OCNMS recruitment analysis: Black and yellowtail rockfish complex

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These are derived data products relevant to estimating recruitment (young-of-year abundance) of the black rockfish (*Sebastes melanops*) and yellowtail rockfish (*S. flavidus*) complex (BYT); the data source is the NWFSC dive survey in Olympic Coast National Marine Sanctuary (OCNMS) conducted between 2015 and 2024. We estimate recruitment for the BYT domplex because it is difficult to distinguish small recruits for these species. Description of survey methods and aims are detailed in (Tolimieri et al. 2023). We also estimate an abundance index for large (>10 cm total length) black rockfishes and provide a size class analysis. We do not include large yellowtail rockfish because they are rarely seen on our dive surveys in this area.

Data description

Divers on SCUBA conducted in situ surveys to count fish at each site along benthic belt transects (30 m by 2 m) following procedures modified from Malone et al. (2022). Transects were conducted within or directly adjacent to canopy kelp beds (consisting of giant *Macrocystis pyrifera* or bull *Nereocystis luetkeana* kelps). In 2015 surveyed at 10 sites and conducted four (4) transects per site at 5 m depth (Fig. **??**, (Shelton et al. 2018)). From 2016 on, we surveyed at five (5) sites (Fig. **??**), sampling at two (2) locations within each site separated by >100 m, and 2 depths within each location (5 and 10 m) Our goal was to complete six (6) replicate transects at each year-site-depth combination (Tolimieri et al. 2023).

During each fish transect, we counted and estimated the size (total length to nearest cm) of all fishes >5 cm total length; the exception was rockfishes *Sebastes* spp., for which we estimated sizes of all individuals. Rockfishes $\leq$ 10 cm were considered young-of-year. Divers also estimated horizontal visibility on each transect by determining the distance at which the lead diver could distinguish their buddy's extended fingers. Transects with visibility less than 2 m were excluded from analyses.

As noted above, it is difficult to visually distinguish many rockfish species when they are small. Therefore, on our surveys, we categorized juvenile rockfishes into five (5) groups established in the literature (Johansson et al. 2018; Markel and Shurin 2020):

(1) Yellowtail and black (YTB) included both yellowtail (*S. flavidus*) and black (*S. melanops*) rockfishes