Fish Gut Contents ROA

General Method/Protocol

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This survey was conducted on three reef fish species: Oxyjulis californica, Sebastes atrovirens, and Paralabrax clathratus. Fish were collected seasonally during Fall, Winter, Spring and Summer from 2017-2019. Specimens were collected 2 MPA and 2 non-MPA sites: Isla Vista, Naples, Arroyo Quemado, Mohawk. For each site, 10 specimens were collected for each species. Collected by scuba divers, fish were caught via pole spear or net. Divers used caution when collecting fish to ensure minimal impact to the gut region of the fish. After the dive, specimens were immediately placed on ice.

At the end of the field day, specimens were returned to lab immediate processing. First, an isotope sample was collected by removing muscle tissue from the fish. Fish scales were removed to aid processing of isotope sample. Next, basic morphometrics were recorded: total length, standard length, wet body weight, and sex. Notes about damaged guts or gravid fish were recorded. Once morphometrics were complete, the entire gut would be removed, placed in a mesh bag and immediately placed in Formalin for fixing. After 24-48 hours of formalin fixing, gut specimens were placed in 95% ETOH for preservation while analyzing gut contents.

The fish stomachs were dissected under a microscope to determine gut contents. Contents were analyzed to the highest identification possible. However, most contents were unidentifiable to species and were lumped into groups: isopods, mysids, amphipods, annelids, caprellids, hydroids, isopods, etc. If stomachs were relatively empty, “no gut contents” was recorded.