Timothy R. Collier *Curriculum vitae* tcollier@uwyo.edu

CURRENT POSITION

2002-present Assistant Professor

Biological Control and Insect Ecology Dept. of Renewable Resources and

Program in Ecology, University of Wyoming Laramie, WY, 82071

JOB DESCRIPTION

Research (52%); Interests: 1. Integrating weed biological control and herbicides

2. The role of plant nutrition in determining host plant

suitability in weed biological control

3. Nutritional ecology of parasitoids as biological control

agents of insect pests

Service (30%); Activities: 1. Outreach related to weed biological control in Wyoming

2. Implementation of weed biological control in Wyoming

3. Subject Editor, Annals of the Entomological Society of America

Teaching (18%); Courses: 1. Invasive Species Ecology Seminar

2. Applied Insect Ecology Lecture

3. Insect Behavior Lecture

PREVIOUS POSITIONS

2001-2002 Post-Doctoral Researcher

Dept. of Environmental Science, Policy and Management,

University of California, Berkeley

1998-2000 Associate Research Scientist

Dept. of Entomology, The University of Arizona

1997-1998 Assistant Research Scientist

Dept. of Entomology, The University of Arizona

1994-1997 Post-Doctoral Researcher

Center for Population Biology, University of California, Davis

COMPETITIVE GRANTS

- United States Dept. of Agriculture. Cooperative State Research, Education and Extension Service. Western Regional IPM. "Mechanisms and impacts of integrated pest management for sustainable Dalmatian toadflax control in the Western U.S." CoPI with S. Enloe, P. Meiman, and A. Norton. \$95,000. 25% responsibility. Oct 1, 2005- Sept 31, 2008.
- University of Wyoming, Agricultural Experiment Station. "Mechanisms and impacts of integrated pest management strategies for sustainable Canada thistle control in riparian corridors." \$56,002. Co-principle investigator with Stephen Enloe. 50% responsibility. Jan 1, 2004-Dec. 31, 2005.
- United States Dept. of Agriculture. National Research Initiative Competitive Grants Program. "Comparative life history and interspecific competition in *Encarsia* parasitoids". Co-principle investigator with Martha Hunter. \$109,000. 25% responsibility. Dec. 1998-Dec. 2000.
- United States Dept. of Agriculture. National Research Initiative Competitive Grants Program. Entomology Postdoctoral Fellowship. "Oviposition strategies in the egg parasitoid, *Trichogramma pretiosum*." \$80,000. 100% responsibility. Oct. 1994-Nov 1996.

RESEARCH PUBLICATIONS

- 2007 Collier, T.R., Enloe, S.E., Sciegienka, J.K., and Menhalled, F.D. Combined impacts of *Ceutorhynchus litura* and herbicides for Canada thistle suppression. *Biological Control* 43: 231-235.
- Collier, T.R., Hunter, M.S., and Kelly, S.J. Heterospecific ovicide influences the outcome of competition between two endoparasitoids, *Encarsia formosa* and *E. luteola. Ecological Entomology* 32 (1): 70-75.
- Ferrero-Serrano, A., Collier, T.R., Mealor, B.A., Hild, A.H., and Smith, T. Combination of stem-boring weevil and native grasses reduces root biomass of Canada thistle in greenhouse experiment (Wyoming). *Ecological Restoration* 24(3): 201-202.
- Collier, T.R., and Van Steenwyk, R.A. How to make a convincing case for augmentative biological control. *Biological Control* 39: 119-120.
- 2004 Collier, T.R., and Van Steenwyk, R.A. A critical review of augmentative biological control. *Biological Control* 31: 245-256.
- Van Steenwyk, R.A., Fouche, C.F., and Collier, T.R.. Seasonal susceptibility of 'Bartlett' pears to codling moth (Lepidoptera: Tortricidae) infestation and notes on diapause induction. *Journal of Economic Entomology* 97(3): 976-980.

RESEARCH PUBLICATIONS (continued)

- Legg, D. E., Van Vleet, S.M., Ragsdale, D.W., Hansen, R.W., Skinner, L.C., Collier, T.R., and Lloyd, J.E. Roles of bootstrap resampling, measure of central tendency, and method for calculating thermal units when developing phenology models for pest management. *International Journal of Pest Management* 49: 319-325.
- 2002 Collier, T., Kelly, S., and Hunter, M. Egg size, intrinsic competition and lethal interference in the parasitoids *Encarsia pergandiella* and *Encarsia formosa*. *Biological Control* 23: 254-261.
- Hunter, M., Kelly, S., and Collier, T. Does an autoparasitoid disrupt host suppression provided by a primary parasitoid? *Ecology* 83(5): 1459-1469
- Collier, T.R., and Hunter, M.S. Lethal interference competition in the whitefly parasitoids *Eretmocerus eremicus* and *Encarsia sophia. Oecologia* 129: 147-154.
- Briggs, C.J., and Collier, T.R. Autoparasitism, interference and pest-parasitoid population dynamics. *Theor. Pop. Biol.* 60: 33-57.
- Murdoch, W.W., Briggs, C.J., and Collier, T.R. Biological control of insects: implications for theory in population ecology. pp. 167-186 in *Insect Populations in Theory and in Practice* (eds. J.P. Dempster and I. F. G. McLean). Kluwer.
- Heimpel, G.H., and Collier, T.R. The evolution of host-feeding behavior in insect parasitoids. *Biol. Reviews* 71: 373-400.
- 1995 Collier, T.R. Host feeding, egg maturation, resorption and longevity in the parasitoid, *Aphytis melinus* (Hymenoptera; Aphelinidae). *Annals Ent. Soc. America* 88:206-214.
- 1995 Collier, T.R. Adding physiological realism to dynamic state variable models of parasitoid host feeding. *Evol. Ecology* 9:217-234.
- Briggs, C.J., Nisbet, R.M., Murdoch, W.W., Collier, T.R., and Metz, J.A.J. Dynamical effects of host-feeding in parasitoids. *J. of Animal Ecology* 64:403-416.
- 1994 Collier, T.R., Murdoch, W.W., and Nisbet, R.M. Egg load and the decision to host-feed in the parasitoid *Aphytis melinus*. *J. of Animal Ecology* 63:299-306.

SERVICE/EXTENSION PUBLICATIONS

- Collier, T., Schaffner, U. and Littlefield, J. A petition for cage- and open-field release of the gall midge *Jaapiella ivannikovi* (Diptera: Cecidomyidae) for biological control of Russian knapweed in North America. Submitted for Review by the Technical Advisory Group, USDA PPQ.
- 2006 Collier, T.R. Weed Biological Control in Wyoming. (Pamphlet)
- Collier, T.R. Chinese beetles munch salt cedar. WyoBio. Biocontrol News and Views for Wyoming. Spring 2006. (Article)
- Collier, T.R. Schaffner, U. and Littlefield, J. A petition for cage- and open-field release of the gall wasp *Aulacidea acroptilonica* (Hymenoptera: Cynipidae) for biological control of Russian knapweed in North America. Submitted for Review by the Technical Advisory Group, USDA PPQ.
- Collier, T.R. WYO BIO Handbook. A Guide to Weed Biological Control in Wyoming. 23 pp.
- Collier, T.R. News Update on the Wyoming Biocontrol Steering Committee. WyoBio. Biocontrol News and Views for Wyoming. Spring 2003. (Article)
- Collier, T.R., and Van Steenwyk, R.A. 2003. Olive fruit fly in California: prospects for integrated control. *California Agriculture* 57(1): 28-32. (Article)
- Collier, T.R. *Apththona* and the Successful Control of Leafy Spurge. WyoBio. Biocontrol News and Views for Wyoming. Spring 2003. (Article)
- Collier, T.R. A New Agent for Leafy Spurge in Wyoming? WyoBio. Biocontrol News and Views for Wyoming. Winter 2003. (Article)
- Collier, T.R. Releases of a New Knapweed Agent in Wyoming. WyoBio. Biocontrol News and Views for Wyoming. Winter 2003. (Article)
- Collier, T.R. and Schaffner, U. A update on Russian knapweed biological control. WyoBio. Biocontrol News and Views for Wyoming. Winter 2003. (Article)
- 2002 Collier, T.R. Toadflax Biological Control. WyoBio. Biocontrol News and Views for Wyoming. Fall 2002. (Article)

GRADUATE STUDENTS

2003-present Karla Lopez-Coreas, M.S. Entomology (co-major advisor)

2005-2007 Diana Dean, M.S. Entomology (co-major advisor)

2004-2006 Angel Ferrero-Serrano, M.S. Rangeland Ecology and Watershed

Management (co-major advisor)

COURSES TAUGHT

ENTO 4884/5884 Insect Behavior

ENTO 4300/5300 Applied Insect Ecology

RNEW 4852/5852 Invasive Species Ecology Seminar

UNIVERSITY SERVICE

2007-present Program in Ecology Steering Committee

2003-present Committee on Committees

2007 Search Committee, Range Extension Specialist Position

2006 Search Committee, Range Extension Specialist Position

2003-2005 Plant Sciences Greenhouse Committee

2003 Search Committee, Weed Extension Specialist Position

PROFESSIONAL SERVICE

2004-present Subject Editor, Annals of the Entomological Society of America

2002-present Peer Reviews; 48 journal manuscripts for 21 Journals

PROFESSIONAL SOCIETIES

1998-present Entomological Society of America