



DIRTY BOTTOMS: ROV OBSERVATIONS OF MARINE DEBRIS

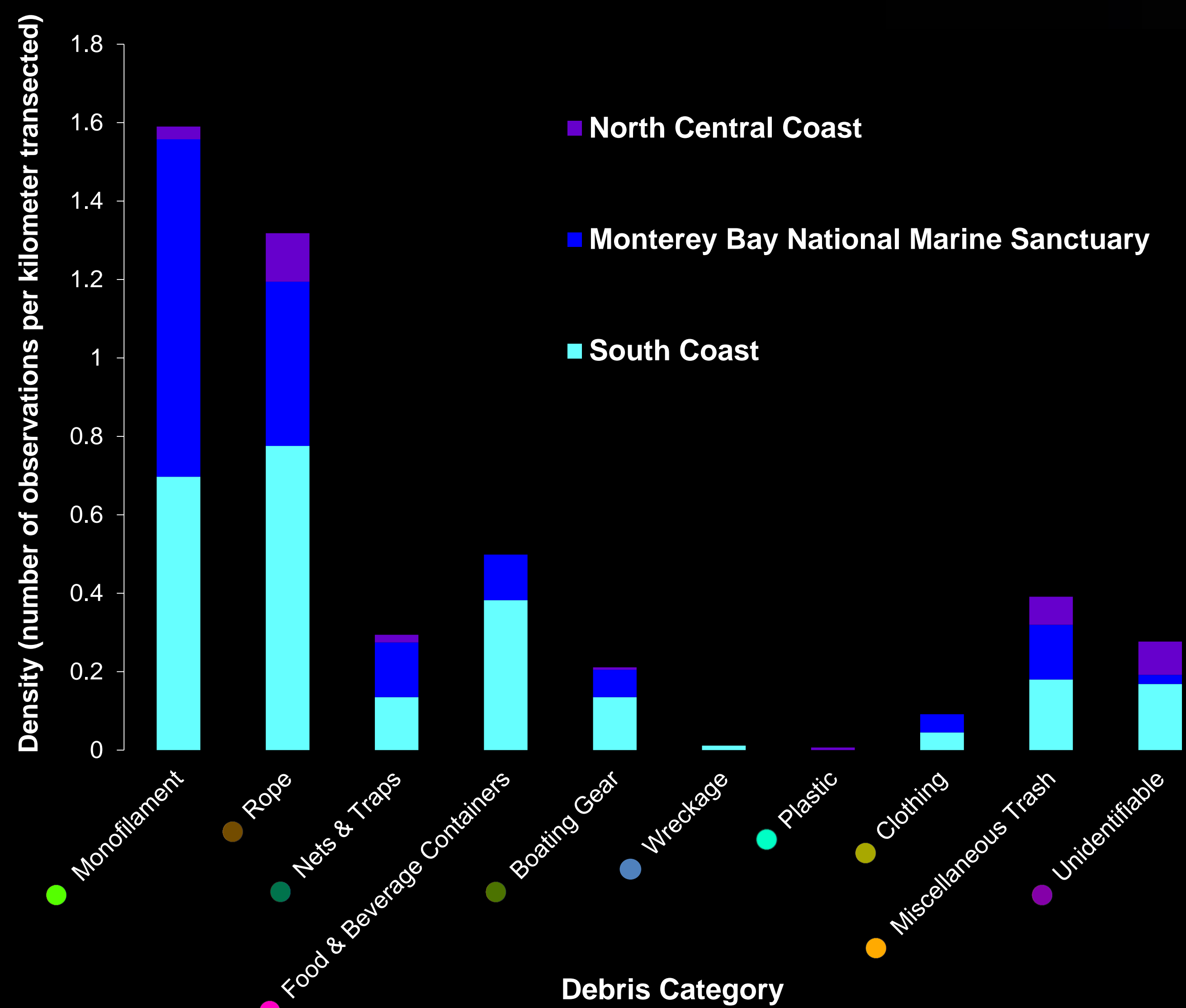
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The Institute for Applied Marine Ecology (IfAME) conducts ROV surveys of the deep subtidal as part of several ongoing ecosystem characterization projects. Since 2009, IfAME has collected thousands of photographs of the seafloor from a variety of study regions off the coast of California. Though generally not a formal part of the sampling programs, geo-referenced observations of marine debris depict a distribution that transcends all sites (Point Arena to La Jolla), depths (15 to 450 m), and habitats surveyed. Level of anthropogenic activity and seafloor bathymetry appear to be more important predictors of debris distribution than legal protection status.

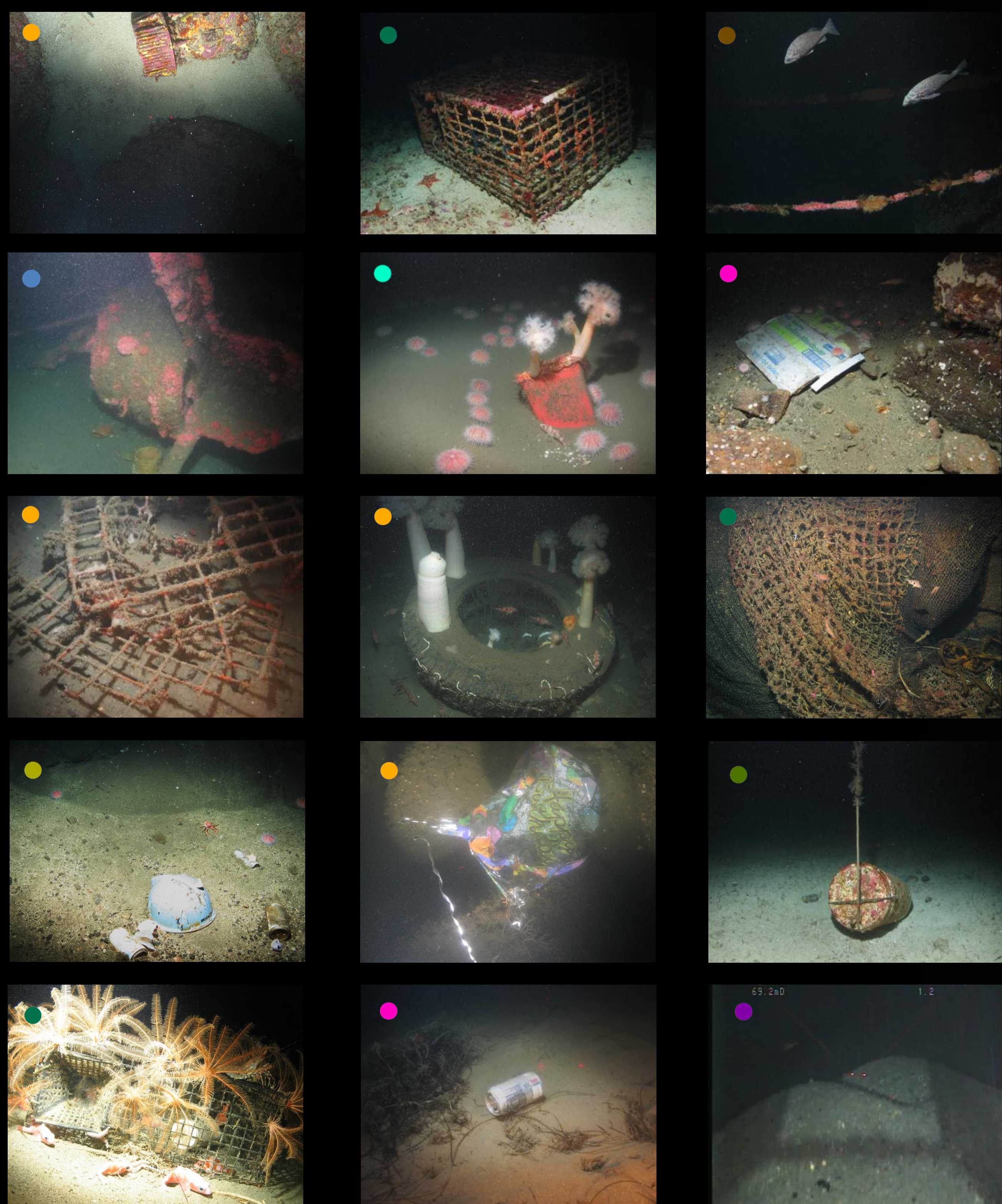
Debris distribution transcends all sites, depths, and habitats surveyed

Debris occurs in areas of high human use, irrespective of legal protection status. Submerged landforms such as canyons appear to serve as collection points for debris.

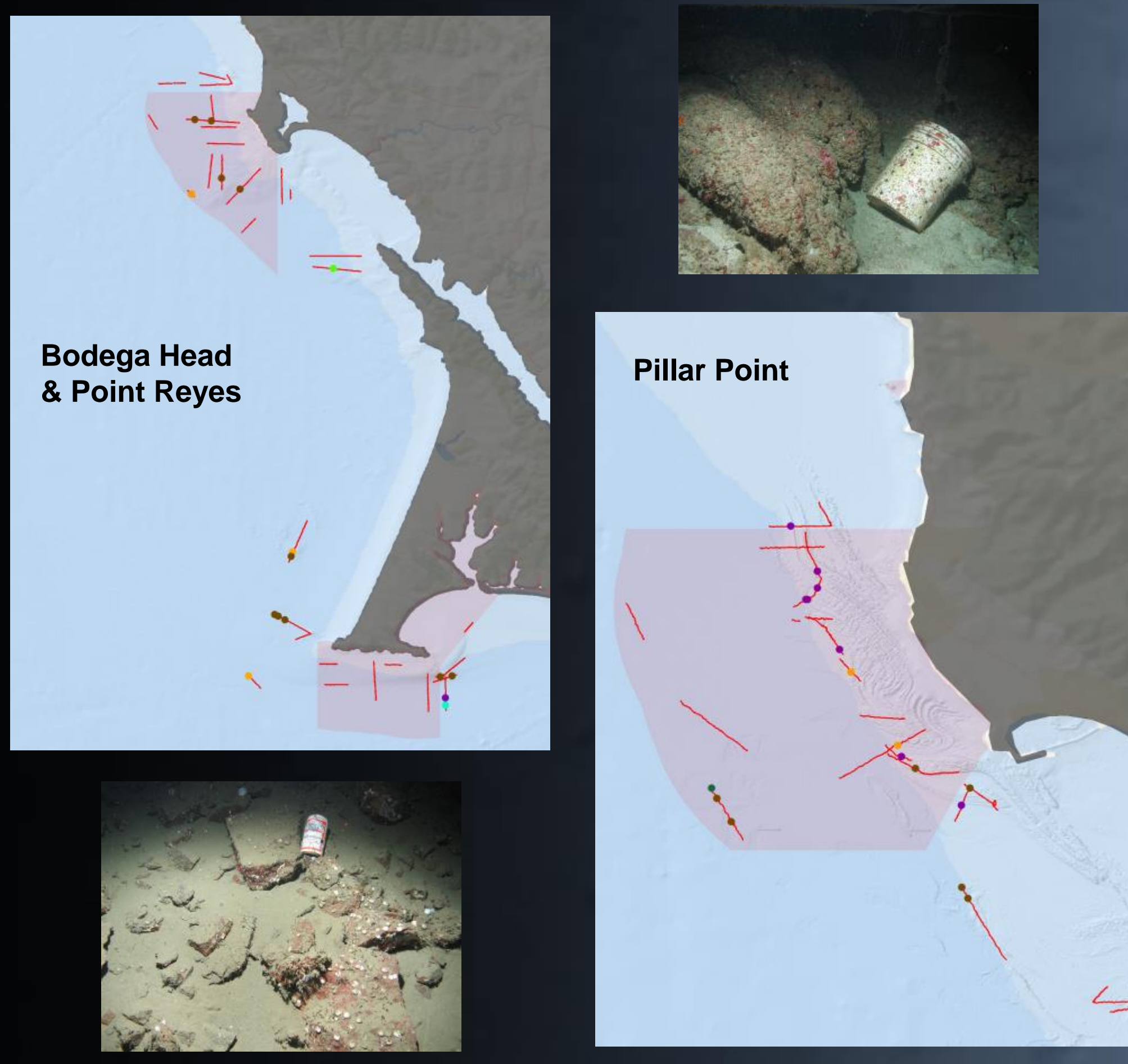
Type and amount of debris varies by site



ROV imagery depicts a wide variety of debris, including boating and diving gear, fishing nets, traps, food and beverage containers, and wreckage. Rope and monofilament line were the most commonly observed debris items to date, with both of these items occurring throughout all surveyed areas. Recently deposited debris was generally devoid of marine life, while long-submerged debris provided habitat structure for a variety of fishes and invertebrates.



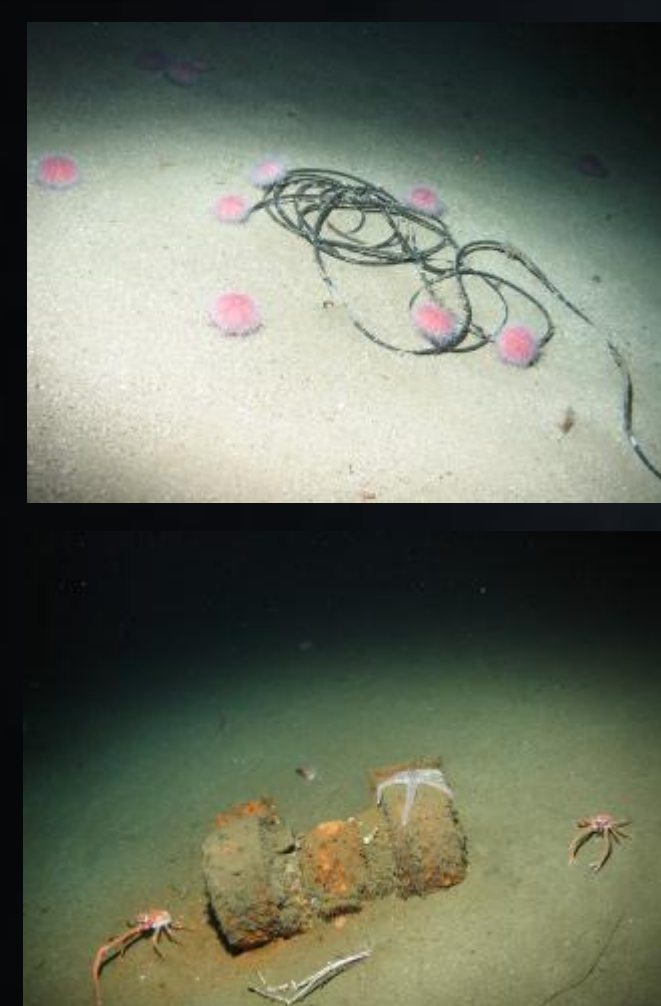
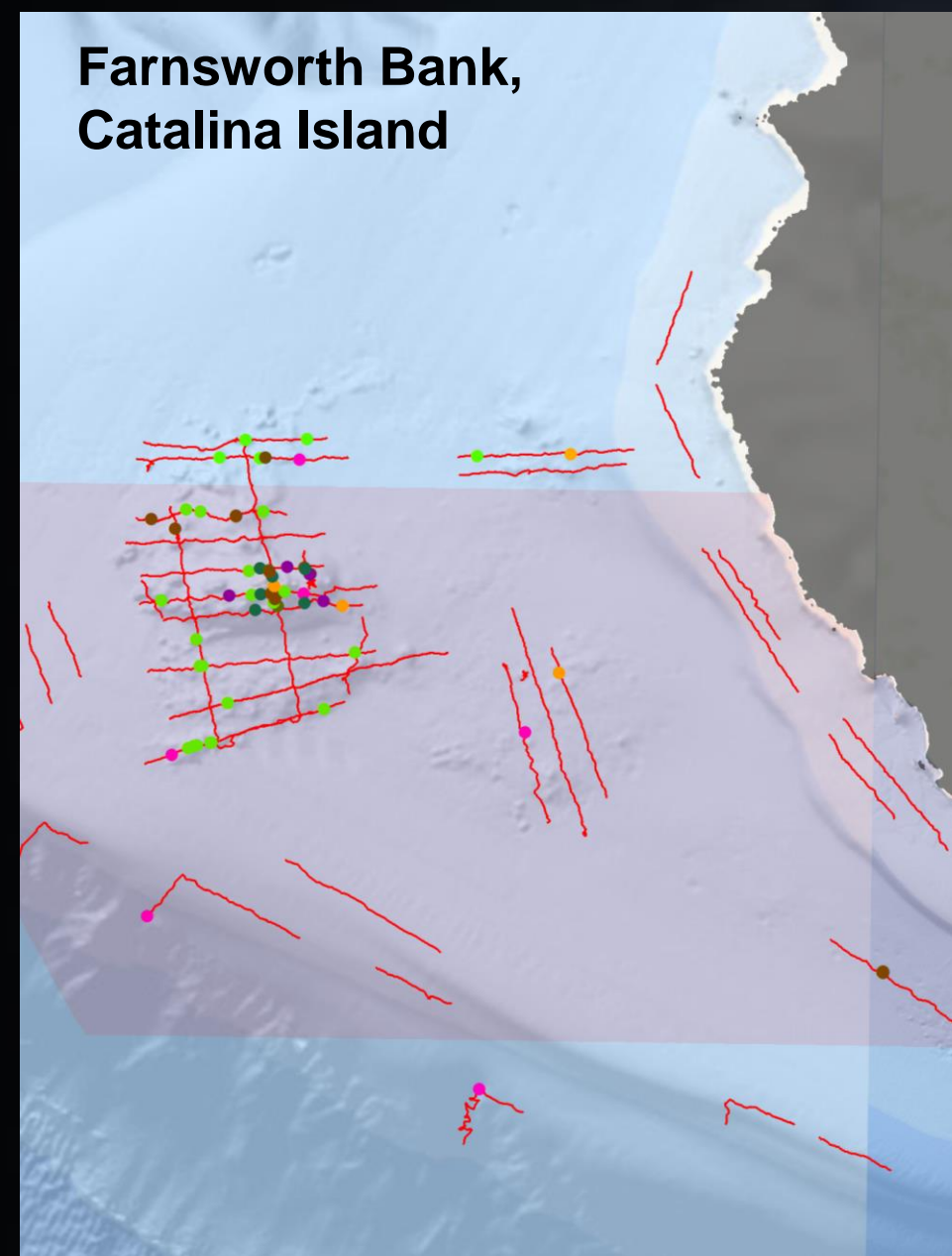
Trash is found both inside and outside marine protected areas



Areas with high human use are trashier

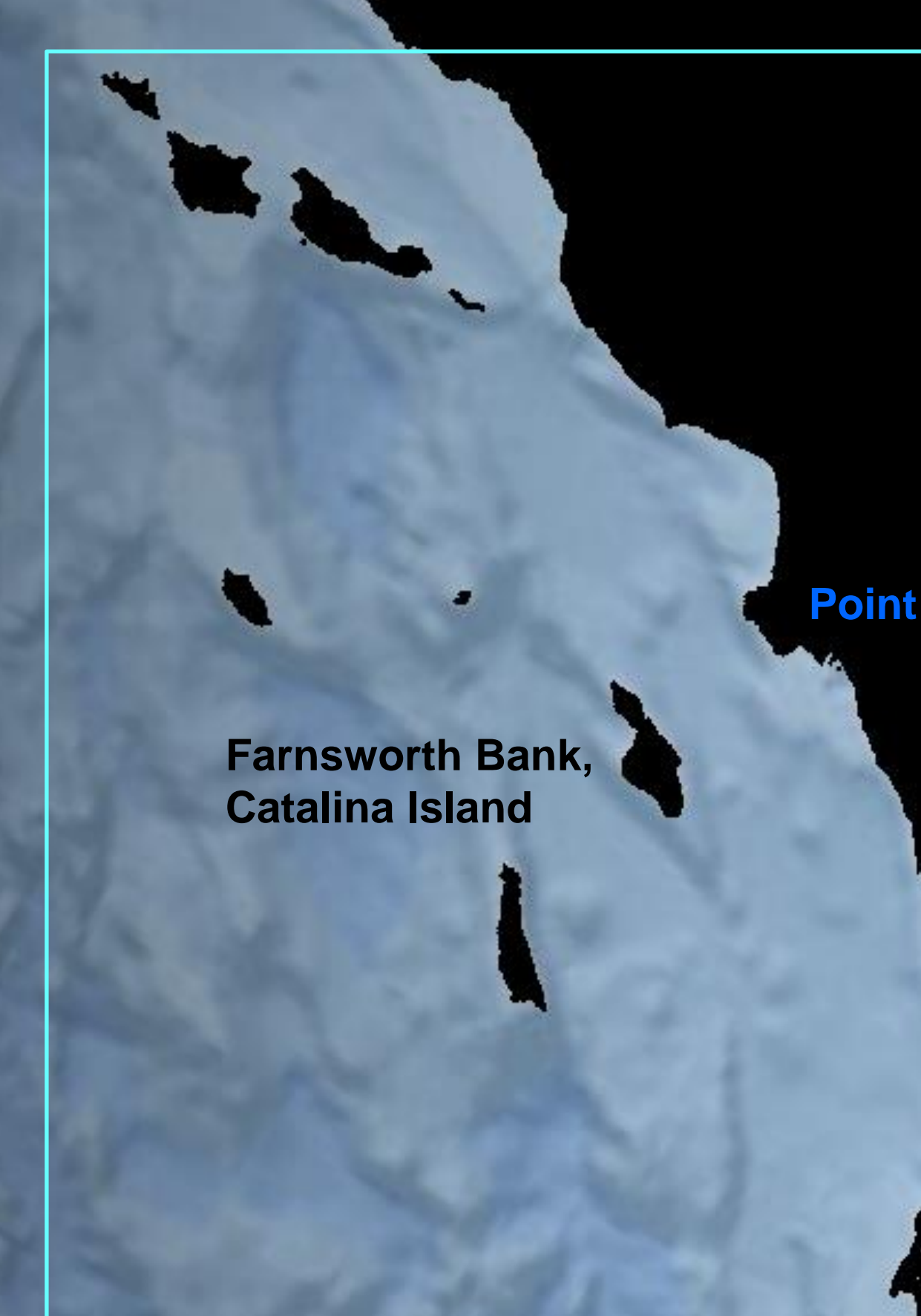
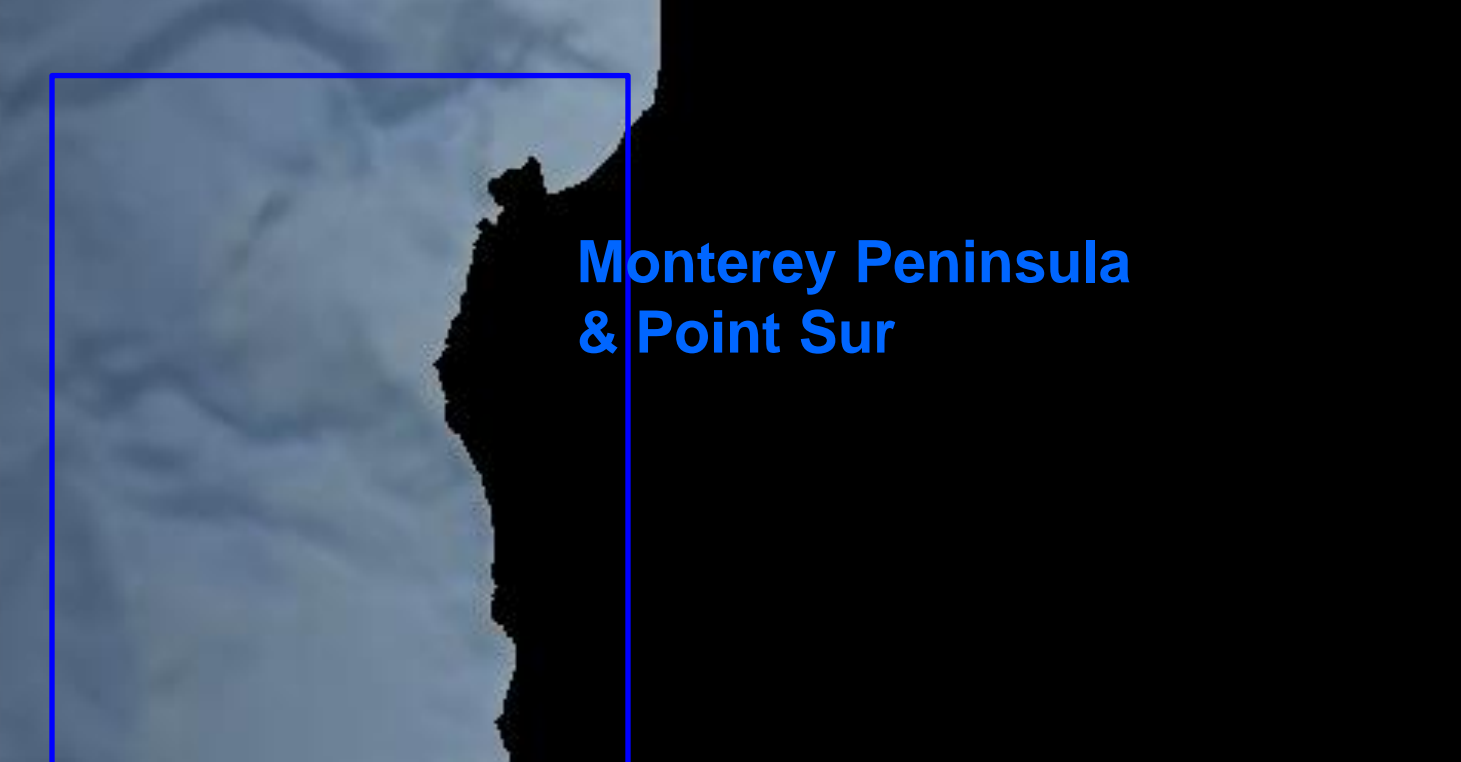
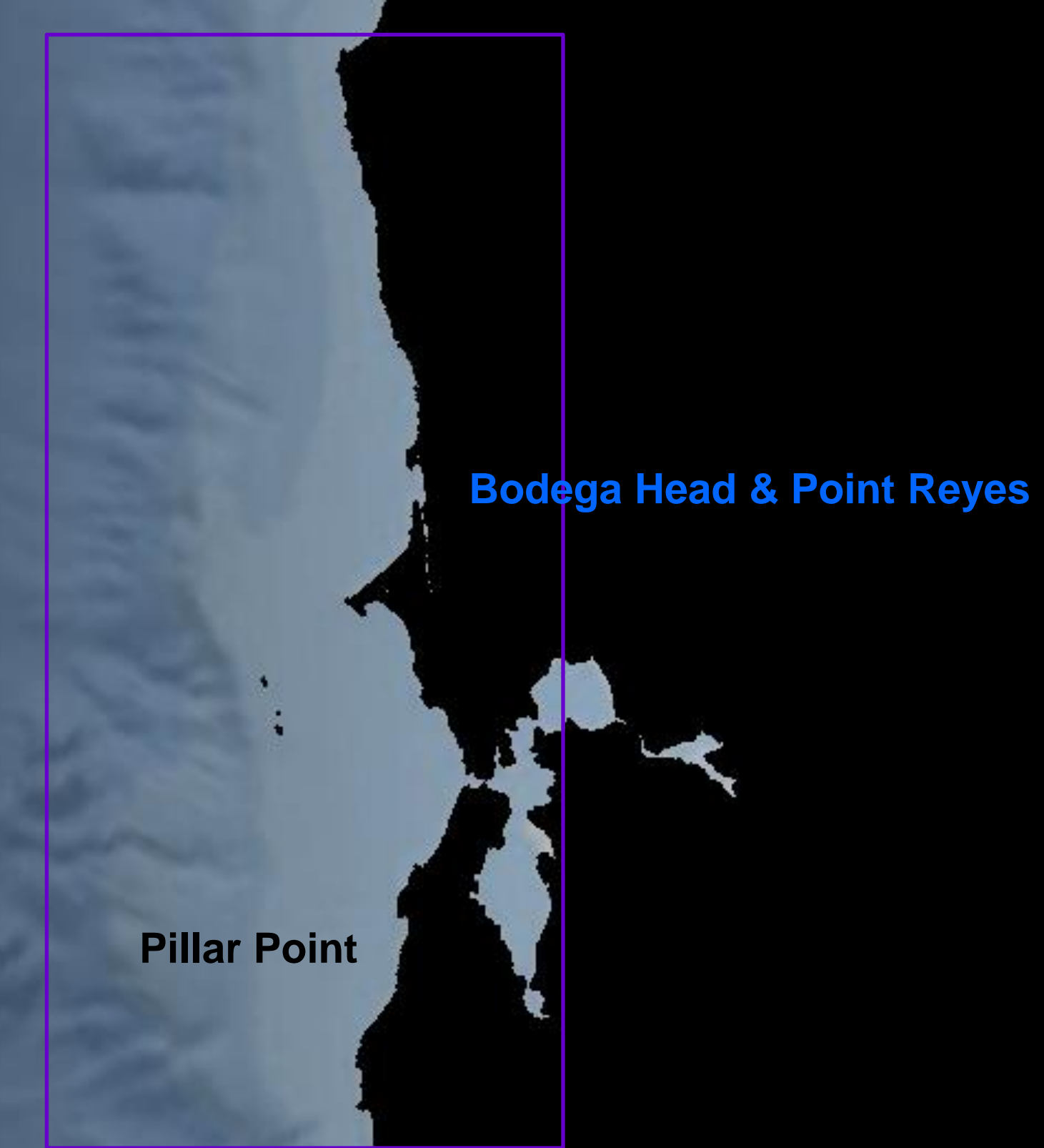
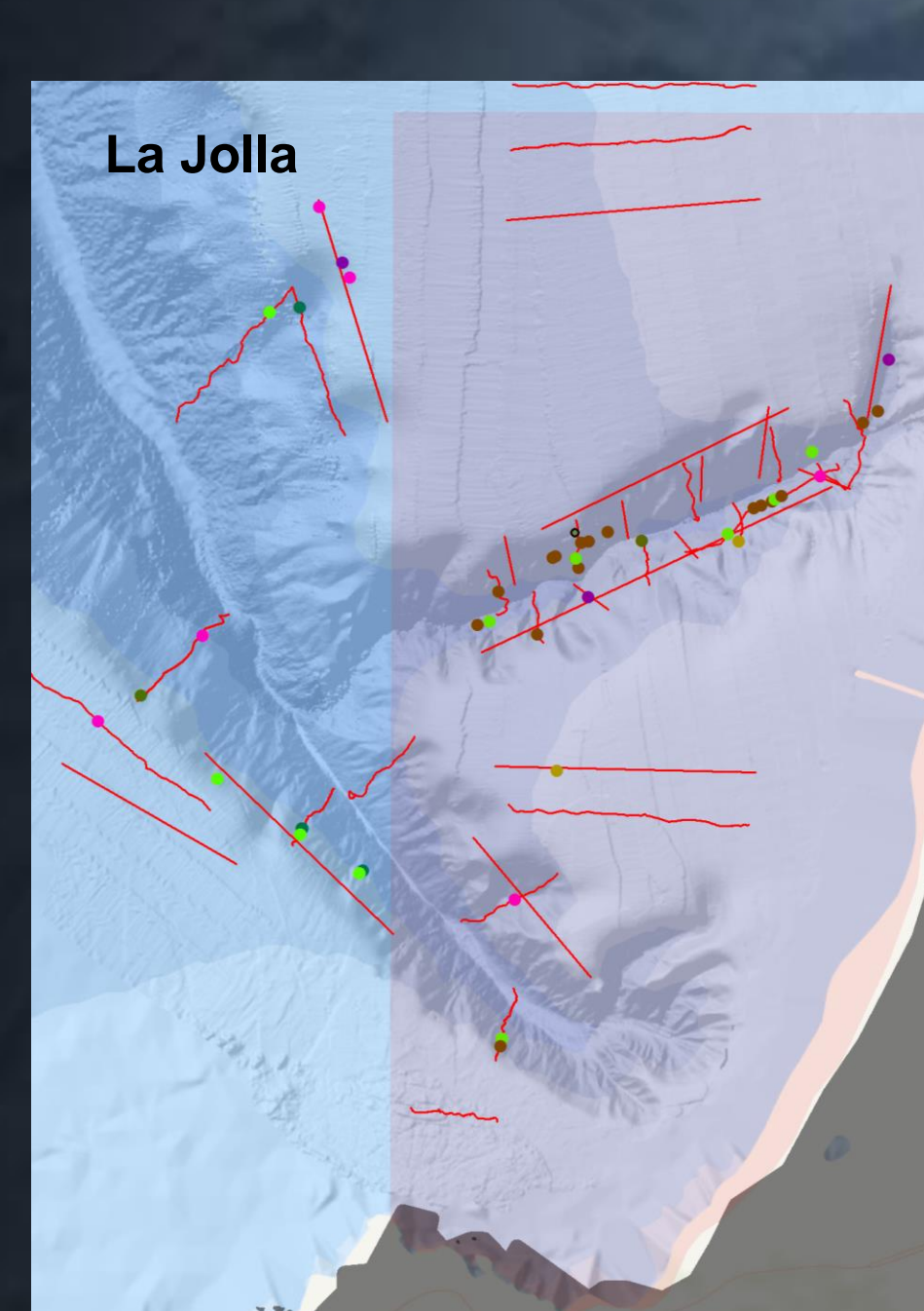
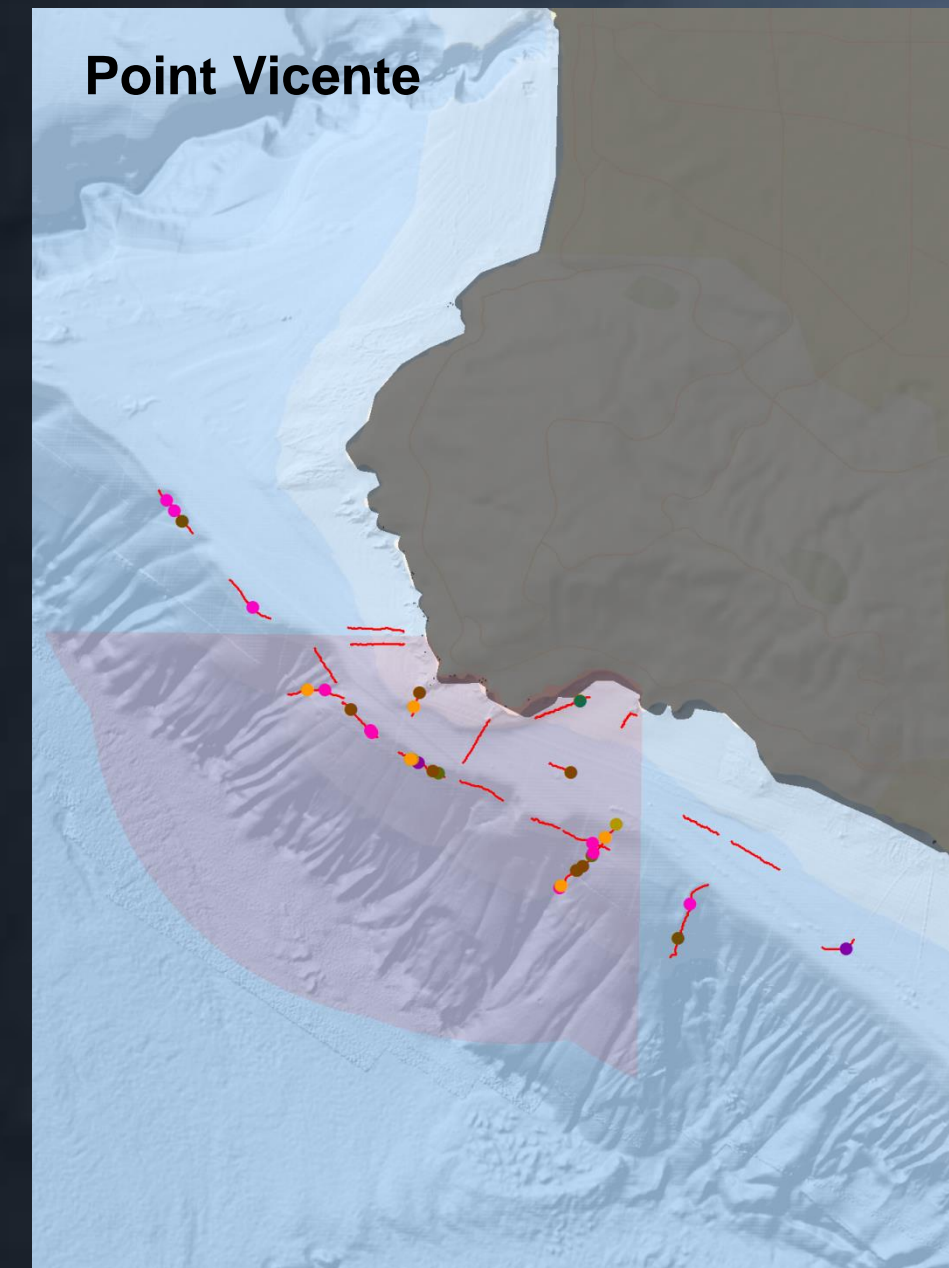


Farnsworth Bank, Catalina Island



Trash ends up in canyons and along shelves

Point Vicente



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