

ASHLEY BRIGHAM MORRIS

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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

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

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 (2014-2016)
Title: *Population genetic structure of two federally endangered legumes, Astragalus bibullatus and Dalea foliosa.*
Principal Investigator, \$23,758.

MTSU Foundation Special Projects (2014)

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. \$5112.

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

Title: *ATBI: Soil microbial communities of the beech gaps of Great Smoky Mountains National Park*

Principal Investigator. \$3500.

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. \$9950.

BP / Marine Environmental Sciences Consortium (MESC) at Dauphin Island Sea Lab (DISL) (2011)

Title: *Gulf of Mexico ecosystem integrity: Resilience of seagrass beds to oil contamination.*

Co-Principal Investigator. \$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. \$6334.

National Science Foundation (2010-2012)

Title: *Integrating genomics and bioinformatics into an ecology and evolution-based undergraduate curriculum.*

Principal Investigator (Co-PIs: Dr. Sinead Ni Chadhain, Dr. Tim Sherman, and Dr. Rob Gray). \$199,496,.

International Carnivorous Plant Society (2009-2010)

Title: *Assessing abiotic and genetic control of pitcher morphology in *Sarracenia*.*

Principal Investigator. \$3400.

Univ. of South Alabama A&S Support and Development (2009-2010)

Title: *Molecular systematics and population genetics seminar series.*

Principal Investigator. \$1500.

LI-COR Biosciences (2008-2009)

Title: *Genomics Education Matching Fund (GEMF).*

Principal Investigator. \$61,739 (plus \$41,000 match from USA).

Univ. of South Alabama Research Council (2008-2009)

Title: *Phylogeographic structure of eastern North American trees: a molecular approach.*

Principal Investigator. \$4997.

Univ. of South Alabama A&S Summer Professional Development (2008-2009)

Title: *Phylogeographic structure of eastern North American trees: a molecular approach.*

Principal Investigator. \$6000.

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, \$1897.

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, \$2000.

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, \$3600.

Publications (student names are underlined)

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*, DOI 10.1007/s12686-014-0283-8.

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 (posters are explicitly noted, student names are underlined)

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.*

Morris AB (2012) Plant phylogeography 2.0: innovative approaches for a stagnating field. Symposium talk given at the annual meeting of the Association of Southeastern Biologists, April 4-7, Athens, GA.

Hieb EE, Nelson DH, **Morris AB** (2011) A population genetic analysis of the Alabama red-bellied turtle. Poster given at the annual meeting of the Association of Southeastern Biologists, April 13-16, Huntsville, AL.

Morris AB, Newell D (2011) Clonal structure in *Illicium parviflorum* as detected by ISSR markers. Talk given at the annual meeting of the Association of Southeastern Biologists, April 13-16, Huntsville, AL. *Awarded the North Carolina Botanical Garden Award for a paper given at the meeting that best advances our understanding of the biology and conservation for southeastern plants.*

Bulla N, Boettcher A, **Morris A** (2010) Analysis of genetic structure in a Gulf Coast population of the seagrass. Talk given at the annual meeting of the National Conference on Undergraduate Research, April 15-17, *Mis Ruppia maritima* soula, Montana.

Howell JS, **Morris AB** (2010) Species distribution and hybridization of *Sarracenia* at Splinter Hill Bog Preserve. Talk given at the annual meeting of the Association of Southeastern Biologists, April 7-10, Asheville, NC.

Morris AB, Graham CH, Soltis DE, Soltis PS (2010) Everything but the kitchen sink: new phylogeographic analyses in *Fagus grandifolia*. Talk given at the annual meeting of the Association of Southeastern Biologists, April 7-10, Asheville, NC. *Awarded the ASB Senior Research Award (2011), given for an especially meritorious manuscript presented orally by the senior author at the annual meeting.*

Invited Seminars

Morris AB (2011) Plant phylogeography: Where we've been and where we should be going. Invited talk given in the Department of Biological and Environmental Sciences, University of Tennessee, Chattanooga.

Morris AB (2011) Intraspecific divergence time estimation reveals temporal complexity in phylogeographic patterns of American sweetgum (*Liquidambar styraciflua*; Altingiaceae). Invited talk given in the Department of Biology, Middle Tennessee State University, Murfreesboro, Tennessee.

Morris AB (2009) Reconstructing the biogeographic history of eastern North American forests using molecular approaches. Invited talk given in the Department of Forestry and Geology, University of the South, Sewanee, Tennessee.

Morris AB (2009) New approaches to phylogeography of eastern North American forests. Invited talk given in the Department of Biology, University of New Orleans, New Orleans, Louisiana.

Morris AB (2007) Phylogeography of eastern North American trees: evidence for multiple refugia? Invited talk given at Louisiana Natural History Museum, Louisiana State University, Baton Rouge, Louisiana.

Morris AB (2007) Phylogeography of eastern North American trees: evidence for multiple refugia? Invited talk given at Dauphin Island Sea Lab, Dauphin Island, Alabama.

Teaching Experience

Middle Tennessee State University (2011-present)

BIOL4200 Senior Seminar, Majors Required Course – Fall 2013
BIOL4060/6060 Dendrology, Majors Elective Course – Fall 2013/Fall 2014
BIOL3250 Genetics Lecture, Majors Core Course - Fall 2011, Fall / Spring 2012 - present
BIOL3251 Genetics Laboratory, Corequisite - Fall 2011, Spr/Sum/Fall 2012
BIOL3251 Genetics Laboratory Coordinator - Spr 2014/Fall2014

University of South Alabama (2007-2011)

BLY302 Genetics Lecture, Majors Core Course - Spring/Fall 2010, Spring 2011
BLY490 Special Topics: Molecular Ecology Lecture and Laboratory - Spring 2011
BLY490 Special Topics: Introduction to DNA Barcoding Lecture and Laboratory - Spring 2010
BLY311 Genetics Lecture - Spring 2007-Fall 2009
BLY490 Special Topics: Molecular Markers Lecture - Spring 2008, 2009
BLY122 General Biology II Laboratory - Spring 2008, 2009
BLY312 Genetics Laboratory - Spring and Fall 2007

University of Florida (2001-2004)

BOT2800 Plants in Human Affairs Lecture - Fall 2004
BOT2011 Plant Diversity Laboratory - Spring 2001, 2002
BOT2010 Introduction to Botany Laboratory - Summer 2001
BOT3151 Local Flora of North Florida Laboratory - Summer 2002

Washington State University (2000)

BIOL102 General Biology Laboratory - Fall 2000

University of Tennessee (1998-2000)

BIO240 Genetics Laboratory - Summer 2000
BIO250 Ecology Laboratory - Spring 2000
BOT Plant Ecology Laboratory - Fall 1999
BIO102 Biology II for non-majors Laboratory - Spring 1999
BIO101 Biology I for non-majors Laboratory - Fall 1999

Synergistic activities

Professional Service

Southeastern Section of Society of Herbarium Curators, Chair - 2014-present
Association of Southeastern Biologists (ASB) Vice President - 2014-2015
Association of Southeastern Biologists (ASB) Web Editor - 2010-present
Association of Southeastern Biologists (ASB) Education Committee, 2009-2011
Association of Southeastern Biologists (ASB) Executive Committee, Member-at-Large 2010-2013
Botanical Society of America (BSA) Webpage Committee, 2007-2009
Reviewer for *African Journal of Biotechnology*; *American Journal of Botany*; *Botanical Journal of the Linnean Society*; *Botany*; *Conservation Biology*; *Conservation Genetics*; *Evolution*; *Genetica*; *International Journal of Molecular 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

NSF BIO Advisory Panel - Fall 2014
NSF BIO Advisory Panel - Spring 2014
NSF DUE Advisory Panel - Summer 2011
NSF DUE Advisory Panel - Summer 2010

University, College, and Departmental Activities

Middle Tennessee State University, Building Naming Advisory Committee, 2014-2015
Middle Tennessee State University, Department of Biology Committee on Strategic Planning, 2014-2015
Middle Tennessee State University, Department of Biology Committee on Web Design, 2014-2015
Middle Tennessee State University, Department of Biology Committee on Graduate Student Awards and Scholarships 2012-2014
Middle Tennessee State University, University Committee on Academic Misconduct, 2013-2014
Middle Tennessee State University, Regional Science Olympiad, Forestry Event Coordinator, 2013
Middle Tennessee State University, Dept of Biology Graduate Admissions Committee, 2012-2014
University of South Alabama Institutional Animal Care and Use Committee (IACUC), 2009-2011
University of South Alabama College of Arts and Sciences Support and Development Award Committee, 2010-2011
University of South Alabama College of Arts and Sciences Academic Programs and Planning Committee (APPC), 2008-2010
University of South Alabama Biology Student Association (BSA) Faculty Advisor, Fall 2007-Spring 2010
University of South Alabama University Committee on Undergraduate Research (UCUR) Summer Program Mentor, Summer 2007-2010
Alabama Louis Stokes Alliance for Minority Participation (ALSAMP) Mentor, Fall 2007

Membership in professional societies

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