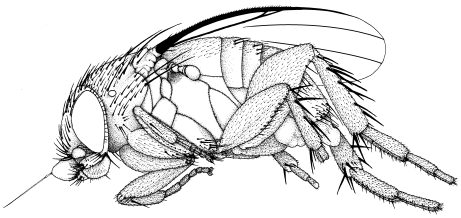
Phorid Newsletter



Brian V. Brown, editor
Drawing of *Chaetopleurophora bisetosa* by Brian Koehler
also available at http://www.phorid.net/phoridae/phornews.html

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Update from Los Angeles

Work continues on many fronts in our lab. Our project on *Melaloncha* bee-killing flies is now finished, with only the final phylogenetic paper (based on sequence data) still to be published. We found many new species of this genus during our study period (roughly 2001-2007), and still expect more to be uncovered, with the final tally of the group being somewhere between 200-300 species. Our publications on *Melaloncha* so far have been:

Brown, B. V. 2001. Beginning to study the bee-killing flies, the parasitoid genus *Melaloncha* Brues. Phorid Newsletter. 9: 1-5.

Brown, B. V. 2004. Revision of the subgenus *Udamochiras* of *Melaloncha* bee-killing flies (Diptera: Phoridae: Metopininae). Zoological Journal of the Linnean Society. 140: 1-42.

Brown, B. V. 2004. Revision of the *Melaloncha cingulata-group* of bee-killing flies (Diptera: Phoridae). Annals of the Entomological Society of America. 97: 386-392.

Brown, B. V. 2005. Revision of the *Melaloncha furcata-group* of bee-killing flies (Diptera: Phoridae). Insect Systematics and Evolution. 36: 241-258.

Brown, B. V. 2006. Revision of the untreated taxa of *Melaloncha* s. s. bee-killing flies (Diptera: Phoridae). Zootaxa. 1280: 1-68.

Brown, B.V. and G. Kung. 2006. Revision of the *Melaloncha ungulata-group* of bee-killing flies (Diptera: Phoridae). Contributions in Science. No. 507, 31 pp.
Gonzalez, L. & B.V. Brown. 2004. New species and records of *Melaloncha* (*Udamochiras*) bee-killing flies (Diptera: Phoridae). Zootaxa. 730: 1-14.

Kung, G. submitted. Two new species of the *Melaloncha ungulata*-group of bee-killing flies (Diptera: Phoridae). Sociobiology.

Smith, P. T. and B. V. Brown. submitted. Utility of DNA sequences for inferring phylogenetic relationships and associating morphologically dissimilar males and females of the bee-killing flies, genus *Melaloncha* (Diptera: Phoridae). Annals of the Entomological Society of America.

Electronic versions of most of these papers are available at our web site: http://www.phorid.net/phoridae/phorpub.html.

Our current National Science Foundation projects are a molecular phylogeny of the non-metopinine phorids (entitled ABasal Lineages of the Phoridae@), and a survey project in Thailand. The Basal Lineages project is in the final year, although we will probably get a one-year extension. We have an amazing variety of taxa sequenced, including both extant sciadocerines (*Sciadocera* and *Archiphora*), plus many other rare things (eg., *Vestigipoda*, *Postoptica*, two species of *Mannheimsia*), including all of the non-metopinine genera of New Zealand. Also included in the Basal Lineages project is a revision of the New World *Dohrniphora*, which is partly completed, and so far consists of the following works:

Brown, B. V. submitted. New records and a new species of the *Dohrniphora longirostrata* group (Diptera: Phoridae). Journal of the Kansas Entomological Society.

Brown, B. V. and G. Kung. 2007. Revision of the New World *Dohrniphora* Dahl species with hind tibial setae (Diptera: Phoridae). Arthropod Systematics & Phylogeny. 65: 155-235.

Kung, G. and B.V. Brown. 2005. New species of *Dohrniphora* related to *D. longirostrata* (Enderlein) (Diptera: Phoridae). Annals of the Entomological Society of America. 98: 55-62.

Kung, G. and B. V. Brown. 2006. The Caribbean species of *Dohrniphora* Dahl (Diptera: Phoridae). Journal of Natural History. 40: 1931-1945.

The *Dohrniphora* revision is an enormous project, with numerous specimens and species, and we are hard at work dealing with all those that lack hind tibial setae.

The Thailand project is an insect survey of national parks, using mostly Malaise traps. There have been disappointingly few new discoveries in this material, but much of it is still unsorted and awaiting attention.

Backyard Biodiversity

On and off over the 15 years I have been in Los Angeles, I have operated a Malaise trap in my backyard. I enjoy seeing what types of phorids (and other insects) live in a suburban yard, and have found many interesting things. I was shocked this summer, however, to find in a single sample two female specimens of the rarely encountered genus *Hypocerides* Schmitz. This is a genus I have never encountered previously- and believe me, I=ve looked through a lot of Malaise trap samples! They were both *H. nearcticus* Borgmeier, which has also been reported from some other parts of the world, but only the east coast of North America. I have seen no further specimens since that one sample. One specimen was sacrificed for the Basal Lineages project, and the other placed in the LACM collection.

female *Hypocerides nearcticus* Borgmeier

Another Lucky Catch

Usually, to establish a host parasitoid relationship between a parasitic phorid and an ant host, one must do time-consuming field work observing the ants in their habitat. One recent Malaise trap sample, collected in Costa Rica by my friend Marc Pollet, short-circuited this requirement. An ant of the genus *Gnamptogenys* was preserved while being attacked by a female

of *Apocephalus brevifrons* Brown. This is the first host record for this fly, and is also the first time I have seen such a joined pair. Luckily, while he was sorting the sample, Marc noticed the fly attached to the ant and pulled them out, before they could be jostled apart.

New host record

I recently had some ant specimens identified for me by Dr. James Pitts of Utah State University. They turned out to be *Solenopsis megergates* Trager. These ants were attacked by *Pseudacteon solenopsidis* Borgmeier. The data were: Argentina: Misiones, Parque Nacional Iguazu, 7.xii.2003, B. Brown, attacking ant hosts.

Phoridologists' Directory

The following is a list of the names, addresses and interests of phorid workers on 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.

Forbes P. Benton, moved, address no longer available. *Interests*: Natural history, identification and faunistic surveys of Brazilian Phoridae. Elucidation of phorid life cycles. Behavioral interactions between parasitic species and their hosts.

James Bonet, Naturhistoriska Riksmuseet, Box 50007, SE - 104 05 Stockholm, SWEDEN. Telephone: 08-669 21 39. Email: james.bonet@nrm.se.

Marcos A. L. Bragança, Fundacão Universidade do Tocantins, Instituto de Biologia, Rua Luiz Leite Ribeiro, s/n, 77500-000, Porto Nacional, TO, BRAZIL. Telephone: 55-63-363 1701. Fax: 55-63-363 1283. E-mail: malbr@uol.com.br. *Interests*: Interactions of phorids and leaf-cutting ants.

Brian V. Brown, Entomology Section, Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, CA, 90007, U.S.A. Telephone (213) 763-3363. FAX (213) 746-2999. E-mail bbrown@nhm.org. *Interests*: Taxonomy, evolution, reconstructed phylogeny, biogeography and natural history of world Phoridae. I have a long-term projects to revise the New World, ant-decapitating genus *Apocephalus*, theI bee-parasitizing genus *Melaloncha*, and the New World *Dohrniphora*. Currently, I have funding for a molecular phylogenetic analysis of higher-level relationships within the Phoridae. I am interested in collecting methods for phorids, and in biodiversity surveys, especially those conducted in the tropics.

Matthias Buck, Dept. Environmental Biology, University of Guelph, Guelph, ON, Canada, NIG 2W1. Email mbuck@evbhort.uoguelph.ca *Interests*: Ecology and biology of Phoridae; 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.

R. Henry L. Disney, Dept. Zoology, University of Cambridge, Downing Street, Cambridge, CB2 3EJ, United Kingdom. Telephone 0223 336654. FAX 0223 336676. Email rhld2@cam.ac.uk. *Interests*: Taxonomy of phorids with novel biological data, Revision of world's *Chonocephalus*, Phoridae of Seychelles, Arabia, British Isles and other Atlantic islands. Revision of keys to world genera.

Ewa Durska, Museum and Institute of Zoology, PAS, Wilcza 64, 00-679 Warszawa, Poland.Email edurska@robal.miiz.waw.pl. *Interests*: Biology, taxonomy, faunistic surveys of Phoridae; behavioral interactions between parasitic species and their hosts; species of *Phalacrotophora* as parasitoids of Coccinellidae.

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. Email: 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).

Patricia J. Folgarait, Unidad de Investigación en Interacciones Biológicas, Centro de Estudios e Investigaciones, Universidad Nacional de Quilmes, Roque Saenz Peña 180, 1876 Bernal, Buenos Aires, Argentina. Telephone: 54-1 365-7100, ext. 225. FAX 54-1 365-7101. Email pfolgarait@unq.edu.ar. *Interests*: 1) Ant- parasitoid interactions, in particular for ant pests, 2) biological control of ant pests, and 3) effects of phorids in structuring ant communities. I am currently doing research on phorids of *Solenopsis* and *Camponotus* but I am also interested in phorids of leaf-cutter ants.

Carlos García Romera, Departamento de Biología Animal, Biología Vegetal i de Ecología, Unidad de Zoología, Edificio Cc, 08193 - Bellaterra (Barcelona), Spain. Email: cgarci24@xtec.net.mailto:cgarci24@xtec.net *Interests*: Taxonomy, faunistic (especially from Spain) studies, and community ecology of Phoridae.

Mauro Gori, Via Del Cronaca 19, 50142 Firenze, Italy. Telephone 055/700588. *Interests*: Italian phorid fauna; life histories.

Tadao Gotô, Tohoku Research Center, Forestry and Forest Products Research Institute, 92-25 Nabeyashiki, Aza-Shimokuriyagawa, Morioka, 020-0123 Japan. Telephone +81-19-648-3962. FAX: +81-19-641-6747. Email: tgotoh@ffpri.affrc.go.jp

David H. Kistner, 3 Canterbury Circle, Chico, CA, 95926-2411, U.S.A. Telephone (916) 898-5116. FAX (530) 894-7609. *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.

Victor A. Kolyada, Department of Entomology, Zoological Museum of the Moscow State University, 6 Herzen Str. Moscow 103009, Russia. *Interests*: Taxonomy of the genus *Megaselia* and its fauna in the Palaearctic Region. Interested in exchanging for determined specimens from other biogeographical regions. Also interested in collecting methods.

Ed LeBrun, University of Texas, Brackenridge Field Lab, 2907 Lake Austin Boulevard, Austin, TX, 78703-4201. Telephone: (512) 471-0191. Email: elebrun@mail.utexas.edu. *Interests*: Interactions of phorids and ant communities.

Guangchun Liu, College of Biological and Environmental Engineering, Shenyang University, No. 21, Wanghua Street, Dadong District, Shenyang, 110044, D. R. China. Telephone +86-24-62268204. FAX +86-24-88112793. Email liugc18@mail.sy.ln.cn. *Interests*: Taxonomy of phorids; Chinese phorid fauna; phorids associated with mushrooms in China.

Marina Michailovskaya, Laboratory of Insects, Gornotaezhnaya Station, AN RAN, Ussurijsk District, Primorye Territory, 692533, Russia. Email root@ssursk.vladpost.marine.su. *Interests*: Taxonomy of phorids; Far East phorid fauna, including Primorskiy kraiy, Chabarovskiy kraiy, Sachalin, Kamchatka; phorids associated with dead animals.

Lloyd Morrison, Department of Biology, Southwest Missouri State University, 901 S National Ave, Springfield, MO, 65804, USA. Telephone (417) 836-3119. Fax: (417) 836-8886. E-mail: LloydMorrison@smsu.edu. *Interests*: Effects of phorid parasitoids (genus *Pseudacteon*) on ant foraging and interspecific competition (genus *Solenopsis*); ant host species-specificity of *Pseudacteon* phorids; introduction of South American *Pseudacteon* species to the U.S. (Texas) as biological control agents against the imported fire ant, *S. invicta*.

Mikhail B. Mostovski, Department of Arthropoda, Natal Museum, P. Bag 9070, Pietermaritzburg 3200, South Africa. E-mail mmostovski@nmsa.org.za. *Interests*: Phorid fauna of former USSR.

Hiroto Nakayama, Biosystematics Laboratory, Graduate School of Social and Cultural Studies, Kyushu University, 4-2-1 Ropponmatsu, Chuo-ku Fukuoka 810-8560, Japan. Telephone 092-726-4818. Fax 092-726-4644. Email youngrcb@mbox.nc.kyushu-u.ac.jp.

E. Hugh A. Oliver, 172 Dinsdale Road, Hamilton 3204, New Zealand. Telephone 84 79541. *Interests*: New Zealand phorid taxonomy and natural history.

Matt Orr, University of Oregon, Chandler Building, 1027 NW Trenton Ave, Bend, OR 97701, USA. E-mail matorr@darkwing.uoregon.edu *Interests*: Influences of phorids on ant foraging ecology, especially pest ants. Ant taxa of interest include *Atta*, *Solenopsis*, and *Linepithema.*

Sanford D. Porter, USDA-ARS, CMAVE, 1600 SW 23rd Drive, P.O. Box 14565, Gainesville, FL, 32604, U.S.A. Telephone (352) 374-5914. FAX (352) 374-5818. E-mail sdp@nervm.nerdc.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. Email s.prescher@gmx.de. *Interests*: Phoridae of a crater in la Palma (Canary Islands), of Iceland, and of agricultural land with maize in Germany.

Athayde Tonhasca, Universidade Estadual do Norte Fluminense, Centro de Ci□nc ias e Tecnologias Agropecuarias, Avenida Alberto Lamego, 2000, Campos dos Goytacazes, RJ, Brazil. *Interests*: Phorids attacking leaf-cutting ants.

Walther Traut, Institut für Biologie, Medizinische Universität zu Lübeck, Ratzeburger Allee 160, 23538 Lübeck, Germany. Telephone (+49) 0451-500-4100. Fax (+49) 0451-500-4034. Email traut@physik.mu-luebeck.de. *Interests*: *Megaselia scalaris*, predominantly with respect to the genetics of sex determination and the evolution of chromosomes.

Sven-Olof Ulefors, Fürgerivägen 9, 380 44 Alsterbro, Sweden. Telephone 46-481-50462. Email so.ulefors@swipnet.se. *Interests*: Palaearctic species of *Megaselia*; separation of *M. pulicaria*-group species.