

Medhavi Ambardar

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PROFESSIONAL APPOINTMENTS/DEPARTMENT & RANK

2018-present Assistant Professor, Department of Biological Sciences, Fort Hays State University
2017-2018 Visiting Assistant Professor, Department of Biological Sciences, Fort Hays State University
2017 Adjunct Instructor, Department of Biological Sciences, Fort Hays State University

EDUCATION

2016 Ph.D. Zoology, Oklahoma State University
2011 M.S. Biological Sciences, University of Wisconsin – Milwaukee
2006 B.S. Biological Sciences, Ecology option, Michigan Technological University

TEACHING EXPERIENCE

Fort Hays State University

- Ornithology Lecture and Lab (Spring semesters)
- Behavioral Ecology (even year Spring semesters)
- Anatomy and Physiology II Lecture and Lab (Spring semesters)
- Endocrinology (odd year Spring semesters)
- Principles of Biology (Fall semesters)
- Anatomy and Physiology I, Lecture and Lab (Fall semesters)
- Professional Scientific Communication (Fall semesters)
- Human Physiology, Lecture and Lab (Fall semesters)
- Human Biology (general education course; last taught Spring 2019)

Oklahoma State University (Teaching Assistant)

- Ornithology Lab
- Mammalian Physiology Lab
- Human Anatomy Lab
- Physiology Seminar
- Physiology Lab

University of Wisconsin – Milwaukee (Teaching Assistant)

- Foundations of Biology I Lab

INTERNAL AND EXTERNAL FUNDING

(\$300,762 total, \$276,212 while at FHSU)

2022 Kansas IDEA Network of Biomedical Research Excellence Summer/Semester Scholar funding \$4000
2021 Kansas IDEA Network of Biomedical Research Excellence Minigrant (w/ Claudia Carvalho) \$4000
2019 Kansas Department of Wildlife, Parks, and Tourism Grant (w/ William J. Stark) \$223,723

- 2019 Kansas IDEA Network of Biomedical Research Excellence Recruitment Package \$26,549
- 2019 Kansas IDEA Network of Biomedical Research Excellence Minigrant (w/ Claudia Carvalho) \$8000
- 2019 FHSU Faculty Summer Grant for Research \$3850
- 2018 FHSU Undergraduate Research Experience Grant \$2690
- 2017 FHSU Undergraduate Research Experience Grant \$3400
- 2015 NSF Doctoral Dissertation Improvement Grant \$18,750
- 2015 New York State Bluebird Society Research Award \$500
- 2015 North American Bluebird Society Research Award \$1000
- 2012 OSU Zoology Bollinger Field Research Award \$1000
- 2012 Oklahoma Ornithological Society Grant \$500
- 2009 American Ornithologists' Union Grant \$1000
- 2009 UWM Biological Sciences Ruth Walker Grant-In-Aid \$1000
- 2009 Bluebird Restoration Association of Wisconsin Grant \$800

AWARDS, HONORS, AND FELLOWSHIPS

- 2022 FHSU Pilot Award Nomination
- 2020 FHSU Werth College of Science, Technology, and Mathematics Faculty Commencement Marshal (Fall Virtual Ceremony)
- 2018 Werth College of Science, Technology, and Mathematics Faculty Commencement Marshal, FHSU
- 2016 Honorary Graduate Commencement Marshal, OSU \$1000
- 2015 OSU Robberson Summer Dissertation Fellowship \$6000
- 2015 SICB Charlotte Mangum Student Support Award \$750
- 2014 First place Graduate Student Talk, Oklahoma Ornithological Society Conference \$150
- 2014 Second place Graduate Student Talk, OSU Biochemical and Molecular Biology Graduate Student Association Symposium \$425
- 2014 SICB Charlotte Mangum Student Support Award \$750
- 2013 Second place, OSU Three Minute Thesis Competition \$750
- 2013 OSU Zoology Wilhm Outstanding Teaching Assistant Award \$1000
- 2013 Best Biological Sciences Graduate Talk, OSU Research Symposium \$100
- 2013 SICB Charlotte Mangum Student Support Award \$750
- 2012 Best Zoology Graduate Student Talk, Oklahoma Academy of Sciences \$50
- 2012 Best Lunchtime Seminar, OSU Zoology \$25

PEER-REVIEWED PUBLICATIONS

Granstrom-Arndt, K., and **M. Ambardar**. 20XX. Influences of grazing on habitat characteristics, avian community composition and nesting bird abundance within Cheyenne Bottoms, Kansas. *In review*. The Southwestern Naturalist.

Grindstaff, J.L., L.E. Beaty, **M. Ambardar**, and B. Luttbeg. 2022. Integrating theoretical and empirical approaches for a robust understanding of endocrine flexibility. *Journal of Experimental Biology* 225:jeb243408.

Luttbeg, B., L.E. Beaty, **M. Ambardar**, and J.L. Grindstaff. 2021. Mathematical modeling reveals how the speed of endocrine regulation should affect baseline and stress-induced glucocorticoid levels. *Hormones and Behavior* 136:105059.

Ambardar, M., P.O. Dunn, and L.A. Whittingham. 2018. Reproductive and foraging success of the Eastern Bluebird (*Sialia sialis*) in relation to vegetation height. *Wilson Journal of Ornithology* 130:362-370.

Ambardar, M., and J.L. Grindstaff. 2017. Pre-GnRH and GnRH-induced testosterone do not vary across behavioral contexts: a role for individual variation. *General and Comparative Endocrinology* 246:51-62.

PLATFORM PRESENTATIONS

† denotes undergraduate student mentee

¥ denotes graduate student mentee

- 2021 **Ambardar, M.**, L.A. Watson¥, C.M. Musgrove†, and A.D. Hinds†. Adventures in bird parenting: Interactions among behavior, physiology, and fitness-related traits. Invited seminar for Emporia State University Department of Biological Science Seminar Series.
- 2019 **Ambardar, M.**, L.A. Watson¥, C.M. Musgrove†, and A.D. Hinds†. Responses of House Wrens (*Troglodytes aedon*) to a novel object and influences on fitness-related traits. Kansas Ornithological Society Meeting, Wichita, KS.
- 2019 Clark, E.L.¥, **M. Ambardar**, W.J. Stark. An updated status report on the Ferruginous Hawk (*Buteo regalis*) in Western Kansas. Kansas Ornithological Society Meeting, Wichita, KS.
- 2017 **Ambardar, M.**, J.L. Grindstaff. Do gonadotropin-releasing hormone-induced testosterone levels predict reproductive success in eastern bluebirds (*Sialia sialis*)? Society for Integrative and Comparative Biology Meeting, New Orleans, LA.
- 2016 **Ambardar, M.**, J.L. Grindstaff. Behavioral sources of individual variation in testosterone in eastern bluebirds (*Sialia sialis*). Animal Behavior Society Meeting, Columbia, MO.
- 2016 **Ambardar, M.**, J.L. Grindstaff. The stress of parenthood: how corticosterone and testosterone interact with brood size in Eastern Bluebirds (*Sialia sialis*). Society for Integrative and Comparative Biology Meeting, Portland, OR.
- 2015 **Ambardar, M.**, J.L. Grindstaff. Behavioral and reproductive correlates of within-individual variation in testosterone levels in Eastern Bluebirds (*Sialia sialis*). American Ornithologists' Union and Cooper Ornithological Society Meeting, Norman, OK.
- 2015 **Ambardar, M.**, A.C. Sabol†, E.E. Reynolds†, J.L. Grindstaff. Effects of brood size manipulation on parental care and nestling corticosterone levels in eastern bluebirds (*Sialia sialis*). Society for Integrative and Comparative Biology meeting, West Palm Beach, FL.
- 2014 **Ambardar, M.**, A.C. Sabol†, E.E. Reynolds†, J.L. Grindstaff. Brood size manipulation affects plumage coloration but not corticosterone or growth in nestling eastern bluebirds (*Sialia sialis*). Oklahoma Ornithological Society Meeting, Stillwater, OK.
- 2014 **Ambardar, M.**, J.L. Grindstaff. Effects of brood size manipulation on corticosterone levels and growth rates in nestling eastern bluebirds (*Sialia sialis*). OSU Biochemical and Molecular Biology Graduate Student Association Symposium, Stillwater, OK.

- 2014 **Ambardar, M.**, J.L. Grindstaff. The roles of sex, parental care and aggression on testosterone production in eastern bluebirds (*Sialia sialis*). Southwestern Association of Naturalists Annual Meeting, Stillwater, OK.
- 2013 **Ambardar, M.**, J.L. Grindstaff. Testosterone production in response to aggression: Physiological or behavioral constraint? American Ornithologists' Union meeting, Chicago, IL.
- 2013 **Ambardar, M.**, J.L. Grindstaff. Testosterone production in response to aggression: Physiological or behavioral constraint? OSU Research Symposium, Stillwater, OK.
- 2012 **Ambardar, M.**, J.L. Grindstaff. Physiological interactions with nest defense and parental care in Eastern Bluebirds (*Sialia sialis*): a preliminary examination. Oklahoma Academy of Science Technical meeting, Edmond, OK.
- 2010 **Ambardar, M.**, P.O. Dunn, and L.A. Whittingham. The effects of habitat and food availability on reproductive success in Eastern Bluebirds (*Sialia sialis*). Bluebird Restoration Association of Wisconsin Annual State Convention, Stevens Point, WI.

POSTER PRESENTATIONS

† denotes undergraduate student mentee

¥ denotes graduate student mentee

- 2022 Watson-Divittore, L.A.¥, C. Crawford†, J. Dinkel†, L. Dunant†, R. Jensen†, C. Carvalho, and **M. Ambardar**. Are bold birds stressed out? Interactions among boldness, heterophil-to-lymphocyte ratio, and reproductive success in House Wrens (*Troglodytes aedon*). Society for Integrative and Comparative Biology meeting, virtual.
- 2020 Clark, E.L.¥, **M. Ambardar**, and W.J. Stark. Preliminary status report on the Ferruginous Hawk (*Buteo regalis*) in Kansas, USA. North American Ornithological Conference, virtual
- 2020 **Ambardar, M.**, L.A. Watson-Divittore¥, C.M. Musgrove†, and A.D. Hinds†. Responses of House Wrens (*Troglodytes aedon*) to a novel object: interactions with fitness-related traits and physiology. North American Ornithological Conference, virtual.
- 2020 Musgrove, C.M.†, L.A. Watson¥, A.D. Hinds†, C.M. Carvalho, and **M. Ambardar**. Relationships among parental care, heterophil to lymphocyte ratio, and reproductive success in a songbird. Society for Integrative and Comparative Biology meeting, Austin, TX.
2020. Watson, L.A.¥, C.M. Musgrove†, A.D. Hinds†, **M. Ambardar**, and C.M. Carvalho. Investigating the dissemination of antibiotic resistant Enterobacteriaceae microorganisms via a migratory bird species. Society for Integrative and Comparative Biology meeting, Austin, TX.
- 2019 Straley, C.C.†, and **M. Ambardar**. Sexual dichromatism of in birds of Western Kansas. John Heinrichs Scholarly and Creative Activities Day, Hays, KS.

- 2017 Luttbeg, B., L.E. Beaty, and **M. Ambardar**. The optimality of hormonal responses with limited reversibility to varying environmental states. Animal Behavior meeting, Toronto, ON.
- 2017 Beaty, L.E., **M. Ambardar**, A.M. Simpson, and B. Luttbeg. There's something in the water: Validating a non-invasive stress hormone assay for tadpoles. Central Ecology and Evolution Conference, Stillwater, OK.
- 2015 Sabol, A.C.†, **M. Ambardar**, and J.L. Grindstaff. Brood size manipulation affects plumage coloration but not growth rate of nestling eastern bluebirds (*Sialia sialis*). Society for Integrative and Comparative Biology meeting, West Palm Beach, FL.
- 2014 **Ambardar, M.**, J.L. Grindstaff. The roles of sex, parental care and aggression on testosterone production in eastern bluebirds (*Sialia sialis*). Society for Integrative and Comparative Biology meeting, Austin, TX.
- 2013 **Ambardar, M.**, J.L. Grindstaff. Testosterone production in response to aggression: Physiological or behavioral constraint? Society for Integrative and Comparative Biology meeting, San Francisco, CA.

RESEARCH MENTORING EXPERIENCE

- 2022-present Sonja Brandt (FHSU master's student, biology). Project: Physiological stress in turtles in relation to human disturbance.
- 2022-present Austin Ulrich (FHSU undergraduate student, biology). Project: Hormones and repeatable behavior in House Wrens.
- 2021-present Anthony Fast (FHSU master's student, biology). Project: Reproductive success of Eastern Phoebes across a woody vegetation gradient.
- 2021-present Connor Champney (FHSU master's student, biology, co-advised with Dr. Mitch Greer). Project: Use of grassland birds as indicators of habitat quality.
- 2019-present Leslie Watson (FHSU master's student, psychology). Project: House Wren responses to novel objects.
- 2021-2022 Heather Befort (FHSU undergraduate student, agriculture). Project: Nest attendance by adult House Wrens.
- 2020-2022 Joslyn Dinkel (FHSU undergraduate student, biology). Project: Parasites and white blood cell counts in House Wrens
- 2019-2022 Kirsten Granstrom-Arndt (FHSU master's student, biology). Project: Effects of habitat and vegetation on avian communities and nestling survivorship at Cheyenne Bottoms wetland.
- 2019-2021 Erica Clark (FHSU master's student, biology). Project: Historic and current nesting distributions of the Ferruginous Hawk in Western Kansas.
- 2021 Chris Crawford (FHSU undergraduate student, biology). Project: Dissemination of microbes via a migratory songbird.
- 2021 Ryan Jensen (FHSU undergraduate student, biology). Project: Dissemination of microbes via a migratory songbird.
- 2020 Lilly Duncan (FHSU undergraduate student, biology). Project: Parasites and white blood cell counts in House Wrens
- 2019-2020 Annie Hinds (FHSU undergraduate student, biology). Project: Antibiotic resistance of bacteria found on House Wren eggs, nests, and nestlings.
- 2019-2020 Chloe Musgrove (FHSU undergraduate student, biology). Project: Antibiotic resistance of bacteria found on House Wren eggs, nests, and nestlings.

- 2019 Nick Varvel (FHSU Undergraduate Research Experience). Project: Use of nocturnal flight calls to assess bird migration.
- 2019 Charlotte Straley (Kansas Academy of Math and Science). Project: Variation in feather color of grassland birds.
- 2018 Virginia Weisar (Kansas Academy of Math and Science). Project: Nesting habits of grassland birds.
- 2018 Sujin Kim. (Kansas Academy of Math and Science). Project: Territoriality in birds across a disturbed to undisturbed gradient.
- 2018 Gwanryoung Kim. (Kansas Academy of Math and Science). Project: Territoriality in birds across a disturbed to undisturbed gradient.
- 2018 Sekwon Im. (Kansas Academy of Math and Science). Project: Territoriality in birds across a disturbed to undisturbed gradient.
- 2018 Jason Park. (Kansas Academy of Math and Science). Project: Territoriality in birds across a disturbed to undisturbed gradient.
- 2014 Erin Reynolds (OSU undergraduate student). Project: Is flight initiation distance an indicator of parental care in eastern bluebirds (*Sialia sialis*)?
- 2014 Anne Sabol (NSF REU; The Ohio State University, home institution). Project: Brood size manipulation affects plumage coloration, but not growth rate of nestling eastern bluebirds (*Sialia sialis*).
- 2013-2014 Susan Gleason (OSU undergraduate student). Project: Parental care and aggression in eastern bluebirds (*Sialia sialis*).
- 2013 Meghan Hennessey (NSF REU; Earlham College, home institution). Project: The effects of testosterone on patterns and intensity of nest defense in eastern bluebirds.
- 2012 Wesley Grissom (OSU undergraduate student). Project: The effects of localized food availability on reproductive success in eastern bluebirds (*Sialia sialis*).
- 2012 Lisa Barrett (NSF REU; University of Michigan, home institution). Project: Parental care is related to nestling feather coloration in eastern bluebirds (*Sialia sialis*).
- 2012 Chandler White (OSU undergraduate student). Project: Feather coloration in eastern bluebird nestlings.

DIVERSITY AND INCLUSION TRAINING AND EXPERIENCE

- 2019 HHMI Inclusive Excellence grant writing team member.
- 2017-present Inclusion and Diversity Excellence Advisory Team, FHSU
- 2017 Diversity Discussion presented by Dr. Precious Ellmore-Sanders, Central Ecology and Evolution Conference, Stillwater, OK.
- 2017 Diversity Speaks Series: Microaggressions presented by Patrick D. Roscoe, FHSU.
- 2017 Diversity Speaks Series: The role of women in Title IX presented by Amy Gildemeister, FHSU.

SERVICE AND OUTREACH

- Service to the University*
- 2022 Tiger Leaders facilitator, FHSU in 2050 event
- 2021 Panelist, What I Wish I Had Known as a New Faculty Member, New Faculty Orientation, FHSU
- 2020-present Committee member, Faculty Advisory Panel FSHU CORE, Information Literacy Outcomes
- 2020-present Committee member, Institutional Animal Care and Use Committee, Hays, KS

- 2020 Discussion panelist, Can You See Me? FHSU
- 2020 Department representative, Student Recognition Program, Great Bend, KS
- 2017-2021 Member, Inclusion and Diversity Excellence Advisory Team, FHSU
- 2019 Panelist, What I Wish I Had Known as a New Faculty Member, New Faculty Orientation, FHSU
- 2019 Department representative, Student Recognition Program, Beloit, KS
- 2019 Panelist, Women in the Academy: Intersectionality and Avoiding Burnout, Spring Professional Development Day, FHSU
- 2017 Instructor, Hispanic College Institute Mock Class, FHSU

Service to the Department

- 2022 Departmental representative, Student Recognition Program
- 2022 Search committee chair, Cellular and Molecular Biology position
- 2021 Search committee member, Anatomy and Physiology position
- 2020 Search committee member, Biological Sciences Department Chair position
- 2020-present Committee chair, Scientific Communication course development committee
- 2020-present Committee member, revisions to Tenure and Promotion Criteria
- 2020 Visited with 9 prospective students
- 2020 Assisted 9 students with pre-enrollment
- 2019-present Writing Across the Curriculum departmental liaison
- 2019 Visited with five prospective students
- 2019 Assisted five individual students with pre-enrollment
- 2019 Assisted with freshman orientation
- 2019 Assisted with group pre-enrollment event
- 2018-present Faculty Co-advisor, FHSU Pre-Med Club
- 2018-present Graduate Studies Committee member, FHSU Biological Sciences
- 2018-present Freshman Advising Team, FHSU Biological Sciences
- 2018 Graduate research committee member for five students, graduate orals committee member for eight students
- 2018 Assisted with group pre-enrollment event

Service to the Discipline

- 2021 Committee member, American Ornithological Society and Society of Canadian Ornithologists-Société des Ornithologistes du Canada annual meeting scientific program committee
- 2021 Committee Member, Wilson Ornithological Society Nominations Committee
- 2020-present Elected Councilor, Wilson Ornithological Society
- 2020 Presentation judge for student competition, Kansas Ornithological Society online conference
- 2020 Presentation judge for student competition, North American Ornithological Conference
- 2019-present Reviewer, Transactions of the Kansas Academy of Science
- 2019 Poster judge for student competition, John Heinrichs Scholarly and Creative Activities Day
- 2018-present Associate Editor (birds), Southwestern Naturalist
- 2018-present Reviewer, Avian Conservation and Ecology
- 2018-present Reviewer, Southwestern Naturalist
- 2018 Poster judge for student competition, Society for Integrative and Comparative Biology Division of Comparative Endocrinology

Service to the Community/Science Outreach

- 2022 Local committee member, Audubon of Kansas Prairie-chicken Festival
- 2022 Invited presenter, Jayhawk Audubon Society
- 2021 Guest scientist, Evolution in Action class, University of Nebraska-Lincoln
- 2020 Invited presenter, Northwest Pennsylvania Sigma Xi Science Café
- 2020 Guest scientist, Advanced Evolution class, Gonzaga University
- 2019 Liaison with Girl Scouts of Kansas Heartland
- 2019 FHSU House Wren Crew Facebook posts
- 2019 Guest Researcher, Sternberg Museum of Natural History Research Methods Camp
- 2018-present Hays Christmas Bird Count local organizer and compiler
- 2018 Jack Kilby Science Day Presenter, Barton Community College
- 2018 Women in Ecology webinar presenter, St. Mary's College
- 2018 Sternberg Museum of Natural History Ecuador Biology Camp Guest Lecturer, FHSU
- 2018 Behavioral Ecology Guest Lecturer, Thomas More Prep-Marian High School Advanced Biology class
- 2018 Science Café Presenter, FHSU
- 2017 Jack Kilby Science Day Presenter, Barton Community College
- 2017 Science and Mathematics Education Institute Regional Science Fair Judge, FHSU
- 2016 OSU Graduate College Dissertation Writing Workshop panelist
- 2016 Communicating Science Workshop Leader
- 2015 Oklahoma Wildlife Expo Seminar Presenter
- 2015 National Wild Turkey Federation Women in the Outdoors Instructor
- 2015 National Lab Day Volunteer, Oklahoma State University
- 2015 Graduate student reviewer for OSU Zoology Academic Document Exchange
- 2014-2015 Zoology Graduate Student Society Outreach Committee Member
- 2014-2015 Zoology Graduate Student Society Fundraising Committee Chair
- 2014 Cowgirls Class at the Court Volunteer
- 2014 Frankenstein Fun at the Oklahoma WONDERtorium Volunteer
- 2014 Women in Science Conference Volunteer
- 2014 Sternberg Museum of Natural History Summer Science Camp Presenter
- 2014 National Lab Day Volunteer, Oklahoma State University
- 2014 Zoology Open House Presenter
- 2014 Southwestern Association of Naturalists Annual Local Committee Member
- 2014 OSU Zoology Biology Education Faculty Position Search Committee Member
- 2012-2014 Zoology Graduate Student Society President
- 2013 Critter Club Volunteer, Oklahoma WONDERtorium
- 2013 Gardenfest Presenter, OSU Botanic Gardens
- 2013 National Lab Day Volunteer, Oklahoma State University
- 2013 Zoology Open House Presenter
- 2013 SICB Science Journalism Intern