Reef Check California

Algae transects sampling

Reef Check California (RCCA) surveys consist of visual surveys performed by scuba divers. At each site, buddy teams of divers conduct eighteen 30 m x 2 m benthic transects, to monitor key species of fishes (35 species), invertebrates (33 species) and algae (5 species & 4 invasive species) and to characterize the reef substrate and relief. Each site is divided into two "zones" by depth (shallow 5-12 meters and deep 12-18 meters - or from offshore to inshore at sites with little depth variation) to assure that samples are distributed across the face of a reef from inshore to offshore. RCCA's survey methods are based on visual census survey methods developed by the Partnership of Interdisciplinary Studies of Coastal Oceans (PISCO) and have been modified so that they can be taught in a reasonable amount of time to volunteer suba divers. Species are selected because of their ecological or economic importance or because they are of specific management interest.

Algae are counted on 6 transects per site (3 transects in each zone). Each transect is a 2m wide x 30m long swath along the seafloor. Five species or species groups of algae are identified and counted along the transect. For *Macrocystis pyrifera* the number of stipes greater than 1 meter off the seafloor are counted and recorded for each individual encountered along the transect. If more than 50 individuals of an algae species are counted along the transect this species is sub-sampled. Sub-sampling is done by counting about 50 individuals and recording the distance along the transect at which this number of individuals is reached. Therefore, to generate densities for a 60 square meter area the count needs to be divided by the distance variable and then multiplied by 30.

For a complete description of the algae sampling methods see the RCCA monitoring protocol at: http://reefcheck.org/rcca/monitoring_protocol.php.