PETROGLYPHS

Environmental Earth Science

2023-24 Newsletter 13th Edition

Message from the Chair

Bryan Oakley

Hi everyone,

As we get along into the halfway point of 2024, it is time for us to reflect on the many accomplishments of the Environmental Earth Science Students and faculty have made over the past year. Pulling together the newsletter content, I am always struck by just how much everyone does around here to make EES the successful academic juggernaut that it is!

I am particularly excited to announce that the department spearheaded some pretty comprehensive curricular changes that will take effect in the fall 2024 semester. These changes help keep EES current and cutting edge to prepare our graduates for the environmental issues of the 21st century. Combining aspects of the environmental science and sustainable energy science concentrations into a new track '*Environmental Science and Sustainability*' as well as continuing our *Environmental Earth Science* concentration will keep our program relevant into the years to come. I can proudly say that we are one of the largest Earth Science programs in New England, however we remain small enough to know our students personally and feel that the EES community remains as vibrant as ever.

We wrapped up the school year with our annual End-of-Year Celebration. During the celebration research recognition awards, a $1000 Solar Energy Association of Connecticut scholarship and our Academic Awards were given out. The top award for Outstanding Environmental Earth Scientist when to Senior, Emma Bean. Our speaker was EES Alumnus Noah Hallisey ('17) who gave the students some great perspective on his time as a graduate student at the University of Rhode Island, where he is currently a Ph.D. Candidate in Marine Affairs. Shortly after commencement, the department led a trip for the global field course, focused on the White Mountains and Acadia National Park (led by Dr. Cunningham, assisted by me and Dr. Hyatt)

I would be remiss if I didn't recognize the contributions of the EES faculty this past year and the help and advice levied by Assistant Department Chair Steve Nathan. A huge shout out goes to our department secretary Zosia Carlquist who keeps the department running smoothly! The collegiality, dedication and commitment of the full-time and part-time faculty are second to none. More importantly, the EES faculty have fostered a community here where our students are challenged, but feel welcome, mentored, accepted, and valued. The faculty have done all this while maintaining a high level of academic scholarship, as evident in the faculty updates. You all, faculty, and students alike, make me look forward to coming to campus each day and make my job as department chair that much easier!

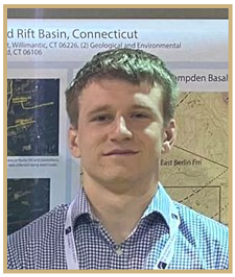
STUDENT RECOGNITION AWARDS

May 2, 2024

In the Spotlight

Emma Bean—Outstanding Environmental Earth Scientist
In recognition of her enthusiasm, academic achievement, and contributions to the Environmental Earth Science major.

Genevieve Rondeau – Hard Rock Geology Recognition—Who has demonstrated the highest level of academic achievement in structural geology, mineralogy, and igneous and metamorphic petrology.



Kristian Kowalski –Soft Rock Geology Recognition
Who has demonstrated the highest level of academic achievement in historical geology, sedimentology, and stratigraphy in the classroom and the field.

Danna Gonzalez Carrasco—Solar Energy Association of Connecticut Scholarship—Who has demonstrated the highest level of achievement in student research and academics in the classroom, laboratory and the field.

Jonathan Lepire – Quaternary Geology Recognition
The Quaternary Geology Award is given to students who have excelled in both applied research topics and coursework pertaining to the Quaternary geology of New England.

Academic Excellence—In recognition of his academic excellence in the Senior Class.

Hunter Piscatelli—Academic Excellence
In recognition of his academic excellence in the Sophomore Class.

Antonio Cazassa—Academic Excellence
In recognition of his academic excellence in the Senior Class.

Hailey Cocca

Daria DiBiasio

Olivia Gentile

Academic Excellence—In recognition of their academic excellence in the Junior Class.

To all

FACULTY UPDATES

On Mt Pierce, White Mts, NH
EES Spring Field Course

Dickson Cunningham—Highlights from the Past Year

It is now mid-July 2024 and there is finally a pause in my schedule so that I can reflect on the last year and all that has transpired. I am pleased that EES continues to thrive as a leading department on campus with a vibrant cohort of enthusiastic majors, dedicated faculty, a wonderful department secretary (thanks Zosia!) and a strong alumni network.

Perhaps the highlight of the last year was the EES 50th Anniversary Celebration in October. I took the lead on organizing this event and we invited all the 800+ EES alumni for whom we held contact information. About 100 people attended the event including approximately 70 alumni (representing all 5 decades of EES graduates), students, faculty, and university administrators. We had a series of presentations and an open discussion where many alumni and current students paid tribute to the department and our larger community. We also showcased student research, provided tours of the department, and enjoyed social time during lunch and coffee breaks. Prior to the event, we created a 50-year timeline display and collated a great deal of alumni information, faculty and student awards, faculty publications and other notable achievements; all are now on display in the EES department and corridor spaces. Please see separate report in this newsletter about this milestone event for our department.

Following the anniversary event, EES Alumnus Ken Wolslegel, class of '87 got in touch and informed me that he had a major multimedia production titled 'Earth 2023' that he would like to present to EES and the entire Eastern community. Ken gave a superb presentation to a large audience that included the University President – see separate page also in this newsletter highlighting this event.

During the fall, I gave two talks at the GSA Annual Meeting in Pittsburgh. One talk was a summary presentation on the active deformation field north of Tibet which was included in a major session focused on intracontinental tectonics. The other talk was part of a geoheritage session and concerned a study I published a few years ago about a potential Geopark worthy of UNESCO recognition in a remote region of Mongolia.

•**On the research front**, I only published one paper in the last 9 months but have other papers in progress. My collaborator Haibo Yang and I (with others) published a paper in *Geophysical Research Letters* about the electrical resistivity structure in an area north of Tibet that reveals the depth extent and geometry of several important crustal boundaries, with important implications for strain transfer and earthquake hazards in the region.

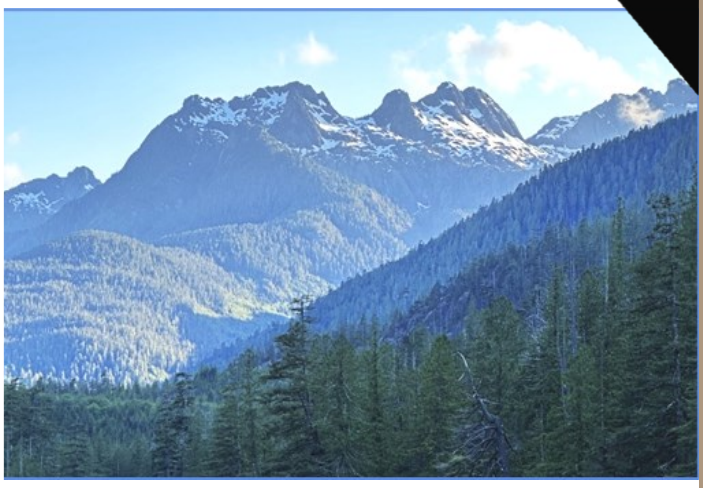
•**On the teaching front**, I continue to teach the structural geology and mineralogy/petrology upper-level courses. I also teach the intro EES 104 course and an EES professional development course which is now a major requirement. In the spring, I also led our inaugural EES 271 "Summits and Seashores" field course to NH and Maine. This trip was very successful and great fun! Please see the separate trip report in this newsletter.

•**On the administrative front**, during the spring semester, I chaired the Campus Advisory committee for the national search for the next University President. This was a large responsibility that involved review of more than 100 potential candidates with many in-person interviews in Hartford and via Webex. The search was very successful, and we were all delighted that Karim Ismaili has accepted the position and will begin his tenure as Eastern's new President in August.

- **In terms of other service**, I continued as Employability Coordinator reporting to the Provost regarding implementation of the campus-wide Employability Plan and incentivizing and supporting academic department efforts to embed career advice and employment preparation activities in major curricula. I also served as the EES Department Senator and Faculty Advisor to the EES chapter of the SGE National Honor Society for the Earth Sciences.

• **On the home front**, my son had very successful seasons playing varsity hockey and varsity tennis this year. I also taught him to drive (alongside his driver's education classes) and at the time of writing, we are visiting various colleges and universities as he begins his senior year in high school and starts the busy application process. At home, we continued to develop our property reconstructing a stone wall and landscaping around our new pond. Our wildlife cameras captured some wonderful photos this year of bobcats, coyotes, raccoons and skunks. A bear was sighted one mile away, so we are wondering if he/she will visit us soon!

• **On the travel front**, my son and I spent 9 days on Vancouver Island in June, and we enjoyed many hikes along the wild and rugged Pacific coast. We hired a VW Vanagon which made it easy for us to camp and travel about the stunning scenery of Vancouver Island which is 2.5 times larger than Connecticut. We also went on a whale watching tour and went bear watching out of Tofino and Ucluelet on the west coast. Finally, we spent 2 pleasant days in Victoria. See photos below! In late 2023, we also had a quick trip to Asheville, NC, which included a day of waterfalls and Blue Ridge hikes. Finally, I continue to explore CT and other parts of New England on my own to identify new sites of geological interest. A few highlights from the last year include the impressive mafic dike complexes in Ogunquit Maine and the spectacular outcrops along the Honey Hill Fault in CT that reveal a major phase of sinistral transtensional orogenic collapse (photos on next page).



Scenes from our Vancouver Island trip including ferry with Mt Baker stratovolcano in distance, interior mountains, mother bear with cubs, sea lion colony and coastal scenes in Pacific Rim National Park.

- Looking Glass Falls, NC, folds in extensional shear zone, Bozrah, CT, and large gabbroic dike, Oqunquit, ME

EES Spring 2024 Field Course to Northern New England—Trip Report

Dickson Cunningham

During May 2024, our much talked about inaugural field course to northern New England was finally realized and it was a resounding success! The EES faculty felt that a less expensive and more "local" trip would be an appropriate offering to balance some of our more expensive trips that we have been running semi-annually to the western US. Having gone to college in New Hampshire and having spent a lot of my boyhood and teen years hiking with my father throughout New Hampshire and Vermont, I thought it would be fun to bring students to the beautiful and geologically interesting summits and notches of the White Mountains. In addition, we decided to add the Maine pegmatite mineral district and stunning Acadia National Park coastline to the trip to add geological and environmental diversity. Thus, the concept of a "Summits and Seashores trip was born. Twelve students attended with Bryan Oakley joining me as co-leader for the first seven days and then Drew Hyatt took Bryan's place for the final five days.

On day one, we left Eastern heading up I-91 in a rainstorm and made a few stops in Massachusetts to see key outcrops in the Hartford-Deerfield Basin including dinosaur footprints, the Holyoke Mt summit basalt and the famous Titan's Piazza columnar joints. We discussed the lithotectonic evolution of the northern Triassic-Jurassic rift system as we huddled under umbrellas. We next drove to Shelburne Falls in the eastern Berkshires as the rain subsided. The famous potholes of Shelburne Falls are beautiful features that invite discussion about their formation and the likelihood that many other similar potholes lie hidden beneath other glaciated valleys of New England. In addition, the potholed outcrops also reveal impressive migmatitic gneisses that are deformed into large-scale overturned folds. Next, we drove to Quechee Gorge and walked to the bottom as the skies cleared and late afternoon sun greeted us. We were able to see tightly folded metasedimentary psammites, phyllites and schists and noted that the impressive canyon follows a series of mafic dikes that are partly exposed. We discussed the glacial lake outburst flood that is thought to have caused the canyon incision at about 13 kybp. We then moved on to North Woodstock, NH where we based ourselves for five nights at the very pleasant Notch Hostel. Bryan brought up pre-cooked sausages and chicken that we added to a dinner feast of pasta and salad.

Dickson on the trip looking for a road through the forest.

The next morning, we climbed Mt Cardigan and had wonderful 360˚views as we explored the marvelous summit geology that provides all kinds of insights into magma chamber processes. We also looked at the jointing, glacial and erosional features that provide information on the mountain's landscape evolution. Afterwards, we visited the Sculpted Rocks State Park where James began his daily crusade to be allowed to swim (after reminding us that he had just carried a 100-lb rock with nice kyanite crystals from Mt Cardigan!). Meanwhile, the rest of us examined the beautiful potholes, pothole cylinders and coalesced potholes along a beautiful stretch of the Cockermouth River.

Bryan leading a discussion on glacial landscapes from the summit of Mt Cardigan

The next day - after an early morning panic when I thought I lost my wallet (it was in my back pocket, so I only lost my mind!), we began a day of geotourism in Franconia Notch. We started at The Flume where we marveled at how a combination of mafic dike weathering/erosion and bedrock jointing created the spectacular slot canyon. The wet spray was refreshing, and we enjoyed our visits to the other falls and huge pool that we passed along the circuit hike.

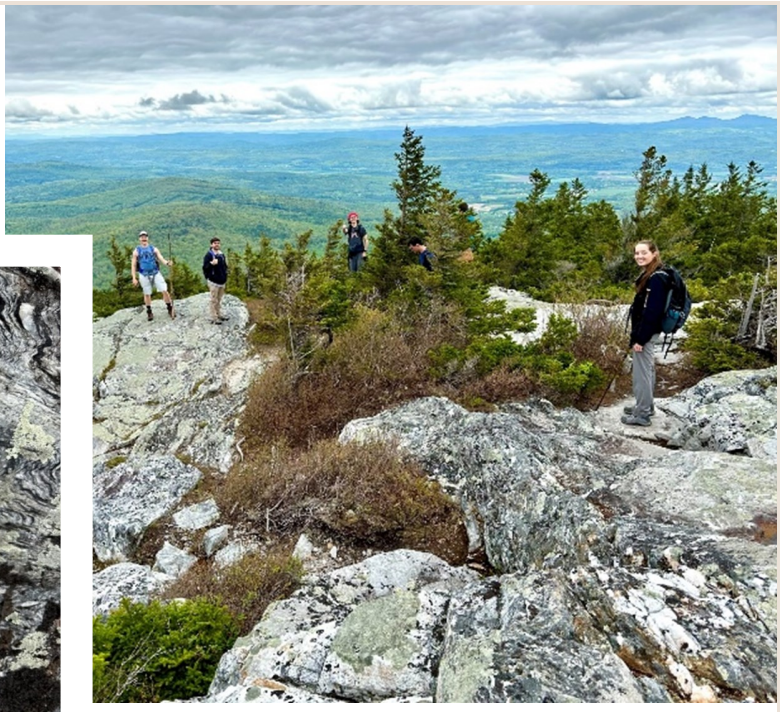
Next, we went to The Basin and hiked to several other falls including Kinsman Falls, where Riley told us about the geological evolution of different types of waterfalls and cascades. An outstanding feature of The Basin outcrops is the evidence for magma mingling and intrusive brecciation. We then drove to Boise Rock where there is a spectacular view of the Cannon Cliffs and where Hunter shared his knowledge of processes that lead to the formation of notches, valleys, cirques, canyons, ravines, and gorges! We also looked carefully at the impressive exfoliation that has contributed to the cliff formation - perhaps the finest example of exfoliation observable in New England.

We then ended the day hiking to the top of Bald Mt and Artist's Bluff at the northern end of the notch. We enjoyed some steep scrambles and wonderful views down U-shaped Franconia Notch with late spring snow blanketing the upper slopes of Mt Lafayette. Unfortunately, Kaylee sprained her ankle on this hike and hobbled down back to the vans in some pain. We were relieved that despite some lingering soreness, she was undaunted and persevered through all the remaining hikes on the trip.

Our group at the Flume, Kayla, Alyssa, Riley, Kaylee, and Rebecca at The Basin, and some of our daring students scaling Artist's Bluff, Franconia Notch

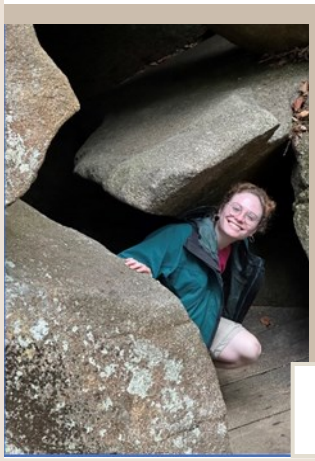
The following day, we climbed Black Mountain in the metasedimentary belt west of the White Mountain batholith. Black Mountain is composed of highly deformed and metamorphosed quartz pebble conglomerates and metasandstones. The hike to the summit is relentlessly steep and the group was quite weary when we finally reached the open summit. Fortunately, the summit outcrops expose beautiful minor folds with ductiley folded quartz pebbles; a testament to the high temperatures and intense strain the rocks have experienced. After examining the structural geology and pointing out prominent distant landmarks as far as the Green Mountains, Mt Ascutney and the Mt Croydon-Sunapee ranges, we descended and then drove to Lost River in Kinsman Notch.

Summit of Black Mountain and intense folds of highly flattened and strained quartz pebble conglomerate



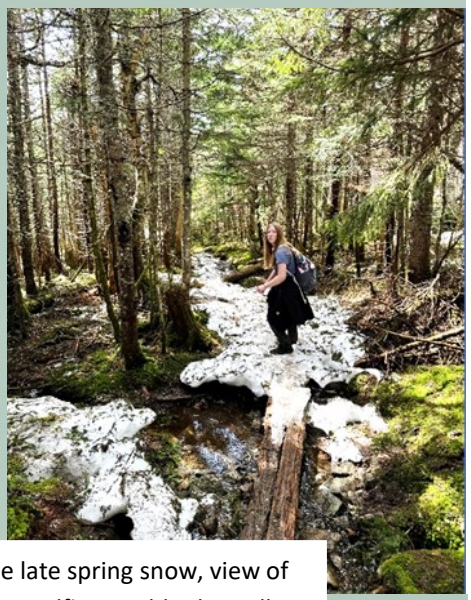
Water levels were high at Lost River and two caves were closed, but we still enjoyed wiggling through the tight boulder spaces and crawling like salamanders through the damp subterranean passages. A few students feared claustrophobic entrapment in passages such as the "Lemon Squeeze," but all managed to escape and James and Hunter even went through some caves twice!

The next day, we were supposed to climb Mt Eisenhower, but reports of deep snow and ice on the upper trail forced us to reconsider and we decided on Mt Pierce in the southern part of the Presidential Range. Climbing Mt Pierce turned out to be an inspired decision (thanks especially to Tricia at the Notch Hostel for suggesting it!). We had beautiful weather, the trail was forgiving in its gradient, and there was a lot of snow in the upper reaches (a "monorail" with some "postholing" hazards) which we enjoyed as it was late May, and we hadn't seen snow in Connecticut for months. Most importantly, as we climbed through the krummholz into the open alpine summit and ridgeline, we were treated to glorious views towards Mt Washington and surrounding regions to the east and west. We spent an hour or so on the summit eating lunch, taking many photos, and hearing from Harrison Fain about the arctic plants and birds all around us, before taking a different route down via the AMC Mizpah Spring Hut. While there, the caretaker told us all about the hut system, summer worker responsibilities, and how the system caters to all passersby, from day hikers to those completing the entire Appalachian Trail. On the way down near the end of the 11-mile circuit, we stopped at Gibbs Falls, where many of us cooled our feet, heads, and lower halves, and of course, James went swimming!



Kayla emerging from a Lost River cave, with Bryan on Mt Pierce and James swimming at Gibbs Falls





Alyssa and Charles with Mt Washington in the distance, Rebecca hiking in the late spring snow, view of Mt Washington and Tuckerman Ravine from Square Ledge, and the ubiquitous selfie at Sabbaday Falls.


The following day, we drove east on the Kancamagus Highway with stops at viewpoints to discuss land sliding and mass wasting, the huge Pemigewassett Wilderness, and reasons why the White Mts have gradually evolved into a four-season tourism and recreation destination. We also stopped at beautiful Sabbaday Falls where another Jurassic mafic dike has eroded into a slot canyon – a recurring theme on the trip. We passed through North Conway and stopped at the top of Cathedral Ledges, which provides beautiful views over the surrounding town and countryside. While we were there, a rock climber emerged over the clifftop and presented Riley with a rose – an unexpected gift that led to great speculation about whether the two would immediately elope!

Next, we drove through Crawford Notch to the Willey House where we examined displays about the natural history and glaciology of the valley, the pioneering Willey Family, and the newspaper accounts of the tragic 1826 landslide disaster. We then drove to Pinkham Notch and hiked up to Square Ledge on the east side of the valley where there are excellent views of the Mt Washington massif and Tuckerman, Huntington, and the Gulf of Slides ravines. Rebecca told us about the glacial history of the Presidential Range, and it was marvelous for the students to look across the notch to see classic examples of glacial cirques. We then drove east to begin the Maine portion of our trip with two nights in Bethel Maine in the famous western Maine pegmatite district.

The next day we followed an overgrown path to the remote Pingree Quarry where we spent a couple of hours mineral collecting. The most impressive discoveries were huge black tourmaline crystals up to a foot long, although most were quite broken and splintery. After following old logging roads and getting a bit lost, we eventually located the Noyes Mtn (Harvard Quarry) trailhead. This was a nice hike with pretty views towards New Hampshire from the summit trail and we spent an hour or so looking around the mine dumps. As usual, we found lots of large muscovite books and black tourmaline, but none of the coveted green tourmaline, although Charles found some nice, terminated quartz crystals and all students found many other nice specimens of typical pegmatite minerals at both quarries, which were brought home for personal collections.

Black tourmaline and garnet-rich pegmatite at Noyes Mt, morning discussion in Bethel, ME, our group at Jordan Pond, Acadia NP, and green amazonite feldspar in miarolitic cavities SW Acadia coastline.

The following morning, Bryan headed home, and Drew Hyatt joined us. We started the morning with Harrison Moss sharing his knowledge of pegmatite geology, followed by a visit to the Bethel Mineral Museum. The Bethel Mineral Museum is remarkable museum and is worth a special trip all by itself. I had heard that it has beautiful Maine tourmaline displays, but I was unprepared for the world-class raw pegmatite specimens and faceted gemstones that are so beautifully presented. In addition, the meteorite exhibit is phenomenal and easily ranks among the best in the world. That is not an exaggeration. The students were awed by being able to touch meteorites from both Mars and the Moon, and carbonaceous chondrites that contain pre-solar system dust particles up to 7 billion years old! The quality of the museum cannot be overstated and I urge whoever reads this account to visit the museum. It is a spectacular museum in a very pleasant small town.

After our morning museum visit, we then began the several-hour drive to the Camden Hills where we squeezed in a visit to Mt Battie which provides pretty views over the harbor and coastline below and then we hiked quickly to the top of Mt Agamenticus. Unfortunately, the skies were darkening all afternoon and when we reached the summit viewpoints, thunder and lightning were rolling in and rain began. It became unsafe to remain on top. But we were able to get a good overview of Penobscot Bay scenery and the many islands that dot the coastline. We were also able to see the deformed conglomerates on Mt Battie and andalusite schists (chiastolite) that can be found on Mt Agamenticus. We then drove to Mt Desert Island where we stayed in comfortable cottages and motel units and had three days to explore Acadia National Park.

Our group above Otter Cliffs, Acadia NP

We had perfect sunny days in Acadia and felt very fortunate on the first day as it was the Friday of Memorial Day weekend and we beat the crowds to all the major sites on the SE coast from Thunder Hole to the Otter Cliffs to the superb shatter zone outcrops at Little Hunter's Beach. We also went to Jordon Pond with the beautiful backdrop of The Bubbles, and we set aside free time to buy gifts at a major souvenir shop! We later drove up to the top of Cadillac Mountain, which was very windy, but provided stunning views of the beautiful Maine coastline and distant islands. We also squeezed in a short hike to see the clastic sedimentary Bar Harbor Formation outcrops near town which are so lithologically different from all the igneous and metamorphic rock types that we examined during most of the trip. We then headed back to our accommodation where we held a big group barbecue with ribs, sausages, and burgers and lots of side dishes. The students then played tag in the dark and counted their mosquito bites in the morning!

Intrusive “shatter zone” and mafic dikes, Acadia NP coastline

The next day we went to the SW part of Acadia to examine the geology along the Seawall and Bass Harbor Lighthouse coastline. This area of the coast has impressive mafic dike swarms, miarolitic cavities with green amazonite feldspar and impressive igneous-metamorphic contacts.

The area experienced extreme storm wash-over events during the previous winter and some sections of the road were boulder-strewn, ripped up and closed which meant that we had to walk further and thus there were very few other people around.

Group at Bass Harbor Lighthouse

Riley and Alyssa

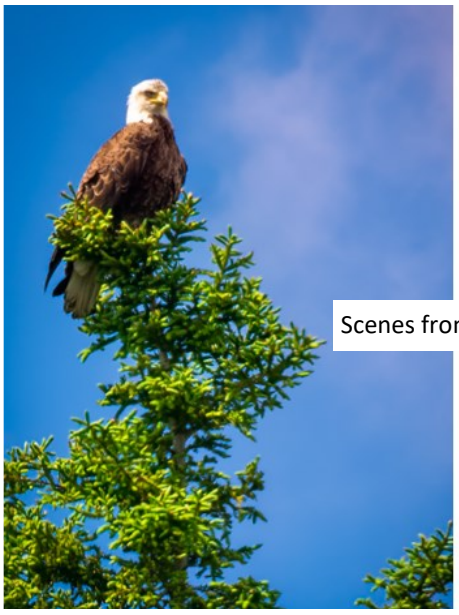
After lunch, we drove north to the Seal Cove area on the west side of the island. The coastal outcrops there of heavily folded Ellsworth Schist are spectacular and the students were very impressed with the intensity of folding which reminded us of what we saw on top of Black Mtn the previous week in western NH. Again, the tectonic forces that have shaped the metamorphic basement throughout New England continued to make a profound impression. We then drove back to eastern Mt Desert Island, but the Memorial Day crowds were creating traffic and parking lot gridlock and a ranger chased us away from the parking areas at The Bubbles trailheads, so we had to forgo climbing the small peaks. Therefore, with unexpected free time, we did what any sensible geo-tourist would do in Acadia, we went to the beach!

Folded Ellsworth Schist

Specifically, we went to Sand Beach – the largest sandy beach in Acadia, which was also chock-full of Memorial Day crowds. Of course, nobody was swimming because the ocean temperature was 50˚and the air temperature was in the 60s. Nobody was swimming, until our crowd came along. Half of our students must be some sort of reincarnated sea creatures because James, Connor, Hunter, Charles and the other lads (?) went full-speed headfirst into the waves while half the crowd on the beach gasped at their impetuous near-insanity. Not to be outdone, Riley and Alyssa proved that women are equally impulsive and joined the boys. Meanwhile Harrison Moss waded in fully clothed and sloshed around in his boots for days afterwards. After this refreshing late afternoon entertainment - full of laundry outcomes but not learning outcomes, we retired to our motel, and we all shared a gigantic spaghetti dinner cooked up in the ladies' cabin.

The next day, we joined a nature cruise through the islands east of Mt Desert Island and along the coastline south of Bar Harbor. The weather was sunny and cool, and the trip was smooth and enjoyable. Everyone was in a fun, festive mood and the excursion exceeded our expectations. We were impressed by the rugged and wild islands we passed that presented sheer cliffs, sea caves and wave ravaged headlands. We also saw many shore birds, a few porpoises, and a seal colony (that looked like a bunch of lazy rock sausages). A beautiful bald eagle was also seen up close. We all felt that the trip was a fitting final chapter to our Acadia visit. And we decided to give the students an hour and a half after the cruise to visit Bar Harbor to grab lunch and/or ice cream, shop for souvenirs or just enjoy walking through the town – which was heaving with tourists the day before Memorial Day. Finally, we departed and headed south to Scarborough for the final night of the trip and a group dinner and review session before the final exam the following morning.

We awoke to a very rainy day like the first day of the trip. We were not discouraged though, as we had enjoyed great weather on every other day. The students took their final exams and then we drove south with plans to visit a few more coastal areas. However, there was driving rain and it was Memorial Day and it seemed like every New Englander was driving down I-95. We were heavily delayed by traffic in southern Maine. Therefore, we decided to forgo the Ogunquit stops, but we did squeeze in Cape Neddick, which has an interesting, layered gabbro complex. It was so windy and wet though that we could barely see the island lighthouse and we didn't stay long. So, we then drove back to Eastern arriving around dinnertime. We had completed our trip safely and all felt enriched by our 12 days of wonderful, shared memories, physical adventures, and interesting learning experiences. This was a stand-out trip in many ways, but especially because we had such a great group of fun, enthusiastic, kind, and considerate students. Drew, Bryan, and I were so impressed with their generous and engaging spirit on every mountain and coastline, and we want to thank all our students for contributing so positively to our collective educational journey!



Scenes from our Acadia NP Nature Cruise

(Thanks to Drew Hyatt for many of the Maine location photos!)

Me in the heart of the Sant Corneli anticline, south-central Pyrenes, Spain.

Peter Drzewiecki

Greetings, EES alumni, students, and friends! Another year has passed, and it was an extremely busy and tiring one for me. This is partly due to committee work at Eastern, and partly due to a lot of travel. But overall, it was a good year!

Summer 2023 began with a Global Field Course to Colorado with Drew Hyatt and 11 EES students, which is described in last year's Newsletter. Upon returning, my youngest son, Max, graduated from High School. Done are the days of Boy Scouts, lacrosse games, and weekly volunteering. Throughout June and July, I conducted fieldwork with EES major Kristian Kowalski, retired UConn geologist Randy Steinen, and US Geological Survey intern Donovan Vitale mapping the buried nose of the Rocky Hill Anticline (also described elsewhere in this Newsletter). During a July visit to my family outside Buffalo, Max and I escaped for a few days west down Interstate 90 to cross a few more National Parks off Max's bucket list. We visited Cuyahoga Valley National Park near Canton along with the First Ladies National Historic Site. While in Canton, we could not pass up the Pro Football Hall of Fame! We drove next to my Alma Mater, the University of Notre Dame. I had not been back in 30 years, and Max got to experience some of the traditions that, as a fan, he is aware of. We ended at Indiana Dunes National Park. Later in the summer, we visited my older son in Boston and saw Minute Man National Historic Park and walked a few miles along Paul Revere's famous route. The summer would not be complete without a few trips to the family home in Maine!

Trip to Ohio and Indiana. Left – Sandstone ledges at Cuyahoga Valley National Park. Middle – "Touchdown Jesus" mural on the library at the University of Notre Dame. Right – Vegetated dunes at Indiana Dunes National Park.

Trip to Scotland and Ireland

Per family tradition, our graduating children get to pick the destination of the family vacation. Max picked Scotland and Ireland, so off we went. I think he picked this so he could legally go pub crawling! My three other children all recently started jobs and did not feel they could take a break, so my wife and I filled the role of fellow pub-crawlers admirably! We spent two days in Edinburgh, seeing the palaces, castles, and cathedrals along the Royal Mile, climbing the Salisbury Crags, and exploring Leith. Along the walk, we came across the childhood house of Robert Louis Stevenson! We then spent two days in the Scottish Highlands. We were not overwhelmed by Loch Ness (perhaps if we had seen 'ole Nessie…) but made finding Highland Cows a goal… there are not many left. We were impressed with the castles! We visited the Urquhart and Eileen Donan Castles and drove by many others. Of all our days in Scotland, our trip to Isle of Sky in the highlands was my favorite. The landscape was stunning!

We next flew to Ireland and spent two days in Dublin. This was by far the best place for pub crawling! We toured the Guinness Storehouse (where they make the beer!), Trinity College (where they drink the beer!), Christ Church, the famous Temple Bar (to start our pub crawl), the Dublin Castle, and the famous statue of Molly Malone, where we took part in the rather risqué tradition that is meant to bring good luck. I will let you look up what that is if you are curious! The next day we headed south of Dublin to the scenic town of Glendalough where we toured more historic sites and bought some of their famous whiskey. On the way back, we stopped in the coastal town of Bray, where we stumbled upon a makeshift memorial to recently deceased Sinead O'Connor outside her most recent house.

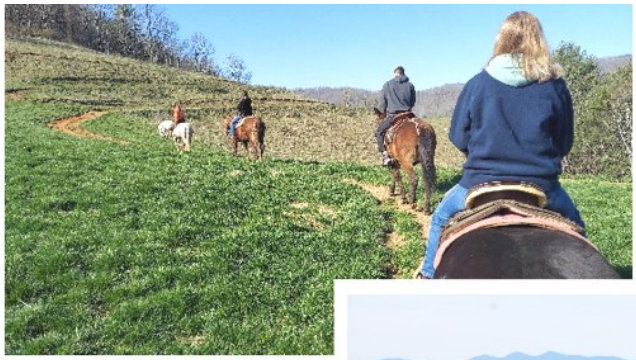
Both nights, we went pub crawling. We ended with two days in Belfast. We toured the northern Irish coast including the Giant's Causeway (a bucket list item of mine) and the rope bridge of Carrick-a-Rede. In Belfast we took an outstanding Taxi Tour where we visited many of the most significant sites of the "Troubles" Belfast experienced throughout the latter half of the 20th century, delivered by somebody who lived through it. We also saw where the shipyard where the Titanic was built (their slogan is "It was fine when it left here…") and the studio where The Game of Thrones was filmed. Both nights, we went pub crawling, and enjoyed local Irish music.

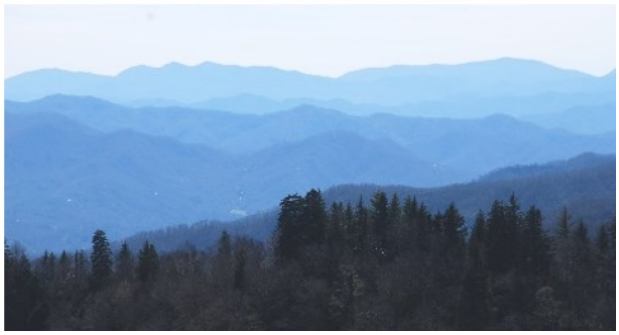
Top Left:—Lisa and Max on Salisbury Crags, Edinburgh. Top Right– Eileen Donan Castle in the Scottish Highlands. Bottom left—Basalt columns at Giant's Causeway, Bottom middle— Highland cows, Me, Max and Lisa in front of Dublin's most famous pub. Bottom right—Quiriang, in the Scottish Highlands

Shortly after our return, it was time to take my son to college (SUNY Oneonta) and begin our semester. I taught a First-Year seminar called "Connecticut's Jurassic Park", Ancient Environments, and Geology of National Parks. I had not taught that since 2006, and it took a lot of time to update and modernize! All my PowerPoint lectures and assignments had to be redone. On top of all that, I am co-chair of a committee that is updating our General Education requirements to make them more in line with a Liberal Arts university. Starting Fall 2024, there are no more LAC courses! This meant that over 150 courses had to be reviewed for the new ELAC (Eastern's Liberal arts Curriculum) program, and we had to get all faculty members and administrators to agree on new policies. The challenge was in trying to get each group to see the bigger picture for students and not focus on the implications to their individual departments and programs. We had up to five committee meetings a week and lots of between-meeting-work. By the end of the semester, I was exhausted!

My in-laws helped a bit by renting a huge house across from Mount Snow (southern Vermont) in January for all their children and grandchildren. We enjoyed a long weekend of skiing, cross-country skiing, snow tubing, and a hot tub! We met up with the Schroeders (Tim taught in the department a few years in the early 2000's) who live near there now. In the Spring semester, I taught my revamped Sedimentology and Stratigraphy course (project-based, which means lots of grading) and a section of Dynamic Earth. This is another course I had not taught since 2006, and required updating all the lectures, assignments, and labs. Meanwhile, work continued on the new Liberal Arts curriculum. Again, I ended the semester exhausted! During our spring break, my wife and children Shelby and Max escaped to Great Smoky Mountain National Park. We always wanted to go but heard horror stories about going in summer (too crowded!). We enjoyed some hikes, great views, a horseback ride, country music, moonshine, and cheesy Gatlinburg.

Trip to Great Smoky Mountains National Park





Horseback riding in the foothills on the North Carolina side

Bottom left—Max, Shelby, and Lisa enjoying dinner with live country music in Blake Shelton's Ole Red Restaurant

Bottom right—Overview of the mountains on the Tennessee side

There was no time to rest, as I left almost immediately to travel to Spain with EES students Emma Bean and Hailey Cocca to conduct a few weeks of field work (this is described elsewhere in the Newsletter). The day after my return from Spain, I left for a week in Nova Scotia… but that will wait until next year's Newsletter.

My family continues to find success! My older daughter Kaela and her husband are becoming "old people". They started a huge garden at their house this year, and they enjoy travelling in their free time (two trips to Europe this year!). My older son Aiden got his first permanent engineering job with Medtronic. He lives in Boston with his long-time girlfriend and two cats. My younger daughter moved to New York City with two other unemployed friends! She got a job as a cake decorator that she loves, but is looking for something more career-oriented. Meanwhile, she is crushing city life. Max completed his first year successfully SUNY Oneonta, where his favorite activity is Dungeons and Dragons. He is majoring in Environmental Sustainability. My wife continues her work as a state auditor, where she is desperately trying to make UConn conform to state laws and guidelines in regard to spending taxpayer's money. It is a losing battle! I look forward now to the rest of summer with my major summer chores already completed and sabbatical leave next semester. I should be fully recovered from this past year by this time next year! Cheers until then!

Faculty: Peter Drzewiecki

Undergraduate Student Research

Kristian Kowalski

Project Title: Using Magnetic Data to Constrain Geological Bedrock Mapping of the Rocky Hill Anticline, Hartford Rift Basin, Connecticut

Kristian and Peter Drzewiecki measuring core in the State Core Repository

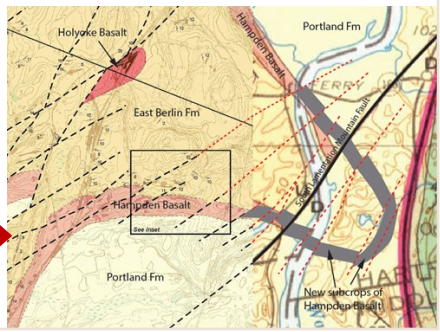
Kristian and retired UConn professor Randy Steinen discussing data-collecting strategies

Kristian (right) and USGS Intern Donovan Vitale preparing the magnetometer for a run

Kristian collecting data with the magnetometer

EES senior Kristian Kowalski worked with Peter Drzewiecki, Dr. Randy Steinen (retired UConn geology professor) and Donovan Vitale (US Geological Survey intern) to collect magnetometer data to map the buried nose of the Rocky Hill Anticline, in Rocky Hill and Glastonbury, CT. This is part of a larger effort of updating the Geological Bedrock Map of Connecticut, spearheaded by the CT Department of Energy and Environmental Protection. The original map, published in 1985, does not show the nose of the anticline because it is buried beneath glacial till east of the Connecticut River. Cores taken in the early 2000's demonstrated that it is present, but deeply buried. There were not enough cores to map its exact position, however. The Hampden Basalt which is used to define the anticline has a different magnetic field strength compared to the surrounding sedimentary bedrock, and thus could be used to recognize and map the nose of the anticline. Despite heavy noise signals from buried human infrastructure (buried power cables, sewers, etc.) we were able to constrain the distribution of the Hampden Basalt with a high enough degree of certainty to add the nose of the Rocky Hill Anticline to the state bedrock map. Kristian prepared a poster and presented it at the March 2024 Northeast Geological Society of America meeting in Manchester, NH, and at Eastern's CREATE conference for undergraduate research.

Kristian presenting to EES students (left to right) Daria DiBiaso, Emma Bean, Hailey Cocca, Cameron Soulagnet, and Jonathan Lepire



Composite of two CT Bedrock Qudrangles with the proposed location of the buried Hampden Basaltl (gray) defining the nose of the Rocky Hill Anticline.

Faculty: Peter Drzewiecki

Undergraduate Student Research

Emma Bean

Project Title: Correlating Strata Across the Sant Corneli Antiacline, South-central Pyrenees, Spain

Emma looking up from measuring the Montagut section

View of the Llau de les Collades Valley, with the Montagut measured outcrop on the left, equivalent strata on the right, and flat-lying Oligocene conglomerate in the distance.

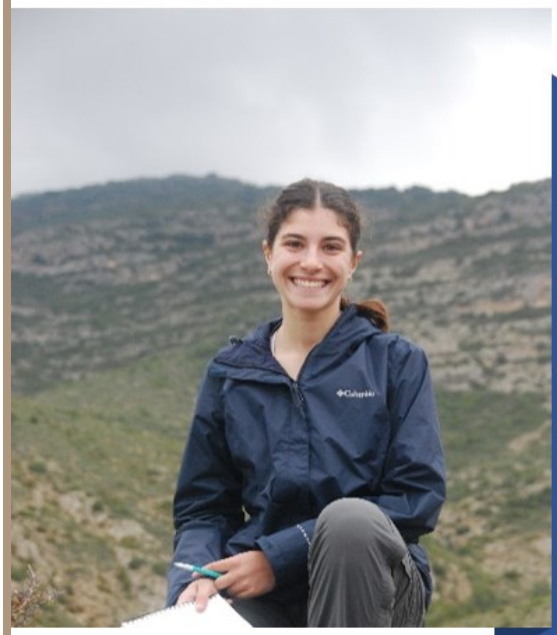
As described more elaborately in another section of this Newsletter, Emma Bean traveled to northeastern Spain with Peter Drzewiecki and Hailey Cocca to collect data pertaining to the correlation of strata between the northern and southern flanks of the east-west trending Sant Corneli Anticline. This correlation has proved difficult since first attempted in 1968 yet is important to identifying the timing of the growth of the anticline. The difficulty lies in the erosion of the strata from the top of the anticline, the lack of species that can be used for precise biostratigraphy, and the complex arrangement of lithofacies related to highly variable paleoenvironments. An undescribed outcrop with the correct aged strata was identified in the Llau de les Collades valley, between the southern and northern flanks. Emma was responsible for measuring a section at this outcrop and relating it to sections previously measured on the flanks. The initial results show promise in helping resolve the correlation issues, as the new outcrop shows facies similar to both sides of the anticline. We believe this will demonstrate that the anticline was growing before compression that started the Pyrenees, related to a newly recognized salt tectonic phase.

Faculty: Peter Drzewiecki

Undergraduate Student Research

Hailey Cocca

Project Title: Using Syndepositional Slumps on the Southern Flanks Bóixols and Sant Corneli Anticlines to Constrain the Timing of Salt Tectonics in the Southern Pyrenees

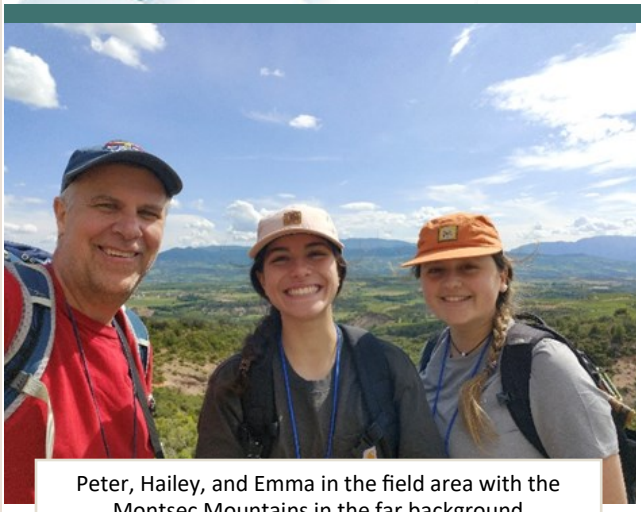


Hailey looking up just after recording a strike and dip measurement.

Southern flank of the Bóixols Anticline; the beds in the front right are part of a slumped unit. The distant rocks are ancient reefs of the Sant Corneli Formation .

Hailey Cocca is presently conducting research for her Honors Thesis. Her project will confirm the timing of the growth of the Sant Corneli and Bóixols anticlines by demonstrating that they were active during deposition of the Sant Corneli Formation, well before the onset of compression that formed the Pyrenees. Using Google Earth, we identified several small, curved faults, known as listric faults, that cut through layers of strata on the flanks of the anticlines. Based on their limited deformation, they are interpreted as the glide surface of submarine slumps and slides that formed while the sediment was being deposited. If true, this means the side of the anticline was unstable, and likely growing while the San Corneli Formation was being deposited. As described in another section of this Newsletter, we traveled to Spain to collect the data needed to prove this interpretation. While the data still need to be carefully analyzed, we left the field knowing that our interpretation is basically correct. Rigid parts of the ancient reefs appear to have broken off and slid down the slope along surfaces in what was then soft mud. Hailey will spend the rest of the summer and the fall semester interpreting her data.

Undergraduate Fieldwork in the South-central Pyrenees



Peter, Hailey, and Emma in the field area with the Montsec Mountains in the far background

From May 20 to 29, 2024, EES students Hailey Cocca and Emma Bean traveled with Peter Drzewiecki to conduct field-work in the south-central Pyrenees Mountains of northeast-ern Spain. This was a continuation of Peter's work, which has been on hiatus since the COVID pandemic, to understand the timing and processes the mark the onset of the for-mation of the mountain range. In addition, the data collect-ed will form the basis of Hailey's Honors Thesis. Previously, Peter and colleagues from Spain and Norway began to docu-ment a phase of salt tectonic deformation in the south-central Pyrenees that started prior to the compression that formed the mountains in the Late Cretaceous time, about 83.6 million years ago. Salt tectonics refers to the underground movement of salt layers deposited in ancient seaways that deform the surface of the Earth as the salt rises. Sedi-ment layers are pushed up from below creating features called salt anticlines which are expressed as topographic highs on the Earth's surface. In our field region, these high spots were located on the seafloor and created shallow water habitats for reefs to grow on back in the Cretaceous. The upward movement of the anticlines resulted in instability on their edges, creating submarine slumps and slides.

The purpose of our trip was to collect data to confirm that small, curved faults, called listric faults, identified on Google Earth were submarine slumps and slides that moved large portions of Creta-ceous reef facies downslope. The reefs are confined to the top of salt anticlines and the slumps show that the reefs were actively growing while the reefs developed. These strata are older than the onset of convergence between the Iberian tectonic plate (Spain) and the European plate that created the Pyrenees, suggesting that salt tectonics preceded the Pyrenees Mountain building. Our work resolves longstanding questions about the early history of the Pyrenees that have been around since the area was first described in 1968.

Emma and Hailey posing on top of and in front of a Cretaceous reef

The trip involved seven field days and a free day in Barcelona while Peter met with Dr. Jaume Vergés, a colleague from the Institute of Geosciences Barcelona of the Spanish Research Council. We flew out of Hartford on May 20, and arrived in Barcelona, jet-lagged, on the morning of the 21st. We drove to the field area and made a few stops to give the students an overview of the field area to place our specific projects into a larger context. We arrived at the hotel in the afternoon and used the early day to recover from the plane trip. The first full field day began with some additional overview stops to get the students up to speed, and reconnaissance to verify field site accessibility. We rely on dirt forest service and farm roads to access the remote field locations, so it is important to make sure they are safe and have not been washed out.

All was well! Along the way we viewed the Roman walls at the town of Isona and explored the tiny village of Abelle de la Conca with its Romanesque Church, Iglesia de Sant Esteve d'Abella de la Conca, completed in the year 1141! The village also contains an excellent exposure of the Bóixols thrust fault. We spent the afternoon and evening at our actual field site getting familiar with the rocks. On the way home we visited a dinosaur track site and climbed to the top of the Orcau Castle. May 23rd was a long field day that began with an hour hike before we could even start collecting data. We explored several listric faults collecting the data we needed. At one location, we ran into a small herd of cows, one of which came right up to us to see what we were up to. That evening, we had dinner in the town of Tremp, which calls itself the "City of Geology."

The field site is full of the ruins of ancient castles and churches dating back to the time of Roman occupation.

Sant Esteve church (built in 1141 and used into the 1980's) in the village of Abella de la Conca.

The following day, we repeated the hike of the previous morning and went even further, to look at rocks that were deposited in what was once deeper water. Here we collected data that shows a large section of the reef, about forty feet thick and half a mile long, slipped down the slope of the growing salt anticline. In the evening, we explored Castell de Mur, a medieval castle and church that is perched on a high hill above the town of Cellars where our hotel was. The late days (it was still light at 9:30 pm), and the Spanish tradition of eating dinner at 9:00 pm allowed time to explore even after a full field day. On May 25, we collected data in a location I had not been to called Montagut, in the Llau de les Collades valley. These data will allow us to link observations we made the previous day, with those at another location called Aramunt that we visited the following day. I have been leading field trips to the Aramunt region since 2014, but never had the opportunity to collect some crucial data. Upon completion of that day's work, we visited a nearby site that preserves a series of machine gun bunkers and concrete trenches from the Spanish Civil War of the 1930's.

May 27 was the last day in the field. It was a relaxing day and used to verify data collected on previous field excursions that confirmed observations made in previous years. We investigated sites near the town of Bóixols and in the canyon of Terradets where we crossed a stone footbridge that was centuries old. After lunch, we drove back to Barcelona, returned our rental car, and went into the city to find our hotel, ice cream, and dinner.

Undergraduate Fieldwork in the South-central Pyrenees Conclusion

Emma holding a giant fossil rudist… a clam that constructed reefs in the Cretaceous. The Sant Corneli peak is in the background.

Emma and Hailey recording the strike and dip of the reef strata.

Hailey taking a break from measuring a section on the Sant Corneli peak.

The students had the entire day of May 28 to explore Barcelona, and they claim it was their favorite day! They visited the Ramblas, the Gothic Quarter, Basilica de la Sagrada Familia, and Gaudi's Casa Batlló before retiring to a rooftop bar. Peter met with Jaume Vergés and devised a plan for the publication that will incorporate the data collected on this trip. On the morning of May 29th, we left Barcelona for Hartford!

This trip gave the students the opportunity not only to conduct research in a remote area firsthand, but allowed them to experience the scenery, culture, and history of one of the most beautiful places on Earth. They were able to gain experience on how geological research is conducted by recognizing a problem, determining how and where to best answer it, and then going to the field to collect the data. They were fortunate enough to be able to do so in an area with a long history and a rich culture!

Drew Hyatt

As usual, the past year flew by with a mix of class, student-centered research, and other activities. This year was quite different for me as I was awarded a sabbatical leave to conduct research for the spring semester of 2024. As such, most of my formal interactions with our students came in the fall semester. That said, as described in the newsletter last year, I did have the pleasure of working with Antonio Cazassa and Dan Castagnetta during the summer of 2023 as they conducted field work on Block Island and were introduced to some 3D modelling techniques in the summer.

Fall 2023 Classes

The 2023-24 academic year, while less class-filled than normal due to my sabbatical, began with a busy fall semester including two EES 104 (Dynamic Earth) classes and one of the associated labs along with field methods class. It was encouraging to note that incoming students in my EES 104 sections seemed to be a little more into the groove of staying on top of classwork and attending classes/labs than had been the case during covid.

Field methods, as always, was fun and in keeping with the last several years was somewhat overfilled with nineteen students (see pics below). We had good luck with the weather and most folks seemed to be into the experience – I know I was! I really enjoyed returning to Bailey's Ravine in North Franklin for the final project; the first time back since before Covid. The students worked well in teams, and with a few close calls, no one went in the drink crossing Bailey's Brook – although I came pretty close a few times. I include some pics below from the site which I must say is one of the more spectacular locations for field activities in the quiet corner.

Most of the fall 2024 Field Methods Class examining some outcrop near Manchester

Field Work

A guest introduction to Real Time Kinematic GPS technology from Dr. Oakley

Field Methods class at Bailey's Ravine

Up close and personal with the departmental drone in your face!

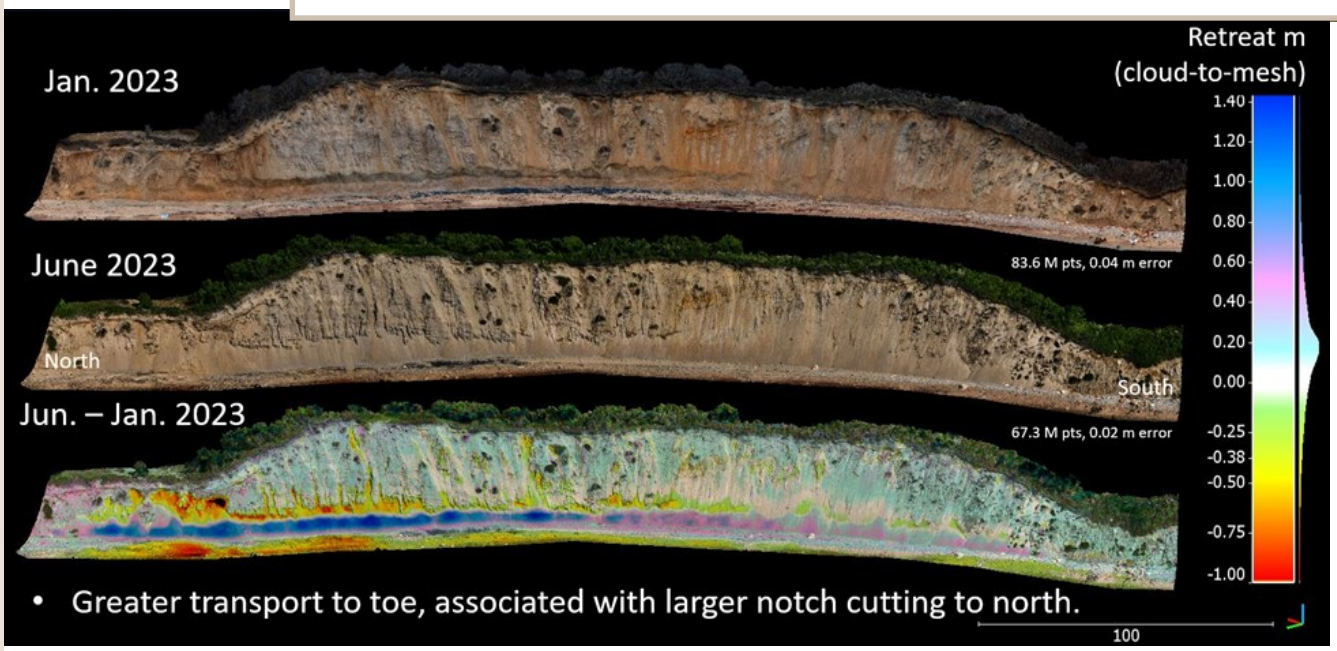
Characterizing a local outcrop in Storrs

In addition to these fall classes, near the end of my sabbatical in late may, I was able to assist Dr. Cunningham for a portion of his Mountains and coastlines field course (EEE 271). As usual, I thoroughly enjoyed being involved in the experience. However, I leave it to Dickson to describe the details of this great learning experience.

Research Activities

It was also a busy year for research, presenting at the national Geological Society of America Meeting in Pittsburgh in the fall, diving into the weeds on sorting out a large and growing data set related to coastal change, returning to and mapping 3 sites on Block Island in January of 2024, and involving 2 students in summer research some of which occurred at Block Island. My focus during the spring sabbatical, however, was to refine Block Island models, learn new volume estimation techniques, and refine my modelling workflow to better utilize our new RTK drone. I learned a great deal on processing models and performing change detection analyses with Cloud Compare and other software during this time. In addition to the research itself, I hope to embed some of this new work within my EES 441 Imaging and Image analysis class that is slated to be offered in the spring of 2025. I include a few pictures related to these activities.

One of the many poster sessions at the National Geological Society of America meeting in Pittsburgh.



A drone-model comparison of January 2023 (top) and June 2023 (middle) models of the Graces Point shoreline. Change detection (bottom) identifies areas of erosion and deposition. Sabbatical research focused on quantifying these changes and collecting new images and building new models using January and June 2024 imaging. The summer work also involved students as described next.

Faculty: Drew Hyatt

Summer 2024 Student-Centered Research Experiences

Without a doubt, my favorite activity at Eastern is the involvement of students in undergraduate research. This past summer I started working with two new students (Mathew Tardella and Kelvin Carranza-Martinez) involving them in field work related to three research projects all of which involve using digital photogrammetry to build and analyze 3D models of geologic sites/samples. This included additional mapping at Block Island using both drone-based and doors-off helicopter imaging/modelling of the shoreline. In addition, Matt and Kelvin assisted with new field work utilizing drone mapping to estimate sediment infilling at nearby Andover Lake.

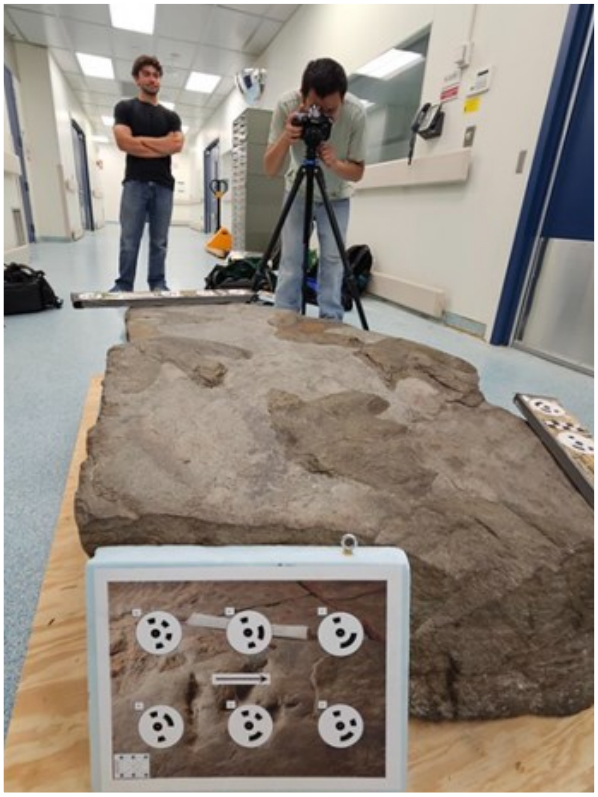
Finally, related to my past experiences modelling dinosaur tracks, Mat and Kelvin joined myself and Dr. Drzewiecki at the collections building on Yale's West campus to image and subsequently model a recently received slab of dinosaur tracks that were excavated from Dinosaur State Park shortly after the site was discovered in 1969. This slab and its analysis are part of an ongoing collaboration I have on dinosaur track modelling. These field experiences provided Matt and Kevin with some pretty cool opportunities, and I look forward to working with them both more during the upcoming academic year as they learn to build and utilize detailed 3D modelling to examine three very different geologic settings/projects.

Professor Drew Hyatt and Matt Tardella

Field Work on Block Island

Stitched view of Kelvin Carranza-Martinez in the back seat of a doors-off helicopter that we used to image all the tall bluffs on Block Island.

Special thanks to Michael Rouleau, University Relations, for both on the ground image and in the air.



Matt, Kelvin, and Dr. D viewing a variety of samples at the Yale-Peabody collections site. Kelvin checks out the nose-hole of a fossil triceratops skull. Both students helped to capture images for building a model of a new slab donated to the museum, and Dr. D. gets a little excited while viewing a large dinosaur vertebrate fossil.

The students also helped collect ground control GPS points that appear in drone images that were captured at Andover Lake (with permission of the Andover Lake Management Association).

Matthew Tardella

Kelvin Carranza-Martinez

A Little Bit of Travel

• While my sabbatical did focus on research activities alluded to above, it also provided an opportunity to undertake a two week trip with Trudy to see if we cold cohabitate an RV—I like to think of it as retirement training (albeit that is still a few years off at least). We had a fantastic time and did some totally awesome hikes in many of the great national parks in Nevada-Arizona-Utah. A few pics elow from a great trip, although I did manage to catch covid for the first time after the return flight home.

Views above from Bryce Canyon National Park, Antelope Canyon, Deadhorse Point, and a brief stop in Vegas before flying back to CT.

Stephen Nathan

The 2023-2024 academic year was a busy one for me. It started on a great note: I was no longer Department Chair! Last September (2023) I traded places with Dr. Bryan Oakley and now I am Assistant Chair. As Associate Chair, I mostly coordinate course scheduling for the department and put out Dr. Oakley's smaller fires.

I continue to develop my Sustainable Energy (EES 205) and Energy Issues in Geoscience (EES 402) courses. Keeping EES 205 up to date is a constant challenge. The subject of sustainable energy is evolving very rapidly, in part because the concept of sustainability has broadened to encompass what is known as JEDI (justice, equity, diversity and inclusion). Energy use touches all aspects of our lives though unequally across various groups, and I try to help students understand that.

For EES 402, the new frontier is teaching this writing intensive course as AI (artificial intelligence) becomes more pervasive. ChatGPT and other AI writing tools are here to stay, and they are becoming more powerful each day. So, in the EES 402, I am working on ways to embrace, but carefully guide, student use of this technology; I believe students still need to demonstrate *their* writing skills, not the software's.

Oceanography (EES 200) and Energy Resources (EES 305) are also in my teaching repertoire. The ocean class is fun because we do a little in-the-classroom "beachcombing" by studying seashells, mermaids' purses, and other stuff. We also work on a wide range of in-class exercises, all the while learning about ocean circulation, tides, waves and other topics.

Energy Resources (EES 305) is the deeper dive into sustainable energy. For this class I am developing more content that, through computations, gives students a fuller understanding of topics such as hydropower, solar and wind power, and biomass power generation. I am also building on several course initiatives, namely, to have the students work on skills that will enhance their employability.

I serve on several committees and my favorite is the Green Campus Committee. A big GCC project for me was organizing Earth Day at Eastern (April 22, 2024; see photos). Expanding last year's farmers market theme, we had over twenty-three vendors set up exhibits on the Fine Arts Instructional Center's amphitheater. A half dozen student clubs, Student Government, and three student groups, joined over a dozen professional farms and civic groups (e.g., KDCrop Farms, Blue Iris Farm, Willimantic Food Co-op, Last Green Valley). With clear blue skies, Earth Day at Eastern was a remarkable success; my challenge for 2025 will be how to top this.

On the home front, my wife retired from the American Red Cross after twenty years of service. To celebrate we spent a week in Washington, DC (during a heat wave!). It was a great trip. Two highlights were touring the Mall on a Segway and getting a private tour of the U.S. Capitol with Hector Conlon, staff member of the House Rules Committee.

Left to right: my nephew Brian, me, and Mary

Pictured: the old U.S. Senate Chamber
Left to right: Brian, Mary , me, and Hector Conlon

Atop Mount Pierce as part of the global field course to New Hampshire and Maine, with Mount Eisenhower and Mount Washington in the background

Bryan Oakley

Every year is getting shorter, never seem to find the time; Plans that either come to naught, or half a page of scribbled lines (R. Waters, 1973).

That phrase sticks with me as a good summation of the past year, which was my first as department chair. Trying to balance the department work with teaching and research has been a challenge, and the 'half page of scribbled lines' resonates with my research and writing!

The EES department continues to evolve and grow mostly on the back of the enthusiasm and commitment of our students and my faculty colleagues within the department. The graduating class of '24 left some big shoes to fill, and I look forward to working with both the students and my colleagues for the 2024-2025 academic year! The 2023-2024 academic year was my first year as the Chair of the EES department. This past year I taught both Coastal Geologic Hazards and Glacial Geology in the fall, and I taught Landform Analysis for Dr. Hyatt when he was on sabbatical in the spring 2024 semester.

My on-going research projects have continued, focusing on the link between the shoreface (area just offshore of the beach and shoreline change, examining sorted bedforms on the shoreface, working with a colleague on various projects examining the shallow-water geology offshore of Cape Cod, monitoring the shoreline on Block Island (collaborating with volunteers) and Napatree Point.

Dr. Hyatt and I have continued to work on Block Island bluff erosion, and we currently have a funded research project to begin drone mapping. I am also still serving as a science advisor for the Napatree Point Conservation Area. The partnership between Eastern EES, the University of Rhode Island Coastal Institute and the Watch Hill Conservancy remains a great asset to the department and will continue to provide student research opportunities in the future!

The research on Napatree has garnered significant local and national attention, and was the focus of an article in the Spring 2024 *Eastern* magazine **LINK**. I presented my research at the National meeting of the Geological Society of America (Pittsburgh, PA) in October, where I also chaired a conference session with Dr. Hyatt. I also presented at the Northeast meeting of GSA and the New England Estuarine Research Society. I was also asked to be part of a paper that was recently published in *EGU Sphere* focused on The Laurentide Ice Sheet in southern New England and New York during and at the end of the Last Glacial Maximum using cosmogenic nuclides. Anyone who has taken glacial knows the timing of deglaciation remains a hot topic, so I was glad to see this paper published!

Haley helming a Hartley 12 as part of the New England Science and Sailing summer program

The Oakley Family

Aidan with a black sea bass and blackfish, caught on his grandfather's boat in the fall of 2023

Aidan and Haley out for a walk with Rocky at Watch Hill Lighthouse

On the home front, my kids continue to grow; Aidan is 14 ½ and is headed to Westerly High School in the fall. He will spend the summer working at the Cooked Goose restaurant, so if you find yourself in town, he may just be bussing your table. Haley is approaching 11½ and is starts 6th grade in the fall. They both have found music as a hobby; Aidan has taken up guitar and is partial to playing some Foo Fighters and Sublime on his Fender Strat, while Haley began leaning Ukulele, piano and dabbles in some voice lessons, playing a lot of Nora Jones songs. Haley is even part of a band, organized by the music school where they take lessons. The *Small Town Rockers* play gigs every few weeks, and let me just say, you haven't lived till you've seen 11-year-olds play the Ramones with an electric Ukulele! Julie continues to work at both L&M Hospital in New London and Westerly Hospital, overseeing the Cardiac Rehab programs at both sites. Coupled with Rocky the dog we have a busy schedule but try to sneak out for some salt-water therapy in a bunch of different forms as often as we can. If we aren't on the boat or our SUP's as a family I am probably surfing (yes, even in the winter!) or fishing with my father on his boat.

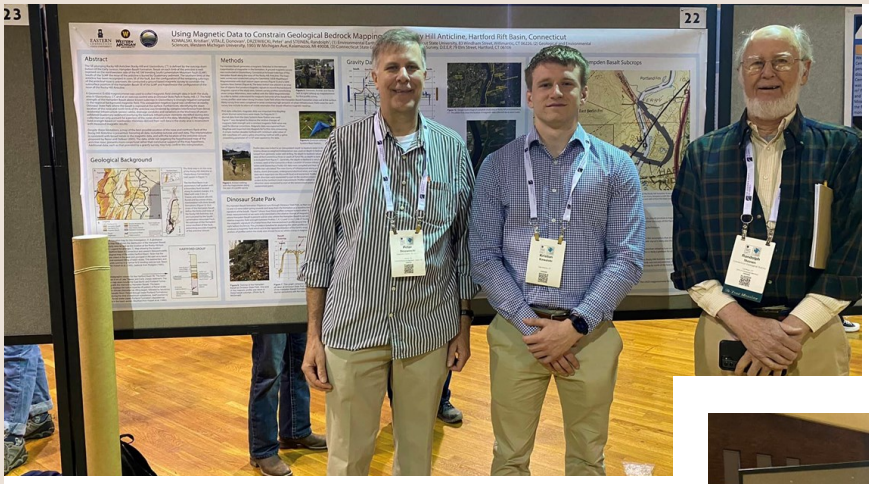
Haley preparing for a future as a Warrior (class of '35?)

Aidan piloting Haley and Julie on our 17ft boat 'Loki'

We met 'Jimmy' down at Painted Rock on Block Island while conducting fieldwork with Dr. Hyatt, Matt Tardella and Kelvin Carranza-Martinez. Jimmy chose to be my field assistant for the next couple of hours, and he was a very good boy!

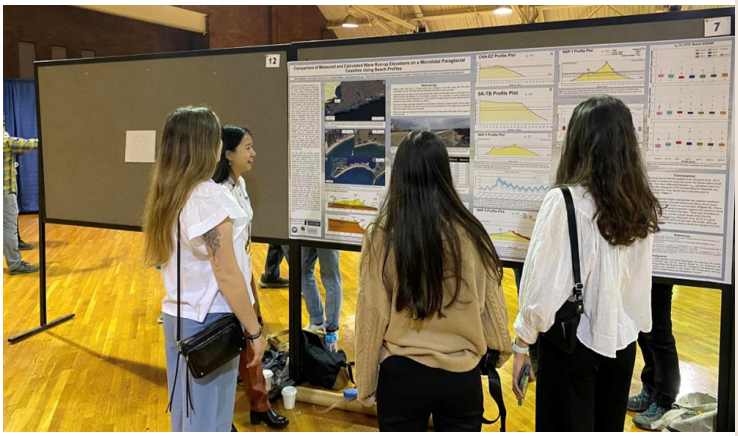
CONFERENCE PRESENTATIONS

Northeast Geological Society of America Meeting



L-R, Dr. D., Kristian Kowalski and Dr. Randy Steinen at the Northeast Geological Society of America Conference, Manchester, NH (March 2024).

In March 2024, Professors Drzewiecki, Hyatt and Oakley, along with EES Students Cameron Soulagnet, Emma Bean, Jonathan Lepire, Olivia Gentile, Hailey Cocoa attended the Northeast section of the Geological Society of America in Manchester, NH. Olvia and Kristian both presented a poster on their work. Jonathan, Cameron, and Professors Oakley, Hyatt and Drzewiecki also presented at the meeting.

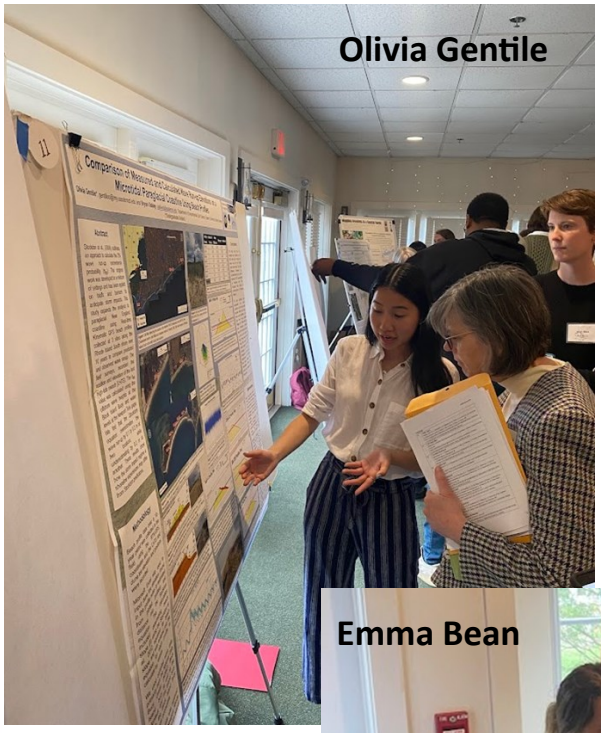


Olivia Gentile presenting her poster at the Northeast Geological Society of America meeting, Manchester, NH (March 2024)

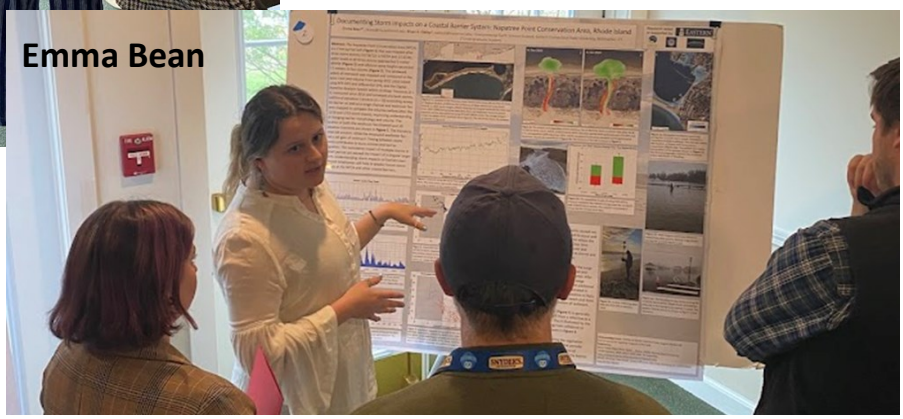
Cameron Soulagnet (L) and Jonathan Lepire (R) presenting his talk at the Northeast Geological Society of America meeting, Manchester, NH (March 2024)

New England Estuarine Research Society

April 2024, Freeport, Maine



In April, EES Students Olivia Gentile, Emma Bean and Jonathan Lepire presented their research projects at the annual New England Estuarine Research Society annual meeting, held this year in Freeport, ME (Dr. Oakley presented as well). This is a great regional meeting, and the students appreciated the diversity of the talks and research areas covered at the meeting.



EES Student wins the Rankin Award for best undergraduate presentation at the New England Estuarine Research Society Annual Meeting

Olivia Gentile received an honorable mention for the Warren Prize for the best undergraduate poster presentation at the recent annual meeting of the New England Estuarine Research Society (NEERS). The Rankin award has been given out annually since 1989 at the NEERS annual meeting. Olivia is the fourth student from Dr. Oakley's lab to win a prize at NEERS in recent years. Alyson Augenstein '19 won the Warren Prize for best undergraduate poster in 2019, Jack Cerra '21 won the Rankin Prize in 2021 and Emily Watling won the Rankin prize in 2023.

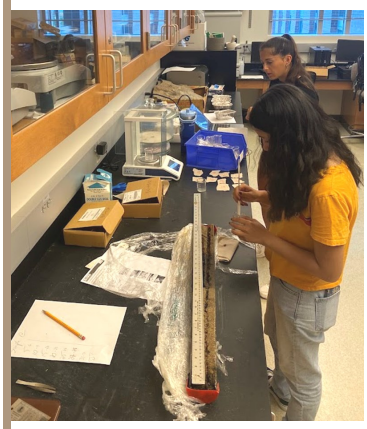
Faculty: Bryan Oakley

Undergraduate Student Research

I am continuing to work with three very talented EES majors on directed research projects, while also assisting Dr. Hyatt with fieldwork involving two additional students (Matt Tardella and Kelvin Carranza-Martinez). As many of my research projects are continual and on-going, I am always looking for motivated students to help with field and lab work, especially if you have already taken GIS! Contact me for more information if you are interested in working on a project.

EES Senior **Olivia Gentile** will be working on airborne LiDAR data, examining the response of the dunes along the eastern shoreline of Block Island to Hurricane Sandy and the subsequent recovery of the dunes between 2012 and 2022. This will be done as part of a research project I am involved with the Graduate School of Oceanography at URI and Rhode Island SeaGrant.

Olivia Gentile measuring a beach profile at the Napatree Point Conservation Area (The big white house in the background is Taylor Swift's!)



EES Senior **Daria DiBiaso** is studying the sedimentary record along southern New England's coastline to examine the frequency of overwash events during intense coastal storms as part of her University Honors thesis. This involves collecting sediment cores, examining the sediment properties in the lab and applying age-dating techniques like radiocarbon and lead isotope analysis to determine the ages of past storms. This builds upon a previous EES Honors project conducted in 2016-2017 by

Daria DiBiaso sampling a sediment core from Moonstone Beach for grain-size analysis

EES Senior **Emma Bean** is examining the impacts of the three back-to-back winter storms in December 2023 and January 2023 on the Napatree Point Conservation Area. This includes examining the erosion during the storm(s) as well as the deposition of washover fans ad the subsequent recovery of the dune system using field and remotely sensed data.

Emma Bean measuring beach profiles in January 2024 following a series of extra-tropical storms that impacted the region.

Theta Upsilon Chapter of the Sigma Gamma Epsilon

National Honors Society for the Earth Sciences

ANNUAL HIGHLIGHTS

- Our chapter of SGE was involved in some notable events this past year. Most members attended the EES 50th Anniversary celebration in October and many helped out with the event logistics. SGE members also Attended EES alumnus Ken Woslegel's important Earth 2023 presentation.
- In December, the society held a holiday bake sale and raised approximately $300 for a local family in need through the WAIM Adopt-a-Family program.
- EES also sponsored a presentation by EES alumni Joe Franklin and Greg Rodman who shared their professional experiences working in the environmental consulting sector.
- SGE also ran a very enjoyable game show night with intensely competitive teams battling though EES-themed games of Pictionary and Connections before being rewarded with pizza and cup-cakes!
- A vanload of SGE members also attended a large mineral show in Webster, MA and most came home with beautiful new mineral and fossils specimens.
- In May, thirteen new members were inducted into the honor society at the EES end-of-Year Celebration, while five members graduated. We expect a lively honor society next academic year with a relatively large cohort of 13 new members!

Dickson Cunningham, EES Faculty Advisor

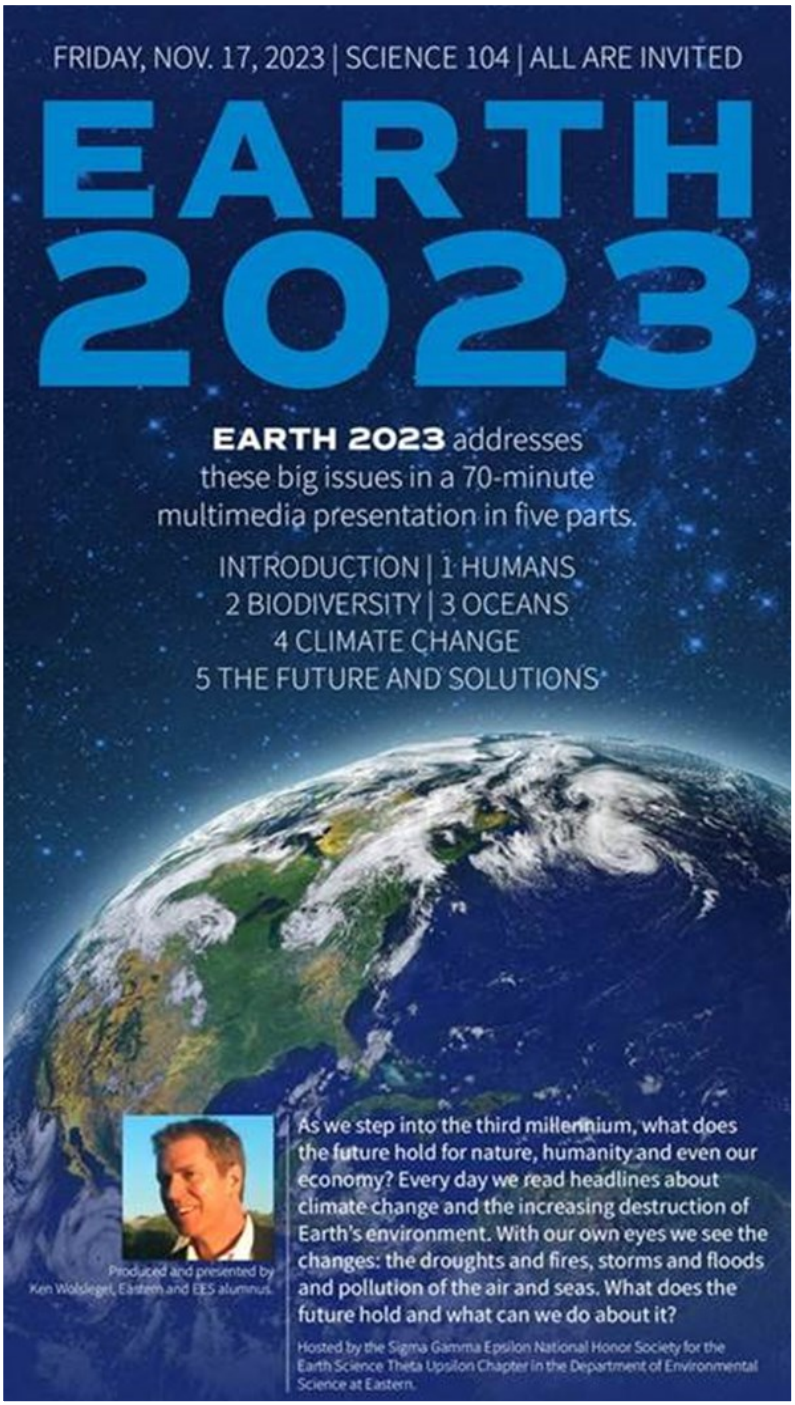
SGE Members (L to R): Jonathan Lepire, Dawson Rigg, Matthew Tardella, Connor Rego, Kelvin Carranza-Martinez, Daniel Castagnetta, Daria DiBiasio, Nicholas Aukerman, Autumn Murray, Antonio Cazassa, Hailey Cocca, William Carrillo, Emma Bean, Riley Matto, Genevieve Rondeau

Emma, Alyssa, Autumn and Olivia at Webster Mineral Show

SGE GAME SHOW NIGHT CONTESTANTS

In November, EES Alumnus Ken Woslegel returned to Eastern to present his timely and important multimedia presentation:

EARTH 2023

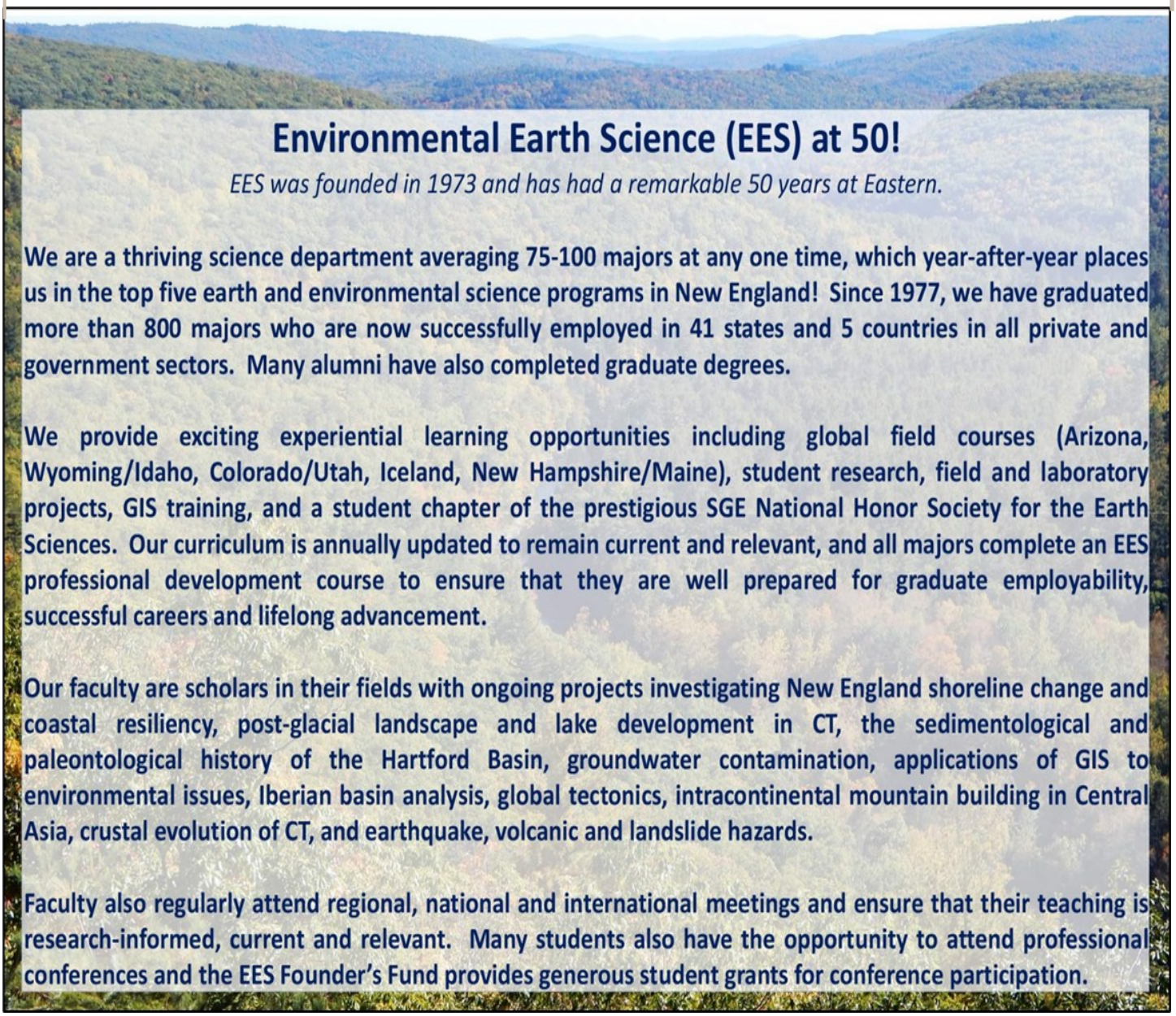


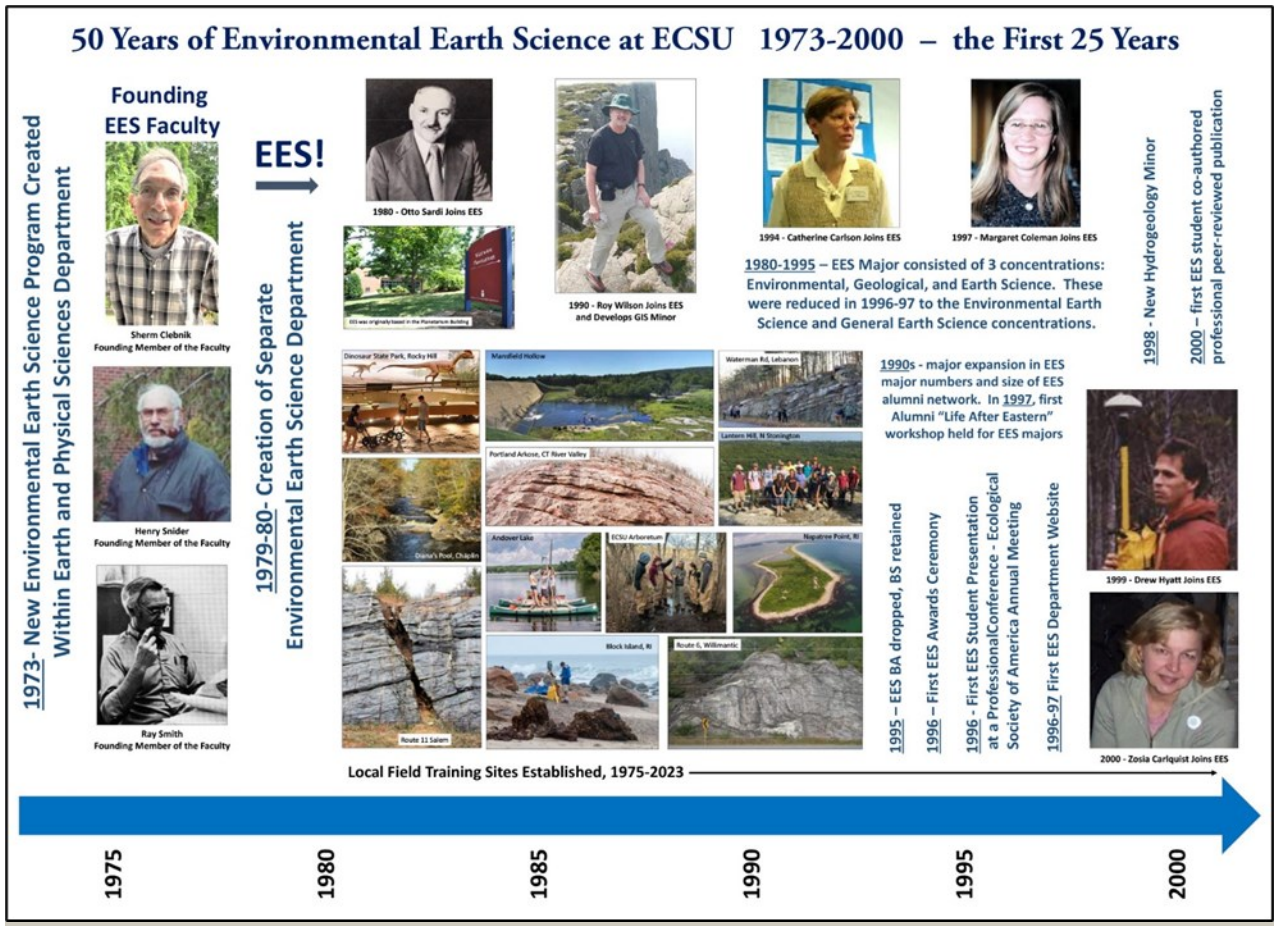
Ken has produced a powerful and moving documentary and a call-to-action presentation that made a deep impression on all of us. The University President and many other administrators, faculty and students attended this major EES event.

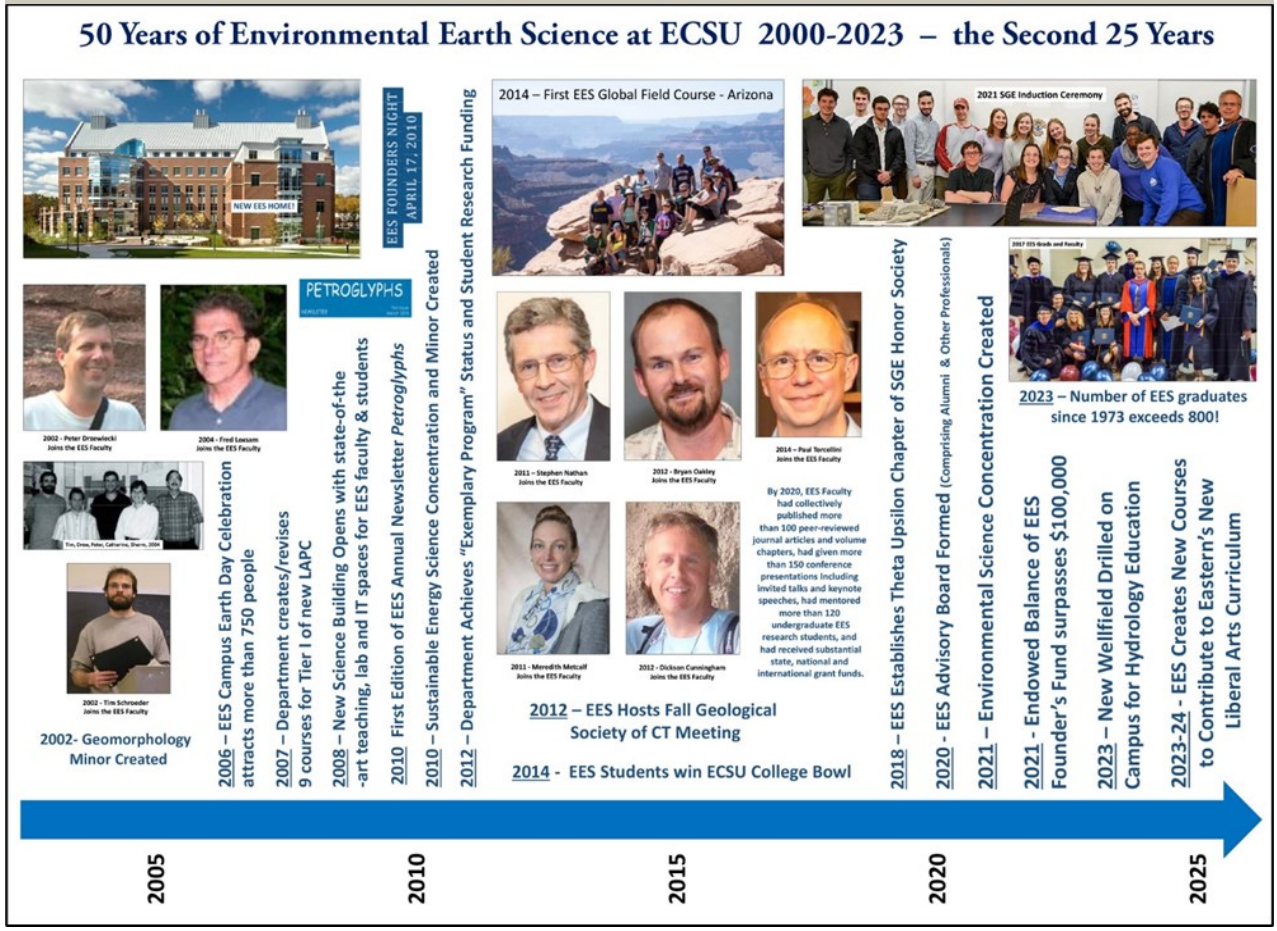
Environmental Earth Science (EES) turns 50!

EES was founded in 1973 and celebrated its 50th Anniversary on October 7, 2023. More than 100 people attended the event including alumni from five different decades, current students, faculty, and campus dignitaries. Thanks to all who attended! We hope that all of our alumni will always think of EES as their home at Eastern. Please come back and visit with us!

Summary slides of the department's evolution, accomplishments and other points of pride are shown in the following slides. Some photos of people and activities during the 50th Anniversary event are also included. This is a special supplement for this year's newsletter as we look back on our first 50 years at Eastern.




50 Years of Environmental Earth Science at ECSU 1973-2000 – the First 25 Years
1973- New Environmental Earth Science Program Created Within Earth and Physical Sciences Department
Founding EES Faculty
Sherm Ciebnik Founding Member of the Faculty
Henry Snider Founding Member of the Faculty
Ray Smith Founding Member of the Faculty
EES!
1979-80- Creation of Separate Environmental Earth Science Department
1980 - Otto Sardi Joins EES
1990 - Roy Wilson Joins EES and Develops GIS Minor
1994 - Catherine Carlson Joins EES
1997 - Margaret Coleman Joins EES
1980-1995 – EES Major consisted of 3 concentrations: Environmental, Geological, and Earth Science. These were reduced in 1996-97 to the Environmental Earth Science and General Earth Science concentrations.
1998 - New Hydrogeology Minor
2000 – first EES student co-authored professional peer-reviewed publication
1990s - major expansion in EES major numbers and size of EES alumni network. In 1997, first Alumni "Life After Eastern" workshop held for EES majors
1995 – EES BA dropped, BS retained
1996 – First EES Awards Ceremony
1996 - First EES Student Presentation at a ProfessionalConference - Ecological Society of America Annual Meeting
1996-97 First EES Department Website
1999 - Drew Hyatt Joins EES
2000 - Zosia Carlquist Joins EES
Local Field Training Sites Established, 1975-2023
1975
1980
1985
1990
1995
2000


50 Years of Environmental Earth Science at ECSU 2000-2023 – the Second 25 Years
NEW EES HOME!
EES FOUNDERS NIGHT APRIL 17, 2010
2014 – First EES Global Field Course - Arizona
2021 SGE Induction Ceremony
PETROGLYPHS
2002 - Peter Draewiecki Joins the EES Faculty
2004 - Fred Loxsom Joins the EES Faculty
2011 – Stephen Nathan Joins the EES Faculty
2012 - Bryan Oakley Joins the EES Faculty
2014 – Paul Torcellini Joins the EES Faculty
2011 - Meredith Metcalf Joins the EES Faculty
2012 - Dickson Cunningham Joins the EES Faculty
2002 - Tim Schroeder Joins the EES Faculty
2002- Geomorphology Minor Created
2006 – EES Campus Earth Day Celebration attracts more than 750 people
2007 – Department creates/revises 9 courses for Tier I of new LAPC
2008 – New Science Building Opens with state-of-the-art teaching, lab and IT spaces for EES faculty & students
2010 First Edition of EES Annual Newsletter Petroglyphs
2010 – Sustainable Energy Science Concentration and Minor Created
2012 – Department Achieves "Exemplary Program" Status and Student Research Funding
By 2020, EES Faculty had collectively published more than 100 peer-reviewed journal articles and volume chapters, had given more than 150 conference presentations including invited talks and keynote speeches, had mentored more than 120 undergraduate EES research students, and had received substantial state, national and international grant funds.
2012 – EES Hosts Fall Geological Society of CT Meeting
2014 - EES Students win ECSU College Bowl
2018 – EES Establishes Theta Upsilon Chapter of SGE Honor Society
2020 - EES Advisory Board Formed (Comprising Alumni & Other Professionals)
2021 – Environmental Science Concentration Created
2021 - Endowed Balance of EES Founder's Fund surpasses $100,000
2023 – New Wellfield Drilled on Campus for Hydrology Education
2023-24 - EES Creates New Courses to Contribute to Eastern's New Liberal Arts Curriculum
2023 – Number of EES graduates since 1973 exceeds 800!
2005
2010
2015
2020
2025

(EES ALUMNI DESTINATIONS)

EES Graduates Go Places!

(EES ALUMNI DESTINATIONS)

EES Alumni Are In The Following States & Countries

Alabama
Alaska
Arizona
Arkansas
California
Colorado
Connecticut
Florida
Georgia
Hawaii
Idaho
Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
Maryland
Massachusetts
Michigan
Minnesota
Missouri
Montana
Nevada
New Hampshire
New Jersey
New Mexico
New York
North Carolina
Ohio
Oklahoma
Oregon
Pennsylvania
Rhode Island
South Carolina
Tennessee
Texas
Vermont
Virginia
Washington
Wisconsin

United Kingdom
Norway
Austria
Mexico

EES Alumni Employers

(examples and not an exhaustive list)

Adams Electric Company
Advia Communications Llc
AECOM
Aerodyne Ulbrich Alloys
Aerospace Testing Lab
Aetna
Aggregate Industries
Agro Lighting
Al Engineers, Inc.
Aig Insurance
Air Tox Environmental
Allied Chemical Disposal Services, LLC
Allied Testing Laboratories
Alpha Analytical
Anadrill Schlumberger
Antea Group
Apex
Apex Companies Llc
ARCADIS
Ashland Inc.
ATC Group Services LLC
Atlantic Testing Laboratories (ATL)
Atlantis Management Group
BGTEnvironmental, LLC
Black Stone Minerals, L.P.
Bluff Elementary School
BNL Industries, Inc.
Boehringer Ingelheim Chemicals
Borbas Surveying and Mapping
Brackett Geosciences
Brandeis University
Bridge Energy Services, LLC
Captain Nathan Hale School
Carya Ecological Services
CDW Consultants
CHA Consulting, Inc
Charles H. Barrows STEM Academy
Chatham Health District
Chubb
Cigna
City Of Middletown
City Of New London
City Of St. Petersburg
City of Ventura
Clean Harbors
ClearStak, LLC
CMG Environmental Inc
College of Education at East Carolina University
Collins Aerospace
Commonwealth of Massachusetts
Connecticut Center For Advanced Technology, Inc.
CT Dept of Economic and Community Development
Connecticut Dept of Energy & Enviro. Protection
Connecticut Department of Transportation
Connecticut Testing Labs Inc
Connecticut Water
ConocoPhillips
Darien Public Schools
Defense Logistic Agency
Diversified Technologies Corp
Dominion Nuclear Connecticut
Dymax Corporation
Earthlight Technologies, LLC

EES Alumni Employers (Continued)

Eastern Connecticut State University
ECS/Marine Environmental
Eleanor Buck Wolf Nature Center
Encon Solar
Environmental Chemical Corp. - Boston
Environmental Laboratory Of Fairfield
ESRI
Eversouce Energy
Exxon
Fairfield Public Schools
Farm Credit Financial Partners
Federal Highway Administration
Fitch Middle School
Franklin Education Association
Fuss & O'Neil
GEI Consultants
General Dynamics
Genzyme Corporation
Geoinsight, Inc.
Geologic Associates
Geologic Services. Corp.
Geomega
Go Environmental
Goetechnical and Environmental Consulting, Inc
Griswold Senior High School
Groundwater & Enviromental Services, Inc.
Gza Geoenvironmental, Inc.
Hamilton Sundstrand
Hartford Police Department
Horton, Dowd, Bartschi & Levesque, P.C.
HRP Associates, Inc.
Idaho Department Of Fish and Game
INSPIRE Environmental
Intel Corporation
Isis Press
Lamar Community College
Landmark Graphics
Lawrence and Memorial Hospital
Lebanon Veterinary Hospital
Ledyard Public Schools
Lincoln High School, South Academy
Ludvik Electric Co.
MA Department Of Revenue
MA Environmental Police
Manchester Water & Sewer Dept.
Manzi Insurance & Real Estate
Martinez Couch and Associates
Massachusetts Dept. Of Environmental Protection
MCS Services, Inc.
Meyer Gage Co.
Microbac Laboratories
Microbac Laboratories, Inc.
Microsoft
Microstrategy
Millstone Nuclear Power Plant In Waterford, Ct
Milone & MacBroom
MISTRAS Group, Inc.
Mks
Mohegan Tribal Govt.
Montrose Engineering
Natl. Oceanic & Atmospheric Adm.
Naubesatuck Watershed Council
Naugatuck Board Of Education
Navarro Research and Engineering

EES Alumni Employers (Coninued)

Neri Research Institute
New England Gem Lab & Appraisal Services, LLC
New England Testing Lab
New Mexico Highlands University
NextEra Energy Resources
NHL
Northeast Utilities
Northeastern University
Norwich Community Development Corp.
Norwich Police Department
Norwich Public Schools
Onyx Environmental
Pennsylvania Department Of Banking
Patock Construction Company
Petroleum Heat & Power Co.
Pfizer
Plymouth State University
Practical Energy Solutions Llc
Pratt & Whitney
Precision Ecology
Premier Laboratory Incorporated
Preston Public Library
Quaker Hill Elementary School
Rema Ecological Services
Rock-Tenn Company
Rogens Corporation
Roux Associates
SAGE Enviromental, INC
Saint Francis Hospital
Sau 38 School District
SBC Technologies
Sheffield Pharmaceuticals
Siemens Energy & Automation
Sikorsky Air Craft
Sky Environmental Services, Llc
Solarcity
Southington High School
SPD Environmental, LLC
Specialty Minerals
Senior Health Physicist At Yale University
St. Bernard School
St. Joseph Clollege
St. Mary Star Of The Sea School
Stantec
State Of Connecticut / Office Of Policy and Management
State Of Connecticut Military Department
State Of Ct Department of Public Health
State Of Rhode Island - Dept. Of Enviro. Management
SUNY Plattsburgh
Super Systems Inc (SSI)
Syneos Health
Syracuse University
Tampa Bay Watch
TDC Excavating
Temple-inland Forest Prods. Corp.
Terracon
The Antea Group, Usa
The Norwich Free Academy
Thomas Consulting
Tighe & Bond, Inc.
Tilcon Connecticut Inc.
Total Energy Connections

EES Alumni Employers (Continued)

Town of East Hartford
Town Of East Lyme
Town of East Lyme Planning and Zoning Dept
Town of Glastonbury
Town Of Killingly
Town Of Manchester, Connecticut
Town Of Somers
Town Of South Windsor
Town Of Wallingford Water and Sewer Divisions
Travelers Insurance Company
TRC Companies, Inc.
Triumvirate Environmental
Tunxis Laboratories, LLC
Turner Construction Co.
U.S. Geological Survey (USGS)
United States Postal Service
United Technologies Corporation
University Of Bridgeport
University Of Connecticut
University of Rhode Island
University of Virginia Health System
US Bureau Of Land Management
US Coast Guard
US Dept. Of State
US Department of Energy
US Department of Veteran Affairs
US Embassy Bangui
US Forest Service
USDA-NRCS
US-Eco LogicTexEnergy Solutions
Ventura Water
Verdantas
Walch & Company, Inc.
Walter D. Sullivan Co. Mechanical Contractors
West Haven Parks and Recreation
West River Restoration Inc.
Westside Head Start
Windham Board Of Education
Windsor High School
Wisconsin Department Of Natural Resources
Woodard & Curran
Woodstock High School
Wright State University
Yale Peabody Museum of Natural History
Yale's Greeley Lab
Yale University School of Medicine
You Tube

EES ALUMNI HAVE ALSO COMPLETED GRADUATE DEGREES FROM MANY INSTITUTIONS INCUDING:

UConn, Yale, Syracuse University, University of California at Santa Cruz, Lehigh University, Clark University, Duke University, ECSU, University of Vermont, University of Wyoming, University of Kansas, University of Rhode Island, University of New Hampshire, New Mexico Highlands University, University of St Joseph, Rensselaer Polytechnic Institute, University of Massachusetts at Lowell, Miami University, University of New Haven, University of Cambridge (UK), University of Graz (Austria), University of Lelcester (UK), University of Hiroshima (Japan), University of Oslo (Norway)

50 Years of Environmental Earth Science at ECSU 1973-2023

EES Faculty Awards and Distinctions

(Received While Serving as EES Faculty Member)

1999 Henry Snider ECSU Service Award
2004 Drew Hyatt Innovative Excellence in Teaching, Learning and Technology 15th International Conference on College Teaching and Learning
2009 Drew Hyatt ECSU Distinguished Professor Award
2010 Peter Drzewiecki ECSU Service Award
2012 Peter Drzewiecki ECSU Teaching Award
2012 Peter Drzewiecki CSU System Teaching Award
2015 Stephen Nathan ECSU University Honors Faculty Mentor Award
2015 Meredith Metcalf ECSU Undergraduate Faculty Mentor Award
2017 Peter Drzewiecki ECSU Distinguished Professor Award
2017 Dickson Cunningham ECSU Research Award
2018 Paul Torcellini ASHRAE Distinguished Lecturer
2019 Dickson Cunningham ECSU Distinguished Professor Award
2019 Bryan Oakley ECSU Research Award

Outstanding EES Student Award Winners

1996 – William Sharer
1999 – Michael Varni
2000 – Jessica Czajkowski
2001 – Tracy Gaylord
2002 - Amy Martyniak
2003 – Heath Carlson
2004 – Jennifer Vinci and Shantar Zuidema
2005 – Julie Rumrill
2006 – John Liddon
2007 – Evan Thomas, Jennifer Goyette
2008 – Jennifer Goyette
2009 – Kelly Martin
2010 – William Oster III
2011 – Toni Langevin
2012 – Eric Lindquist
2013 – Lindsey Belliveau
2014 – Sean Kellarson
2015 – Mackenzie Fannon
2016 – Rachel Mackewicz
2017 – Martha Deniskey and Madeleine Haynes
2018 – Luke Davis
2019 – Jennifer Croteau
2020 – Erick Bora
2021 – Jack Cerra
2022 – Abigail Durling
2023 – Emily Watling

Peer-Reviewed Journals of EES Faculty Publications

(With EES and ECSU as Institutional Affiliation)

AAPG Search and Discovery
American Journal of Science
ASHRAE Journal
Basin Research
Bulletin of the Geological Society of America
Bulletin of the Peabody Museum of Natural History
Bulletin of the Seismological Society of America
Computers and Geosciences
Connecticut Review
Continental Shelf Research
Environmental Earth Sciences
Environmental Geology
Estuaries and Coasts
Frontiers of Earth Science
Geochemistry, Geophysics, Geosystems
Geoheritage
Geological Magazine
Geophysical Research Letters
Geoscience Frontiers
Geosciences
Gondwana Research
Groundwater Monitoring and Remediation
Groundwater Resources
International Journal of Hydrogen Energy
Journal of Asian Earth Sciences
Journal of Coastal Research
Journal of College Science Teaching
Journal of Contaminant Hydrology
Journal of Environmental Management
Journal of Environmental Quality
Journal of Foraminiferal Research
Journal of Geochemical Exploration
Journal of Geophysical Research
Journal of Geoscience Education
Journal of Marine Sciences and Engineering
Journal of Paleolimnology
Journal of Structural Geology
Landslides
Lithosphere
Marine Geophysical Researches
Natural Hazards
Northeastern Geology and Environmental Science
Northeastern Naturalist
Palaios Journal
Paleontology
Quaternary Research
Remote Sensing
Sedimentary Geology
Tectonics
Tectonophysics
The Physics Teacher
Water Sciences and Technology
Water Supply

EES Faculty Conference Presentations

(Regional, National and International Meetings)

ACEEE Summer Study on Energy Efficiency in Buildings
American Assoc. of Sustainability in Higher Education Annual Conference
American Association of Petroleum Geologists Annual Meeting
American Indian Science and Engineering Science Annual Meeting
American Shore and Beach Preservation Association National Conference
Annual Estuarine and Coastal Monitoring Conference
Annual Meeting European Geophysical Union
Annual Meeting of American Solar Energy Society
Annual Meeting of the American Geophysical Union (AGU)
Annual Meeting of the Association of American Colleges and Universities
Annual Meeting of the Association of American Geographers
Annual Meeting of the European Geophysical Union (EGU)
Annual Meeting of the Geological Society of America (GSA)
Annual Meeting of the NE Friends of the Pleistocene
Annual Meeting of the Northeast Section of the Geological Society of America
Annual Meeting Society of Sedimentary Geology
Annual Mtg of the Society for Preservation of Natural History Collections
Annual WSSS Interdisciplinary Water Symposium: Water and Cities
ASHRAE Annual Meeting
Assoc. of Environmental Health and Sciences Foundation East Coast Conference
AWRA Specialty Conference on GIS and Water Resources
Binghampton Geomorphology Symposium
CESTA Elementary Educators Conference
Coastal Estuarine Research Federation Bi-Annual Meeting
COPLAC Annual Meeting
Diversity and Democracy Summit
Ecological Society of America Annual Meeting
ESRI International User Conference
European Geosciences Union Annual Meeting
Geological Society of London Tectonic Studies Group Annual Meeting
Geological Soc. of London Volcanic and Magmatic Studies Group Annual Meeting
Geological Society of London 50th Anniversary of Plate Tectonics Meeting
Geological Society of China World Meeting
Getting to Zero National Forum
GIS and Public Health Conference
Greening the Heartland
IAH Congress, The International Association of Hydrogeologists
International Association of Sedimentologists (IAS) Annual Meeting
International Conference on College Teaching and Learning
International Conference on Continental Ichnology
International Conference on Energy, Environment and Disasters
International Conference on Groundwater in Fractured Rocks
International Himalayan-Karakorum-Tibet Workshop
National Association of Geoscience Teachers, NE Annual Meeting
National Conference for Science and the Environment
National Council for Science and the Environment
National Council on Undergraduate Research (NCUR)
National Science Teachers Association Annual NE Meeting
NESTVAL Annual Meeting
Net-Zero North American Leadership Summit
New England Board of Higher Education, Sustainability Summit
New England Estuarine Research Society Annual Conference
New England Intercollegiate Geological Conference
New England St. Lawrence Valley Geographical Society Annual Meeting
New England Sustainable Coalition Conference
New England Sustainable Energy Annual Conference
Northeast Arc Users Group Conference
Northeast Natural History Conference
Northeast Shore and Beach Preservation Association Annual Meeting
Symposio Nacional Estudos Tectonicos International Conference
Vision 2020 Summit
Water and Rocks, the Foundations of Life Conference

EES Research Students Go Places!

We are the Theta Upsilon Chapter of the Sigma Gamma Epsilon National Honor Society for the Earth Sciences

EES Graduates – Student Testimonials

"My years at Eastern (1983-1987) were some of the best times of my life. Real life afterwards, has some smiles, but is a lot of work.

I will always remember, and be thankful for the early EES program and professors; Sherm Clebnick., Ray Smith, Henry Snyder, and especially Otto Sardi (my advisor that took me under his wing, saw something in me that I did not at the time, and arranged my first job with the USGS). Graduated on a Sunday and went to work the next day with the USGS."
Asa Scranton '87

Jenny Petrario '17
"The EES department provided me with the ability to problem-solve independently and a strong science foundation that has given me confidence to achieve my personal goals in graduate school."

"The EES department allowed me to learn skills and theory in scientific fields that are interesting and relevant to the 21st century. I had four fulfilling years as an EES undergraduate and felt that by making the most of every opportunity I had, from class work to internships and conferences, it ultimately placed me in an exciting and advantageous career position."
Nicholas Denegre '14.

Sean Kellerson '16
"My professors in the EES department and in other classes were the greatest part of my Eastern education. They were so easy to talk to, and I could bring up anything to talk with them about. They always gave us time — the students came first. If you made the effort, they wanted to be there to help you along the way."
"Taking different courses in the liberal arts core—history, art, psychology, classes in the sciences—really helped shape me and help me discover what I was good at. It makes for a more rounded student and individual."

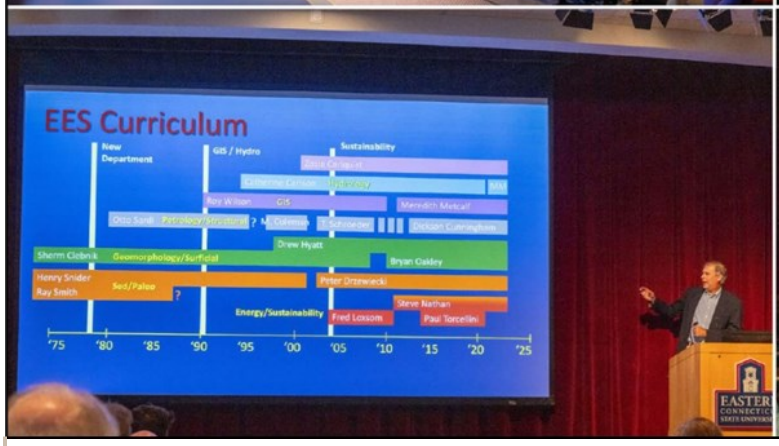
Cody Lorentson '14
"Two of the greatest strengths of Eastern's EES department are the opportunity to complete independent studies and the faculty's dedication to student growth. By the end of my four years, I developed personal and professional skills that have allowed me to excel in postgraduate endeavors."

"The EES Department has given me the opportunity to work with a mentor to conduct research that students at larger universities might never get the chance to do. My mentor was not only very helpful with my independent research but also gave me career advice that would benefit me long after graduation."
Stephanie Rodgers '15

Nick Jones '12
"During my four years at Eastern, studying in the field of Environmental Earth Science, I gained valuable technical, analytical, and critical-thinking skills, which I've carried with me into subsequent careers. My experience in both the EES program, as well as during the two years spent working at the Institute for Sustainable Energy (ISE), also helped to solidify my career aspirations, by creating the opportunity for me to follow a personal ambition to drive change within the realm of sustainability."

Timothy Bugden '14
"Eastern was nothing short of extraordinary. I flourished under the instruction of exceptionally mortivated professors and enjoyed the camaraderie of my fellow EES students. I shudder to think of the opportunities I would have missed had I not enrolled at Eastern."

Martha Denisky '17
"Becoming a part of the EES major at Eastern was one of the best decisions I made as an undergraduate student. From the moment I began this major as a sophomore, I was supported and advised by very encouraging and knowledgeable professors. Every professor prioritizes each student in professional advisement and science education. Each course provides students with applicable skills that are necessary for a science career. Above all, this department focuses on the importance of field work and engagement. Many classes incorporate hands-on field trips that ensure an enhanced quality of education. The professors inspire students to pursue their interests by encouraging them to join an abundance of research projects. I built many lasting connections with both professors from the department and geologists outside of Eastern. Networking is consistently encouraged by the EES department which made it possible for me to become part of the professional world. I am very grateful that the EES department encouraged me to pursue this education with a high degree of quality, academic rigor and support which prepared me for my future in science."



Scenes from the 50th Anniversary Celebration, October 2023

Scenes from the 50th Anniversary Celebration, October 2023

A big SHOUT OUT to our most recent class of EES graduates. We wish you all the best in your life journey!

The Environmental Earth Science Department (faculty and students) participating and enjoying the graduation ceremony in May 2024 at the XL Center in Hartford, CT.

Eastern Connecticut State University
Environmental Earth Sciences
83 Windham Street
Willimantic, CT 06226

Dr. Bryan Oakley
Department Chair
Email: oakleyb@easternct.edu

Dr. Stephen Nathan
Assistant Department Chair
Email: nathans@easternct.edu

We're on the Web!

See us at:

https://www.easternct.edu/environmental-earth-science/index.html

SUPPORTING EES STUDENTS

The faculty members of the EES Department are committed to providing our students with practical research, field, and presentation experience as often as possible Many of the activities our students participate in are supported through EES Founders Fund, which was established for these purposes. We welcome your tax-deductible donations to this fund and encourage you to contact Mr. Joseph McGann at Institutional Advancement (860-465-4514) or email him at (McGannJ@easternct.edu), if you would like to learn more about how to contribute to experiences that open minds and support career development for new generations of EES students. Thank you in advance!

Eastern EES Facebook Page: Alumni, if you are not currently a member of the Eastern EES Facebook page, please email Bryan at OakleyB@easternct.edu and he can send you the link. The Facebook page is a great way to stay connected to the department as well as a growing resource for the EES related jobs.

EES Students and Faculty at Black Canyon of the Gunnison National Park, CO