Phorid Newsletter

Number 2
Brian V. Brown, editor 13 Oct 1994

As promised, here is the second phorid newsletter. I had a mixed reaction to the first mailing; some thought it was a good idea, others thought it was too specialized to provide a decent quantity of information. I decided to continue sending out these updates whenever I have information of interest.

Thank you to everyone who responded to my questionnaire about phoridological interests! These are listed in the Phoridologist's Directory on the following pages. Hopefully this directory will help us all keep in contact.

International Congress of Dipterology in Guelph

This summer, four of us were able to attend the Third International Congress of Dipterology in Guelph, Ontario, Canada. Besides informal communications, mostly in pubs, we had some more formal presentations about phorids.

* Don Feener gave a talk entitled "Evolution of extreme host specificity in phorid parasitoids of ants." Using examples from his recent work on the chemicals that attract phorids to their hosts, Don explained that phorids attracted to generalized, ephemeral, alarm pheromones were less host specific than phorids presumably attracted to species-specific, persistent, trail pheromones. He plans to continue his work on the chemical ecology of the *Apocephalus miricauda*-group of species, including *A. paraponerae*, about which he has a paper in press.

* Matthias Buck gave two presentations. One was a paper about the catch of small flies in buried carrion, including differences between carrion protected or not protected by fine meshed screen. Screened carrion had larger numbers of phorids and sphaerocerids. Additionally, he contrasted large baits (15g of meat) with small baits (5g) and found phorids to be more prevalent in smaller pieces of meat. Finally, he contrasted different baits: liver vs dead slugs. Phorids seemed to prefer the slugs.

  Matthias' collecting techniques merit careful attention. He collected large numbers of some phorids like *Anevrina* and *Conicera*, which I have collected relatively infrequently in Malaise traps. We look forward to the publication of these results!

  In a separate, poster presentation, Matthias showed some new characters that allowed him to separate females of some Palearctic *Conicera* species. He is now examining closely related genera to see if they share some of these interesting, newly discovered structures.

* Sven-Olof Ulefors presented a paper about his search for new taxonomic characters in the genus *Megaselia.* Concentrating his attention mainly on the *M. pulicaria*-group of species, Sven has found some interesting correlations and structures, especially associated with the setation of the notopleuron. He has recently started a PHD

program at Guelph, and we wish him the best in his work on *Megaselia.*

* I gave a talk on my preliminary work on the taxonomy of the *Apocephalus attophilus*-group. These flies are parasitoids of attine ants, including the tropical leaf-cutting ants. So far, I have recognized about 44 species, only 25 of which are described. Hosts are known for only a few species, and oviposition behavior has observed for only two species (information about one was published by Feener and Moss).

The next International Congress of Dipterology is scheduled for 1998 in Agra, India, but there was considerable uncertainty whether it would indeed be held there. Rumor has it that several alternative sites were being considered, including Rio de Janeiro and Oxford.

Phorids in Los Angeles

When I first moved to Los Angeles almost 2 years ago, I had no idea what kind of phorids were found here. The phorid collection of the Los Angeles County Museum consisted of half a drawer, mostly *Megaselia* and *Phora*, so it was obvious that some further collecting was necessary. Last year, I persuaded a fellow curator to place a Malaise trap in his backyard in Topanga Canyon, and below I report on the phorids it has collected so far. Note that the site is only a couple of miles from the ocean, in the Santa Monica Mountains, and barely missed being burned by the huge brush fires last year! The area is quite dry, with only scrubby chapparel as the natural vegetation.

Anevrina variabilis (Brues)
Beckerina sp.
This is an undescribed species, widespread throughout North America.
Conicera aldrichi Brues
Conicera sp.
Diplonevra gaudialis (Cockerell)
Dohrniphora cornuta (Bigot)
Gymnophora talea Brown
Megaselia spp.
Both *M. barberi* and *M. sulphurizona* are common species in this area.
Metopina sp.
Myriophora sp.
Phalacrotophora halictorum (Melander & Brues)
Phora sp.
Puliciphora sp.
Spiniphora bergenstammii (Mik)
Triphleba sp.
Trophodeinus sp.

Phoridologists' Directory

The following is a list of the names, addresses and interests of phorid workers in my mailing list. Any additions, corrections or updates would be greatly appreciated. Those wanting to discuss their projects and interests at even greater length are welcome to do so.

Jeffery K. Barnes, Biological Survey, Rm.3132, Cultural Education Center, Albany, NY, 12230, U.S.A. Telephone (518) 486-2004.

Brian V. Brown, Entomology Section, Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, CA, 90007, U.S.A. Telephone (213) 744-3363. FAX (213) 746-2999. E-mail brianb@mizar.usc.edu. *Interests*: Taxonomy, evolution, reconstructed phylogeny, biogeography and natural history of world Phoridae. Currently I have a long-term project to revise the New World, ant-decapitating genus *Apocephalus*; also I am beginning to prepare the phorid sections for the series *Flies of the Nearctic Region*. I am interested in collecting methods for phorids, and in biodiversity surveys, especially those conducted in the tropics.

Matthias Buck, Dept. Ecology and Morphology of Animals, University of Ulm, Albert-Einstein-Allee 11, 89069 Ulm, GERMANY. E-mail meyer_eb@dulruu51.bitnet. *Interests*: Ecology and biology of Phoridae (PHD Thesis, to be finished by April 1995); community structure; ecology and biology of small saprophagous (especially necrophagous) Diptera breeding in small-sized and buried vertebrate and invertebrate carrion. Other interests are anatomy of the reproductive organs, larval morphology, phylogeny and hymenopterous parasitoids of small, necrophagous Diptera. So far, I have only worked in the Palaearctic Region. Future aspirations include a postdoctoral fellowship, or curatorship of Diptera at some natural history museum.

R. Henry L. Disney, Dept. Zoology, University of Cambridge, Downing Street, Cambridge, CB2 3EJ, United Kingdom. Telephone 0223 336654. FAX 0223 336676. *Interests*: Biology, taxonomy, phylogenetic reconstruction of world Phoridae. Currently revising Termitoxeniinae, including *Alamira* and *Perissa*.

Donald H. Feener, Jr., Department of Biology, University of Utah, Salt Lake City, UT, 84112, U.S.A. Telephone (801) 581-6444. FAX (801) 581-4668. E-mail feener@bioscience.utah.edu. *Interests*: Ant-phorid interactions in general. Specific projects include: 1) chemical ecology of host location in phorid parasitoids of ants; 2) phorid parasitoids as biological control agents of pest ants; 3) evolution of host specificity of phorid parasitoids; 4) behavioral ecology of ant defenses against phorid parasitoids. I work mostly in the New World temperate and tropical regions, especially the southwestern U.S.A. and Central America (Costa Rica, Panama).

Tadao Gotô, Central Forest Research Lab and Training Center, Royal Forest Department, Bangken, Bangkok, 10900 Thailand

David H. Kistner, California State University, Chico, CA, 95929-0515, U.S.A. Telephone (916) 898-5116. FAX (916) 898-6804. *Interests*: Mostly interested in Phoridae inhabiting the nests of social insects or preying on social insects. I am interested in all biogeographic regions, but have minimal taxonomic interests. I am currently working in collaboration with Henry Disney on Termitoxeniinae and a study of Phoridae of the upper Sacramento River, based on cantara spill collections.

Guangchun Liu, Dept. Plant Protection, Shenyang Agricultural University, Shenyang, Liaoning

110161, P.R. China. Telephone (024) 282-5074. *Interests*: Taxonomy of phorids; Chinese phorid fauna; phorids associated with mushrooms in China.

Mikhail B. Mostovski, Arthropod Laboratory, Palaeontological Institute, 123, Profsoyuznaya Str., Moscow, 117647, Russia. Telephone (095) 238-0721. FAX (095) 339-0622. E-mail rasna@glas.apc.org.

E. Hugh A. Oliver, 172 Upper Dinsdale Road, Hamilton, New Zealand. Telephone 84 79541. FAX 64 7 838 5085. *Interests*: New Zealand phorid taxonomy and natural history.

Matt Orr, Division of Zoology, University of Texas, Austin, TX, 78712, U.S.A. Telephone (512) 471-2825. FAX same as telephone. E-mail morr@emx.cc.utexas.edu. *Interests*: Influences of phorids on ant foraging ecology, especially pest ants. Ant taxa of interest include *Atta*, *Solenopsis*, and *Linepithema* [formerly *Iridomyrmex* -ed.].

Sanford D. Porter, USDA-ARS, MAVERL, 1600 SW 23rd Drive, P.O. Box 14565, Gainesville, FL, 32604, U.S.A. Telephone (904) 374-5914. FAX (904) 374-5818. E-mail sdp@gnv.ifas.ufl.edu. *Interests*: Ant-parasitizing phorids, especially *Pseudacteon*: oviposition behavior, growth and development of larvae and pupae, host specificity, responses of ant hosts, biocontrol.

Sabine Prescher, Hinter der Masch 26, 38114 Braunschweig, Germany. Telephone 05 31 - 57 90 92. *Interests*: Palaearctic Phoridae, especially ecology of various species. Current projects include determination of specimens and evaluation of the results of Phoridae collected in: 1) the nature preserve area "Apfelstedter Ried" in Thuringia (Germany) with moist meadows; 2) moist meadows, dry meadows, wheat fields and maize fields at the village Limpach near Zürich, Switzerland; 3) caverns in Rhineland-Pfalz, Germany; and 4) a gravel pit near the city of Köln, Germany.

Sven-Olof Ulefors, Department of Environmental Biology, University of Guelph, Guelph, ON, Canada, N1G 2W1. Telephone (519) 824-4120, ext. 2582. *Interests*: Canadian species of *Megaselia*; separation of *M. pulicaria*-group species.

Axel Froese and Bill Robinson have both informed me that they no longer work on phorids

Next Issue !

In the next issue of this newsletter, I will report on my March collecting trip to Costa Rica. I am travelling with my technician and Isabel Bohorquez (Isabel is a neotropical firefly expert) to some middle elevation sites, to collect firefly hosts, and hopefully to rear adults of firefly-parasitizing phorids of the genus *Apocephalus*, subgenus *Mesophora.*

Also, in the next issue, I will include a list of all phorid publications that I am aware of from 1994.

I invite anyone else with news, reviews, opinions or any other material relating to the study of phorids to contribute them.