SC ENTIFIC OCEAN DRILLING

CREDIT: Michelle Pratt & IODP

Digital Newsletter the Drilling Dispatch October 2023

SC ENTIFIC OCEAN DR LLING

In This Issue

TIME TO CELEBRATE International Geodiversity Day

HAPPENING NOW IODP Expedition 400: Northwest Greenland Glaciated Margin

IN THE WORKS Expedition 400T: School of Rock

HOW TO Submit an Ocean Drilling Legacy Asset Project (LEAP) Proposal

FOR YOUR CALENDAR FEATURED VIDEO FEATURED SCI-COMM RESOURCE

SPOTLIGHT ON Jose Cuevas Tessa Peixoto

CREATIVE CORE-NER

Get spooky with SciOD!

Time to celebrate... International Geodiversity Day

written by Sharon Katz Cooper (USSSP)

Did you know? October 6th is **International Geodiversity Day**, an opportunity to recognize and reflect on the amazing geological diversity of our planet. Mountains and valleys, canyons and gorges, riverbeds, volcanoes and lava flows—these features are all around us. At IODP, we explore what lies beneath the sea; it is geodiversity that few people have the opportunity to see and explore, yet it is also amazing and beautiful. To mark Geodiversity Day, we thought we'd share just a few of our amazing and varied core images.

Note: These are all IODP core images from **IODP Expedition 364: Chicxulub K-Pg Impact Crater**.



Happening now... Expedition 400: Northwest Greenland Glaciated Margin

Paul Knutz and Anne Jennings, Expedition 400 Co-Chief Scientists Laurel Childress, Expedition 400 Project Manager

written by Elizabeth Doyle and Michelle Pratt, Expedition 400 Onboard Outreach Officers

The Greenland Ice Sheet is the last remaining ice sheet in the northern hemisphere. This ice sheet is currently just under 2 miles (3.22 kilometers) thick and is melting in response to warming of the atmosphere and ocean water. If this ice sheet fully melted, it would add about seven meters (23 feet) to global sea level. At times the ice sheet extended to the edge of Greenland's continental shelf. At least once in the past 2.5 million years, it fully melted, or nearly so. How did the Greenland Ice Sheet respond to past intervals of warming? How might it respond in the future?

Expedition 400 scientists boarded the JOIDES Resolution (JR) in Reykjavik, Iceland on August 13, 2023 and headed to Northwest Greenland to address these questions. Once aboard the JR, they planned to drill at seven sites along Greenland's continental slope and shelf to collect sediment core samples from beneath the seafloor. These samples contain sediment carried offshore by Greenland's glaciers, icebergs and meltwater. Interbedded with this sediment are the preserved remains of marine plants and animals that lived at



TOP: An iceberg is spotted from the deck of the *JOIDES Resolution* (Credit: Beth Doyle & IODP). BOTTOM: Icebergs have been a common sight during Expedition 400 (Credit: Erick Bravo & IODP JRSO).







TOP: Scientists discuss a newly split sediment core at the core describing table (Credit: Michelle Pratt & IODP). MIDDLE: Siem personnel work on the rig floor (Credit: Nick Logan & IODP JRSO). BOTTOM: Onboard Outreach Officers Michelle Pratt and Beth Doyle display the Expedition 400 Reach the World flag before boarding the *JOIDES Resolution* (Credit: Lara Pérez Miguel & IODP). the time when this glacial material was deposited. By analyzing the samples, scientists will gain a deeper understanding of ice sheet dynamics, and specifically how the Greenland ice sheet changed during intervals of climate warming.

From the first three sites, Expedition 400 recovered over 1,000 meters of core, more than one might expect in these geologic settings. In their samples, scientists have observed a variety of material that represents pieces of Greenland and North America, including mud, rock fragments in a range of sizes, and diamictons (a mix of both). Microfossils, including diatoms, foraminifera and dinoflagellates have also been identified, but not in great abundance. Together, microfossil and paleomagnetic data have helped to narrow down the age range of certain sediment layers.

Essential to this particular expedition have been the two ice navigators. They monitor and track iceberg movement around the clock in relation to the stationary drilling ship. Organizations that provide satellite-based monitoring of arctic regions, including the Danish Meteorological Institute (DMI), the Canadian Ice Service (CIS), and Polar View, are important resources for ice navigation. Looming icebergs have forced the JR to change its location several times. As a result, free-fall reentry funnels, crucial to this operation, have been used three times. This allows the JR to return to the drilling site, once an iceberg is at a safe distance.

Onboard Outreach Officers have hosted shipto-shore events, supported the scientists' professional and educational outreach, posted on social media, written <u>blogs</u> and created <u>videos</u> featuring different aspects of the expedition and the JR. Through a <u>special collaboration</u> with Reach The World, they have engaged with 24 schools by posting unique content and connected through several live ship-to-shore events.

In the works... Expedition 400T: School of Rock

written by Maya Pincus (USSSP)



School of Rock is back, like never before!

The goal of this workshop is to continue the partnership between the U.S. Science Support Program (USSSP) and the American Geosciences Institute (AGI) to revise and update a series of lesson plans from our vast library of IODP curriculum resources. Both education and the internet have evolved since we first started posting classroom materials in 2007, so it's high time that a team of talented and passionate educators come together to ensure our offerings reflect breakthroughs in understanding how students learn science, and are optimized for use in this modern digital age.





american geosciences institute connecting earth, science, and people This project began in the previous School of Rock (February-March 2023), and as a result, 12 pre-existing lessons were revisited and revised to ensure rigorous, data-based instruction. You can see a draft of our new lesson plan template <u>here</u>. This October, an additional 12 lessons will be revised and updated by another team of educators from across the country.

What's new this time around is an additional partnership with the Atlanta University Center Consortium (AUCC), the world's oldest and largest association of historically Black colleges and universities. Four instructors and five participants from the Consortium will bring a unique perspective to this round of lesson revisions, and will help ensure that Scientific Ocean Drilling, and the educational materials we offer, better meet our goal of increasing belonging, equity, justice, inclusion, diversity, and accessibility in the field. The AUCC hosted a two-day pre-workshop meeting this summer, in which instructors and participants came together to build community, learn about the International Ocean Discovery Program, and begin the process of transforming their lesson plans. The full workshop will begin on October 13, 2023, kicking off with two days of field trips to learn about the geology and geoheritage of Iceland. Participants will then board the *JOIDES Resolution* in Reykjavik, and immerse themselves in ocean-drilling science and operations over the course of a week-long transit through the north Atlantic to Amsterdam. After another day of field trips in the Netherlands, participants will return home to implement what they learned for their students and colleagues at a number of educational institutions.

The <u>School of Rock October'23 expedition page</u> is live on the *JOIDES Resolution* website, which you can visit to learn more about this group of instructors and participants. And make sure to check back regularly throughout the workshop to read their entries to the Ship's Log as they reflect on what it means to be a School of Rocker!



School of Rock October 2023 participants gathered in Atlanta this summer for a pre-workshop meeting. From left to right: Sharon Cooper, Lisa Crowder, Dr. Justin Ballenger, Dwight Ebanks, Steve Kirsch, Maya Pincus, DaNel Hogan, Hannah Eisla, Melisa Dettbarn, Dr. Carlos Alvarez-Zarikian, and Michelle Autrey (Credit: Hope Ballenger).

How to... Submit an Ocean Drilling Legacy Asset Project (LEAP) proposal

Ocean Drilling Legacy Assets Projects (LEAPs) are a new type of project for international and interdisciplinary collaborations under the umbrella of the scientific ocean drilling programs. They are standalone research endeavors that: (1) address at least one aspect of the <u>2050 Science Framework</u>, and (2) have objectives that maximize the return on the legacy assets of current and past scientific ocean drilling programs without new drilling. Examples of legacy assets are cores, samples, data, open boreholes, and downhole observatories from current and past scientific ocean drilling programs.

Avenues of LEAP research could include, for example, the production of new data from samples, integration of data across multiple expeditions and/or multiple boreholes, incorporation of legacy borehole data with new data, application of a new method or technology that was not available when the legacy assets were collected, or measurements in legacy drillholes to address new problems in innovative and ways.

LEAPs do not replace other research mechanisms (e.g., individual proposals to funding agencies for sample requests or data analysis); instead, they are intended to provide a new avenue to facilitate collaboration at scales larger than conventional single or multi-proponent research projects. The definition for LEAPs is deliberately broad to provide flexibility for new approaches, integrations, and technology uses that foster coordinated multidisciplinary and international research efforts. LEAPs also provide an opportunity through which researchers can increase the visibility of their research and results.

The deadline to submit a LEAP proposal is November 1, 2023. Visit the IODP website for details.

- **Step 1**: Visit the <u>LEAPs page</u> on the IODP website for important information and useful resources.
- Step 2: Read the LEAPs Proposal Submission Guidelines.
- Step 3: Create an account or log into the <u>IODP Proposal Database</u> (PDB).
- **Step 4:** Prepare a Preliminary Proposal. The Preliminary Proposal should describe a compelling hypothesis, question, or idea that can be addressed using the legacy assets of the scientific ocean drilling program. The Preliminary Proposal should include a cover sheet, abstract, scientific objectives, management plan, engagement plan / results, main text (including figures and tables with captions), a list of proponents, and curriculum vitae of the primary investigator(s). More details can be found in the Proposal Submission Guidelines.

- Step 5: Submit the Preliminary Proposal in the PDB. The Science Support Office sends Preliminary
 Proposals to the <u>Science Evaluation Panel</u> (SEP) for review.
- **Step 6:** Anticipate a response after the next SEP meeting. The written review will include one of the following decisions: <u>Request for Full Proposal</u> (see Step 7), before which the project must be opened to the broader community for input, or <u>Declined</u> (see Step 4), which upon request can include a supportive message from the SEP to re-scope the research and submit a new Preliminary Proposal.
- **Step 7:** Prior to preparing a Full Proposal, solicit input and participation from the broader community through a workshop or other mechanism.
- **Step 8:** If the Full Proposal will use archived core, contact the appropriate <u>IODP Core Curator(s)</u> to discuss sampling needs and core facility access.
- **Step 9:** Prepare a Full Proposal. A Full Proposal should describe all aspects of the scientific objectives, the use of legacy assets, the research approaches, and the timeline necessary to complete the work. A Full Proposal should include a cover sheet, abstract, scientific objectives, management plan, engagement plan / results, main text (including figures and tables with captions), a list of proponents, science party, curriculum vitae of the primary investigator(s), and a change form. More details can be found in the Proposal Submission Guidelines.
- **Step 10:** Submit the Full Proposal in the PDB. The Science Support Office sends Full Proposals to the Science Evaluation Panel for review.
- **Step 11:** Anticipate a response after the next SEP meeting. The written review will include one of the following decisions: <u>Endorsement</u> (see Step 12), after which the proposal will receive a project number and be placed on <u>www.iodp.org</u>, or <u>Declined</u> (see Step 4), which upon request can include a supportive message from the SEP to re-scope the research and submit a new Preliminary Proposal.
- **Step 12:** After the Full Proposal is endorsed, the Science Support Office will contact the Principal Lead Proponents to discuss timelines and next steps.
- **Step 13:** To document outcomes, the lead proponent of each endorsed LEAP must submit a project report summarizing the results of the research. LEAP reports must discuss the project's motivation, methods, and results. The report should contain an abstract summarizing key findings and contain a list of the project's science party. The timeline for producing the report must be discussed in the proposal's Management Plan, and the report must be delivered as a PDF to the Science Support Office (science@iodp.org). Accepted LEAP reports will be posted on www.iodp.org, as will references to any peer-reviewed publications resulting from the research and any references to newly produced data.

Altered States

FEATURED VIDEO

When we recover igneous rocks from the ocean floor, they are not always perfectly preserved. However, there is a lot that we can learn from their altered states! In this video from Expedition 393 Onboard Outreach Officer Tessa Peixoto, igneous petrologist Dr. Michelle Harris explores what we can learn from the alteration features in South Atlantic Transect II basalt cores.

- For your calendar
- Apply to sail with Expedition 405: JTRACK (Deadline: 2 October 2023; learn more here)
- Submit a drilling proposal
 (Deadline: 2 October 2023; learn more here)
- IODP Forum and PMO Meeting (11-13 October 2023; Wollongong, Australia; <u>learn more here</u>)
- Propose a novel project or activity in support of SciOD
 (Deadline: 20 October 2023; learn more here)
- 2025-2035 Decadal Survey of Ocean Sciences (Meeting 3) (24-25 October, 2023; learn more here)
- Propose an Ocean Drilling Legacy Asset Project (LEAP) (Deadline: 1 November 2023; learn more here)

SCI COMM RESOURCE OF THE MONTH



Measuring is an underrated skill in science. This is a quick introduction to using a ruler, understanding how to read a ruler, and measuring lengths of veins in basalt cores with a ruler.

Measuring cores: Practice using rulers

Spotlight on... Jose Cuevas

written by Maya Pincus (USSSP)

When I reached out to Jose Cuevas to pitch this spotlight, in just a few hours he wrote back with the generous invitation to talk more about his "winding and frankly nonsensical career both in the research world and outside of it." I agree that his story is tortuous, but as to nonsensical? By the end of our conversation I had settled deeply into the belief that Jose is a person who is exactly where he needs to be, and exactly the person who could help others figure out where they need to be as well.

His story begins in the zoos and aquariums of San Diego, where he grew up from the age of two after his family moved there from the Philippines. He describes those venues as "places where you could learn, where you could discover more every time you went." It's evident that these early instances of informal investigation influenced the expanse of his education. For most of his young life, Jose assumed he would grow up to be a marine biologist. After all, San Diego was "a great place to be exposed to the ocean." However, since his parents were not from the United States nor from academic backgrounds, Jose understood that it would be up to him to figure out *What does a degree and career path as an ocean scientist actually look like?*

Credit: Jose Cuevas

While many of his young peers were volunteering at hospitals or participating in Mock Trial after school, Jose launched his career with an internship at the Birch Aquarium. Eventually, he would be promoted to a regular compensated employee. This isn't the only example of Jose's ambition driving his path (in fact, you'll see this emerge as a common theme). As an undergraduate student, Jose sought out the op



LEFT: In 2022, Jose sailed aboard the R/V *Sally Ride* as an instructor for the STEMSEAS program. RIGHT: Just a few weeks ago, Jose joined STEMSEAS for another expedition aboard the R/V *Kilo Moana*. (Credit: Jose Cuevas)

portunity to volunteer in a research lab, since many people had told him that was a step toward grad school and an eventual career. He ended up working with then PhD candidate Elizabeth Sibert, analyzing the accumulation of prehistoric fish teeth in cores collected from the north Atlantic during the days of the Ocean Drilling Program.

An early example (though not the first—"There's a video that I made in 8th grade about the periodic table of the elements that you can still find on youtube if you look hard enough") of Jose's early career as a science communicator is a video, <u>The Age of Fishes</u>, made while he was working for Sibert and Dr. Richard Norris at Scripps Oceanographic Institution. It's clear that from an early age his enthusiasm for teaching about science was matched only by his creativity.

Many regard college years as a time for self-discovery, and for Jose, this was particularly poignant. He entered with his heart set on marine biology, but through time came to develop an appreciation for integrative Earth systems as a whole. He couldn't help but think about "how the biosphere influences the geosphere influences the atmosphere and they all have all of these feedbacks onto each other. When I actually started getting coursework I realized I had a lot to learn, and I was curious."

This curiosity took him places. He authored his first published, peer-reviewed paper before even completing his undergraduate degree. He earned a reputation for being passionate and knowledgeable about ocean sciences. Even as he struggled to raise his GPA above 2.5,





TOP: Jose says, "on the *Robert Gordon Sproul* I took a gravity core and it was *this big.*" BOTTOM: Aboard the *Sally Ride*, Jose prepares to deploy an Argo float. (Credit: Jose Cuevas).

he grew "excited about the prospect of deep time and how the planet changes through deep time." As more and more effort went into what he cared about—learning and communicating the science—classwork began to "feel a little superfluous."

But that didn't stop him from graduating, with research experience and publications no less. He took a job facilitating citizen science at the Smithsonian Environmental Research Center, which provided him an opportunity to synthesize many previous skills with those he was trying to develop. It also was a chance to narrow down his idea of the ideal career. It showed him that "Yes, I can do a career in science that isn't this traditional research career." As he led an effort [mostly for high school students on mandatory field trips and senior citizens looking for a productive way to fill retirement] to monitor the extent of an invasive barnacle in populations of Chesapeake Bay crabs, he remembered that as much as he had always been driven by his love for science, it was the education and communication that truly inspired him.

After bidding adieu to the Chesapeake Bay ("crabs are not my passion as much as I enjoy them"), Jose returned home to San Diego and the Birch Aquarium. He was reunited with Scientific Ocean Drilling through





TOP: Aboard the *Kilo Moana*, Jose helped deliver two generators to power a pharmacy in Kahalui on the island of Maui. BOTTOM: During his most recent STEMSEAS expedition, Jose helped navigate the ROV *Lu'ukai* from its control room on the *Kilo Moana*. (Credit: Jose Cuevas). the aquarium's marketing manager Caitlin Scully, a former Onboard Outreach Officer and student of Dick Norris. At that point, he "had my bachelors for a few years and didn't know if I was where I wanted to be," which is a very normal thing, Jose stressed that we assure the reader. "I did what any younger millennial would do and applied for grad school."

On top of that, with IODP on his mind, Jose applied for the Onboard Outreach Program and was staffed on Expedition 388: Equatorial Atlantic Gateway. When that expedition was postponed, he was reassigned to Expedition 395: Reykjanes Mantle Convection and Climate, scheduled to sail in the summer of 2020. We all know how that went. After a year of back and forth, of postponements, cancellations, and confusion, Jose was asked to take charge of outreach for the barely-staffed Expedition 395C from shore. While a skeleton crew of technicians collected cores from the arctic, Jose looked for creative ways to involve the science party and the public in the expedition.

In some ways, Jose explains, this worked out for the best. Because all connections were virtual, and even scientists were displaced from their science, Jose was able to focus on their thoughts and feelings, spotlighting them as people, as "more accessible main characters" in the stories of their research. Many people in our audience wonder *How do I become an ocean scientist?* The way Jose sees it, "this is the science and this is the human being and these are both important points to tell that story."

Though he was not able to sail on the *JOIDES Resolution*, Jose has since participated in two ocean expeditions as an instructor for the STEMSEAS program. Because of his non-linear career, his role with that group is a crucial one: He teaches participants that "maybe at the end of the day it's about your skills and what you like doing and finding a way that lets you use those skills to do what you care about to the best of your ability."

These days, Jose works as the Digital Community Manager for the Museum of Science in Boston and is in the thesis stage of a masters degree in geology. He thinks deeply about science, education, and communication, always striving to "meet the audience at that individualized as possible level." Sometimes, this means making a <u>video about seahorses</u> to celebrate Father's Day. Other times, it's giving a talk about Filipino sailors, the unsung heroes of ocean sciences, because "their friends and family deserve to know how important their work is." Either way, Jose finds it "weirdly validating to get paid to exist on social media platforms." It may be unconventional, but the way I see it, there is no one in a better position to do it.

Spotlight on... Tessa Peixoto

written by Maya Pincus (USSSP)

"I just want people to not be afraid of science." This is a point that came up over and over again as I got to know Expedition 393 Onboard Outreach Officer Tessa Peixoto. She is someone who cares deeply about science, and has spent her life working to increase access to science for everyone through science literacy education. It seems only natural that she ended up as a science communicator aboard the *JOIDES Resolution*, and is now known for being one of the most prolific creators of content in the recent history of the International Ocean Discovery Program.

Credit: Tessa Peixoto

Tessa's earliest memories center around seeing *Jaws* for the first time and thinking "Yup... Sharks are awesome!" As she watched all five movies on repeat, she grew into someone who "just really loved the ocean." This was helped by the fact that her mom also loved the ocean, so many family vacations were spent at the beach. By the age that most children begin to read, she already had her life plan all figured





out: "My brother said to me 'If you want to study sharks, you have to go into marine biology,' and my 5-year-old brain was like 'Yup, that's what I gotta do.'"

Her fixation almost got her into trouble, when she was scolded by a professor in college for dedicating every single project to sharks. He said, "You do know you can't just do everything about sharks, you have to really see things from a bigger picture." Her response? "I sometimes get mad at him because that just opened the floodgates, like, oh I can be fascinated by everything? Let's go!" Suddenly, she was looking out to a much broader horizon.

The years after college were spent hunting for the perfect job, made difficult by the fact that

TOP: As the Onboard Outreach Officer for Expedition 393, Tessa shared scientific ocean drilling with the world through virtual ship-to-shore connections (Credit: Erick Bravo & IODP JRSO). BOTTOM: Whenever she had the chance, Tessa would work with EXP393 scientists to learn everything she could (Credit: Erick Bravo & IODP JRSO).

many of the positions that synthesized her skills and passions were temporary, and "living is hard on seasonal pay." Tessa worked as a technician in labs, did research in the Pacific Northwest, and eventually settled in as an educator at the Harvard Museum of Natural History. Though that job too had a fixed end date, it was there that Tessa really began to see herself as a teacher. "I kept finding myself in any position I was working in talking to people to tell them what I learned," she described her growing commitment to science communication. Whatever new project she was doing, "I was just always wanting to talk about it."

Driven by that realization, Tessa began a new, more permanent role as a science literacy instructor at an adult education program. This was a big change, given that she had previously been working with very young children at the museum, but she found herself filling a niche, as there are so many resources available "for children to get access to science literacy and funness and exploration and nature, but so little for adults." Having moved to the United States for college after growing up in Brazil, she felt at home in an organization that serves clients from over 90 nations.

Still, every now and then Tessa would find herself on Google, searching for terms like "science education" and "science communication." One such search took her straight to the *JOIDES Resolution* website, where she discovered that it was possible for educators to participate alongside scientists in the 60-day expeditions at sea. The opportunity didn't work out for her the first time she applied, but when another Outreach Officer dropped out a month before an upcoming expedition, Tessa had her chance. When she received the surprising invitation, "the little child inside me exploded with joy." Even though she got the offer in May for a June port call, "I said 'Hands down, yes, I will go."

It's always a delight to hear people talk about their time at sea, but with Tessa it's particularly special. More than a year after her return to dry land, she can still describe intricate details of different parts of the ship in vivid reverie. She speaks fondly of the friends she made, the sunrises they shared, and even of the 12-or-more hour days spent leading virtual tours and collecting content for <u>blogs</u> and <u>social media posts</u>. To



One of the biggest highlights of Tessa's time at sea was the opportunity to make many new friends. Together they celebrated moments both small and big, from the daily sunrises to Tessa's birthday. (LEFT: Tessa Peixoto & IODP; RIGHT: Erick Bravo & IODP JRSO).





TOP: Tessa poses on the *JOIDES Resolution* helideck in view of the derrick at the start of Expedition 393 (Credit: Tessa Peixoto & IODP). BOTTOM: Tessa enjoys another sunrise on the steel beach (Credit: Tessa Peixoto & IODP). this day, every time she's out on a hike and sees a carbonate vein she can still hear the excited voices of Expedition 393 scientists in her head.

The transition back to shore was tough for Tessa. As for many of us, "I worked twelve hours a day on the ship, but my seven-hour with commute day feels longer and harder." But now she was equipped with a new experience to help her students find excitement in science.

Tessa approaches adult education realistically, with a full understanding that her job is not to raise a new cohort of academic researchers (though one of her students did go on to get a degree in biotech and is now working as a lab tech!). Still, "I really just like talking about science and making it accessible to people. I don't need them to love it, I just want them to be okay with it, and to understand that they use it in their day-to-day without knowing." This strategy works. Upon leaving her class, more than one of her students told her, "I like science because of you." Beyond that, Tessa views adult education as a way to support adults "to interact with their world (media especially) more confidently."

It was a sad day four years in, when the grant funding her program ran out. Tessa was able to stay with the company, transitioning to a workforce development program that provides vocational training to refugees, immigrants, and other adults that haven't had the opportunity to adequately prepare for a career. Tessa's philosophy about the world gives her the motivation to excel in this new trajectory: "To holistically attack the issues that the world is having, you have to understand all the industry that falls into it. There's the political part, the social aspect, the educational aspect, and business aspect. I got a little of the science aspect with my academia, a little bit of the education aspect, but I was like, let me learn what it means to make business relationships." The new role is not strictly one of science education, but she is still dedicating every day to helping people learn and empower themselves through new knowledge and skills.

It was humbling to meet someone so devoted to using her own expertise to make the world better for so many people. But Tessa herself is humble about it too. Rather than viewing education as giving something to her students, she regards it more as helping them find something they already have.

The way she sees it, "Everyone is a little scientist, even if they don't know the words yet."

THE BEST LOOKS of the Season

OCTOBER. THERE'S A NEW CRISPNESS TO THE AIR, FASHION IS SHIFTING TOWARDS COZY CHIC, EVERYTHING IS TINGED IN WARM EARTH TONES, AND PUMPKIN SPICE IS INESCAPABLE. NO MATTER WHERE YOU ARE, YOU CAN FEEL JUST THE SLIGHTEST CHILL DOWN YOUR SPINE, AS IF SOMETHING—BUT YOU DON'T KNOW WHAT—IS JUST A LITTLE BIT... SPOOKY.

IT'S HALLOWEEN SEASON, FRIENDS!

Though we usually stick to science and spotlights, this month you can think of us as your personal stylist too. We know you meant to have your Halloween costume finalized by September (especially when you came up with such a good idea in January), but let's face it, life gets in the way and come the third week of October you'll be scrambling to throw something together. Let this column take the guesswork out of your dress work, all the while impressing your friends with your clever commitment to science.



High-fashion radiolarian

You know what they say: High risk, high reward.

Though we're not yet sure what your reward will be if you pull this one off, we are confident that you will get the chance to strut your stuff on the catwalk.





GET THE LOOK

Honestly, good luck with this one. Our best guess is glitter and zip ties. A lot of zip ties.



Hydrothermal Vent

I originally made this costume for Halloween (I think in 2008?) for our grad student costume party at RSMAS.

When I was asked to be one of the co-instructors for the 2009 School of Rock, I decided wouldn't it be fun to talk about hydrothermal vents while -dressed- as a vent chimney? I surprised the Rockers and they thought it was great! The Japanese teachers even asked me to wear it during our live interaction with their schools in Japan.

The costume sailed again on Exp. 327, where I did a unit on how to use costume/sewing in science outreach for the teachers we had on the leg (we sailed something like 10 E/O folks on 327), which resulted in a fashion "catwalk" on the catwalk at the very end of the leg.

atie Inderbitzen

IODP Researcher





NON-COMMITTAL JOIDES Resolution

Keep your costume a secret until the perfect moment for a reveal! What looks like cute autumn color-blocking is actually an homage to everyone's favorite ocean-drilling research vessel.









1 Nannofossil ooze

- 2 Coccolithophore Jaclyn Pittman
- **3** Re-entry cone Orbon Alija / Getty Images



DAY SPLICE Night Splice

You'll never be alone (or un-correlated) again!



Sietske Batenburg | Kenneth MacLeod



FORAMINIFERA picking slide

WE'RE ALL THINKING IT BUT WE'LL NEVER LET THE MICROPALEONTOLOGISTS HEAR US SAY IT OUT LOUD



If you're feeling crafty, but not TOO crafty, this one's perfect for you. All you need is a black shirt, black pants, a bag of popped popcorn, and a sewing kit or hot glue gun.

Throw in a pair of tweezers or single-bristle brush to make it extra convincing.

Call for contributions

If there's one thing that can be said about the International Ocean Discovery Program (and the Integrated Ocean Drilling Program, and the Ocean Drilling Program, and the Deep Sea Drilling Program), it's that we are a tight-knit community. Just as much as this newsletter is for you, we want it to be from you, too! In future editions we will highlight our readers by featuring the following community contributions:

- From the Field Have you had an experience with scientific ocean drilling that you want to share? Write a piece to tell us your perspective "from the field" for our next edition. Bonus points if you include some pictures!
- **Scientist Spotlight** Do you know someone who's making waves in the ocean drilling scene, whether it's a grad student or accomplished scientist? Send us a nomination! Briefly tell us why this person deserves a shout-out, and ideally how to get in touch with them. Self-nominations are also accepted.
- **Photo Montage** We'll take any photos you want to share!
- **Creative COREner** Scientists are creators too! Send in your paintings, drawings, digital designs, poems, short stories, sculptures, or any other ocean science art you've made.

Send your contributions (and questions and concerns) to **mpincus@ldeo.columbia.edu** no later than October 20, 2023 to be featured in next month's newsletter.

See you next month!