000 Tachinidae, with very full data and mostly determined by specialists many years ago. The great majority of the specimens were from the northeastern states, but some were taken in other parts of the world, and some series are from the Palearctic region, brought in during introduction projects for biological control.

The Peabody Museum has one of the premier

collections of world Lepidoptera, and rearings by many contributory investigators have yielded hundreds of tachinid parasitoids; these and thousands of field-caught tachinid adults are largely unsorted. We would welcome inquiries from specialists that might lead to determinations at any level. [Ed.: For further information or to borrow specimens, write Dr. Charles L. Remington, Curator and Head, Division of Entomology, Yale Peabody Museum, New Haven, Connecticut 06511, USA.]

***Exorista sorbillans* – a serious tachinid pest of silkworms (by P. Kumar)**

Since 1982, I have been actively engaged in research on several aspects of the tachinid *Exorista sorbillans* Wiedemann. Tachinids are generally regarded as beneficial insects, especially due to their potential as biological control agents of insect pests. However, there are also tachinid species that act as serious pests. A classic example is *E. sorbillans*, which is a serious pest of the silkworm *Bombyx mori* L. (Bombycidae).

Near the end of the last century *E. sorbillans*, commonly known as the uzi fly, was reported attaching *B. mori* in many countries including India. Eggs of *E. sorbillans* are generally laid directly on the body of late instar silkworm larvae. Upon hatching, a young maggot will enter a silkworm, devour its contents, and eventually kill it.

In addition to India, *E. sorbillans* is also reported from several other sericultural countries like Bangladesh, China, Japan, Thailand, South Korea and Vietnam. Silkworm losses due to attack of this fly is very high in the tropical region and the extent of damage ranges between 10-30%.

India is currently the second largest producer of silk in the world. Being agro-based, sericulture (the commercial production of silk) provides employment primarily to rural people. Moreover, silkworm rearing is the only cash crop which guarantees frequent attractive returns throughout the year, especially in the southern sericulture states of India. Presently, sericulture is practised in about 45,000 villages of India and provides employment to about 5.5 million people.

Karnataka, the premier silk producing state of India, accounts for more than 60% of India's total silk production. The flourishing silk industry of this state, however, was exposed to a serious threat during the early 1980's due to the accidental introduction of *E. sorbillans*. Up to 80% of silkworm rearings were initially affected. The yield of silkworm cocoons per 100 layings in Karnataka was reduced from 30-35 kg to as low as 5-10 kg in many villages. In recent years, the spread of the uzi fly has also been noticed in neighbouring and sericulturally developing states of Andhra Pradesh, Tamil Nadu and Kerala. The uzi fly menace has become a serious concern to sericulturists in India.

Measures to contain the uzi fly menace are of paramount importance. To this end, I have studied the systematics and biology of this notorious fly. In recent years, I have developed an integrated program consisting mainly of chemical control (by spray of uzicide - a formulation to kill uzi fly eggs without affecting the growth of host larvae) and biological control (by using hymenopteran insects that attach uzi fly maggots and puparia). I have published more than 40 scientific papers on the biology and control of this tachinid fly in different national and international journals.

Observations on the aggregating behavior of *Eloceria delecta* (by S. Andersen)

Last summer I spent my holidays in Jutland, on the western peninsula of Denmark. One day in the early afternoon while I was collecting flies (and cantharelles) in a large beech forest I noticed a swarm of at least 15 males of *Eloceria delecta* (Meigen), all dancing on the trunk of a large beech tree (standing isolated at the foot of a slope). "Dancing" took place in a very restricted area near the bark and at a height of about 2 meters. Each individual was constantly engaged in quick flights straight out from the trunk - each flight reached about 8 cm out from the tree after the fly briefly touched the bark. The swarm suddenly flew away, only to return again after a few minutes to the same (marked) spot. Each swarming lasted 2-3 minutes and was repeated trice. When I started to collect some of the flies the swarm disappeared.

Rhythmic flights, vertically from resting places, are known of several "station-taking" tachinids (eg. *Dexiosoma canina* and *Winthemia quadripustulata*). *Eloceria delecta* is a rare species in Denmark and was previously found only singly "sun-bathing" on tree trunks or feeding from honeydew on leaves (never observed on flowers). The species is easily recognized by its small size and extremely short (scarcely visible) palps. Females have one strong *ad* seta on the mid tibia, males none or only a very small one. This condition is to my knowledge unique in tachinids and probably related to the peculiar dancing behavior. On two occasions the species has been reared from centipedes (*Lithobius* sp.), a very unusual host for tachinids (only one species each of *Loewia* and *Lypha* known as reared from centipedes).

Morphology of microtype tachinid eggs (by S. Gaponov)

Serge Gaponov has been publishing on eggs of the Tachinidae in the Soviet literature for several years. His views about aeropylar transformations in microtype eggs of the Goniini presented here are based on a passage published in his 1989 publication, "Tachinid egg morphology. Part I. Microtype eggs." (p. 27):

The investigation of microtype tachinid eggs shows that microtype eggs can be divided into two groups. The dorsal surface of microtype eggs of the first group have pits, perforations and little hills (the genera *Gonia* Mg., *Pseudogonia* B.B., *Gaedia* Mg., *Erycilla* Mesnil, *Eumea* R.-D., *Prosopea* Rond., *Thelymorpha* B.B., *Clemelis* R.-D., *Pales* R.-D. and *Spallanzania* R.-D.). The dorsal part of the chorion of microtype eggs of the second group have not only pits, perforations and hills, but also a hexagonal network of plastron (genera *Masicera* Macq., *Frontina* Mg., *Sturmia* R.-D., *Zenillia* R.-D., *Elodia* R.-D., *Ceromasia* Rond., *Bothria* Rd., *Blepharipa* Rond. and *Phryno* R.-D.).

The aeropylar zone of microtype eggs may be divided into three general groups. In the first (*Gaedia* Mg.), the system of respirative crypts does not aggregate into a single centre, but rather the crypts are situated in the first third part on the anterior pole. In the second group (*Gonia* Mg., *Pseudogonia* B.B., *Pales* R.-D., *Elodia* R.-D., *Zenillia* R.-D., *Clemelis* R.-D. and *Spallanzania* R.-D.), aeropylar crypts are concentrated into a single respirative center as a plate elevated above the surrounding surface. Aeropylar crypts are enlarged. In the third group (*Ceromasia* Rd., *Frontina* Mg., *Masicera* Macq., *Sturmia* R.-D., *Blepharipa* Rd. and *Thelymorpha* B.B.), the aeropylar crypts are distinctly concentrated on the apex of the anterior egg pole and are separated from the surrounding egg surface. In microtype eggs of *Erycilla* Mesnil, *Bothria* Rd. and *Prosopea* Rd., the perforations of the plastron surface are enlarged, and the aeropylar crypts are very small and situated on the apex of the anterior egg pole. I did not discover an aeropylar zone in microtype eggs of *Phryno* R.-D., *Eumea* R.-D. and *Prosopea* Rd.

The evolution of the aeropylar zone of microtype eggs is characterized by a concentration and enlargement of crypts and by the isolation of the respirative center on the apex of the anterior egg pole. Probably, aeropylar crypts were descended by the way of plastron perforation oligomerization.

Morphology of the egg of *Bothria frontosa* Meigen (by S. Gaponov)

The tachinid *Bothria frontosa* Meigen has microtype eggs, length 0.19 mm, width 0.19 mm and height 0.13 mm. Eggs are oval and yellowish-brown. The dorsal part of the chorion is thick, convex, and has a clear polygonal network. The ridges of the polygonal system are thick and high. The bottom of each cell, between the ridges, has multiple perforations and hills of the plastron surface. The aeropylar zone is situated apically on the anterior egg pole. This zone is represented by the field of 14-17 round respirative crypts. The ventral part of the chorion is concave.

Host-parasite catalog available (by P. Arnaud)

Paul Arnaud published a valuable reference work in 1978 entitled, "A host-parasite catalog of North American Tachinidae (Diptera)" [U.S. Dept. Agric., Misc. Publ. **1319**: 1-860]. Copies of this publication are still available for free from the author. Paul's address is given in the mailing list.

Mellini's publication on the biology of the Tachinidae (by J. O'Hara)

I recently requested a translation into English of Mellini's Italian publication entitled "Synopsis of the biology of Diptera Larvaevoridae" (Boll. Ist. Entomol. "Guido Grandi", Univ. Bologna **45**: 1-38, 1990). Contact me, Jim O'Hara, if you are interested in receiving a copy of the unofficial translation when it is completed.

***Fauna* for free (by T. Pape)**

On a recent Congress trip to a suburb of Budapest, I took the opportunity of filling my suitcase with Diptera issues of *Fauna hungariae*, which are still irresistibly inexpensive. I still have two copies left of Dr. Mihályi's impressive "Tachinidae - Rhinophoridae" for anybody interested. Just send me a note; first come, first served! (*Fauna hung*. **161**, 425 pages, numerous original illustrations, text exclusively in Hungarian.)

Hosts of Palearctic species of *Germaria* R.-D. (by V. Richter)

Germaria sesiophaga Richter: 1F reared from the caterpillar of sesiid *Chamaesphecia diabarensis* Gorbunov in southeastern Transcaucasia (Richter 1987). Another species, *Germaria nudinerva* Mesnil was bred in Tajikistan (1M, 1F) from the roots of *Limonium otolepis* (Plumbaginaceae) inhabited only by caterpillars of sesiid *Dipchasphecia consobrina* (Le Cerf.) (Richter & Nikulina 1990). It seems that

unknown hosts of other *Germaria* species should be looked for in the family Sesiidae (Lepidoptera).

Rearing the siphonine *Ceranthia samarensis* (Villeneuve) (by F. W. Quednau)

I have succeeded in rearing over 1,000 puparia of the siphonine *Ceranthia samarensis* in the laboratory in 1990. This European larviparous tachinid is a major biological control agent of the gypsy moth, attacking 2nd and 3rd instar hosts. It was believed to be nearly impossible to rear in the laboratory because of its highly demanding requirements for reproduction. Successful rearing requires synchronization of 5-6 day old males with newly emerged females for mating, observation of a 10-day gestation period, differential day and night temperatures, 85-90% relative humidity for maximum survival, presence of newly-grown (from acorns) oak foliage for stimulation of larviposition, and rearing of gypsy moth larvae on an artificial diet to avoid virus contamination. Puparia must be collected frequently to avoid their destruction by the voracious non-parasitized gypsy moth larvae. In Europe a partial second generation of *C. samarensis* was observed in the field but complete diapause can be obtained in the laboratory by subjecting attacked gypsy moth larvae to 20/15°C day/night temperatures and a 12-hour photoperiod, and storage of fly puparia formed at 15°C for prehibernation treatment.

PERSONAL NOTES

Stig Andersen reports that Leif Lyneborg (Therevidae; Zoological Museum, Copenhagen) will be retiring at the end of March 1992 and will not be replaced. [Ed.: Denmark already has very few employed entomologists, and the loss of another is very unfortunate.] Lyneborg will continue his work at the museum as a research associate. Stig is not able to spend much time working on his *Fauna ent. scand.* book on the Siphonini and Leskiini, and as a consequence the book is not yet finished. He has spent a great deal of time searching for structures to support the apparently close relationship between the Siphonini and Leskiini, and has found one good synapomorphy which he will describe in his book.

Susana Avalos has taken a job in Agricultural Zoology in Argentina and now has little time to study tachinids. She still hopes to complete and publish some of the studies she had started on the tachinids of Argentina.

Michaél v.d. Berg writes: My interest in tachinids lies in the species that parasitize stinkbugs which are pests of subtropical fruit and nuts. I am therefore interested in rearing techniques of especially *Trichopoda* spp.

D.E. Conlong writes: We [at the South African Sugar Association Experiment Station] are particularly interested in tachinids as biological control agents of the African sugarcane stalk borer *Eldana saccharina*, and have reared South American and African species in attempts to control the borer in our sugarcane. Thus we would appreciate literature of any kind on these parasitoids.

John Dugdale writes: An Australian tachinid, *Chaetophthalma bicolor* Macquart, is now firmly established in New Zealand below 300m altitude, in the North Island and the northern half of the South Island. It was easily recognised as a 'stranger' because of the disparate nature of the Australian and New Zealand tachinid faunas. How it got here is conjectural, but it may be another example of trans-Tasman dispersal via low-pressure weather systems. *Chaetophthalma bicolor* was first encountered in New Zealand by my colleague Dr. Beverley Holloway on a window in our building on the DSIR Mt. Albert campus in Auckland. Later we both recognized and collected adults on flowers (e.g. *Euryops)* in various parts of the city, and I found that females were abundant on an unsprayed experimental plot of tomatoes in the campus grounds. Over the succeeding years, specimens have been sent in from New Plymouth (March 1989), Foxton (March 1990; in blowfly traps!), Nelson (January 1991) and North Canterbury (January 1991). So far, attempts to find the host have failed. I have noticed that females spend a lot of time 'investigating' the leaves, flowers, fruit and stems of crop plants, i.e. *Heliothis* sites, rather than the ground beneath (diurnal sites for *Agrotis,* the host reported in Australia).

Serge Gaponov writes: During the past year I was working intensively as a teacher at Voronezh State University, where I lectured on Biology of Soils, Invertebrate Zoology and Parasitology. I also prepared a Manual of Invertebrate Zoology for students. On the scientific side, I have continued my study of tachinid eggs. I am expecting that in 1991-1992 three of my papers will be published in *Zoological Magazine*: (1) Macrotype eggs of Phasiinae, (2) Egg of tachina-fly *Lecanipa bicincta*, and (3) Macrotype eggs of Exoristinae.

Giuliana Giangiuliani writes: I am an Italian Ph.D. student in entomology and biological control in the Entomology Institute of the University of Perugia, Italy. My supervisor is Prof. Ferdinando Bin, a Hymenoptera taxonomist and a specialist in biological control and behavior of parasitoids. We are studying the tachinid parasitoids of adult Hemiptera, especially *Trichopoda pennipes* F. and *Ectophasia crassipennis* F., which are parasitoids of *Nezara viridula* L. In 1990 I was in the United States (Beltsville, Maryland and College Station, Texas) and Canada (Edmonton, Alberta) to study tachinids with Dr. J.R. Aldrich, Prof. S.B. Vinson and Dr. J. Roland.

My Ph.D. thesis is entitled "Tachinid adult parasitoids of *Nezara viridula* L. and other Pentatomids in Central Italy". I will show in my thesis the data of four years of research, samples in the field, rearing and bioassays in the laboratory about *Ectophasia crassipennis* F. and *Trichopoda pennipes* F.

Last September (1991) there was, here in Italy, the XVI National Congress of Entomology and I presented a paper about the "Efficacy of *Ectophasia crassipennis* F., adult parasitoid of *Nezara viridula* L., in central Italy". I am also preparing a paper about the fortuitous introduction of *Trichopoda pennipes* F. into Italy, that will probably be submitted to *Ecological Entomology*. I am continuing my studies on the ultrastructure of the antennae of the tachinids mentioned above (begun during my visit to College Station, Texas). Additionally, I am trying to collect volatiles from soybean plants and leaves in collaboration with a Ph.D. student in chemistry, to find and identify the substances, and to possibly make bioassays with the tachinids and their hosts.

I would like to thank Dr. H.P. Tschorning for his kindness and promptness in sending me his bibliography program about the Tachinidae; it is a very good work, and very useful for my thesis and my research.

A. van Harten writes: Since the end of 1990 I have been working in Yemen, trying to start some work on biological pest control. Right at this moment I am making an inventory of natural enemies of the principal pest species, which is something no one has done so far. Through the newsletter I hope to find a specialist interested in tachinids from Yemen, who would be willing to help me with identification of material reared from pest species.

Zdravko Hubenov continues his work on Korean Tachinidae. During the past year he has prepared two papers on Bulgarian Tachinidae.

Silvia Acosta Izquierdo writes: I am working on the biological control of a pyralid moth, *Diatraea saccharalis* (Fab.), the most important pest of sugarcane in Cuba. I am particularly interested in a tachinid parasitoid of this pest, *Lixophaga diatraeae* (Townsend). During 1991 studies were initiated on the ecology and genetics of *L. diatraeae*. I would be grateful for any information about the existence of morphometric characteristics that would help in tachinid differentiation.

Rolando Lópes writes: I am a graduate student working on the behavioral ecology of *Myiopharus aberrans* and *Myiopharus doryphorae*, two tachinid parasitoids of the Colorado potato beetle (*Leptinotarsa decemlineata*). The overwintering mechanism or biology for both species was not clear; it had been assumed that parasitism of the first beetle generation is low because the tachinids were thought to suffer heavy mortality during the winter, though how *Myiopharus* spp. overwinter had not been studied. My research has established conclusively that *M. aberrans* and *M. doryphorae* overwinter as first or second instar maggots within adult Colorado potato beetles (CPB), and that they complete their development after CPB emergence the following spring. There is a publication related to this finding that will appear in the June 1992 issue of *Entomophaga*: "Overwintering biology of the Colorado potato beetle (Coleoptera: Chrysomelidae) larval parasitoids *Myiopharus aberrans* (Townsend) and *Myiopharus doryphorae* (Riley) (Diptera: Tachinidae)".

My research on *Myiopharus* is aimed partly at learning how best to improve the effectiveness of *Myiopharus* parasitism of the CPB under field conditions. I am trying to gain more information about the overwintering mechanism and trying to manipulate it in different ways to our advantage. I am also interested in various behaviors of *Myiopharus* species in the field; mainly feeding, mating, searching and larvipositing. I have been using a computer-based program to record fly behavior in the field on a notebook computer as well as videotaping many hours of behavior. I think this will greatly facilitate the statistical and sequential analysis. Anyone having any knowledge about the behavior of these tachinids is asked to contact me.

Bhanu Ch. Nandi writes: I have been working on Indian Sarcophagidae for the past 18 years. I have published a total of 38 papers on this group. At present I have almost finished the writing of a Fauna volume on Indian Sarcophagidae. During my research I have collected many tachinids from different parts of

India, and though I know the group is very difficult I want to begin study of the family.

Jim O'Hara writes: I have concentrated on several small projects during the last year. A revision of the Nearctic species of *Actia* R.-D. was published, a revision of the Nearctic species of *Cyzenis* R.-D. is currently out for review (coauthored with Bruce Cooper, my assistant), and a revision of *Eufrontina* Brooks (a Nearctic genus related to *Cyzenis*) is well under way. A revision of the Nearctic species of *Ceromya* R.-D. will follow, hopefully to be completed by early fall 1992. I shall then start on a larger project, a revision of Lyphini genera and species. Also during 1992 I will begin a ProCite database on recent tachinid literature, which will permit computer searches on index words (hosts, tachinid species, biogeographic regions, etc.). Plans to compile a list of Mesnil genera and species have been put on hold for the present.

I spent nearly three weeks in late May and early June 1991 on a field trip to Arizona and New Mexico, taking in the Second Meeting of the North American Dipterists' Society on the way (held at the Southwestern Research Station near Portal, Arizona – a truly superb setting for informal meetings and for good tachinid collecting). While in New Mexico I stopped in Portales to meet tachinid collector Newel Jorgensen, who has amassed a fine collection of tachinids from New Mexico.

Thomas Pape writes: I have made but little progress in my studies on *Bezzimyia* and relatives but I feel confident that I will be able to devote more time to this during 1992. At the moment I am writing a short paper with Hiroshi Shima, describing a peculiar rhinophorid-like tachinid from the Philippines.

Cristobal J.H. Pruett has a large number of tachinids reared from hosts in Bolivia. He would appreciate help from anyone willing and able to identify the tachinids, and would permit the identifier to retain a portion of the specimens for their collection.

Jens Roland has recently taken a position as Population Dynamicist with Forestry Canada in Sault Ste. Marie, Ontario. Jens will be working on spatial dynamics of forest defoliators and their natural enemies (including tachinids). As well, he is completing work on volatile plant compounds used as search cues by the leaf-ovipositor *Cyzenis albicans*; field trials of attractants will be completed this spring (1992).

Hiroshi Shima writes: I did not work much in the field in 1991. I visited the Bishop Museum, Honolulu, in March for about two weeks to sort out New Guinea tachinids to genera or tribes. I visited Honolulu again in June to attend the XVII Pacific Science Congress, where I presented a paper entitled "Diversity and peculiarity of Tachinidae in the New Guinea Area" in the symposium "Gondowanan-Pacific Diptera Systematics: the Developing Picture" (conducted by Neal Evenhuis of the Bishop Museum). During the summer I worked mainly on a paper on the genus *Winthemia* from Yunnan Province, China. I have finished that revision and have started to work on a revision of the tribe Winthemiini from Japan. It will be finished soon and then I will start again on *Carcelia* and *Blepharipa*.

This year I am planning to attend the XIX International Congress of Entomology in Beijing, China, where I plan to present a paper on the characteristics of the tachinid fauna of Yunnan Province. After the congress I will collect in Nepal for about a month as a member of Dr. Shinonaga's research party of "Studies on medically important flies in India and Nepal." I will visit there after an interval of 20 years!

Claude Thireau writes: For two successive summers we have reared 4-6 generations of the tachinid parasitoid *Actia interrupta* in the laboratory. Using an artificial method of infecting larvae, analogous to that described by King et al. (1975), we encountered high levels (45-75%) of encapsulation. This phenomenon of encapsulation was not observed in dissected field collected larvae. The rate of successful parasitism was later raised in the laboratory by injecting or feeding host larvae with the chemical substance phenylthiourea (PTU) or by using younger host larvae. We would greatly appreciate help and suggestions from other researchers for improving our knowledge in the rearing of tachinids.

Hans-Peter Tschorsnig writes: Tachinid work has been going slowly because of many other duties in the Museum. I collected in southern France in 1991; worth mentioning was the finding of three tachinid species which were known before only from Israel: *Catharosia claripennis* Kugler from the French Pyrenees (one female collected by myself) and *Engeddia mutisetosa* Kugler and *Dionomelia hennigi* Kugler from northern Spain (a few specimens collected by J. Blasco-Zumeta). The latest version of my dBase database on world Tachinidae literature contains 5,982 records while my dBase database on reared Palearctic Tachinidae contains 10,106 records.

Jaromír Vanhara writes: I have been working as a dipterist for nearly 20 years. Until recently I have studied Culicidae, Athericidae, Tabanidae, Opetiidae+Platypezidae and the ecology of Brachycera (in the floodplain forest, in spruce monoculture and in scattered greenery in an agricultural area). At present I have started work on the Tachinidae and plan to study tachinids in the floodplain forests and steppe zone of southern Moravia. I hope to compare my results with those of D. Jacentkovsky who studied in the same region 50 years ago.

Susan Wineriter writes: I am in the process of writing a paper on parasitism of mole crickets (*Scapteriscus* spp.) by *Ormia depleta* based on laboratory studies, as well as summarizing information on mating in *O. depleta* and improved methods of rearing. I will be continuing to work on mating and feeding in *O. depleta* in 1992.

I am looking for information/references on mating aggregations and aggregation sites of Tachinidae, especially of the tribe Ormiini and more specifically its members in South America. Also references on the natural diet of adults (pollen, nectar, honeydew, etc.) would be very helpful. I would like to know if anyone has looked for and found mating aggregations in the field, and if so then what methods were used to find such sites. As a neophyte in such matters, I would appreciate whatever information or advice that can be offered on this subject.

Monty Wood continues to be a very active Research Associate in the Biological Resources Division (previously called the Biosystematics Research Centre). In 1990 he collected flies in eastern Siberia, then visited Vera Richter and the Zoological Institute in St. Petersburg (then Leningrad) to compare the tachinids he had collected with named specimens in the collection. Monty found that some of his specimens were new records for species named in the Nearctic region but not previously known from Siberia (no new synonymies were recognized).

Monty is currently involved as a coauthor in the writing of a book on the black flies of North America. He is also busy with several tachinid projects, including the sorting of miscellaneous Tachinidae in the Canadian National Collection, preparing a new catalog on Nearctic Tachinidae, collaborating with Dan Janzen on a compendium of tachinids in Costa Rica, and preparing a list of new generic synonymies and new species combinations contained within his chapter on tachinids in Volume 2 of the *Manual of Nearctic Diptera* (1987).

Sun Xuekui writes: My interests are tachinid systematics and pest management using tachinid biocontrol agents. I am working on the basic biology and field ecology of the tachinid *Nealsomyia rufella* Bezzi. This tachinid is an important natural enemy of the giant bagworm in Shandong and Anhui, China. In addition, I am revising the Chinese species of *Pexopsis* B.& B. The genus has at least 10 new species in China.

Joachim Ziegler writes: In the past year I compiled faunistic and ecological data from my collection into a dBase III database. I started the compilation of data from the Institute's [DEI] collection and a faunistic bibliography (for Central Europe). This work has been done in collaboration with Peter Tschorsnig. In spring and summer 1991 I collected tachinids in several parts of Europe.

I hope that our Institute and positions will survive. The die is still not cast for a definite decision. Despite the uncertainty, I started a large work on puparia and third instar mouthparts. I would like to make a catalog with figures of puparia and larval mouthparts of European tachinids. Furthermore, I will try to develop a modified system based on the structures of the small pieces of larval mouthparts.

CORRIGENDA

Two errors are noted in O'Hara's publication, "Revision of Nearctic species of *Actia* Robineau-Desvoidy (Diptera: Tachinidae)" (1991, Can. Ent. **123**: 745-776):

1) Map 4, p. 758, solid square marking a record for *Actia dasymyia* O'Hara on western Victoria Island should be north of Prince Albert Sound, not south of it as mapped (the printed longitude and latitude figures in the list of paratypes are correct).
2) *Lapsus calami*, throughout the paper "flagellomere 3" should read "flagellomere 1".

A BRIEF HISTORY OF TACHINOLOGICAL STUDIES IN CZECHOSLOVAKIA, WITH PARTICULAR REGARD TO TACHINOLOGICAL PAPERS BY DR. JIRÍ CEPELÁK

by Jaromír Vanhara

Dedicated to Dr. J. Cepelák on his 75th birthday

The first records of tachinid flies from the territory of today's Czechoslovakia were published as early as 1793. On their journey through the Šumava Mts., J.D. Preyssler, J.T. Lindacker and J.K. Hofer

found *Zophomyia temula* (Scop., 1763), *Tachina fera* (Linn., 1761), *T. grossa* (Linn., 1758) and *Gymnosoma rotundata* (Linn., 1758) (see Samml. Physik. Aufs. **3**: 135-378).

Antonín Vimmer (1864-1941) was the first Czech dipterist to study systematically the tachinid flies, among other dipterans. Vimmer was a secondary school teacher who devoted considerable attention to the specialized study of these insects. Vimmer published 137 papers on Diptera out of the 166 entomological papers he published between 1899 and 1941. As early as 1912, he published the first list of Diptera species in Bohemia and supplemented it systematically thereafter. In 1925 he published a paper on the "Larvae and pupae of central European Diptera". In 1931 he published a "Key to the determination of flies, including a description of the ways in which flies do harm to humans, animals and plants". Then, in 1934, he published a paper on the "Tachinid flies of Czechoslovakia". In all, 26 of his papers are devoted to tachinid flies. Due to the extent of his dipterological studies, Vimmer became known as the founder of Czechoslovak dipterology.

Dimitrij Jacentkovsky (1898-1945) was the first specialized tachinidologist. He laid the foundation of modern faunistics of the family Tachinidae in Czechoslovakia. A Russian by origin, he came to Brno as a post-revolution emigrant. In 1931 he graduated from the Faculty of Forestry in Brno and got there a position as an assistant in the Forest Protection Department. He moved to Germany during World War II, and when it was over he moved to France, where he soon died. Jacentkovsky studied tachinid flies not only in the territory of Czechoslovakia of that time (especially in Moravia and Carpathian Ruthenia, the latter being now part of the Ukraine) but also in Bulgaria. He published 29 papers on Diptera during 1932-1944, 21 of those on the Tachinidae. His descriptions of new species *Beida latifrons* (Jacentkovsky, 1944) and *Linnaemyia steini* Jacentkovsky, 1944 are still valid. Two tachinid species bear his name, viz., *Winthemia jacentkovskyi* Mesnil, 1949 and *Bithia jacentkovskyi* (Villeneuve, 1937).

At present, Dr. **Jirí Cepelák** (born 21 April 1917) is the only tachinid specialist in Czechoslovakia. He studied at Charles University in Prague (1945). His postgraduate studies were devoted to agricultural research. After 1952 he lectured as teacher at the University of Agriculture in Nitra. The first of his 106 papers in which tachinid flies are at least mentioned was published in 1952. Since that time he has devoted most of his attention to a number of dipteran families occurring in the territory of Slovakia. This faunistic study was crowned by a three-volume work on the "Diptera of Slovakia, I-III" (Cepelák 1984a, 1986c, 1989b), with Cepelák being not only its editor but also the author of a large part of its contents. He also studied the faunistics of tachinid flies and other Diptera in the territory of the Balkan Peninsula (Bulgaria, Romania, Serbia). For the "Checklist of the Diptera of Czechoslovakia", he enumerated the families Rhinophoridae and Tachinidae (Cepelák 1987a,b) and, in co-authorship, also the Sarcophagidae (Cepelák, J., Slamecková, M. and M. Stanek 1987, Ibid., pp. 295-299).

Cepelák described one new species, *Hyalurgus tomostethi* Cepelák, 1963. One species bears his name, viz., *Admontia cepelaki* (Mesnil, 1961). In some of his dipterological papers (totalling 161), Cepelák tackled problems of a wide scope, such as the importance of glaciation for the territory of our republic (Cepelák and Slamecková 1965). His attention was also directed toward the development of new collection methods, which led to the knowledge of new records and new species (Cepelák and Slamecková 1967, "Bedeutung der neuen dipterologischen Sammelmethoden für die Ökonomie der Durchforschung", in "Problems of the faunistical and entomological research in Czechoslovakia and Central Europe", Opava 21-23 Sept. 1966, pp. 31-46). Last but not least, they led to the use of tachinid flies in zoogeographical studies (Cepelák 1979g).

Cepelák has also devoted much of his attention to organizing and developing dipterology in Czechoslovakia, and not only as a university teacher but also as co-founder of regular dipterological seminars, which have taken place every two years since l969 (I-X).

In conclusion of this review of tachinological studies in Czechoslovakia, one may summarize that between 1758 and 1991 a number of native and foreign authors have published a total of 175 papers in which tachinid flies of Czechoslovakia are at least mentioned. A major portion of those works were written by the three authors mentioned above.

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