

Alaine Kathryn Knipes

School of Biological Sciences • University of Nebraska-Lincoln • Lincoln, Nebraska 68588
www.alaineknipes.com • alaineknipes@huskers.unl.edu • phone 413 695 0621

EDUCATION:

- 2004 - present: Ph.D. Candidate – Othmer Fellow – School of Biological Sciences
University of Nebraska, Lincoln. Advisor: Dr. John Janovy, Jr.
- 1998 - 2003: BS in Biology & BA in French – Honors College Scholar
University of Massachusetts, Amherst. Advisor: Dr. W. Brian O'Connor.
- 1998 - 1999: Université de Paris VII, Jussieu, Paris, France - UMass Study Abroad Program.

GRANTS:

- 2009: The Marc Dresden Student Travel Grant, The American Society of Parasitologists (\$400)
2009: The Sigma Xi Student Travel Grant, University of Nebraska Chapter of Sigma Xi (\$150)
2008: Sigma Xi Student Travel Grant, University of Nebraska Chapter of Sigma Xi (\$150)
2008: Frank Kestner Memorial Fund for research, UNL (\$1500)
2008: Frank Kestner Memorial Fund for travel, UNL (\$500)
2008: Marc Dresden Student Travel Grant, The American Society of Parasitologists (\$350)
2008: Adrian M. Srb Memorial Fund Award, Cedar Point Biological Station, UNL (\$200)
2007: Blair Paxton Udale Estate Scholarship Award for research, UNL (\$2000)
2007: Adrian M. Srb Memorial Fund Award, Cedar Point Biological Station, UNL (\$2,000)
2007: Mary Rogick Scholarship for travel, UNL (\$500)
2006: Adrian M. Srb Memorial Fund Award, Cedar Point Biological Station, UNL (\$2,000)
2006: Blair Paxton Udale Estate Scholarship Award for research, UNL (\$1,500)
2006: Walker Fellowship Award for travel, UNL (\$223)
2005 Blair Paxton Udale Estate Scholarship Award for research, UNL (\$1,000)
2005 Initiative for Ecological and Evolutionary Analysis Award for travel, UNL (\$450)
2005 Othmer Travel Award, School of Biological Sciences Special Funds Grant, UNL (\$450)
2005 Marc Dresden Student Travel Grant, The American Society of Parasitologists (\$400)

FELLOWSHIP:

- 2004: Othmer Graduate Fellowship, UNL (\$22,500 over 3 years)

AWARDS:

- 2008: Honorable Mention, Outstanding Graduate Teaching Assistant
2008: Datus M. Hammond Award for Best Graduate Student Paper, The Rocky Mountain Conference of Parasitologists (\$100)
2007: Datus M. Hammond Award for Best Graduate Student Paper, The Rocky Mountain Conference of Parasitologists (\$100)

RESEARCH EXPERIENCE:

2004 – present: I study the parasite community structure in Nebraska minnows, and the role of habitat variability and host dispersal in the determination of the parasite distribution in nature. Due to variation in host specificity and complexity of life cycles among parasites, it is necessary to study a number of different parasites at locations that vary abiotically and biotically, in order to understand the ways in which habitats affect the ability of parasites to distribute in nature. Additionally, I am working towards constructing a molecular phylogenetic hypothesis for North American representatives of the globally distributed fish parasite genus *Dactylogyrus* (Platyhelminthes; Monogeneoidea). My objective is to determine the evolutionary relationships among North American, European and Asian representatives

to provide insight into the processes of parasite speciation and host colonization on local and global scales.

TEACHING EXPERIENCES:

- 2008, 2009: **Invertebrate Zoology** - Lecturer (2 sections - 30 students) & Lab supervisor. UNL.
2008, 2009: **Peruvian Amazon Expedition** - Invited Researcher & instructor. (40 students)
Lawrence Academy (MA) & Lawrenceville School (NJ), in the Peruvian Amazon, Peru.
2008: **Summer Ecology & Evolution** - Teaching assistant. (18 students). Cedar Point
Biological Station, UNL.
2008, 2009: **Parasitology** - Teaching assistant. (2 sections - 19 students). UNL.
2005-2009: **Summer Field Parasitology** - Teaching assistant. (5 sections - 101 students). Cedar
Point Biological Station, UNL.
2005-2007: **Invertebrate Zoology** - Teaching assistant. (3 sections - 30 students). UNL.
2005 & 2006: **Organismal Biology** - Teaching assistant. (4 sections - 73 students). UNL.
2004 & 2007: **General Biology** - Teaching assistant. (4 sections - 70 students). UNL.

ADVISING and PROFESSIONAL ACTIVITIES:

- 2008-2009: President of the Biology Graduate Student Association (BGSA). UNL.
2008-present: Maintenance of BGSA Web page - http://www.biosci.unl.edu/bgsa_new/
2008: Chair of the Planning Committee: 2009 BGSA Symposium. UNL.
2008: Planning Committee: 2009 Midwest Ecology and Evolution Conference. UNL.
2008: Planning Committee: Campus-wide Workshop for Graduate Teaching Assistants. UNL.
2004-present: Design & Implementation of Research & Teaching Web page – www.alaineknipes.com
2008: Mentor of Undergraduate Research: Xiao Bi, UNL.
2007: Mentor of Undergraduate Research: Kristin Brotan, UNL.
2003-2004: Instructional Para-Professional, Special Education Department. Amherst-Pelham
Regional Middle School. Amherst, Massachusetts.
2001-2002: Peer Academic Advisor, Freshman Summer Orientation, UMass-Amherst.

PUBLICATIONS:

- Knipes, A.K.** and J. Janovy, Jr. Community Structure and seasonal dynamics of *Dactylogyrus* spp. (Monogenea) on the Fathead Minnow (*Pimephales promelas*) from the Salt Valley Watershed, Lancaster County, Nebraska. *Journal of Parasitology*. **IN PRESS**.
- Janovy, J. Jr., J. Detwiler, S. Schwank, M.G. Bolek, **A.K. Knipes**, and G. J. Langford. 2007. New and emended descriptions of gregarines from flour beetles (*Tribolium* spp. and *Palorus subdepressus*: Coleoptera, Tenebrionidae). *Journal of Parasitology*, 93(5): 1155-1170.
- Janovy, J. Jr., M. G. Bolek, J. Detwiler, S. Schwank, **A.K. Knipes**, and G. Langford. 2007. *Gregarina niphandrodes* (Eugregarinorida: Septatorina): Oocyst Surface Architecture. *Journal of Parasitology*, 93(3): 714-716.

PUBLICATIONS IN PREPARATION FROM DISSERTATION:

- Knipes, A.K.** and J. Janovy, Jr. Community Structure and Seasonal Dynamics of *Dactylogyrus* spp. (Monogenea) in Sand shiners (*Notropis stramineus*) and Creek Chub (*Semotilus atromaculatus*) from the Salt Valley Watershed, Lancaster County, Nebraska. To be submitted to the *Journal of Parasitology*.

INVITED TALKS:

Knipes, A. K. 2008. Parasitology in the Peruvian Amazon: Lessons Learned with American High School Students. The 39th Annual Meeting of the Rocky Mountain Conference of Parasitologists. Ogallala, Nebraska.

Knipes, A. K. 2008. The Scientific Method and the Vocabulary of Research in the Biological Sciences. The McNair Scholars Program at the University of Nebraska-Lincoln. Lincoln, Nebraska.

TALKS GIVEN AT CONFERENCES AND MEETINGS:

Knipes, A. K. and John Janovy Jr. 2009. Assessing Predictability in Parasite Communities: A Multi-year, Multi-site Study of *Dactylogyrus* spp. on Native North American Cyprinids. The 84th Annual Meeting of the American Society of Parasitologists, Knoxville, Tennessee.

Knipes, A. K. and John Janovy Jr. 2008. Host Specificity and Differential Success of *Dactylogyrus* spp. (Platyhelminthes, Monogeneoidea) in Nebraska Minnows: Local and Global Implications. The 12th Annual Meeting of the New England Association of Parasitologists. Tufts University, Cummings School of Veterinary Medicine, North Grafton, Massachusetts.

Knipes, A. K. and John Janovy Jr. 2008. Host Specificity and Differential Success of *Dactylogyrus* spp. (Platyhelminthes, Monogeneoidea) in Nebraska Minnows: Local and Global Implications. The 39th Annual Meeting of the Rocky Mountain Conference of Parasitologists. Ogallala, Nebraska.
*****The 2008 Datus M. Hammond Award for Best Graduate Student Paper.**

Knipes, A. K. and John Janovy Jr. 2008. Seasonal Occurrence and Population Structure of *Dactylogyrus* spp. on Nebraska Minnows. The 83rd Annual Meeting of the American Society of Parasitologists, Arlington, Texas.

Knipes, A. K. and John Janovy Jr. 2008. Seasonal Occurrence and Population Structure of *Dactylogyrus* spp. on Nebraska Minnows. The 41th Annual Meeting of the Southwestern Society of Parasitologists. The University of Oklahoma Biological Station, Lake Texoma, Oklahoma.

Knipes, A. K. and John Janovy Jr. 2008. Consequences of stable small-scale environmental variations in the occurrence and distribution of *Dactylogyrus* spp. (Monogenea; Platyhelminthes) on minnows (Cyprinidae; Leuciscinae). The UNL Biological Graduate Student Association Symposium. Lincoln, Nebraska.

Knipes, A. K. and John Janovy Jr. 2007. Larval Morphology reveals factors determining the distribution of parasites in nature: The case of *Dactylogyrus*. The 38th Annual Meeting of the Rocky Mountain Conference of Parasitologists. Denver, Colorado.
*****The 2007 Datus M. Hammond Award for Best Graduate Student Paper.**

Knipes, A. K. and John Janovy Jr. 2007. Factors exerting evolutionary pressures on parasite species in nature: The case of *Dactylogyrus* - Part Two. The First North American Meeting of American Society of Parasitologists, Sociedad Mexicana de Parasitologia, and Parasitology Section of the Canadian Society of Zoologists. Merida, Mexico.

Knipes, A. K. and John Janovy Jr. 2007. Factors exerting evolutionary pressures on parasite species in nature: The case of *Dactylogyrus* - Part One. The 40th Annual Meeting of the Southwestern Society of Parasitologists. The University of Oklahoma Biological Station, Lake Texoma, Oklahoma.

Knipes, A. K. 2005. Population structure and recruitment of Monogenea and Trematoda in three cyprinid fish species of the Salt Valley Watershed, Lancaster County, Nebraska: Part Two. The 80th Annual Meeting of the American Society of Parasitologists, Mobile, Alabama.

Knipes, A. K. 2005. Population structure and recruitment of Monogenea and Trematoda in three cyprinid fish species of the Salt Valley Watershed, Lancaster County, Nebraska: Part One. The 38th Annual Meeting of the Southwestern Society of Parasitologists. The University of Oklahoma Biological Station, Lake Texoma, Oklahoma.

Poster Presentations:

Knipes, A. K. and John Janovy Jr. 2006. Population structure and recruitment of Monogenea and Trematoda in three cyprinid fish species of the Salt Valley Watershed, Lancaster County, Nebraska: 2004-2005. The University of Nebraska-Lincoln, 5th Annual Student-Faculty Retreat. Morrill Hall, UNL.

Knipes, A. K. and John Janovy Jr. 2005. Population structure and recruitment of Monogenea and Trematoda in three cyprinid fish species of the Salt Valley Watershed, Lancaster County, Nebraska: 2004-2005. Poster. The 7th Annual Workshop for the Initiative in Ecology and Evolutionary Analysis. Lincoln, Nebraska.

Talks Given at Public Seminars:

Dactylogyrus communities on Native North American cyprinids. 2009. Guest Lecture, Field Parasitology Course. Cedar Point Biological Station, UNL.

Parasites of the Peruvian Amazon: March 5 – 19, 2009. 2009. Parasitology Seminar, UNL.

Predicting speciation patterns in North American Dactylogyrus spp. 2008. Parasitology Seminar, UNL.

Parasitology. 2008. Guest Lecture, Ecology and Evolution Course. Cedar Point Biological Field Station, UNL.

Seasonal Occurrence and Population structure of Dactylogyrus in Nebraska Minnows. 2008. Parasitology Seminar, UNL.

Problems in Monogene Systematics. 2007. Parasitology Seminar, UNL.

Monogenes and other common parasites of Nebraska Fish. 2007. Guest Lecture, Invertebrate Zoology Course, UNL.

Assessing Factors Exerting Evolutionary Pressures on Parasite Species in Nature: A Case of Dactylogyrus. 2007. Parasitology Seminar, UNL.

174 years of Dactylogyrus research: a historical perspective on Dactylogyrus of Cyprinids, with particular reference to the questions being addressed and the conceptual contributions of one and three quarters century of research. 2006. Parasitology Seminar, UNL.

Variation in Parasite distribution among three cyprinid fish species in three different stream types. 2006. Guest Lecture, Field Parasitology, Cedar Point Biological Field Station, UNL.

Women of Science: The First Two Female Presidents of the American Society of Parasitologists. 2005. Parasitology Seminar, UNL.

Population structure and recruitment of Monogenea and Trematoda in three cyprinid fish species of the Salt Valley Watershed, Lancaster County, Nebraska: Part Two. 2005. Guest Lecture Invertebrate Zoology, UNL.

Parasite Communities as Integrated Systems. 2004. University of Nebraska- Lincoln, Parasitology Seminar, February 2005. *Global Change: The Introduction of Species and the Future of Parasites.* Parasitology Seminar, UNL.

PROFESSIONAL SOCIETIES:

Rocky Mountain Parasitologists Conference

Sigma Xi

The Wildlife Disease Association

The Helminthological Society of Washington

The North American Native Fishes Association

The Southwestern Association of Parasitologists

The American Society of Ichthyologists and Herpetologists

The American Society of Parasitologists