Smithsonian Environmental Research Center

SFSU San Francisco State University

Citizen Marine Science Network:

Understanding Change in Coastal Marine Environments

Adopt-a-Plate program

Program Goal: The Adopt-A-Plate program is being established to (a) detect biological invasions by non-native marine species; (b) measure changes in the distribution and abundance of marine invertebrates more broadly, and (c) measure important water quality parameters.

Approach: The program relies upon a distributed network of volunteer participants, who take and share standardized measures across many geographic locations. Each participant examines key organisms at a single site and collects descriptive physical measures. Although the individual commitment and time required per participant is small, the combined effort can produce a significant amount of critical information. Together, we seek to address fundamental gaps in our understanding of coastal ecosystems and improve stewardship of coastal resources.

Details: Each network participant or group will assess marine invertebrates and collect physical data (including temperature and salinity) at only one site. For each site, 10 PVC settling plates will be deployed, retrieved, and analyzed following standardized protocols. The settling plates serve as passive collectors for colonization of marine organisms,

providing an easy and standardized method to assess the presence of key species. We are focusing initial attention on non-native tunicates (sea squirts), which are spreading northward along western North America. We estimate the time required for one site (10 plates) @ 1 day every 3 months.

As a minimum, the plates will be deployed initially on or about 15 June and retrieved 3 months later, on or about 15 September. This standard time period allows comparison across many sites, including North America and overseas. Ideally, the network participant/group will be able to sample quarterly with replacement, setting out new plates upon retrieval of the initial summer collectors. We provide each participant with plates, collecting vials, temperature loggers, data sheets and instructions. Participants must have a good digital camera with good macro photography capabilities.

Participants: We currently have 10 organizations and/or individuals participating in Alaska and 3 in California. Participants include middle and high school teachers and their students, coastal resources managers, university professors, fisheries biologists and agency scientists. Most do not have any prior background in marine invertebrates!

The future: We are applying for funding to expand this network and to create an online database which participants and others can use to download their data and view information collected by the network. While our focus is currently on non-native tunicates, we are likely to add additional focal species.

Who we are: This is a joint project of the Smithsonian Environmental Research Center and San Francisco State University, operating out of Tiburon in Marin County, California.

Contact us: If you are interested in joining, or want more information, call or email Linda McCann at 415-435-3528, mccannl@si.edu.