

SUNY College of  
Environmental  
Science and Forestry

**Waterfowl and  
Wetlands Initiative**

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2018

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Annual Report





**SUNY ESF Will Mind the Marsh** – Decades have passed since Aldo Leopold, father of wildlife ecology, wrote of sandhill cranes,

“This much, though, can be said: our appreciation of the crane grows with the slow unraveling of earthly history. His tribe, we now know, stems out of the remote Eocene.

The other members of the fauna in which he originated are long since entombed within the hills. When we hear his call we hear no mere bird. He is the symbol of our untamable past, of the incredible sweep of millennia which underlies and conditions the daily affairs of birds and men.”

To this day, these words guide the efforts of conservationists; the daily affairs of birds and our own are not mutually exclusive, and scientific discovery guides our decision-making processes about the marshes, fields, and forests we and the birds depend upon.

**The goal of the SUNY ESF Waterfowl and Wetlands Initiative is to train the next generation of waterfowl and wetlands scientists, conservationists, and managers.**

At the forefront of our program is the recognition that the hunter-conservationist and boots-on-the-ground wetlands managers largely pioneered waterfowl conservation and management in North America. We also know that university programs focused on training waterfowl and wetlands scientists have declined substantially. The program at SUNY ESF is one of two remaining in the New York-New England region with expertise in waterfowl conservation and management. Across North America there has been a 44% decline in professors with waterfowl expertise and nearly half of those remaining may retire in less than 10 years. Unfortunately, this leads to students graduating from university programs and starting careers without the applied skills necessary to sustain waterfowl populations. We aim to reverse this decline by producing well-trained young professionals from our program, equipped with the applied skills to take on the daily tasks required of waterfowl biologists and wetlands managers. The many successes of pioneering waterfowl scientists, conservationists, and managers are increasingly taken for granted. These successes not only provided for those interested in sustaining waterfowl populations, but a foundation for other stakeholders in conservation and all those concerned with the future of this planet. We will not forget this history; our challenge, today, is to meld these successes with the increasingly diverse value-systems of emerging conservationists to build a new success story for tomorrow.







# Master's Students

Adam Bleau



Adam completed his Master's of Fish and Wildlife Biology and Management in May 2018. He is currently employed as a Biologist with NY State Department of Environmental Conservation in Brownville, NY.

## **COMPARATIVE HABITAT SELECTION AND BEHAVIOR OF MALLARDS (*Anas platyrhynchos*) AND AMERICAN BLACK DUCKS (*Anas rubripes*) WINTERING IN THE FINGER LAKES REGION**

ABSTRACT: Mallards and American black ducks are closely related species with little niche separation. I sought to

identify management actions to promote the Finger Lakes population of wintering black ducks in the face of competition with mallards. Occupancy by black ducks of points on lake shorelines was negatively influenced by building presence. Local black duck colonization varied negatively with proportion of developed land and local black duck extinction varied positively with dock density. Based on GPS tracking, mallards used agriculture and developed habitats more than black ducks. Black ducks selected emergent wetlands to a greater degree than available within their home range. I did not statistically detect behavioral differences between species although proportion time spent foraging when in forested wetlands was eight times greater for black ducks than mallards. Black duck conservation in wintering areas should focus on restoring agricultural areas to emergent marsh and maintaining shoreline areas with limited development.



## Justin Droke



Justin completed his Master's of Fish and Wildlife Biology and Management in May 2018. Justin is currently self-employed in western Tennessee as a wildlife consultant.

### **COMPARISON OF SPRING MIGRATION ECOLOGY OF AMERICAN BLACK DUCKS (*Anas rubripes*) AND MALLARDS (*Anas platyrhynchos*) IN THE MONTEZUMA WETLANDS COMPLEX**

**ABSTRACT:** I compared behavior, habitat selection, and movements between American black ducks and mallards using the Montezuma Wetlands Complex (MWC) during spring. I did not detect differences in behavior between species within habitat types. Black ducks used open water more than mallards. Black ducks chose home ranges with less agriculture, developed, and forested wetland cover types and greater emergent marsh and open water relative to their availability within the MWC, but used cover types in proportion to their availability within their home ranges. Mallards chose home ranges with cover types proportional to their availability within the MWC and used cover types in proportion to their availability within home ranges. Local movement step lengths were similar between species at 0.5 – 25 km. Departure date was earlier with increasing percent use of agricultural areas in spring, a possible explanation for mallards departing the MWC earlier than black ducks in 2016.



## Edward Farley



Ed is originally from the famed waterfowling region of Mattamuskeet, North Carolina.

He is a Biologist with the NY office of Ducks Unlimited and concurrently completing his Master's degree in Fish and Wildlife Biology and Management at SUNY ESF.

### **ECOLOGICAL ASSESSMENT OF WETLANDS MANAGEMENT TECHNIQUES ON RESTORED WETLANDS IN THE MONTEZUMA WETLANDS COMPLEX**

**ABSTRACT:** Throughout New York state, thousands of acres of wetland habitat have been restored through the efforts of various organizations and government agencies. Metrics of success for these restorations are often only measured in acres conserved, whereas there is an information deficit on the ecological returns of these restored wetlands in relation to varied management techniques. It is important for wetland managers to understand how post-construction management techniques influence plant and animal communities in order to improve utility of wetland restoration in meeting regional biodiversity goals. The goal of this project is to determine plant and animal responses to wetland restoration by assessing plant, invertebrate, and wildlife metrics among different wetland management techniques on restored wetlands in New York state to provide resulting guidelines to optimize management.





## Aidan Flores



Aidan comes to us from the Texas coast. He is pursuing a Master's degree in Fish and Wildlife Biology and Management studying black ducks on coastal Long Island. In addition to his research at ESF, he also will be assisting with the Wildlife Techniques course in May 2019 by serving as a Hunter Safety Instructor for the course.

### **INFLUENCE OF AGRICULTURAL GRAINS ON BODY CONDITION AND SEASONAL STRESS IN AMERICAN BLACK DUCKS AND MALLARDS WINTERING ON LONG ISLAND**

**ABSTRACT:** Decreases in the quantity and quality of coastal marshes on Long Island has decreased the carrying capacity during winter for American black ducks (*Anas rubripes*; hereon black ducks). It may be necessary for agriculture fields to increasingly serve as winter foraging sites for black ducks because restoration of coastal marshes is often infeasible or logistically difficult. Understanding the utility of agricultural fields to black ducks, mallards (*Anas platyrhynchos*), and other waterfowl relative to coastal marshes will help determine the winter carrying capacity of Long Island for black ducks, and may provide options for managing wintering habitat. I will assess and compare, diets, body condition, and seasonal stress between black ducks and mallards during February – March 2018 and 2019.



## Adam Macy



Adam is the newest member of TEAM DUCK and is a seasoned back country outdoorsman of the Adirondack Mountains. He has been working with the New York Department of Environmental Conservation for the past 3 summers assessing black duck breeding pairs and productivity in the Adirondacks, making him a perfect fit for his project, which will start in May 2019.

### **AMERICAN BLACK DUCK AND MALLARD BREEDING PAIR ABUNDANCE, PRODUCTIVITY, AND OCCUPANCY IN THE ADIRONDACK PARK**



**ABSTRACT:** The Black Duck Joint Venture aims to identify and understand factors that limit carrying capacity of habitats for black ducks during the breeding season. The Adirondack Park has substantial breeding habitat for black ducks, is one of the remaining areas where they breed in New York, and has similar geologic and ecologic conditions as the boreal forest transition zone of Canada. However, information on occupancy and productivity by black ducks, as well as relative habitat use and productivity between black ducks and mallards, are limited because of the remote nature of beaver-modified wetlands in the Adirondack Park. The goal of his project is to determine the relative contributions of lakes and ponds and beaver-modified wetlands in the Adirondack Park to black duck and mallard populations.





# Master's of Professional Studies (MPS) Students

Stephen Sliwinski



Prior to joining our lab, Stephen worked as a Biologist and Heavy Equipment Operator at Montezuma National Wildlife Refuge. He is pursuing his MPS to fulfill course requirements necessary to advance in the USFWS or a state agency. Stephen also worked as a field technician for Ed Farley this summer, learning various wetlands sampling techniques.

Stephen is **DETERMINING GREATER AND LESSER SNOW GOOSE MIGRATION PATTERNS THROUGH NEW YORK STATE** from a sample of nearly 1,500 snow goose heads donated by waterfowl hunters.

Jake Chronister



Jake comes from Illinois and is currently working at Clarence-Cannon National Wildlife Refuge.

Jake will join us in Spring 2019 to initiate a **WINTER AND SPRING BANDING PROGRAM FOR GREATER AND LESSER SCAUP IN NEW YORK**. During February and March, he will be located on Long Island, capturing and banding Greater Scaup (AKA Broadbill) at Great South Bay and Moriches Bay and applying mark-recapture methods to estimate the wintering population. In March and April, he will return to central New York and capture diving ducks including lesser scaup on Onondaga Lake and lead the SUNY ESF Ducks Unlimited Collegiate Chapter waterfowl banding experience.





# Undergraduate Honors Students

Mikayla Call



Mikayla is completing her Honors degree in Wildlife Science. She conducted a **A FIELD SURVEY OF WATERBIRDS IN THE DARKHAD DEPRESSION, MONGOLIA**. As far as we are aware, our survey is the first large-spatial scale census of waterbirds throughout the Darkhad Depression during breeding and molting.

Allison Smith



Alli graduated from ESF in Spring 2017, but continued to work with us towards publication of her Honors Thesis in the Southeast Association of Fish and Wildlife Agencies Journal.

## **ACHIEVEMENT-ORIENTED EFFECTS ON WATERFOWL-HUNT QUALITY AT MISSISSIPPI WILDLIFE MANAGEMENT AREAS**

Alli is currently completing her Master's degree at the University of Florida.



# Undergraduate Research Students

Michael Rickershauser



As part of his course work in GIS, Michael joined our lab to determine **WETLAND COVER TYPES OF THE ATLANTIC FLYWAY BREEDING WATERFOWL POPULATION SURVEY AND USGS BREEDING BIRD SURVEY** relative to those available on the landscape. The Atlantic Flyway Breeding Waterfowl Population Survey suggests a declining trend in mallard populations for NY, but the Breeding Bird Survey trend is the opposite. Michael is comparing wetland cover types between these two surveys to help determine why these differences in trends may be occurring.

Laura Wallace



Laura joined our team to gain additional lab, field, and computational experience. She is currently volunteering in the lab and using data from the Atlantic Flyway Breeding Waterfowl Population Survey to determine the **INFLUENCE OF SPRING PHENOLOGY ON UNPAIRED MALE MALLARD ABUNDANCE THE ATLANTIC FLYWAY**. She hypothesizes that declines in mallard abundance estimated by this survey could, in part, be caused by earlier pairing and nesting in some years. This would cause male mallards to congregate in groups which are counted as singles rather than pairs, and could result in bias low mallard abundance estimates.





# Undergraduate Lab and Field Technicians

## Jordan Thompson

Jordan was in our Waterfowl Ecology and Management course in spring 2018 and subsequently secured a position working in at Yukon Delta National Wildlife Refuge, Alaska for summer 2018. He now works in our lab as technician processing aquatic vegetation, invertebrate, and seed samples for Ed Farley's project.



## Tyler Hodges



Tyler, Anna, and Riley are undergraduate students in Wildlife Science at ESF and technicians in our lab processing aquatic vegetation, invertebrate, and seed samples for Ed Farley's project. Tyler and Anna also assisted with goose banding this summer. These undergraduate students are an integral part of TEAM DUCK. Our aim is to have their participation in our lab help them secure a graduate position or gainful employment beyond ESF.

## Anna Lee



## Riley Paige Stedman





# Courses Offered

## Waterfowl Ecology and Management

In Spring 2018, we once again taught the Waterfowl Ecology and Management course. We have now trained 70+ undergraduate and graduate students in the conservation and management of waterfowl and wetlands at ESF, 2016 - 2018. Following funding provided by Waterfowl Research Foundation (WRF) to re-instate the course in 2016, SUNY ESF funded the course for 2017 and 2018.



The course features an overview of the ecology of ducks, geese and swans from the perspective of life history events (i.e., breeding, migration, and wintering ecology). Lectures, hands-on experiences, and potential weekend field experiences focus on identification of North American waterfowl, identification and management of wetland plants of importance to North American waterfowl, field techniques in the study of waterfowl ecology, and contemporary strategies used in conservation of waterfowl populations and their habitats.







## Wetlands Conservation and Management for Wildlife

### NEW COURSE SPRING 2019

#### Wetlands Conservation and Management for Wildlife

The goal of the course is to prepare undergraduate and graduate students with a foundation in strategies used in conserving wetland-dependent wildlife. Student will gain the applied skills necessary to pursue careers in conservation where knowledge of wetland-wildlife and wetlands management are required or preferred.

Find at registrar:

EFB 496 Section 13 - Wetlands Cons&Mgmt for Wildlife (#42426)

EFB 696 Section 03 - Wetlands Cons&Mgmt for Wildlife (#42429)

F 12:45 pm-3:35 pm Illick 251 SCHUMMER, email at [mlschumm@esf.edu](mailto:mlschumm@esf.edu) with questions



← Wetlands are one of the most threatened habitats on Earth and knowledge by biologists of active restoration and management are often needed to sustain wetland-dependent wildlife.



Our course will provide you the knowledge needed to sustain biological diversity of wetlands through contemporary conservation, restoration, and management techniques used throughout North America →

In Spring 2019, we are adding this course to expand our capacity to teach the breadth of concepts needed to produce the next generation of waterfowl and wetland professionals. It will be a companion to the current waterfowl course.

The intent is to ensure students completing degrees in Wildlife Science, Conservation Biology, and related majors have the opportunity to learn the applied skills necessary to properly conserve and manage wetlands for wildlife; a skill very much needed by our federal, state, and non-profit partners.







## Wildlife Techniques

For two weeks most every May, many ESF undergrads are immersed in the questions, methods, and tools used to track and manage wildlife populations. Students are "up" at 5 am for bird surveys and out well after dark studying bats and owls. They deploy game cameras, track plates, mist nets, rocket nets and live traps to document species, in the process, they learn how to safely handle wild animals and design effective surveys. They conduct field necropsies to study wildlife health, home in on radio-collars to track animal movements and habitat use, quantify vegetation composition and structure to assess habitat quality, and learn how to manage wildlife conflicts. In addition, students earn their certificates for hunter education, trapper education and waterfowl identification. This is the kind of intensive boots-on-the-ground training that sets ESF students apart.

Is the wing on the right from a lesser or greater scaup?



## Deer Aging

**While a good deal of the focus is on the 3<sup>rd</sup> premolar and 1<sup>st</sup> molar, get in the habit of looking over the entire jaw. Focusing on just one item, i.e. 1<sup>st</sup> molar, will sometimes mislead you.**

1st molar worn like a 4 ½ year old deer.



Milk 1<sup>st</sup> premolar.

No wear on 3<sup>rd</sup> molar.







# Waterfowl Banding

Each year undergraduate and graduate students in our lab band Canada Geese and ducks. Students and other young professionals help capture and band birds so they can experience waterfowl up-close and learn how banding operations contribute to management of our North American waterfowl resources. This July we banded over 200 Canada Geese in central New York with the help of our NYSDEC partners. With the help of the Ducks Unlimited Collegiate Chapter at SUNY ESF we will band ducks on Onondaga Lake, March – April 2019.





# Additional Research

## **Aggression and Behavioral Dominance in Wintering Mallards and American Black Ducks**

We placed Go-Pro cameras in the back of walk-in traps used to capture mallards and black ducks during winter to compare their aggression and behavioral dominance.

We detected that male mallards were more common, aggressive, and dominant than female mallards & black ducks. Our results suggest that mallards may decrease the carrying capacity of wintering areas for black ducks by interfering with them during foraging and displacing them from energy dense feeding locations.



## **Influence of Wetlands Management on Movement and Survival of Rails at the Montezuma Wetlands Complex**

Since 2016, we have been working with biologists at Northern Montezuma Wildlife Management Area to develop and refine capture techniques for Virginia Rails, Sora, and Common Gallinule. This project has been successful in capturing and banding over 125 of these secretive gamebirds. We recently secured funding from NYSDEC and Bird Studies Canada to advance this work towards a graduate project to start in Fall 2020. This year we marked Virginia Rails with radio-transmitters and nanotags. Of the 12 rails we marked in Spring 2018, only one stayed in the Montezuma Wetlands Complex which may suggest this area is used more for staging during migration than a breeding location by rails.







# Presentations

Bleau, A. J., J. Cohen, and M. L. Schummer. 2018. Comparisons of habitat selection and behaviors between mallards and American black ducks in the Finger Lakes Region during winter. Northeastern Association of Fish and Wildlife Agencies Conference, Burlington, Vermont.

Bleau, A. J. 2018. Comparative habitat selection and behavior of mallards (*Anas platyrhynchos*) and American black ducks (*Anas rubripes*) wintering in the Finger Lakes Region, Master's degree defense, Syracuse, New York.

Droke, J. M. 2018. Comparison of spring migration ecology of American black ducks (*Anas rubripes*) and mallards (*Anas platyrhynchos*) in the Montezuma Wetlands Complex. Master's degree defense, Syracuse, New York.

Droke, J. M., M. L. Schummer, and J. Cohen. 2018. Spring migration strategies of mallards and American black ducks that winter in the Finger Lakes region. Northeastern Association of Fish and Wildlife Agencies Conference, Burlington, Vermont.

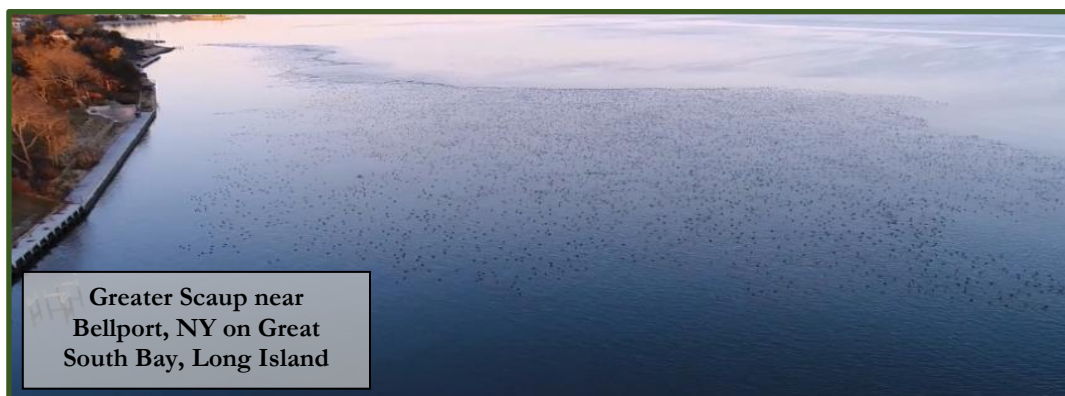
Flores, A. and M. L. Schummer. 2018. Influence of Agricultural Grains on Body Condition and Seasonal Stress in American Black Ducks Wintering on Long Island. New York State Ornithological Association Conference, Rochester, New York.

Farley, E. and M. L. Schummer. 2018. Ecological assessment of wetland management techniques on restored wetlands in the Montezuma Wetlands Complex New York State Ornithological Association Conference, Rochester, New York.

Schummer, M. L. 2018. Wetlands Conservation and Management for Wildlife in central New York. Onondaga Lake Conservation Corps. Honeywell Visitors Center, Syracuse, New York.

Schummer, M. L. 2018. SUNY ESF Waterfowl and Wetlands Initiative. Central New York Wildfowlers, Solvay, New York.

Schummer, M. L., A. Smith, E. St. James, K. Hunt, R. M. Kaminski, and H. Havens. 2018. Achievement-oriented effects on waterfowl-hunt quality at Mississippi Wildlife Management Areas, Southeastern Association of Fish and Wildlife Agencies Conference, Mobile, Alabama.



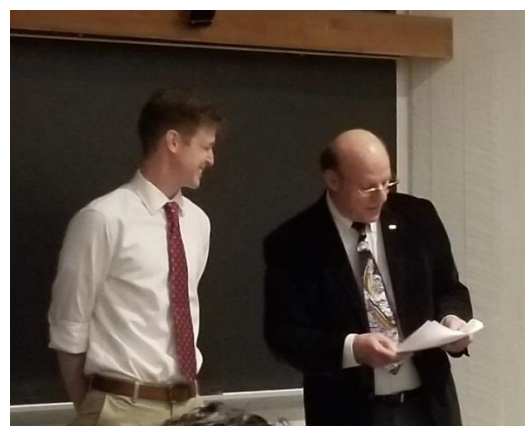


# Publications

- Bleau, A. J. 2018. Comparative habitat selection and behavior of mallards (*Anas platyrhynchos*) and American black ducks (*Anas rubripes*) wintering in the Finger Lakes Region. Thesis, SUNY ESF, Syracuse, New York.
- Droke, J. M. 2018. Comparison of spring migration ecology of American black ducks (*Anas rubripes*) and mallards (*Anas platyrhynchos*) in the Montezuma Wetlands Complex. Thesis, SUNY ESF, Syracuse, New York.
- Dyson, M., M. L. Schummer, T. Barney, H. Henry, and S. A. Petrie. 2018. Habitat selection and survival of wood duck broods and ducklings at Long Point, Ontario. *Wildlife Society Bulletin* 82: 1725-1735.
- Schummer, M. L., A. D. Afton, S. S. Badzinski, S. A. Petrie, G. Olsen, and K. Jacobs. 2018. Evaluating the waterfowl breeding population and habitat survey for counting lesser scaup. *Journal of Wildlife Management* 82: 1252-1262.
- Schummer, M. L., A. M. Smith, R. M. Kaminski, K. Hunt, and H. Havens. *In Press*. Influence of achievement-oriented factors on hunt quality in Mississippi. *Journal of the Southeast Association of Fish and Wildlife Agencies*.

# Awards

- Maurice Alexander Wetlands Research Award  
(Edward Farley) – 2018
- Roy E. Glahn Central New York Wildfowlers Award  
(Aidan Flores) – 2018
- Elon Eaton Student Research Award  
(Edward Farley) – 2018



Ed Farley receives the Maurice Alexander Wetlands Research Award from Dr. Neil Ringler at the ESF Annual Awards Ceremony





# SUNY ESF Ducks Unlimited Collegiate Chapter

We are proud to announce that the Ducks Unlimited Collegiate Chapter at SUNY ESF is the **first university chapter in the northeastern US to ever make DU's Sweet Sixteen** (top fund-raising collegiate chapters).

Initiated by a few students passionate about waterfowl conservation and hunting, the Ducks Unlimited Collegiate Chapter at SUNY ESF was founded in 2015. In their first year, they held several successful events including their "Conservation Night Out". In their second and third years, this event expanded to well over 175 attendees providing substantial financial gains for waterfowl and wetlands conservation. They also participated in the ESF Fall Fest, put up wood duck boxes at the Newcomb Campus in the Adirondacks, and are planning on assisting with duck banding on Onondaga Lake in spring 2019. The Ducks Unlimited Collegiate Chapter at SUNY ESF provides opportunity for students to develop fund-raising skills and an understanding that conservation of our waterfowl and wetland resources can only happen with a passionate community of waterfowl enthusiasts.





# TEAM DUCK

*More than just a name...*

**TEAM DUCK**, is the idea that we are all in this together and undergraduate and graduate students support each other to ensure success. It also means that as **TEAM DUCK** students move from their academic to professional careers, the support continues.

**TEAM DUCK** has emerged as an ideology among university programs in waterfowl and wetlands across the country. Mississippi State University and Clemson University also carry this moniker proudly in their labs. Together, the greater **TEAM DUCK** family is helping ensure students are well-trained in waterfowl and wetlands science, conservation, and management. Increasingly, we see these young professionals making strong contributions in conservation; continuing the legacy of waterfowl conservation professionals and the hunter-conservationist ethic.







# 2018 TEAM DUCK ASSOCIATES

Aaron Yetter  
Al Afton  
Albert Flores  
Alicia (Wiseman) Farrell  
Alison Kocek  
Andrea Van Beusichem  
Andrew Schummer  
Anthony Roberts  
Barb Brillo  
Bill Stewart  
Bird Studies Canada  
Brandy Nevelndine  
Brendan Shirkey  
Brian Davis  
Bryan Swift  
Central New York  
Wildfowlers  
Chris Dwyer  
Chris Nicolía  
Chris Pitman  
Chuck Gibson  
Craig Kessler  
Dan Delawyer  
David Dunn  
David Schummer  
Delta Waterfowl  
Don Leopold  
Doug Tozer  
Duane Arnister  
Ducks Unlimited Canada  
Ducks Unlimited Inc.  
Eaton Birding Society  
Ed Hogan  
Elizabeth St. James  
Eric Pitman  
Eric Smith  
Faith Ashmore  
Frances DiDonato  
Frank Morlock

Friends of the Montezuma  
Wetlands Complex  
Gary Raffel  
Greg Soulliere  
Heath Hagy  
Heidi Kennedy  
Jacob Straub  
Jacqui Frair  
James Callicutt (Emeritus)  
James Eckler  
James Gibbs  
Jerry Belant  
Jessica Goretzke  
Jim McQuiggan  
Joe Nicosia  
John Coluccy  
John Farrell  
John Fraser  
John Simpson  
Jonathan Cohen  
Josh Bacon  
Josh Cushman  
Josh Stiller  
Joshua Cheshier (Emeritus)  
Justyn Foth  
Kelly Hamilton  
Kent Kowalski  
Kevin Hunt  
Kevin Ringleman  
Lena Vanden Elsen  
Linda Schummer  
Linda Ziemba  
Long Island Wildfowl  
Heritage Group  
Luke Naylor  
Mark McConnell  
Matt Dyson  
Matt Frackleton  
Matt Palumbo  
Matt Wagner

Max Myers  
Melissa Fierke  
Mike Brasher  
Mike Wasilco  
Moore Charitable  
Foundation  
Nora Heaphy  
Pam Garretson  
Patrick Devers  
Patrick Raney  
Paul Hess  
Paul Link  
Paul Schmidt  
Phil Lavretsky  
Richard Smith  
Rick Capozza  
Rick Kaminski  
Ron Giegrich  
Ron Zega  
Sandy Polimino  
Sarah Fleming  
Scott Petrie  
Scott Smith  
Sean Ennulat  
Steven Price  
Stu McKenzie  
SUNY ESF Ducks Unlimited  
Collegiate Chapter  
Ted Barney  
Tom Bell  
Tom Moorman  
Waterfowl Research  
Foundation  
William Chamberlain  
Yukon Delta National  
Wildlife Refuge

THANK YOU TO OUR **TEAM DUCK ASSOCIATES**, your contributions collectively enable us to train the **next generation of waterfowl and wetlands scientists, conservationists, and managers.**



# An OPPORTUNITY to Invest in the Conservation of Our Waterfowl and Wetland Resources



We are encouraged by the energy that our Waterfowl and Wetlands Initiative in the Atlantic Flyway has produced. I thank you for being part of TEAM DUCK at ESF. Because of you we are strong, growing, and have an extensive network of ASSOCIATES locally and throughout North America that are helping make our collective vision a success.

ESF's Waterfowl and Wetlands Conservation Program trains the next generation of waterfowl and wetlands scientists and conservationists. Our mission is to sustain and enhance expertise in waterfowl and wetlands in the work force and deliver science-based conservation in the Atlantic Flyway and throughout North America.

Our next step is to ensure our vision becomes reality by sustaining a Waterfowl and Wetlands Program at ESF in perpetuity in the Atlantic Flyway. **The time is now and ESF is the right place.** ESF is unique among higher education in its singular focus on the environment. Founded in 1911, ESF has strong roots in “hands-on”

education that continues today; we offer 25 undergraduate programs and 46 graduate areas of study that provide diverse opportunities and experiences for our students. ESF boasts the 4<sup>th</sup> largest program in wildlife science, conservation biology, and fisheries management in the US. Look anywhere and you will find an ESF graduate making our planet a better place to live.

As a hunter-conservationist, I interact with a diversity of stakeholders. Above all, we all seek quality outdoor experiences and a healthy environment where we can thrive. Our challenge in the Atlantic Flyway (and increasingly elsewhere) is balancing human population growth and consumption with sustaining natural resources to ensure future generations can enjoy and find value in the forests, fields, and wetlands that we all enjoy so much.

The conservation ethic many of us hold today resulted from opportunities provided by forward thinking conservationists. Let us work together to continue to train and produce the next generation of waterfowl and wetlands scientists and conservationists.

Sincerely,

**Michael L. Schummer**, Roosevelt Waterfowl Ecologist, SUNY College of Environmental Science & Forestry





# The Program Vision

ESF seeks to sustain the Waterfowl and Wetlands Conservation Initiative for generations to come.

**Additional private donations will allow us maintain and grow critical aspects of the Program.**

*Planned program elements include the following:*

## **Program Director**

A program director would teach critical courses, supervise students, and coordinate teaching, research, and outreach efforts.

## **Graduate Students**

We will sustain an internationally recognized graduate program focused on waterfowl and wetlands science and conservation. The program will include the opportunity to concurrently pursue a degree in public administration at Syracuse University's Maxwell School – the top-ranked school in the nation for public affairs and policy.

## **Masters of Professional Studies Program**

This rigorous three-semester program will include an internship and hand-selected courses aimed at retooling federal, state, and non-profit wildlife professionals.

## **Undergraduate Internships and Honors Students**

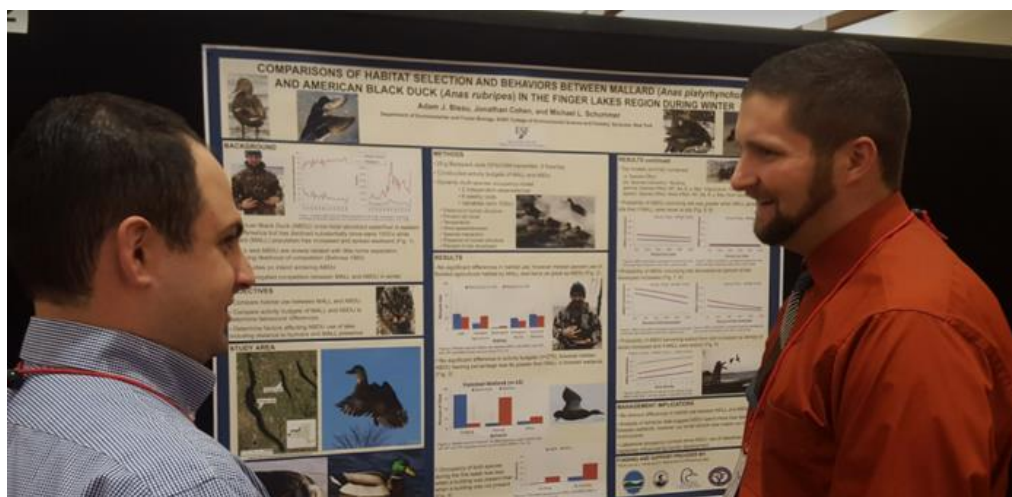
We will train ESF's top undergraduates to engage in three- to six-month internships, research experiences, or honors theses involving ongoing investigations and outreach.

## **Immersion Course in Waterfowl and Wetlands Conservation**

We will create opportunities for undergraduate students to engage in immersive training experiences focused on field methods, and population and habitat management.

## **Continual Promotion of Best Practices**

The program will offer workshops, technical assistance and guidelines on waterfowl habitat management techniques for private landowners, public land managers, and conservation partners.





# Ways to give

## *Help Support Our Collective Vision*

**When you make a tax-deductible donation to ESF's Waterfowl and Wetlands Initiative, you're helping to conserve waterfowl and waterfowl habitat for generations to come. Gifts to the ESF College Foundation are eligible for charitable tax deductions for federal income tax purposes. Here are some ways you can help:**

### **Make a gift online at [www.esf.edu/giving](http://www.esf.edu/giving)**

Credit card gifts can be made on our secure site 24 hours a day, 7 days a week

### **Put a check in the mail**

Checks made payable to the ESF College Foundation may be sent to:

*ESF College Foundation, 1 Forestry Drive, 214 Bray Hall, Syracuse, NY 13210*

The ESF College Foundation also accepts marketable securities, including stocks, bonds and mutual funds and planned gifts including bequests, annuities, life insurance and retirement plan proceeds. *Donors may also commit pledge payments over three to five years*

### **To learn more about fundraising and partnership opportunities for ESF's Waterfowl and Wetlands Initiative contact:**

Nora Heaphy, Director of Donor Relations, ESF College Foundation, Inc., 315-470-6973, [nheaphy@esf.edu](mailto:nheaphy@esf.edu)

**Or**

Michael L. Schummer, Roosevelt Waterfowl Ecologist, SUNY ESF, 585-319-6763, [mlschummer@esf.edu](mailto:mlschummer@esf.edu)



THANK YOU FOR YOUR GENEROUS SUPPORT!

Doin' it  
for the  
Ducks

