



ZEN AND THE ART OF SCIENTIFIC OCEAN DRILLING

CREATIVELY SHOWCASING SUB-SEAFLOOR
RESEARCH TO THE PUBLIC

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Laura Guertin, Kevin Kurtz, Dana Montlack, Kellan Moss, Maryalice Yakutchik & Marlo Garnsworthy

Who am I?

MAYA PINCUS

- Earth Science teacher in NYC (2015 - 2022)
- Onboard Outreach Officer for Expeditions 391 and 397T
- Science communicator for the International Ocean Discovery Program



International Ocean Discovery Program (IODP)

drilling into the ocean
floor since 1961

*“The most successful science
program no one’s ever heard of!”*

CUSS I



*Glomar
Challenger*

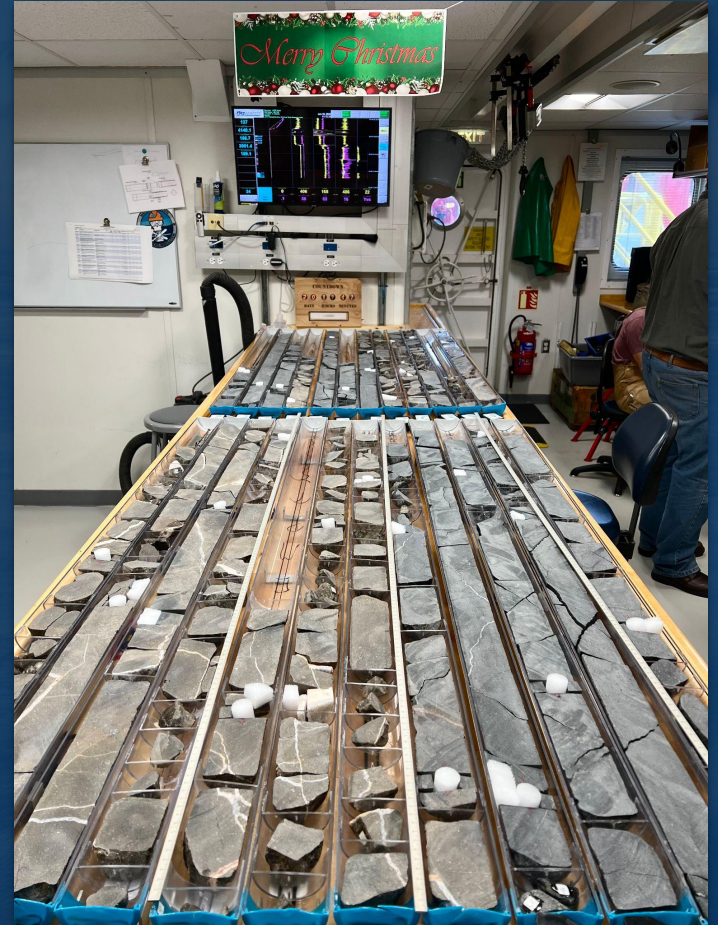
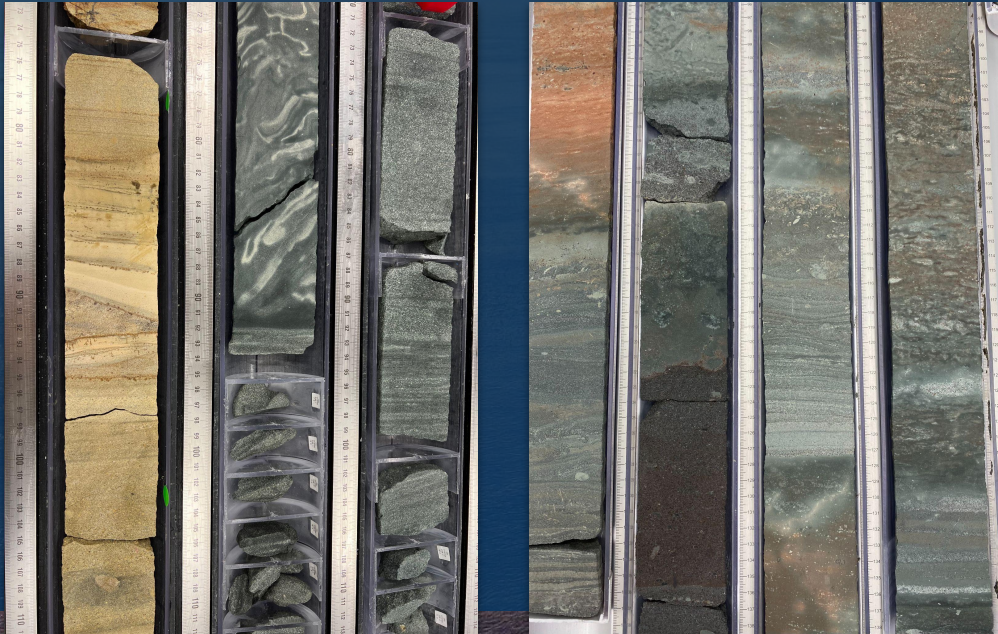


*JOIDES
Resolution*

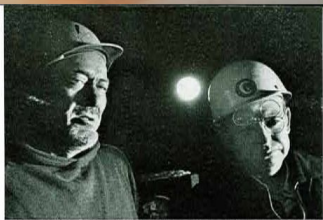


Collecting cores

Tubes of mud and rock from the ocean floor reveal secrets about climate change, natural disasters, and even the origins of life!



High Drama of Bold Thrust



AUTHOR STEINBECK AND PHOTOGRAPHER GORO ON DECK OF THE CUSS I

through Ocean Floor

EARTH'S SECOND LAYER IS TAPPED IN PRELUDE TO MOHOLE

Last week Project Mohole (LIFE, April 7) made scientific history when its drilling barge, CUSS I (whose name is made up of the initials of oil companies who developed it: Continental, Union, Shell and Superior), pierced 600 feet into the sea floor to get core samples of the earth's never-before-penetrated second layer. On board to describe the extraordinary operation for LIFE was novelist John Steinbeck, who is also an amateur oceanographer.

by JOHN STEINBECK

This is a short and casual log of CUSS I, the experimental drilling barge of Project Mohole. I am aboard because of a long-time interest in oceanography and some small experience in matters of the sea. I feel privileged and greatly excited.

CUSS I is a Navy barge redesigned to take sample cores from deep in the earth's surface under 12,000 feet of ocean. Our station is 44 miles east of Guadalupe and 220 miles south of San Diego. The sea bottom there is 11,700 feet beneath the surface. In a practice run we drilled a hole under 3,100 feet of water off La Jolla so we know it can be done.

CUSS I has the sleek race lines of an outhouse standing on a garbage scow. Actually it is an oil rig, straddle-legged over a hole cut through the middle of a barge 260 feet long and 48 feet wide. In addition to drilling

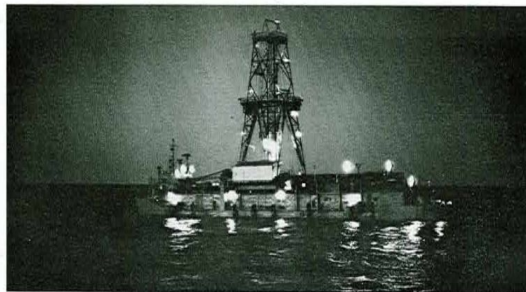
equipment, cores and diamond bits it is loaded with electronic equipment, much of it invented and designed for this project. But the most important and unique equipment we have is the group of men aboard, an elite and motley crew. The drilling men are the cream of a very special profession already trained in offshore oil drilling in shallow water. Then we have engineers of a dozen kinds, oceanographers, geologists, paleontologists, petrologists, geophysicists and seismologists. Our expedition should destroy the old and well loved error that doers and thinkers are different breeds—and about time too.

This is the opening move in a long-term plan of exploration of the unknown two thirds of our planet that lie under the sea. We know less about this area than we do about the moon. Therefore this log will concern itself with men and events rather than with scientific conclusions. Those will have to come later after analysis of what we find.

Thursday March 23—After five days in a San Diego shipyard refitting and taking on additional equipment, we sailed at 1:30 for our Guadalupe Station, a point in the Pacific Ocean described as 27° North latitude, 117° 30' West longitude.

Sailed is a status word for what we did. CUSS I waddled like a duck into the channel on its four gigantic Diesel outboard motors. Come to

STEINBECK CONTINUED ON PAGE 118



← WORKING THROUGH NIGHT, drillers adjust "kelly" which fits over drill pipe so it can be rotated. Man on high perch (top, center) affixes gauge to measure strain on pipe.

AGLOW WITH LIGHTS, CUSS I lies hove to off Guadalupe Island on Easter eve—a night when its drill was busy making its unprecedented thrust into earth's second layer.



LOCATION of CUSS operation is about 150 miles off west coast of Mexico's Lower California peninsula.

Onboard Outreach

Sharing the excitement of ocean drilling science with the public:

- Live ship-to-shore connections
- Blog posts
- Social media
- Educational resources
- ART!



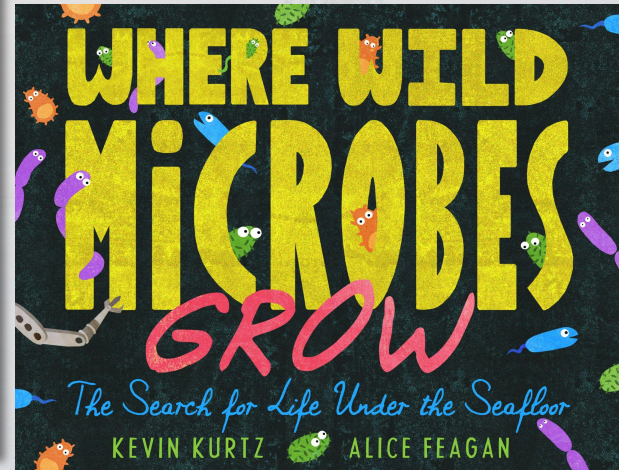
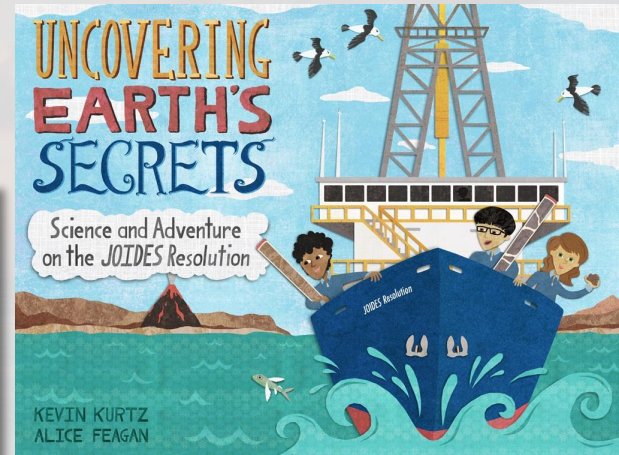
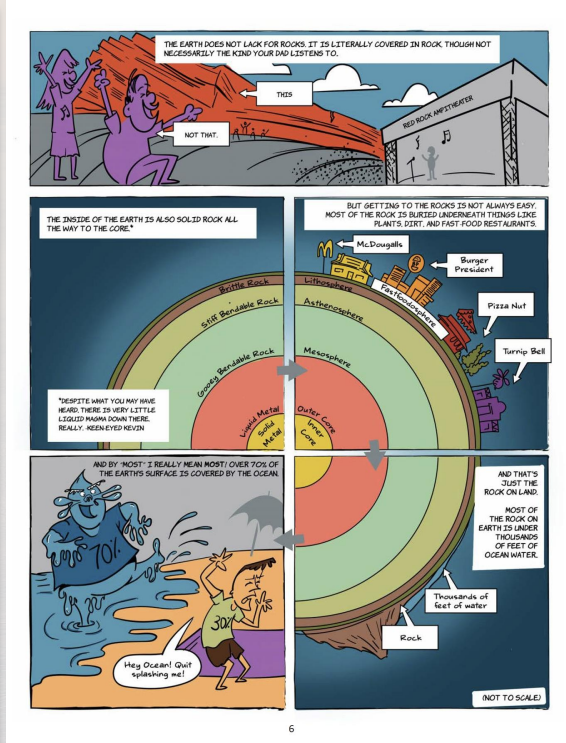
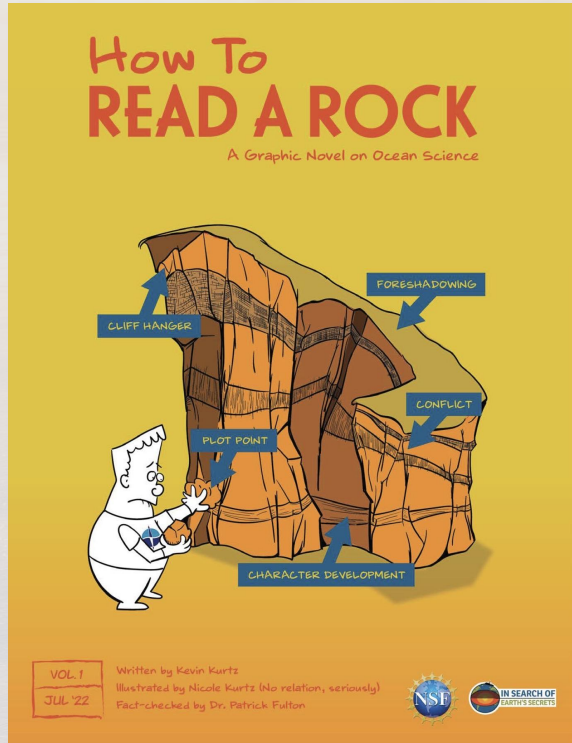
Laura Guertin

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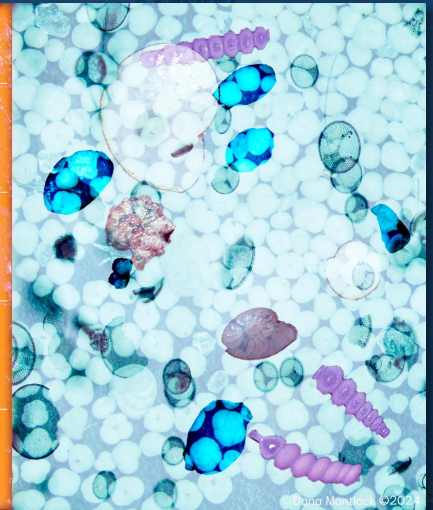
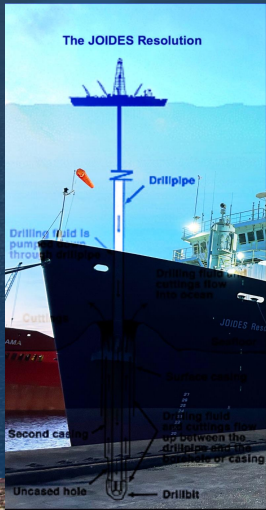
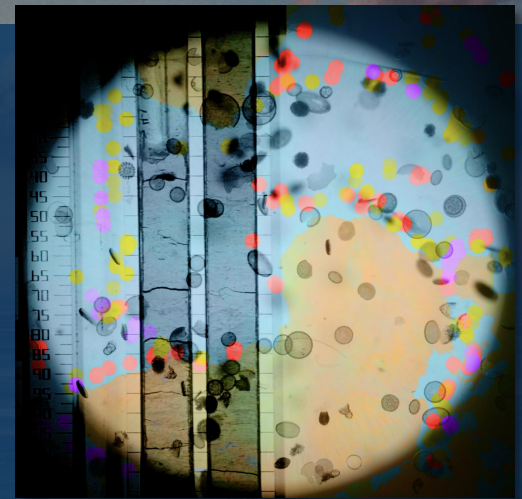


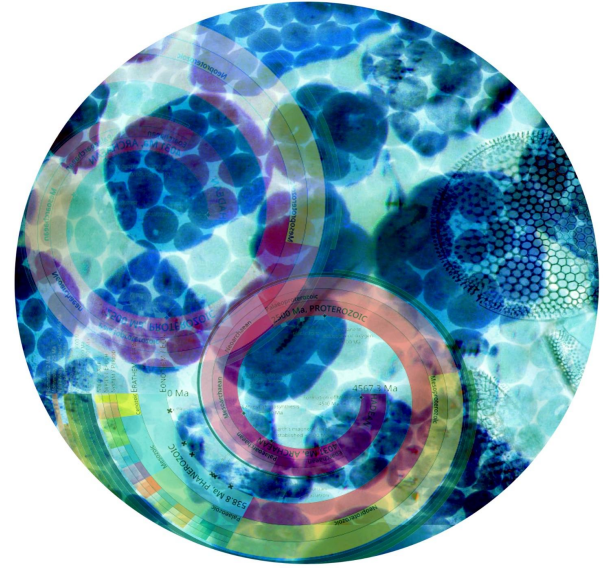
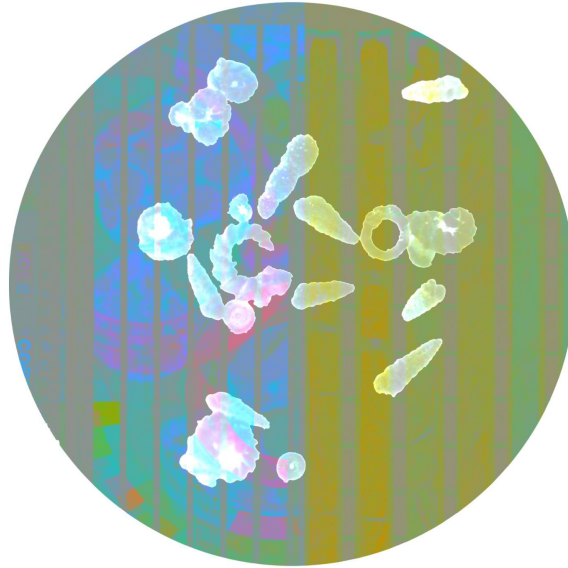
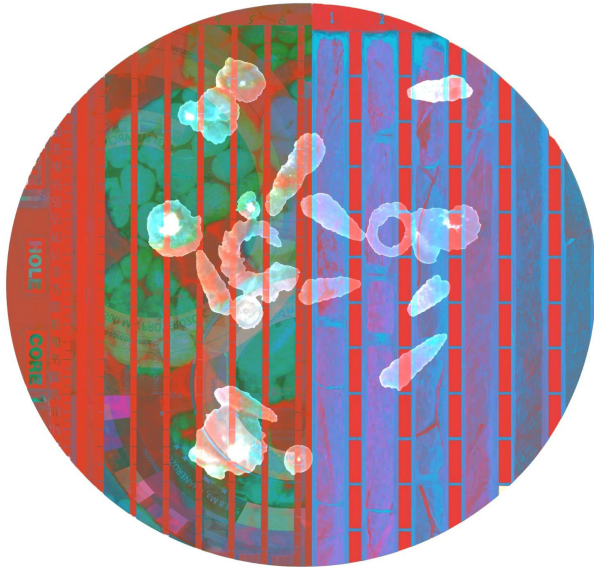


Kevin Kurtz (kevkurtz.com)



Dana Montlack

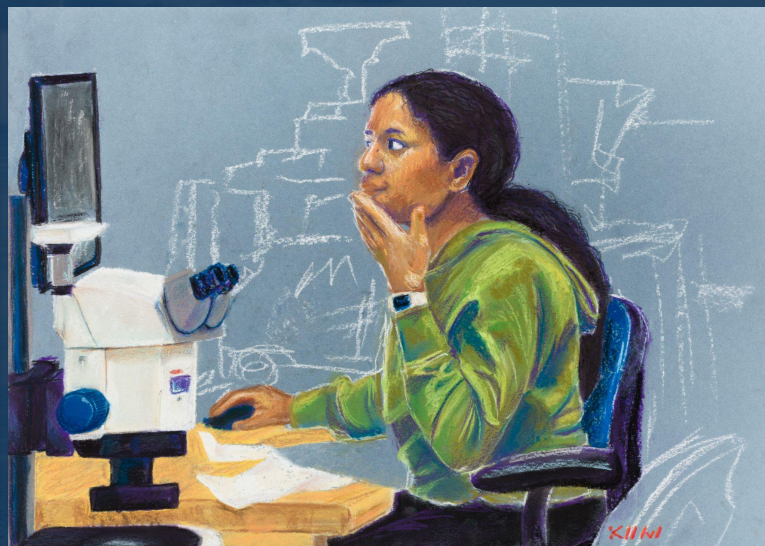




www.danamontlack.com

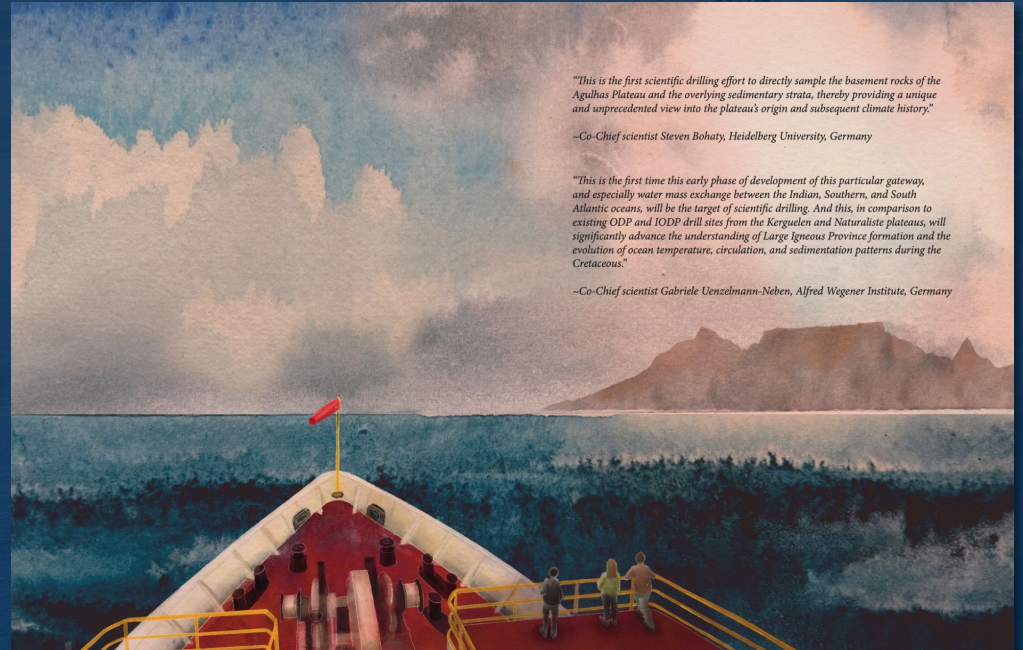
Kellan Moss





kellanmoss.com

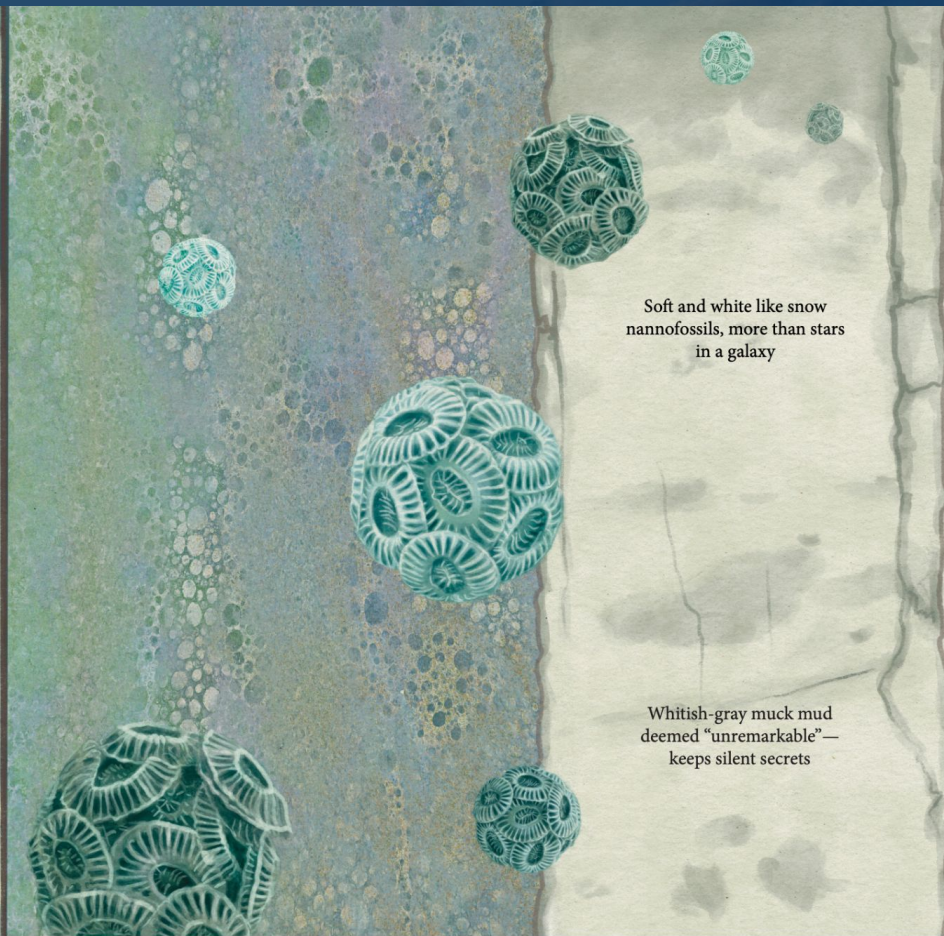
Maryalice Yakutchik & Marlo Garnsworthy



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There once was a chert
from Agulhas; fell into
our core to fool us.



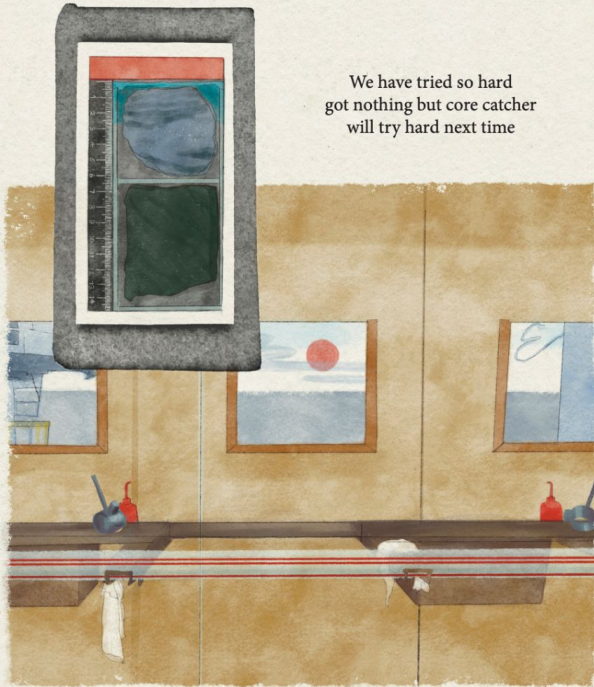
Soft and white like snow
nanofossils, more than stars
in a galaxy

Whitish-gray muck mud
deemed "unremarkable"—
keeps silent secrets

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We have tried so hard
got nothing but core catcher
will try hard next time

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The sorrow of an
empty liner – mocking our
attempts to advance.

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A great transition
From sediments to lava
Everything changes

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6

Creeping magma cooks
rocks black, green, red—who was hottest?
What may have been lost?

G
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From deep inside the earth
I rose to conquer the world—
and was stopped by chert!

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Thomas Ronge

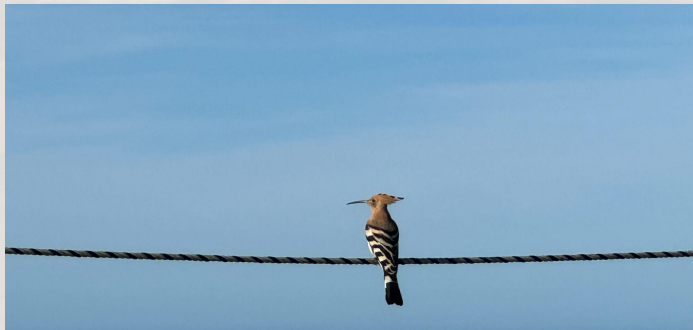


PHOTOGRAPHY

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Lisa Crowder



Tiffany Liao



Alan Baxter



DIVE DEEPER!

Free children's books and
educational activities:

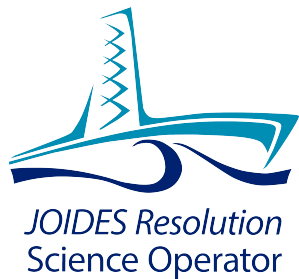
www.joidesresolution.org

Monthly digital newsletter:

<https://usoceandiscovery.org/newsletter>

Questions?

What more do you want to know about scientific ocean drilling lessons?



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