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1

Finding the Octopuses

MARCH 7, 1976: 300 meters off the Coast of San Carlos, Panama. It was the flashlight beam cutting through the dark, murky water that first caught the octopus's attention. The fine silt and mud particles drifting above did little to distort the light source. The beam revealed the jagged cracks and seams of the rocky outcropping where the octopus sat. Branches that previously blossomed with brilliant pink and orange coral polyps now hung limply against the stones. Strands of gray and brown algae clung to the branches as wisps of a once-thriving reef. Near the base of the oceanic graveyard was the octopus burrow, its yawning mouth caught briefly in the blinding beam. Behind this light, a dark figure floated, blurry and swaying with the current.

The octopus, half peering out of the small hole of its den, slowly unspooled an arm, sucker by sucker, flexing to taste the water above. The light between the dead corals shifted, creating a pattern of shine and shadow that slid over the animal. The combination of this light pattern and the octopus's banding of espresso-brown and pearl-white stripes camouflaged it among the rocks.

The octopus waited, watching.

After a few moments, when the figure did not move or swim away, the octopus slid a bit farther out of the den, keeping several arms adhered to the opening of its home. Instantly, the light was on the octopus. In response, the octopus darkened; its stripes and whorls of umber and white blended into a muddled sable. The optical illusion was revealed,

as for several minutes figure and octopus remained, the beam of light connecting them across the unknown sea.

Then the figure's legs kicked as it swam closer, its form growing, the light intensifying. A cloud of liquid darkness, like smoke, swirled upward as the octopus inked and squirted back into its den. In its shelter, the octopus expanded its arms into a web as it pushed itself against the back wall.

It waited.

The light intensified, uncovering every pockmark and niche in the walls of the burrow. The jagged edges of the rock poked out like fangs. Shadows on the floor lengthened and twisted as the light glided closer. Finally, the beam turned and shone fully into the den.

The octopus, a nexus of flesh and fluid, transformed itself, shedding the sickly pale coat for a muddy brown appearance. Its skin, initially smooth, wrinkled and puckered as it morphed into a rocky expansion of the wall. One moment, an octopus lived in this small burrow; the next, it seemed empty, inhabited by a phantom.

The light remained on the back wall as minutes trickled by. The only sounds were the dulled splashes and clicks and thuds of the sea. Suddenly, the light pulled away, and the den became dark once more. The octopus slowly peeled off the wall, its constellation of dots and stripes returning to its smoothing skin.

Outside the den, the light danced in the current, revealing another striped octopus on the rocky outcropping, this one gliding along the surface, three of its arms curled underneath, grasping a hidden prey. It jetted closer to the stones and, spotting the light, paled as it pulled itself to a stop and ducked beneath a small rock. After a couple of minutes, it poked an arm over the top of its hideout, waiting.

Then a third octopus popped its head out of a nearby den, it too watching the figure. Behind a small pile of cracked and empty scallop shells, a fourth willowy bundle of limbs appeared, a polka-dotted arm grabbing the top shell from the stack. As the shell jerked backward, the mound of debris toppled forward, revealing a small striped octopus carrying an ivory prize bigger than the size of its mantle.

The light beamed down on the four octopuses, an artificial moon in the nighttime sea. Without any warning, the light arced upward and was

gone. The octopuses watched the figure swim away, rippling the water as it kicked its large fins.

A breeze rustled the top of the sea as Panamanian diver and citizen scientist Arcadio Rodaniche surfaced. His flashlight waved wildly as he propelled toward the 15-foot-long Boston whaler, floating lazily nearby, its motor respectfully silent. From the sporadic flashes of light, the words “Smithsonian Tropical Research Institute” could be seen painted neatly on the side in stiff navy-blue letters. A diving officer at the institute and an artist by trade, Rodaniche had a passion for cephalopods and spent much of his free time, as on this spring evening, diving to observe their enigmatic habits.

Grasping the boat railing with one hand, Rodaniche pushed the oval-shaped diving mask onto his head. He rubbed his eyes, brushing away droplets of seawater. He pulled the double-hosed respirator out of his mouth, gulping in breaths of Panamanian air.

“Did I see what I think I did?” Rodaniche said to no one in particular. The boat was empty and he was alone; only the soft breeze whistled an answer. Reaching over the side of the boat, he released the flashlight, which clunked its way across the metal floor.

Rodaniche hoisted himself up on the railing and swung one leg over the side into the boat, his flipper flinging an arc of seawater toward the bow. Shuffling awkwardly, he disconnected his regulator with a satisfying pop. He unbuckled the straps of his oxygen tank and relaxed his shoulders, sliding the tank onto a metal bench at the back of the boat with a loud clank.

Rodaniche half fell onto the seat, leaning back against the tank. The flashlight on the boat floor revealed him to be young and tanned, with thick, almost black hair and similarly dark eyes. His jaw clenched as he released his fingers from the stranglehold of his wet gloves. His hands, thick and roughened from years of diving, seemed to have a mind of their own, moving as the man excitedly began talking to himself.

“It sure as hell looks like I might have stumbled upon what could be an octopus colony,” Rodaniche muttered, grinning.¹

The screws of the bench, rusted from years of seawater splashback, creaked rhythmically in the stillness of the night. The clanking of the oxygen tank added a soft percussion to the noise. Bending down, Rodaniche slid off his flippers, and then removed the soaked socks clinging desperately to his toes, before putting on a pair of cheap boat shoes, faded from years spent in the hot tropical sun. He stood up and walked toward the bow, deftly avoiding an open toolbox, its contents splattered across the floor of the whaler. One of its progeny, a metal screwdriver, was still wedged beneath the glass of another oval diving mask.

With a grunt, he snapped open one of the small plastic bins and pulled out a yellowing notebook—pages curled and crimped from repeated exposure to seawater—and a yellow pencil. After closing the bin, Rodaniche leaned over his new makeshift table. Opening the notebook, he quickly scanned the previous pages of scrawled lettering, dates that seemed to weave together to create a years-old tapestry of observations. While the writing knotted itself into hard-to-read words, Rodaniche’s eyes kept lingering over two words found over and over again, page after page.

Octopus colony.

The phrase was always accompanied by a question mark, squiggled uncertainly as if suggesting a forbidden concept. With one page-turning flourish, Rodaniche revealed the delicate pencil drawings of several small octopuses with pointy mantles covered in swirls of black and white. In one drawing, an octopus splayed out its arms like the spokes of a Ferris wheel, connected by a web that resembled star maps used by ancient astronomers. Next to this posed figure, another drawn octopus, this one with a more melon-shaped mantle, had scrunched itself into a flat-bottomed ball with two arms reared into a boxing position. At the top of both pages, in the same tangled scrawl, read “The Larger Pacific Striped Octopus.”

“This could possibly be the same octopus in the lab,” Rodaniche murmured, his fingers stroking the drawings. “Same colorings, same size.”

He fiddled with a few more pages, gently trying to separate one yellowed paper from another, cursing himself for the water droplets that locked the information into a fragile vice, only to be released by slow, deliberate work. The pages growled softly, making a tearing sound as he separated them. After freeing the following two pages, Rodaniche found himself at the end of the writing, a date indicating his last expedition.

March 1, 1976: Went out again to try to find the possible Larger Pacific Striped Octopus. That's what I'm calling them, for now. They don't have a scientific name yet, something that Voss is working on. If I can get him more information . . . Martin is encouraging me to continue looking for the colony to try to help validate what I'm seeing in the laboratory.

This octopus, it's something else . . . something . . . different. The fact that it lives in pairs, close together, suggests a possible octopus colony. But where? Surely someone should have spotted something by now. The animals mate constantly, in a weird, new way, by putting their beaks together. Something Martin said has never been seen. They fight a lot and lay multiple rounds of eggs without dying, also something that seems impossible for an octopus. Octopuses SHOULD die after laying eggs. Why doesn't this one? Why is it so different?

I've only been able to get these specimens from trawlers and fishermen. The specimens come from many different places, from estuaries to being inside the mouths of fish as future prey. The fishermen claim they find the octopuses in groups, but could there really be a colony?

I need to keep searching.

With a sigh, Rodaniche leaned his forearm over the page and began writing.

March 7, 1976: I've found a possible colony. They're about 9 meters down, with dens close together along this rocky outcropping. I got close to one in its den and it looks the same as the specimens at the Naos lab. It's around the size of my fist

*and has the red and brown stripes I would recognize anywhere.
Will return to the colony to look further.
This could be it.*

Tucking the pencil inside the notebook, Rodaniche placed it in the bin, closing the lid with a loud snap. His feet squelching in the stillness of the night, he then returned to his oxygen tank on the bench. He squatted and squinted over the glass dial, tapping it with his thumbnail. Satisfied, he stood, and with a grunt, hoisted the tank back onto his weather-beaten shoulders. After sliding back into his flippers and putting on his gloves, Rodaniche shuffled to the back of the boat. He swung one leg over the edge and then the other, sitting uncomfortably on the metal railing for a moment, his arms held upright. He looked up at the moon and sighed, smiling to himself.

“This could be it,” he repeated softly before sliding his diving mask over his excited eyes and shoving the respirator back into his mouth.

He then dropped into the dark water with a splash. The whaler was quiet once again. What Rodaniche couldn’t know at the time was that he had not just stumbled across a grouping of unusual octopuses, but he had also found something that would help reshape our understanding of these remarkable animals forever.

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