Step 1: Night Smelt Weight Analysis - Overview

Sampling for night smelt (*Spirinchus starksii*) took place from March through August in 2014 and May through August in 2015 within 5 MPAs and four reference sites. Samples were collected on receding tides between dusk and dawn when nearshore swell height was no larger than 7 feet. Spawning aggregations of night smelt were located by scanning the wave slope with a high-powered spotlight from a four-wheel drive vehicle in the northern bioregion. Beaches in the southern bioregion were sampled by hiking along the wave slope with a battery powered spotlight due to vehicle access restrictions on those beaches. When spawning aggregations of night smelt were located all artificial light sources were turned off and samples were collected using an A-frame dip net hung with 3/8” stretch mesh. Night smelt were collected from several dip net hauls spread over the course of each observed spawning event or for a minimum of a two-hour period when spawning events lasted longer than two hours. Samples were collected from as many spawning aggregations as could be located within sample sites to ensure that the data collected were as representative of each site as possible. On nights when spawning aggregations of night smelt could not be located, researchers spent a minimum of 4 hours repeatedly searching the entire length of the beach within each sample site before concluding their sampling effort. All night smelt collected during an individual sampling trip were mixed together and preserved frozen for laboratory processing. Randomly selected subsamples of approximately 100 night smelt collected during each sampling trip were thawed in the laboratory at room temperature and weighed to the nearest 0.1 gram (2014 only), and gonads were examined for sex identification.