

# What's New in 2017?

## Eight New Courses

The Station was the lucky recipient of a five-year \$1.5 million "Third Century Initiative" grant from the University of Michigan to bring new kinds of classes Up North on the shoulder seasons of operation. Our inaugural courses this first year ranged from Water Law and Policy to Florilegium: Drawing a Plant Compendium. Also included were introductory biology and chemistry lab classes with an ecological field research focus that proved vastly more popular than the conventional alternatives on campus. In all, these courses increased Station 2017 enrollment by more than 30%.



Professor Stacy Coyle (left) with her Water Law and Policy students at Bridge View Park in St. Ignace this spring.

## We're Flyin' Drones

Nancy Tuckman and her "Team Typha" have been studying and restoring a large wetland on the shores of Lake Huron near Cheboygan for several years, since the marsh was overtaken by invasive plants. Because collecting detailed field-based post treatment data by hand is so expensive, her team has turned to remote detection, using drones to determine what types of mechanical removal treatments are most effective. We are considering offering a short course on flying drones for ecological research in 2018.

## And speaking of technology...

We are offering a course on field mapping using Geographic Information Systems (GIS) this summer for the first time. Students will pair the skills they learn in this class with the second class they are taking for their summer research project. Analyses of Station property using GIS will be added to our growing database.

## New Station Biologist



Adam Schubel is the University of Michigan Biological Station's new resident biologist.

Longtime Resident Biologist Bob Vande Kopple retired this past fall after nearly four decades of service. Filling Bob's shoes is Adam Schubel, who first attended the Station as a student in 2002 and served as a TA for multiple classes. Adam, an enthusiastic botanist and teacher, is intent on learning the University of Michigan land like the back of his hand. This is a huge job, and Adam has totally nailed it.

## An Interim Director



Dr. Linda Greer is the Interim Director at the Biological Station this year.

Longtime Station Director Knute Nadelhoffer has been on sabbatical this academic year, working with international colleagues on climate change issues in Copenhagen. Linda Greer, an alum with five Station summers under her belt, has served as interim director in his place. When not interim-directing the Station, Linda is a scientist with the Natural Resources Defense Council. Linda reports that Bug Camp is

every bit as great as alumni remember it to be, and that it is in fact possible to "come home again" to Pellston.

## Bragging Rights for Our Chemistry Lab



In addition to new equipment, our chemistry laboratory was also moved to the second floor of Lakeside Lab.

We took chemical analysis in Lakeside Laboratory to a state-of-the-art level with the purchase of a hybrid gas chromatograph/isotope ratio mass spectrometer, one of a handful of such instruments in the world dedicated to ecological applications. This equipment provides isotope fingerprints of various elements and compounds. It can be used to trace biogeochemical cycling, pinpoint origins of pollutants and contaminants, and more. We also acquired from Ann Arbor a well-loved inductively coupled plasma mass spectrometer to analyze trace metals in water, soil, and plant tissues.

## First New Student-built Structure in 100 Years



The students of the Green Building class gather on the porch of the structure they built this May.

Twenty-two students - 19 of them women - worked from dawn to dusk each day during May to construct a solar-powered straw bale building on the top of the hill at the Station. This was for a sustainable design course lead by Professor Joe Trumpey. The effort was impressive! And the result is a beauty that we plan to use for our environmental writing class and various group discussions. Read for more information: <http://arts.umich.edu/news-features/the-straw-bale-house/>.

## New Climate-controlled Workspace and Sample Archive

A unique feature of the Station attracting researchers from around the country is our high-value sample collections from long-term research projects that is linked to data on-line. This summer and fall, we are renovating one of our lab buildings into a climate-controlled archive for soil, sediment, and water samples. On a parallel track, we are curating selected databases to improve their on-line accessibility and usability for future scientists.

## A Plethora of Plovers

The summer of 2017 is proving to be a very successful year for the Great Lakes Piping Plover, an endangered shorebird UMBS has worked to protect for more than two decades. By summer's end zookeepers managed by the Detroit Zoological Society and other zoos from around the country will have raised a dozen chicks from abandoned eggs in the captive rearing center on Douglas Lake. Professor Francie Cuthbert and her team have located 74 pairs and 83 nests in the Great Lakes Region; this is great progress for a species that was down to only 13 pairs in the area when the species was formally listed as endangered in 1986.



A Great Lakes Piping Plover chick huddles beneath a heat lamp at the captive rearing facility at UMBS, which is managed by the Detroit Zoological Society.

## A Crash in White-footed Mice

The population of white-footed mice, which outnumbered people by the thousands last summer here at the Station and elsewhere in the region, took a dive this summer. Mammologist Phil Myers found nary a one in his early season trapping. Wild swings in the population are typical and follow the ups and downs of acorn crops. Chipmunks have seized the initiative to raid cabins with gusto, however, and students are still learning the hard way that it is really not a good idea to have food where they sleep.



A white-footed mouse.

## Logged Plot, Ready to Burn

We've taken down the trees and are letting the wood dry out in a one hectare area of our forest, readying ourselves for a burn this fall. This plot will add to adjacent ones burned in 1936, 1948, 1954, 1970, 1980, and 1998. These burn plots continue to be studied by scientists from around the country each summer at the Station. Interest in them has been growing over the past decade as scientists compare the roles that disturbed versus undisturbed forests play in sequestering carbon from the atmosphere.



A fern unfurls next to a cut stump in the burn plots this spring.