

A Cruise
Galley Gallery

Porthole **Cruise**

02.2024

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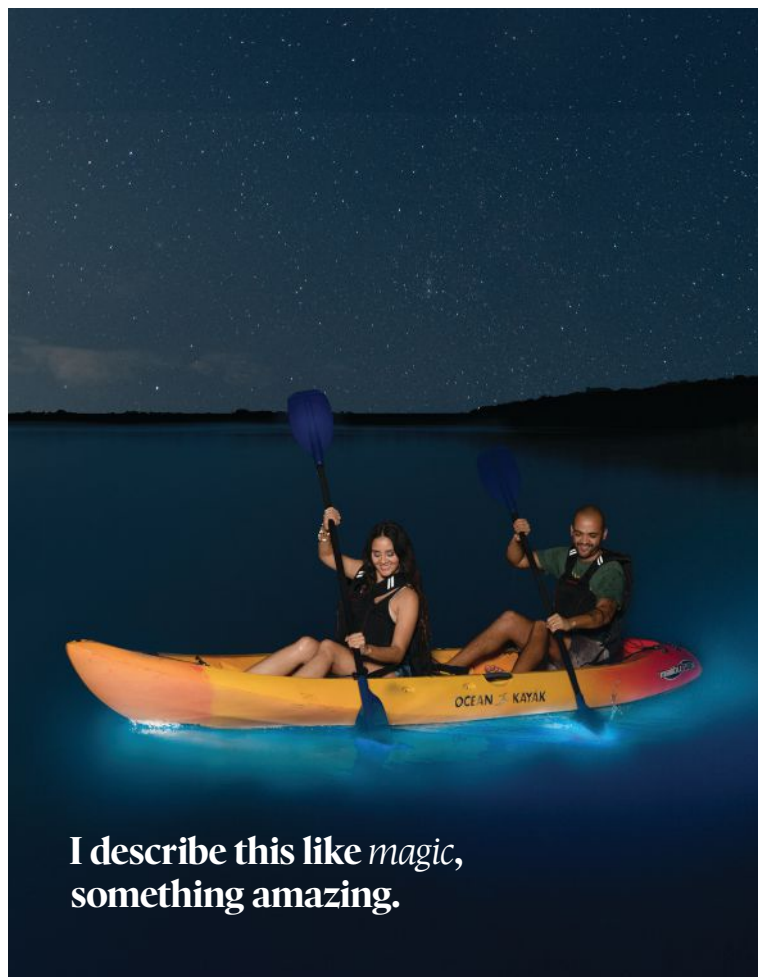
**CYCLING
THE DANUBE...**
for bike newbies

Like Swimming Through a Galaxy

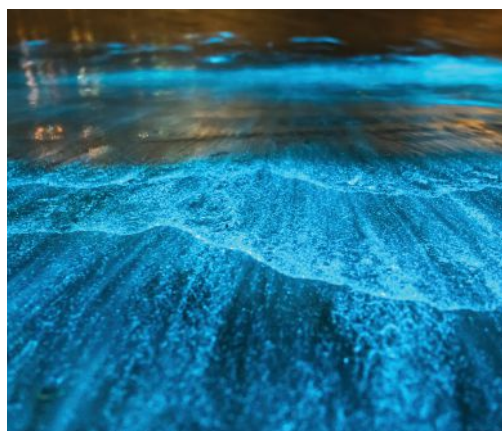
In Puerto Rico's bioluminescent bays, you could be seeing "stars" in the water.

By Richard Varr

Artem Mchedzev - stock.adobe.com



I describe this like *magic*, something amazing.



Left: iStockphoto; Omar Reyes; Discover Puerto Rico; Gary - iStockphoto.com
Right: iStockphoto - iStockphoto.com

I have the perfect view of a densely speckled starlit sky.

I'm floating on my back an hour or so after sunset in warm Caribbean waters as darkness envelops this quiet bay along Puerto Rico's southwestern coast. I can barely discern the surrounding shoreline, only faintly illuminated by the soft glow of lights from a nearby fishing village. But as I start to swim, I'm now seeing stars of sorts in the water — with each stroke, flashes of light illuminate my legs with an eerie blue-green hue. Specks of light drip down as I raise my arms out of the bay.

"I describe this like magic, something

amazing," says Javier Mendoza with Parguera Water Sports. "It's incredible how these microscopic algae can do what they do."

Mendoza is our catamaran captain on this nighttime kayaking and swimming tour of La Parguera Bioluminescent Bay, one of the three such spectacular natural wonders in Puerto Rico. "One of the most amazing personal experiences is meeting so many people from different parts of the world," he tells me. "They come to La Parguera to enjoy what I have in my backyard."

If my first time swimming with these glowing organisms — dinoflagellates, they're called — isn't perfect

enough, my experience instantly becomes more thrilling when a flash of light streaks across the heavens. A shooting star illuminates the bay around us for maybe a second or two.

"Whoa. That was a blessing," Mendoza marvels.

BRIGHT BIOLOGY

Bioluminescence is a worldwide phenomenon. Some fish, jellyfish, and other creatures deep in the oceans add a flicker of light to abject darkness. On land, fireflies add a glow to twilight pastures and forests. The dinoflagellates in bioluminescent bays and lagoons, however, are only single-celled microor-

ganisms. They're a kind of plankton, also known as "protists," with two hair-like appendages called "flagella" that they use to whip themselves through the water.

"In simple scientific terms, these organisms contain chemicals, a protein and an enzyme, and whenever agitated create a chemical reaction that you can actually observe," explains Ashley Perez, an environmental specialist with Kayaking Puerto Rico, which offers nighttime excursions on Laguna Grande, a bioluminescent lagoon on the island's eastern shoreline. "They produce chemicals that have a blue-greenish hue you can see if there are a lot of them in the water."

And why do they light up? Mostly to distract predators. "Whenever they glow, predators usually get startled by the light," says Perez.

"Bio bays are very magical places," she continues. "There's a lot of bioluminescence in the ocean, but a lot of it occurs below 600 feet. So these are rare opportunities when the organisms inhabit shallow environments that you can actually go to and observe them." In fact, such ecosystems only occur in warm water bays and lagoons with narrow openings as they're mostly closed off to the sea. Trapped within the bays, dinoflagellate concentrations thus increase.

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EVENING OF WONDERS

The number of such bodies of water worldwide varies according to different sources, from only several to a few dozen. But it's no small wonder that Puerto Rico has three of them — La Parguera located in Lajas, Laguna Grande in Fajardo, and Mosquito Bay along the island of Vieques' southern coast.

Mosquito Bay is noted as having the highest concentration of dinoflagellates. "It's the titleholder in the Guinness Book of World Records as the brightest

bay in the world," says Yordi Siverio, the operations manager with Black Beard Sports, which offers nighttime kayaking excursions there. "It's something that can easily be described as out of this world, like having a lot of fairy dust or magic glow dust going through your fingers when you run your hands in the water."

Bioluminescent brightness can fluctuate through the year as microorganism concentrations vary, influenced by such factors as weather and rainfall. Not surprisingly, moonlight can greatly thwart the ability to see the glow, so tour operators usually avoid bio bay activities within a day

or two of a full moon. Chemicals and lotions including bug sprays, perfumes, moisturizers, and sunscreen can increase pollution and decrease the number of dinoflagellates. Thus, swimming is prohibited at Laguna Grande and Mosquito Bay, and instead visitors kayak or tour on glass-bottom boats. Only La Parguera allows swimming.

La Parguera is convenient to visit if staying in Rincón or Ponce, while Laguna Grande is the closest bioluminescent wonder to the tourist hub of San Juan. Getting to Mosquito Bay on Vieques, however, involves a ferry ride or commuter flight from the main island. When visiting these bio

bays, tour operators urge visitors to leave the cameras and cell phones behind, since most cannot adequately capture the dim glow.

"The bay is best enjoyed by seeing it through your eyes and not through a screen," insists Siverio.

"Visitors are always surprised, maybe a little bit timid the first time they put their hands in the water, but they get super excited."

"It's like seeing stars in the water" is how Dalissa Zeda, Discover Puerto Rico's digital marketing director, describes it. "Like swimming through a galaxy." Yes, maybe like a bit of the heavens on Earth. ●

