

Assessing the Population Genetics of an Invasive Colonial Tunicate

Sarila Young, San Francisco State University

The invasive colonial tunicate (*Didemnum vexillum*)—known as “Dvex”—is a marine invertebrate that has rapidly outcompeted other native species around the world. Since Dvex was first discovered in the San Francisco Bay 30 years ago, it has continued to establish itself within local estuaries, marinas, and turbulent rocky intertidal zones. This includes areas within Point Reyes National Seashore. While it has long been established that genetic diversity can contribute to the success of a species, researcher Sarila Young from San Francisco State University is curious how environment conditions—water temperature and salinity—shape the genetic structure of Dvex populations. Young’s research will compare the genetic differences between Dvex populations—in the outer coast, Point Reyes, and the San Francisco Bay—and assess the relationship between these differences and variability in environmental conditions. In doing so, Young’s work will evaluate the potential spread of Dvex and will allow park managers to make informed decisions for future projects and removal practices.

“With this project, I hope to further explore how the environment affects marine organisms, especially in the face of a changing climate. It is truly an honor to be a recipient of this grant and to receive such amazing support, encouraging me to continue my conservation work.”

– Sarila Young,
San Francisco State
University



Graduate students Sarila Young (L) and Cassie Vaniotis (R) – from the Cohen Lab at San Francisco State University – on a trip to look for Dvex. Lab sample of invasive colonial tunicate (*Didemnum vexillum*) growing on eelgrass (*Zostera marina*).

