

ASHLEY BRIGHAM MORRIS

Middle Tennessee State University, Department of Biology
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Education

- Ph.D. 2006 Botany University of Florida, Gainesville, FL
Dissertation title: *A multi-pronged approach to eastern North American biogeography: phylogeny, phylogeography, and predictive modeling of temperate woody plant species*
- M.S. 2001 Botany University of Tennessee, Knoxville, TN
Thesis title: *Within and among population genetic variation in Fagus grandifolia within Great Smoky Mountains National Park*
- B.S. 1997 Natural Resources University of the South, Sewanee, TN

Professional experience

- 2016-present Associate Professor Department of Biology
Middle Tennessee State University, Murfreesboro, TN
- 2011-present Assistant Professor Department of Biology
Middle Tennessee State University, Murfreesboro, TN
- 2007-2011 Assistant Professor Department of Biology
University of South Alabama, Mobile, AL
- 2001-2007 Research Assistant Florida Museum of Natural History
University of Florida, Gainesville, FL
- 2000-2001 Teaching Assistant School of Biological Sciences
Washington State University, Pullman, WA
- 1998-2000 Teaching Assistant Department of Botany
University of Tennessee, Knoxville, TN
- 1997-1998 Research Technician Dept. of Entomology & Plant Pathology
University of Tennessee, Knoxville, TN

Grant support

- NSF Advancing Digitization of Biological Collections (ADBC) (2014-2018)
Title: *Digitization TCN: Collaborative Research: The Key to the Cabinets: Building and sustaining a research database for a global biodiversity hotspot*
Co-PI with Joey Shaw (PI, UTC) and Dwayne Estes (Co-PI, Austin Peay); \$301,164
- US Fish and Wildlife Service (2014-2018)
Title: *Population genetic structure of two federally endangered legumes, Astragalus bibullatus and Dalea foliosa*
Principal Investigator; \$34,215

MTSU Foundation Special Projects (2014-2015)

Title: *MTSU Virtual herbarium project*
Principal Investigator; \$9,000

MTSU FRCAC (2014)

Title: *Using non-coding chloroplast DNA to resolve phylogeographic patterns in trees*
Principal Investigator; \$6,044

US Fish and Wildlife Service (2013-2014)

Title: *Characterization of nuclear microsatellite loci in the federally endangered *Astragalus bibullatus* (Fabaceae) endemic to the limestone cedar glades of Middle Tennessee*
Principal Investigator; \$5,112

Discover Life in America (DLIA) (2012-2013)

Title: *ATBI: Soil microbial communities of the beech gaps of Great Smoky Mountains National Park*
Principal Investigator; \$3,500

MTSU FRCAC (2012)

Title: *Development of a molecular toolbox for understanding relatedness in a medicinally important group of plants (the star anise family; Illiciaceae)*
Principal Investigator; \$9,950

BP / Marine Env. Sciences Consortium (MESOC) at Dauphin Island Sea Lab (DISL) (2011)

Title: *Gulf of Mexico ecosystem integrity: Resilience of seagrass beds to oil contamination*
Co-Principal Investigator with Anne Boettcher (USA); \$77,060

US Fish and Wildlife Service (2011-2012)

Title: *Reproductive ecology and population genetic analysis of the Alabama red-bellied turtle*
Principal Investigator; \$28,369

Institute for Marine Mammal Studies (2010-2012)

Title: *Genetic assessment of bottlenose dolphins stranded in Mississippi and Alabama before and after the Deepwater Horizon oil spill*
Principal Investigator; \$47,314

NOTE: This award was cancelled by IMMS in April 2011 due to a NOAA directive prohibiting the analysis of any dolphin tissues from February 2010 to present as a result of 1) the BP oil spill and 2) an Unusual Mortality Event (UME) affecting bottlenose dolphins in the Northern Gulf of Mexico.

Institute for Marine Mammal Studies (2010)

Title: *Preliminary genetic survey of bottlenose dolphins stranded in Mississippi and Alabama*
Principal Investigator; \$6,334

National Science Foundation (2010-2012)

Title: *Integrating genomics and bioinformatics into an ecology and evolution-based undergraduate curriculum*
Principal Investigator (Co-PIs: Ní Chadhain, Sherman, and Gray at USA); \$199,496

International Carnivorous Plant Society (2009-2010)

Title: *Assessing abiotic and genetic control of pitcher morphology in *Sarracenia**
Principal Investigator; \$3,400

- Univ. of South Alabama A&S Support and Development (2009-2010)
Title: *Molecular systematics and population genetics seminar series*
Principal Investigator; \$1,500
- LI-COR Biosciences (2008-2009)
Title: *Genomics Education Matching Fund (GEMF)*
Principal Investigator; \$61,739 (plus \$41,000 match from USA)
- University of South Alabama Research Council (2008-2009)
Title: *Phylogeographic structure of eastern North American trees: a molecular approach*
Principal Investigator; \$4,997
- Univ. of South Alabama A&S Summer Professional Development (2008-2009)
Title: *Phylogeographic structure of eastern North American trees: a molecular approach*
Principal Investigator; \$6,000
- Florida Native Plant Society (2003-2004)
Title: *The Illicium parviflorum Michx. ex Vent. (Illiciaceae) paradox: an endangered Florida endemic and its role in the horticultural trade*
Principal Investigator; \$988
- Botanical Society of America Karling Award (2002-2003)
Title: *Exploring the biogeographic history of eastern North American trees: a comparative phylogeographic approach*
Principal Investigator; \$500
- American Society of Plant Taxonomists, Graduate Student Research Award (2002-2003)
Title: *Phylogenetic patterns in New World Illicium*
Principal Investigator; \$750
- Society of Systematic Biologists Graduate Student Award (2002-2003)
Title: *Comparative phylogeography of eastern North American flora*
Principal Investigator; \$1,897
- Florida Native Plant Society Endowment Grant (2002-2003)
Title: *Population genetic structure of an endangered Florida endemic plant, Illicium parviflorum*
Principal Investigator; \$498
- Canon National Parks Science Scholars Program (2002-2005)
Title: *Biogeographic patterns in Eastern North America: Phylogeography of a regional flora with implications for modeling potential future species distributions*
Principal Investigator; \$78,000
- Canon National Parks Science Scholars Program (2001-2002)
Title: *Potential barriers to migration in Fagus grandifolia: implications for modeling population distributions under global climate change*
Principal Investigator, Honorable Mention; \$2,000
- Great Smoky Mountains Natural History Association Carlos Campbell Fellowship (1999-2000)
Title: *Genetic resistance to beech bark disease in American beech in Great Smoky Mountains National Park*
Principal Investigator; \$3,600

Publications (*graduate students, **undergraduate students)

- Evans J, Morris AB (2016) Isolated coastal populations of *Tilia americana* var. *caroliniana* exhibit long-term persistence through vegetative growth. *American Journal of Botany*, 103, 1687-1693.
- Fan D, Hu W, Li B, Morris AB, Zheng M, Soltis DE, Soltis PS, Zhang Z (2016) Idiosyncratic responses of evergreen broad-leaved forest constituents in China to the late Quaternary climate changes. *Scientific Reports*, 6, 31044.
- Morris AB, Scalf C**, Burleyson A**, Johnson LT**, Trostel K* (2016) Development and characterization of microsatellite primers in the federally endangered *Astragalus bibullatus* (Fabaceae). *Applications in Plant Sciences*, 4, 1500126.
- Howell JS*, Morris AB (2016) Niche partitioning in sympatric *Sarracenia* species at Splinter Hill Bog Preserve, Baldwin County, Alabama. *Carnivorous Plant Newsletter*, 45, 12-18.
- Nelson G, Sweeney P, Wallace LE, Rabeler RK, Allard D, Brown H, Carter RJ, Denslow MW, Ellwood ER, Germain-Aubrey CC, Gilbert E, Gillespie E, Goertzen LR, Legler B, Marchant DB, Marsico TD, Morris AB, Murrell Z, Nazaire M, Neefus C, Oberreiter S, Paul D, Ruhfel BR, Sasek T, Shaw J, Soltis PS, Watson K, Weeks A, Mast AR (2015) Digitization workflows for flat sheets and packets of plants, algae, and fungi. *Applications in Plant Sciences*, 3, 1500065.
- Shaw J, Shafer HL**, Leonard OR*, Kovach MJ, Schorr M, Morris AB (2014) Chloroplast DNA sequence utility for the lowest phylogenetic and phylogeographic inferences in angiosperms: The tortoise and hare IV. *American Journal of Botany*, 101, 1987-2004.
- Hieb EE*, Nelson DH, Morris AB (2014) Oviductal eggs from road-kill turtles provide a novel source of DNA for population studies of the Alabama red-bellied turtle. *Conservation Genetics Resources*, 6, 837-839.
- Hieb EE*, Nelson DH, Morris AB (2014) Genetic monitoring reveals loss of microsatellite diversity in a breeding population of the endangered Alabama red-bellied turtle. *Endangered Species Research*, 23, 253-261.
- Morris AB, Millsaps NK**, Mason KQ**, Howell JS*, Speer JH (2014) Mature beech trees (*Fagus grandifolia*; Fagaceae) are persistently clonal in coves and beech gaps in the Great Smoky Mountains. *American Journal of Botany*, 101, 1-8.
- Jackson TG*, Nelson DH, Morris AB (2012) Phylogenetic relationships in the North America genus *Pseudemys* (Emydidae) inferred from two mitochondrial genes. *Southeastern Naturalist*, 11, 297-310.
- Hieb EE*, Jackson TG*, Nelson DH, Morris AB (2011) Characterization of eight polymorphic microsatellite loci for the endangered Alabama red-bellied turtle (*Pseudemys alabamensis*; Emydidae). *Conservation Genetics Resources*, 3, 781-783.
- Newell DH**, Morris AB (2010) Clonal structure of wild populations and origins of horticultural stocks of *Illicium parviflorum* (Illiciaceae). *American Journal of Botany*, 97, 1-5.
- Morris AB, Graham CH, Soltis DE, Soltis PS (2010) Reassessment of phylogeographical structure in an eastern North American tree using Monmonier's algorithm and ecological niche modelling. *Journal of Biogeography*, 37, 1657-1667.

- Judd WS, Abbott JR, Morris AB (2008) *Illicium guajaibonense*, elevated to subspecies rank and compared with the subspecies of *Illicium cubense* (Illiciaceae). *Journal of Botanical Research Institute of Texas*, 2, 799-806.
- Morris AB, Ickert-Bond SM, Brunson DB*, Soltis DE, Soltis PS (2008) Phylogeographical structure and temporal complexity in American sweetgum (*Liquidambar styraciflua*; Altingiaceae). *Molecular Ecology*, 17, 3889-3900.
- Morris AB, Bell CD, Clayton JW, Judd WS, Soltis DE, Soltis PS (2007) Phylogeny and divergence time estimation in *Illicium* with implications for New World biogeography. *Systematic Botany*, 32, 236-249.
- Soltis DE, Morris AB, McLachlan JS, Manos PS, Soltis PS (2006) Comparative phylogeography of unglaciated eastern North America. *Molecular Ecology*, 15, 4261-4293.
- Sherman TD, Boone E, Morris AB, Woodard A, Goldman E, Martin DL, Gautier C, O'Brien JJ (2008) Investigations of internal interactions between the parasitic barnacle *Loxothylacus texanus* (Rhizocephala: Sacculinidae) and its host *Callinectes sapidus* (Brachyura: Portunidae) using PCR techniques. *Journal of Crustacean Biology*, 28, 220-227.
- Morris AB*, Small RL, Cruzan MB (2004) Variation in frequency of clonal reproduction among populations of *Fagus grandifolia* Ehrh. in response to disturbance. *Castanea*, 69, 38-51.
- Guerrero A, Judd WS, Morris AB* (2004) A new species of *Illicium* subsection *Parviflora* from the Massif de la Hotte, Haiti. *Brittonia*, 56, 346-352.
- Scheen AC*, Brochmann C, Brysting AK, Elven R, Morris AB*, Soltis DE, Soltis PS, Albert VA (2004) Northern hemisphere biogeography of *Cerastium* (Caryophyllaceae): Insights from phylogenetic analysis of noncoding plastid nucleotide sequences. *American Journal of Botany*, 91, 943-952.
- Morris AB*, Small RL, Cruzan MB (2002) Investigating the relationship between *Cryptococcus fagisuga* and *Fagus grandifolia* in Great Smoky Mountains National Park. *Southeastern Naturalist*, 1, 415-424.
- Morris AB*, Baucom RS, Cruzan MB (2002) Stratified analysis of the soil seed bank in the cedar glade endemic *Astragalus bibullatus*: evidence for historical changes in genetic structure. *American Journal of Botany*, 89, 29-36.
- Presentations in the last five years (*graduate students, **undergraduate students)
- Morris AB (2017) Comparative plastomics, conservation genetics, and reproductive ecology of rare plants. Invited seminar given at Austin Peay State University, Clarksville, TN, January 2017.
- Morris AB (2016) Comparative plastomics with implications for plant phylogeography. Invited seminar given at Tennessee Technological University, Cookeville, TN, October 2016.
- Morris AB, Shaw J, Germain-Aubrey C, Beck JB (2016) Documenting a need for community data standards and a call for a new collaborative network in plant systematics and phylogeography. Talk given at the annual meeting of the Botanical Society of America, 30 July-3 August, Savannah, GA.
- Morris AB, Beck JB (2016) Expanding the role of SERNEC: Opportunities to address old taxonomic problems with new collaborative approaches. Talk given at the annual meeting of the Association of Southeastern Biologists, 31 March – 3 April, Concord, NC.

- Morris AB (2015) Comparative plastomics in plant phylogeography and systematics. Invited seminar given at University of the South, Sewanee, TN, October 2015.
- Morris AB, Leonard OR*, Shafer H**, Schorr M, Kovach M, Shaw Joey (2015) Variation in noncoding chloroplast DNA regions at the lowest taxonomic levels: Tortoise and Hare IV and beyond. Talk given at the annual meeting of the Botanical Society of America, 26-30 July 2015, Edmonton, Alberta, CA.
- Krimmel ER, Linton DL, Marsico TD, Monfils A, Morris AB^a, Ruhfel B (2015) connecting students to citizen science and curated collections. Talk given at the annual meeting of the Botanical Society of America, 26-30 July 2015, Edmonton, Alberta, Canada. ^a*Presenting author*
- Morris AB, Leonard OR*, Germain-Aubrey C, Shaw J (2015) The state of plant phylogeography: A review of methodological approaches. Talk given at the annual meeting of the Association of Southeastern Biologists, 1-4 April, Chattanooga, TN.
- Morris AB, Leonard OR*, Germain-Aubrey C, Shaw J (2014) Markers in time and space: The current state of the field of plant phylogeography. Talk given at the annual meeting of the Botanical Society of America, 26-30 July, Boise, ID.
- Morris AB (2014) It takes a village: Building a network of primarily undergraduate institutions to address large-scale phylogeographic problems. Talk given at the annual meeting of the Association of Southeastern Biologists, 2-5 April, Spartanburg, SC.
- Morris AB (2013) Which way did they go? Assessing biogeographic hypotheses in New World star anise. Talk given at the annual meeting of the Botanical Society of America, 27-30 July, New Orleans, LA.
- Moore M, Jabaily R, Martine C, Drenovsky R, Morris AB (2013) What is it like to apply to and work at a primarily undergraduate institution? A discussion session for grad students and postdocs. A Conference-wide discussion panel held at the annual meeting of the Botanical Society of America, 27-30 July, New Orleans, LA.
- Morris AB, Millsaps N**, Mason K**, Howell JS*, Speer JH (2013) The beech gaps revisited: determining reproductive strategy using nuclear microsatellite loci. Talk given at the annual meeting of the Association of Southeastern Biologists, 10-13, Charleston, WV. *Awarded the ASB Senior Research Award (2014), given for an especially meritorious manuscript presented orally by the senior author at the annual meeting.*

Teaching Experience

Exhaustive list of courses taught at Middle Tennessee State University (MTSU, 2011-present)

- Spr 2017 BIOL 1000 Intro to the Biology Major / majors requirement / 24 enrolled
 BIOL 3250 Genetics lecture / majors requirement / 130 enrolled (2 sections)
- Fall 2016 BIOL 1000 Intro to the Biology Major / majors requirement / 24 enrolled
 BIOL 3250 Genetics lecture / majors requirement / 60 enrolled
 BIOL 4280 Undergraduate Research / majors elective / 4 enrolled
 BIOL 6620 Biological Research / program requirement / 1 enrolled
 BIOL 6640 Thesis Research / program requirement / 1 enrolled
- Jun 2016 BIOL 3250 Genetics lecture / majors requirement / 12 enrolled
- Spr 2016 BIOL 3250 Genetics lecture / majors requirement / 33 enrolled

- BIOL 4120/5120 Flowering Plants / majors elective / 18 enrolled
 - BIOL 4280 Undergraduate Research / majors elective / 5 enrolled
 - BIOL 6630 Thesis Research / program requirement / 1 enrolled
- Fall 2015
 - BIOL 3250 Genetics lecture / majors requirement / 75 enrolled
 - BIOL 4060/6060 Dendrology / majors elective / 16 enrolled
 - BIOL 4280 Undergraduate Research / majors elective / 2 enrolled
 - BIOL 6620 Biological Research / program requirement / 1 enrolled
 - BIOL 6630 Thesis Research / program requirement / 2 enrolled
- May 2015
 - BIOL 4200 Senior Seminar / majors requirement / 13 enrolled
- Spr 2015
 - BIOL 3250 Genetics lecture / majors requirement / 75 enrolled
 - BIOL 4280 Undergraduate Research / majors elective / 3 enrolled
- Fall 2014
 - BIOL 3250 Genetics lecture / majors requirement / 77 enrolled
 - BIOL 3251 Genetics lab coordinator / majors requirement / 8 sections
 - BIOL 4060/6060 Dendrology / majors elective / 17 enrolled
 - BIOL 4280 Undergraduate Research / majors elective / 2 enrolled
 - BIOL 6630 Thesis Research / program requirement / 2 enrolled
- Sum 2014
 - MOBI 7010 Lab Rotation / program requirement / 1 enrolled
 - MOBI 7500 Directed Research / program requirement / 1 enrolled
- Spr 2014
 - BIOL 3250 Genetics lecture / majors requirement / 98 enrolled
 - BIOL 3251 Genetics lab coordinator / majors requirement / 8 sections
 - BIOL 6640 Thesis Research / program requirement / 3 enrolled
 - MOBI 7500 Directed Research / program requirement / 1 enrolled
- Fall 2013
 - BIOL 4060/6060 Dendrology / majors elective / 19 enrolled
 - BIOL 4200 Senior Seminar / majors requirement / 21 enrolled
 - BIOL 6620 Biological Research / program requirement / 2 enrolled
- Spr 2013
 - BIOL 3250 Genetics lecture / majors requirement / 97 enrolled
 - BIOL 3251 Genetics lab coordinator / majors requirement / 8 sections
 - BIOL 4280 Undergraduate research / 4 enrolled
- Fall 2012
 - BIOL 3250 Genetics lecture / majors requirement / 99 enrolled
 - BIOL 3251 Genetics lab / majors requirement / 47 enrolled (2 sections)
 - BIOL 4280 Undergraduate research / 3 enrolled
- Sum 2012
 - BIOL 3250 Genetics lecture / majors requirement / 23 enrolled
 - BIOL 3251 Genetics lab / majors requirement / 23 enrolled
- Spr 2012
 - BIOL 3250 Genetics lecture / majors requirement / 94 enrolled
 - BIOL 3251 Genetics lab / majors requirement / 22 enrolled
 - BIOL 4280 Undergraduate research / 5 enrolled
 - MOBI 7300 Special Topics / 5 enrolled
- Fall 2011
 - BIOL 3250 Genetics lecture / majors requirement / 75 enrolled
 - BIOL 3251 Genetics lab / majors requirement / 48 enrolled (2 sections)

Exhaustive list of courses taught at University of South Alabama (USA, 2007-2011)

- Spr 2011
 - BLY 302 Genetics lecture / majors requirement / 50 enrolled
 - BLY 490 Molecular Ecology lecture and lab / majors elective / 10 enrolled
 - BLY 494 Undergraduate Directed Studies / major elective / 1 enrolled
 - BLY 594 Graduate Directed Studies / major elective / 2 enrolled

Synergistic activities

Professional Service

- 2016-2020 *Systematic Botany*, journal of American Society of Plant Taxonomists (ASPT) Associate Editor
- Fall 2016 National Science Foundation (NSF) DEB Electronic Reviewer
- Spring 2016 National Geographic Society (NGS) Grant Reviewer
- Spring 2016 Society of Herbarium Curators (SHC) Grant Reviewer
- 2015-2016 Association of Southeastern Biologists (ASB) President-Elect
- Spring 2015 American Society of Plant Taxonomists (ASPT) Grant Reviewer
- 2014-2015 Southeastern Section of Society of Herbarium Curators Chair
- 2014-2015 Association of Southeastern Biologists (ASB) Vice-President
- Fall 2014 National Science Foundation (NSF) DEB Panelist
- Spring 2014 National Science Foundation (NSF) DEB Panelist
- Summer 2011 National Science Foundation (NSF) DUE Panelist
- 2010-present Association of Southeastern Biologists (ASB) Web Editor
- 2010-2013 Association of Southeastern Biologists (ASB) Member-at-Large
- Summer 2010 National Science Foundation (NSF) DUE Panelist
- 2009-2011 Association of Southeastern Biologists (ASB) Education Comm.
- 2007-2009 Botanical Society of America (BSA) Webpage Comm.

Reviewer for *African Journal of Biotechnology; American Journal of Botany; Annals of Botany; Applications in Plant Sciences; Botanical Journal of the Linnean Society; Conservation Biology; Conservation Genetics; Evolution; Genetica; International Journal of Molecular Sciences; International Journal of Plant Sciences; Journal of Biogeography; Journal of Systematics and Evolution; Journal of the Torrey Botanical Society; Journal of Tropical Forest Science; Molecular Ecology; Molecular Phylogenetics and Evolution; Organisms, Diversity, and Evolution; Plant Molecular Biology Reporter; PLoS One; and Systematic Botany.*

University, College, and Departmental Activities

Department or School:

- 2014-2016 MTSU Department of Biology Web Committee
- 2014-2015 MTSU Department of Biology Strategic Planning Committee
- 2014-present MTSU Department of Biology Freshman Course Committee
- 2014-2015 MTSU Department of Biology Clicker Committee
- 2013-present MTSU Department of Biology Greenhouse Advisory Committee
- 2011-present MTSU Department of Biology Graduate Curriculum Committee
- 2011-2015 MTSU Department of Biology Graduate Scholarship Committee
(Chair 2014-2015)
- 2011-2012 MTSU Department of Biology Genomics Faculty Search Committee
- 2008-2009 USA Department of Biology Microbiology Faculty Search Committee
- 2009-2010 USA Department of Biology Instructor Search Committee
- 2010-2011 USA Department of Biology Genetics Faculty Search Committee

College:

- 2017-present MTSU Molecular Biosciences PhD Program Executive Committee Chair
- 2015-present MTSU Molecular Biosciences PhD Program Executive Committee
- 2010-2011 USA College of A&S Support and Development Awards Committee
- 2008-2010 USA College of A&S Academic Programs and Planning Committee

University:

- 2016-2017 MTSU University Committee on Academic Misconduct
- 2014-present MTSU University Building Naming Committee
- 2013-2014 MTSU University Committee on Academic Misconduct
- 2009-2011 USA Institutional Animal Use and Care Committee (IACUC)
- 2007-2010 USA Biology Student Association (BSA) Faculty Advisor
- 2007-2010 USA University Committee on Undergraduate Research (UCUR)
Summer Program Mentor
- 2007 USA Alabama Louis Stokes Alliance for Minority Participation
(ALSAMP) Mentor

Public Service

- 2013-2014, 2016 Tennessee Science Olympiad Regional Tournament (MTSU) Event Coordinator
Elementary (2013, 2014, 2016) and High School (2013, 2014)
- 2011 Mobile County (Alabama) Schools Science Fair Judge
- 2010 Mobile County (Alabama) Schools Teacher In-service presentation (Epigenetics)

Membership in professional societies

American Society of Plant Taxonomists (ASPT)
Association of Southeastern Biologists (ASB)
Botanical Society of America (BSA)
Southern Appalachian Botanical Society (SABS)
Society of Herbarium Curators (SHC)