

T. KEITH PHILIPS

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EDUCATION

Ph.D. 1997. The Ohio State University, Columbus, OH

Entomology, with emphasis on Coleoptera systematics. Dissertation: Systematics of New World Spider Beetles (advisors: N. Johnson and C. Triplehorn).

M.S. 1990. Montana State University, Bozeman, MT

Entomology, with emphasis on Coleoptera systematics. Thesis: A Revision of the Methiini (Coleoptera: Cerambycidae) of the West Indies and circum-Caribbean Area (advisor: M. Ivie).

B.Sc. 1986. Carleton University, Ottawa, ON

Biology Honours degree.

PROFESSIONAL EMPLOYMENT

2011- Professor, Western Kentucky University, Bowling Green, KY

Instructor of insect biodiversity, systematics and evolution, and general biology for majors. Research on diversity, evolution, and ecology of insects and related projects.

2006-11. Associate Professor, Western Kentucky University, Bowling Green, KY

2000-06. Assistant Professor, Western Kentucky University, Bowling Green, KY

1999-00. Post-doctoral Fellow, University of Pretoria, South Africa

Diversity and evolution of the scarabaeine dung beetles of the world.

1996-99. Instructor, The Ohio State University, Mansfield campus and Stone Laboratory, Put-in-Bay, OH

First year general biology course, including laboratory, at regional campus; intensive classroom and field course on insect biology/diversity at Lake Erie research station.

1997. Systematist, The Ohio Biological Survey and the Ohio River Valley Water Sanitation Commission (ORSANCO), Cincinnati and Columbus, OH

Invertebrate diversity survey, including collection of live Chironomidae larvae for rearing and association with adults. Ohio River (Cincinnati to Mississippi River).

1996-98. Systematist, National Biological Service, Lake Michigan Ecological Station, Porter, IN

Contract involving identification and databasing of Coleoptera from oak savannah habitats to determine the effect of fire frequency on beetle diversity.

1990-96. Graduate Teaching Associate, The Ohio State University, Departments of Entomology and Biology, Columbus, OH

Courses taught: Systematics & Biodiversity, Advanced and Introductory Entomology, Field Entomology, Bee Biology, General Biology, Biology & Society, Biology of Human Diversity.

1988-90. Graduate Research and Teaching Associate, Montana State University, Department of Entomology, Bozeman, MT

Assistant Curator of the Entomology Research Collection; Survey team member investigating the effects of fire intensity on the diversity of Coleoptera and Hymenoptera in various habitats in Glacier National Park, Montana; Teaching associate: Insects and Society and Field Entomology.

RESEARCH INTERESTS

Insect diversity, ecology, evolution, behavior, and conservation, especially in the Coleoptera, including the bostrichoid beetles, especially the spider beetles, the scarabaeine dung beetles, and the cave beetles in the eastern USA.

REFEREED PUBLICATIONS

- 201x.** Philips, T.K., M. Callahan, J. Orozco and N. Rowland Phylogenetic Analysis of the North American Beetle Genus *Trichiotinus* (Coleoptera: Scarabaeidae: Trichiinae). Final draft.
- 201x.** Philips, T.K.. An evolutionary analysis of the Oniticellini and Onthophagini dung beetles (Scarabaeidae:Scarabaeinae). Zookeys, submitted.
- 201x.** C.A. Ricci, A.J. Meier, O.W. Meier, and T.K. Philips' The effects of fire and other habitat characteristics on habitat selection of *Exyra ridingsii*, the Riding's pitcherplant looper moth. Castanea, submitted.
- 201x.** Philips, T.K. and C.S. DeWildt. Survey of the insects found in the caves of Ghana. Journal of Cave and Karst Studies. submitted.
- 2014.** Hudson et al. (multiauthored). The PREDICTS Database: A Global Database of How Local Terrestrial Biodiversity Responds to Human Impacts. Ecology and Evolution 4: 4701-4735.
- 2014.** Peris, D., T.K. Philips, X. Delclòs and C. Soriano. Anobiid beetles (Coleoptera: Polyphaga) from the Cretaceous conifer forests. Cretaceous Research (2015-hardcopy) 52:440-452.
- 2013.** Mynhardt, G. and T.K. Philips. A third new genus and species of spider beetle, *Okamninus annae* (Coleoptera: Ptinidae), from Dominican amber. Palaeodiversity 6: 23-28.
- 2013.** Huchet, J.B., G. Pereira, Y. Gomy, T. K. Philips, C. E. Alatorre-Bracamontes, M. Vásquez-Bolaños and J. Mansilla.. Archaeoentomological study of a pre-Columbian funerary bundle (mortuary cave of Candelaria, Coahuila, Mexico). Annales de la Société entomologique de France (N.S.) 49: 277-290.
- 2013.** Wood, M.V. and T.K. Philips. *Carinomezium*: another new genus of spider beetle

- (Coleoptera: Ptinidae) from Namaqualand, South Africa. Tijdschrift voor Entomologie 156: 11-19.
- 2012.** Orozco, J. and T.K. Philips. *Pachnoda marginata* (Drury) (Coleoptera: Scarabaeidae: Cetoniinae) developing in bat guano in a West African cave. Coleopterists Bulletin 66: 378-379.
- 2012.** Mudge, A.D., J. Orozco, T.K. Philips, and P. Antoine. Cetoniine Diversity of the Upper Guinean Forests and Savannas of Ghana (Coleoptera: Scarabaeidae: Cetoniinae). Terrestrial Arthropod Review 5: 133-174.
- 2012.** Bell, K.L. and T.K. Philips. Molecular systematics and evolution of the Ptinidae (Coleoptera: Bostrichoidea) and related families. Zoological Journal of the Linnean Society 165: 88-108.
- 2011.** Smiley, M.E. and T.K. Philips. Review of the spider beetle genus *Pseudomezium*. African Entomology 19: 572-596.
- 2011.** Trimboli, S. and T.K. Philips. Description of a new species of *Meziomorphum* (Coleoptera: Ptinidae) from the Western Cape region of South Africa. Coleopterists Bulletin 65: 109-114.
- 2011.** Philips, T.K. and G. Mynhardt. Description of *Electragnostus intermedius*, the first spider beetle from Dominican amber (Coleoptera: Ptinidae), with implications on spider beetle phylogeny. Entomapeiron Paleoentomology 4:37-51.
- 2010.** Philips, T.K. and M.E. Smiley. A new species of spider beetle from the Dominican Republic. Florida Entomologist 93: 567-570.
- 2010.** Krell F.-T. and T.K. Philips.
Formicdubius Philips & Scholtz from South Africa, a junior synonym of *Haroldius* Boucomont, and a survey of the trichomes in the African species (Coleoptera, Scarabaeidae, Onthophagini). Zookeys 34: 41-48.
- 2010.** Orozco, J. and T.K. Philips
Morphological evidence on the phylogeny of the New World Cetoniini (Coleoptera: Scarabaeidae: Cetoniinae). Insect Systematics and Evolution 41: 39-54.
- 2009.** Akotsen-mensah, C. and T.K. Philips
Description of a new genus of spider beetle (Coleoptera: Ptinidae) from South Africa. Zootaxa. 2160: 51-67.
- 2009.** Davis, A.L.V. and T.K. Philips
Regional Fragmentation of Rain Forest in West Africa and Its Effect on Local Dung Beetle Assemblage Structure. Biotropica 41: 215-220.
- 2009.** Bell, K.L. and T.K. Philips
Six New Species of the Myrmecophile *Polyplocotes* Westwood (Coleoptera: Ptinidae) from South Australia. Australian Journal of Entomology. 48:15-24.
- 2008.** Bell, K.L. and T.K. Philips
A Revision of the South African myrmecophile *Diplocotidus* (Coleoptera:Ptinidae). African Entomology 16: 33-40.
- 2008.** Philips, T.K. and M.A. Ivie.

Seven new species of *Canthochilum* Chapin from Hispaniola (Coleoptera: Scarabaeidae: Scarabaeinae). *Zootaxa* 1730: 27-42.

- 2008.** Bell, K.L. and T.K. Philips.
Four New Species of the Myrmecophile *Diplocotes* Westwood (Coleoptera: Ptinidae) from Central and North-eastern Australia. *Australian Journal of Entomology* 47: 80-86.
- 2008.** Philips, T.K. and K.L. Bell.
Attavicinus, a new generic name for the myrmecophilous dung beetle *Liatongus monstrosus* (Scarabaeidae: Scarabaeinae) and notes on the species. *Coleopterists Bulletin* 62: 67-81.
- 2008.** Ivie, M.A. and T.K. Philips.
Three new species of *Canthonella* Chapin from Hispaniola, with new records and nomenclatural changes for West Indian dung beetles (Coleoptera: Scarabaeidae: Scarabaeinae). *Zootaxa* 1701: 1-14.
- 2007.** Majka, C.G., T.K. Philips, and C. Sheffield.
Ptinus sexpunctatus Panzer (Coleoptera: Anobiidae: Ptininae) newly recorded in North America. *Entomological News* 118: 73-76.
- 2006.** Emlen, D.J. and T.K. Philips.
Phylogenetic evidence for an association between tunneling behavior and the evolution of horns in dung beetles (Coleoptera: Scarabaeidae: Scarabaeinae) (pp. 47-56). In: M.L. Jameson and B.C. Ratcliffe (editors), *Scarabaeoidea in the 21st Century: A Festschrift Honoring Henry F. Howden*. *Coleopterists Society Monograph*, No. 5, 219 pp.
- 2005.** Philips, T.K.
Acanthaptinus triplehorni: A new genus and species of spider beetle (Coleoptera: Ptinidae) from Madagascar. *Annales Zoologici (Warszawa)* 55: 583-587.
- 2005.** Davis, A.L.V. and T.K. Philips
Effect of Deforestation on a Southwest Ghana Dung Beetle Assemblage (Coleoptera: Scarabaeidae) at the Periphery of Ankasa Conservation Area. *Environmental Entomology* 34: 1081-1088.
- 2005.** Ocampo, F.C. and T.K. Philips.
Food relocation and nesting behavior of the Argentinian dung beetle genus *Eucranium* Brullé and comparison with the southwest African *Scarabaeus* (*Pachysoma*) (Coleoptera: Scarabaeidae: Scarabaeinae). *Revista de la Sociedad Entomologica Argentina* 64: 53-59.
- 2004.** Forgie, S. A., T.K. Philips and C.H. Scholtz.
Evolution of the Scarabaeini (Scarabaeidae: Scarabaeinae). *Systematic Entomology* 30: 60-96.
- 2004.** Philips, T.K. and D.E. Foster.
Cryptopeniculus nigrosetus n.g., n.sp. (Coleoptera: Ptinidae) from the Namaqualand region of South Africa. *Zootaxa* 577: 1-11 .
- 2004.** Philips, T.K., R. Pretorius, and C.H. Scholtz.
A phylogenetic analysis of the dung beetles: (Scarabaeinae: Scarabaeidae): Unrolling an evolutionary history. *Invertebrate Systematics* 18: 1-36.

- 2004.** Philips, T.K., D. W. Edmonds and C.H. Scholtz.
Phylogenetic analysis of the New World Phanaeini (Scarabaeidae: Scarabaeinae):
Hypotheses on origins and relationships. *Insect Systematics and Evolution* 35: 43-63.
- 2003.** Lee, C.-F., T.K. Philips and P.-S. Yang
Revision of the genus *Afroebria* Villiers (Coleoptera: Psephenidae: Eubriinae).
Annals of the Transvaal Museum 40:137-143.
- 2003.** Harrison, J. du G. and T.K. Philips.
Phylogeny of *Pachysoma* MacLeay and related flightless Scarabaeini (Scarabaeidae:
Scarabaeinae). *Annals of the Transvaal Museum* 40: 47-71
- 2003.** Lee, C.-F., T.K. Philips and P.-S. Yang
Afrobrianax, a new genus of the Eubrianacinae (Coleoptera: Psephenidae) with notes
on its phylogenetic position and description of one new species from South Africa.
African Entomology 11:1-8.
- 2002.** Philips, T.K., C.H. Scholtz and F. C. Ocampo.
A phylogenetic analysis of the Eucraniini (Scarabaeidae: Scarabaeinae). *Insect
Systematics and Evolution* 33: 241-252.
- 2002.** Davis, A.L.V., C.H. Scholtz and T.K. Philips
Historical biogeography of scarabaeine dung beetles. *Journal of Biogeography* 29:
1-41.
- 2001.** Pretorius, R., T.K. Philips and C.H. Scholtz.
Geometric morphometrics, the metendosternite and its use in phylogenetics of the
Scarabaeinae (Coleoptera). *Elytron* 14: 125-144.
- 2001.** Philips, T.K.
A record of *Micromalthus debilis* LeConte (Coleoptera: Micromalthidae) from
Central America and a discussion of its distribution. *Florida Entomologist* 84:159-
160.
- 2001.** O'Neill, K.M., W.P. Kemp, C. Seibert, M.G. Rolston, J.A. Bess, and T.K. Philips.
Natural enemy assemblages on native and reseeded grasslands in southwestern
Montana: a family-level analysis. *Western North American Naturalist* 61: 195-203.
- 2000.** Philips, T.K. and C.H. Scholtz.
A new genus and species of trichome bearing dung beetle (Scarabaeidae:
Scarabaeinae) from South Africa. *African Entomology* 8: 227-231.
- 2000.** Philips, T.K.
A Phylogenetic analysis of the New World Ptininae (Coleoptera: Bostrichoidea).
Systematic Entomology. 25: 1-29.
- 1999.** Bond, W.B. and T.K. Philips.
Diversity, phenology, and flower hosts of anthophilous long-horned beetles
(Coleoptera: Cerambycidae) in a southeastern Ohio forest. *Entomological News*.
110: 267-278.
- 1999.** Philips, T.K.
Revision of the New World genus *Niptinus* Fall (Coleoptera: Anobiidae: Ptininae).
Journal of the Kansas Entomological Society. 71: 137-158.
- 1998.** Philips, T.K., W.E. Steiner, and C.A. Triplehorn.

A new species of Central American *Platydemia* Laporte and Brullé (Coleoptera: Tenebrionidae) recently established in Florida. *Coleopterists Bulletin*. 52: 291-296.

1998. Philips, T.K.

A new genus and species of putatively myrmecophilous ptinine, *Coleoaethes tetralobus* (Coleoptera: Anobiidae: Ptininae). *Pan-Pacific Entomologist*. 74(2): 1-5.

1998. Philips, T.K., and M.A. Ivie.

The Methiini of the West Indies (Coleoptera: Cerambycidae) with notes on circum-Caribbean species. *Entomologica Scandinavica*. 29: 57-87.

1998. Philips, T.K. and D.C. Smith.

Notes on the biology and hosts of *Procecidochares atra* (Loew) (Diptera: Tephritidae): Evidence for cryptic species. *Entomological News*. 109: 159-164.

1998. Philips, T.K.

A new genus and species of spider beetle from the Virgin Islands: *Lachnoniptus lindae* (Coleoptera: Anobiidae: Ptininae). *Florida Entomologist*. 81: 1-6.

1998. Philips, T.K., M.A. Ivie and L.L. Ivie.

Leaf mining in spider beetles (Coleoptera: Anobiidae: Ptininae): An unreported mode of larval feeding in the Bostrichoidea. *Proceedings of the Entomological Society of Washington*. 100: 147-153.

1997. Philips, T.K.

Cubaptinus Zayas, a new synonym of *Fabrasia* Martínez and Viana (Coleoptera: Anobiidae: Ptininae). *Coleopterists Bulletin*. 51: 52.

1996. Philips, T.K., R.G. Hancock, and W.A. Foster.

Epigamic display and unique mating position in *Wyeomyia arthrostigma*. (Diptera: Culicidae) *Journal of Insect Behavior*. 9: 739-753.

1990. Ivie, M.A., T.K. Philips, and K.A. Johnson.

High altitude aggregations of *Anetia briarea* Godart (Nymphalidae: Danainae). *Journal of the Lepidopterist's Society*. 44: 209-214.

1990. Ivie, M.A. and T.K. Philips.

New Species of *Canthonella* Chapin from Hispaniola (Coleoptera: Scarabaeidae: Scarabaeinae). *Journal of the New York Entomological Society*. 98: 429-433.

1989. Philips, T.K. and M.A. Ivie.

Familial placement of *Atenizoides curacaoae* (Coleoptera: Cerambycidae, Anthicidae). *Pan-Pacific Entomologist*. 65: 162.

1983. Klassen, R.A., J.V. Matthews Jr., and T.K. Philips.

Taxa in lake sediments of the District of Keewatin. *Current Research, Geological Survey of Canada, Part A*: 357-361.

BOOK CHAPTERS

2011. Philips, T.K.

The Evolution and diversification of the Scarabaeine Dung Beetles. *In* Dung Beetle Ecology and Evolution. L.W. Simmons & J. Ridsdill-Smith (Editors). Wiley-Blackwell, Hoboken, NJ.

- 2010.** Philips, T.K. and K.L. Bell
Ptinidae. *In* Handbook of Zoology, Coleoptera II, R.A.B. Leschen, R.G. Beutel, & J.F. Lawrence (Editors). De Gruyter Publishers, Berlin/ New York.
- 2008.** Philips, T.K.
The Spider Beetles of Argentina. *In* Biodiversidad de Artrópodos Argentinos vol. 2. Claps, L.E.; G. Debandi & S.A. Roig-Juñent (Editors). Sociedad Entomológica Argentina.
- 2002.** Philips, T.K.
Anobiidae. *In* American Beetles Vol. 2, R.H. Arnett, Jr., M.C. Thomas, P.E. Skelley, J.H. Frank (Editors), CRC Press.
- 2002.** Philips, T.K., M.A. Ivie, and J.J. Giersch
Jacobsoniidae. *In* American Beetles Vol. 2, R.H. Arnett, Jr., M.C. Thomas, P.E. Skelley, J.H. Frank (Editors), CRC Press.
- 2002.** Philips, T.K. and M.A. Ivie
Bothrideridae. *In* American Beetles Vol. 2, R.H. Arnett, Jr., M.C. Thomas, P.E. Skelley, J.H. Frank (Editors), CRC Press.
- 2001.** Philips, T.K. and W. Xie
Amphizoidae. *In* American Beetles Vol. 1, R.H. Arnett and M. Thomas (Editors), CRC Press.
- 2001.** Philips, T.K. and D.K. Young
Micromalthidae. *In* American Beetles Vol. 1, R.H. Arnett and M. Thomas (Editors), CRC Press.

SCARABAEINAE RESEARCH NETWORK PUBLICATIONS

2009. E. Nichols, T. A. Gardner, C. A. Peres, S. Spector and The Scarabaeinae Research Network* (* additional ScarabNet members contributed to this effort: Keith Philips and Karen Bell). Co-declining mammals and dung beetles: an impending ecological cascade. *Oikos* 118: 481-487.

2007. E. Nichols, T. Larsen, S. Spector, A.L. Davis, F. Escobar, M. Favila, K. Vulinec, and The Scarabaeinae Research Network* (* additional ScarabNet members contributed to this effort: Toby A. Gardner and Keith Philips). Global dung beetle response to tropical forest modification and fragmentation: A quantitative literature review and meta-analysis. *Biological Conservation* 137: 1-19.

PROJECTS IN PROGRESS

- Cave beetles of the eastern USA, including next generation sequencing (M. Niemiller, K. Ober, and O. Boyd)
- Expanded molecular (and will be combined with morphological data) analysis of the bostrichoid beetles (continuing studies with S. Forgie, K. Bell, X. Bellés, and others).

- Ecological studies of dung beetles in Ghana (with numerous collaborators, in particular A. Davis, including students).
- Phylogeny of spider beetles using morphological data (with G. Mynhardt).
- Trichiine scarab molecular phylogeny (with J. Orozco).
- Amber fossil spider beetle descriptions, including three new genera (with G. Mynhardt).
- Conservation of insects in Upper Guinean forests of West Africa.
- Combined molecular and morphological analysis of the psephenid water penny beetles (with M. Wood (current MS student), C.-F. Lee, and w. Shepard).
- Phylogeographic studies of the dung beetle genus *Anachacos* in Ghana using CO1 sequence data (with L. Paemka (former MS student) and K. Bell).
- Phylogeny of the gibbiine group of spider beetles (with C. Akotsen-Mensah).
- Ecology of a cave beetle in Mammoth Cave National Park (with C. DeWildt (former MS student) and K. Helf).
- Molecular and morphological phylogeny of *Trichiotinus* (Cetoniinae: Scarabaeidae) (with Mark Callaghan (NSF-REU student)).
- Phylogeny of the Onthophagini + Oniticellini of the World (Scarabaeidae: Scarabaeinae).
- Coleoptera fauna and behavior associated with the honey bee, *Apis mellifera*, in Southern Africa (with P. Kryger and J. Orozco (former MS student)).
- New genera of spider beetles from South Africa, Peru, Australia and Madagascar
- The evolution of aggregation behavior of lycid beetles and their mimics in South Africa (with M. Ivie and R. Miller).
- Spider beetles of the West Indies.
- Larval and pupal descriptions of phylogenetically important spider beetles (Anobiidae).
- Seed feeding in spider beetles (with F. Keller)

PRESENTATIONS (EXCLUDING UNDERGRAD STUDENT PRESENTATIONS, GRAD STUDENT PRESENTATIONS WITH *)

- 2015. Agriculture Canada, Ottawa ON.** Systematic studies on spider beetles and cave beetles, TK Philips (Feb. 2015).
- 2014. Entomology Society of America Annual Meeting, Portland OR.** Genetic diversity in the genus *Darlingtonia*: phylogeography and species limits. Olivia F. Boyd* and T. Keith Philips.
- 2014. Entomology Society of America Annual Meeting, Portland OR.** New species of *Pseudanophthalmus* from Western Kentucky Caves. Olivia F. Boyd* and T. Keith Philips.
- 2014 11th Annual Southeastern Ecology and Evolution Conference (SEEC), Statesboro, GA.** *Characterization of West Central African dung beetle (Coleoptera: Scarabaeidae) fauna and their vulnerability to human activity.* (Poster), 2nd Place Best Graduate Student Poster. Christie A. Sukhdeo*, T. Keith Philips, and Nicola M. Anthony
- 2013. Entomology Society of America Annual Meeting, Austin TX.** The poop on dung beetle evolution. (Symposium on decomposers, invited talk).
- 2013. Entomology Society of America Annual Meeting, Austin TX.** A preliminary look at the phylogeography of the monotypic cave beetle genus *Darlingtonia* (Coleoptera: Carabidae). Boyd, O.* and Philips, TK. (2nd place best grad student Poster)
- 2013. 10th Mammoth Cave Research Symposium.** Valkanas E. *, Philips TK, Rowland N, Helf K (2013) The cave beetle *Neaphaenops tellkampfi* Erichson: Relationships within and among related genera using molecular data. (Poster, Feb.)
- 2011. Entomology Society of America Annual Meeting, Reno.** *Untangling the spider beetle web: redefining generic groups based on morphology.* (talk- Glene Mynhardt *presenter).

2011. **Entomology Society of America Annual Meeting, Indianapolis.** *Explorations into the amazing diversity of Pseudomezium: an endemic and enigmatic genus from South Africa.* (poster).
2011. **Entomology Society of America Annual Meeting, Indianapolis.** *A survey of the dung beetles of the critically endangered habitats of the Nimba Mountain Range and environs, Guinea, West Africa.* (Poster).
2010. **University of Manitoba, Winnipeg.** *Hotspots in Africa: Beetles, Diversity, and Conservation.* (Invited talk).
2009. **Entomology Society of America Annual Meeting, Indianapolis.** *Dung beetle diversity in the Guinean forest of Ghana.* (Invited talk).
2009. **University of Nebraska, Lincoln.** *Insects or bush meat: Conservation efforts in the Upper Guinean forests of Ghana.* (Invited Talk).
2007. **Purdue University, West Lafayette.** *Insects or bush meat: Conservation efforts in the Upper Guinean forests of Ghana.* (Invited Talk).
2006. **Entomology Society of America Annual Meeting, Indianapolis.** *A survey of the beetles of Ghana.* (Invited Talk).
2006. **VII Reunión Latinoamericana de Scarabaeideología, Santa Cruz, Bolivia.** *Dung beetles in the Upper Guinean forests of Ghana.* (Talk).
2005. **Entomology Society of America Annual Meeting, Ft. Lauderdale.** *Description of a new genus of spider beetle from South Africa (Coleoptera: Ptinidae).* (Poster with Clement Akotsen-Mensah*).
2005. **Entomology Society of America Annual Meeting, Ft. Lauderdale.** *A phylogenetic analysis of the Oniticellini and Onthophagini (Scarabaeidae: Scarabaeinae).* (Poster).
2005. **Scarabaeinae Research Network meeting, Archbold Biological Station, Florida.** *Dung Beetle Studies in Ghana and the evolution of the Oniticellini and the Onthophagini (Scarabaeidae: Scarabaeinae).* (Talk).
2004. **Kentucky Academy of Sciences, Murry State University.** *Evolution of the sacred scarab (Scarabaeidae: Scarabaeinae).* (Talk).
2004. **Scarabaeinae Research Network meeting, Earth University, Costa Rica.** *Evolution of the sacred scarab (Scarabaeidae: Scarabaeinae).* (Talk).
2004. **VI Reunión Latinoamericana de Scarabaeideología, Earth University, Costa Rica.** *A phylogenetic analysis of the Oniticellini and Onthophagini (Scarabaeidae: Scarabaeinae).* (Talk).
2004. **Sigma Xi Student Research Conference, Bowling Green.** *Dung beetles (Scarabaeinae) in the Upper Guinean forests of Ankasa, Ghana.* (Poster presented by Douglas Foster).
2003. **Entomology Society of America Annual Meeting, Cincinnati.** *Dung beetles (Scarabaeinae) in the Upper Guinean forests of Ankasa, Ghana.* (Poster).
2003. **Kentucky Academy of Science, Bowling Green.** *Dung beetles (Scarabaeinae) in the Upper Guinean forests of Ankasa, Ghana.* (Poster).
2003. **Agriculture Canada Biodiversity Research Centre, Ottawa.** *The evolution of the scared scarab and its kin.* (Invited talk).
2002. **Entomology Society of America Annual Meeting, Fort Lauderdale.** *Rockin' and rolling: Evolutionary patterns in the scared scarab and its kin.* (Invited talk).
2002. **WKU Kentucky Biodiversity Conference, Bowling Green.** *Diversity of Kentucky scarabaeines and their evolution.* (Talk).
2001. **Entomology Society of America Annual Meeting, San Diego** *Afrobianax, a new genus of the Eubrianacinae (Coleoptera: Psephenidae) with notes on its phylogenetic position and description of one new species from South Africa* (Poster). With Chi-Feng Lee.
2001. **Entomology Society of America Annual Meeting, San Diego** *Phylogenetic analysis of the New World Phanaeini (Scarabaeidae: Scarabaeinae): Hypotheses on relationships and origins.* (Poster).

2001. **IV Reunión Latinoamericana de Scarabaeideología, Quito, Ecuador** *Estudio filogenético preliminar de la tribu Phanaeini (Scarabaeidae: Scarabaeinae)*. (Talk: presented by W.D. Edmonds).
2001. **Ohio Academy of Science, Mount Union College, Alliance, OH** *Diversity, phenology, and flower hosts of anthophilous long-horned beetles in a southeastern Ohio forest*. (Talk: presented by B. Bond).
2000. **Entomology Society of America Annual Meeting, Montreal, QC** *Evolution of the scared scarab and its kin*. (Poster).
2000. **Santa Barbara Museum of Natural History, Santa Barbara, CA** *The evolution of spider beetles and dung beetles: revelations of a phylogenetic approach*. (Invited talk).
1999. **Department of Zoology and Entomology, University of Pretoria, Pretoria, South Africa** *Biology and Evolution of the Scarabaeinae*. (Talk).
1999. **Department of Biology, Western Kentucky University, Bowling Green, KY** *Hypotheses on the evolution of animals: Case studies with spider beetles and dung beetles*. (Invited talk).
1998. **Northern Michigan University, Marquette, MI** *The biodiversity of New World spider beetles (Coleoptera: Anobiidae): Not just stored product pests*. (Invited talk).
1998. **National Museum of Natural History, Washington, D.C.** *Systematics of New World spider beetles (Coleoptera: Anobiidae: Ptininae)*. (Invited talk).
1997. **Entomology Society of America Annual Meeting, Nashville, TN** *Revision of the neotropical genus Prosternoptinus (Coleoptera: Anobiidae: Ptininae)*. (Poster).
1997. **Entomology Society of America Annual Meeting, Nashville, TN** *Effects of prescribed burning on the diversity of Scarabaeidae in southern Ohio oak forests*. (A. Smith, K. Philips, and D. Horn). (Poster).
1997. **Department of Entomology, The Ohio State University, Columbus, OH** *Systematics of New World spider beetles (Coleoptera: Anobiidae: Ptininae)*. (Talk).
1997. **Mosquito Control Association Annual Meeting, Salt Lake City, UT** *Epigamic display and unique mating position in Wyeomyia arthrostigma (Diptera: Culicidae)*. (K. Philips, R. Hancock, and W. Foster). (Talk presented by W. Foster).
1997. **North Central Branch Meeting of the Entomological Society of America, Columbus, OH** *Impact of fire on Scarabaeidae in southern Ohio oak forests*. (A. Smith, K. Philips, and D. Horn). (Poster).
1996. **Entomological Society of America Annual Meeting, Louisville, KY** *A phylogenetic analysis of the New World ptinines: Are spider beetles really monophyletic?* (Talk).
1996. **Entomological Society of America Annual Meeting, Louisville, KY** *Scarabaeidae as indicators of impact of burning in southern Ohio oak forests*. (A. Smith, K. Philips, and D. Horn). (Poster).
1995. **Entomological Society of America Annual Meeting, Las Vegas, NV** *Identification of areas of endemism using a geographic information system*. (N. Johnson, F. Ejchel, K. Philips, J. Tipping, P. Kovarik). (Poster).
1995. **Annual Meeting: Ohio Systematists, Columbus, OH** *Use of heliconiine and ithomiine butterflies (Nymphalidae) for identification of areas of endemism in Latin America*. (Talk).
1994. **Entomological Society of America Annual Meeting, Dallas, TX** *Systematics of New World spider beetles (Anobiidae: Ptininae)*. (Poster).
1994. **Department of Entomology, Montana State University, Bozeman, MT** *New World ptinines (spider beetles) and their "discovery" in Venezuela*. (Talk).
1991. **Department of Entomology, The Ohio State University, Columbus, OH** *Aggregation in a primitive danaine butterfly*. (Talk).
1989. **Entomological Society of America, Annual Meeting, San Antonio, TX** *Revision of the Methia necydalea species-group (Coleoptera: Cerambycidae)*. (Talk).
1989. **Montana Academy of Sciences, Annual Meeting, Bozeman, MT** *Scarabaeinae (Coleoptera: Scarabaeidae) of Pedernales, Dominican Republic*. (Talk).
1988. **Department of Entomology, Montana State University, Bozeman, MT** *Entomological Wanderings in Southeast Asia*. (Talk).

ADDITIONAL MEETINGS

- 2012: Entomology Society of America Annual Meeting, Knoxville TN, Nov.
- 2008: Entomology Society of America, Reno NV, Nov.
- 2006: Scarabaeine Research Network, Santa Cruz, Bolivia
- 2001: Kentucky Biodiversity Conference, Bowling Green KY.
- 2001: Sigma Xi Meeting, Bowling Green KY- moderator and judge of student papers.
- 2000: Canada Museum of Nature and Canadian National Collection, Ottawa, ON

GRANTS (FUNDED IN BOLD)

EXTERNAL:

2015. Pending: National Geographic Young Explorers Fund. (with PhD student Christie Sukdeo). Impacts of bush-meat hunting on dung beetle diversity and dung removal rates in Cameroon (\$20,000)
2015. **National Science Foundation, EPSCoR, Research Scholars Program. Phylogeography and molecular systematics of the trechine cave beetle genera *Darlingtonia* and *Neaphaenops* (\$15,000).**
2014. National Geographic Explorers Fund. (with Shaun Forgie, Landcare Research Institute, Auckland, New Zealand). Rediscovery of *Scarabaeus cancer*: a charismatic dung beetle lost for a century (\$14,000)
2014. **Percy Sladen Memorial Fund. Rediscovery of *Scarabaeus cancer*: a charismatic dung beetle lost for a century (£600)**
2014. **Systematics Research Fund, Society for Systematic Biologists Grant (with PhD student Christie Sukdeo). The Highland Scarabaeinae Dung Beetle Fauna in Cameroon and Hypotheses on Modes of Speciation (\$2000)**
2014. **Sigma Xi (with PhD student Christie Sukdeo). The Highland Scarabaeinae Dung Beetle Fauna in Cameroon and Hypotheses on Modes of Speciation (\$800).**
2014. Lewis and Clarke Grant (with PhD student Christie Sukdeo). The Highland Scarabaeinae Dung Beetle Fauna in Cameroon and Hypotheses on Modes of Speciation
2013. Explorers Club Grant (with PhD student Christie Sukdeo). The Highland Scarabaeinae Dung Beetle Fauna in Cameroon and Hypotheses on Modes of Speciation

- 2011. Federal Assistance Award, US Dept. of State. University Entomology/Biology Curriculum Development Project in Afghanistan. (\$10,000). Awarded but declined.**
- 2010-12. Bilateral Research Activities Programme, Landcare Research Institute, New Zealand. (collaboration with S. Forgie). (~\$12,000)**
- 2010. National Science Foundation, Biological Surveys and Inventories (NSF-BSI). Systematics of the Southern African Spider Beetles (\$518,000- Submission July 12, 2010- not funded). (PI).**
- 2010. National Science Foundation, Research Experiences for Undergraduates (NSF-REU). (\$300,000). (listed as primary collaborator due to PI limit of two persons).**
- 2010. National Science Foundation, Undergraduate Research Mentoring (NSF-URM). (~\$1,000,000- Submission April 26, 2010- not funded). (co-PI).**
- 2010. National Science Foundation, Planetary Biological Inventory Collaborative Research (NSF-PBI). The Scarabnet Global Dung Beetle Inventory (\$1,100,000- WKU share of \$3,000,000). Jan. 2010 resubmission- Not funded (co-PI).**
- 2009. National Science Foundation, Revisionary Syntheses in Systematics (NSF-REVSYS). Systematics of the South African Spider Beetles & Phylogeny of the Bostrichoidea (\$479,000). Resubmitted July 2010 as NSF-BSI. (PI).**
- 2008. National Science Foundation, Planetary Biological Inventory Collaborative Research (NSF-PBI). The Scarabnet Global Dung Beetle Inventory (\$1,300,000- WKU share of \$3,000,000). Jan. 2008 submission- Not funded (co-PI).**
- 2004-08. National Science Foundation, Biotic Surveys and Inventories, A survey of the insects of the Upper Guinean Forests in Ghana with systematic studies on spider beetles and dung beetles (\$403,000). (PI).**
- 2003-04. National Science Foundation - Epscor, Ecological studies of dung beetles in the Upper Guinean rain forests of Ghana (\$31,000).**

PRE-WKU:

- 1998-00. Post-doctoral Fellowship, University of Pretoria, South Africa. For studies on the evolutionary history of the Scarabaeinae of the world (R65,000/yr.)**
- 1997. Guana Island Club (H. and G. Jerecki). For spider beetle research on Guana Island, British Virgin Islands (in kind support).**
- 1997. The Conservation Agency. For research travel to Guana Island, British Virgin Islands (\$250).**
- 1997. Virgin Islands Beetle Fauna Project, Montana State University. For research travel to Guana Island, British Virgin Islands (\$250).**
- 1995-7. Knull Fund, The Ohio State University. For travel to the Entomology Society of America Annual Meeting Las Vegas, Louisville, and Nashville.**
- 1994. Latin America Studies Program Tinker Grant. For research travel to Venezuela (\$600).**

- 1994. Graduate Student Alumni Research Awards Program**, The Ohio State University. For research in Venezuela (\$2000).
- 1990, 1992-96. Osborn Fund**, The Ohio State University. For travel to Entomological Society of American Annual Meeting in San Antonio, Baltimore, Indianapolis, Dallas, Las Vegas, and Louisville.
- 1991. Knull Research Fund**, The Ohio State University. For research in Chiapas, Mexico and Guatemala.
- 1989. Research Creativity Grant**, Montana State University. For travel to Entomological Society of America Annual Meeting, San Antonio.
- 1988. Department of Entomology Student Travel Grant**, Montana State University. For travel to XVIII International Congress of Entomology, Vancouver.

INTERNAL:

- 2013-14. RCAP II: Research & Creative Activities Program, Western Kentucky University. Population Genetics of Eastern North American Cave beetles. (\$6000).**
- 2012-13. RCAP II: Research & Creative Activities Program, Western Kentucky University.** Exploration of Mount Cameroon, and Adjacent Highlands: Unknown Insect Biodiversity in a Vanishing Habitat on Earth. (\$5650) (PI).
- 2012. RCAP I: Research & Creative Activities Program, Western Kentucky University.** Exploration of Mount Cameroon, and Adjacent Highlands: Unknown Insect Biodiversity in a Vanishing Habitat on Earth. (\$5650) (PI).
- 2011. RCAP II: Research & Creative Activities Program, Western Kentucky University. Exploration of the Nimba Range, Guinea: Unknown Insect Biodiversity in a Vanishing Habitat on Earth. (\$4700) (PI).**
- 2010. Summer Faculty Research Fellowship, Western Kentucky University. Phylogeny of the oniticelline and onthophagine dung beetles (\$6,000).**
- 2008-10. Grant Submission Incentive Funds, Western Kentucky University. (\$700, \$1,000, \$675, and \$900).**
- 2008-09. Proposal Incentive Fund, Western Kentucky University. For research on dung beetle diversity and evolution (\$6,200).**
- 2004. Center for Biodiversity Studies, Department of Biology, and Ogden College (Western Kentucky University). For travel to the Latin-American Scarabaeologists and the Scarabaeinae Research Network joint meeting (\$1,000).**
- 2004. Summer Faculty Research Fellowship, Western Kentucky University. For research on dung beetle diversity and evolution (\$5,000).**
- 2003. Summer Faculty Research Fellowship, Western Kentucky University. For research on dung beetle diversity and evolution (\$5,000).**

2002. **Center for Biodiversity Studies, Department of Biology, and Ogden College** (Western Kentucky University). For research on eucraniine dung beetles in Argentina (\$2,000).
2001. **Center for Biodiversity Studies, Department of Biology, and Ogden College** (Western Kentucky University). For travel to the Entomological Society of America annual meeting in San Diego (\$1,000).
2001. **Center for Biodiversity Studies, Department of Biology, and Ogden College** (Western Kentucky University). For research on water penny beetles and spider beetles in South Africa (\$2,000).
2001. **Junior Faculty Award**, Western Kentucky University. For research material (\$4,000).
2000. **Office of sponsored Programs**, Western Kentucky University. For travel to the Entomological Society of America annual meeting in Montreal (\$1,200).

POSTDOCTORAL AND LAB RESEARCHERS

Research Associate: Robert Neidlinger Sept. 2012- Sept. 2015

Post-doctoral: Karen Bell, Aug. 2005- June 2007

PhD: Christie Sukhdeo (Current co-advisor, Univ. New Orleans)
Elvis Taminaih (Current, co-ad. at Univ. of Buea, Cameroon)
Glenn Mynhardt (PhD completed 2012, at Ohio State Univ.)

MS: Amelia Smith (current)
Matthew Wood (current)
John Griffin (on-line...?)
Olivia Boyd (graduated 2015)
Robert Moore (on-line, graduated 2014)
Lily Paemka (PhD, Univ. of Iowa, 2013)
Chris DeWildt (currently high school teacher)
Jesus Orozco (PhD at Univ. of Nebraska, 2011)
Clement Akotsen-Mensah (PhD at Auburn Univ. 2010)

Undergrad: Douglas Foster
Ben Bryson
Sarah Henry
Marianne Corcoran
Bradley Smith
Bonnie Newby
Brent Collins
John Wilson
Brian Payne
Danah Whitley
Jason Musser
Arron Carver
Dara Carver
Ronson Elrod
Justin Spears
Jeremy Cossel

Kyle Barnes
 Thomas Sutter
 Sophy Helm (fall 2008)
 Jordan Embry (fall 2008)
 Daniel Casas (fall 2008)
 Molly Hays (spring 2009)
 Alex Chen, Gatton Academy (spring 2009)
 Catherine Smith, Gatton Academy (fall 2008- Spring 2011)
 Michelle Smiley (Fall 2009- Fall 2011)
 Cuina Lin (Fall 2010)
 Josh Jackson, (Gatton, Fall 2010-spring 2011)
 Allison Fruehwald (Fall 2010-spring 2011)
 Ankita Patel (Fall 2010)
 Kelsey Willen (spring 2009-fall 2011)
 Khusbu Patel (spring 2009- fall 2011)
 Ashton Fields (Fall 2009- spring 2012)
 Suzanne Scott (Fall 2011- current)
 Eva Gray-Jennings (Gatton, Fall 2011)
 Henry Uradu (Gatton, Spring 2012- spring 2013)
 Nathan Serpico (Gatton, Spring 2012-spring 2013)
 Chris Treichelt (Spring 2014-)
 Kristen Coel (Spring 2014)
 Ryan Dickmann (Spring 2014-)
 Jauan Burbage (Summer 2015)
 Katie Bautista (Summer 2015)

AWARDS & HONORS

- 2012.** Research and Creativity Award, both Ogden College and University Awards. Western Kentucky University
- 2003.** Nominated for research award, Ogden College, Western Kentucky University
- 1996.** President's Prize, Honorable Mention (2nd place), Section A Student Competition For best paper, Entomology Society of America, Annual Meeting.
- 1996.** Mary Ellen Clay Teaching Award, The Ohio State University. For excellence in teaching.
- 1994-95.** President, Entomology Graduate Student Association, The Ohio State University.
- 1994.** Phi Kappa Phi Honor Society. Recognition and encouragement of superior scholarship.
- 1994.** Graduate Associate Teaching Award Finalist, The Ohio State University.

PROFESSIONAL EXPERTISE

Molecular laboratory skills
 Museum curatorial techniques
 Cladistic methodologies including the following software: Mr Bayes, Clados, Ratchet, Hennig 86, Nona, Phast, Piwe, TNT, Geneious, Winclada.
 Geographic information systems including Arc-Info, Arc-View, and OSU-Map.
 Relational databases including Excel and Oracle.
 Arthropod Rearing- especially adept at some difficult Coleoptera and arachnids.
 Field collecting/trapping/sampling techniques for invertebrates.
 Collaborative, student-centered teaching style.

PROFESSIONAL SOCIETIES

American Association for the Advancement of Science
Coleopterists Society
Entomological Society of America
Sigma Xi
Society of Systematic Biologists
Willi Hennig Society
Western Kentucky University
 Center for Biodiversity Studies
 Biotechnology Center
 Bioinformatics Center
(Non-professional: Nature Conservancy, World Wildlife Fund, National Geography Society)

PROFESSIONAL SERVICE

Entomology Society of America
 Resolutions Committee Chair, 2005
 International Affairs Committee
 Thomas Say Award Committee
 Lacordaire Award Committee
 Moderator, Sect. A, 1996 Annual meeting, Louisville, KY.
 Moderator, Sect. A, 1992 Annual meeting, Baltimore, MD.
 Judge, student paper competition
National Science Foundation reviewer of Environmental Programs grant submissions
National Geographic Society research proposal reviewer
Coleopterists Society
 Editorial Board member (2001-2003)
 Nominating Committee (2007-
 Reviewer for the Coleopterists Bulletin.
Mentor for the Renaissance Teacher Quality Improvement Project (2002-)
Judge for Intel Science and Engineering Fair, Louisville, 2002
Academic Advisor, Tri-beta Biological Honor Society, Western Kentucky University (2002-)
Judge and moderator for Sigma Xi, (2001)
Western Kentucky University: Recruitment/Public relations/Scholarships Committee,
 Instructional/Computer/Extended Campus Committee,
 Promotion/Continuance/Tenure Guideline Committee, Fish Biologist Search
 Committee, Functional Morphologist Search Committee, Evolution Search
 Committee, Student Fulbright Committee, Faculty, Grievance Committee
 Graduate Student Coordinator
Animal Biodiversity and Conservation. Reviewer.
Asociación Europea de Coleopterología. Reviewer for Elytron.
Environmental Entomology. Reviewer.
Fauna of Arabia, series. Reviewer.
Journal of Biogeography. Reviewer.
Journal of Tropical Ecology. Reviewer.
Annales Zoologici, Warsaw. Reviewer.
Cladistics. Reviewer.
Systematic Entomology. Reviewer
Zootaxa. Reviewer
Zoological Studies. Reviewer
African Entomology. Reviewer
Journal of the Kentucky Academy of Science. Reviewer

President of the Entomology students Association, Ohio State University, 1994-95.
 Ohio State University, Department of Entomology, E-2 Network Workshop for public school teachers of Franklin Co., OH, Oct, 1991. Presenter of techniques for environmental and outdoor education activities involving invertebrates.
 Insect talks at various schools, boy scout troops, etc.
 Media interviews - local ABC-TV news affiliate and local newspaper, Bowling Green, KY.

RESEARCH VISITS

- 2014. Academy of Natural Sciences of Drexel University, Philadelphia.
- 2013. Carnegie Museum of Natural History, Pittsburg.
- 2009. University of Nebraska State Museum
- 2008. National Collection of Insects, Pretoria, South Africa; Transvaal Museum, Pretoria, South Africa; South African Museum, Cape Town, South Africa.
- 2001. National Collection of Insects, Pretoria, South Africa; Transvaal Museum, Pretoria, South Africa; Albany Museum, Grahamstown, South Africa.
- 2000. Canadian Museum of Nature, Ottawa; Canadian National Collection, Ottawa.
- 1999-00. Transvaal Museum, Pretoria, South Africa; National Collection of Insects, Pretoria, South Africa.
- 1998. Smithsonian Institution, Washington, D.C.; California Academy of Sciences, San Francisco.
- 1996. Smithsonian Institution, Washington, D.C.; The Museum of Comparative Zoology, Cambridge.
- 1995. Canadian Museum of Nature, Ottawa
- 1992. Smithsonian Institution, Washington, D.C.
- 1991. Field Museum of Natural History, Chicago.
- 1989. Canadian Museum of Nature, Ottawa; Canadian National Collection of Insects, Ottawa; Texas A&M University, College Station.
- 1988. Museo Nacional de Historia Natural, Santo Domingo, Dominican Republic; Museum of The Bombay Natural History Society, Bombay, India; Museum of Natural History, Kuching, Malaysia; Sandel Research Centre, Bangalore, India.

FIELD EXPERIENCE

Canada: British Columbia, Ontario, Quebec (have traveled in every other province)
USA: Arizona, California, Florida, Georgia, Idaho, Indiana, Kentucky, Maryland, New York, Ohio, Montana, Nevada, South Carolina, Tennessee, Texas, Utah, Virginia, Washington
Argentina (2002-Medoza, La Rioja, San Juan)
Belize (Blue Creek and South Water Caye)
Bolivia (2006-Santa Cruz region)
Costa Rica (La Selva, Cloudbridge Nature Reserve and Chirripo National Park, Hacienda Barú, Parque Marino Ballena, Parque Manuel Antonio, Parque Corcovado)
Guatemala (1992-central and south)
Mexico (1985-Quintana Roo, Yucatan, 1992-Chiapas,)
Venezuela (1994-“Rancho Grande,” Coro, Gran Sabana)
West Indies:
 British Virgin Islands
 Dominican Republic-1988
 Jamaica-
 Puerto Rico

China (Guangzhou, Hong Kong, Macau, and New Territories)

India (Karnataka, Kerela, Maharastra, Rajasthan, Uttar Pradesh, Rajasthan)

Indonesia (Bali and Java)

Japan (Fijiyama, Kyoto areas)

Malaysia (Malaya and Sarawak)

South Korea (Sokcho, Mount Sorak, Seoul, Incheon areas)

Thailand (Chiang Mai to Malaysia border overland and Kho Samui)

Angola (2015, Cuando Cubango, Bengula, Cuanza Norte, Luanda, Malanje Provinces)

Botswana (2001, most areas)

Cote d'Ivoire (2010, southern half)

Cameroon (2014)

Ghana (2003, 2005-2011, everywhere)

Guinea (2010, 2011, mainly Mt. Nimba region)

Liberia (2011, Robertsport and Mt. Nimba regions)

Mozambique (2000, central and south)

Namibia (1999, 2000, central and south)

South Africa (1999-2000, 2001, 2008, everywhere)

Swaziland (1999, parts)

Togo (2007, central western highlands)

Zimbabwe (2000, (Ba)Vumba Mountains, 2001, Hwange area, Victoria Falls)

LANGUAGES

Limited reading and speaking in both French and Spanish.

HOBBIES

Mountain biking, Gardening, Cooking, Oil painting, Hockey

References:

Dr. Michael Stokes
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Denver Museum of Nature and Science
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Chercheur - Laboratoire des végétaux d'Ottawa, A.C.I.A.
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