Romberg scientist leads group hoping to preserve Blackie’s Pasture shoreline

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Amid growing concern about sea-level rise due to climate change, a scientist from the Romberg Tiburon Center for Environmental Studies has a plan to prevent tidal action from damaging the Blackie’s Pasture shoreline.

Katharyn Boyer, a marine biologist and coastal ecologist, heads a collaborative team that wants to protect the existing marsh and shoreline using gravel, sand and a rare marsh shrub called California seablite.

The marsh along the Blackie’s Pasture shoreline and up the creek a distance serves as a shelter and nesting habitat for birds and other marsh wildlife species. Richardson Bay is also a key stopover in the Pacific Flyway, a migratory course for birds who fly between the Arctic and the tip of South America twice a year.

Seablite is a shrub that grows in the higher elevations of marshes but is so rare in San Francisco Bay that it’s considered extinct, Boyer said.

By introducing it to Blackie’s Pasture, she and her team hope it will thrive and grow as high as 3 feet tall, curbing erosion by trapping sediment and providing a refuge to animals that need to escape the water when the tide is high.

Even at 3 feet tall, the seablite will not block views from nearby homes, as the marsh sits well below the high point of the bank, she said. Boyer said the project would not disrupt water birds because the group won’t be working in areas where birds nest.

“The shoreline is eroding,” Boyer said. “It’s going to erode more over time. If nothing is done, the erosion process will go faster. We use habitat restoration as a means of shoreline protection. … We call it a living shoreline.”

The project team includes John Takekawa of Richardson Bay Audubon Center and Sanctuary; Julie Beagle of the San Francisco Estuary Institute and Aquatic Science Center; Peter Baye, a coastal ecologist and private consultant; and coastal engineer Roger Leventhal. Boyer said Leventhal has extensive experience in designing restoration projects.

“We’re bringing together the physical and biological expertise necessary to do the project,” Boyer said.

She said the Coastal Conservancy has given the group a $200,000 grant to cover the cost of the conceptual design for the placement of the gravel and sand, which they call “coarse material,” along the shoreline.

As the seablite grows, wooden stakes and eucalyptus branches will be anchored into the substrate to give the plant a structure to climb. The plan is to start planting the seablite in February.

They’re hoping additional funding will come from the San Francisco Bay Restoration Authority, which allocates funds for wetlands and wildlife habitat restoration and protection. The authority is primarily funded through proceeds of Measure AA, a $12 parcel tax approved by Bay Area voters in 2016. Measure AA will raise $25 million annually.

Romberg is expected to submit a formal proposal to the authority in September.

Boyer is hopeful the project will make the cut. She estimated design and implementation of the project, followed by biological and physical monitoring, would probably run a few million dollars. The project also has yet to secure all of its regulatory permits, although it does have the required permit from the California Department of Fish and Wildlife.

The project will have to be reviewed by the Tiburon Parks, Open Space and Trails Commission and will need an encroachment permit from the town’s Public Works Department, according to Tiburon Community Development Director Scott Anderson.

“The town is supportive of habitat restoration efforts in Richardson Bay, especially in collaborations with our local scientists at the Romberg Tiburon Center,” Anderson said. “We are excited that the bay margin near Blackie’s Pasture is being considered for such a worthy project.”

Audubon, which owns the waters of the Richardson Bay Audubon Center and Sanctuary, not only supports the project but is offering volunteers from its youth leadership program a chance to participate by helping to remove non-native ice plant and monitor the growth of the seablite.

For Boyer, living shorelines are a passion.

“A place like the San Francisco Bay is a very rich environment for me to work in,” she said. “There are so many human-caused problems and so many solutions to fix them. This is pioneering. It’s the kind of restoration that has not been done much.”

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