Carl W. Dick

Doctor of Philosophy, Zoology

Robinson Professor of Biology Department of Biology Western Kentucky University 1906 College Heights Blvd #11080 Bowling Green, KY 42101-1080

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AFFILIATIONS

Professor: Department of Biology, WKU, 2020-present

Associate Professor: Department of Biology, WKU, 2015-2020

Assistant Professor: Department of Biology, WKU, 2009-2015

Adjunct Assistant Professor: Department of Biological Sciences, University of Illinois, Chicago

Research Associateships: Field Museum of Natural History, The Museum of Texas Tech University, Center for North American Bat Research and Conservation

PERSONAL

Birthplace:	Kansas City, Missouri, USA
High School:	Mountain Lake, Minnesota, USA
Residence:	Smiths Grove, Kentucky, USA
Citizenship:	United States of America

EDUCATION

Ph.D., 2005. Zoology. Texas Tech University, Lubbock, Texas

M.S., 1998. Biology. University of Central Arkansas, Conway, Arkansas

B.A., 1992. Biology/Environmental Biology. Tabor College, Hillsboro, Kansas

POSTDOCTORAL EXPERIENCE (June 2005 - August 2009)

Brown Postdoctoral Research Fellow, Field Museum of Natural History, Chicago, Illinois, USA

Advisor: Dr. Bruce D. Patterson, MacArthur Curator of Mammals

DISCIPLINE-SPECIFIC HONORS

Gloeandromyces dickii Haelewaters & Pfister, 2019 (Harvard University - Fungal Systematics and Evolution 3: 19-3). A new species of Ascomycota: Laboulbeniales from the bat fly *Trichobius joblingi* in Panama.

PUBLICATIONS (Submitted, In Press, and Published)

<u>Google Scholar citation indices</u>: total citations = 2577; h-index = 29; i10-index = 46 <u>ResearchGate indices</u>: (professional science networking site): RG Score = 30.33

Manuscripts Submitted

Speer, K. A., T. S. M. Teixeira, S. L. Perkins, K. Dittmar, M. Ingala, C. Wultsch, K. Krampis, A. Brown, S. Galen, C. W. Dick, N. B. Simmons, and E. L. Clare.

Habitat island area changes the composition and network structure of microbiome communities of blood-feeding arthropods. ISME Communications.

- Speer, K. A., T. S. M. Teixeira, A. Brown, S. L. Perkins, K. Dittmar, M. Ingala, C. Wultsch, K. Krampis, C. W. Dick, M. Vieira, A. Delciellos, S. Galen, N. B. Simmons, and E. L. Clare. Parasite species identity mediates effects of habitat fragmentation on bacterial microbiomes. Ecography.
- Brown, A. M., K. Speer, T. Teixeira, E. Clare, N. Simmons, J. A. Balbuena, C. W. Dick,
 K. Dittmar, and S. Perkins. Phylogenetic and ecological trends in specialization:
 disentangling the drivers of ectoparasite host specificity. Journal of Animal Ecology.

In Press

2021

- (65) Lutz, H. L., J. A. Gilbert, and C. W. Dick. 2021. Tripartite associations between Afrotropical bats, eukaryotic parasites, and microbial symbionts. Molecular Ecology DOI: 10.1111/mec.16044 (Journal Cover Article)
- (64) Haelewaters, D., C. W. Dick, K. P. Cocherán Pittí, K. Dittmar, and B. D. Patterson.
 2021. Bats, Bat Flies, and Fungi: Exploring Uncharted Waters. Pages 349-371 In: Lim, B. K., M. B. Fenton, R. M. Brigham, S. Mistry, A. Kurta, E. H. Gillam, A. Russell, and J. Ortega (Eds). 50 Years of Bat Research: Foundations and New Frontiers. Springer, Cham, Switzerland.
- (63) Porter, M. L., T. W. Cronin, C. W. Dick, N. Simon, and K. Dittmar. 2021. Visual system characterization of the obligate bat ectoparasite *Trichobius frequens* (Diptera: Streblidae). Arthropod Structure and Development. 60: DOI: 10.1016/j.asd.2020.101007

2020

- (62) Liu, J., D. Haelewaters, W. P. Pfliegler, R. A. Page, C. W. Dick and M. C. Aime. 2020. A new species of *Gloeandromyces* from Ecuador and Panama revealed by morphology and phylogenetic reconstruction, with a discussion of secondary barcodes in Laboulbeniomycetes taxonomy. Mycologia. doi: <u>https://doi.org/10.1080/00275514.2020.1781496</u>
- (61) Hüseyin, Ç., G. Coşkun, and **C. W. Dick**. 2020. Ectoparasitic bat flies (*Eucampsipoda hyrtlii*) detected on the Egyptian Fruit Bat (*Rousettus aegyptiacus*) in Antalya, Turkey. Turkiye Parazitol Derg 44: 115-117.

- (60) Lutz, H. L., E. W. Jackson, C. W. Dick, P. W. Webala, W. S. Babyesiza, J. C. Kerbis Peterhans, T. C. Demos, B. D. Patterson, and J. A. Gilbert. 2019. Associations between Afrotropical bats, parasites, and microbial symbionts. Nature, Ecology and Evolution. DOI: <u>https://doi.org/10.1101/340109</u>
- (59) Speer, K. A., E. Luetke, E. Bush, B. Sheth, A. Gerace, Z. Quicksall, M. Miyamoto, C. W. Dick, K. Dittmar, N. Albury, and D. L. Reed. 2019. A fly on the cave wall: parasite genetics reveal fine-scale dispersal patterns of bats. Journal of Parasitology 105: 555-556.

 (58) Webala, P. W., J. Rydell, C. W. Dick, S. Musila, and B. D. Patterson. 2019.
 Echolocation calls of high duty-cycle bats (Hipposideridae and Rhinonycteridae) from Kenya. Journal of Bat Research and Conservation 12: 10-20.

2018

- (57) Haelewaters, D., T. Hiller, and C. W. Dick. 2018. Bats, Bat Flies, and Fungi: A Case of Hyperparasitism. Trends in Parasitology 1775 (16 pp.) DOI 10.1016/j.pt.2018.06.006 1 (Journal Cover Article)
- (56) Patterson, B. D., P. W. Webala, M. Bartonjo, J. Nziza, C. W. Dick, and T. C. Demos. 2018. On the taxonomic status and distribution of African species of *Otomops* (Chiroptera: Molossidae). PeerJ 6: e4864; DOI 10.7717/peerj.4864.
- (55) Brown, B. V. et al. (51 total authors). 2108. Comprehensive inventory of true flies (Diptera) at a tropical site. Communications Biology 1: 21 (8 pp.) DOI 10.1038/s42003-018-0022-x.
- (54) Borkent, A. et al. (51 total authors). 2018. Remarkable fly (Diptera) diversity in a patch of Costa Rican cloud forest: Why inventory is a vital science. Zootaxa 4402: 053-090.
- (53) Buchholz, M. J., C. Davis, N. S. Rowland, and **C. W. Dick**. 2018. *Borrelia burgdorferi* in rodent reservoirs in Kentucky, a non-endemic state for Lyme Disease. Parasitology Research. DOI: 10.1007/s00436-018-5794-x.

2017

- (52) Ramasindrazana, B., S. M. Goodman, Y. Gomard, C. W. Dick, and P. Tortosa. 2017. Hidden diversity of Nycteribiidae (Diptera) bat flies from the Malagasy region and insights on host-parasite interactions. Parasites and Vectors 10: 630 (8 pp.). DOI 10.1186/s13071-017-2582-x.
- (51) Buchholz, M. J. and C. W. Dick. 2017. Ecology of rodent-ectoparasite associations in South-Central Kentucky. Northeastern Naturalist 24: 97-109.
- (50) Haelewaters, D., W. P. Pfliegler, T. Szentiványi, M. Földvári, A. D. Sándor, L. Barti, J. J. Camacho, G. Gort, P. Estók, T. Hiller, C. W. Dick, and D. H. Pfister. 2017. Laboulbeniales (Fungi, Ascomycota) ectoparasites of Central European bat flies (Diptera, Nycteribiidae): distributional data and host associations. Parasites and Vectors. DOI 10.1186/s13071-017-2022-y

2016

- (49) **Dick, C. W.**, G. Graciolli, and R. Guerrero. 2016. Family Streblidae. Zootaxa 4122: 784-802.
- (48) Graciolli, G. and C. W. Dick, and R. Guerrero. 2016. Family Nycteribiidae. Zootaxa 4122: 780-783.

- (47) Villalobos-Chaves, D., and C. W. Dick. 2015. Rediscovery of the rare Tacarcunan bat *Lasiurus castaneus* (Chiroptera: Vespertilionidae) in Cost Rica. Ecotropica 20:83-86.
- (46) Dittmar, K., S. F. Morse, C. W. Dick, and B. D. Patterson. 2015. (Invited Paper). Bat fly evolution from the Eocene to the Present (Hippoboscoidea, Streblidae and Nycteribiidae). Pages 246-264 In: S. Morand, B. R. Krasnov and T. Littlewood (Editors) Parasite Diversity and Diversification: Evolutionary Ecology Meets Phylogenetics. Cambridge University Press.
- (45) **Dick, C. W.** 2015. Streblidae *in* Encyclopedia of Parasitology, 4th Edition (H.

Mehlhorn, Ed.). Springer-Verlag, Berlin. DOI 10.1007/978-3-642-27769-6_3463-1.

(44) Dick, C. W., and R. Pospischil. 2015. Nycteribiidae *in* Encyclopedia of Parasitology, 4th Edition (H. Mehlhorn, Ed.). Springer-Verlag, Berlin. DOI 10.1007/978-3-642-27769-6_3462-1.

2014

- (43) Camacho, M. A., D. G. Tirira, C. W. Dick, and S. F. Burneo. 2014. Lophostoma carrikeri (Allen, 1910) (Chiroptera: Phyllostomidae): First confirmed records in Ecuador. Check List 10: 217-220.
- (42) Dick, C. W. and K. Dittmar. 2014. (Invited Paper). Parasitic bat flies (Diptera: Streblidae and Nycteribiidae): host specificity and potential as vectors. Pages 131-155 In: S. Klimpel and H. Melhorn (Editors). Parasitology Research Monographs (Vol. 5): Bats (Chiroptera) as Vectors of Diseases and Parasites. Springer-Verlag Berlin Heidelberg. 187p.

2013

- (41) Tortosa, P., N. Dsouli, Y. Gomard, B. Ramasindrazana, C. W. Dick and S. M. Goodman. 2013. Evolutionary history of Indian Ocean nycteribiid bat flies mirroring the ecology of their hosts. PLoS One 8: e75215.
- (40) Olival, K. J., C. W. Dick, N. B. Simmons, J. C. Morales, D. J. Melnick, K. Dittmar, S. L. Perkins, P. Daszak and R. DeSalle. 2013. Lack of population genetic structure and host specificity in the bat fly, *Cyclopodia horsfieldi*, across species of *Pteropus* bats in Southeast Asia. Parasites and Vectors 6:231 (18 pp.).
- (39) Morse, S.F., S. Bush, B.D. Patterson, C.W. Dick, M. Gruwell, and K. Dittmar. 2013. Evolution, multiple acquisition, and localization of endosymbionts in bat flies (Hippoboscoidea, Streblidae, Nycteribiidae). Applied and Environmental Microbiology 79: 2952-2961.
- (38) Dick, C. W. 2013. Review of the bat flies of Honduras, Central America (Diptera: Streblidae). Journal of Parasitology Research Vol. 2013, Article ID 437696, 17 pp. doi:10.1155/2013/437696

- (37) Kim, H-C., S-H. Han, C. W. Dick, S-T. Chong, T. Klein, L. Rueda. 2012. Geographical distribution of bat flies (Diptera: Nycteribiidae and Streblidae), including two new records, *Nycteribia allotopa* and *N. formosana* collected from bats (Chiroptera: Rhinolophidae and Vespertilionidae) in the Republic of Korea. Journal of Vector Ecology 37: 333-337.
- (36) Morse, S., C. W. Dick, B. D. Patterson, and K. Dittmar. 2012. Some like it hot: Evolution and ecology of novel endosymbionts in bat flies of cave-roosting bats (Hippoboscoidea, Nycterophilinae, *Nycterophilia*). Applied and Environmental Microbiology 78: 8639-8649.
- (35) Morse, S., K. Olival, M. Kosoy, S. Billeter, B. D. Patterson, C. W. Dick, and K. Dittmar. 2012. Global distribution and genetic diversity of *Bartonella* in bat flies (Hippoboscoidea, Streblidae, Nycteribiidae). Infection, Genetics and Evolution 12: 1717-1723.
- (34) Pilosof, S., C. W. Dick, C. Corine, B. D. Patterson, and B. Krasnov. 2012. Effects of anthropogenic disturbance and climate on patterns of bat fly parasitism on bats. PLoS One 7: 1-7.

(33) Graciolli, G., and C. W. Dick. 2012. Description of a second species of *Joblingia* Dybas & Wenzel, 1947 (Diptera: Streblidae). Systematic Parasitology 81: 187-193.

2011

- (32) Gettinger, D., C. W. Dick, and R. D. Owen. 2011. Host associations between laelapine mites (Parasitiformes: Laelapidae) and palustrine rodents in Paraguay: A study of host specificity and cryptic species. Systematic and Applied Acarology 16: 145–159.
- (31) Abuzeineh, A. A, N. E. McIntyre, R. D. Owen, C. W. Dick, and T. Holsomback. 2011. Extreme population fluctuation in the Northern Pygmy Mouse (*Baiomys taylori*) in Southeast Texas. Therya 2: 37-45.

2010

(30) Dick, C. W. and J. A. Miller. 2010. (Invited Paper). Streblidae. Pp. 1249-1260 In: Manual of Central American Diptera (Vol II). Brown, B.V., A. Borkent, J.M. Cumming, D.M. Wood, N.E. Woodley, and M. Zumbado (Editors). National Research Council Press, Ottawa.

- (29) Whitaker, J. O. Jr., C. M. Ritzi and C. W. Dick. 2009. (Invited Paper). Collecting and preserving ectoparasites for ecological study. Pages 806-827 In: Kunz, T. H. and S. Parsons (Editors). Ecological and behavioral methods for the study of bats. 2nd edition. Johns Hopkins University Press, Baltimore. 901p.
- (28) Dick, C. W., C. E. L., Esbérard, G. Graciolli, H. G. Bergallo, and D. Gettinger. 2009. Assessing host specificity of obligate ectoparasites in the absence of dispersal barriers. Parasitology Research 105: 1345-1349.
- (27) McIntyre, N. E., R. A. Nisbett, A. Abuzeineh, T. Holsomback, T. Holsomback, Y. K. Chu, J. A. Carmichael, N. de la Sancha, C. W. Dick, C. Jonsson, and R. D. Owen. 2009. Ecological correlates of serological status for Bayou virus in *Oryzomys palustris* (Rodentia: Sigmodontinae). Mastozoologia Neotropical 16: 83-93.
- (26) Hastriter, M. W. and C. W. Dick. 2009. A description of *Paractenopsyllus madagascarensis* sp. n. and the female of *Paractenopsyllus raxworthyi* Duchemin & Ratovonjato, 2004 (Siphonaptera, Leptopsyllidae) from Madagascar with a key to the species of *Paractenopsyllus*. Zookeys 13: 43-55.
- (25) Patterson, B. D., C. W. Dick, and K. Dittmar. 2009. Nested distributions of bat flies (Diptera: Streblidae) on Neotropical bats: artifact and specificity in host-parasite studies. Ecography 32: 481-487.
- (24) Holsomback, T. S., N. E. McIntyre, R. A. Nisbett, R. E. Strauss, Y-K Chu, A. A. Abuzeineh, N. de la Sàncha, C. W. Dick, C. B. Jonsson, B. E. L. Morris. 2009. Bayou virus detected in non-oryzomyine rodent hosts: an assessment of habitat composition, reservoir community structure, and rice rat social dynamics. Journal of Vector Ecology 34: 9-21.
- (23) Dittmar, K., C. W. Dick, B. D. Patterson, M. F. Whiting, and M. Gruwell. 2009. Pupal deposition and ecology of bat flies (Diptera: Streblidae): *Trichobius* sp. (*caecus* group) in a Mexican cave habitat. Journal of Parasitology 95: 308-314.
- (22) Graciolli, G., and C. W. Dick. 2009. A new species of *Basilia* Miranda-Ribeiro (Diptera: Nycteribiidae) from Honduras, parasite of *Bauerus dubiaquercus* (Van Gelder) (Chiroptera: Vespertilionidae: Antrozoinae). Zootaxa 1972: 59-64.

2008

- (21) **Dick, C. W.**, and B. D. Patterson. 2008. An excess of males: skewed sex ratios in bat flies (Diptera: Streblidae). Evolutionary Ecology 22: 757-769.
- (20) Patterson, B. D. and C. W. Dick, and K. Dittmar. 2008. Parasitism by bat flies (Diptera: Streblidae) on Neotropical bats: effects of host body size, distribution and abundance. Parasitology Research 103: 1091-1100.
- (19) Patterson, B. D. and C. W. Dick, and K. Dittmar. 2008. Sex biases in parasitism of neotropical bats by bat flies (Diptera: Streblidae). Journal of Tropical Ecology 24: 387-396.
- (18) Tello, J. S., R. D. Stevens, and **C. W. Dick**. 2008. Patterns of species co-occurrence and density compensation: a test for interspecific competition in bat ectoparasite infracommunities. Oikos 117: 693-702.

2007

- (17) **Dick, C. W.** 2007. High host specificity of obligate ectoparasites. Ecological Entomology 32: 446-450.
- (16) Dick, C. W., and B. D. Patterson. 2007. Against all odds: explaining high host specificity in dispersal-prone parasites. International Journal for Parasitology 37: 871-876.
- (15) **Dick, C. W.**, D. Gettinger, and S. L. Gardner. 2007. Bolivian Ectoparasites: A survey of bats (Mammalia: Chiroptera). Comparative Parasitology 74: 372-377.
- (14) Abuzeineh, A., R. D. Owen, N. E. McIntyre, C. W. Dick, R. E. Strauss, and T. Holsomback. 2007. Response of the March Rice Rat (*Oryzomys palustris*) to inundation of habitat. The Southwestern Naturalist 52: 75-78.
- (13) Patterson, B. D., C. W. Dick, and K. Dittmar. 2007. Roosting habits of bats affect their parasitism by bat flies (Diptera: Streblidae). Journal of Tropical Ecology 23: 177-189.

2006

- (12) Dick, C. W. and R. L. Wenzel. 2006. A new genus and species of trichobiine bat flies (Diptera: Hippoboscoidea: Streblidae) from Costa Rica. Insect Systematics and Evolution 37: 433-442.
- (11) Dick, C. W. 2006. The streblid bat flies (Diptera: Streblidae) of Guatemala. Pages 441-452 In: E. Cano (Editor). Biodiversidad de Guatemala, Vol. 1. Universidad del Valle de Guatemala, Guatemala.
- (10) Dick, C. W. and B. D. Patterson. 2006. Bat flies: Obligate ectoparasites of bats. Pages 179-194 In: S. Morand, B. Krasnov, and R. Poulin (Editors). Micromammals and Macroparasites: from Evolutionary Ecology to Management. Springer-Verlag Publishing. 647p.
- (9) Graciolli, G., C. W. Dick, and D. Gettinger. 2006. A faunal survey of nycteribiid flies (Diptera: Nycteribiidae) associated with bats in Paraguay. Zootaxa 1220: 35-46.
- (8) **Dick, C. W.**, and S. C. Dick. 2006. Effects of prior infestation on host choice of bat flies (Diptera: Streblidae). Journal of Medical Entomology 43: 433-436.

2005

(7) McIntyre, N. E., Y.-K. Chu, R. D. Owen, A. Abuzeineh, N. de la Sancha, C. W. Dick, T. Holsomback, R. A. Nisbett, and C. Jonsson. 2005. A Longitudinal Study of Bayou Virus, Hosts, and Habitat. American Journal of Tropical Medicine and Hygiene. 73: 1043-1049.

- (6) **Dick, C. W.** and D. Gettinger. 2005. A faunal survey of streblid bat flies (Diptera: Streblidae) associated with bats in Paraguay. Journal of Parasitology 91: 1015-1024.
- (5) **Dick, C. W.** 2005. Ecology and Host Specificity of Bat Flies (Diptera: Streblidae) and their Chiropteran Hosts. Ph.D. Dissertation. Texas Tech University, Lubbock, Texas. 253p.

2004

(4) Graciolli, G. and C. W. Dick. 2004. A new species of *Metelasmus* (Diptera: Streblidae: Streblinae) from southern South America. Zootaxa 509: 1-8.

2003

(3) Dick, C. W., M. R. Gannon, W. E. Little, and M. J. Patrick. 2003. Ectoparasite associations of bats from central Pennsylvania. Journal of Medical Entomology 40: 813-819.

2002

(2) **Dick, C. W.** 2002. Variation in the dental formula of the Ipanema bat, *Pygoderma bilabiatum*. The Southwestern Naturalist 47: 505-508.

1998

(1) Dick, C. W. 1998. Macroinvertebrate community structure of headwater streams of the Buffalo National River, Arkansas, in relation to physicochemical environmental variables. M.S. Thesis. University of Central Arkansas, Conway, Arkansas. 72p.

Online Resources/Publications:

- Field Museum Insects Division. Online Insect Collections Database: Vertebrate Ectoparasites. Posted at the following URL (version 24 March 2009): http://emuweb.fieldmuseum.org/arthropod/ectoparasites.php
- Dick, C. W. and G. Graciolli. Checklist of World Streblidae (Diptera: Hippoboscoidea). Posted at the following URL (version January 2018): <u>https://www.researchgate.net/publication/322578992_CHECKLIST_OF_WORLD_HIPPOBOSCIDA</u> <u>E_DIPTERA_HIPPOBOSCOIDEA</u>
- Graciolli, G. and C. W. Dick. Checklist of World Nycteribiidae (Diptera: Hippoboscoidea). Posted at the following URL (version July 2018): <u>https://www.researchgate.net/publication/322579074_CHECKLIST_OF_WORLD_NYCTERIBIIDAE_DIPTERA_HIPPOBOSCOIDEA</u>
- Dick, C. W. Checklist of World Hippoboscidae (Diptera: Hippoboscoidea). Posted at the following URL (version January 2018): <u>https://www.researchgate.net/publication/322578992 CHECKLIST OF WORLD HIPPOBOSCIDA</u> <u>E DIPTERA HIPPOBOSCOIDEA</u>
- **Dick, C. W.** Checklist of World Glossinidae (Diptera: Hippoboscoidea). Posted at the following URL (version 3 November 2006): http://fm1.fieldmuseum.org/aa/Files/cdick/Glossinidae_Checklist_3nov06.pdf
- Dick, C. W. and M. Bindokas. Checklist of World Polyctenidae (Hemiptera: Cimicoidea). Posted at the following URL (version January 2018): <u>https://www.researchgate.net/publication/322725590_CHECKLIST_OF_WORLD_POLYCTENI</u> <u>DAE_HEMPITERA_CIMICOIDEA</u>

PENDING PROPOSALS

FUNDED GRANTS, SCHOLARSHIPS, AND AWARDS (Career Total = \$2,544,000)

National Science Foundation (DEB- PurSUiT), 2021-2024. (\$1,499,000); Collaborative Research: PurSUiT: Species diversity and evolution of parasitic microfungi. Mary C. Aime, PI, Carl W. Dick, Danny Haelewaters, Kyryll Savchenko, Alisha Quandt, CoPIs (\$211,455 subaward to WKU).

Western Kentucky University, Research and Creative Activities Program #18-8001), 2017-2018. (\$5,050); Nycteribiid bat flies of the world. Carl W. Dick, PI

John Robinson Professorship, 2013-present. Western Kentucky University, Ogden College of Science and Engineering; for recognition of exceptionally meritorious faculty achievement (awards ca. \$3,000/year for research support)

Western Kentucky University, Research and Creative Activities Program (#13-8037), 2013-2014. (\$7,000); Flying under the radar?: Immunological compatibility reinforces host specificity in blood-feeding parasites. Carl W. Dick, PI

JRS Biodiversity Foundation, 2012-2015. (\$90,095); Bats of Kenya: distribution, status, ecology, and public health. Field Museum of Natural History, Bruce D. Patterson, Paul W. Webala, PIs, Carl W. Dick, CoPI

Western Kentucky University, Research and Creative Activities Program (#11-8020), 2011-2012. (\$15,000); Catalogs and Monographs on world collections of bat flies (Diptera: Streblidae and Nycteribiidae). Carl W. Dick, PI

Western Kentucky University, Office for Sponsored Programs Proposal Incentive Fund (#10-905), 2009. (\$1,350); Long-term Loan Acquisition of Field Museum's Hippoboscoid Diptera (Bat Flies) Collection. Carl W. Dick, PI

Smithsonian Institution/US National Museum Williston Fund, 2009. (\$1,335); Inventory and loan of the US National Collection of hippoboscoid Diptera. Carl W. Dick, PI

National Science Foundation (DEB-0640330, 0640331, 1003459), 2007-2012. (\$420,000); Collaborative Proposal: Phylogeny of the bat flies of the world – Insights into trends in host associations and ectoparasitism. Katharina Dittmar and Carl W. Dick, PIs; Bruce D. Patterson, CoPI

 National Science Foundation (DBI-0545051), 2006-2010. (\$406,912); Digitization, Conversion, and Accessibility of The Field Museum's Bat Fly Collection. Carl W. Dick, PI; Bruce D. Patterson, Joanna McCaffrey, Alfred F. Newton, CoPIs

 National Geographic Society, Committee on Research and Exploration, 2006. (\$12,793); Behavioral Ecology of Ectoparasites Infesting Bats, Marsupials, and Rodents in the Atlantic Forests of Ilha Grande, Rio de Janeiro State, Brazil. Donald Gettinger, PI; Carl W. Dick, CoPI

Entomological Society of America, 2006. (\$790); Symposium Speaker Fund for Special Symposium (Section A)

Field Fund Grants for Collections, 2005. (\$3,330); Field Museum of Natural History

Summer Dissertation Research Award, 2005. (\$2,300); The Graduate School, Texas Tech University

Research Grant, 2004. (\$30,000); "Genetic diversity and phylogeography of the small mammal fauna of the western side of the Andes in Ecuador." Robert J. Baker, René M. Fonseca, PI's; Carl W. Dick, Juan Pablo Carrera, Co-PI's

ARCS Scholarship, 2004. (\$5,000); Achievement Rewards for College Scientists,

Lubbock, Texas Chapter

- Phi Kappa Phi Honor Society, 2004. (nominated)
- Wilks Award Finalist, 2004. Southwestern Association of Naturalists
- Field Fund Grant for Collections, 2003. (\$1,724); Field Museum of Natural History
- Mini-PEET Award, 2003. (\$4,000); Society of Systematic Biologists
- ARCS Scholarship, 2003. (\$5,000); Achievement Rewards for College Scientists, Lubbock, Texas Chapter
- **Third Best Student Paper**, 2003. (\$75); Graduate Research Forum, Texas Tech University Association of Biologists
- Summer Scholarship Award, 2003. (\$2,343); Department of Biological Sciences, Texas Tech University
- Student Travel Award, 2003. (\$400); Southwestern Association of Naturalists

Robert L. Packard Award (best overall research paper), 2003. (\$150); Texas Society of Mammalogists

J. Knox-Jones, Jr. Memorial Endowed Scholarship, 2002. (\$1,250); Texas Tech University

Research Mini-grant, 2002. (\$350); Association of Biologists, Texas Tech University **Phi Kappa Phi Honor Society**, 2002. (nominated)

- Explorer's Club Research Grant, 2001. (\$1,200); The Explorers Club, New York
- James Sowell Scholarship, 2001. (\$250); The Museum, Texas Tech University
- Summer Research Award, 2001. (\$500); Department of Biological Sciences, Texas Tech University
- **Best Student Paper**, 2001. (\$150); Graduate Research Forum, Texas Tech University Association of Biologists
- Summer Research Award, 2000. (\$500); Department of Biological Sciences, Texas Tech University
- Dean's List (4.0 GPA), 1999-2005. Texas Tech University
- Chancellor's Endowed Graduate Fellowship, 1999-2001. (\$9,000); Texas Tech University
- Visiting Scholar Grant, 1999. (\$945); Field Museum of Natural History, Chicago

Student Research Grant, 1996. (\$355); University of Central Arkansas

Student Research Grant, 1995. (\$598); University of Central Arkansas

Dean's List, (4.0 GPA), 1994-1998. University of Central Arkansas

Dean's List, 1991-1992. Tabor College

PROFESSIONAL POSITIONS HELD

Western Kentucky University, Department of Biology: Professor, 2020-present Associate Professor, 2015-2020 Assistant Professor, 2009-2015
University of Illinois at Chicago, Department of Biological Sciences: Adjunct Assistant Professor, 2011-present
Field Museum of Natural History, Department of Zoology: Research Associate, 2002-2005; 2009-2014 Brown Postdoctoral Research Fellow, 2005-2009 (Bruce D. Patterson, Advisor)

- **Curatorial/Research Assistant** (B. D. Patterson, Douglas Stotz, and William J. O. Ballard); "Birds, Mammals and Parasites Along an Elevational Gradient in SE Peru" (NSF DEB-9870191), 2000-2003
- Indiana State University, Department of Ecology and Organismal Biology: Graduate Faculty, 2010-present
 - **Research Associate**; Center for North American Bat Research and Conservation, 2005-present
- Texas Tech University, Natural Sciences Research Laboratory: Research Associate, 2007-present
- **Texas Tech University, Department of Biological Sciences: Research Assistant** (Robert D. Owen); "Ecology of Hantavirus in Paraguay", 2005
 - Head Teaching Assistant (Lauren Gollahon); Human Anatomy and Physiology, 2004
 - Teaching Assistant (Michael R. Willig); Biometry, 2003
 - **Research Assistant** (Marilyn A. Houck, R. D. Owen, Nancy McIntyre, and Richard Nisbett); "Landscape Epidemiology of a Texas Hantavirus: habitat structure and the potential role of parasites", 2002-2003
 - Research Assistant (Robert J. Baker, Robert D. Bradley, Ronald A. Van Den Bussche, and Meredith J. Hamilton); James Sowell Expedition to Honduras, 2001
 - **Teaching Assistant** (Clyde Jones and R. D. Bradley); Vertebrate Natural History, 2001
 - President; Association of Biologists, Texas Tech University, 2000-2001
 - **Teaching Assistant** (L. Gollahon); Human Anatomy and Physiology, 1999-2000 **Laboratory Manager** (R. D. Owen); 1999-2005
 - **Database Manager** (R. D. Owen and M. R. Willig); "Mammals of Paraguay and their ectoparasites", 1998-2003 (NSF DEB-9400926, DEB-9741543, DEB-9741134)
 - Research Aide (R. D. Owen and M. R. Willig); "Mammals of Paraguay and their ectoparasites", 1998 (NSF DEB-9400926, DEB-9741543, DEB-9741134)
 - Research Assistant (Donald Gettinger); "Mammalian ectoparasites of Paraguay", 1997-1998
- University of Central Arkansas, Department of Biology:
 - Research Assistant (Katherine Larson); "Comparative morphological plasticity in *Lonicera sempervirens* and *L. japonica*", 1997-1998
 - Teaching Assistant (Don Culwell); General Botany, Fall, 1997
 - **Teaching Assistant** (Michael L. Mathis); Biology for General Education, 1995-1997
 - **Teaching Assistant** (Steven Runge); Cellular and Molecular Biology, 1994-1995

MENTORSHIP/SUPERVISION:

- Academic Advisor (Committee Chair) Taylor Verrett, MS Student, Department of Biology, Western Kentucky University. 2019-present
- Academic Advisor (Committee Member) Sophia Corde, MS Student, Department of

Biology, Western Kentucky University. 2019-present

- Research Advisor Savanah Miller, WKU Undergraduate student, 2019-2020
- Research Advisor William Boroughs, Gatton Academy HS Student. 2019
- Academic Advisor (Committee Member) Olivia Gearner, MS Student, Department of Biology, Western Kentucky University. With Co-advisors Keith Philips, Albert Meier. 2017-2019
- Academic Advisor (Committee Chair) Mitchell Schooler, MS Student, Department of Biology, Western Kentucky University. With Co-advisors Jarrett Johnson, Keith Philips. 2015-2017
- Academic Advisor (Committee Member) Christopher Banotai, MS Student, Department of Biology, Western Kentucky University. With Co-advisors Michael Stokes, Scott Grubbs. 2015-2017
- Academic Advisor (Committee Member) Kenneth Anderson, MS Student, Department of Biology, Western Kentucky University. With Co-advisors Jarrett Johnson, Phil Lienesch. 2015-2017
- Academic Advisor (Committee Chair) Matthew Buchholz, MS Student, Department of Biology, Western Kentucky University. With Co-advisors Michael Stokes, Cheryl Davis. 2014-2016
- Academic Advisor (Committee Member) Michael Chaise Gilbert, MS Student, Department of Biology, Western Kentucky University. With Co-advisors Michael Collyer, Steve Huskey. 2015-2016
- Academic Advisor (Committee Member) Michael Barrow, MS Student, Department of Biology, Western Kentucky University. With Co-advisors Jarrett Johnson, Michael Collyer. 2013-2015
- Academic Advisor (Committee Chair) Lauren Van Sicklin, MS Student, Department of Biology, Western Kentucky University. With Co-advisors Michael Stokes, Bruce Schulte. 2013-2017
- Research Advisor Grace Babbs and Ajit Deshpande, Gatton Academy HS Students. 2013
- Academic Advisor (Committee Member) Rebecca Morgan, BS Honor's CE/T Student (Religious Studies). With Co-advisor Joseph Trafton. 2012-2013
- Academic Advisor (Committee Co-Chair) Kayla Pittman, MS Student, Department of Biology, Western Kentucky University. With Co-advisors Cheryl Davis, Kenneth Crawford. 2012-2014
- Academic Advisor (Committee Member) Merrie Richardson, MS Student, Department of Biology, Western Kentucky University. With Co-advisors Michael Stokes, Bruce Schulte. 2012-2014
- Academic Advisor (Committee Member) Kelly Derham, MS Student, Department of Biology, Western Kentucky University. With Co-advisors Bruce Schulte, Albert Meier. 2012-2014
- Academic Advisor (Committee Member) Kevin Tewell, MS Student, Department of Biology, Western Kentucky University. With Co-advisors Jarrett Johnson, Lawrence Alice. 2011-2014
- Academic Advisor (Committee Chair) Ayodele Atolagbe, MS Student, Department of Biology, Western Kentucky University. With Co-advisors Mike Stokes, Keith Phillips. 2011-2012

- Academic Advisor (Committee Chair) Eric Stamper, CE/T Honor's Undergraduate Student, Department of Biology, Western Kentucky University. With Co-advisors Cheryl Davis, Courte Voorhees. 2011-2012
- Academic Advisor (Committee Chair) Katherine Bias, MS Student (non-thesis), Department of Biology, Western Kentucky University. 2010-2012
- Academic Advisor (Committee Member) Margaret Hook, MS Student, Department of Biology, Western Kentucky University. With Co-advisors Bruce Schulte, Keith Philips. 2009-2012
- Academic Advisor (Committee Member) Erika Arnold, PhD Student, Ecology and Evolution Group, Department of Biological Sciences, University of Illinois at Chicago. With Co-advisors Henry Howe, Bruce Patterson, Joel Brown, David Wise. 2008-2015
- Academic Advisor (Committee Member) Nicholas Gikas, MS Student, Department of Biology, Indiana State University. With Co-advisors John Whitaker, Steven Lima, Joy OKeefe. 2010-2011
- Academic Advisor Luiz Felipe Alves da Cunha Carvalho, PhD Student, Programa de Pós-graduação em Ecologia e Conservação, Departamento de Biologia, Universidade Federal do Mato Grosso do Sul. With Co-advisors Erich Fischer and Gustavo Graciolli. Campo Grande, Matto Grosso do Sul, Brasil, 2006-2008
- Supervisor Stephanie Ware, Collections Assistant II, Zoology Department, Insect Division, "Bat Flies Like an EMu" project. Chicago, 2007-2009
- Supervisor Mary Beth Prondzinski, Collections Assistant III, Zoology Department, Insect Division, "Bat Flies Like an EMu" project. Chicago, 2006-2007
- Supervisor/Mentor Gabriella Chiono, Field Museum/Loyola University Chicago Internship program. Chicago, fall semester of 2006, spring semester of 2007
- Supervisor/Mentor Cassie Pontone, Charles Muller, Michael Barber, Elizabeth Muller, Michael Bindokas, Lakshmi Sundaresan, and Alifia Merchant. Field

Museum/Oak

Park-River Forest High School Internship program. Chicago, summers of 2006-2008

- Supervisor/Mentor Sonia Leon and Nickolas Travanty, Field Museum Volunteer Program. Chicago, 2005-2006
- Supervisor/Mentor Juan Sebastian Tello, Ectoparasite Training. Ecuador, 2004; Bat Flies of Ecuador (pursuant to NSF project). FMNH Chicago, 2006 and 2008 Mentor - John Chavez, Ectoparasite Training. Peru, 2001

MANUSCRIPTS and GRANT PROPOSALS REVIEWED FOR:

Acta Chiroptologica, Acta Parasitologica, Biological Journal of the Linnaean Society, Biotropica, Comparative Parasitology, Diversity and Distributions, Ecography, Ecological Entomology, Florida Scientist, Folia Parasitologica, Hysterix – The Italian Journal of Mammalogy, Insecta Mundi, International Journal for Parasitology, Israel Science Foundation, Journal of Animal Ecology, Journal of Biogeography, Journal of Mammalogy, Journal of Parasitology, Journal of Tropical Ecology, Mammalian Species, Mastozoologia Neotropical, Memórias do Instituto Oswaldo Cruz, Molecular Ecology, Molecular Phylogenetics and Evolution, National Geographic Society, National Science Foundation (US), Northeastern Naturalist (Guest Editor), Oecologia, Oikos, Pan Pacific Entomologist, Parasites and Vectors, Parasitology, PLOS One, PNAS, Proceedings of the Oklahoma Academy of Sciences, Revista Brasileira de Entomologia, Southwestern Naturalist, Studies on Neotropical Fauna and Environment, Systematic Entomology, Systematic Parasitology, The Auk, Trends in Parasitology, Western North American Naturalist, Zoonoses and Public Health, Zootaxa

MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS

- American Society of Mammalogists
 - Member: Board of Directors, 2003-2006
 - Member: Systematics Collections Committee, 2002-present
- Entomological Society of America
- Kentucky Academy of Science
- Southeastern Society of Parasitologists
- Southwestern Association of Naturalists
 - Member: Board of Governors, Class of 2007 (2004-2007)
 - Chair: President's Student Advisory Committee, 2002-2004
- Texas Tech University Association of Biologists

President: 2000-2001

PROFESSIONAL COMMITTEES

Systematics Collections Committee; American Society of Mammalogists, 2002-present
Ambassador; American Society of Mammalogists, 2002-present
Board of Governors; Southwestern Association of Naturalists, Class of 2007
Board of Directors; American Society of Mammalogists, 2003-2006
President's Student Advisory Committee (Chair); Southwestern Association of Naturalists, 2002-2004
Faculty Relations Committee; Texas Tech University Association of Biologists, 2001-2004
Faculty Search Committee; Mammalogy, Texas Tech University, 2002 (hired Dr. Jorge Salazar-Bravo)

WESTERN KENTUCKY UNIVERSITY TEACHING

- BIOL 122 (Biological Concepts: Evolution, Diversity, and Ecology), Fall 2010-11, 2013, 2015, Spring 2014
- BIOL 122H (Honors Biological Concepts: Evolution, Diversity, and Ecology, Fall 2019, 2021
- BIOL 151/153 (Investigative Biotechnology: Evolution Module), Spring 2010
- BIOL 225 (Zoology Laboratory), Coordinator, Spring 2017
- BIOL 316 (Evolution: Theory and Process), Spring 2015, Summer 2018 2021
- BIOL 316H (Honors Evolution: Theory and Process), Spring 2016-2021
- BIOL 430 (Evolution: Theory and Process), Spring 2010-2014
- BIOL 430 WEB (Evolution: Theory and Process), Spring 2012-2013
- BIOL 430G (Evolution: Theory and Process), Spring 2010-2014
- BIOL 430H (Honors Evolution: Theory and Process), Spring 2010-2012, 2014, Fall 2012
- BIOL 489 (Professional Aspects of Biology), Spring 2020-2021, Fall 2021
- BIOL 500 (Intro to Graduate Study and Research), Fall 2017-2021

- BIOL 523 (Symbioses and Host-Parasite Associations), Fall 2012, 2014, 2016, 2018, 2020
- BIOL 598 (Graduate Seminar), 2010-2012

WESTERN KENTUCKY UNIVERSITY SERVICE

- Member, Advisory Committee, Department of Biology, 2020-present
- Graduate Council, Western Kentucky University, 2019-22 (elected)
- Member, Graduate Dean advisory and search committee, Western Kentucky University, 2018 (chaired by Dean Cheryl Stevens)
- Member, University Senate, 2018-2019
- Member, University Senate Executive Committee, 2018-2019
- Chair, Graduate Council Policy Committee, 2018-present
- Chair, Graduate Council, Western Kentucky University, 2018-2019 (elected)
- Vice-Chair, Graduate Council, Western Kentucky University, 2017-2018 (elected)
- Chair, Physiologist/Pathologist faculty search committee, Department of Biology, 2016-2017
- Member, Graduate Dean search committee, Western Kentucky University, 2016 (chaired by Dean Connie Foster)
- Graduate Council, Western Kentucky University, 2016-20 (elected)
- Graduate Council, Western Kentucky University, 2015-16 (appointed)
- Graduate Council Policy Subcommittee, Western Kentucky University, 2015present
- Graduate Program Director, Department of Biology, 2014-present
- Chair, Graduate Program Committee, Department of Biology, 2014-present
- Member, Graduate Recruitment Council, The Graduate School, 2014-2015
- Chair, Seminar Committee, Department of Biology, 2010-2013
- Member, Tenure and Promotion sub-committee, Department of Biology, 2009present
- Member, Graduate Committee, Department of Biology, 2011-2014
- Assistant-In-Training to Graduate Program Director, Department of Biology, 2012-2014
- Member, Ad Hoc BIOL122 committee, Department of Biology, 2010-present
- ATP Advisor, Department of Biology, 2010-2017
- Faculty liaison Biology Alumni Homecoming Reception, 2010-2016
- Member, Research and Creative Activities Program Committee, Office of Sponsored Programs, 2010-2013
- Judge, WKU Student Research Conference, Bowling Green, KY, Spring 2011-2012
- Guest Lecturer for C. Davis's Parasitology class, Fall 2010
- Guest Lecturer for M. Stokes' Mammalogy class, Fall 2010
- Member, Genetics faculty search committee, Department of Biology, 2009-2010
- Member, Developmental Biology faculty search committee, Department of Biology, 2010 (Host for Developmental Biologist candidate Armando Casas-Mollano)

- Second Reader, Capstone Experience Honor's College student Candace Read, 2010
- Second Reader, Capstone Experience Honor's College student Jason Hall, 2010
- Augmentation mentor, BIOL430 (Evolution) for Honor's College students Candace Read, Chris Obermeyer, Erin Eaton, Katrina Bidwell, Daniel Brown, Jason Hall, 2010
- Interview by Bowling Green Daily News on White Nose Syndrome, 21 April 2010
- NSF-REU Advisor for Hillary Jones and Mark Callaghan, 2010

LECTURES/SYMPOSIUM PRESENTATIONS

Austin Peay State University, Invited Research Seminar Series, Clarksville, TN, April 2019. Western Michigan University, Invited Research Seminar Series, Kalamazoo, MI, April 2013. Southern Illinois University, Invited Research Seminar Series, Carbondale, IL, November 2011.

- Universiti Malaysia, Sarawak, UNIMAS-FMNH Symposium, Kuching, Sarawak, Malaysia, December 2010.
- Leibniz Institute for Zoo and Wildlife Research, Plenary Lecture: 2nd International Berlin Bat Meeting, Bat Biology and Infectious Diseases, Berlin, Germany, February 2010.

Western Kentucky University, Invited Seminar Series, Bowling Green, KY, February 2009 University of Illinois - Chicago, Invited Seminar Series, Chicago, IL, April 2008 Indiana State University, Invited Seminar Series, Terre Houte, IN, November 2007 Entomological Society of America, Special Symposium: Different Ways to Hitch a Ride:

Phylogenetic Perspectives on Ectoparasitism (Co-Chaired with Katharina Dittmar), Indianapolis, IN, December 2006

Field Museum of Natural History, Regular Seminar Series, Chicago, IL, March 2006 Texas Tech University, Dissertation Defense Seminar, Lubbock, TX, May 2005 Museo de Zoología, Pontificia Universidad Católica del Ecuador, Quito, Ecuador, June 2004

Texas Tech University, Graduate Research Forum, Lubbock, TX, Spring 2003

- Texas Tech University Junction Campus, Natural History of Aquatic Habitats (Dr. Kent Rylander), Junction, TX, Summer 2002
- Texas Tech University, Graduate Research Forum, Lubbock, TX, Spring 2002

Texas Tech University, Graduate Research Forum, Lubbock, TX, Spring 2001

University of Central Arkansas, Student Research Seminar, Conway, AR, Spring 1997

University of Central Arkansas, Student Research Symposium, Conway, AR, Spring 1997

Guest Lecturer; Biology for General Education, General Zoology, General Ecology, Conway, AR, 1996-1999

University of Central Arkansas, Student Research Forum, Conway, AR, Fall 1996

SYNERGISTIC ACTIVITIES AND PROFESSIONAL DEVELOPMENT

Speaker; The seed of science is wonder: Darwin and Natural Selection, Unitarian Universalist Church of Bowling Green, 12 February 2017

Participant; Tenure and Promotion Policies Professional Development (with Dr. Richard Miller, Vice Provost for Policies and Personnel); 7 February 2013

Participant; Ogden College Professional Development - undergraduate and graduate

theses and professional writing; Fall 2012.

- Student; Western Kentucky University, Online Teaching Summer Camp (Distance Learning, FaCet, DELO); 16-20 July 2012.
- Guest Speaker; Western Kentucky University, Mary Lohr's Summer "VAMPY" Genetics class, 4 July 2012.
- Guest Speaker; Western Kentucky University, Cheryl Davis' Parasitology class, Fall, 2010.
- Guest Speaker; Western Kentucky University, Michael Stokes' Mammalogy class, Fall, 2010.
- Guest Speaker; Loyola University-Chicago, IL, parasitology class trip, Field Museum, Chicago, IL, 2007-2008.
- Guest Speaker; Danville Community College, IL, biology class trip, Field Museum, Chicago, IL, 2007, 2008

Member; Field Museum Cryogenics Storage Committee, Chicago, IL, 2005-present Member; Field Museum Cleanup Committee, Chicago, IL, 2005-present

- Judge; South Plains Regional Science and Engineering Fair, Lubbock, TX, 2004
- Judge; All Saints Episcopal School Science Fair, Lubbock, TX, 2001
- Instructor; Audubon Society Ecology Camp, Hot Springs, AR, 1999
- Guest Speaker; Zoology Exercise, Marguerite Van Elementary, Conway, AR, 1997
- Judge; Conway High School Science Fair, Conway, AR, 1997
- Volunteer; Special Olympics, Conway, AR, 1996, 1997
- Guest Speaker; Student Enrichment Day, Sallie Cone Elementary, 1996, 1997
- Guest Speaker; High School Workshop, Univ. of Central AR, 1995
- Research Technician; Bureau of Land Management, Salem, OR, Summer, 1993
- Environmental Education Intern; AuSable Institute of Environmental Studies,

Mancelona, MI, Winter, 1992-1993

FIELD EXPERIENCE

Kenya: Marsabit (2015; 3 weeks) South Africa: (2014; 3 weeks) Costa Rica: Zurqui (2013; 1 week) Ecuador: Amazonia (2013; 3 weeks) Kenya: numerous localities (2013; 3 weeks) Costa Rica: Monteverde (2012; 1 week) Kenya: numerous localities (2012; 2 weeks) Kenya: numerous localities (2011; 4 weeks) Ecuador: Amazonia (2011; 3 weeks) Malaysian Borneo (2010; 10 days) Puerto Rico and Vieques (2009; 2 weeks) Puerto Rico and Vieques (2008; 2 weeks) Brazil: Ilha Grande, Rio de Janeiro state (2007; 1 month) Vietnam (2007; 1 week) Thailand (2007; 1 week) Kenya: Arabuko-Sokoke Forest (2006; 3 weeks) Dominican Republic: numerous localities (2005: 3 weeks) Ecuador: numerous localities (2004; 2 months)

Panama: Barro Colorado Island (2003; 10 days) St. John: numerous localities (2003; 2 weeks) Vieques: numerous localities (2003; 1 week) Puerto Rico: Luquillo Experimental Forest (2003; 1 week) Mexico: Colima (2002-2003; 2 weeks) Peru: near Iquitos (2002; 1 month) Peru: Manu Biosphere Reserve (2001; 2.5 months) Honduras: numerous localities (2001; 3 weeks) Peru: Manu Biosphere Reserve (2000; 1 month) Mexico: numerous localities (1999; 1 month) Paraguay: numerous localities (1998; 4 months) Brazil: near Manaus (1997; 1 week) Brazil: Distrito Federal (1997; 1 month) Brazil: near Rio de Janeiro (1997; 2 weeks) Puerto Rico: numerous localities (1994; 3 months) United States: numerous localities (1988 – present)

<u>CONTRIBUTED PRESENTATIONS</u> (*indicates student author)

- Dunnum, J. L., R. C. Dowler, C. W. Dick, et al. (ASM Systematics Collections Committee). 2017. (Poster) ASM Systematic Collections Committee 2017 Resurvey of the Mammal Collections of the Western Hemisphere. Ninety-seventh annual meeting of the American Society of Mammalogists. Moscow, ID.
- *Haelewaters, D., W. P. Pfliegler, J. C. Camacho, C. W. Dick, and D. H. Pfister. 2016. Laboulbeniales on bat flies: independent lineages of host usage. Third Biennial MassMyco, Amherst, MA.
- *Buchholz, M. J., and **C.W. Dick**. 2015. Relationships between ectoparasitic vectors and small mammal reservoirs of *Borrelia burgdorferi* in South Central Kentucky. Annual conference of The Wildlife Society, Winnipeg, Manitoba, Canada.
- Patterson, B.D., P. Webala, C.W. Dick, and * Natalia Cortes Delgado. 2015. Steps toward The Bats of Kenya: identification and characterization of *Rhinolophus* (Chiroptera: Rhinolophidae). Forty-sixth annual meeting of the North American Society for Bat Research, Monterey, CA.
- Patterson, B.D., P. Webala, R. Keeru, **C.W. Dick**, and *A. Weber. 2013. Delimiting cryptic species for 'The Bats of Kenya' the genus *Miniopterus* (Miniopteridae). Sixteenth annual International Bat Research Conference. San Jose, Costa Rica.
- *Stamper, E.A., and **C.W. Dick**. 2013. Evaluating host specificity assessments of bat flies (Diptera: Streblidae) from Ecuador. Ninety-third annual meeting of the American Society of Mammalogists. Philadelphia, PA.
- Dsouli, N., **C.W. Dick**, S.M. Goodman, K. Dellagi, and P. Tortosa. 2012. Phylogeny of bat flies: contribution to host associations and phylogeographic origins. EU Research Conference Centre de Recherche et de Veille sur les maladies émergentes dans l'Océan Indien, La Réunion (Indian Ocean), France.
- *Stamper, E.A., *P. Rivera-Parra, and **C.W. Dick**. 2012. Host specificity of Ecuadorian bat flies (Diptera: Streblidae). WKU Research Conference, Bowling Green, KY.
- Dick, C.W., *A. Atolagbe, P. Webala, B. Agwanda and B.D. Patterson. 2011. Preliminary

survey of the bat flies (Diptera: Streblidae and Nycteribiidae) of Kenya. Joint meeting of the Zoological Society of Southern Africa and the Parasitological Society of Southern Africa. Stellenbosch, South Africa.

- **Dick, C.W.**, *A. Atolagbe, P. Webala, B. Agwanda and B.D. Patterson. 2011. Preliminary survey of the bat flies (Diptera: Streblidae and Nycteribiidae) of Kenya. Annual meeting of the Kenya Wildlife Service. Nanyuki, Kenya.
- **Dick, C.W.** 2010. Bat flies: Intimate ecological and evolutionary partners of bats. UNIMAS-FMNH Symposium, Universiti of Malaysia. Kuching, Sarawak, Malaysia.
- *Jones, H., and **C.W. Dick**. 2010. Species boundaries and phylogenetic analysis of biglegged bat flies (Diptera: Streblidae), and potential coevolution with leaf-nosed bat hosts." Ninety-sixth annual meeting of the Kentucky Academy of Science. Bowling Green, KY.
- *Jones, H., and **C.W. Dick**. 2010. Species boundaries and phylogenetic analysis of biglegged bat flies (Diptera: Streblidae), and potential coevolution with leaf-nosed bat hosts. NSF REU Symposium, Western Kentucky University. Bowling Green, KY.
- **Dick, C.W.**, *A. Sjodin, K. Dittmar, and B.D. Patterson. 2010. The influence of bat roosts on visual reductions in bat fly ectoparasites. Ninetieth annual meeting of the American Society of Mammalogists. Laramie, WY.
- Dittmar, K., **C.W. Dick**, and B.D. Patterson. 2010. Phylogenetic history and convergent evolution of the bat flies (Diptera: Hippoboscoidea: Streblidae & Nycteribiidae). Seventh International Congress of Dipterology. San José, Costa Rica
- **Dick, C.W.** 2010. Bat Biology and Infectious Diseases (Plenary Lecture). Second International Berlin Bat Meeting. Leibniz Institute for Zoo and Wildlife Research, Berlin, Germany.
- **Dick, C.W.** 2009. Ecology and evolution of bats and their parasites. Second Kentucky Bat Working Group meeting. Frankfort, KY.
- **Dick, C.W.**, B.D. Patterson, and K. Dittmar. 2009. Ecology and host associations of ectoparasitic bat flies (Diptera: Streblidae and Nycteribiidae). Tenth International Mammalogical Congress. Mendoza, Argentina.
- **Dick, C.W.**, G. Graciolli, and R. Guerrero. 2009. Biodiversity of Neotropical bat flies: patterns and prospects. Tenth International Mammalogical Congress. Mendoza, Argentina.
- Dittmar, K., **C.W. Dick**, M. Gruwell, and B.D. Patterson. 2009. Evolutionary analysis of the Neotropical ectoparasitic bat flies (Streblidae). Tenth International Mammalogical Congress. Mendoza, Argentina.
- **Dick, C.W.**, *M.W. Bindokas, and B.D. Patterson. 2009. Sizing up big-legged bat flies: a morphometric approach to species boundaries within the genus *Megistopoda*. Eighty-ninth annual meeting of the American Society of Mammalogists. Fairbanks, AK.
- **Dick, C.W.**, and B.D. Patterson. 2008. Males seeking females: anomalous sex-ratio bias in bat parasites (Diptera: Streblidae). Eighty-eighth annual meeting of the American Society of Mammalogists. Brookings, SD.
- Dittmar, K., **C.W. Dick**, B.D. Patterson, and M. Gruwell. 2008. Phylogeny and evolution of bat flies (Streblidae, Nycteribiidae). Eighty-third annual meeting of the American Society of Parasitologists. Arlington, TX.
- **Dick, C.W.**, B.D. Patterson, and K. Dittmar. 2007. Bat flies: obligate ectoparasites of bats (Mammalia: Chiroptera). First Annual South-East Asian Bat Research Conference,

Phuket, Thailand.

- **Dick, C.W.**, B.D. Patterson, and K. Dittmar. 2007. Bat flies: obligate ectoparasites of bats (Mammalia: Chiroptera). Eighty-seventh annual meeting of the American Society of Mammalogists. Albuquerque, NM.
- *Tello, J. S., R.D. Stevens, and **C.W. Dick**. 2007. A test for interspecific competition in bat ectoparasites: patterns of species co-occurrence and density. Eighty-seventh annual meeting of the American Society of Mammalogists. Albuquerque, NM.
- **Dick, C.W.**, B.D. Patterson, K. Dittmar, and J. Chavez. 2007. Bat flies: obligate ectoparasites of bats (Mammalia: Chiroptera). Symposium: Avances de la Mastozoología en el Perú. Universidad Nacional Mayor de San Marcos, Lima, Perú.
- *Gardner, S.E., *J.A. White, *S.T. Samoray, and **C.W. Dick**. 2007. The first record of a nycteribiid bat fly, *Basilia boardmani*, in Alabama. Twelfth annual meeting of the Southeastern Bat Diversity Network and Seventeenth colloquium on Conservation of Mammals in the Southeastern United States. Destin, FL.
- Dittmar, K., M.F. Whiting, **C.W. Dick**, and B.D. Patterson. 2006. Comparing Two Ectoparasite Groups: Convergent Trends in Parasite Evolution. Fifty-fourth annual meeting of the Entomological Society of America. Indianapolis, IN.
- **Dick, C.W.**, B.D. Patterson, K. Dittmar, and M.F. Whiting. 2006. Competition and Coexistence of Neotropical Bat Flies. Fifty-fourth annual meeting of the Entomological Society of America. Indianapolis, IN.
- **Dick, C.W.** 2005. Host Specificity of Bat Flies: Effects of Inter-Host Contamination. Eighty-fifth annual meeting of the American Society of Mammalogists. Springfield, MO.
- Carrera, J.P., R.M. Fonseca, D.F. Alvarado, S.F. Burneo, A.D. Brown, C. Carrion, C.W.
 Dick, P.A. Larsen, F.G. Hoffmann, D. Parish, S. Solari, C.J. Phillips, J.S. Tello, and
 R.J. Baker. 2005. An Approach to Bat Diversity on the West Side of the Ecuadorian Andes: Sowell Expeditions Results. Eighty-fifth annual meeting of the American Society of Mammalogists. Springfield, MO.
- **Dick, C.W.** 2004. Biodiversity of Bats and Parasites in Western Ecuador. Annual Reception of the Achievement Rewards for College Scientists (ARCS). Lubbock, TX
- Fonseca, R.M., J.S. Tello, J.P. Carrera, D.F. Alvarado, A.D. Brown, C. Carrión-B, C.
 W. Dick, J. Higginbotham, F. Hoffmann, P.A. Larsen, D. Parish, C.J. Phillips, S. Solari, and R.J. Baker. 2004. Murcielagos del occidente Ecuatoriano: resultados preliminares de las expediciones Sowell (2001 y 2004). Jornadas de Biologia, Guayaquil, Ecuador.
- **Dick, C.W.** 2004. Ectoparásitos de Murielagos Neotropicales. Invited Presentation: Museo de Zoología, Pontificia Universidad Católica del Ecuador, Quito, Ecuador.
- **Dick, C.W.** 2004. Co-occurrence of bat flies on Neotropical bats: a null model analysis. Eighty-fourth annual meeting of the American Society of Mammalogists. Arcata, CA.
- **Dick, C.W.** 2004. Co-occurrence of ectoparasites on phyllostomid bats: a null model analysis. Fifty-first annual meeting of the Southwestern Association of Naturalists. San Antonio, TX.
- **Dick, C.W.** 2003. Biodiversity and Ecology of Bat Ectoparasites. Annual Reception of the Achievement Rewards for College Scientists (ARCS). Lubbock, TX
- Dick, C.W. and S.C. Mackinder. 2003. Multi-species associations of bat flies on New

World bats: direct experimental evidence for competition. Eighty-third annual meeting of the American Society of Mammalogists. Lubbock, TX.

- **Dick, C.W.** and S.C. Mackinder. 2003. Multi-species associations of bat flies on New World bats: direct experimental evidence for competition. Fiftieth annual meeting of the Southwestern Association of Naturalists. Norman, OK.
- McIntyre, N.E., Y-K. Chu, C.W. Dick, T. Holsomback, M.A. Houck, C. Jonsson, R.A. Nisbett, R.D. Owen, and R. Walker. 2003. Fine-grained landscape epidemiology: a case study with Bayou *Hantavirus*. Eighteenth annual meeting of the International Association for Landscape Ecology. Banff, Alberta, Canada.
- **Dick, C.W.**, B.D. Patterson, J.B. Bender, M.D. Dean, R.L. Wenzel, and R.D. Owen. 2003. Roosting habits of Neotropical bats affect prevalence, intensity and host specificity of parasitic bat flies. Texas Tech University Association of Biologist's Graduate Research Forum. Lubbock, TX.
- Dick, C.W., B.D. Patterson, J.B. Bender, M.D. Dean, R.L. Wenzel, and R.D. Owen. 2003. Roosting habits of Neotropical bats affect prevalence, intensity and host specificity of parasitic bat flies. Twenty-first annual meeting of the Texas Society of Mammalogists. Junction, TX. (winner of the "Robert L. Packard Award" for best overall research paper)
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