Greetings from Villanova! On behalf of the Department’s faculty and staff, I wish you all the best and I hope that things are going well with each of you. This is our first “official” edition of the newsletter and I am hopeful that you will find it informative. My contact information is located at the end of the newsletter; please don’t hesitate to contact me with suggestions.

There are, as always, a great deal of exciting and newsworthy things going on here and this newsletter can only capture some of them. We update the News and Events page of our web site (http://www1.villanova.edu/villanova/arts/sci/geoenv/newsandevents.html) frequently; and I encourage you to check it occasionally to keep abreast of GEV news.

Perhaps the most exciting news in the Department is our ten-year anniversary! Other news:

- Dr. Stephen Strader has just received a $245k grant from NOAA to study tornado hazard mitigation in the Southeastern US.
- The National Science Foundation has funded a Major Research Instrumentation Grant for an Inductively Coupled Plasma Mass Spectrometer (ICP-MS). This is a +$250k award and we are very excited about it. Acquiring this piece of equipment is essential to the Department’s research efforts. Thanks to Drs. Nat Weston and Steve Goldsmith and their team for developing the proposal.
- Our Master’s program is off to a really good start. We started this second year with 17 students, which has greatly exceeded expectations. We now have 28 students in the program.
- Finally, Dr. Steve Goldsmith was granted Tenure and promoted to Associate Professor in May 2017.

Best wishes from Villanova
Frank Galgano, Department Chair

Please look for our next newsletter following the Christmas Holidays!
GEOGRAPHY & THE ENVIRONMENT AFFINITY SOCIETY (GEV-AS)

Announcing Our New Alumni Leader Group

In anticipation of its 10-year anniversary, the Department could think of no better way to commemorate its growth and accomplishments than to reconnect and strengthen ties with its alumni. With that goal in mind, the Department and six committed alumni launched the Geography and the Environment Affinity Society (GEV-AS), which is an alumni association that seeks to provide all GEV alumni the opportunity to meaningfully contribute to the Department’s legacy. GEV-AS also aims to connect alumni, current students, and faculty through the establishment and maintenance of an alumni network database and an alumni-student mentorship program. The board members for the 2017-2018 GEV Affinity Society are:

- **Diane Ditzel**: graduated in 2008 with a B.A. in Geography and concentration in Environmental Studies. She is currently based in Raleigh, North Carolina and is a Senior Marketing Specialist for VHB’s Mid-Atlantic Region.

- **Katie O’Gara**: graduated in 2009 with a B.A. in Environmental Studies. She is based in Washington D.C. and is an Analyst for the World Bank’s BioCarbon Fund Initiative for Sustainable Forest Landscapes.

- **Carla Erskine**: graduated in 2010 with a B.A. in Political Science, Geography and a concentration in Environmental Studies. She is currently based in West Palm Beach, Florida and is a land use and real estate attorney at the law firm of Ciklin Lubitz and O’Connell.

- **Timothy Kloeben**: graduated in 2010 with a B.A. in Environmental Studies. He is currently based in San Diego, California and is a Senior Staff Scientist for Terraphase Engineering, Inc.

- **Justin Meschter**: graduated in 2010 with a B.S. in Environmental Science and Comprehensive Science. He is received his M.S. from the University of Maryland where he completed a thesis on invasive species in wetland ecosystems as a Smithsonian Fellow.

- **Michael Patson**: graduated in 2011 with a B.S. in Environmental Science and notably, was the Department’s first recipient of a Villanova Undergraduate Research Fellowship. He is currently based in Texas and is an Exploration GeoScientist for Climarex Energy Company.

Why should you become an active member of the Geography & the Environment Affinity Society?

To learn more about GEV-AS, reconnect with the Department, become an active mentor for current students, stay up to date on Department happenings, or if you just want to share some of the amazing work you’re doing, GEV-AS is excited to learn about where you’re living and how you’ve been using your GEV education to impact the world around you!

Go to the Department’s web site to learn more about how you can get involved in the GEV-AS mentorship program, to share your professional experience and expertise with current students. By becoming a mentor, you will have a positive impact on students and direct them on a path to success. Whether you’re still in the local area and can meet with students in person, or are on the other side of the globe and can only communicate by email or phone, the positive footprint you can leave on the GEV community is uncontested and we invite you to get involved!

Reach out and stay connected with GEV–AS. Who knows, maybe you’ll be the next alum highlighted in the GEV newsletter!

Contact GEV-AS at gev.alumni@villanova.edu.

$10 FOR 10 CAMPAIGN

GEV-AS is excited to celebrate the Department’s 10-year anniversary in a big way! That’s why we decided to kick start the Department’s 10-year anniversary with an opportunity for YOU to give back in a BIG WAY. It only takes a small donation of $10.00 to participate! To celebrate the GEV Department’s 10-year anniversary, we’re launching a “$10 for 10” campaign. All funds raised will support 2018 summer research opportunities for a current GEV student.

By giving $10 or more, you will provide much needed financial support GEV students, thus enabling them to complete a terrific summer research experience. GEV-AS board members have pledged a $2,000 matching donation, aiming for a minimum of $5,000 for student support. Give back in a big way and support the $10 for 10 campaign by donating today! The Department will have a crowd funding link established on 18 October. For information how to contribute to the **$10 for 10 Campaign** please go to:

http://www1.villanova.edu/villanova/artsci/geoenv/AffinitySociety.html
STUDENT NEWS

Sea Level Rise Research

Diana Lampasona ('18, Environmental Science and Geography) was awarded a prestigious Villanova Undergraduate Research Fellowship (VURF) in the spring to pursue her summer research project. Diana has been working with Dr. Nathaniel Weston since her sophomore year. As part of this VURF–sponsored project, Diana employed an unmanned aerial vehicle (a drone) to collect imagery and used it to determine the effects that rising sea levels have had on high- and low-elevation marshes in the Plum Island, Massachusetts. This project was completed in collaboration with existing efforts by the Long Term Ecological Research Network funded by the National Science Foundation to Dr. Weston. Using the unmanned aerial vehicle, Diana was able to capture vertical imagery of four creek–sheds within Plum Island Sound. The imagery was processed and analyzed using GIS software and combined with elevation data to create a high-resolution digital elevation model of the creek–sheds. Diana’s research is instrumental in determining how this ecosystem is effected by climate change and rising sea levels.

Sustainable Agriculture Awarded

Julie Greenwald ('19, Environmental Studies and Geography) is among a group of five students selected nationally by Crop Science, a division of Bayer, to represent the U.S. at the third Youth Ag–Summit in Brussels, Belgium, from October 9-13, 2017. The five U.S. representatives are part of a delegation of 100 students from 49 countries selected to participate in a week-long think tank focused on identifying innovative, sustainable and actionable solutions to address global food security challenges. Themed “Feeding a Hungry Planet,” this year’s summit will address U.N. Sustainable Development Goals. Julie is from Wellesley, MA and spent five weeks living and working on organic farms in Belgium. Field experience at home and abroad, coursework and personal research have all inspired her to focus her efforts—alongside peers—to discover solutions to one of the most complex problems of our time. Congratulations, Julie!

To support student research like Diana’s and Julie’s, contribute to our $10 for 10 Campaign.

http://www1.villanova.edu/villanova/artsci/geoenv/AffinitySociety.html
This summer Alexandra Schneider ('19, Environmental Science) participated in an Ocean Sciences REU at Rutgers University. Her work there culminated in a poster session in which 10 students presented their research projects and answered questions from a panel of judges. Alex’s research project, “A 25-Year Time Series Analysis of Juvenile Blue Crabs (Callinectes sapidus) in Southern New Jersey,” won first place. In recognition of her excellent research, Alexandra has been invited to present her poster at the 2018 Ocean Sciences Meeting in Portland, Oregon in February 2018. Funding is being provided by the Association for the Sciences of Limnology and Oceanography (ASLO). This is another example of the outstanding undergraduate research program in GEV. Congratulations, Alexandra!
FACULTY NEWS

WESTON LAB

The Weston Lab enjoyed a productive summer in the mud! Our research on the influence of climate change and land-use change on coastal ecosystems continues. We completed several field campaigns in Plum Island, MA, and trips to sites in the Delaware River. Diana Llampasona (ENV ‘18) received a VURF grant to work on drone imaging of marshes in Plum Island. Mikala Jordan (ENV ‘18) measured carbon dioxide and methane exchange between tidal creeks and the atmosphere with new floating chambers she constructed, and Gabriella Giordano (ENV ‘19) evaluated estuarine production and respiration rates in Plum Island. Maddie Dimacale (ENV ‘19) measured microplastics contamination in sites throughout the Delaware River estuary. Diana and Mikala will both be continuing their work this academic year through Senior Project/Thesis research. The continuing graduate students are nearing completion of their data collection! Mary Zawatski (MSES ‘18) continued her work on carbon dioxide exchange between the marsh and atmosphere in Plum Island, and she has only one more trip to make. Alec Davis (MSES ‘18) is close to completing the modeling he has undertaken to evaluate marsh vulnerability to sea-level rise and housing exposure in the Delaware River. We are completing the final field sampling for Elise Rodriguez’s (MSES ‘18) work on measuring marsh accretion rates, which she’ll compare to land-use change over the last century in nine marsh/watershed systems along the East Coast. New graduate students Miranda Cento (MSES ‘19) and Kristen Jezycki (MSES ‘19) joined the Weston Lab for several trips this summer, and will be undertaking their thesis research this fall. After a summer internship at the University of Minnesota, Olivia Cacciatore (ENV ‘18) is rejoining the lab to conduct her thesis research on floating vegetation islands used in water quality remediation. We even got Eric Wagner (GEO ‘12) and former departmental postdoc Dr. Lori Sutter up to Plum Island with us for some field work this summer! None of this work would be possible without GEV alum Brian Donnelly (ENV ‘16), who has been working as a research technician in the lab since graduating. He has been an integral part of every project the lab undertakes! Brian has been interviewing prospective PhD advisors at several universities, and it will be very difficult to replace him when he leaves the lab next year to start his graduate studies.
Dr. Lisa Rodrigues, Melissa Jaffe, Gavin Kreitman, and Sean Frangos show their Villanova spirit at Coconut Island off of Oahu, HI.

Summer 2017 was another busy research season for the Rodrigues Lab with travel to two very different, yet beautiful locations in the tropics:

In June, we continued our ongoing research collaboration with Dr. Steven Goldsmith’s lab to Guánica, Puerto Rico. For the past three years our lab groups have been studying the ongoing land use changes in the watershed and their effects on nearshore coral reefs. This summer, Dr. Frank Galgano, Laura Korman (MSES ‘18), and Dr. Goldsmith’s student, Amber Carter (MSES ‘18) joined us in the field, along with Dr. Ryan Moyer from US Fish & Wildlife Service based in Tampa, FL. Laura and Ryan collected coral cores for a suite of ongoing isotopic analysis that will help us better understand both acute and chronic impacts of changing land use to coral reefs. Laura has also developed wet and dry season models of hydrologic flow through the watershed. Amber collected and processed sediment samples throughout the watershed for research that will involve sediment fingerprinting techniques to determine pollutant sources and sinks. Both Laura and Amber will present their research in October at the Geological Society of America Meeting in Seattle, WA.

For up-to-date student and faculty news, see our News and Events web page:
http://www1.villanova.edu/villanova/artsci/geoenv/newsandevents.html

Amber Carter and Laura Korman having fun along the Lajas Valley Drainage Ditch in Guainia, Puerto Rico. Can anyone spot Dr. Galgano in this picture?
We were excited to receive $540,092.00 from the National Science Foundation to assess the physiological and molecular implications of coral bleaching on coral reproduction. The three-year study will use isotopic tracers to assess carbon and nitrogen pathways in corals to better understand how changing climatic conditions affect coral physiology, ultimately coral reproduction. Research began this summer on Coconut Island with technician, Gavin Kreitman (ENV/GEO ‘17), and two students Melissa Jaffe (MSES ‘19) and Sean Frangos (ENV/GEO ’19). In August, our group set up a tank system to house nearly 300 coral pieces of two different species, spending long days in the water collecting colonies followed by long days plumbing tanks. We were exhausted every day, but had a blast! We’ve mimicked a coral bleaching event in the tanks by raising the seawater temperature for one month. We’ll monitor the impact of bleaching on coral reproduction over the next year. Gavin is still in Hawaii for a few more weeks; he has been instrumental in setting up and maintaining the tanks. He’s also started some projects on his own related to natural bleaching events and is using his drone to provide a 3-dimensional map of reef structure. Melissa’s thesis work will involve a detailed analysis of how these corals’ metabolism following bleaching ultimately impacts coral egg development; her work will help us better predict and model future reef composition as the oceans continue to warm. Sean has been working in the Rodrigues lab since his freshman year. This summer he began his undergraduate thesis research by collecting oyster, sediment, and coral samples to conduct an analysis of heavy metal accumulation in Kaneohe Bay, HI. Sean’s research will allow us to assess changes in heavy metal accumulation over the last 25 years.

Alumni News

Allen Landis, ’14, Selected to be a 2017 William Penn Fellow

Earlier this year, Governor Wolf of Pennsylvania announced a new program called the William Penn Fellowship to help attract the best and the brightest minds to answer the call to public service. More than 250 individuals with master’s-level and other advanced degrees applied to the program. Allen Landis (ENV ’14) was selected to be part of this inaugural group! The fellows will spend two years working on projects related to the Governor’s priorities of Jobs that Pay, Schools that Teach and Government that Works. At the conclusion of their fellowships, they will present the results of their work to the Governor and other senior officials. Congratulations!
GRADUATION 2017

The Class of 2017

The GEV Class of ’17 completed their four-years at Villanova during Commencement Weekend on 12–13 May 2017. We graduated 17 seniors this year and once again, nearly half of the senior class graduated with cum laude or higher recognition! Among this group of seniors, three of them, Devin Smith, Gavin Kreitman, and Yevgeniya Malyutina, successfully defended their senior theses. Additionally, Devin Smith was recognized for academic distinction through the award of the Alexander von Humboldt Medallion Award for Excellence in Geography and the Rachel Carson Medallion Award for Excellence in Environmental Science. This is truly a remarkable performance! Devin is currently a graduate student at The Ohio State University. Gavin Kreitman was awarded with the Delaware Valley Geographical Association Award for Distinguished Academic Achievement during their annual dinner on 28 April 2017. Gavin was recently hired by Dr. Lisa Rodrigues as a laboratory technician.

Class of 2017 Graduates

- Thomas J. Boland, Environmental Science
- Norbert J. Dengler, Environmental Science and Geography
- Peter N. Fahan, Environmental Science
- Kathleen E. Fisher, Environmental Science and Geography
- Alexandra L. Henninger, Environmental Studies
- Drake Johnston, Environmental Science
- Gavin J. Kreitman, Environmental Science and Geography
- Yevgeniya Malyutina, Environmental Science and Geography
- Kelsey M. Margey, Environmental Science
- Arielle J. Massillon, Environmental Science
- Paige T. McNamara, Environmental Science and Geography
- Natalie A. Pikus, Environmental Science
- Ashley Seyfried, Environmental Studies and Political Science
- Devin F. Smith, Environmental Science and Geography
- Vince B. Thompson, Geography
- Meghan K. Walsh, Environmental Studies and Economics
- James G. Weinstock, Environmental Science


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