

## DAVID ANDREW CRAIN

Professor of Biology

Maryville College

502 E. Lamar Alexander Parkway

Maryville, Tennessee 37804

Office: 865-981-8238

Cell: 865-292-8737

EMAIL: [drew.crain@maryvillecollege.edu](mailto:drew.crain@maryvillecollege.edu)

Website: <http://www.maryvillecollege.edu/faculty/dcrain>

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### ACADEMIC DEGREES

Ph.D. 1997. University of Florida, Department of Zoology, Gainesville, FL. Directed by Louis Guillette, Jr. "Effects of Endocrine-Disrupting Contaminants on Reproduction in the American Alligator, *Alligator mississippiensis*."

M.S. 1994. University of Florida, Department of Zoology, Gainesville, FL. Directed by Karen A. Bjorndal and Louis J. Guillette, Jr. "Insulin-like Growth Factor-I in the Plasma of Two Chelonians: *Caretta caretta* and *Trachemys scripta elegans*."

B.S. 1992. Clemson University, Department of Biology, Clemson, SC. Graduated Magna Cum Laude.

### TEACHING POSITIONS

August 1998 to present. Professor (2011-present), Associate Professor of Biology (2003-2011) and Assistant Professor of Biology (1998-2003), Division of Natural Sciences, Maryville College.

Lecturer and laboratory coordinator for Animal Physiology (BIO 412), Developmental Biology (BIO 414), Ornithology (BIO 403), Wildlife Photography (BIO 200), Human Anatomy and Physiology I (BIO 217), Human Anatomy and Physiology II (BIO 218), Vertebrate Zoology (SCI 150), Understanding Biology Through Food (SCI 150), and Fundamentals of Biology (Bio111).

Lecturer for Principles of Environmental Science (EVS101), Environmental Toxicology (SCI 350), Developmental Biology for non majors (SCI 350), Biology Research Seminar (BIO 299), Freshman Biology: Principals of Cellular Biology (BIO 115), Perspectives on the Environment (FRS 130), Senior Seminar on Science and Religion (SRS 480).

August 1997 to May 1998. Assistant Professor of Biology, University of Mississippi. Lecturer and laboratory coordinator for Introductory Physiology, BISC 330. Developed new lectures and laboratories. Lectures focused on a systems-level approach to physiology, while labs illustrated these principals using both model animal species and computer-assisted programs.

## **PROFESSIONAL DEVELOPMENT, SERVICE, AND HONORS (2015-PRESENT; FOR COMPLETE LIST, SEE FULL CV)**

Teacher of the Year. Maryville College faculty honor. Runner-up: 2021, 2020, 2014, 2013, 2004. Winner: 2015.

Participant. The Maryville College Online Learning Training Program for Faculty. June and July 2020. Numerous online instructional sessions on adapting content, assessment, and engagement via a Hyflex course for the fall of 2020 (and potentially subsequent semesters).

Leader. "Maryville College Riparian Zone Restoration." Led MC students, faculty, and community members in removal of invasive/exotic plants and planting of natives. Saturday, February 22, 2020.

Board Member. TBF Foundation. <http://www.tbfmission.org/>. Spring 2018-January 2020.

Manuscript Reviewer for the following journals: *American Biology Teacher*, *Biological Conservation*, *Chemosphere*, *Environmental Toxicology and Chemistry*, *Environmental Health Perspectives*, *Journal of Herpetology*, *Herpetologica*, *ZooBiology*.

Presenter. "Science & Christianity: A Guide to Study this Topic." St. Paul Lutheran Church, Maryville, Tn. September 5, 2019.

MC Wildlife Photography Calendar. Compiled and coordinated photos and copy for the 2014-2015, 2015-2016, 2017-2018, 2019-2020. "[Beauty In Our Backyard](#)" calendars that feature photos and stories of MC students.

Presenter. "Science & Christianity: A Guide to Study this Topic." Second Presbyterian Church, Knoxville, Tn. June 2, 2019.

Coordinator, Lead Gardener. Maryville College Gardens and Orchards. Establish, plant, maintain, and harvest vegetables and fruits on the Maryville College campus for the Margaret Ware Dining Hall. 2008-present.

Presenter. "Science & Christianity: An Overview for New Providence Classes." New Providence Presbyterian Church, Maryville, Tn. April 28, 2019.

Author. "[Maryville College History Hikes](#)." A trifold pamphlet to promote hiking in the Great Smoky Mountains National Park. April, 2019.

Chair, The Maryville College Woods Group. Responsible for developing and implementing a "100 Year College Woods Plan" for the 140-acre MC woods. See [www.maryvillecollege.edu/woods](http://www.maryvillecollege.edu/woods). October 2012-present.

Presenter. "Science & Christianity: Past, Present, Future." Board of Church Visitors, Maryville College. March 26, 2019.

Presenter. "Science & Christianity: Past, Present, Future." Blount County Ecumenical Association. Maryville, TN. March 26, 2019.

Chair, Maryville College Bicentennial Celebration Curricular and Co-Curricular Committee. Spring 2017-2019.

Presenter. "RT Lodge & Maryville College Fireside Chat: A discussion of professional activities." November 5, 2018.

Chair, MC Institutional Animal Care and Use Committee (IACUC). August 2008-January 2018.

Presenter. "Seeing God in the Wilderness." New Providence Presbyterian Church, First Baptist Church, Maryville, Tn. Fall, 2017.

Baccalaureate Speaker. "Being salt and light after graduation." Maryville High School. May 14, 2015.

Little River Blueways Map. Assisted in the writing, production, and distribution of the Little River Watershed Blueways Map.

([https://static1.squarespace.com/static/59b01f3e12abd9eb6c2260cb/t/5a95b6e9419202af2b58b4b2/1519761143248/LRWA\\_Blueways\\_Map.pdf](https://static1.squarespace.com/static/59b01f3e12abd9eb6c2260cb/t/5a95b6e9419202af2b58b4b2/1519761143248/LRWA_Blueways_Map.pdf))

Board Member and Vice President. Little River Watershed Association. Spring, 2013-2016.

## **PUBLICATIONS AND PROFESSIONAL PRESENTATIONS (2015-PRESENT; FOR COMPLETE LIST, SEE FULL CV)**

- CRAIN, D.A.** 2020. [Science and Christianity: Past, Present, and Future. A Group Study](#). Smyth & Helwys Books. 62 pgs.
- CRAIN, D.A.** 2019. Environmental ethics and motivations for Christians. *Biologos*. Published October 16, 2019. <https://biologos.org/articles/environmental-ethics-and-motivations-for-christians>
- CRAIN, D.A.** 2019. 5 Lessons learned from teaching college students about science and Christianity. *Biologos*. Published August 20, 2019. <https://biologos.org/articles/5-lessons-learned-from-teaching-college-students-about-science-and-christianity>
- CRAIN, D.A. AND M. HALE.** 2019. Pancake evolution: A novel and engaging illustration of natural selection. *The American Biology Teacher* 81: 110-114.
- CRAIN, D.A.** 2019. Effects of Endocrine Disrupting Contaminants on Wildlife: Evidence from Biochemistry, Physiology, and Ecology. Inaugural speaker for the Environmental Speaker Series. Berry College, Rome, Georgia. September 27, 2019.
- WILSON, L.E., N.C. DUNCAN, AND D.A. CRAIN.** 2017. Comparison of aquaponics and hydroponics on basil (*Ocimum basilicum*) morphometrics and essential oil composition," *RURALS: Review of Undergraduate Research in Agricultural and Life Sciences: Vol. 11 Issue 1* , Article 3. <http://digitalcommons.unl.edu/rurals/vol11/iss1/3>
- BRUMBAUGH, A., D. CRAIN, C. WILLIAMS, L.J. GUILLETTE, D.D. SPYROPOULOS, AND S. KOHNO.** 2016. Obesogenic Activity of Oil Dispersant Corexit 9500 in the American Alligator. 2016 Oil Spill and Ecosystem Science conference in Tampa, Florida. February 1-4, 2016.
- CRAIN, D.A.** 2015. Cades Cove Wildlife: A Visitor's Guide. E-book created for non-majors biology class. 130 pages.

## **GRANTS RECEIVED (2015-present; for complete list, see full CV)**

- 2021 [Council on Undergraduate Research Small Research Grant](#). Grant to support an undergraduate research project during the fall of 2021.
- 2020 Tennessee Wildlife Resources Association (TWRA) Riparian Zone Restoration Grant. \$500. This grant will fund removal of invasive exotics and plant native vegetation along Duncan Branch in the Maryville College Woods.
- 2019 Promotion of Science & Christianity Study Guide. \$6,971.99. This project funded (1) the writing of two papers that will lead readers to the study guide, (2) editing an electronic 2<sup>nd</sup> edition of the guide, and (3) exploration of potential publishers to publish the second edition. Funded by [TBFmission.org](http://TBFmission.org).
- 2018 Science & Christianity Study Guide. \$19,748. This project sought to alleviate two problems: (1) people leaving the church because they choose science and (2) people dismissing science because they choose faith. The methodology for the study guide focused attention on effectively communicating science and faith, and a study of regional differences in acceptance of science and faith discussions. Spring & Summer, 2018. Funded by [TBFmission.org](http://TBFmission.org).
- 2018 Sabbatical Leave from January-May, 2018. Granted time away from teaching obligations to complete three projects: (1) publication of a teaching lab that I created several years ago, (2) promoting sustainable agriculture at MC, and (3) publication and distribution of a Science and Christianity Study Guide.
- 2015 Naylor Grant. \$3879.52 Maryville College Fund to assist Maryville College student Hannah Cummings in her senior study project to examine the effect of companion plants on native green beans. Summer, 2015.

## WEB MEDIA PRODUCTIONS

Flickr Photos: <http://www.flickr.com/photos/46540890@N06/>

YouTube Channels: <https://www.youtube.com/channel/UCp8VTMbXmnw9E24Ve4dCM8g/>  
<https://www.youtube.com/channel/UCjqIMDWZHkLQwXKqQ5o78qg>  
<https://www.youtube.com/user/MCbiology/>  
<https://www.youtube.com/user/DrDrewCrain/>

### *Representative Videos Produced:*

Wildlife Photography Class 2019: <https://www.youtube.com/watch?v=7eehvs3WpZA>

Mountains to Sea 2017: <https://www.youtube.com/watch?v=5Vlx6tFACLY&feature=youtu.be>

Wildlife Photography Class 2017: [https://www.youtube.com/watch?v=nmy\\_jcihsKI](https://www.youtube.com/watch?v=nmy_jcihsKI)

Wildlife Photography Class 2016: <https://www.youtube.com/watch?v=vTqElGjGml8>

Wildlife Photography Class 2015: <https://www.youtube.com/watch?v=7tWSVPkHMZM&feature=youtu.be>

Biology, Charleston, S.C. 2014: <https://www.youtube.com/watch?v=mAWcQ5vNIW0&feature=youtu.be>

Wildlife Photography Class 2014: <https://www.youtube.com/watch?v=xwF9pCJwxjc&feature=youtu.be>

Wildlife Photography Class 2013: [https://www.youtube.com/watch?v=28g-lmsU\\_VY](https://www.youtube.com/watch?v=28g-lmsU_VY)

Ornithology Florida Trip 2013: <https://www.youtube.com/watch?v=H7PIVkJkFWw>

Science for Non-science majors 2013: <https://www.youtube.com/watch?v=zmvs2ETKdjM>

Wildlife Photography Class 2012: <https://www.youtube.com/watch?v=tIOYMWgYRY0>

Science for Non-science majors 2012: <https://www.youtube.com/watch?v=H3VORCD7gqk>

### *Representative Videos Highlighting Projects:*

Science and Christianity (7 videos to supplement chapters in my recent book):

[https://www.youtube.com/channel/UCemDRNIFJ4JdUAohI8mJA2g?view\\_as=subscriber](https://www.youtube.com/channel/UCemDRNIFJ4JdUAohI8mJA2g?view_as=subscriber)

Maryville College Garden, Grapes: <https://www.youtube.com/watch?v=5xttAaDLSN0>

Pre-med undergraduate research: <https://www.youtube.com/watch?v=1dWXBWbp-yQ>

Maryville College Orchard: <https://www.youtube.com/watch?v=p-PXAcWScSE>

Maryville College Garden, Green Beans: [https://www.youtube.com/watch?v=Jex7BF\\_Z\\_uw](https://www.youtube.com/watch?v=Jex7BF_Z_uw)