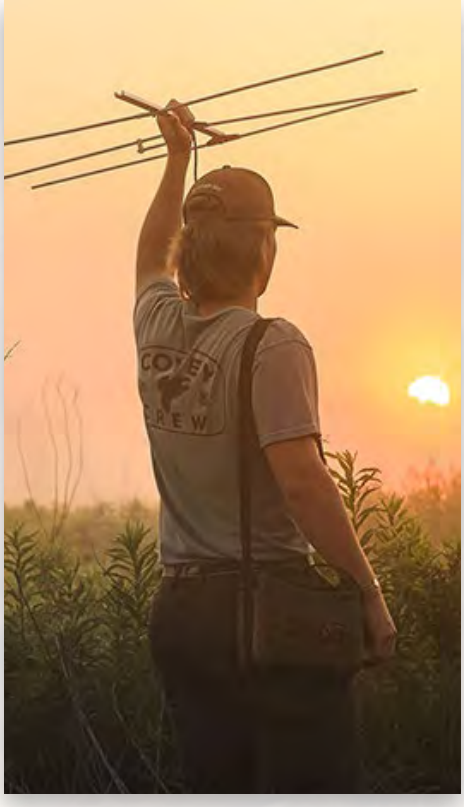
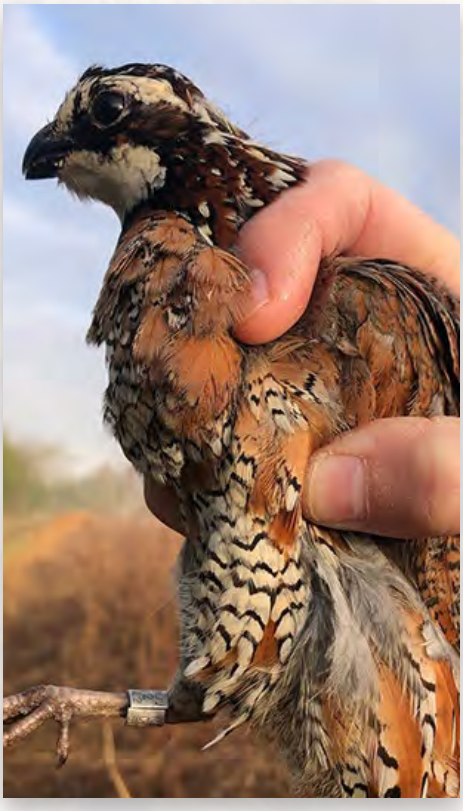
MISSISSIPPI STATE UNIVERSITY™
FOREST AND WILDLIFE RESEARCH CENTER

James C. Kennedy Endowed Chair in

UPLAND GAMEBIRD ECOLOGY





Bryan Endowment for

BOBWHITE RESTORATION

UPLAND BIRD PROGRAM
MISSISSIPPI STATE UNIVERSITY

2023-2024
ANNUAL REPORT

TAKING CARE OF WHAT MATTERS

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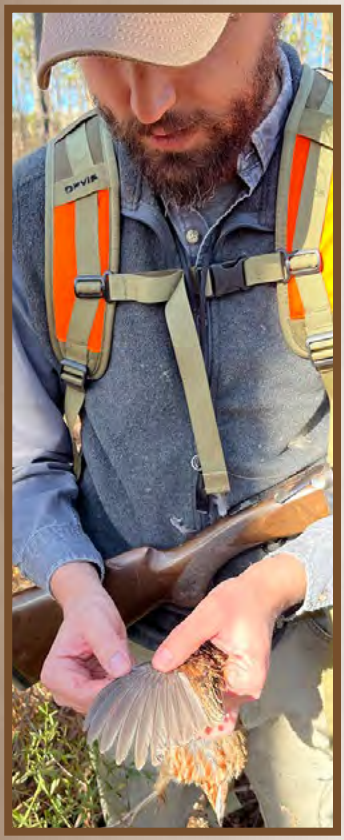
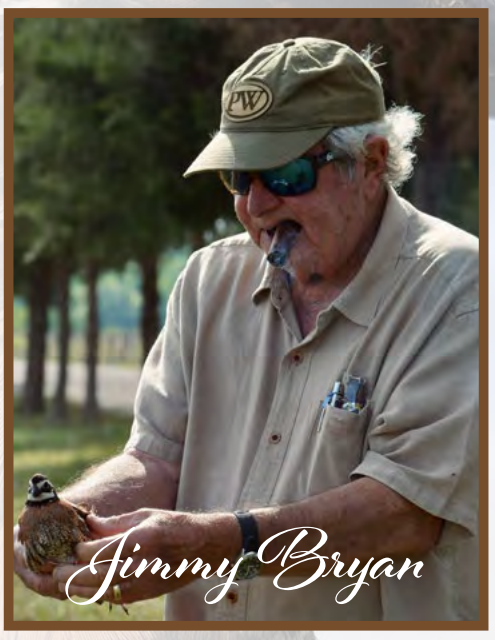


ABOUT

Advancing Upland Bird *Conservation Through* Endowed *Support*

In 2018, conservationist Jimmy Bryan established the Bryan Endowment for Bobwhite Habitat Restoration at Mississippi State University. The endowment's mission is to "advance restoration of bobwhite quail populations and Southeastern native grasslands as a component of working agricultural landscapes through research, conservation, and education."



Soon after, fellow conservation advocate James C. Kennedy founded the James C. Kennedy Endowed Chair in Upland Bird Ecology at MSU. Kennedy, a passionate waterfowl hunter and longtime supporter of wildlife research, previously funded an endowed chair in waterfowl ecology at the university more than a decade ago.

Together, the visionary commitments of Bryan and Kennedy have created a unique and powerful foundation for the Upland Bird Program at MSU. These two endowments, working in tandem, position the Mississippi State University Upland Bird Program as a leader in science-driven conservation for upland birds. Their support brings renewed energy, resources, and purpose to training future leaders and advancing cutting-edge research focused on restoring and managing bobwhite quail, turkey, dove, and woodcock populations across the Southeastern U.S.

From the CHAIR

Over the past two years, I've had the privilege of overseeing both the James C. Kennedy Endowment in Upland Gamebird Ecology and the Bryan Endowment for Bobwhite Habitat Restoration. The generosity of these visionary donors has been central to the growth and impact of Mississippi State University's Upland Gamebird Program.

Thanks to the continued support of Mr. James C. Kennedy, Jake and Harriet McFadden, Jerry and Christan Toney, Jimmy Bryan, and many dedicated landowners, our team has advanced innovative research in working landscapes that directly informs habitat management across the Southeast.

Since 2022, these endowments—leveraged with nearly $2 million in external funding—have supported multiple graduate students, postdoctoral researchers, a research associate, and numerous undergraduate student workers. This investment has resulted in eight peer-reviewed publications and delivery of over 40 presentations at national, regional, and state-level conferences. Additionally, endowment funds have supported training opportunities for undergraduate research scholars, interns, and seasonal technicians in gamebird ecology and management.

Our program continues to grow. Since 2019, we have graduated 10 master's students, all of whom have successfully advanced into their professional careers. Currently, we are mentoring four graduate students conducting research on Northern bobwhite movement ecology, conservation decision support tools, avian diversity, and wild turkey foraging behavior. We have also supported two postdoctoral associates leading research in precision agriculture and bobwhite population dynamics.

The success of our program would not be possible without the Bryan and Kennedy endowments and the support of our partners, including the Mississippi Department of Wildlife, Fisheries, and Parks; The Jones Center at Ichauway; the U.S. Department of Agriculture's Natural Resources Conservation Service and Farm Service Agency; Working Lands for Wildlife; the National Wild Turkey Federation; Turkeys for Tomorrow; Quail Forever; and the National Fish and Wildlife Foundation. We are also grateful for institutional support from the MSU Forest and Wildlife Research Center and the Mississippi Agricultural and Forestry Experiment Station.

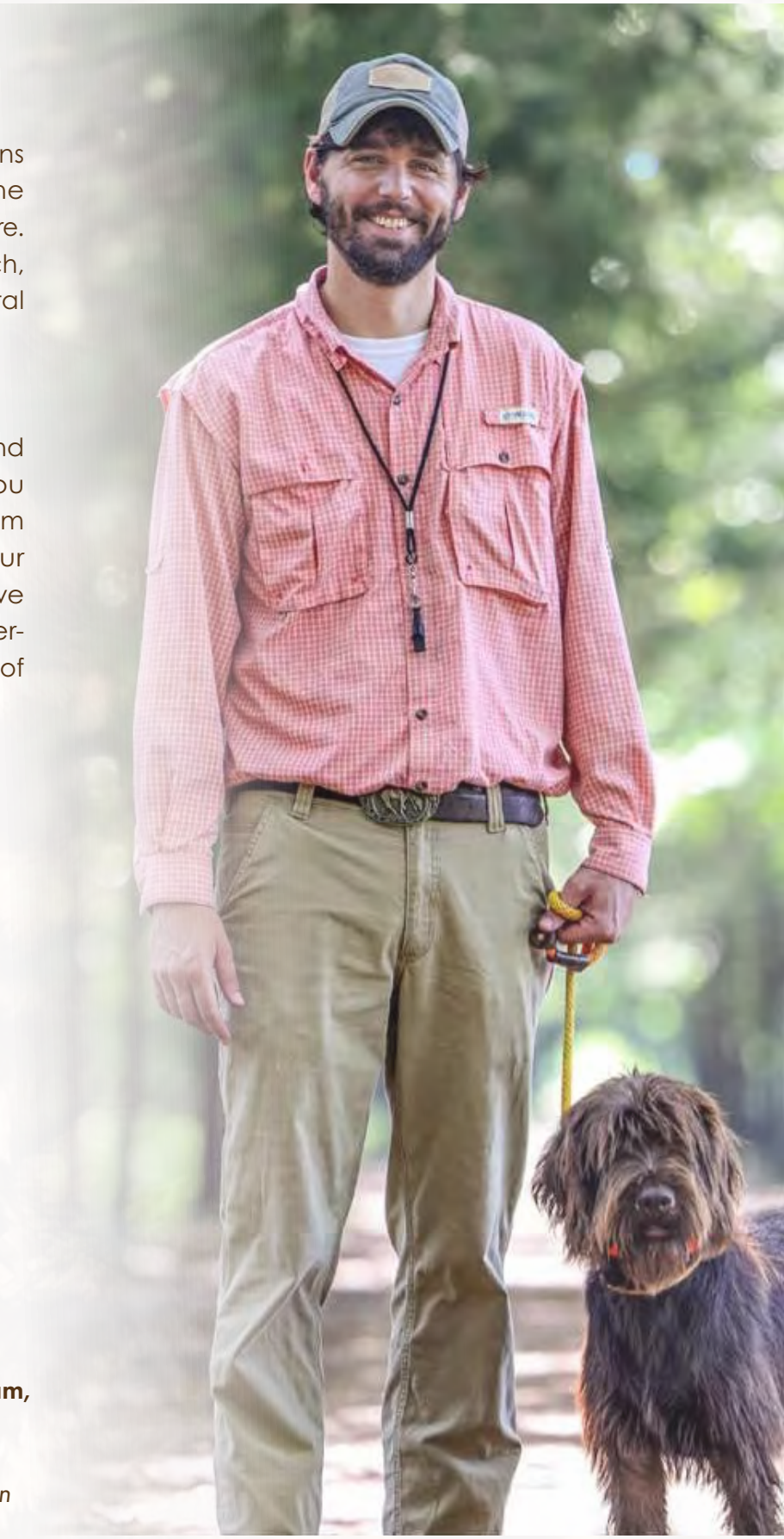
Our outreach capacity has expanded with the addition of James Callicutt, Gamebird Extension Specialist, who brings extensive experience from his previous roles with the Mississippi Department of Wildlife, Fisheries, and Parks and Ducks Unlimited. Alongside Extension Associate Logan Tomlinson, he launched the MSU Gamebird Extension Program, which translates research into practical guidance for landowners and wildlife professionals. Their efforts include the Gamebird University Podcast and active engagement on Facebook, Instagram, and YouTube.

We've also strengthened our communications with Angel Parrish, Graphic Designer in the Department of Wildlife, Fisheries and Aquaculture. Her work enhances the visibility of our research, events, and outreach across print and digital platforms.

Looking ahead, the future of our research and education program is bright. We hope you enjoy this summary of our projects and team members. With the ongoing support of our donors, partners, students, and faculty, we are well-positioned to provide national leadership in advancing the science and practice of gamebird management.

— Dr. Mark McConnell

Associate Professor of the Upland Bird Program,
James C. Kennedy Endowment
in Upland Gamebird Ecology &
Bryan Endowment for Bobwhite Habitat Restoration



New MEMBERS

JAMES CALLICUTT

Extension Instructor, Wildlife, Fisheries and Aquaculture

Callicutt is a native Mississippian and Extension Instructor in the Department of Wildlife, Fisheries and Aquaculture at Mississippi State University, where he serves as the Waterfowl and Upland Gamebird Extension Specialist. He earned both his B.S. and M.S. in Wildlife Biology and Management from MSU and brings more than 16 years of experience in the research, conservation, and management of waterfowl, upland gamebirds, and the habitats they depend on.

Before joining MSU Extension faculty, Callicutt worked as a State Waterfowl Biologist and Private Lands Biologist with the Mississippi Department of Wildlife, Fisheries, and Parks, and later as a Private Lands Biologist for Ducks Unlimited. His lifelong passion for bird hunting—particularly waterfowl—helped shape his career in gamebird conservation and management.

As the leader of the MSU Extension Gamebird Program, Callicutt translates cutting-edge research into practical, science-based management strategies for landowners, managers, producers, and hunters. His outreach activities are having a national impact, fostering collaboration to strengthen both gamebird habitat and overall wildlife conservation.

LOGAN TOMLINSON

Extension Associate I, Wildlife, Fisheries and Aquaculture

Tomlinson is an Extension Associate I in the College of Forest Resources, Department of Wildlife, Fisheries and Aquaculture at Mississippi State University. She earned her B.S. in Conservation Biology from MSU.

As an undergraduate, Tomlinson gained broad research experience in waterfowl ecology, working on projects involving abundance surveys, web tagging, banding, habitat management, and duckling survival. She also contributed to a wetland monitoring project, where she developed skills in water quality analysis, soil conservation, species monitoring, and sampling macroinvertebrates, fish, and amphibians.

Today, Tomlinson is an active member of the MSU Gamebird Program, helping deliver science-based information that supports the conservation and management of gamebird species across Mississippi.

ANGEL PARRISH

Graphic Designer, Wildlife, Fisheries and Aquaculture

Parrish is the graphic designer and chair of the Communications Committee for the Department of Wildlife, Fisheries and Aquaculture at Mississippi State University. A proud MSU alumna, she holds a Bachelor of Fine Arts in Graphic Design from Mississippi State.

In her role, Parrish leads the department's outreach and communications, developing visual content and strategic messaging that showcase its people, research, and mission. She works closely with faculty, staff, and students to support marketing, recruitment, public relations, and grant initiatives. From recruitment materials to research proposal visuals, she plays a vital role in telling the department's story and promoting its impact in training the next generation of conservation leaders.

Her creativity and dedication have greatly strengthened the department's visibility and influence across multiple platforms.

Meet the Lab

CURRENT GRADUATE STUDENTS

JORDON BARON
M.S. Student

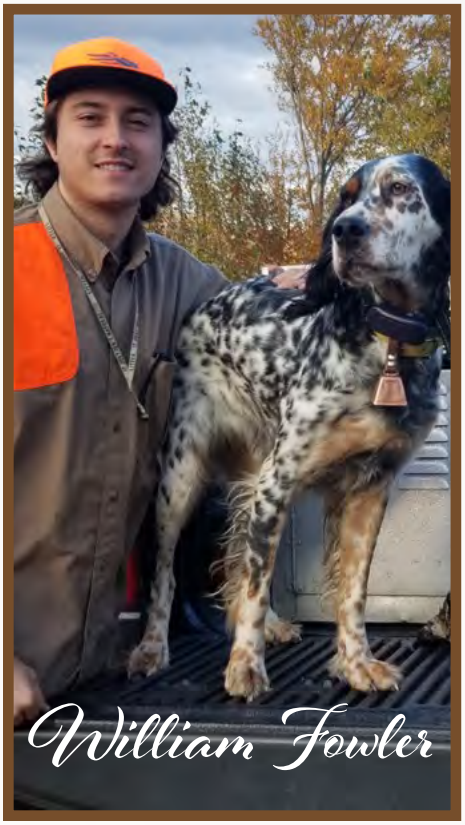
Thesis: Northern bobwhite winter resource selection in a supplementally-fed, fire-managed longleaf forest

Home State: Minnesota

LOGAN PRUITT
M.S. Student

Thesis: Evaluating avian diversity and monitoring techniques on Conservation Reserve Program tree practices in the Southeastern United States

Home State: Mississippi



WILLIAM FOWLER
M.S. Student

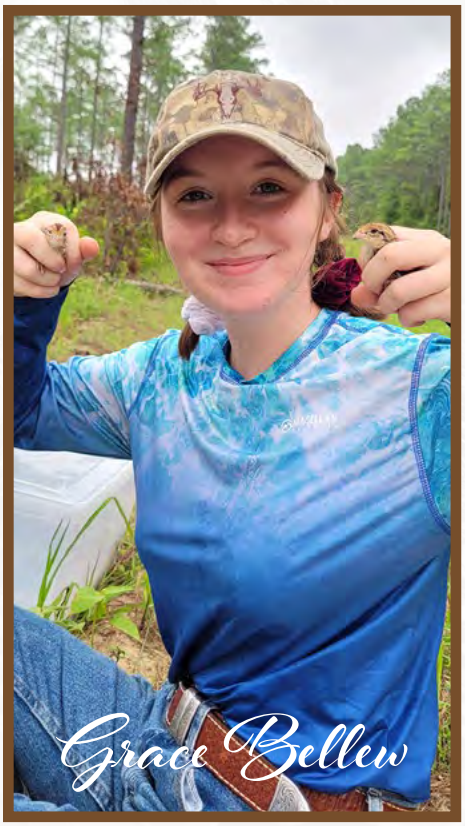
Thesis: Wild turkey forage availability and movement in conventional versus regenerative food plot management

Home State: Virginia

DANIEL EGERSON
Ph.D. Student

Dissertation: Examining motivations, barriers, and technicalities associated with CRP decision support tool in the Midwest and Southern United States

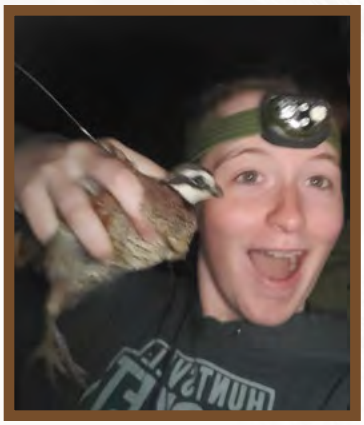
Home State: Nigeria



GRACE BELLEW

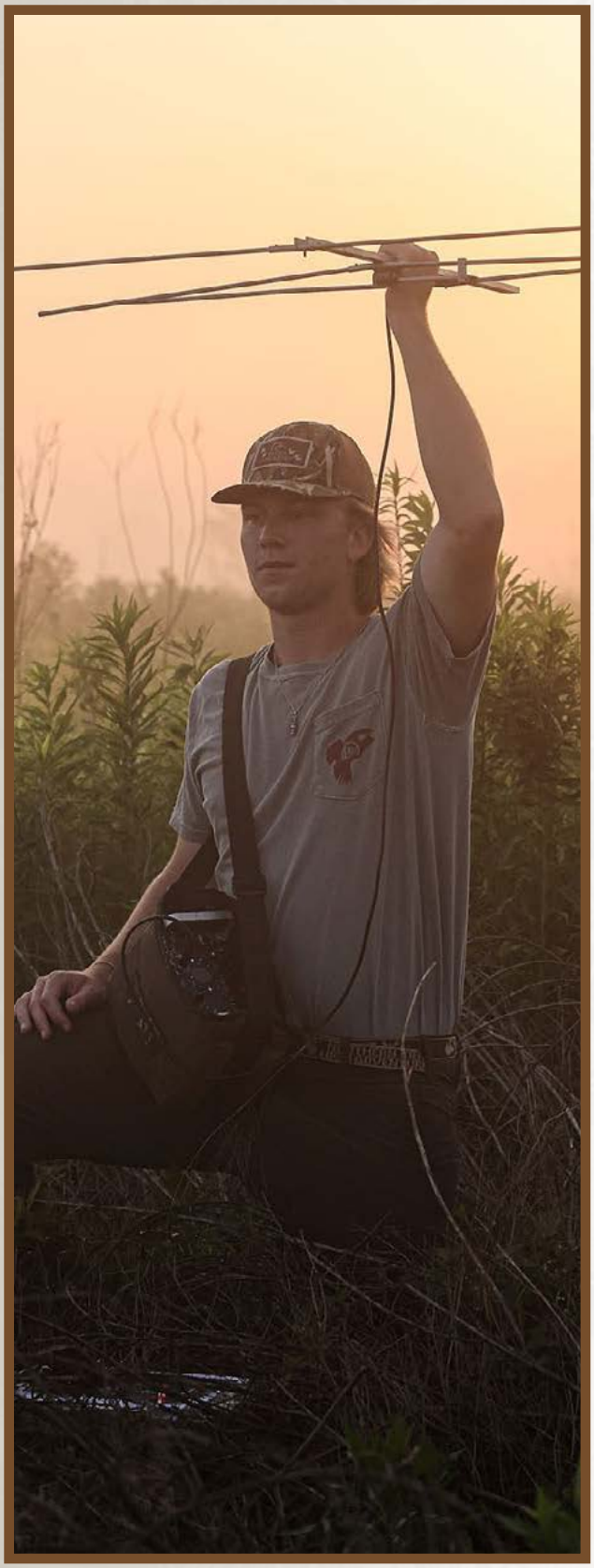
James C. Kennedy Upland Bird Internship

Bellew is the inaugural recipient of the James C. Kennedy Upland Bird Internship. She has contributed to several key projects within the lab, including:



- Northern Bobwhite Chick Imprinting Study
- Fire Seasonality Research
- Small Acreage Population Study

GALT HOUSE



the Lab continued

POST-DOCTORAL ASSOCIATE

DR. AQIL TARIQ

Project: Mapping Economic Opportunities for Wildlife Conservation in Agricultural Landscapes Using Precision Agriculture Technology

Home State: Pakistan

RESEARCH ASSOCIATE

RYAN MANN

Project: Technical Assistance Partnership for Targeted Conservation Delivery in Mississippi

Home State: Mississippi

Research ALUMNI

Olivia Lappin

Caleb Blake

Jeff Grayum

Michael Warren

Kyle Watkins

Jenny Sublet

OLIVIA LAPPIN
M.S. Student

Thesis: Northern Bobwhite Breeding Season Calling Behavior and Roost Site Selection in a Working Agricultural Landscape in Clay County, Mississippi

Home State: Maine

Graduation: Spring 2023

Current Position: IHM Rights of Way & Energy Coordinating Wildlife Biologist, Pheasants Forever, Inc. and Quail Forever

CALEB BLAKE
M.S. Student

Thesis: Motivations for Habitat Management of Private Lands in the Southeastern United States: Implications for At-Risk Species

Home State: Alabama

Graduation: Spring 2024

Current Position: Private Lands Coordinator, Alabama Division of Wildlife and Freshwater Fisheries

JEFF GRAYUM
M.S. Student

Thesis: Assessing Northern Bobwhite Habitat Use and Short-Term Response to Prescribed Fire in an Intensively Managed Longleaf Pine Ecosystem

Home State: Missouri

Graduation: Spring 2024

Current Position: Conservation Field Biologist, The Peregrine Fund

MICHAEL WARREN
M.S. Student

Thesis: Effects of Fire Seasonality on Bachman's Sparrows on the Longleaf Pine Forest of Southern Mississippi

Home State: Wisconsin

Graduation: Fall 2023

Current Position: Ph.D. Student, North Dakota State University

KYLE WATKINS
M.S. Student

Thesis: Quantifying the Economic Impact of Conservation Policy Changes Utilizing Precision Agriculture Tools

Home State: North Carolina

Graduation: Fall 2022

Current Position: Regional WMA Biologist, Mississippi Department of Wildlife, Fisheries, and Parks

JENNY SUBLET
M.S. Student

Thesis: Developing a Precision Agriculture Framework to Assess Financial Viability of Decisions in Farming and Conservation

Home State: Florida

Graduation: Fall 2024

Current Position: Pending

Lab ACTIVITIES

FALL COVEY COUNT COLLABORATION

In collaboration with the Mississippi Department of Wildlife, Fisheries, and Parks, our lab conducts annual fall covey counts to support long-term monitoring of Northern bobwhite populations across the state.

AVIAN SCIENCE CENTER EDUCATIONAL OUTREACH

Fall Covey Count Collaboration

Our team connects with local elementary students through visits to the Avian Science Center, offering hands-on learning experiences in avian ecology and Northern bobwhite research.

PRESCRIBED FIRE IMPLEMENTATION

We conduct prescribed burns across multiple Mississippi properties to support ecological research and habitat management, advancing our understanding of fire's role in maintaining healthy upland ecosystems.

Prescribed Fire Implementation

Prescribed Fire Implementation

Program EVENTS AND

SUSTAINABLE AGRICULTURE SUMMIT PANEL

Dr. Mark McConnell participated in a panel on ecosystem services in agriculture at the Sustainable Agriculture Summit in Charlotte, NC, alongside representatives from Syngenta, Ducks Unlimited, and Pheasants Forever/ Quail Forever.

GAMEBIRD MANAGEMENT WORKSHOP

Gamebird Management Workshop

In collaboration with Quail Forever; Mississippi Department of Wildlife, Fisheries, and Parks; National Wild Turkey Federation; Turkeys for Tomorrow; and Mossy Oak Gamekeepers, we hosted a Gamebird Management Workshop in Starkville, MS, featuring a live prescribed fire demonstration to showcase its role in managing turkey and quail habitat.

ACTIVITIES

FIELD COLLABORATION

Our team works closely with Quail Forever, Wildlife Mississippi, and the Mississippi Department of Wildlife, Fisheries, and Parks to provide technical guidance on private lands conservation delivery.

LEARN TO HUNT PROGRAM

Learn to Hunt Program

We partnered with Quail Forever to host a Learn to Hunt event for newly hired biologists at Prairie Wildlife in West Point, MS.

Invited Speaking
ENGAGEMENTS

CANOLA COUNCIL OF CANADA ANNUAL MEETING

Location: Saskatchewan, Canada

Presentation: *Converting Unproductive Acres to Wildlands with Precision Agriculture*

COMMODITY CLASSIC – THE USE OF PRECISION AGRICULTURE IN CONSERVATION DELIVERY

Location: New Orleans, LA

Presentation: *Finding the Sweet Spot: Combining Precision Agriculture and Conservation to Build a Sustainable and Diverse Farming Landscape*

PHEASANTS FOREVER / QUAIL FOREVER – CROSS-BOUNDARY COLLABORATION WORKSHOP

Location: Akron, IA

Presentation: *Upland Habitat Conservation Needs at Scale*

Dr. Mark McConnell has been invited to present his research and applied conservation work at national and international conferences and symposia, highlighting the increasing interest in integrating precision agriculture with wildlife conservation and habitat management.

Location: Minneapolis, MN

Presentation: *Opportunities for Quail Management in Working Landscapes Using Precision Agriculture*

NATIONAL PHEASANT FEST & QUAIL CLASSIC – WORKING LANDS FOR WILDLIFE QUAIL SYMPOSIUM

Location: Minneapolis, MN

Panel Topic: *Connecting Agriculture and Habitat for a Sustainable Future*

NATIONAL PHEASANT FEST & QUAIL CLASSIC – PANEL DISCUSSION

Location: La Jolla, CA

Presentation: *Identifying Opportunities for Biodiversity in Cotton Production*

COTTON SUSTAINABILITY SUMMIT

Media ENGAGEMENTS

Dr. Mark McConnell has appeared on several prominent podcasts to discuss his research on wildlife conservation, habitat management, and the use of precision agriculture in working landscapes. These interviews allowed him to share scientific insights with practitioners, landowners, and conservation professionals.

HABITAT UNIVERSITY PODCAST

Episode: *"Conserving Wildlife in Agricultural Landscapes: Creating Win-Win Solutions for Wildlife and Farmers"*

https://habitatuniversity.libsyn.com/conserving-wildlife-in-ag-landscapes-creating-win-win-solutions-for-wildlife-and-farmers-ep-25

PRIMOS SPEAK THE LANGUAGE PODCAST

Episode: *"Cautiously Optimistic: Quail in the Southeast (Part 2)"*

https://podcasts.apple.com/dm/podcast/cautiously-optimistic-quail-in-the-southeast-part-2/id1292749928?i=1000636906806

WILD TURKEY SCIENCE PODCAST

Episode: *"Density Dependence in Upland Game Birds"*

https://podcasts.apple.com/us/podcast/density-dependence-in-upland-game-birds-14/id1666903553?i=1000604957274

MOSSY OAK GAMEKEEPERS PODCAST

Episode: *"The Plight of the Bobwhite Quail"*

https://mossyoakgamekeeper.com/podcasts/ep92-the-plight-of-the-bobwhite-quail/

AMERICAN WINGSHOOTING PODCAST

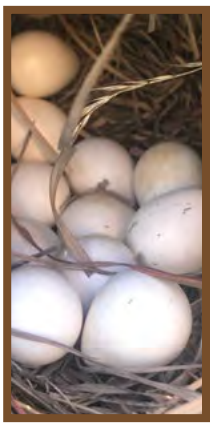
Episode: *"Mark McConnell"*

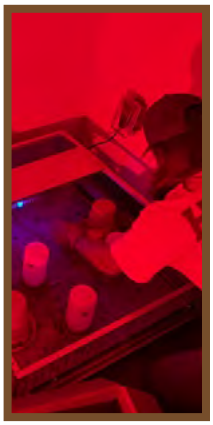
https://podcasts.apple.com/gb/podcast/ep49-mark-mconnell/id1620439702?i=1000642093005

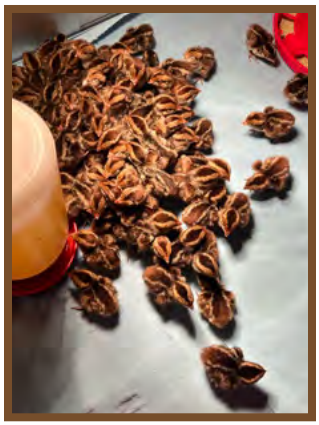
Research HIGHLIGHTS

Chick Foraging Study

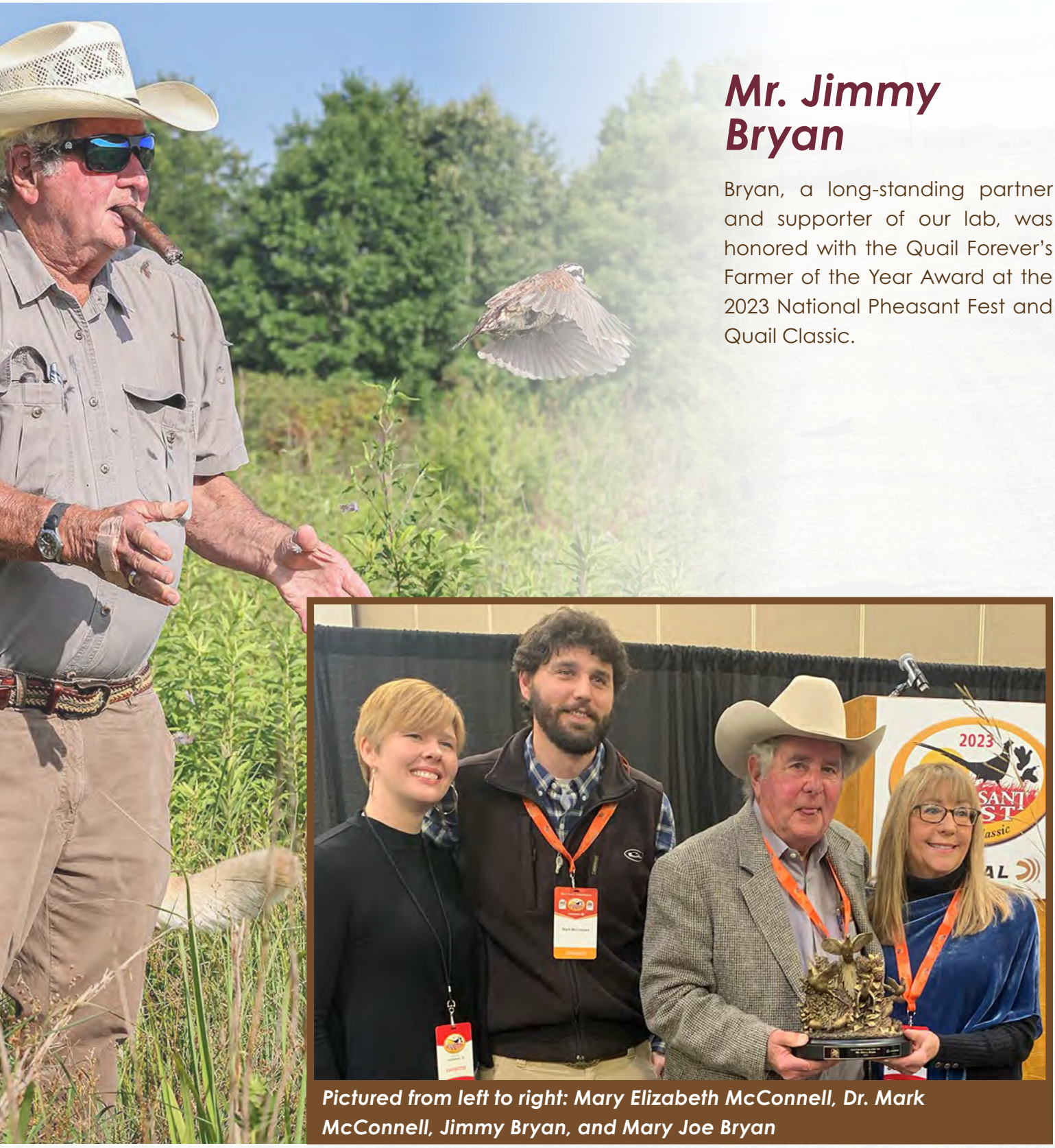
Our lab has imprinted and raised hundreds of Northern bobwhite chicks to study brood foraging behavior. By examining diet and habitat use, we aim to identify vegetation types and structures that optimize foraging success and chick survival.







Partner RECOGNITION

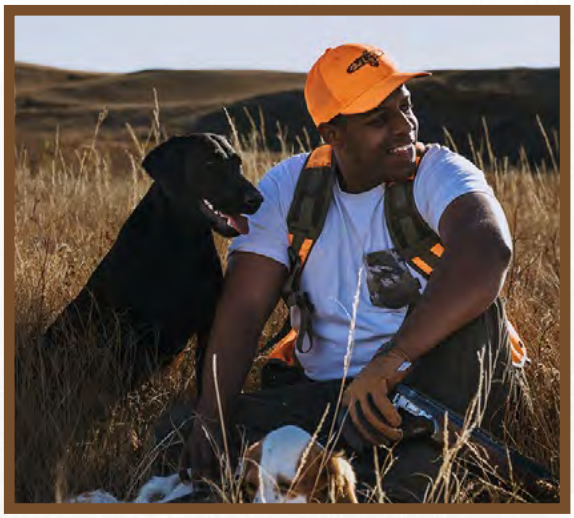


Mr. Jimmy Bryan

Bryan, a long-standing partner and supporter of our lab, was honored with the Quail Forever's Farmer of the Year Award at the 2023 National Pheasant Fest and Quail Classic.

Pictured from left to right: Mary Elizabeth McConnell, Dr. Mark McConnell, Jimmy Bryan, and Mary Joe Bryan

Stakeholder
ENGAGEMENT



Douglas Spale

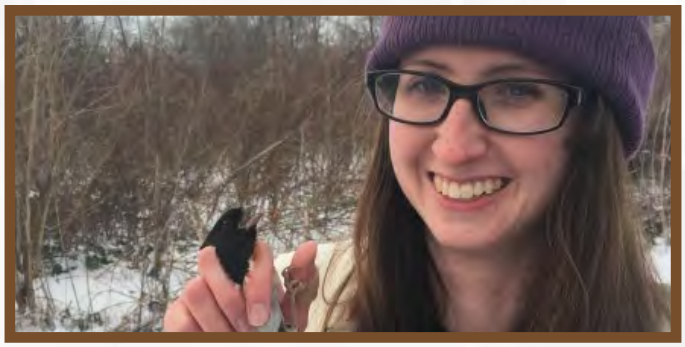
Dr. McConnell hosted Spale, Board Member of Pheasants Forever/Quail Forever, for a quail hunt on a property managed in collaboration with the lab.

Alumni CONNECTIONS

At the 2023 Sustainable Agriculture Summit in Charlotte, NC, Dr. McConnell reconnected with lab alumni Makayla Brister and Megan Martin.

Makayla Brister

Makayla currently serves as Manager of Federal Relations at the National Fish and Wildlife Foundation.



Megan Martin

Megan is a Research Scientist with Ducks Unlimited.

Student ACHIEVEMENTS

Daniel Egerson

Egerson, Ph.D. student, received the Gluesing Outstanding Ph.D. Student Award.

Grace Bellew

Bellew was recognized with the Outstanding Undergraduate Student Award for her contributions to multiple lab projects, outstanding academic performance and her leadership of the Mississippi State University Student Chapter of The Wildlife Society.

MSU GAMEBIRD PROGRAM

Gamebird Extension
PROGRAM

Our Gamebird Extension Program continues to grow and engage the public through:

- *Educational content on Facebook, Instagram, and YouTube*
- *Field-based outreach and habitat management demonstrations*

Strategic PARTNERSHIPS

Mr. Jimmy Bryan

Mr. James Kennedy

Mr. Jake and
Mrs. Harriet McFadden

THE JONES CENTER AT ICHAUWAY

MISSISSIPPI WILDLIFE, FISHERIES, & PARKS

NATIONAL FISH AND WILDLIFE FOUNDATION
NFWF

NRCS

QUAIL FOREVER®

USDA United States Department of Agriculture

U.S. FISH & WILDLIFE SERVICE
DEPARTMENT OF THE INTERIOR

Wildlife Mississippi

STATE
MISSISSIPPI STATE UNIVERSITY™

PRAIRIE WILDLIFE

Our long-standing partnership with Mr. Jimmy Bryan and Prairie Wildlife continues to expand. We recently launched a long-term study to evaluate how late-summer prescribed fires influence established native warm-season grass plantings.

THE JONES CENTER AT ICHAUWAY

We are preparing to welcome our third graduate student through our ongoing partnership with The Jones Center at Ichauway. This collaboration supports applied research to advance bobwhite management across the Southeastern United States.

QUAIL FOREVER / PHEASANTS FOREVER

Our continued partnership with Quail Forever / Pheasants Forever spans multiple initiatives, including:

- Firebird University program, which provides training for newly hired Quail Forever / Pheasants Forever biologists.
- Co-hosted workshops, field days, and site visits to promote habitat management and conservation delivery.

Donor SPOTLIGHT

We were honored to host Mr. Jerry Toney and his son Parker on a quail hunt at one of our managed properties. Mr. Toney and his wife, Christan, generously established the Jerry and Christan Toney Bobwhite Excellence Fund, supporting research and outreach efforts to restore bobwhite quail populations in the Deep South.

Summary
IMPACT

- 40 Presentations
- 8 Publications
- 10 Graduate Students
- ~$2M External Funding

MISSISSIPPI STATE UNIVERSITY

FOREST AND WILDLIFE RESEARCH CENTER

TAKING CARE OF WHAT MATTERS

Our mission is to foster the management, conservation, and sustainable use of forest, wildlife, and aquatic resources to benefit the people of Mississippi, the nation, and the world.

Mississippi State University is an equal opportunity institution. Discrimination is prohibited in university employment, programs or activities based on race, color, ethnicity, sex, pregnancy, religion, national origin, disability, age, sexual orientation, genetic information, status as a U.S. veteran, or any other status to the extent protected by applicable law. Questions about equal opportunity programs or compliance should be directed to the Office of Civil Rights Compliance, 231 Famous Maroon Band Street, P.O. 6044, Mississippi State, MS 39762, (662) 325-5839.