CURRICULUM VITA

David M. Darda

(August 2018)

I. ADDRESS

Department of Biological Sciences Central Washington University 400 East University Way Ellensburg, WA 98926-7537

Phones: office 509-963-2881; cell 509-899-0052

fax: 509-963-2730 email: dardad@cwu.edu

II. EDUCATION

University of California, Berkeley.

Ph.D. Zoology, Museum of Vertebrate Zoology, Dec. 1988 Area of study: Vertebrate morphology and evolution

University of Illinois, Urbana.

B.S. Biology, Cum Laude, Jan. 1980

Area of study: General Biology (Organismal emphasis)

III. PROFESSIONAL POSITIONS HELD

Department of Biological Sciences, Central Washington University, Ellensburg, WA. Professor, 1997-Present.

Responsible for teaching courses in Integrative Anatomy, Human Anatomy and Physiology, Histology, and Herpetology.

College of the Sciences, Central Washington University, Ellensburg, WA. Associate Dean, 2008-2014.

Responsibilities included resolution of student issues, planning and management of Summer Session, coordination of COTS Interdisciplinary Programs, support of student research and faculty development, class scheduling, data gathering and report generation, assessment coordination, various committee memberships, and special projects. (See below for details.)

Department of Biological Sciences, Central Washington University, Ellensburg, WA. Department Chairman, 2003-2007, 1997-1998.

Coordination and management of departmental programs (B.A., B.S., M.S.) for more than 200 majors and 12-15 graduate students, budgets (\$100,000 -150,000), and personnel (17-20 faculty and six support staff).

Department of Ecology and Evolutionary Biology, University of Connecticut, Storrs, CT.

Visiting Associate Professor, August 1996 - June 1997.

Participated in research concerning Evolutionary Vertebrate Morphology in association with Dr. Kurt Schwenk. Participation and guest lectures in Dr. Schwenk's Comparative Vertebrate Anatomy course.

Department of Biological Sciences, Central Washington University, Ellensburg, WA. Associate Professor, 1993-1997.

Department of Biological Sciences, Central Washington University, Ellensburg, WA. Assistant Professor, 1987-1993.

Department of Zoology, University of California, Berkeley.

Teaching Assistant for various zoology and biology courses, 1980-1985.

General Biology for majors, General Zoology for non-majors, Herpetology, and Evolutionary and Functional Vertebrate Anatomy.

Museum of Vertebrate Zoology, University of California, Berkeley.

Curatorial Assistant in the Division of Herpetology, 1980-1987.

Responsible for helping to curate this major collection of amphibians and reptiles.

Museum of Vertebrate Zoology, University of California, Berkeley.

Research Assistant for Dr. David B. Wake, 1981-1984.

Participated in long-term research project supported by the National Science Foundation concerning morphology, systematics, ecology, and evolution of neotropical plethodontid salamanders. Field work in Mexico and California.

Illinois Natural History Survey, Urbana, Illinois.

Research Assistant with pheasant ecology project, 1978-1980.

Studied impact of habitat loss on population size and nutrition. Population censusing, nutrition studies, interacting with public concerning wildlife conservation.

IV. PROFESSIONAL MEMBERSHIPS

Human Anatomy and Physiology Society (active)
American Association of Anatomists (active)
Society of Integrative and Comparative Biology
Society for Northwestern Vertebrate Biology
Society for the Study of Amphibians and Reptiles
Herpetologists' League
American Society of Ichthyologists and Herpetologists
Phi Beta Kappa, University of Illinois Chapter
Phi Kappa Phi, University of Illinois Chapter

V. TEACHING

A. Undergraduate Teaching

Non-majors' courses taught:

General Education Colloquium (UNIV 101) General Biology Human Physiology Introduction to Evolution

Lower division majors' courses taught:

Basic Biology Animal Biology Upper division majors' courses taught:

Integrative Anatomy

Human Anatomy and Physiology

Histology

Herpetology

Comparative Vertebrate Anatomy

Mechanisms of Evolution

Vertebrate Embryology

Senior Seminar

Cooperative Education (Internships)

Individual Studies

B. Graduate Teaching

Graduate courses taught:

Current Topics in Biology

Developments in Organismal Biology

Natural History Museum Techniques

Graduate Seminar

Graduate Research

Graduate committee chair:

Gray, Lucy - 1992

Thesis title: "Larval growth and age at completion of metamorphosis of the tailed frog, *Ascaphus truei*"

Earned Ph.D. from Northern Arizona University.

Currently is a Senior Lecturer, Biological Sciences, CWU.

Richard Lukose - 2000

Thesis title: "Ontogenetic changes in the foraging ecology of the wandering garter snake (*Thamnophis elegans vagrans*)"

Entered Ph.D. program at Univ. of California, Santa Barbara.

Graduated from Lake Erie College of Osteopathic Medicine.

Currently a practicing neurologist.

Leingang, Colin - 2001

Thesis title: "Distribution, relative density, and age structure of *Ascaphus truei* tadpoles along a longitudinal stream gradient"

Currently is a wildlife biologist, Yakima Training Center, U.S. Army.

Weaver, Robert - 2006

Thesis title: "Natural history of the Night Snake (*Hypsiglena torquata*) in Washington"

Earned Ph.D. from Washington State University.

Peterson, Robert Troy - current

Thesis title: "Microhabitat use of the Colorado Checkered Whiptail (*Aspidoscelis neotesselata*) in Grant County, Washington State"

Graduate committee member:

Have served as a member of approximately 50 graduate committees.

C. Teaching Awards

"Excellence in Teaching" award. September, 1990. Awarded by the Central Washington University Parents Council to "recognize excellent professors who are relative newcomers to the university, yet who have shown a special ability to inspire and support students in the excitement of learning."

CWU Distinguished University Professor of Teaching. June, 2002. Awarded by Central Washington University "to faculty members who have brought distinction, in the highest sense, to the university and to themselves."

VI. PROFESSIONAL SERVICE

A. Undergraduate Advising

Biology majors' advisor as a member of the Biology Advising Team (2016-present). Primarily advisor for B.S. students pursuing the Biomedical Science specialization. Approximately 80 students per year.

Pre-Physical Therapy advisor (1988-present)

Many of my advisees have successfully been accepted into professional Physical Therapy programs in Washington, Oregon, and across the country.

Pre-Occupational Therapy advisor (1988-2010)

B. Committee and Other Service (recent only)

1. Departmental:

Biology Advising Task Force (2017-present) (chair 2017-2018)

Biology Advising Team (2016-present)

Biological Sciences Personnel Committee (1999-2003, 2015-present) (chair 2002-2003)

Cadaver lab coordinator (2015-present)

Amphibian collection curator (1990-present)

Darwin Day Planning Committee (multiple years)

Graduation Celebration Planning Committee (2016-2018)

Biology Personnel Committee (2015-2018)

Biology Club faculty advisor (2015-2017)

A&P curriculum revision and design (2015-2017)

Coordinator of Natural Science Seminar Series (2001-2003, Winter 2014)

Director of Biomedical Sciences M.S. program (2010-2011)

Coordinator of the Dumas Lecture in Biology (2003, 2010)

Department Secretary Search Committee (chair) (2006)

Biological Sciences Curriculum Committee (1999-2002)

(chair 1999-2000)

Science Education Search Committee (2001-2002)

Forest Ecologist Search Committee (chair) (2000-2001)

2. College:

Associate Dean (2008-2014)

Executive Committee of Department Chairs (1997-1998, 2003-2007, 2008-2014)

Instrument Tech Steering Committee (2004-2007)

Associate Dean Search Committee (2006)

COTS Instrument Tech Search Committee (2004-2005)

Science Occupants Committee (1998-2005)

Science Education Search Committee (2003-2004) Chemistry Department Tenure Revue Committee (for four faculty) (2001)

3. University:

CWU Retirement Association Board of Directors (active faculty member) (2014-present) CWU Liaison with Washington Department of Transportation for I-90 East Connectivity Project (2007-2017)

COTS Dean Search Committee (chair) (Summer/Fall 2015)

Summer Session Advisory Committee (2008-2014)

Registrar's Scheduling Committee (2008-2014)

Individual Studies Committee (2008-2014)

Registrar's Commencement Committee (2008-2014)

Student Commencement Speaker Committee (2008-2014)

Health Career Education Resources (HCER) Task Force (2003-2012)

CWU Distinguished Professor Selection Committee, Chair (2004, 2011)

Professional Leave Committee (2000-2004)

Instructional/Research Equipment Committee (Spring 2002)

Graduate Dean Search Committee (1999-2000)

4. External

Human Anatomy and Physiology Society (HAPS) – Member of the *HAPS Educator* Committee (*HAPS Educator* is the professional journal published by this society.) (2017-present)

C. Administrative Responsibilities

- 1. Associate Dean, College of the Sciences (July 2008–July 2014) Regular Duties:
 - a. Student issues met with students to help resolve issues with faculty, departments, or college processes. Review and approval of Individual Studies degrees, individual study courses, course substitutions, grade changes, and other student curricular issues.
 - b. Summer Session responsible for planning and management of Summer Session course offerings, faculty contracts, and tracking of instructional costs and revenues.
 - c. Interdisciplinary Programs responsible for coordination of thirteen COTS interdisciplinary programs. Chair COTS IDP Directors meetings.
 - d. Student research responsible for coordination of the COTS Undergraduate Research Grant.
 - e. Faculty development responsible for coordination of the COTS Summer Faculty Research Grant (for writing related to scholarly work). Liaison with appropriate CWU offices for helping to secure resources for faculty scholarly pursuits.
 - f. Class scheduling worked with Departments and Registrar to coordinate class scheduling and to analyze and modify policy and procedure to better serve student needs.
 - g. Data gathering and report generation used available databases to generate appropriate reports that inform the College or other campus offices as to how resources are being used, what educational goals are being met, and to inform planning.
 - h. Assessment served as liaison between the office of the Associate Vice-President for Undergraduate Studies and COTS programs to coordinate assessment efforts such as Program Review and the annual Assessment of Student Learning.
 - i. University Centers assisted the Dean in coordinating COTS programs at the Centers.
 - j. Support for the Dean consultation on College vision, planning, and decision-making.

Special Projects:

a. Organized and co-chaired (with Martha Kurtz) *The Future of STEM in COTS Task Force*. Fall Quarter 2012. This group of seven COTS faculty were tasked, by Dean Kirk Johnson to examine the COTS STEM support programs at a critical point when funding for the Science

Talent Expansion Program (STEP) funding was ending. Charges were: 1) In the short-term, determine how COTS can maintain the positive aspects of STEP without external funding. 2) In the long-term, determine how COTS can provide for a quality university science education for students and move toward more extensive and reliable support both internally and externally. A report was generated and shared with both Dean Johnson and the Provost and proved to be at least a partial blueprint for changes realized in the college.

- b. Partnership with WSDOT developed and maintained partnership with Washington Department of Transportation (WSDOT) to involve CWU students and faculty in environmental evaluation of the I-90 Snoqualmie East construction project. WSDOT has funded faculty, graduate student, and undergraduate employment and research. Long-term continued funding is anticipated.
- c. Partnership with PNWU explored and developed cooperative programs with Pacific Northwest University of Health Sciences in Yakima. Agreements pertained to preferred admission consideration to the D.O. program for CWU students, faculty exchange, and the new M.S. program in Biomedical Sciences.
- d. COTS Caravan coordination of College outreach efforts to community colleges with the goals of recruiting quality science students, establishing relationships between CWU and community college faculty, working toward better curricular articulation to allow more seamless student transfers to CWU, and to generally publicize the strength of CWU science programs.
- 2. Chair, Department of Biological Sciences (1997-1998, 2003-2007)
- 3. Chair, Science Facility Building Committee (1994-1996, 1997-1999)

VII. SCHOLARLY ACTIVITY

A. Projects

Current:

Distribution, abundance, and evolution of the Larch Mountain salamander (*Plethodon larselli*) and Ensatina salamander (*Ensatina eschscholtzii*) in the eastern Washington Cascades. In association with the U.S. Forest Service and Washington Department of Transportation and the I-90 East Connectivity Project.

Bringing evolution into the teaching of Human Anatomy and Physiology. Professional publications and presentations promoting the importance of including an evolutionary perspective into courses that usually do not give this broader view of human biology.

Ongoing:

Science writing – "Body Parts: Oddball Anatomical Structures and the Stories they Tell". A series of essays on interesting and unusual human body parts. My intent is to address functional, developmental, clinical, and evolutionary topics for a non-professional audience (e.g. undergraduate students, general public).

Curriculum design – examine current curricula in the anatomical sciences (vertebrate morphology, human anatomy and physiology, histology, embryology) and work toward revision that reflects current knowledge, pedagogy, technology, and student need.

Investigations into the distribution, morphology, and evolution of amphibians and reptiles of the Pacific Northwest.

Completed:

Evolutionary morphology of the Mexican salamander genus *Chiropterotriton*. Analysis of morphological variation within the genus and its implications concerning the evolution of form.

Analysis of genetic variation within the Mexican salamander genus *Chiropterotriton*, with implications concerning the systematics and morphological evolution of this group as well as morphological evolution in general.

Comparative morphology of the squamate vomeronasal organ using histological techniques. Work undertaken with Dr. Kurt Schwenk, Department of Ecology and Evolutionary Biology, University of Connecticut.

B. Funding

2003 University-wide Faculty Development Grant

Project Title: Darwin Day 2004: third annual celebration of biological evolution.

Funding received: \$1330

2003 Len Thayer Small Grants Program

Project Title: Museum curation: the CWU Herpetology Collection.

Funding received: \$500

1997 Research Opportunity Award, National Science Foundation

Project Title: Functional morphology of vomeronasal chemoreception in squamate reptiles.

Funding received: \$14,870

1993 CWU Small Grant Award

Project Title: Competition among ranid tadpoles in the Pacific Northwest and implications

for the decline of the Spotted Frog (Rana pretiosa).

Funding received: \$1,783

1992 Summer Faculty Research Appointment

Project Title: Genetic variation and morphological evolution among Mexican salamanders

of the genus *Chiropterotriton*. Funding received: Summer salary

1988 Summer Faculty Research Appointment

Project Title: Development, morphology, and the evolution of *Taricha granulosa*.

Funding received: Summer salary

C. Publications

2017 Darda, D.M. The gubernaculum and the evolution of testicular descent. HAPS Educator 21(3):12-19. doi:10.21692/haps.2017.048

- Darda, D.M. Bringing evolution into anatomy and physiology: the uvula and the story it tells. HAPS Educator 20(4):71-75. doi:10.21692/haps.2016.035
- 2015 Darda, D.M. and D.B. Wake. Osteological variation among extreme morphological forms in the Mexican salamander genus *Chiropterotriton* (Amphibia: Plethodontidae): morphological evolution and homoplasy. PLoS ONE 10(6): e0127248. 34pp. doi:10.1371/journal.pone.0127248
- Darda, D.M. Observations by a university anatomy teacher and a suggestion for curricular change: integrative anatomy for undergraduates. Anatomical Sciences Education. 3:73-76.

- Krupka, J., P. Garvey-Darda, D.M. Darda, and C. Leingang. Distribution, abundance, and habitat association of the Larch Mountain Salamander (*Plethodon larselli*) in the eastern Washington Cascades. Final report to U.S. Geological Survey Species at Risk Program. U.S. Fish and Wildlife Service Reference: 13260-2006-TA-0196. 13pp.
- Darda, D.M. "Overview of amphibians" *in* Amphibians of the Pacific Northwest (L.L.C. Jones, W.P. Leonard, and D.H. Olson eds.). Seattle Audubon Society, Seattle, WA.
- Weaver, Robert E. and D. M. Darda. Geographic distribution: *Contia tenuis*. Herpetological Review 34:386.
- 2001 Darda, D.M., J.W. Baugh, and P.A. Garvey-Darda. Geographic distribution: *Ensatina eschscholzii*. Herpetological Review 32:53.
- 1996 Leonard, W. P., Darda, D. M., and K. R. McAllister. Aggregations of sharp-tailed snakes (*Contia tenuis*) on the east slope of the Cascade Range in Washington state. Northwestern Naturalist 77:47-49.
- Brown, H. A., R. B. Bury, D. M. Darda, L. V. Diller, C. R. Peterson, R. M. Storm (R. M. Storm and W. P. Leonard, eds.). Reptiles of Washington and Oregon. Seattle Audubon Society, Seattle, WA.
- 1995 Darda, D. M. Amphibians of Washington and Oregon (book review). Herpetological Review 26:219.
- 1995 Darda, D. M. The Larch Mountain Salamander, *Plethodon larselli*, on the Cle Elum Ranger District, Wenatchee National Forest. Final contract report 43-05GG-4-0643 to the USDA Forest Service. 24pp.
- 1995 Darda, D. M. and P. A. Garvey-Darda. Geographic distribution: *Plethodon larselli*. Herpetological Review 26:150.
- 1995 Leonard, W. P. and D. M. Darda. Geographic distribution: *Thamnophis ordinoides*. Herpetological Review 26:110.
- 1995 Leonard, W. P. and D. M. Darda. Natural history notes: *Ambystoma tigrinum* (Tiger Salamander) reproduction. Herpetological Review 26:29-30.
- Darda, D. M.
 Allozyme variation and morphological evolution among Mexican salamanders of the genus *Chiropterotriton* (Caudata: Plethodontidae). Herpetologica 50:164-187.
- Darda, D. M. and T. D. Kelley
 Amphibian and reptile inventory on the Wenatchee National Forest (Naches and Cle Elum Districts). U.S. Forest Service Report.
- Darda, D. M.
 Morphological and biochemical evolution within the plethodontid salamander genus *Chiropterotriton.*. Ph.D. Dissertation, University of California, Berkeley.
- 1982 Warner, R. E., D. M. Darda, and D. H. Baker. Effects of dietary protein level and environmental temperature stress on growth of young ring-necked pheasants. Poultry Science 61:673-676.

D. Presentations

- 2016 Oddball anatomical structures and the stories they tell bringing evolution into A&P.
 Poster presented at the annual meeting of the Human Anatomy and Physiology Society, Atlanta, GA, May
- Oddball anatomical structures and the stories they tell: the governor of the testes.

 Lecture presented for Darwin Day celebration, Central Washington University, Feb. 11
- 2013 Central Washington University Science Talent Expansion Program: Recruiting and Retaining the Next Generation of STEM Professionals Wendy A. Bohrson, Michael Braunstein, Lucinda Carnell, **David Darda**, Lisa L. Ely, Martha Kurtz, Jessica Nye, Andrew Piacsek Poster at the annual meeting of the NSF STEP (Science Talent Expansion Program), Washington, DC (March)
- 2012 Central Washington University, College of the Sciences, Science Talent Expansion Program: Recruiting and Retaining the Next Generation of STEM Professionals Wendy A. Bohrson, Michael Braunstein, **David Darda**, Lisa L. Ely, Michael Jackson, Martha Kurtz, Jessica Nye, Andrew Piacsek Poster at the annual meeting of the NSF STEP (Science Talent Expansion Program), Washington, DC (March)
- 2010 Charles Darwin: the right man, at the right place, at the right time.

 Lecture presented to Yakima Valley Audubon Society, Yakima, WA, May 27
- Charles Darwin: the right man, at the right place, at the right time.Lecture presented for Darwin Day celebration, Central Washington University, Feb. 12
- 2010 Vertebrate morphology in the biology curricula of four-year colleges and comprehensive universities: observations, data, and a suggestion.
 Poster presented at the annual meeting of the Society of Integrative and Comparative Biologists, Seattle, WA, January 3-7.
- 2009 Charles Darwin: the right man, at the right place, at the right time.

 Lecture presented to Kittitas Audubon Society, Ellensburg, WA, Nov. 19
- Observations by a middle-aged university anatomy teacher and suggestions for curricular change.
 Poster presented at the annual meeting of the American Association of Anatomists, New Orleans, LA, April 18-22.
- 2009 Andy Rooney's eyebrows and the fountain of youth.

 Lecture presented for Darwin Day celebration, Central Washington University, Feb. 12
- 2008 Amphibians and Reptiles of Central Washington. Barn Beach Reserve, Leavenworth, WA, September 12.
- The human tailbone and that thing that hangs down in the back of your throat: oddball anatomical structures and the stories they tell. Natural Science Seminar, Central Washington University, April 25.
- Andy Rooney's eyebrows, the human tailbone, and that thing that hangs down in the back of your throat: oddball anatomical structures and the stories they tell. Invited talk, Yakima Valley Community College, January 29.

- Chytridiomycosis: a silent spring for Pacific Northwest amphibians?
 Annual meeting of the Society for Northwestern Vertebrate Biology, Evergreen State College,
 Olympia, WA, March 27-April 1. (with Jim Johnson, Eric Dean, Susan Belmont, Steve Germaine, and R. Steven Wagner)
- 2004 "Spring Symphony: Frog and Bird Calls at Helen McCabe State Park", a part of the "Get Intimate with the Shrub-Steppe" event sponsored by the Kittitas Environmental Education Network (KEEN), May 7.
- 2002 The amphibians and reptiles of Yakima County.
 Yakima Valley Community College, Yakima, WA (22 May)
- 2002 Conservation genetics: tales of Pacific Northwest forest associated salamanders. Annual meeting of the Society for Northwestern Vertebrate Biology, Hood River, OR. (3-6 April) (with R. Steven Wagner, Charles Crisafulli, Jennifer Scott, Lyn Dehen, and Melissa Mackey)
- 2002 Evolution in the 21st century.

 Darwin Day, Central Washington University (12 February)
- 2001 The amphibians and reptiles of Yakima County.
 Yakima Valley Community College, Yakima, WA (1 May)
- Observations on the foraging ecology of the western terrestrial garter snake
 (*Thamnophis elegans vagrans*) in Washington state, USA.
 Annual Meeting of the Society for the Study of Amphibians and Reptiles, La Paz, Mexico.
 (with Richard L. Lukose)
- The amphibians of eastern Washington.
 Amphibian training for Wenatchee National Forest biologists.
 U. S. Forest Service, Cle Elum, WA (2 June)
- The amphibians of Kittitas County and Central Washington. Kittitas Audubon Society, Ellensburg, WA (20 Jan.)
- 1998 From amphibians and reptiles of Washington to lizard heads in Connecticut: a sabbatical journey.
 Natural Sciences Seminar, Department of Biological Sciences, Central Washington University, Ellensburg, WA (16 Jan.).
- Herps of the Pacific Northwest.
 Public talk presented at the Connecticut State Museum of Natural History, Storrs, CT (27 April).
- 1997 From amphibians and reptiles of Washington to lizard heads in Connecticut: a sabbatical journey.
 Departmental Seminar, Department of Ecology and Evolutionary Biology, University of Connecticut, Storrs, CT (7 April).
- 1993 Amphibian and reptile inventory on the Wenatchee National Forest.

 Annual Meeting of the Society for Northwestern Vertebrate Biology. Astoria, OR (19 March) (with T. D. Kelley)
- 1992 Herpetology, herps and the Wenatchee National Forest. U.S. Forest Service, Naches, WA (27 Aug.).
- 1992 The amphibians and reptiles of the eastern Cascades of central Washington. U. S. Forest Service, Cle Elum, WA (10 June).

- 1992 Amphibians and reptiles of central Washington. Twenty-sixth annual meeting of the Northwest Biology Instructor's Organization. Ellensburg, WA (17 May).
- 1992 Possible origins of life and evolutionary biology.
 Institute for Science and Society, Ellensburg, WA (19 Feb.).
- The amphibians and reptiles of central Washington.Monthly meeting of the of the Timber, Fish, and Wildlife (TFW) Wildlife Task Force.Ellensburg, WA (11 Feb.).
- 1992 The snakes, frogs, and lizards of Washington. Kittitas Audubon Society, Ellensburg, WA (4 Feb.)
- Amphibians and reptiles of the eastern Cascade Mountains. Biologists' Breakfast, Wenatchee, WA (6 Jan.).
- 1990 Parallelism in neotropical Plethodontid salamanders.The Society for the Study of Amphibians and Reptiles, New Orleans, LA.
- 1989 Allozyme variation among members of the genus *Chiropterotriton* (Caudata: Plethodontidae).

 American Society of Ichthyologists and Herpetologists, San Francisco, CA.
- Mexican salamanders of the genus *Chiropterotriton*: Morphological diversity, stasis and parallelism.
 Departmental Seminar, Department of Zoology, University of California, Berkeley, CA.
- Osteology and ontogeny of cannibalistic larvae in *Ambystoma tigrinum*.

 A poster presented at the 75th anniversary celebration of the Museum of Vertebrate Zoology, Berkeley, CA.
- Development and evolution of the salamandrid frontosquamosal arch. Society for the Study of Amphibians and Reptiles/Herpetologists' League, Salt Lake City, UT (with W.E. Bemis).
- 1982 Sequence of cranial ossification through metamorphosis in *Taricha* (Amphibia: Caudata: Salamandridae).

 American Society of Zoologists, Louisville, KY (with W.E. Bemis).
- Osteology and ontogeny of cannibalistic larvae in *Ambystoma tigrinum*. Society for the Study of Amphibians and Reptiles/Herpetologists' League, Raleigh, NC.

E. Professional Meetings, Symposia, Short Courses Attended

- 2018 Human Anatomy and Physiology Society, Columbus, OH (May)
- 2017 Human Anatomy and Physiology Society, Salt Lake City, UT (May)
- 2016 Human Anatomy and Physiology Society, Atlanta, GA (May)
- 2014 Society for Northwestern Vertebrate Biology, Pasco, WA (February)
- 2013 NSF STEP (Science Talent Expansion Program), Washington, DC (March)
- 2012 NSF STEP (Science Talent Expansion Program), Washington, DC (March)
- 2010 Society of Integrative and Comparative Biologists Annual national meeting, Seattle, WA, January 3-7.
- 2009 American Association of Anatomists

	Annual national meeting, New Orleans, LA, April 18-22.
2008	American Association of Anatomists
2000	Annual national meeting, San Diego, CA, April 5-9.
2007	Society of Integrative and Comparative Biologists
2007	Annual national meeting, Phoenix, AZ, January 3-7.
2006	Human Anatomy and Physiology Society
2000	Regional meeting, Puyallup, WA, November 3-4.
2005	Seminar on Departmental Leadership
2003	M.J. Murdock Charitable Trust and Project Kaleidoscope, Northwest Nazarene University,
	November 9-10.
2004	"Cascade Crossings: A Forum on Wildlife Passage across Interstate 90", invited to
2001	participate in pre-event scientists' roundtable, Univ. of Washington, August 24.
2004	Society for Northwestern Vertebrate Biology, Ellensburg, WA, March 24-27.
2003	"Chairing the Academic Department: A Workshop for Division and
_000	Department Chairs and Deans", San Antonio, TX, November 5-8.
2003	Society for the Study of Evolution, Chico, CA
2002	Society for Northwestern Vertebrate Biology, Hood River, OR
2001	"Creation, Evolution, or Both?" - a Chautauqua Short Course for College
	Science Teachers, Univ. of Dayton, Dayton, OH
2001	"Mammalian Diversification: from Population Genetics to Biogeography" - a
	Symposium in Jim Patton's Honor, University of California, Berkeley, CA
2000	The Society for the Study of Amphibians and Reptiles, La Paz, Mexico
1996	Northeast Regional Meeting, Division of Vertebrate Morphology, Society of
	Integrative and Comparative Biologists (formerly ASZ), Amherst, MA
1996	Society for Northwestern Vertebrate Biology, Corvallis, OR
1995	Northwest Biology Instructors Organization, Mount Hood, OR
1995	Society for Northwestern Vertebrate Biology, Orcas Island, WA
1994	Society for Northwestern Vertebrate Biology, Ellensburg, WA
1993	Society for Northwestern Vertebrate Biology, Astoria, OR
1992	Society for Northwestern Vertebrate Biology, Bellingham, WA
1991	Pacific Northwest Amphibian Workshop, Roseburg, OR
1990	The Society for the Study of Amphibians and Reptiles, New Orleans, LA
1989	American Society of Ichthyologists and Herpetologists, San Francisco, CA
1989	"Old-Growth Douglas Fir Forests: Wildlife Communities and Habitat
1984	Relationships", Portland, OR American Society of Zoologists, Denver, CO
1984	
1983	Society for the Study of Amphibians and Reptiles, Salt Lake City, UT Society for the Study of Amphibians and Reptiles, Raleigh, NC
1982	Society for the Study of Amphibians and Reptiles, Corvallis, OR
1981	American Society of Zoologists (ASZ), Seattle, WA
1700	American society of Zoologists (ASZ), seattle, WA

VIII. REFERENCES

On request.