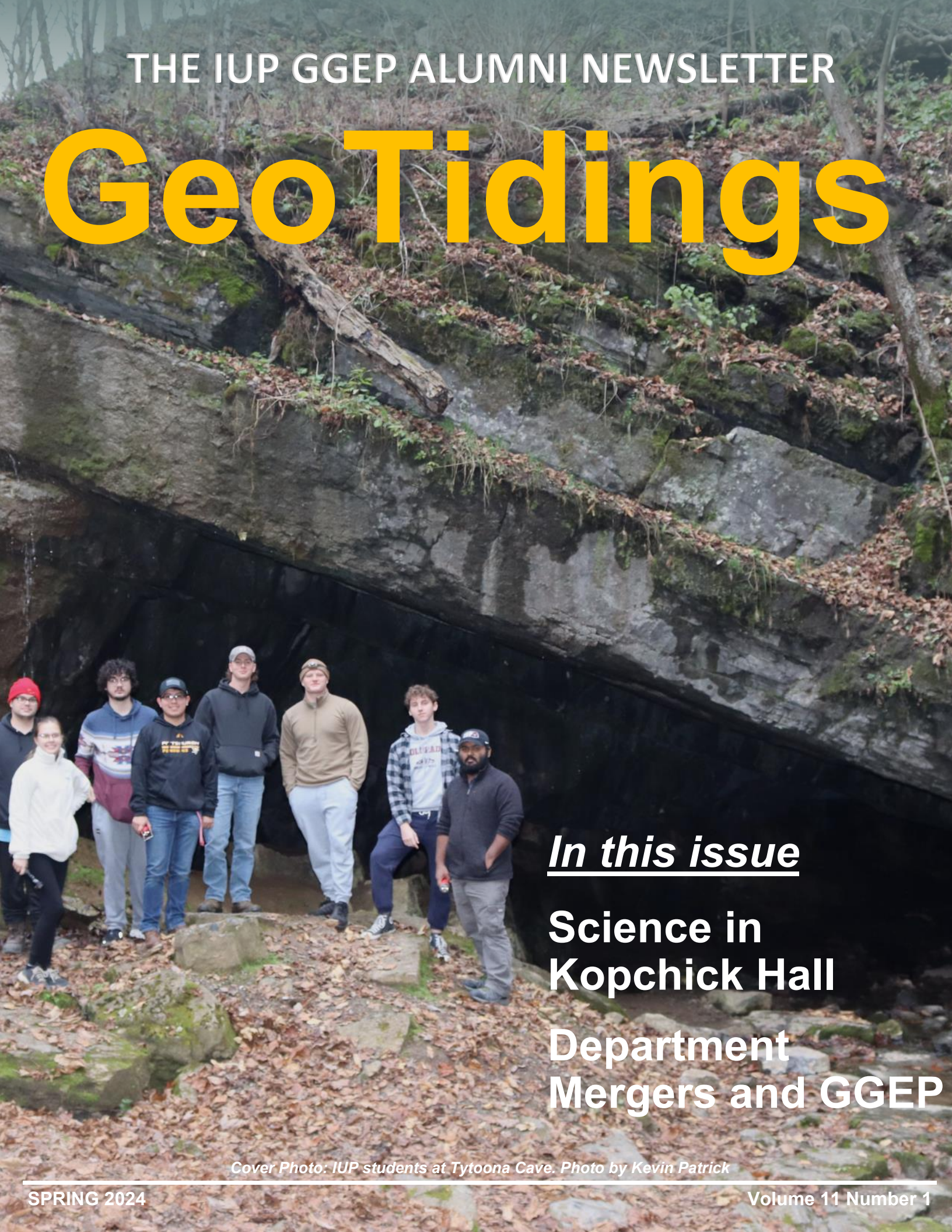


THE IUP GGEP ALUMNI NEWSLETTER

# GeoTidings



*In this issue*

**Science in  
Kopchick Hall**

**Department  
Mergers and GGEP**

*Cover Photo: IUP students at Tytoona Cave. Photo by Kevin Patrick*

# Making Kopchick Hall Our Home

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GGEP moved into Kopchick Hall in December and January. We are still adjusting and finding the best way to teach and work here, but the potential is great and we are working to make use of the amazing new setting.

ABOVE: The entry to Kopchick Hall, with the Cejka Planetarium entrance on the left.

BELOW: The dedicated lab for GIS and Planning classes.



RIGHT: The window from the lobby to the Walt Granata teaching lab allows for an attractive display of rocks and fossils.

MIDDLE: The Granata teaching lab has more space than our old labs and is already being used for both lectures and lab work.

BOTTOM: A view of Department research shows we are still unpacking, but processing of dinosaur fossils by Dr. Warnock's group is already underway.



# Update from the Chair

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Hello alumni and friends of the Geology, Geography, and Regional Planning programs. It has been another crazy year at IUP. It feels like we can't go two weeks without changes rippling through the university. This year I have more changes to our programs to share with you, as well as some good news regarding our new science building, Kopchick Hall.

Due to declining enrollments over the last several years resulting in budget and revenue shortfalls, the university is constricting again. This led the administration to complete a university-wide academic program review with the intention to restructure IUP. The goal is to maintain the 'right mix' of programs to fulfill IUP's mission and meet regional needs while achieving financial sustainability. This process included an academic self-review last fall with a request that departments consider reducing program offerings. Due to low enrollments in all of our programs in GGEP, we were strongly encouraged to rethink our programmatic array. After many weeks of discussion our department decided to significantly rearrange our programs into just two undergraduate programs and our current graduate program. Our three undergraduate degrees in Geology, Geography and GIS, and Regional Planning will be condensed into an Earth & Environmental Science, BS and a Geographical Sciences and Planning, BS. The goal of these changes is to redesign our programs, so they are more attractive to prospective students, who often do not realize what careers in Geography, Geology, or Planning entail. We believe these revised programs will be more attractive to a wider range of prospective students, leading to increased enrollment in our majors while allowing us to continue to provide high quality instruction and training in geospatial analyses and GIS, urban, regional, and environmental planning, and Earth and environmental sciences.



The Earth & Environmental Science program will be designed for students interested in either geology or environmental science, with a range of specializations and courses they can take based on their interests. The Environmental and Sustainability Planning program is a combination of our current geography and planning programs where students will receive a blend of GIS, geospatial analysis, and planning courses, all with a focus on the environment and climate, sustainability, and community resilience. Our master's program in Geographical Sciences and Planning will largely remain unchanged, with just a few tweaks to the course offerings, to accommodate international students, as we complete an agreement or two with universities in India.

This review process also included a university-wide restructuring, leading to numerous department mergers and reconfiguration of the university colleges. The changes are too numerous to discuss here. Below is a link that provides a summary. The primary change that concerns our department is that over the next year GGEP will merge with Anthropology and Archaeology.

[https://www.thepenn.org/news/iup-recommends-academic-restructuring-enrollment-by-program-revealed/article\\_9a309172-9b7d-11ee-9201-57fee4bac8b7.html](https://www.thepenn.org/news/iup-recommends-academic-restructuring-enrollment-by-program-revealed/article_9a309172-9b7d-11ee-9201-57fee4bac8b7.html)

# Update from the Chair

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I'd be lying if I stated we are all excited about these changes. The changes to our programs and our pending merger with Anthropology have left us in a constant state of uncertainty. We are uncertain what this new department will look like, and we are uncertain how well our redesigned programs will operate, since this is completely uncharted territory. We are still hopeful, and we are working hard to take all appropriate steps to be successful. But the uncertainty is certainly stressful.

Now onto some more exciting news. This spring we started teaching classes in the new Kopchick Hall! After several weeks of moving (from November to January) we finally moved everything out of our old spaces in Weyandt Hall and Leonard Hall, and our department is completely housed in Kopchick Hall. I can't tell you how many thousands of pounds of rocks and equipment I moved, but it was a lot! This took a significant effort by all of our faculty, several student helpers, and a hired moving company. While Weyandt Hall served us well, despite the leaks and crazy temperature fluctuations, we are very excited to be in the new building. Our new laboratories and classrooms are state-of-the-art and the students and faculty are really enjoying the new space. Dr. Coles is ironing out the kinks in the new planetarium (which is awesome), our faculty are negotiating shelves and cubbies for teaching materials, and we are all trying to get our keys and the AV systems to work properly. But these are 'good' problems to have as we settle in. But don't take my word for it. Please come check out the new building yourselves! I can even arrange for a student to give you a tour, if interested.

Cheers,

Dr. Nick Deardorff

Geography, Geology, Environment, and Planning (chairperson)



***The office of the Geography, Geology, Environment, and Planning Dept. in Kopchick Hall.***

# Alumni News

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## **Ellen Lamont '12**

[Ellen gave the guest seminar for this year's 50th Geoscience Day Celebration.]

Hi everyone. Ellen Lamont ('12) here. The last year has been a whirlwind of activity from buying my first home (yes, the market is crazy), finally conquering a long-term travel goal of visiting all 50 states, and working on some exciting research projects with colleagues and friends around the world. When I am not working or traveling, I have taken up competition hip hop dancing, kickboxing, and other recreational opportunities abundant in the southern Rockies. I am currently building a career as a hazards geologist with the U.S. Bureau of Reclamation based in Denver, CO, though my work takes me to most of the western 18 states. For those not familiar with the Bureau of Reclamation, we are concerned with issues of water conveyance in the western United States. This includes dam construction and safety, irrigation and drinking water, and related recreation and ecosystem needs. Flood control is covered by the Army Corp of Engineers. My specific group projects include mapping and dating, paleoseismology, characterization of faults, seismic hazard assessment related to risk analysis, and infrastructure safety, among others.

## **Molly Rudolchick '17**

After graduation (2017), I accepted a job at The Gateway Engineers in Pittsburgh. I'm still working for Gateway and obtained my Geologist-in-Training certification in 2021. I spend most of my workday compiling the environmental permits that are required for earth disturbance projects in Pennsylvania, Ohio, and West Virginia. If I'm not permitting, I'm likely in the field looking for areas that could be problematic from a landslide perspective or looking at areas that turned out to be problematic from a landslide perspective, then figuring out how to repair them. I also conduct Phase I and Phase II Environmental Site Assessments, although that field work has been limited for me the last several months as my husband and I welcomed a baby girl, Madelyn, into

the world on April 30th!

Outside of work, I've been trying to cross off some "bucket-list" items and have been lucky enough to complete some dream hikes in the North Cascades, Glacier National Park, Banff, Yoho National Park, and Iceland over the last two years. I'm hoping to keep that momentum going with the baby, so if anyone has any "hiking with baby" tips – please send them my way!

## **Nate Zlockie '18**

I have been accepted into the online Master's program in Geological Sciences at Ohio University as I work towards my Level II teaching certificate.

## **Susie Adams '21**

I am a 2nd-year MS studying geoscience at University of North Carolina Wilmington. My current research involves numerical modeling at the submarine volcano Axial Seamount to understand how the magma chamber roof influences deformation on the seafloor. This past summer, I sailed on the R/V Marcus Langseth to the Blake Plateau. We spent over five weeks at sea collecting and processing bathymetric and multichannel seismic data to understand rifting during the Pangea breakup.

## **Allison Bergeron (Sec. Science Teaching Certificate) '23**

I have a 7th grade science position at Franklin Regional Middle School [southwest PA]. I will be teaching life science.

## **Joshua Colasante '23**

I have been accepted into the master's program at the University of Kansas. [Josh started the program in January 2024 and has sent IUP faculty some resources from the Kansas Geological Survey.]

## **Joellen (Nelson) DeBuyser '23**

It's your favorite recent Earth and space science education graduate, Joellen Nelson (now DeBuyser since I got married)! I work as the science teacher at Adelphoi Education at Indiana, right across from the Indiana Junior High.

# Faculty News — Calvin Masilela

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Calvin Masilela, professor of Geography and Regional Planning, has been awarded a Visiting Fellowship at the University of Zululand, South Africa, by the Council for the Development of Social Science Research in Africa (CODESRIA).

Funded by the Carnegie Corporation of New York, the fellowship “supports African diaspora academics to visit African universities and undertake academic activities aimed at strengthening teaching and research in the social sciences, humanities, and higher education studies.”

During his visit in summer 2024, Masilela will explore pathways for capacity building in the Department of Geography and Environmental Studies, including faculty and PhD student mentoring, development of a student research manual, and potential collaborative research in the areas of development geography and urban restructuring in South Africa’s global cities.



***Prof. Calvin Masilela is ready to travel for his Visiting Fellowship in South Africa!***

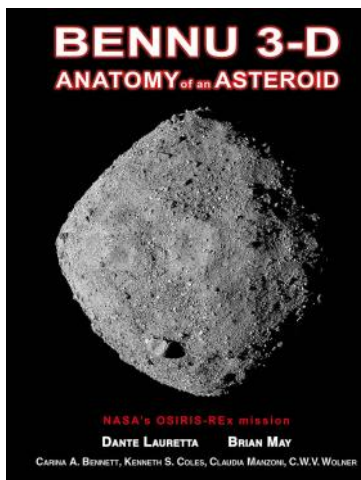
# Faculty News — Ken Coles

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For the first time in several years my teaching effort focused this year on astronomy. Both semesters included astronomy lecture (with lab in the Spring) for non-science majors. The Weyandt Hall planetarium and the Cejka Planetarium in Kopchick Hall require different approaches. The new facility adds many capabilities we haven't had before. It also requires quite a bit of prep time and new expertise to use these features. I am already able to run quite a few special effects manually: drawing the analemma in the sky and showing star trails to illustrate their motion. I hope other faculty will begin using the facility for visualizing things like large molecules and of course, the surface of the Earth in high resolution satellite imagery. This year's schedule included extra public shows to let the public and students see the facility and prepare everyone for the total solar eclipse in April.

July 2023 saw the release of the book I've been contributing to, [Bennu 3-D: Anatomy of an Asteroid](#) (jointly published by London Stereoscopic Co. and Univ. of Arizona Press). There was a book release

party at the Natural History Museum in London – of course I was there for it! The photo shows most of my coauthors at that event. The stereo images, created by Brian May and Claudia Manzoni, are easier than is typical to merge (for me at least) because of their lengthy processing and adjustments. There was a second celebration in Houston at the end of September after the sample was successfully returned to Earth. Analyses of the oldest unaltered material ever collected in the solar system will appear over the next several years.



Another new development is that I am serving a term as President of the Amateur Astronomers Association of Pittsburgh. This group has over 300

members and two observatories with professional-grade telescopes. Despite the name many members are accomplished professionals. This has been a big job, but I'm paying back the group for all they've taught me about telescopes and the sky over the years. And like the planetarium at IUP, they believe in doing free events for the public whenever possible. Their star party schedule is posted at <https://www.3ap.org>.

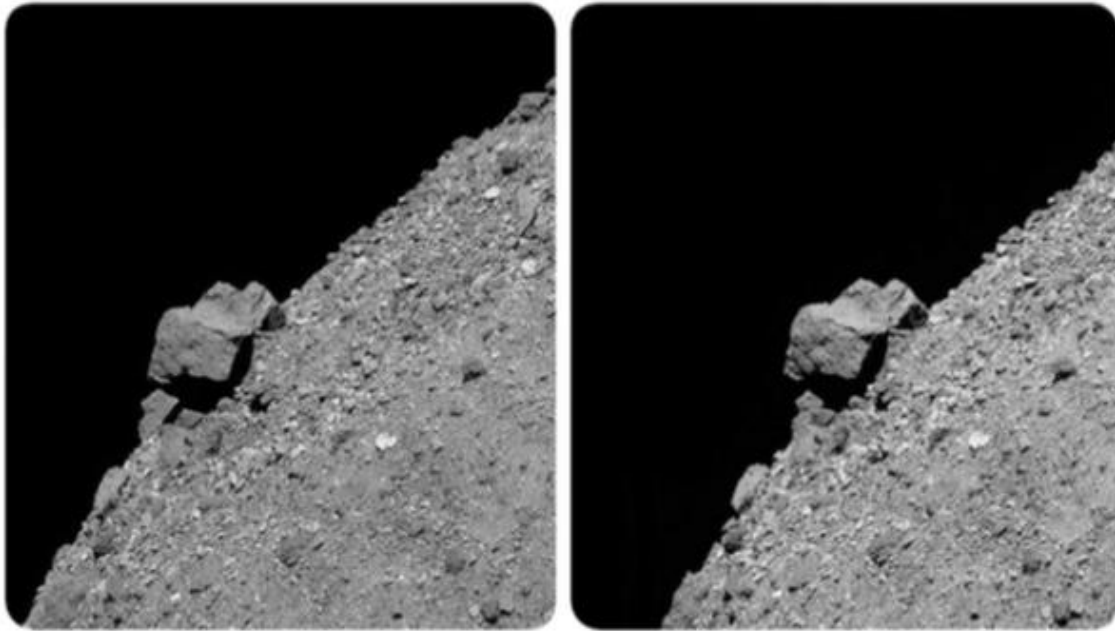


*Authors of Bennu 3-D at the book release, Natural History Museum of London (left to right): Carina Bennett (U. Ariz.), Ken Coles (IUP), Cat Wolner (U. Ariz.), Dante Lauretta (U. Ariz and OSIRIS-REx Principal Investigator), Sir Brian May (London Stereoscopic Co.)*



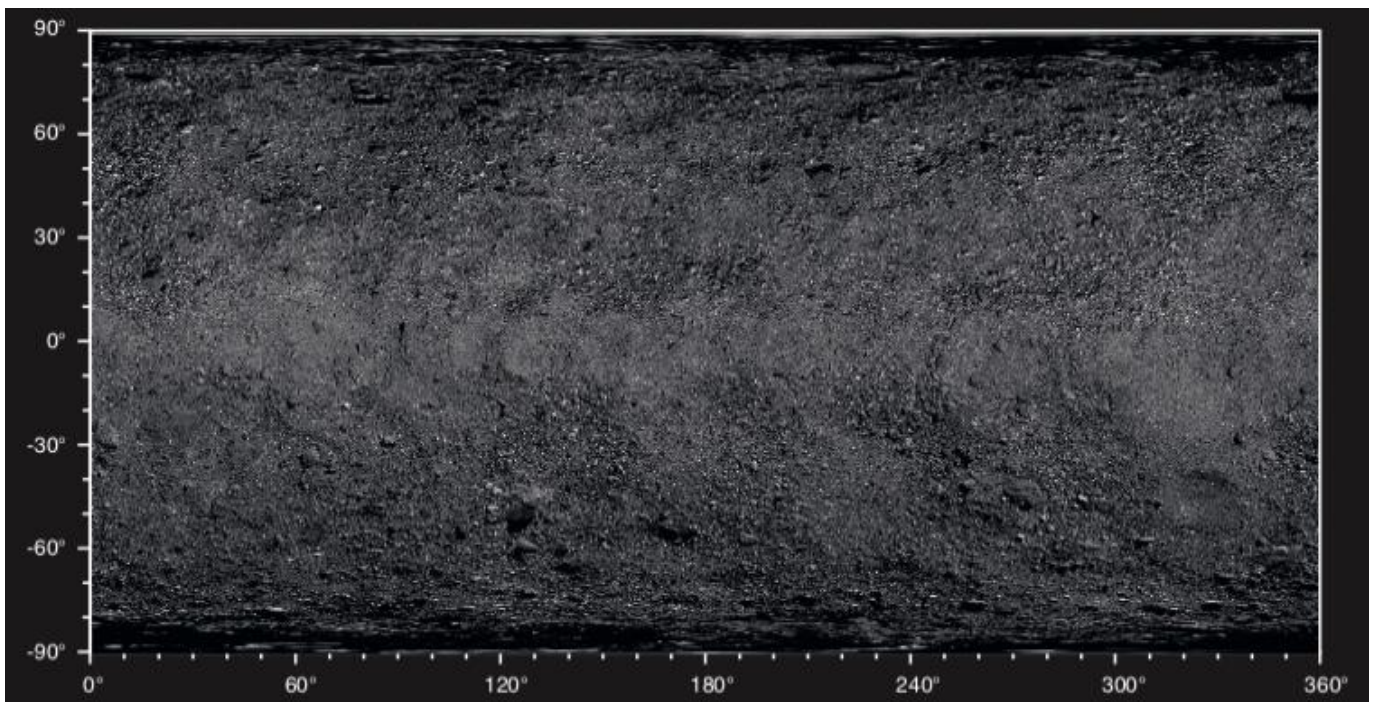
# Book Bennu 3-D: Anatomy of an Asteroid published

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*Above: Stereo pair of BenBen, the tallest boulder on Bennu (40 m above surface).*

*Below: Base map of Bennu in equirectangular projection.*



# Faculty News — Kevin Patrick

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The past year was spent talking about the relationship between community and its adjacent patch of nature described in my book, *Near Woods; A Year in an Allegheny Forest*. Presentations were made in Geography Department colloquiums at Saginaw Valley State University, and Michigan State University, and at the International Society for Landscape and Place Meaning conference at Missouri University. In March, the book won the Association of American Geographers J. B. Jackson Prize. Back in Indiana, field trips into White's Woods, the book's focus, were made in every season with students, Indiana residents, and professionals working on the White's Woods Stewardship Committee's Management Plan.

Class field trips also ranged farther afield, with a Geography of National Parks expedition to

Shenandoah, Urban Landscapes trip to Pittsburgh, and a Geography of Pennsylvania karst and cave trip to Penn's Cave and Tytoona Cave. On the cultural landscapes side of Geography, I led a bus load of Society for Commercial Archeology conference attendees into the Pennsylvania Wilds from Erie, and then west to Cleveland along US 6 searching for remnant bits of 20th century Modernism and commercial roadside architecture. As Indiana Planning Commission president, I continue to work with GGEP students and alumni-turned-planners in updating the Indiana Borough Comprehensive Plan. It's great to see our former students making a difference (and a living) as planning professionals in local and county government.

***White's Woods provides the Geography of Pennsylvania class an opportunity for a near-woods nature scavenger hunt.***



# Faculty News — Kevin Patrick

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*Above: The owner of Erie's 1948 Lawrence Park Diner addresses the Society for Commercial Archeology.*

*Below: GGEP Planners leading the public outreach component of Indiana's Comprehensive Plan update at IRMC Park.*



# Faculty News — John Benhart

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Indiana University of Pennsylvania, the only university in Pennsylvania recognized by the Federal Aviation Administration as an FAA Collegiate Training Institution, is taking drone research and study to a higher level—literally.

Funding from the federal Build Back Better Regional Challenge grant provided IUP the opportunity to purchase a WingtraOne Gen II hybrid drone for IUP's Geospatial Intelligence and Unmanned Aircraft Systems Certificate Programs. The WingtraOne is classified as a hybrid drone because it has both the ability to take off and land vertically in compact areas and to fly at altitude using fixed wings.

Like traditional vertical take-off and landing (VTOL) drones such as quadcopters, the Wingtra One can perform flight missions in locations with limited area for take-off and landing.

A unique aspect of the Wingtra drone is that after its vertical takeoff, it can be programmed to “flip” so that it flies as a fixed-wing aircraft, with air moving over its wings as the aircraft moves forward, John Benhart, professor of regional planning in IUP's [Department of Geography, Geology, Environment,](#)

[and Planning](#) and director of IUP's Geospatial Intelligence Certificate Programs and Unmanned Aircraft Systems Certificate Programs, said. Benhart is also a GISCI-certified GIS professional and an FAA-certified remote sUAS (drone) pilot.

“This means that, compared to traditional quadcopter and hexacopter drones which generate lift and maintain flight with multiple rotating propellers and no wings, the WingtraOne can fly for significantly longer time periods, over larger land areas using less battery power and acquire high-resolution imagery from higher altitudes, with high-accuracy location positioning limiting the need to establish ground control on larger or more difficult to access sites,” Benhart said.

Benhart said that the Wingtra drone's capabilities will create opportunities for student and faculty research and field work, with projects already being planned and implemented to use the aircraft and its multiple sensors to acquire data in support of research on high-accuracy 2-D and 3-D mapping, sea level rise, post-hurricane coastal development patterns, land cover and habitat delineation, animal population dynamics, and invasive plant species distribution.



# Faculty News — John Benhart

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*From left: John Benhart; students Emily Parks, Lilee Lux, Daniel Kukula, Matthew Bucko, Braden Yard, Aaron Capouellez, Aaron Nickas, Joshua Merichko, William Smith, and Tyler Johnson.*

## Faculty News — Nick Deardorff

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Every time I sit down to write my annual Geotidings update, I can't believe another year has gone by. I remember writing my first Geotidings update, and I am currently about to finish my 10<sup>th</sup> year here. While working at IUP can be stressful and occasionally chaotic, this university has provided me with many opportunities. Considering field courses alone, I have traveled to Oregon, Newfoundland, Colorado twice, western Pennsylvania and West Virginia, and now Iceland. This last summer I was fortunate to be invited along on a field experience to Iceland with the Honor's College as their personal volcano expert and guide. We tramped around Reykjavik visiting museums and other touristy things, completed the Golden Circle (consisting of Þingvellir National Park, Goldfoss, and Geysir), bathed in hot springs, visited a geothermally heated greenhouse that specialized in growing tomatoes, visited a geothermal power and carbon sequestration plant,

viewed hundreds of waterfalls, observed and hiked near a few glaciers (mostly in and around Vatnajökull National Park), and... wait for it... witnessed an active volcanic eruption at Fagradalsfjall volcano. My cheeks still hurt from grinning for that entire day as we hiked in and out to witness my first active, subaerial volcanic eruption. While the photo provided may not do this justice, the cone in the background is displaying classic fire-fountaining and was still building the lava flow field just behind me. We were about a kilometer from the active vent and the lava nearby, although the crust was solid, was quite warm and you could feel the heat coming off it as the wind swirled. It smelled like a large fireworks display. While this only constitutes two weeks from this last year, it was by far the highlight of the year for me. It was a truly amazing trip and I see no need to talk about anything else. See my chairperson's update for an update on the department and our programs.



***A very happy volcanologist checks a key item off his lifetime bucket list! (Nick Deardorff in Iceland.)***

# Support Geography, Geology, Environment, and Planning Programs

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In these times of tight budgets, the GGEP Department is deeply grateful for continuing financial support from our alumni and friends. Generous supporters like you have helped current students do research, attend professional conferences, and cover educational expenses. To learn about the funds and how to make your donation to the fund of your choice, please visit

[Support the Department - Department of Geography, Geology, Environment, and Planning - IUP](#)



*GGEP students on a trip to learn about Urban Landscapes at Mount Washington in Pittsburgh.*

# PLEASE STAY IN TOUCH

## Contact Us

**IUP Geography, Geology, Environment,  
and Planning Department  
Kopchick Hall, Room 114B  
421 North Walk  
Indiana, PA 15705  
724-357-2440  
[www.iup.edu/geoplanning](http://www.iup.edu/geoplanning)**



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