

Todd T. Tracy

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Education

- 1996-2000 Colorado State University, Fort Collins, CO, PhD in Zoology
Department of Biology
Dissertation: House Finch syllable dialects and repertoires in Northern Colorado
- 1993-1996 Colorado State University, Fort Collins, CO, MS in Zoology
Department of Biology
Thesis: House Finch song dialects in Northern Colorado
- 1987-1991 Cornell College, Mt. Vernon, IA, BA in Chemistry and Environmental Studies

Professional Experience

- 2002-present Full Professor of Biology
Northwestern College, Orange City, IA

Current teaching responsibilities:

BIO101SN: Introduction to Environmental Science
BIO115SN: General Biology: Molecular and Cellular Biology
BIO116SN: General Biology: Ecological and Organismal Biology
BIO205: Ecology
BIO330: Vertebrate Ecology
NSC101: Introduction to Earth Science

Courses previously taught:

BIO112: Zoology
BIO202: Genetics
BIO280: Vertebrate Zoology
BIO329: Stewardship Ecology
BIO330: Restoration Ecology
BIO330: Ecology of Invasives
BIO330: Behavioral Ecology
CHE101SN: College Chemistry I
CHE102: College Chemistry II
CHE105 Topics in Chemistry: Forensics
CHE108L: General, Organic, and Biological Chemistry Lab

- 2015-present Visiting Professor
Wheaton College Science Station, Rapid City, SD

- 2001 Interim Coordinator of Undergraduate Programs
Colorado Christian University, Ft. Collins campus
- 2000-2002 Affiliate Professor
Colorado Christian University, Fort Collins, CO
- 2000-2001 Adjunct Faculty
Front Range Community College, Boulder, CO
- 1999-2001 Instructor and Visiting Professor
Colorado State University, Fort Collins, CO
- 1993-2000 Graduate Teaching Assistant
Colorado State University, Fort Collins, CO
- 1991-1993 Laboratory Coordinator and Instructor
Kirkwood Community College, Cedar Rapids, IA

Research experience

- 2002-present Northwestern College
Effects of wind farms on birds of the tallgrass prairie
Route-level diversity trends in Iowa's Breeding Bird Survey results
Bumblebee diversity in northwest Iowa
Effects of invasive species on the native flora, fauna, and soils of the Midwest
Prairie restoration (NWC prairie and Landsmeer Golf Course)
Geographic variation in the House Finch song
Route monitor for USGS Breeding Bird Survey (Gaza route)
Bander for USGS Bird Banding Lab
- 2000 Genesis Laboratories, Wellington, CO
Research technician
- 1993-2000 Department of Biology
Birdsong repertoires in House Finches and Black-capped Chickadees
Summer research technician for genetics (fruit fly) lab
Sub-permittee for USGS Bird Banding Lab
- 1989 United States Geological Survey, Iowa City, Iowa
Research Intern

Publications

- 2019 Tracy, T. The wonder of birds. Perspectives on Science and the Christian Faith
71(2):124-125.
- 2017 Tracy, T. Environmental ethics, in Dictionary of Science and Christianity.
Zondervan Publishers, 691 pp.

- 2009 Tracy, T., H. Zasadny, J. Erickson, and J. Siemers. Syllable and song sharing in a recently established population of House Finches. *Auk* 126:823-830.
- 1999-2000 Tracy, T., J. Junell, B. VanWieren, and G. Packard Laboratory manual of vertebrate biology. Colorado State University.
- 1999 Tracy, T. and M. Baker. Geographic syllable variation in the House Finch song in northern Colorado. *Auk* 108:666-676.
- 1996 Baker, M., T. Tracy, and L. Miyasato. Gargle vocalizations of black-capped chickadees: test of repertoire and video stimuli. *Animal Behaviour* 52:1171-1175.

Conference presentations

- 2024 AP Environmental Science Professional Night, Cincinnati, OH:
T. Tracy. Little bumblebees on the prairie
- 2019 Iowa Academy of Science annual conference, University of Northern Iowa:
S. Meyer, A. Eversman, L. Peschau, E. Wagner, S. Tarchione, N. Eide, S. Kamstra, D. Rowley, **T. Tracy**, and L. Furlong. Baseline data collection for long-term terrestrial insect biomonitoring during the “Insect Apocalypse”
S. Tarchione, S. Meyer, A. Eversman, S. Kamstra, E. Wagner, L. Peschau, D. Rowley, **T. Tracy**, and L. Furlong. Substrate colonization in a degraded low order stream
- 2016 Iowa Academy of Science annual conference, Grand View University:
A. Schutt, S. Hill-Norby, J. Tolsma, C. Van Surksum, A. Blankespoor, and **T. Tracy**. The Effect of Eyeless and Wingless Mutations on the Reproductive Fitness of Fruit Flies
- 2015 Iowa Academy of Science annual conference, University of Iowa:
T. Tracy, A. Daumer, J. Inge, A. Schweighart, J. Tampio, and J. Tolsma. If you farm it, will they come? Route-level diversity trends in Iowa’s Breeding Bird Survey results
A. Daumer, J. Inge, L. Morris, A. Schweighart, E. Stricklin, J. Tampio, E. Thies, K. Thomson, J. Tolsma, and **T. Tracy**. Soil, cedars, and fire: Interactions and effects on invertebrate diversity at Niobrara Valley Preserve
- 2014 Iowa Academy of Science annual conference, Iowa Central Community College:
J. Reinders, K. Cleveringa, B. Schmidt, E. Stricklin, S. Kaltenbach, **T. Tracy**, and L. Furlong. Earth, trees, and fire: Ecological interactions at Niobrara Valley Preserve.
M. Feuchtenberger, L. Hurley, E. Nienhuis, Kelley Thurman, E. Heeg, and **T. Tracy**. Is MRSA among us?

- 2013 Iowa Academy of Science annual conference, Simpson College:
T. Tracy and O. Norman. Does European buckthorn affect the distribution of anurans in a gallery forest?

O. Norman and **T. Tracy**. The effect of eastern redcedar on soil properties in a northwest Iowa prairie.
- 2011 Iowa Academy of Science annual conference, Wartburg College:
O. Norman, **T. Tracy**, S. Burmakow, H. Craven, A. Mattila. The effects of European buckthorn *Rhamnus cathartica* on soil properties in a riparian forest.
- 2010 Iowa Academy of Science annual conference, Graceland University:
H. Pagelkopf, T. McKenney, A. Wentworth, **T. Tracy**. Seed dormancy in leafy spurge *Euphorbia esula* and the potential for enhanced germination in the soil of eastern redcedar *Juniperus virginiana*.
- 2009 Iowa Academy of Science annual conference, Des Moines University:
E. Brogan, J. Gaster, J. Noble, H. Doty, E. Boyd, **T. Tracy**, M. Vander Molen. Effects of eastern redcedar and its removal on invertebrate abundance and richness in two relict prairies.

J. Knibbe, E. Heeg-Truesdell, **T. Tracy**. PCR analysis as a possible means for sex determination of eastern redcedar (*Juniperus virginiana*).

E. Boyd, **T. Tracy**, J. Noble, E. Brogan, J. Gaster, and H. Doty. The allelopathic properties of fruit and leaf extracts of the invasive European buckthorn (*Rhamnus cathartica*) and white mulberry (*Morus alba*).
- 2008 Iowa Academy of Science annual conference, Kirkwood Community College:
T. Tracy, J. Nieuwenhuis, J. Knibbe. Predation of artificial nests placed in invasive vs. native shrubs and trees.

G. Dubois, J. Noble, L. Walters, **T. Tracy**. Allelopathy in an invasive shrub: A comparison of European buckthorn to other species.

L. Furlong, **T. Tracy**, L. Walters, J. Knibbe, J. Nieuwenhuis. Monitoring the effects of European buckthorn (*Rhamnus cathartica*) removal from a forest community: Ground beetle (Coleoptera: Carabidae) richness and abundance.

J. Noble, **T. Tracy**, J. Nieuwenhuis, J. Gesink. Effects of red cedar on invertebrate abundance and morphospecies richness.
- 2007 Iowa Academy of Science annual conference, Central College:
T. Tracy, D. Dockter, E. Vander Broek, J. Boersma, R. Weeks, L. Furlong, A. Kolb, G. Dubois, J. Olson, and L. Rensink. Monitoring the impact of European buckthorn in two forest communities in Northwestern Iowa.

- E. Vander Broek, **T. Tracy**, J. Boersma, and R. Weeks. The effects of a spring burn on noxious weeds in a tallgrass prairie.
- 2006 Iowa Academy of Science annual conference, Buena Vista University:
T. Tracy, H. Zasadny, and J. Erickson. Syllable and song sharing in a recently established population of house finches.
T. Tracy, N. Boersma, G. Dubois, L. Walters, A. Arthur, M. Bradley, M. Garrels, J. Jansen, C. Mick, T. Swart, and A. Tenold. The effects of European buckthorn (*Rhamnus cathartica*) on a floodplain forest in Sioux County, Iowa.
- 2000 American Ornithologists' Union annual conference, St. John's University, Nfd
T. Tracy. Brightly colored male House Finches sing fewer syllable types
- 1996 Animal Behavior Society annual conference, University of Northern Arizona
T. Tracy. A syllable-level analysis of House Finch song dialects in Northern Colorado
- 1995-2000 Colorado State University Department of Biology Student Symposium:
T. Tracy. Brightly colored male House Finches sing fewer syllable types (2000)
T. Tracy. Differential response of female House Finches to local and distant song types (1998)
T. Tracy. House Finch song dialects in Northern Colorado (1995)

Institutional Service

- Current Biology Department Chair
Faculty advisor for Biology Ecological Science and Biology majors
Various activities for Admissions Office and Biology Department (e.g., scholarship application reviews, majors fairs, etc.)
Scorekeeper for Red Raider women's volleyball team
Co-manager: NWC forest (field station) and prairie
Chemical Hygiene Officer (Biology Department)
Undergraduate research supervisor
- 2021-2022 Faculty Handbook Workgroup
2018-2021 Northwestern Core Committee (Interim Director 2020-21)
2012-2015 Online Advisory Workgroup
2012-2015 Academic Affairs Committee (chair 2014-15)
2012-2015 Academic Appeals Workgroup
2011-2012 Faculty/Staff Welfare Committee
2004-2006 Academic Appeals Workgroup
2003-2010 Campus recycling supervisor
2003-2007 Academic Affairs Committee (chair 2005-06)

Other scholarly activities

- 2019-present MasteringBiology Content Expert, Pearson-Benjamin Cummings
Resolve content issues on publisher's teaching and learning platform
- 2018 Environmental Science Ready-To-Go Module Author, Pearson/Benjamin Cummings
Authored RTG modules for two Environmental Science textbooks
- 2017-2018 LearningCurve Adaptive-Learning Author, Bedford Freeman & Worth Publishing
Authored questions for Karr's Environmental Science 3e
- 2012-present Test Bank Editor and Author, Pearson/Benjamin Cummings
Edit and author worksheets, test bank questions, and homework questions for five environmental science textbooks
- 2010-present MasteringEnvironmentalScience Content Expert, Pearson-Benjamin Cummings
Resolve content issues on publisher's teaching and learning platform
- 2005-present College Board/Educational Testing Service:
Advanced Placement Environmental Science (APES):
Reader (2005-2007, 2016-2019, 2021-present)
Table Leader (2008-2010)
Question Leader (2011-2014, 2020)
Free-Response Questions pilot (2013-2018)
Course Auditor (2017-present)
Fresh-eyes Reviewer (2020-present)
Item writer for Tennessee Comprehensive Assessment Program exam (2018)
- 2004-2022 Member of Iowa Academy of Science:
Societal Issues Committee (2009-2016)
Student Programs Committee (2012-2016)
Board of Directors (2008-2009)
- 2002-present Member, Au Sable Institute Academic Advisory Council, Au Sable Institute

Volunteer activities

- 2023 First Reformed Church
Community cleanup volunteer; Meal prepper; Adult Sunday-school guest speaker
- 2020-2024 Assistant Bowling Coach, West Sioux High School
- 2016-2023 Trinity Church
Coffee server, funeral assistant, youth group mission trip chaperone
- 2013 Sioux County Bird Expo, Hike leader and presenter
- 2011-2022 Orange City Cub Scout Pack 208 and BSA Troop 208
Den Leader, Cubmaster, Committee Chair, Committee Member

2010-2012 Regional reviewer, Audubon Society's Great Backyard Bird Count

2008, 2016 Workshop presenter, NWC Day of Learning in Community

2005, 2006 Instructor, Annual Outdoor Classroom at Oak Grove County Park

2002-2011 Volunteer, Iowa DOT Roadside Cleanup Program