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# Gregory W. Courtney

Professor

Department of Entomology  
Iowa State University  
Ames, IA 50011

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## EDUCATION

Ph.D. Entomology	University of Alberta	1989
B.S. Zoology	Oregon State University	1982
B.S. Entomology	Oregon State University	1982

## MAJOR RESEARCH INTERESTS

Insect systematics and aquatic entomology, with emphasis on aquatic flies (Diptera); Diptera phylogeny; systematics and ecology of aquatic insects, especially aquatic midges and crane flies; stream ecology.

## EMPLOYMENT HISTORY

Professor, 2007-present  
Dept of Entomology, Iowa State University

Associate Professor, 2001-2007  
Department of Entomology, Iowa State University

Assistant Professor, 1997-2001  
Dept of Entomology, Iowa State University

Assistant Professor, 1995-1997  
Dept of Biology, Grand Valley State University

Postdoctoral Fellow (2 fellowships), 1990-1994  
Dept of Entomology, Smithsonian Institution

Postdoctoral Fellow, 1989  
Dept of Entomology, University of Missouri – Columbia

## OTHER PROFESSIONAL APPOINTMENTS

Research Associate, 2005-present  
Entomology Division, Natural History Museum of Los Angeles County

Research Associate, 1994-present  
Department of Entomology, Smithsonian Institution

Chair, 2006-2009  
Ecology & Evolutionary Biology Graduate Program, ISU

Adjunct Professor, 2006-present  
Dept of Ecology, Evolution, and Organismal Biology, ISU

Adjunct Professor, 2001-2006  
Department of Biology, Chiang Mai University (Thailand)

Adjunct Professor, 2001-2006  
Department of Entomology, Kasetsart University (Thailand)

## UNIVERSITY AWARDS:

*Regent's Award for Faculty Excellence*; Iowa State University, 2015

**CURRENT DUTIES**

Primary responsibilities are in insect systematics, aquatic entomology, and insect biodiversity. Research interests include the systematics and phylogeny of Diptera and the morphology, phylogeny, biogeography, and ecology of aquatic insects. Major teaching responsibilities include field-based courses in Systematic Entomology and Aquatic Insects, and various offerings in Entomology and the Ecology and Evolutionary Biology interdepartmental program (EEB). Research and teaching activities include supervision of graduate students and other laboratory personnel, and participation in the EEB. Outreach responsibilities include curation of the Iowa State Insect Collection (ISIC) and development and direction of ISU's Insect Zoo. Service activities include participation on various departmental, college, and other committees. In addition to duties associated with the Insect Zoo and ISIC, administrative activities have included serving as Chair of EEB.

**PROFESSIONAL SOCIETY MEMBERSHIPS**

American Entomological Society  
 American Indian Science and Engineering Society  
 Dragonfly Society of the Americas  
 Entomological Society of Canada  
 Entomological Society of Washington  
 International Society of Plecopterologists  
 Minorities in Agriculture, Natural Resources, and Related Sciences  
 North American Dipterist's Society  
 Phi Kappa Phi Honorary Fraternity  
 Sigma Xi [Full Member]  
 Society of Systematic Biologists  
 Willi Hennig Society [Fellow]

**PROFESSIONAL SERVICE:**

2011 – present Editor and Contributor, *BugGuide.net*  
 2004 – present Editorial Board, *Aquatic Insects*  
 1994 – 2020 Editorial Committee, Systematic Database of Nearctic Diptera  
 2019 Co-organizer, Meeting of North American Dipterist's Society. Bull Shoals Field Station, Missouri.  
 2005 – 2015 Associate Editor, *Zootaxa*  
 1999 – 2013 Editorial Advisor, *Systematic Entomology*  
 2008 – 2011 Panelist, National Science Foundation Graduate Research Fellowship Program  
 2005 Organizer, Meeting of North American Dipterist's Society. Malheur Field Station, Oregon.  
 2001 – 2003 Panelist, National Science Foundation Graduate Research Fellowship Program  
 1996 – 1997 Panelist, NSF (Collaborative Research at Undergraduate Institutions)

**UNIVERSITY SERVICE***Department of Entomology*

2004 – present Student Awards Committee  
 2004 – present Post-tenure Review Committee  
 1997 – present Curator and Collections Manager, Iowa State Insect Collection  
 1997 – present Director, Insect Zoo  
 1997 – present Chair, Insect Zoo Committee  
 2002 – 2021 Chair, Diversity Committee  
 2018 – 2020 Co-Chair, Seminar Committee  
 2012 – 2018 Chair, Seminar Committee  
 2014 Search Committee (Vector Entomologist)  
 2005 – 2006 Search Committees (Medical Entomologist, Corn Entomologist)  
 1997 – 2004 Student Recruitment Committee  
 1997 – 2004 Curriculum Committee

## Courtney

*Department of Natural Resources Ecology & Management*

2012 – 2019	Aquatic Biology Task Force
2015	Search Committee (Conservation Geneticist)
2014 – 2015	Search Committee (Wildlife Habitat Biologist)
2012	Search Committee (Fisheries Management)

*Ecology & Evolutionary Biology Interdepartmental Graduate (EEB) Program*

2013 – present	EEB Supervisory Committee
2014	EEB Grievance Committee
2006 – 2009	Chair of EEB program
2006 – 2009	Director of Graduate Education (DOGE) for EEB program
2002 – 2006	EEB Supervisory Committee
2002 – 2006	EEB / Ecology, Evolution, & Organismal Biology Seminar Committee
1999	EEB Task Force to Revise Evolutionary Biology Core Curriculum

*College of Agriculture & Life Sciences*

2020	Promotion & Tenure Committee
1998 – 2021	Diversity Committee
1998 – 2002	Tribal College Task Force

*Iowa State University*

2017 – present	American Indian Faculty and Staff Association
2002 – 2020	Natural History Collections Committee
2000 – 2004	Reiman Gardens Academic Advisory Committee
2000 – 2004	Reiman Gardens Educational Plan Subcommittee

*Grand Valley State University*

1995 – 1997	Biology Department Faculty Recruitment Committee(s)
1995 – 1997	Biology Department Student Relations Committee

**RESEARCH GRANTS:**

**Project title:** Survey of psammophilic insects of Iowa  
**Source:** Iowa Department of Natural Resources  
**Grant amount:** \$2500 Effective dates: 2018-2020  
**Courtney's role:** Principal investigator

**Project title:** Digitization TCN: InvertNet—an integrative platform for research on environmental change, species discovery and identification  
**Source:** National Science Foundation (Advancing Digitization of Biological Collections)  
**Collaborating faculty:** Drs. C. Dietrich, University of Illinois; A. Short, University of Kansas; G. Zolnerowich, Kansas State University; A. Cognato, Michigan State University; P. Tinerella, University of Minnesota; etc. (collaboration of 22 Midwestern institutions)  
**Grant amount:** \$213,523 [Entire collaboration \$5 million] Effective dates: 2011 – 2017  
**Courtney's role:** Principal investigator. Advisor to 2 graduate students (M.S. & Ph.D.) at ISU.

**Project title:** MIDGEPEET: A Collaborative Effort to Increase Taxonomic Expertise in Understudied Families of Nematoceros Diptera  
**Source:** National Science Foundation (Partnerships in Enhancing Expertise in Taxonomy)  
**Collaborating faculty:** Drs. P.H. Adler, Clemson University; P.S. Cranston, University of California – Davis; J.K. Moulton, University of Tennessee; B. Sinclair, Canadian National Museum  
**Grant amount:** \$750,000 [ISU subaward \$172,560] Effective dates: 2010 – 2016  
**Courtney's role:** Co-principal investigator. Team leader on Blephariceridae and Outreach programming, advisor to 1 graduate student (M.S.) at ISU.

- Project title:** **The Evolution of larval and adult features in Diptera (Insecta)**  
**Source:** Deutsche Forschungsgemeinschaft (Germany)  
**Collaborating faculty:** Dr. R. Beutel, Institut für Spezielle Zoologie und Evolutionsbiologie mit Phyletischem Museum; Dr. R. Meier, National University of Singapore.  
**Grant amount:** 10,788 Euro (approx. US\$15,050) Effective dates: 2009-2012  
**Courtney's role:** Co-principal investigator.
- Project title:** **Upgrading the Iowa State Insect Collection: creating an on-line biodiversity resource for scientists, land managers, and citizens**  
**Source:** Iowa Science Foundation  
**Grant amount:** \$4994 Effective dates: 2010-2011  
**Courtney's role:** Principal investigator
- Project title:** **Insect survey of aquatic habitats in Iowa**  
**Source:** Iowa Department of Natural Resources  
**Grant amount:** \$2500 Effective dates: 2007-2008 Courtney's role: Principal investigator
- Project title:** **Insect survey of Iowa State Preserves**  
**Source:** Iowa Department of Natural Resources  
**Grant amount:** \$2150 Effective dates: 2007-2008 Courtney's role: Principal investigator
- Project title:** **Building the Dipteran Tree: Cooperative Research in Phylogenetics and Bioinformatics of True Flies (Insecta: Diptera).**  
**Source:** National Science Foundation (Assembling the Tree of Life)  
**Collaborating faculty:** Drs. A.T. Beckenbach, Simon Frasier University, A. Borkent, Royal British Columbia Museum, M. Friedrich, Wayne State University, M.E. Irwin, University of Illinois, R. Meier, National University of Singapore, T. Pape, Zoological Museum, J. Skevington, Canadian National Museum, B. Sinclair, Zoological Museum Koenig, F.C. Thompson, USDA-SEL, B.M. Wiegmann, North Carolina State University, D. Yeates, CSIRO-Division of Entomology  
**Grant amount:** \$2,390,000 [ISU subaward \$236,575] Effective dates: 2004 – 2010  
**Courtney's role:** Co-principal investigator. Team leader on “lower Diptera”, Advisor to 1 postdoc and 1 graduate student (Ph.D.) at ISU.
- Project title:** **Biodiversity of lotic aquatic insects of northern Thailand.**  
**Source:** National Science Foundation (Biotic Surveys & Inventories)  
**Collaborating faculty:** Drs. J. Chanpaisaeng, Kasetsart University, P. Chantaramongkol, Chiang Mai University, P.S. Cranston, University of California – Davis, M. Hubbard, Florida A&M University, C. Hutacharem, Royal Forest Department, W.D. Shepard, California State University – Sacramento, R.W. Sites, University of Missouri, I. Sivec, Slovene Natural History Museum.  
**Grant amount:** \$299,957 Effective dates: 2001 – 2006  
**Courtney's role:** Principal investigator, Advisor to 2 graduate students at ISU (1 M.S., 1 Ph.D.), Co-advisor to 2 graduate students at Chiang Mai University (1 M.S., 1 Ph.D.).
- Project title:** **Biodiversity of lotic aquatic insects of northern Thailand.**  
**Source:** College of Agriculture, ISU (Foreign Research Supplement Grant)  
**Collaborating faculty:** see above. Grant amount: \$8,000 Effective dates: 2002  
**Courtney's role:** Principal investigator.
- Project title:** **Biodiversity of lotic aquatic insects of northern Thailand.**  
**Source:** Global Agriculture Program, ISU (Foreign Research Supplement Grant)  
**Collaborating faculty:** see above. Grant amount: \$2,500 Effective dates: 2002  
**Courtney's role:** Principal investigator.

**Project title:** **Changes in rheophilic insect communities along an altitudinal gradient in the Mae Klaeng watershed.**

Source: Royal Golden Jubilee Program (Thai Government)  
 Collaborating faculty: Dr. P. Chantaramongkul, Chiang Mai University, Thailand  
 Grant amount: 1,500,000 Baht (approx. US\$37,500) Effective dates: 2001 – 2005  
 Courtney's role: Collaborator / Ph.D. student co-advisor / Primary author of proposal.

**Project title:** **Biodiversity of the net-winged midges (Diptera: Blephariceridae) of Nepal.**

Source: National Geographic Society  
 Grant amount: \$7,425 Effective dates: 2000 – 2001  
 Courtney's role: Principal investigator.

**Project title:** **Diversity of the aquatic Diptera of Khao Yai National Park, Thailand.**

Source: Royal Golden Jubilee Program (Thai Government)  
 Collaborating faculty: Dr. J. Chanpaisaeng, Kasetsart University, Thailand  
 Grant amount: 2,152,000 Baht (approx. US\$53,800) Effective dates: 1999 – 2005  
 Courtney's role: Collaborator / Ph.D. student co-advisor / Primary author of proposal.

**Project title:** **Zoogeography of the mosquitoes of Nepal.**

Source: National Geographic Society  
 Collaborating faculty: Dr. R.F. Darsie, Jr., University of Florida  
 Grant amount: \$21,511 (postponed due to political unrest) Effective dates: Jul – Oct 1995  
 Courtney's role: Research collaborator / Expedition coordinator.

**Project title:** **Systematics, cytogenetics and life histories of Nearctic *Blepharicera* (Diptera: Blephariceridae).**

Source: National Science Foundation (Systematic Biology)  
 Grant amount: \$90,000 Effective dates: 1994 – 1999  
 Courtney's role: Principal investigator.

**Project title:** **Biodiversity of the net-winged midges (Diptera: Blephariceridae) of Thailand.**

Source: National Geographic Society  
 Grant amount: \$4,656 Effective dates: Sept – Dec 1994  
 Courtney's role: Principal investigator.

#### WORKSHOP GRANTS:

**Project title:** **Taxonomic workshop and collaborative research on aquatic insects (Nepal).**

Source: National Science Foundation (International Program)  
 Grant amount: \$2,500 Effective dates: July 1994  
 Courtney's role: Principal investigator.

#### OTHER GRANTS AND AWARDS:

2007 *Foreign Travel Grant*; Iowa State University (research in Patagonia)  
 2001 *Foreign Travel Grant*; Iowa State University (workshop in Malaysia)  
 1998 *Foreign Travel Grant*; Iowa State University (meeting in England)  
 1994 *Research Collaborator / Expedition coordinator*; National Geographic Society (field work in Nepal)  
 1993 *Research Collaborator*; National Geographic Society (field work in Nepal)  
 1993 *Samuel W. Williston Grant*; Smithsonian Institution  
 1992 *Research Collaborator*; National Geographic Society (field work in Nepal)  
 1991 *Theodore Roosevelt Memorial Fund*; American Museum of Natural History  
 1990 *Samuel W. Williston Grant*; Smithsonian Institution

**PUBLICATIONS** (97 total, underlined = student):*Peer-reviewed journals* [59]

- WHITMORE, D., S.D. GAIMARI, S.S. NIHEI, N.L. EVENHUIS, O. KURINA, C.J. BORKENT, B.J. SINCLAIR, J.E. O'HARA, Z-Q ZHANG, J.K. MOULTON, G.C. RIBEIRO, D.J. BICKEL, W. GILKA, T. ANDERSEN, B. ROSSARO, A.E. WHITTINGTON, C.J.E. LAMAS, K. HELLER, C. KEHLMEIER, **G.W. COURTNEY**, P.H. KERR & V. BLAGODEROV. 2021. Twenty years of Dipterology through the pages of *Zootaxa*. *Zootaxa* 4979: 166-189.
- BOWLES, D.E & **G.W. COURTNEY**. 2020. The aquatic Neuropterida of Iowa. *Proceedings of the Entomological Society of Washington* 122: 556–565.
- ADLER, P.A. & **G.W. COURTNEY**. 2019. Ecological and societal services of aquatic Diptera. *Insects*. 10 (3): 1-23. (<https://doi.org/10.3390/insects10030070>)
- BOWLES, D.E & **G.W. COURTNEY** (editors). 2018. Special Issue: Advances in Aquatic Insect Systematics and Biodiversity in the Neotropics. *Aquatic Insects* 39 (2-3): 89-353.
- BOWLES, D.E & **G.W. COURTNEY**. 2018. Advances in aquatic insect systematics and biodiversity in the Neotropics: Introduction. *Aquatic Insects* 39: 89-93.
- COURTNEY, G.W.** & C.L. HOGUE. 2018. A review of the net-winged midges (Diptera: Blephariceridae) of the West Indies, with description of a new species from Puerto Rico. *Aquatic Insects* 39: 117-154.
- MADRIZ, R.I., A. ASTORGA, T. LINDSAY, & **G.W. COURTNEY**. 2018. A new species of *Neoderus* Alexander, 1927 (Diptera, Tanyderidae) from southern Chile, with a first description of a male and key to extant genera of the family. *Aquatic Insects* 39: 155-179.
- MARTINS, C.C., A. ARDILA-CAMACHO, & **G.W. COURTNEY**. 2018. Neotropical Osmylidae larvae (Insecta, Neuroptera): Description of habitats and morphology. *Aquatic Insects* 39: 181-207.
- FASBENDER, A. & **G.W. COURTNEY**. 2017. A revision of Bittacomorphinae with a review of the monophyly of the extant subfamilies of Ptychopteridae (Diptera). *Zootaxa* 4039: 1-69.
- COURTNEY, G.W.** & B.M. WIEGMANN. 2016. Editorial overview: Insect phylogenetics: an expanding toolbox to resolve evolutionary questions. *Current Opinion in Insect Science Special Issue*. 18: 93-95.
- COURTNEY, G.W.** & B.M. WIEGMANN (editors). 2016. Insect phylogenetics. *Current Opinion in Insect Science Special Issue*. 18: 35-95.
- MADRIZ, R.I. & **G.W. COURTNEY**. 2016. The Neotropical tanyderid *Araucoderus gloriosus* (Alexander) (Diptera, Tanyderidae), with description of the egg, larva and pupa, redescription of adults, and notes on ecology. *Zootaxa* 4158: 325-351.
- COURTNEY, G.W.** 2015. A new genus and species of net-winged midge from Madagascar (Diptera: Blephariceridae). *Zootaxa* 4052: 107-116.
- FASBENDER, A. & **G.W. COURTNEY**. 2014. Case 3664. *Tipula contaminata* Linnaeus, 1758 (currently *Ptychoptera contaminata*; Insecta, Diptera): proposed conservation of prevailing usage through designation of a neotype. *Bulletin of Zoological Nomenclature*. 71: 237-243.
- FARNSWORTH, E.J., M. CHU, W.J. KRESS, A.K. NEILL, J.H. BEST, J. PICKERING, R.D. STEVENSON, **G.W. COURTNEY**, J.K. VANDYK, & A.M. ELLISON. 2013. Next-generation field guides. *Bioscience* 63: 891-899.
- LAMBKIN, C.L., B.J. SINCLAIR, T. PAPE, **G.W. COURTNEY**, J.H. SKEVINGTON, R. MEIER, D.K. YEATES, V. BLAGODEROV, AND B.M. WIEGMANN. 2013 (online 2012). The phylogenetic relationships among infraorders and superfamilies of Diptera based on morphological evidence. *Systematic Entomology* 38: 164-179.
- PETERSEN, J.D., M.J. PETERSEN, & **G.W. COURTNEY**. 2012. Description of a new subgenus *Neophylidorea* (Diptera: Tipulidae) and a new species. *Zootaxa* 3555: 40-54
- SCHNEEBERG, K., F. FRIEDRICH, **G.W. COURTNEY**, B. WIPFLER & R.G. BEUTEL. 2012. The larvae of Nymphomyiidae (Diptera, Insecta) — ancestral and highly derived? *Arthropod Structure and Development* 41: 293-301.
- WIPFLER, B., **G.W. COURTNEY**, D.A. CRAIG & R.G. BEUTEL. 2012. First  $\mu$ -CT based 3D reconstruction of a dipteran larva - the head morphology of *Protanyderus* (Tanyderidae) and its phylogenetic implications. *Journal of Morphology* 273: 968-980.
- WIHLM, M.W., SAM, R.B. & **G.W. COURTNEY**. 2012. Morphology of *Axymyia furcata* McAtee (Diptera: Axymyiidae), including scanning electron microscopy of all life stages. *The Canadian Entomologist* 144: 273-280.

- JACOBSON, A.J., G.R. CURLER, **G.W. COURTNEY**, & J.K. MOULTON. 2011. New species of *Blepharicera* Macquart (Diptera: Blephariceridae) from eastern North America, with a discussion of the phylogenetic relationships and biogeography of all Nearctic species. *Systematic Entomology* 36: 768-800.
- SCHNEEBERG, K., **G.W. COURTNEY** & R.G. BEUTEL. 2011. Head structures of Deuterophlebiidae (Insecta), a highly derived “ancestral” dipteran lineage. *Arthropod Structure and Development* 40: 93-104.
- WIEGMANN, B.M., M.D. TRAUTWEIN, I.S. WINKLER, N.W. BARR, J. KIM, C.L. LAMBKIN, M.A. BERTONE, B.K. CASSEL, K.M. BAYLESS, A.M. HEIMBERG, B.M. WHEELER, K.J. PETERSON, T. PAPE, B.J. SINCLAIR, J.H. SKEVINGTON, V. BLAGODEROV, J. CARAVAS, S.N. KUTTY, U. SCHMIDT-OTT, G.E. KAMPMEIER, F.C. THOMPSON, D.A. GRIMALDI, A.T. BECKENBACH, **G.W. COURTNEY**, M. FRIEDRICH, R. MEIER, AND D.K. YEATES. 2011. Episodic radiations in the fly tree of life. *Proceedings of the National Academy of Sciences* 108: 5690-5695.
- WIHLM, M.W. & **G.W. COURTNEY**. 2011. The distribution and life history of *Axymia furcata* McAtee (Diptera: Axymyiidae), a wood inhabiting, semi-aquatic fly. *Proceedings of the Entomological Society of Washington* 113: 385-398.
- PFRENDER, M.E., C.P. HAWKINS, M. BAGLEY, **G.W. COURTNEY**, B. R. CREUTZBURG, J.H. EPLER, S. FEND, L.C. FERRINGTON, JR., P.L. HARTZELL, S. JACKSON, D.P. LARSEN, C.A. LÉVESQUE, J.C. MORSE, M.J. PETERSEN, D. RUITER, D. SCHINDEL, & M. WHITING. 2010. Assessing macroinvertebrate biodiversity in freshwater ecosystems: Advances and challenges in DNA-based approaches. *The Quarterly Review of Biology* 85: 319-340.
- PETERSEN, M.J., M.A. BERTONE, B.M. WIEGMANN & **G.W. COURTNEY**. 2010. Phylogenetic synthesis of morphological and molecular data reveals new insights into the higher-level classification of the Tipuloidea (Diptera). *Systematic Entomology* 35: 526-545
- PETERSEN, M.J. & **G.W. COURTNEY**. 2010. Landscape heterogeneity and the confluence of regional faunas promote richness and structure community assemblage in a tropical biodiversity hotspot. *Journal of Insect Conservation* 14: 181-189.
- CURLER, G.R., & **G.W. COURTNEY**. 2009. A revision of the world species of the genus *Neotelmatoscopus* Tonnoir (Diptera: Psychodidae). *Systematic Entomology* 34: 63-92.
- BERTONE, M.A., **G.W. COURTNEY** & B.M. WIEGMANN. 2008. Phylogenetics and temporal diversification of the earliest true flies (Insecta: Diptera) based on multiple nuclear genes. *Systematic Entomology* 33: 668-687.
- JACOBSON, A.J. & **G.W. COURTNEY**. 2008. A new species of *Blepharicera* Macquart (Diptera: Blephariceridae) from western North America. *Proceedings of the Entomological Society of Washington* 110: 978-987.
- WAGNER, R., M. BARTAK, A. BORKENT, **G. COURTNEY**, B. GODDEERIS, J-P. HAENNI, L. KNUTSON, A. PONT, G.E. ROTHERAY, R. ROZKOSNY, B. SINCLAIR, N. WOODLEY, T. ZATWARNICKI & P. ZWICK. 2008. Global diversity of dipteran families (Insecta Diptera) in freshwater (excluding Simuliidae, Culicidae, Chironomidae, Tipulidae and Tabanidae). *Hydrobiologia* 595: 489-519.
- GIBSON, J.F. & **G.W. COURTNEY**. 2007. Revision of the net-winged midge genus *Horiaia* Tonnoir and its phylogenetic relationship to other genera within the tribe Apistomyiini (Diptera: Blephariceridae). *Systematic Entomology* 32: 276-304.
- YEATES, D.K., B.M. WIEGMANN, **G.W. COURTNEY**, R. MEIER, C. LAMBKIN & T. PAPE. 2007. Phylogeny and systematics of Diptera: Two decades of progress and prospects. *Zootaxa* 1668: 565-590.
- CURLER, G.R., J. PHASUK, J. CHANPAISAENG, & **G.W. COURTNEY**. 2006. A new species of *Horiella* Tonnoir (Diptera: Psychodidae) from Thailand. *Proceedings of the Entomological Society of Washington* 108: 519-524.
- JACOBSON, A.J., J. PHASUK, J. CHANPAISAENG, & **G.W. COURTNEY**. 2006. The net-winged midges (Diptera: Blephariceridae) of Khao Yai National Park, Thailand, with description of a new species of *Blepharicera* Macquart. *Aquatic Insects* 28: 67-78.
- PHASUK, J., J. CHANPAISAENG, P.H. ADLER, & **G.W. COURTNEY**. 2005. Chromosomal and morphological taxonomy of larvae of *Simulium* (*Gomphostilbia*) (Diptera: Simuliidae) in Thailand. *Zootaxa* 1052: 49-60.
- ROZKOSNY, R. & **G.W. COURTNEY**. 2005. New records of *Ptecticus* species from Thailand including description of a new species (Stratiomyidae, Diptera). *Acta Zoologica Academiae Scientiarum Hungaricae* 51: 343-348

- PHASUK, J., J. CHANPAISAENG, P.H. ADLER, & **G.W. COURTNEY**. 2004 (2006). A preliminary report of black flies (Diptera: Simuliidae) of Khao Yai National Park, Thailand. *Thai Journal of Agricultural Science* 37: 109-117.
- ALVERSON, A.J. & **G.W. COURTNEY**. 2002 Temporal patterns of diatom ingestion by larval net-winged midges (Diptera: Blephariceridae: *Blepharicera*). *Freshwater Biology* 47:2087-2097.
- ALVERSON, A.J., **G.W. COURTNEY**, & M.R. LUTTENTON. 2001. Niche overlap of sympatric *Blepharicera* (Diptera: Blephariceridae) larvae from the southern Appalachian Mountains. *Journal of the North American Benthological Society* 20: 564-581.
- COURTNEY, G.W.** 2000. Revision of the net-winged midges of the genus *Blepharicera* Macquart (Diptera: Blephariceridae) of eastern North America. *Memoirs of the Entomological Society of Washington* 23: 1-99.
- COURTNEY, G.W.** & R.M. DUFFIELD. 2000. Net-winged midges (Diptera: Blephariceridae): a food resource for Brook Trout in montane streams. *Pan-Pacific Entomologist* 76: 87-94.
- COURTNEY, G.W.** 1998. A method for rearing pupae of net-winged midges (Diptera: Blephariceridae) and other torrenticolous flies. *Proceedings of the Entomological Society of Washington* 100: 742-745.
- COURTNEY, G.W.** 1998. First records of the Nymphomyiidae (Diptera) in Nepal. *Proceedings of the Entomological Society of Washington* 100: 595-597.
- DARSIE, R.F., JR., **G.W. COURTNEY** & S.P. PRADHAN. 1996. Notes on the mosquitoes of Nepal IV: Results of the 1994 collecting in the Midwestern Region, including new country records and voucher confirmation (Diptera: Culicidae). *Journal of the American Mosquito Control Association* 12: 130-134.
- OOSTERBROEK, P. & **G.W. COURTNEY**. 1995. Phylogeny of the nematoceros families of Diptera (Insecta). *Zoological Journal of the Linnean Society* 115: 267-311.
- COURTNEY, G.W.** 1994. Revision of Palaearctic mountain midges (Diptera: Deuterophlebiidae), with phylogenetic and biogeographic analyses of world species. *Systematic Entomology* 19: 1-24.
- COURTNEY, G.W.** 1994. Biosystematics of the Nymphomyiidae (Insecta: Diptera): life history, morphology and phylogenetic relationships. *Smithsonian Contributions to Zoology* 550: 1-41.
- DARSIE, R.F., JR., **G.W. COURTNEY** & S.P. PRADHAN. 1994. The mosquitoes (Diptera: Culicidae) of Mustang District, Nepal. *Proceedings of the Entomological Society of Washington* 96: 230-235.
- COURTNEY, G.W.** 1993. Archaic black flies and ancient forests: conservation of *Parasimulium* habitats in the Pacific Northwest. *Aquatic Conservation: Marine and Freshwater Ecosystems* 3: 361-373.
- DARSIE, R.F., JR., **G.W. COURTNEY** & S.P. PRADHAN. 1993. Notes on the mosquitoes of Nepal: III. additional new records in 1992 (Diptera: Culicidae). *Mosquito Systematics* 25: 186-191.
- COURTNEY, G.W.** & I.M. SMITH. 1992. First record of larval water mites (Acari: Lebertioidea: Sperchontidae) parasitic on mountain midges (Diptera: Deuterophlebiidae). *The Canadian Entomologist* 124: 421-423.
- COURTNEY, G.W.** 1991. Life history patterns of Nearctic mountain midges (Diptera: Deuterophlebiidae). *Journal of the North American Benthological Society* 10: 177-197.
- COURTNEY, G.W.** 1991. Phylogenetic analysis of the Blephariceromorpha, with special reference to mountain midges (Diptera: Deuterophlebiidae). *Systematic Entomology* 16: 137-172.
- COURTNEY, G.W.** 1990. Cuticular morphology of larval mountain midges (Diptera: Deuterophlebiidae): implications for the phylogenetic relationships of Nematocera. *Canadian Journal of Zoology* 68: 556-578.
- COURTNEY, G.W.** 1990. Revision of Nearctic mountain midges (Diptera: Deuterophlebiidae). *Journal of Natural History* 24: 81-118.
- COURTNEY, G.W.** 1986. Discovery of the immature stages of *Parasimulium crosskeyi* Peterson (Diptera: Simuliidae), with a discussion of a unique black fly habitat. *Proceedings of the Entomological Society of Washington* 88: 280-286.
- PETERSON, B.V. & **G.W. COURTNEY**. 1985. First description of the female of *Parasimulium stonei* Peterson (Diptera: Simuliidae), with notes and a discussion on collection sites. *Proceedings of the Entomological Society of Washington* 87: 656-661.
- KYTE, M.A. & **G.W. COURTNEY**. 1977. A field observation of aggressive behavior between two North Pacific Octopus, *Octopus dofleini martini*. *The Veliger* 19: 427-428, + 1 plate.



*Book chapters (peer-reviewed)* [30]

- LENCIONI, V., P.H. ADLER & **G.W. COURTNEY**. in press. Chapter 15: Freshwater Diptera. pp. xx-xx in A. Maasri & J.H. Thorp (editors). *Thorp and Covich's Freshwater Invertebrates: Identification and Ecology of Freshwater Arthropods in the Mediterranean Basin*. Academic Press, London, UK.
- COURTNEY, G.W.** in press. Chapter 18.7: Freshwater Diptera. pp. xx-xx in J. Day, D.C. Rogers & J.H. Thorp (editors). *Thorp and Covich's Freshwater Invertebrates, Fourth Edition. Volume VII: Keys to the Afrotropical Fauna*. Academic Press, London, UK
- COURTNEY, G.W.** & S.A. MARSHALL. 2019. 10. Aquatic insects of North America: A photographic overview. pp. 193-230 in R.W. Merritt, K.W. Cummins & M.B. Berg (editors). *An Introduction to the Aquatic Insects of North America. Fifth Edition*. Kendall / Hunt Publishing Co., Dubuque, Iowa.
- COURTNEY, G.W.** 2019. 23. Aquatic Diptera. pp. 925-1022 in R.W. Merritt, K.W. Cummins & M.B. Berg (editors). *An Introduction to the Aquatic Insects of North America. Fifth Edition*. Kendall / Hunt Publishing Co., Dubuque, Iowa.
- COURTNEY, G.W.** 2017. 16. Blephariceridae (Net-winged Midges or Torrent Midges). pp. 487-496 in A. Kirk-Spriggs & B. Sinclair (editors). *Manual of Afrotropical Diptera. Volume 2. Nematocerous Diptera and Lower Brachycera*. Suricata 5. South African National Biodiversity Institute, Pretoria.
- COURTNEY, G.W.**, T. PAPE, J.H. SKEVINGTON & B.J. SINCLAIR. 2017. Biodiversity of Diptera. pp. 229-278 (+ 2 plates) in R.G. Foottit & P.H. Adler (editors). *Insect Biodiversity: Science and Society. Second Edition*. John Wiley & Sons, Chichester, UK. 904 pp
- MARSHALL, S.A. & **G.W. COURTNEY**. 2015. Diptera. pp. 210-227 in C. Griffiths, J. Day & M. Picker (editors). *Field Guide to Freshwater Life in Southern Africa*. Penguin Random House / Struik (Field Guide Series), Cape Town, South Africa.
- COURTNEY, G.W.** & P.S. CRANSTON. 2015. Section VI: Phylum Arthropoda. Chapter 40: Order Diptera. pp. 1043-1058 in J.H. Thorp & D.C. Rogers (editors). *Thorp and Covich's Freshwater Invertebrates Volume I: Ecology and General Biology*. Academic Press, London, UK.
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- COURTNEY, G.W.** & R.W. MERRITT. 2009. Diptera (non-biting flies). pp. 288-298 in G.E. Likens (editor). *Encyclopedia of Inland Waters. Volume 2*. Elsevier Limited, Oxford, UK.
- COURTNEY, G.W.**, T. PAPE, J.H. SKEVINGTON & B.J. SINCLAIR. 2009. Biodiversity of Diptera. pp. 185-222 (+ 2 plates) in R.G. Foottit & P.H. Adler (editors). *Insect Biodiversity: Science and Society*. Blackwell Publishing, Oxford.
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- COURTNEY, G.W.** & R.W. MERRITT. 2008. Aquatic Diptera: Part one: Larvae of aquatic Diptera. pp. 687-722 in R.W. Merritt, K.W. Cummins & M.B. Berg (editors). *An Introduction to the Aquatic Insects of North America. Fourth Edition*. Kendall / Hunt Publishing Co., Dubuque, Iowa.
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- NUNTAKWANG, A., P. CHANTARAMONGKOL & **G.W. COURTNEY**. 2007. Biodiversity and biogeographic connections of Trichoptera from mountain streams of northern Thailand. pp. 257-262 in J. Bueno-Soria, R. Narba-Alvarez and B. Armitage (editors) *Proceedings of the 12<sup>th</sup> International Symposium on Trichoptera*. The Caddis Press, Columbus, Ohio.
- THAMSENANUPAP, P., P. CHANTARAMONGKOL & **G.W. COURTNEY**. 2005 (2006). Diversity and seasonal occurrence of rheophilic caddisflies in mountain streams in Chiang Mai, Northern Thailand. pp. 421-427 in K. Tanida & A. Rossiter (editors). *Proceedings of the 11th International Symposium on Trichoptera*. Tokai University Press, Kanagawa, Japan.

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- COURTNEY, G.W.** 2003. Blephariceridae. pp. 702-708 *in* S.M. Goodman & J.P. Benstead (editors). *The Natural History of Madagascar*. University of Chicago Press.
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- COURTNEY, G.W.** 2000. A.1. Family Blephariceridae. pp. 7-30 *in* L. Papp & B. Darvas (editors). *Contributions to a Manual of Palaearctic Diptera. Appendix*. Science Herald, Budapest.
- COURTNEY, G.W., B. J. SINCLAIR & R. MEIER.** 2000. 1.4. Morphology and terminology of Diptera larvae. pp. 85-161 *in* L. Papp & B. Darvas (editors). *Contributions to a Manual of Palaearctic Diptera. Volume 1*. Science Herald, Budapest.
- COURTNEY, G.W. & L. JEDLICKA.** 1997. Nymphomyiidae. pp. 21-27 *in* L. Papp & B. Darvas (editors). *Contributions to a Manual of Palaearctic Diptera. Volume 2*. Science Herald, Budapest.
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- COURTNEY, G.W., H.J. TESKEY, R.W. MERRITT & B.A. FOOTE.** 1996. Aquatic Diptera: Part one: Larvae of aquatic Diptera. pp. 484-514. *in* R.W. Merritt & K.W. Cummins (editors). *An Introduction to the Aquatic Insects of North America. 3rd Edition*. Kendall / Hunt Publishing Co., Dubuque, IA.
- COURTNEY, G.W., R.W. MERRITT, K.W. CUMMINS, B.A. FOOTE & D.W. WEBB.** 1996. Ecological and distributional data for larval aquatic Diptera. pp. 537-548. *in* R.W. Merritt & K.W. Cummins (editors). *An Introduction to the Aquatic Insects of North America. 3rd Edition*. Kendall / Hunt Publishing Co., Dubuque, IA.
- COURTNEY, G.W.** 1994. Diptera families. pp. 400-437. *in* J.C. Morse, L. Tian & L. Yang (editors). *Aquatic Insects of China Useful for Monitoring Water Quality*. Hohai University Press, Nanjing.
- COURTNEY, G.W.** 1991. Sections pertaining to Blephariceridae, Deuterophlebiidae, and Tanyderidae. pp. 394, 398-399, 402. *in* H.F. Clifford. *Aquatic Invertebrates of Alberta*. University of Alberta Press, Edmonton.
- ANDERSON, N.H., R.W. WISSEMAN & G.W. COURTNEY.** 1984. Emergence trap collections of lotic Trichoptera in the Cascade Range of Oregon, U.S.A. *Fourth International Symposium on Trichoptera. Series Entomologica* 30: 13-19.

#### Book reviews [3]

- COURTNEY, G.W.** 2012. Review of: “Borkent, A. 2012. The pupae of Culicomorpha— morphology and a new phylogenetic tree. *Zootaxa* 3396: 1-98.” *Flytimes* 49: 25-26. (Newsletter of the North American Dipterists Society) Website: [https://dipterists.org/fly\\_times.html](https://dipterists.org/fly_times.html).
- COURTNEY, G.W.** 2007. Review of “Yeates, D.K. & B.M. Wiegmann (editors). 2005. The Evolutionary Biology of Flies. Columbia University Press, New York. 430pp.” *Annals of the Entomological Society of America* 100: 91-92.
- COURTNEY, G.W.** 2000. Review of “Bugledich, E.M.A. 1999. Zoological Catalogue of Australia. Volume 30.1, Diptera: Nematocera. CSIRO Publishing, Melbourne. 627pp.” *Systematic Entomology* 25: 278-279.

#### Popular articles [1]

- COURTNEY, G.W.** 2013. Australian endangered species: Tasmanian Torrent Midge. *The Conversation* (<http://theconversation.com/australian-endangered-species-tasmanian-torrent-midge-12077>).

#### Professional society publications [4]

- COURTNEY, G.W.** 2021. A long-overdue “re-discovery” of *Oreoleptis torrenticola*. *Flytimes* 66: 5-8. (Newsletter of the North American Dipterists Society) Website: [https://dipterists.org/fly\\_times.html](https://dipterists.org/fly_times.html).
- COURTNEY, G.W.** 2018. Crabwalkers and sand minnows: Searching for psammophilic mayflies in the central and western states (& provinces). *The Mayfly Newsletter* 21: 2-7. [Feature Article]

- COURTNEY, G.W. 2018. Crabwalkers and sand minnows: Searching for psammophilic mayflies in the central and western states (& provinces). *Newsletter of the Biological Survey of Canada* 37: 16-21.
- COURTNEY, G.W. 2008. Patagonia — A long wait, but worth it. *Flytimes* 41: 15-18. (Newsletter of the North American Dipterists Society) Website: [https://dipterists.org/fly\\_times.html](https://dipterists.org/fly_times.html).

*Student publications (peer-reviewed) based on work in Courtney lab.*

- CURLER, G.R., J.K. MOULTON & R.I. MADRIZ. 2015. Redescription of *Aposycorax chilensis* (Tonnoir) (Diptera, Psychodidae, Sycoracinae) with the first identification of a blood meal host for the species. *Zootaxa*. 4048: 114-126.
- FASBENDER, A. 2017. 27. Ptychopteridae (Phantom Crane Flies or Fold-winged Crane Flies). in A. Kirk-Spriggs & B. Sinclair (editors). *Manual of Afrotropical Diptera*. South African National Biodiversity Institute. [in press]
- MADRIZ, R.I. 2017. 15. Tanyderidae (Primitive Crane Flies). pp. 479-486 in A. Kirk-Spriggs & B. Sinclair (editors). *Manual of Afrotropical Diptera. Volume 2. Nematocerous Diptera and Lower Brachycera. Suricata 5*. South African National Biodiversity Institute, Pretoria.
- PETERSEN, M.J. 2015. The evolutionary history of *Lipsothrix* Loew (Diptera : Tipuloidea) inferred through systematic revision and historical biogeographical analysis). *Invertebrate Systematics*. 29: 239-286.

#### SELECTED INVITED PRESENTATIONS (out of 81 total):

- Aquatic insects of upper Midwest wetlands: A “well known” fauna that isn’t. *North American Prairie Conference*, Ankeny, IA. July 2020 (cancelled due to Covid-19).
- Seeps, psammophiles and shutter speeds: Vignettes on macro photography of unusual aquatic insects. *Biology Club*, ISU, Ames, IA. September 2018
- The quest for cryptic caddisflies: Vignettes on the natural history of “rare” Trichoptera. *Day of Insects Conference*, Ames, IA. March 2018.
- Mountains, midges and monsoons: biodiversity of Nepalese flies. *Four-Nation Agricultural Biodiversity Conference*, Ames, IA. October 2015.
- Crabwalkers and sand minnows: Searching for psammophiles in the central states. *Day of Insects Conference*, Ames, IA. March 2015.
- From BugGuide to biosystematics: Natural history, adaptations and phylogeny of torrenticolous flies. *Ohio State University*, Wooster, OH. April 2014.
- Not just for images anymore: BugGuide as a tool in research and teaching. *North Central Branch Meeting, Entomological Society of America*, Des Moines, IA. March 2014
- Biosystematics of rheophilic insects: Systematics, science and society. *Clemson University*. September 2013.
- From BugGuide to Bluffton: Journey to Iowa Odonates. *A Day of Insects Conference*, Ames, IA. April 2013.
- BugGuide: The community behind half a million submitted specimens. *Ecological Society of America*, Portland, OR. August 2012; **and** *Entomological Society of Canada*, Edmonton, Alberta. November 2012.
- Stability in a phylogenetic morass: Monophyly and interfamilial relationships of the Culicomorpha. *International Congress of Dipterology*, San Jose, Costa Rica. August 2010.
- Flies at risk: Overview of the Blephariceridae of Madagascar. *International Congress of Dipterology*, San Jose, Costa Rica. August 2010. [w/ R.B. Sam]
- Biosystematics of Asian net-winged midges: trekking for torrenticolous flies. Biology seminar, *Brigham Young University*. October 2008.
- The status of freshwater invertebrate taxonomy: Diptera. *Freshwater Invertebrate DNA-Signature Workshop*, Logan, Utah. November 2006.
- Phylogenetic relationships of the Blephariceridae (Diptera) inferred from morphological and molecular characters. *International Congress of Dipterology*, Fukuoka, Japan. September 2006.
- Studies of aquatic flies in the 21<sup>st</sup> Century: A renaissance in dipterology? *North American Benthological Society*, Anchorage, AK. June 2006.
- Biosystematics of torrenticolous flies, with emphasis on net-winged midges (Diptera: Blephariceridae). *University of Tennessee*, Knoxville, TN. March 2006.

- Fundamentals of aquatic invertebrate ecology, with emphasis on aquatic insects. *Wetland Ecology and Wildlife: Considerations for Wetland Restoration and Management*. Malheur Field Station, Oregon. August 2005.
- The role of woody debris in stream ecosystems. *Chiang Mai University*; Chiang Mai, Thailand. May 2005.
- Systematics, biology, and ecology of North American aquatic Nematocera (Diptera). *Entomological Society of America*, Fort Lauderdale, Florida. November 2002.
- Mountains, midges, and monsoons: biosystematics of torrenticolous flies. *Entomological Society of Queensland*, Brisbane, Australia; **and** *Chiang Mai University*; Chiang Mai, Thailand; **and** *Kasetsart University*; Bangkok, Thailand. October 2002.
- Phylogenetic relationships of nematoceros Diptera: synopsis of recent hypotheses. **Plenary lecture**, *International Congress of Dipterology*, Brisbane, Australia; **and** *Chiang Mai University*; Chiang Mai, Thailand. October 2002.
- Biodiversity of Asian net-winged midges: trekking for torrenticolous flies. *University of Missouri*, Columbia, Missouri. March 2001.
- Mouthpart morphology of larval net-winged midges (Blephariceridae): ontogenetic and intergeneric comparisons and their phylogenetic implications. *International Congress of Dipterology*, Oxford, England. September 1998.
- Snowshoes, sympatry and synapomorphies: biosystematics of torrenticolous Diptera. *Loyola University — Chicago*; Chicago, Illinois; **and** *Michigan State University*; East Lansing, Michigan. October 1996.
- Matrices, midges & monsoons: biosystematics research on aquatic Diptera. *Cornell University*; Ithaca, New York. June 1995
- Biosystematics of aquatic Diptera: a research program. *Smithsonian Institution*; Washington, D.C. April 1995.
- Phylogenetic studies of aquatic flies: systematics, science and society. *International Institute of Entomology*; London, England. January 1994.
- Ancient floods, forests and flies: hyporheic habitats in the Cascade Range. *University of Maryland*; College Park, Maryland. October 1993; **and** *Oregon State University*; Corvallis, Oregon. January 1994.

**SELECTED OTHER PRESENTATIONS** (out of 44 total):

- The Megaloptera of Iowa. *Entomological Society of America*, St Louis, MO. November 2019. [Poster, w/ D. Bowles]
- Psammophiles and shutter speeds: Searching for crabwalkers and sand minnows in western North America. *Invertebrates in Education and Conservation Conference*, Tucson, AZ. August, 2019
- Twigs around the trunk: phylogenetic relationships of Neotropical Blephariceridae. *International Congress of Dipterology*, San Jose, Costa Rica. August 2010.
- Phylogenetic relationships of the Blephariceridae (Diptera) inferred from morphological and molecular characters. *North American Benthological Society*, Salt Lake City, Utah. May 2008. [w/ J.K. Moulton].
- Resolving crane fly confusion: Systematics of the subfamily Limoniinae (Diptera; Tipuloidea). *Entomological Society of America*, Indianapolis, Indiana. December 2006. [w/ M. Petersen (presenter)].

**SCIENTIFIC MEETING ORGANIZER:**

- Co-organizer (w/ D.E. Bowles). Field meeting *North American Dipterist's Society*. Bull Shoals Field Station, Missouri. June 2019.
- Organizer. Field meeting *North American Dipterist's Society*. Malheur Field Station, Oregon. August 2005.

**WEB SITE DEVELOPMENT:**

In addition to course websites (see below), the following have been developed:

Blephariceridae: <http://www.ent.iastate.edu/dept/research/systematics/bleph/> (with information on the biology and classification of net-winged midges, and interactive taxonomic keys to various groups).

Aquatic insects of Thailand: <http://www.ent.iastate.edu/dept/faculty/courtney/research/thai.html> (summary of research projects in northern and central Thailand)

**TECHNICAL REVIEWER***Grant Proposals:*

- National Science Foundation ( $\approx 50$ )
- National Geographic Society (3)
- Natural Environment Research Council [UK]
- Natural Sciences and Engineering Research Council [Canada] (3)

*Book chapters:*

- Fry, C. 2022. A Field Guide to Freshwater Macroinvertebrates of Southern Africa (Diptera chapter) Jacana Media, South Africa.
- Marshall, S.A. 2012. *Flies. The Natural History and Diversity of Diptera*. Firefly Books, Canada [reviewed keys, introduction and sections pertaining to nematocerous Diptera]
- Adler, P.H., D.C. Currie, & D.M. Wood (editors). 2004. *Black Flies of North America* (section on genus *Parasimulium*). Cornell University Press, Ithaca, NY.
- Hodges, E.R.S. (editor). 2003. *The Guild Handbook of Biological Illustration. Second Edition* (chapter: Microscopical techniques). John Wiley & Sons, Inc., New York, NY
- Merritt, R.W. & K.W. Cummins (editors). 1996. *An Introduction to the Aquatic Insects of North America. Third Edition* (two chapters: Phylogenetic relationships and evolutionary adaptations of aquatic insects **and** Aquatic Diptera: Part two: Pupae and adults of aquatic Diptera). Kendall / Hunt Publishing Co., Dubuque, IA.
- Clifford, H.F. 1991. *Aquatic Invertebrates of Alberta* (Diptera chapter). Univ. of Alberta Press, Edmonton.

*Manuscripts for scientific journals* (multiple reviews for most):

- Annals of the Entomological Society of America
- Aquatic Insects ( $>20$ )
- Archiv für Hydrobiologie
- Arthropod Systematics & Phylogeny
- Australian Journal of Entomology
- Bonner zoologische Beiträge
- Canadian Entomologist ( $>10$ )
- Canadian Journal of Zoology
- Contributions in Science, Natural History Museum of Los Angeles County
- Ecology and Evolution
- Entomological News
- Freshwater Science
- Insect Conservation and Diversity
- Insect Systematics and Diversity
- Insect Systematics and Evolution
- Journal of the North American Benthological Society
- Natural History Journal of Chulalongkorn University
- Pan-Pacific Entomologist
- Proceedings of the Biological Society of Washington
- Proceedings of the Entomological Society of Washington ( $>10$ )
- Studies on Neotropical Fauna and Environment
- Systematic Entomology ( $>10$ )
- Zoological Anzeiger
- Zoological Journal of the Linnaean Society
- Zootaxa ( $>100$ )

**TEACHING EXPERIENCE**

- SYSTEMATIC ENTOMOLOGY**; ISU (1998-present), Univ. of Missouri (1989) Graduate and upper-level undergraduate course on insect taxonomy, phylogeny and classification. The course includes field trips to local habitats, frequent exposure to live insects, and comprehensive training in the collection, preparation, and identification of insects. Canvas URL: <https://canvas.iastate.edu/courses/74032>
- AQUATIC INSECTS**; ISU (2001-present), Grand Valley State University (1995-1997) Graduate and upper-level undergraduate course on the comparative morphology, identification, and ecology of aquatic insects. The course includes field trips to local habitats and (until 2018) the southern Appalachian Mountains, frequent exposure to live insects, and training in collection methods.  
Cybox URL: [https://iastate.app.box.com/files/0/f/2921320827/Ent\\_425](https://iastate.app.box.com/files/0/f/2921320827/Ent_425)
- ADVANCED SYSTEMATICS**; ISU (2003-present) Graduate and upper-level undergraduate course on the principles and practice of systematic biology, including revisionary taxonomy, phylogenetic analysis, and biological classification. Primary audience: graduate students in Ecology and Evolutionary Biology.  
Cybox URL: [https://iastate.app.box.com/files/0/f/2925947787/EEOB\\_ENT\\_568](https://iastate.app.box.com/files/0/f/2925947787/EEOB_ENT_568)
- INSECT ZOO INTERNSHIP**; ISU (2017-present) Undergraduate course focused on learning how to (1) care for different species of live arthropods in the Insect Zoo, (2) create and deliver, age-appropriate, hands-on curriculum, and (3) care for, curate & catalogue preserved specimens in the Iowa State Insect Collection.
- ENTOMOLOGY FIELD TRIP**; ISU (2019-present). Upper-level undergraduate and graduate course that provides students with field experiences in different regions of North America. The course includes field trips to the southern Appalachian Mountains or Ozark Plateau during alternate (odd) years and other destinations alternate (even) years, frequent exposure to live insects, and training in collection methods.
- INSECT SYSTEMATICS AND EVOLUTION**; ISU (2006, 2009, 2013, 2018) Graduate-level, discussion-based “special topics” course focused on current issues in the taxonomy, systematics, phylogeny, classification of insects, and the co-evolution of insects, plants, and other major groups of organisms.
- NATURAL HISTORY OF THE PACIFIC NORTHWEST**; ISU (2002, 2016) Discussion and field-course on the geology, flora, fauna, ecology, and management of the Pacific Northwest. The course included a two-week field trip to the area. Primary audience: graduate students in Ecology and Evolutionary Biology.  
Website for 2002 trip: <http://www.ent.iastate.edu/fieldtrips/pn2002/>
- NATURAL HISTORY OF THE SOUTHERN APPALACHIANS**; ISU (2000, 2004) Discussion and field-course on the geology, flora, fauna, ecology, and management of the southern Appalachian Mountains. The course included an eight-day field trip to the area. Primary audience: graduate students in Ecology and Evolutionary Biology. Website for 2004 trip: <http://www.ent.iastate.edu/fieldtrips/appalachia2004/>
- IMMATURE INSECTS**; ISU (2000, 2004) Graduate course on the comparative morphology, identification, and ecology of immature insects. The course included field trips to local habitats, exposure to live insects, and training in collection methods.
- ENTOMOLOGY SEMINAR** (2012-present, every Fall & Spring) Graduate course to help students present scientific work, critically evaluate oral presentations, and become engaged in scientific presentation.
- NATURAL HISTORY OF INVERTEBRATES**; Grand Valley State University (1995-1997) Undergraduate course on the comparative morphology, development, identification, and ecology of major invertebrate taxa. The course included considerable "hands-on" exposure to invertebrates in the laboratory and on local field trips. Primary audience: undergraduate Biology majors.
- STREAM ECOLOGY**; Grand Valley State University (1996) Upper-level undergraduate course on the structure and function of stream ecosystems. The course covered physical, chemical and biological parameters important to flowing water habitats, and included field trips to local habitats. Primary audience: undergraduate Biology majors and postgraduate (M.S.-level) students.
- EVOLUTIONARY BIOLOGY**; Grand Valley State University (1995-1996) “Capstone” Biology undergraduate course on the principles and mechanisms of evolutionary biology. This lecture course built on the knowledge base of general biology, morphology, ecology, genetics, and molecular biology.

**Field courses and workshops**

- DIVERSITY AND IDENTIFICATION OF DIPTERA; Day of Insects Conference, Ames, IA (2020, cancelled due to Covid-19). Short course / workshop on the diversity, ecology, morphology, and identification of true flies (Diptera), with emphasis on adults and taxa from the Upper Midwest. Participants were to include teachers, amateur photographers and citizen scientists.
- AQUATIC INSECT MACROPHOTOGRAPHY; Annual BugGuide Meeting, Ames, IA (2011); Day of Insects Conference, Ames, IA (2018). Short course / workshop on methods of photographing aquatic insects, with emphasis on live specimens. Participants included 15 (2011) to 25 (2018) teachers, amateur photographers and citizen scientists.
- AQUATIC DIPTERA; Association of Mid-Atlantic Biologists Workshop, Berkeley Spring, WV. (2012) Short course / workshop on the phylogeny, morphology, and identification of aquatic Diptera, including identification of live and preserved specimens. Participants included 21 professional benthologists and environmental scientists.
- AQUATIC DIPTERA; Northwest Biological Assessment Workgroup, Oregon State University, Corvallis, OR. (2010) Short course / workshop on the phylogeny, morphology, and identification of aquatic Diptera, including field trips to local habitats and identification of live and preserved specimens. Participants included 27 professional benthologists, teachers, and environmental scientists.
- AQUATIC DIPTERA; Florida Association of Benthologists, Seminole County Environmental Center, Florida (2008) Short course / workshop on the phylogeny, morphology, and identification of aquatic Diptera, including field trips to local habitats and identification of live and preserved specimens. Participants included 35 professional benthologists, teachers, and environmental scientists.
- AQUATIC ENTOMOLOGY; Kasetsart University (Khampaengsaen), Thailand (2002) Short course / workshop on the morphology, identification, and ecology of aquatic insects, including field trips to local habitats and training in specialized collection methods. Participants included 15 graduate students, college professors, and professionals.
- GENERAL ENTOMOLOGY; Krabi, Thailand (2000) Short course / workshop developed and co-taught with Dr. J. Chanpaisaeng, Kasetsart University. The course focused on general insect biology and identification, and included field trips to local habitats, and training in collection and identification methods. Participants included 12 high schools students from southern Thailand.
- AQUATIC INSECTS OF THE NEPAL HIMALAYA'S; Nepal (1994) Short course on the morphology, identification, and ecology of aquatic insects, with emphasis on species found in streams around the Kathmandu Valley. The course included several field trips to local habitats, and training in specialized collection methods. Students included 7 Nepalese citizens with limited entomological training.
- TROPICAL FIELD BIOLOGY; Rancho del Cielo, Mexico [University of Texas – Brownsville] (1993) The course, which was taught at a field station in the montane cloud forests of tropical Mexico, included lessons in general and tropical biology, but focused on insect biodiversity, plant / insect interactions, herpetology, and aquatic biology. The 10 students were recent high-school graduates planning to enter college in science.

**Invited class lectures**

- AQUATIC INSECTS AND BIOMONITORING; French Conservation Camp, MT (2017–2019, 2021). Short (1-2 day) course / workshop on the diversity, ecology, morphology, and identification of aquatic insects, with emphasis on taxa from the intermountain west. Participants were students enrolled in Field Ecology course (NREM 496).
- GROUND BEETLE CLASSIFICATION AND IDENTIFICATION; Entomology Special Topics course (ENT 590C), Iowa State University, Ames, IA (2021). Guest lecture and laboratory on the diversity, phylogeny, classification and identification of ground beetles (Carabidae), including hands-on laboratory component with preserved and locally-collected live specimens. Participants included four graduate students and a postdoctoral fellow.

AQUATIC INSECTS OF PRAIRIE WETLANDS; ECOLOGY & EVOLUTIONARY BIOLOGY FIELD TRIP course (EEB 585), Iowa State University, Ames, IA (2021). Guest lecture on the diversity and ecology of aquatic insects in prairie wetlands of Iowa. Participants were graduate students from the Ecology & Evolutionary Biology program.

AQUATIC INSECT DIVERSITY, ECOLOGY & IDENTIFICATION; Stream Ecology course (AECL 418/518), Iowa State University, Ames, IA (2019, 2021). Guest lecture and laboratory on the diversity, ecology and identification of aquatic insects in Iowa rivers. Participants were undergraduate- and graduate students from the Animal Ecology or NREM.

RIPARIAN ZONE DYNAMICS, WOODY DEBRIS, & RIVER CONTINUUM CONCEPT; Stream Ecology course (AECL 418/518), Iowa State University, Ames, IA (2021). Two guest lectures, one on the importance of riparian zones and role of woody debris in streams, the other on the River Continuum Concept. Participants were undergraduate- and graduate students from the Animal Ecology or NREM.

**DEVELOPMENT OF TEACHING MATERIALS** (references for aquatic- & systematic entomology courses).

COURTNEY, G.W. & S.A. MARSHALL. 2019. 10. Aquatic Insects of North America: A Photographic Overview. pp. 193-230 in R.W. Merritt, K.W. Cummins & M.B. Berg (editors). *An Introduction to the Aquatic Insects of North America. Fifth Edition*. Kendall / Hunt Publishing Co., Dubuque, Iowa.

COURTNEY, G.W. & R.W. MERRITT. 2019. 23. Aquatic Diptera. pp. 925-1022 in R.W. Merritt, K.W. Cummins & M.B. Berg (editors). *An Introduction to the Aquatic Insects of North America. Fifth Edition*. Kendall / Hunt Publishing Co., Dubuque, Iowa.

COURTNEY, G.W., T. PAPE, J.H. SKEVINGTON & B.J. SINCLAIR. 2017. Biodiversity of Diptera. pp. 229-278 (+ 2 plates) in R.G. Footitt & P.H. Adler (editors). *Insect Biodiversity: Science and Society. Second Edition*. John Wiley & Sons, Chichester, UK. 904 pp.

COURTNEY, G.W. & P.S. CRANSTON. 2015. Section VIII: Phylum Arthropoda – Subphylum Hexapoda. 40. Diptera. pp. 1043-1058 in J.H. Thorp, D.C. Rogers, & K. Tockner (editors). *Thorp and Covich's Freshwater Invertebrates Volume I: Ecology and General Biology*. Academic Press, London, UK.

COURTNEY, G.W. & R.W. MERRITT. 2008. Aquatic Diptera: Part one: Larvae of aquatic Diptera. pp. 687-722 in R.W. Merritt, K.W. Cummins, & M.B. Berg (editors). *An Introduction to the Aquatic Insects of North America. 4th Edition*. Kendall / Hunt Publishing Co., Dubuque, Iowa.

COURTNEY, G.W., R.W. MERRITT, K.W. CUMMINS, M.B. BERG, D.W. WEBB & B.A. FOOTE. 2008. Ecological and distributional data for larval aquatic Diptera. pp. 747-771 in R.W. Merritt, K.W. Cummins, & M.B. Berg (editors). *An Introduction to the Aquatic Insects of North America. 4th Edition*. Kendall / Hunt Publishing Co., Dubuque, IA.

COURTNEY, G.W. 2004. Deuterophlebiidae. pp. 763-768 in C.M. Yule & Y.H. Sen (eds.). *Freshwater Invertebrates of the Malaysian Region*. Academy of Sciences Malaysia, Kuala Lumpur.

COURTNEY, G.W. 2004. Nymphomyiidae. pp. 769-774 in C.M. Yule & Y.H. Sen (eds.). *Freshwater Invertebrates of the Malaysian Region*. Academy of Sciences Malaysia, Kuala Lumpur.

COURTNEY, G.W., H.J. TESKEY, R.W. MERRITT & B.A. FOOTE. 1996. Aquatic Diptera: Part one: Larvae of aquatic Diptera. pp. 484-514. in R.W. Merritt & K.W. Cummins (editors). *An Introduction to the Aquatic Insects of North America. 3rd Edition*. Kendall / Hunt Publishing Co., Dubuque, Iowa.

COURTNEY, G.W., R.W. MERRITT, K.W. CUMMINS, B.A. FOOTE & D.W. WEBB. 1996. Ecological and distributional data for larval aquatic Diptera. pp. 537-548. in R.W. Merritt & K.W. Cummins (editors). *An Introduction to the Aquatic Insects of North America. 3rd Edition*. Kendall / Hunt Publishing Co., Dubuque, IA.

COURTNEY, G.W. 1994. Diptera families. pp. 400-437. in J.C. Morse, L. Tian & L. Yang (editors). *Aquatic Insects of China Useful for Monitoring Water Quality*. Hohai University Press, Nanjing.



**ADVISING ACTIVITIES:****Postdoctoral advisor**

Dr. Vladimir Blagoderov, Department of Entomology, ISU. 2004-2005. Building the dipteran tree: Cooperative research in phylogenetics and bioinformatics of true flies (Insecta: Diptera). [Principle Curator of Invertebrates, National Museums Scotland, Edinburgh]

**Graduate advisor**

- Carly Cunningham, Department of Entomology, ISU. 2021-present. Biodiversity and phenology of aquatic beetles associated with bulrush (*Scirpus* spp.) communities in an Iowa wetland.
- Ruben Madriz, Department of Entomology, ISU. 2012-2017. The primitive crane flies (Diptera: Tanyderidae). [**Ph.D. recipient, 2017**; Fulbright – National Geographic Society Fellow in Aysen, Chile]
- Andrew Fasbender, Department of Entomology, ISU. 2010-2014. Phylogeny and diversity of the phantom crane flies (Diptera: Ptychopteridae). [**Ph.D. recipient, 2014**; Research Scientist at Rhithron Associates, Inc., Missoula, MT]
- Rebecca Brown, Department of Entomology, ISU. 2004-2011. Taxonomy, phylogeny, and biogeography of the net-winged midges of Madagascar (Diptera: Blephariceridae: *Paulianina* and *Eupaulianina*). [**Ph.D. recipient, 2011**; Secondary teacher in Atlanta, GA]
- Jessica Petersen, Department of Entomology, ISU. 2006-2010. Revisionary systematics and evolutionary ecology of *Neophylidorea* (Diptera: Tipuloidea). [**Ph.D. recipient, 2010**; Invertebrate Ecologist for Minnesota Department of Natural Resources]
- Matthew Wihlm, Department of Entomology, ISU. 2006-2009. The ecology, morphology, and phylogeography of the Nearctic species *Axymyia furcata* McAtee (Diptera: Axymyiidae). [**M.S. recipient, 2009**; Researcher at Corteva Agriscience]
- Matthew Petersen, Department of Entomology, ISU. 2003-2008. A systematic investigation of the crane fly subfamily Limoniinae (Tipuloidea: Limoniidae). [**Ph.D. recipient, 2008**; Assistant Professor at University of Minnesota]
- Amanda Jacobson, Department of Entomology, ISU. 2004-2006. Phylogenetic analysis of Nearctic *Blepharicera* Macquart (Diptera: Blephariceridae). [**M.S. recipient, 2006**; Senior Biologist at Dow Corporation]
- Gregory Curler, Department of Entomology, ISU. 2003-2005. A review of the moth flies (Diptera: Psychodidae) of northern Thailand, with revision of world species of the genus *Neotelmatoscopus* Tonnoir (Psychodinae: Telmatoscopini). [**M.S. recipient, 2005**; Adjunct Curator at Mississippi Entomological Museum]
- Mary Schuster, Department of Entomology, ISU. 2002-2005. A bird in the hand is worth two in the book: Development and assessment of a teacher- and student-friendly invertebrate learning kit for children. [**M.S. recipient, 2005**; Secondary teacher in eastern Iowa]
- Joel Gibson, Department of Entomology, ISU. 2000-2002. A revision of the genus *Horaia* Tonnoir (Diptera: Blephariceridae: Blepharicerinae: Apistomyiini). [**M.S. recipient, 2002**; Curator at Royal British Columbia Museum]
- Andrew Alverson, Department of Entomology, ISU. 1998-2000. Feeding ecology of larval net-winged midges (Diptera: Blephariceridae: *Blepharicera* Macquart) from the southern Appalachian Mountains. [**M.S. recipient, 2000**; Associate Professor at University of Arkansas]

**Graduate co-advisor**

Amanda Jacobson, Department of Entomology and Plant Pathology, University of Tennessee. 2007-present. Phylogenetic analysis of the Blephariceridae with an emphasis on eastern Nearctic *Blepharicera* Macquart (Diptera: Blephariceridae). [**Ph.D. recipient, 2010**; Senior Biologist at Dow Corporation]

- Artit Nuntakuang, Department of Biology, Chiang Mai University (Thailand). 2002-2006. Diversity and biogeography of caddisflies of northern Thailand. [**Ph.D. recipient, 2006**]
- Penkhae Thamsenanupap, Department of Biology, Chiang Mai University (Thailand). 2001-2005. Changes in rheophilic insect communities along an altitudinal gradient in Doi Inthanon and Doi Suthep-Pui national parks [**Ph.D. recipient, 2005**; Assistant Professor at Mahasarakham University, Thailand]
- Jumnongjit Phasuk, Department of Entomology, Kasetsart University (Thailand). 1999-2005. Diversity of aquatic Diptera from Khao Yai National Park [**Ph.D. recipient, 2005**; Assistant Professor at Kasetsart University, Thailand]
- Nattaporn Changthong, Department of Biology, Chiang Mai University (Thailand). 2002-2005. Diversity of Trichoptera larvae communities from different microhabitats and streams in Phu Hin Rongkla National Park. [**M.S. recipient, 2005**]
- Jirayu Nawvong Department of Biology, Chiang Mai University (Thailand). 2002-2004. Role of discharge on rheophilic insect communities at Wieng Ko Sai National Park. [**M.S. recipient, 2004**]
- Joseph A. Johns, Department of Entomology, Clemson University. 1995-1996. The net-winged midges (Diptera: Blephariceridae) of the southeastern United States: phenology and ecology. [**M.S. recipient, 1996**]

#### **Graduate committee member (\*degree received)**

Braymond Adams, Entomology (Ph.D.)	Erica Bakken, EEB (Ph.D.)*
Anna Belyaeva, Environmental Science (Ph.D.)*	Kristen Bernhard, EEOB (M.Sc.)*
Jeralyn J.M. Calaor, EEB (Ph.D.)	Jay Christensen, EEB (Ph.D.)*
Hathaira Chokthaweapanich, EEB (Ph.D.)*	Vicente Faria, EEB (Ph.D.)*
Kristy Halverson, EEB (M.Sc.)*	Laura Jesse, Entomology (Ph.D.)*
Bryan Juarez, EEB (PhD)*	Sarah Kaatz, Animal Ecology (M.Sc.)*
Robert March, Botany (M.Sc.)*	Gerardo Marquez, Entomology (Ph.D.)*
Elisabeth McMurchie, EEB (PhD)	Jeff Noll, Botany (M.Sc.)*
Johnson Odera, Entomology (Ph.D.)*	Laura Schrage, Animal Ecology (M.Sc.)*
Elliott Smith, Entomology (Ph.D.)	Jim Triplett, Botany (Ph.D.)*
Andres Vargas, Entomology (M.Sc.)	Amy Weibe, Entomology (M.Sc.)*

#### **Undergraduate advising**

Research advisor: Andrew Alverson, Nicholas Behrends, Taylor Best, Nathan Brockman, Joshua Byrne, Brittany Clark, Greg Curler, Keri Devilbiss, Erick Hernandez, Andrew Guinness, Oliver Higley, I-Shin Hsu, Julie Hutson, Chelsea Jackson, Sara Jones, Javon Latimore, Sarah Maniscalco, Alex Myrkis, Susannah Sant, Mary Schuster, Michael Shaver, Erica Simbro, Meghan Smith, Nicole Smith, Shawna Snyder, Gregory Vannostrand, Micaela Zagar.

Students trained in biological illustration: Jeremy Cook, Greg Curler, Lori Kibbey, Derrick Meads, Martin Huber, Laurel Prafke, Lori Ziska.

Science With Practice: Brittany Clark, Shawna Snyder, Micaela Zagar.

#### **Mentor for Undergraduate internships**

George Washington Carver Minority Program: Manuel Hernandez (2).

#### **Mentor for High School internships**

George Washington Carver Minority Program: Taea Jackson, Nikia American-Horse, Nathan Hermond, Jordan Shell-Track, Kristy Stotler.

Insect Zoo: Joi Hegenger, Claire Miller, Meredith Talbert