CFAES

STONE LAB

THE OHIO STATE UNIVERSITY'S **ISLAND CAMPUS** ON LAKE ERIE

› stonelab.osu.edu

Sea Grant
Ohio Sea Grant College Program

The Ohio State University
College of Food, Agricultural, and Environmental Sciences

NOAA

Explore Science + Discover Yourself

MEET **STONE**LAB

Two and a half years. That's how long it takes for a single drop of water entering Lake Erie from the Detroit River to make its way out to Lake Ontario by way of Niagara Falls. That's when that drop of water, completely unnoticed as it entered the lake, makes a huge splash.

ONE WEEK. FOUR WEEKS. SIX WEEKS.

That's just how little time it could take for your whole life to change after experiencing Stone Laboratory, The Ohio State University's island campus on Lake Erie.

For more than 100 years, Stone Lab has been making its mark as a resource for freshwater biology research, science education and outreach. As the research station for the Ohio Sea Grant College Program, the lab is a base for professional scientists from all over the Midwest as they work to solve the most pressing issues facing the Great Lakes, such as invasive species and toxic algal blooms.

Stone Lab's Gibraltar Island, just off the coast of South Bass Island in Lake Erie, is a full-service campus with dormitories, a dining hall, classrooms, a library and a computer lab. In addition to hosting college-credit courses and resume-building workshops, Stone Lab offers field trips, conference and event center space and public tours of Gibraltar Island, the Aquatic Visitors Center and the South Bass Island Lighthouse, putting Lake Erie science and history within anyone's grasp.

WHAT'S INSIDE

Ohio Sea Grant and Stone Laboratory staff combine research, education, and outreach, in collaboration with Great Lakes communities, to make and inform decisions regarding Lake Erie and the region's most important environmental and economic issues with impartiality. We are committed to fostering culturally and intellectually diverse experiences which value people and local knowledge to reach new audiences, increase participation, and broaden our impact so all members of our community reach their full potential.

Someone who takes a Stone Lab class will make an impact in the world.

WILL IT BE YOU?

SMALL ISLAND
BIG IMPACT

Stone Lab is located on Gibraltar Island, just north of South Bass Island's Put-in-Bay. Gibraltar is named for its resemblance to the famous British fortress at the western end of the Mediterranean Sea. Though it's no more than a few hundred yards from South Bass, the 6-acre island feels like a whole other world.

Gibraltar Island

1 › **Bayview Office**

2 › **Peach Point Research Laboratory:** Houses the Water Quality Laboratory and holding tanks for aquatic organisms.

3 › **Aquatic Visitors Center:** Open June through August, this former fish hatchery has educational displays, aquaria filled with fish and a public fishing dock.

4 › **Peach Point and Sycamore Cottage:** Staff and faculty housing.

5 › **Glacial Grooves:** Deep striations, remnants of the last great North American glacier more than 10,000 years ago.

6 › **Solar Pavilion:** Forty-four 240-watt solar panels provide energy and shade a few picnic tables below.

7 › **Stone Laboratory:** This is the main instruction building on the island and contains laboratories, classrooms, office space, a meeting room for special lectures, a library, a computer lab and the Stone Lab bookstore. Forty solar panels were added to the roof.

8 › **Main Dock**

9 › **Dining Hall:** Solar thermal installed on the roof provides nearly all the hot water needed for the Dining Hall.

10 › **Gibraltar House:** Staff housing

11 › **Research Buoy:** Collects data including water temperature, pH and algae pigment and transmits it live to the Stone Lab website.

12 › **Stone Cottage:** Faculty housing

13 › **Harborview House:** Student housing

14 › **Barney Cottage:** Additional housing

15 › **Cooke Castle:** Built in 1865 by Jay Cooke, a Civil War financier, this 15-room Victorian home is currently undergoing maintenance updates.

16 › **Swimming Beach**

GAIN NEW SKILLS

For details, visit ***go.osu.edu/intro***

"Stone Lab allowed me to spend more "class time" in the field doing the things we learn about. I am definitely more prepared for a job in the natural resources field now."

ANTHONY TAMBINI // forestry, fisheries, and wildlife major, The Ohio State University

Introductory Courses

2 CREDITS

Monday-Sunday.
Open to Ohio State students.

EEOB 1910	Introduction to Biological Studies
EEOB 1930	Introduction to Biological Studies – Aquatic Biology
ENR 2360	Ecology and Conservation of Birds

Need help paying for your class?
See page 14 for info on scholarships.

Introductory-level courses at Stone Lab give you the chance to get your feet wet – literally.

College students can earn credit hours to accelerate their education. You'll spend most of your time in the field, not a classroom – while earning two semester credits in one week as you study biology, ecology, plants, birds, insects or even sport fishing. Field studies expand career choices for students with any major.

GET A NEW **PERSPECTIVE**

WILL IT BE **YOU?**

"I would 100% recommend anyone who loves being outside and loves the environment to take classes at Stone Lab. It was one of the best times I've ever had. I already miss it!"

EMILY ESPLANDIU // biology major, The Ohio State University

Ready to discover science outside the classroom? We offer high-impact courses that give you the skills you need for a future in your chosen career.

For details, visit ***go.osu.edu/upper***

Each course is an in-depth experience you'll share with a handful of classmates as dedicated to the subject as you are.

Ranging from one to six weeks, you'll be able to earn credits and take required classes for your major while practicing scientific techniques in the field. At Stone Lab, nature is your classroom and Lake Erie is your living laboratory.

Upper-Level Courses

SIX-WEEK COURSES (4 CREDITS)

EEOB 3310.01	Evolution
EEOB 3410	Ecology

FOUR-WEEK COURSES (3 CREDITS)

ENR 3200	Environment and Natural Resources Policy
ENR 3700	Intro to Spatial Information for Environmental and Natural Resources
ENR 5350.01	Taxonomy and Behavior of Aquatic Invertebrates
ENR 5350.02	Taxonomy and Behavior of Fishes

ONE-WEEK COURSES (2 CREDITS)

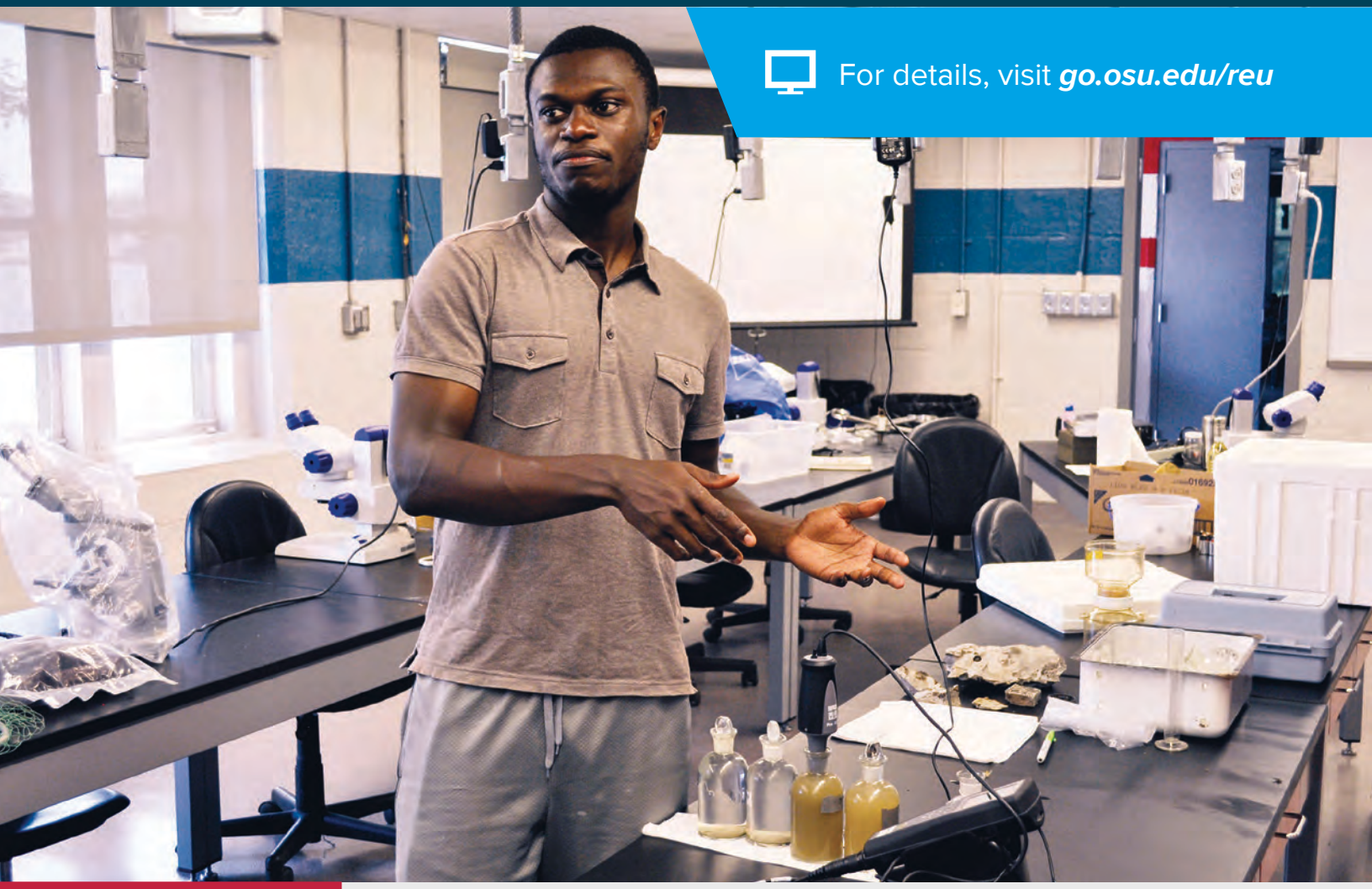
EEOB 5910	Field Herpetology
ENR 3280	Water Quality Management

Open to Ohio State students.

REU Fellowship Program

DIVE INTO RESEARCH

Our Research Experience for Undergraduates Fellowship Program offers an incomparable chance to gain experience as a professional researcher at Stone Lab.



For details, visit ***go.osu.edu/reu***

POTENTIAL REU TOPICS

- *Botany*
- *Fish Ecology*
- *Ornithology*
- *Limnology*

Under the guidance of top scientists, our REU students carry out their own research projects from start to finish, including specimen collection, data analysis and a final presentation.

Stone Lab REU alumni have gone on to master's and PhD programs at colleges across the country and are working scientists in a host of fields.

Application Deadline

FEBRUARY

Five Reasons to Apply for a Stone Lab REU

Participate in hands-on research

In the lab or in the field, you're the one observing conditions, collecting data and interpreting your findings.

Learn from world-class scientists

The Stone Lab REU supervisors are at the top of their fields. Learn how to use scientific equipment, as well as how to collect and analyze important data, from the pros.

Make the most of your time

REUs get free room and meals, and are paid an hourly stipend.

Present your findings

At the end of the term, you'll present your research. Many REUs have also written up their results and presented at conferences. Some have even been published in peer-reviewed journals.

Stand out from the crowd

Get experience that looks great on a graduate school application or your resume.

Training for Natural Resource Professionals

NEVER STOP GROWING

Not all Stone Lab students are in college. Many are working professionals or those hoping to develop resume-building skills.

WILL IT BE **YOU?**

For details, visit ***go.osu.edu/slworkshops***

Workshop facilitators include staff from state agencies such as the Ohio Department of Natural Resources Division of Wildlife and the Ohio Environmental Protection Agency and the activities are specifically designed to help job seekers get a basic knowledge of common field techniques.

In addition to the offerings listed here, nearly any of our for-credit courses can be taken as a non-credit workshop with permission of the instructor. You can add topics like ecology, fish biology and evolution to your knowledge base while spending most of your time learning outside, getting first-hand experience with the things you're learning about!

Potential Stone Lab Workshops

Lake Erie Sport Fishing Workshop

Algae Identification Workshop

Water and Wildlife Training for Educators

Dealing with Cyanobacteria, Algal Toxins, and Taste and Odor Compounds

Fisheries Techniques Workshop

PARTICIPANTS SAY...

"The entire experience was great, especially with the amount of gear and techniques we were able to learn in such a short time period while still being in a relaxed learning environment. The instructing was great and overall it was a great opportunity that I would recommend to everyone."

"I learned so much from the classes as well as the networking with others. Staying at Stone Lab for this class does give it a great hands-on approach."

"I really got a feel for how much we (as an industry) are learning all the time about the algae and their toxins and what we can do to minimize the impact (and what we need to do.) I now have an increased concern and feel a need for a higher level of vigilance in our source water monitoring after learning from the classes and others in the industry."

IT'S POSSIBLE

Because the opportunities at Stone Lab are so valuable, our network of alumni, donors and partners give generously to scholarships to allow as many students as possible to experience a Stone Lab education.

Each year we award more than 80 scholarships to those with superior academic records and financial need. Anyone taking a for-credit class (and some workshops) is eligible to apply.

You'll indicate your interest in scholarships as you complete the online Stone Lab application. Scholarship applications are due in March. Initial recipients will be notified in late March/early April.

Part-Time Jobs

Taking two consecutive four-week courses or a six-week course? Consider applying for a part-time position as a student lab assistant. On the days you aren't in class, you'll work with researchers, help cook and serve meals in the dining hall or assist with programming at the Aquatic Visitors Center and South Bass Island Lighthouse.

Applications for student positions are due in March. Interviews will be held in late March.

For details, visit ***go.osu.edu/studentjobs***

APPLICATION **TIMELINE**

Workshop deadlines are typically 4 weeks before the workshop date.

01 **February**
Applications open

02 **February**
Research Experience for Undergraduates (REU) deadline

03 **March**
Student employment deadline

04 **March**
Scholarship deadline

05 **Early April**
Scholarship recipients notified

06 **May**
College student application deadline

07 **July – August**
Non-credit workshop applications due

How to **Apply**

SUBMIT YOUR ONLINE APPLICATION AT

stonelab.osu.edu/applynow

HOW MUCH DOES IT COST?

Tuition is charged per credit hour and is based on The Ohio State University tuition. All costs are subject to change. For fees, room and meal costs and updated information, visit **go.osu.edu/costs**.

FIND US ON SOCIAL MEDIA

stonelaboratory @stonelab stonelab stonelab

Professional Development for Educators

LEAD THE NEXT GENERATION

Stone Lab classes are hands-on and interactive, and get students out in the field for most class days. This isn't your typical professional development opportunity!

Educators can earn continuing education units or credit toward their advanced degree by taking any of Stone Lab's courses and workshops. Each course focuses on activities that you can bring back to your classroom to engage your students in scientific discovery and learning.

TEACHERS SAY...

"Stone Lab helped me to become much more focused and deliberate in making real world connections with my students. It has provided a wide variety of resources to help me incorporate Great Lakes literacy principles into the various classes I teach."

"It was just an amazing week with amazing teachers. As soon as I got home, I thought 'How can I use this in the classroom to make the students' education more meaningful and more real?'"

"Stone Lab is different from any other professional development I've done and it was exactly what I needed. The class was full of inquiry activities that challenged me to think, and I didn't realize how much I was learning because I was having so much fun."

EDUCATOR SCHOLARSHIPS

Educators are eligible for tuition assistance and are encouraged to submit a scholarship application with their course application.

For details, visit ***go.osu.edu/educators***

"The big takeaways for the students are some things that they can do proactively to help combat some of the issues that are affecting the Great Lakes."

TONY KABEALO // 7th grade science teacher, Phoenix Middle School

FIELD TRIP ACTIVITIES:

- *Invertebrate Collection Walk*
- *Aquatic Invasive Species Slide Show*
- *Insect Collecting*
- *Island Geology Tour*
- *Herpetology Overview*
- *Ornithology Hike*
- *Science Cruise*
- *Fish Lab*
- *Plankton Lab*
- *Climate Expedition*
- *Aquatic Visitors Center Tour*

HANDS-ON LEARNING

Students in grades 5-12 or groups of adults (up to 80 people) can make reservations for Lake Erie Science Field Trips in April, May, August, September and October.

Groups can choose from 11 specialized activities to create a one-day trip lasting up to eight hours or a two-day overnight trip, including a stay in the island dormitory and meals at the Dining Hall.

For details, visit ***go.osu.edu/fieldtrips***

Hear directly from a field trip leader at ***go.osu.edu/fieldtripvid***

DISCOVERY STARTS HERE

Stone Lab's position in the western basin of Lake Erie has made it an ideal spot for scientists conducting Great Lakes research for more than a century.

As part of world-renowned research university Ohio State, Stone Lab has the connections and well-stocked facilities needed for scientific discovery.

Stone Lab has multiple labs ranging from an analytical lab for water sample analysis to a wet lab for handling vertebrates to a new state-of-the-art 15-tank mesocosm facility. Three research vessels are available for trawling, sediment sampling, and long-distance water sample collection. The lab also has collections of fish, invertebrates, birds and rocks for historical analysis.

Two cottages near the research laboratory on South Bass Island are available for visiting researchers who are planning overnight stays. Housing is also available on Gibraltar Island and in the Aquatic Visitors Center.

The lab also has several research boats:

- ***R/V Gibraltar III*:** A 42-foot research vessel for open-lake sampling and has an A-frame for trawling and deploying buoys.
- ***Electro-Fishing Vessel*:** A 16-foot aluminum vessel with Smith-Root electrical setup and 30 HP Yamaha motor used for fish sampling near island and in rivers, wetlands, or other inland bodies of water.
- ***R/V ErieMonitor*:** A 25-foot research vessel ideal for towing underwater equipment and light water sampling.
- ***R/V GS-3*:** A 28-foot research vessel with an electric winch and davit for medium-sized bottom sampling equipment.

Available Equipment:

- *High-speed centrifuge*
- *Spectrophotometer*
- *Fluorometer*
- *-80˚ C freezer*
- *Drying oven*
- *Temperature- and light-controlled incubators*
- *96-well plate reader*
- *Micropipettors ranging from 0.2 microliters to 10 milliliters*
- *Filter manifolds*
- *Automated nutrient analyzer*
- *Flow-through microscope*
- *Walk-in environmental chamber*
- *Flow-through lake water*
- *Multi-sensor sondes*
- *Water sampling equipment*

To arrange use of the facility or equipment, contact:

Dr. Justin Chaffin
Research Coordinator
chaffin.46@osu.edu

For details, visit ***go.osu.edu/researchfacilities***

PRESENTATION SUPPORT INCLUDES:

- *Computer and projector with audio*
- *High-speed wireless internet*
- *Teleconferencing/ web conferencing*
- *TV displays*

For details, visit ***go.osu.edu/conferences***

MEET ME AT THE LAKE

Secluded meeting spaces on Gibraltar Island offer spectacular views of Lake Erie.

Stone Lab staff can help you incorporate field trip activities such as a sampling cruise on a research vessel, historical tours and other team-building activities.

Stone Lab can accommodate up to 75 people with a conference room that can be set in classroom, theater or U-shaped styles. We also offer indoor and outdoor reception facilities.

Dormitory-style double rooms accommodate up to 40 people for overnight stays. A full-service dining hall provides meals and breaks for guests, if desired.

To book a meeting space, contact:

Kelly Dress
419-285-1800
dress.3@osu.edu

Dr. Kristin Stanford
419-285-1847
stanford.147@osu.edu

Experience the Greatness of our Great Lake

AQUATIC VISITORS CENTER
go.osu.edu/aquatic

Examine Lake Erie's ecosystem up close, including live fish. Children under 16 can borrow gear and bait and fish for free off our dock.

SOUTH BASS ISLAND LIGHTHOUSE
go.osu.edu/lighthouse

Scheduled tours are available from April through November. Lighthouse grounds are open to the public daily from dawn to dusk.

GIBRALTAR ISLAND TOURS
go.osu.edu/gibtours

Tours are held each week for up to 70 people on a first-come, first-served basis. Groups tour the island, including Perry's Lookout, the glacial grooves and the outside of Cooke Castle before learning more about the research being conducted at Stone Lab.

Tours of Stone Lab facilities are available from mid-June through August.
To learn more, visit ***go.osu.edu/tours***

Sea Grant
Ohio Sea Grant College Program

The Ohio State University
College of Food, Agricultural, and Environmental Sciences

NOAA

F.T. Stone Laboratory // The Ohio State University // 1314 Kinnear Rd. // Columbus, OH 43212-1156

stonelaboratory @stonelab stonelab stonelab

OHSU-SLC-1874