

San Francisco Bay conservation 2.0

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If I were to tell you one thing about the nature of the San Francisco Bay, it is this: The bay is strange. And it is getting stranger.

Get used to it, says Emma Marris. Not only that, she says: Embrace it. Celebrate it. Help create this new bay nature. Call it Bay Nature 2.0.

Marris is a whip-smart writer for the prestigious science journal *Nature* and the author of a new book, "Rambunctious Garden: Saving Nature in a Post-Wild World," which is turning the conservation movement upside down.

Rather than struggling to restore nature to some impossible historical ideal, she says, we should work with the mixed-up world we've got to try to make it better. Rather than fighting invasive species, we ought to learn to live with them as part of the mix. Rather than fighting rearguard battles to preserve nature in ever-smaller enclaves, we need to go on the offensive and create beachheads for new forms of conservation everywhere.

A vivacious young redhead, mother of one with another child on the way and her first book out in between, Marris is already being compared to the greatest environmental writers and thinkers of the past century, Rachel Carson and Aldo Leopold.

In "Rambunctious Garden," Marris visits cutting-edge scientists and conservationists working on what she calls "novel" and "designer" ecosystems around the world.

Marris recently visited San Francisco to explore some of the surprising new natures that we are creating around the bay. After a day of trekking with me around our wetlands, marshes, beaches and headlands, Marris concluded that the Bay Area is leading the world toward what Stewart Brand, in his endorsement of the ideas in her book, calls "reality-based ecology at its best."

When Marris came to San Francisco, our first stop was the Bay Conservation and Development Commission, where Executive Director Will Travis met with us in a conference room with an expansive view of the San Francisco waterfront and the sun rising over the glistening bay beyond.

A blue rectangular advertisement. At the top, the text "Was Free. Is Free. Will Be Free." is written in a bold, orange, sans-serif font. Below the text is the Pacific Service Credit Union logo, which consists of a stylized white house icon with a sunburst pattern inside, followed by the text "PACIFIC SERVICE CREDIT UNION" in white, uppercase letters.

"If you look around the bay, there's hardly anything natural," Travis said as we chatted about how the movement to save the bay, which created the commission, has evolved. "We can't go back," he added. "We have to try to figure out what we want and design for it."

That, of course, was music to Marris' ears, especially coming from the head of an agency that is shaping the future of the bay. As we crossed the bay to visit Eden Landing, one of the enormous salt pond restoration projects in progress in the South Bay, Marris remarked that the Bay Area seems "optimistic and forward-looking" in contrast to much of the doom-and-gloom rhetoric of modern environmentalism.

Peter Kareiva, chief scientist for the Nature Conservancy, has said as much of Marris herself. "She shows conservation a way out of its sullen addiction to the parable of relentless decline," he said. Marris has a "lively" vision of nature "poking itself rambunctiously into every human habitat and finding ways to run free in those rare places where humans do not step quite so heavily."

As we looked over a huge barren expanse of salty ground at Eden Landing, where industry heavily shaped the margins of the bay for more than a century, John Bourgeois, who manages the restoration efforts for the California Coastal Conservancy, smiled as he told Marris: "Your chapter on designer ecosystems is precisely what we're doing on big parts of this."

In the distance, a huge earthmover clawed away at a levee to let the bay back in. "This is obviously an altered landscape," Bourgeois said. "It doesn't look like anything in nature."

Some critics have scoffed at this "Disneyland of restoration," where Bourgeois said he is trying to "engineer wildlife habitat."

"It's a big gamble," Marris said.

"It's a gamble to do nothing," Bourgeois replied as sandpipers and black-necked stilts pecked around in the muddy bottom of a pond that had been breached and opened to the tides, watched over by a great blue heron.

Later in the afternoon, and a little farther north in San Leandro Bay, Robin Grossinger, a historical ecologist with the San Francisco Estuary Institute, showed us an example of what Marris in her book calls a "novel ecosystem," where clapper rails, an endangered species, nest happily in great patches of an invasive species of marsh grass growing on a mound of debris dumped in the bay more than a century ago from mining upstream.

Grossinger recounted the history of the creation of the bay as the sea level rose over the past several thousand years and covered what used to be a valley between the East Bay and the Peninsula. Marris marveled: "That means there is no pre-human bay." Indeed, people have lived by and shaped the bay's nature as long as it has existed.

Grossinger works with historical maps and documents to uncover ecosystems that existed here in the past. Nearby, Grossinger used historical maps to guide the re-creation of a historical wetland. But he believes we must use history in creative ways. "It's like a palette," he said.

As the sun set behind the headlands west of Richardson Bay later in the day, we stepped off a boat onto a brand-new blank canvas, a beach created by a team of engineers working with the Audubon Society on Aramburu Island. The island itself was created when a developer leveled a hillside and pushed the dirt into the bay.

What might have remained as a sorry reminder of the bad old days when the bay was a dumping ground became, instead, a site that "had the potential to be something better," said Graham Chisholm, Audubon's state director. Engineers brought in tons of rock, sand and fragments of oyster shells to construct a beach, one of the rarest features around the bay these days, oriented precisely to be shaped by wind and waves.

"It's a fake beach," Marris grinned. "We prefer faux," joked Brooke Langston, director of Audubon's Richardson Bay Sanctuary.

"Does it become real over time?" Marris mused.

"It depends on what's real," Langston replied. "It will be what the waves want it to be."

What the waves and the people who work with them want it to be, I thought as we docked and night fell again on an ever-changing San Francisco Bay.

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Jon Christensen is executive director of the Bill Lane Center for the American West at Stanford University. Send your feedback to us through our online form at sfgate.com/chronicle/submissions/#1

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