SAN DIEGO CITIZEN SCIENCE NETWORK
February 4, 2013 Meeting Notes

The third meeting of the San Diego Citizen Science network/group was held on Monday, February 4, 2013 from 4:00 to 6:00 pm at the Birch Aquarium, and 27 attended.

Introductions. Participants offered short introductions and their interests in citizen science. Shelley Glenn Lee gave an overview of citizen science processes, and referred to two references: article by Rick Bonney and others, 2009 (at http://sdchildrenandnature.org/citizenscience.php), and Frontiers in Ecology Research issue devoted to citizen science (at http://www.esajournals.org/toc/fron/10/6).

Presentation. Karen Martin, Professor of Biology at Pepperdine University, and Melissa Studer, Beach Ecology Coalition, described the highly-successful Grunion Greeters project. It engaged scientists, community members, environmental organizations, surfers, and beach workers to better understand the habits and habitats of beach-spawning grunion (*Leuresthes tenuis)*, and to make beach grooming changes. Melissa described the key support from Jeff Graham, Director of Birch Aquarium and the efforts involved in volunteer recruitment, training, scheduling, incentives, and appreciation. Although the Grunion Greeters project is not currently funded, the Beach Ecology Coalition developed from this effort throughout southern California and continues. More information is available on their webpage, http://grunion.pepperdine.edu/ . Excerpts:

> Grunion Greeters observe small stretches of beach on nights of grunion runs during peak spawning season from April through early June. Grunion runs occur at night, twice a month, after the highest tides associated with a full or new moon. Greeters submit their observations via an interactive web site at http://www.Grunion.Org (this web site) and through a "hotline" phone number. For a full-color brochure with pictures download this PDF. (también disponible en español) Grunion are found only in California and Baja California. They spawn on the sandy beaches of the outer coast and protected bays. Their eggs remain buried in the sand incubating for about two weeks until they wash out and hatch.
>
> After concern that beach grooming practices were harming grunion eggs incubating beneath the surface of the sand during spawning season, the first systematic study of the impact of humans on the sandy beach habitat of this unique fish was conducted in 2002 throughout California. The study originated in San Diego and involved a massive collaboration of concerned residents, numerous scientists, agencies and organizations, and hundreds of volunteers. The results effected significant and lasting change in official beach grooming procedures in San Diego and other municipalities throughout California.
>
> Volunteer citizen scientists—the Grunion Greeters—provide vital observations and information. They collect data during spawning runs and submit reports online to be used for research and beach management. Research studies include population assessment of the grunion throughout their range in California, staging tables for embryonic development, effects of altered salinity, comparisons of microsatellite DNA between populations, hatching mechanisms, and evaluation of grunion spawning runs as potential indicators for the ecological health of sandy beaches.

Proposal to National Science Foundation. Shelley Glenn Lee provided an overview of the proposal submitted to the Advancing Informal STEM Learning (AISL) program at the National Science Foundation on January 14. This proposal, “Pathways: The San Diego Citizen Science Network - Establishing a regional network model to support public participation in scientific research,” was written by Meredith Vaughn (Principal Investigator), Shelley Glenn Lee, Mary Ann Hawke, and Anne Fege. Excerpts from the proposal:

> The San Diego Citizen Science Network will leverage existing and potential resources to increase collaboration among PPSR stakeholders, build capacity to provide opportunities for

public participation in scientific research, and create a framework for building a regional network to support citizen science efforts. The greatest potential is in engaging many stakeholders at the same time, in a region that has abundant science, conservation, and informal science education resources, and yet few have experience in citizen science process.

With a base of 400 professional and para-professionals interested in documenting and analyzing the biodiversity of San Diego, the network will provide a forum for discussion, professional development, and networking through a series of meetings, workshops, and strategic planning sessions. Through active participation in the network and with support of the project team, the capacity of informal science centers/educators, research scientists and others to conduct citizen science projects in San Diego County will be increased and evaluated, utilizing best practices in PPSR and in alignment with individual organizational goals. Three "Action Groups," consisting of an informal science center, a land manager/conservation professional, and a research scientist, will be supported in their efforts to design and implement a new citizen science project and/or improve an existing one.

Discussions: Participants were organized by table, discussed one or two steps in the Citizen Science process (from Bonney, et al 2009), and made these suggestions to the entire group:

- Use the Network for co-marketing, referring contacts to other citizen science projects
- Go to where people are already gathered (schools, community organizations)
- Put real-time collected data on a website for a project
- Attribute data to groups or individuals (San Diego Plant Atlas)
- Consider the sensitivity of data (grunion surveys not published, as grunion could be poached)
- Address how to collect data in ecologically-sensitive habitats or for sensitive species
- When first starting a project, explain that goals are for both science and science literacy

Upcoming events and projects:

- The Great Backyard Bird Count will be held in San Diego on February 15-18. More information at www.birdsource.org/ and in San Diego U-T article on February 1, http://www.utsandiego.com/news/2013/feb/01/watch-the-birdies/.
- Project Feeder Watch can engage students in schoolyards, www.birds.cornell.edu/pfw/
- Judith Coats (jcoats@ucsd.edu) mentioned the Aquatic Invasives Curriculum, customized to San Diego and funded by Sea Grant. A teacher workshop will be offered on May 11.
- The San Dieguito River Park Conservancy is doing some monitoring for the Multiple Species Conservation Program. More information from David O'Connor, david@sdrvc.org
- The County of San Diego has invited proposals for the Community Enhancement Program, due March 1. This could fund another season of the Grunion Greeters, supported by cooperation within the Network. The grants are for cultural activities, museums, visitor and convention bureaus, economic development councils, and other similar institutions that promote and generate tourism and/or economic development at the regional and community levels throughout the County. Info at http://www.sdcounty.ca.gov/auditor/commehnc.html.
- Several organizations volunteered to host the next meeting of the Network, likely in mid-April.

Send meeting note corrections to Anne Fege, fege@sandiegoaudubon.org . For further information about the Network, contact Shelley Glenn Lee, sglenn@ucsd.edu.