Citation-based repository for knowledge of species in the kelp forest ecosystem of Central and Southern CA maintained by the Long Marine Lab at the University of California, Santa Cruz from 2010-2013

Website: https://www.bco-dmo.org/dataset/3657
Version: 15 May 2012
Version Date: 2012-05-15

Project
» CAMEO: Comparative Approaches to Predicting the Consequences of an Impending Re-Invasion: Top Predator Effects on Californian Near-Shore Fisheries (SeaOtterReInv)

Program
» Comparative Analysis of Marine Ecosystem Organization (CAMEO)

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Dataset Description

The CAMEO Kelp Forest Database is a citation-based repository for knowledge of the identities, life-histories, and interactions between the species present in the nearshore kelp forest ecosystems of the eastern Pacific, focusing in particular on central and southern California.At present the database consists of two parts: (i) The database-proper (a MySQL database housed on a server at UCSC) and (ii) an online interface to the database, accessible to anyone with an internet connection, built to permit multiple users to enter information into the database simultaneously.

To access the Kelp Forest Database, visit http://kelpforest.ucsc.edu/ (Note: **At this point in time the online interface is designed only for manual data-entry.** The goal is to add batch-importing, data visualization, and data exporting utilities in the future.) Read/Write/Export access to the database interface currently requires user registration. Read-only access is available to anyone using a visitor account.

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Parameters

Parameters for this dataset have not yet been identified

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Deployments

lab_UCSC_Carr

Website	https://www.bco-dmo.org/deployment/58824
Platform	Long Marine Lab UCSC
Start Date	2010-07-15
End Date	2013-06-30
Description	Kelp Forest Database project; housed at Long Marine Laboratory University of California, Santa Cruz Santa Cruz, CA 95060

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Project Information

CAMEO: Comparative Approaches to Predicting the Consequences of an Impending Re-Invasion: Top Predator Effects on Californian Near-Shore Fisheries (SeaOtterReInv)

Website: http://cameo.noaa.gov/pres_mcarr.html

Coverage: Nearshore Eastern Pacific kelp forests

This project will compare the structure and dynamics of central and southern Californian nearshore ecosystems by parameterizing and analyzing the performance of three approaches for modeling these areas. The goals are to develop analytical tools to facilitate ecosystem-based decision making and management, and to forecast how marine reserves and the impending re-invasion of sea otters to southern Californian waters will affect the region's fisheries. The investigators will synthesize and leverage an array of preexisting data from spatially-extensive, long-term monitoring efforts. Along with a time series on the range, density, and feeding habits of sea otters, community data from a network of MPAs and reference sites of known age will provide the large-scale observational experiments needed to disentangle the effects of sea otters and MPAs on the structure and dynamics of California's nearshore ecosystems and their fisheries. The results will be incorporated into three different modeling approaches.

By employing multiple modeling approaches, one can compare predictions for how the effects of MPAs and the impending re-invasion of sea otters will affect the productivity, dynamics, and resilience of these important communities. This work will result in (1) a set of analytical tools and effective and transferable ecosystem-based indicators to assess the status, thresholds and resiliency of nearshore temperate reef ecosystems; and (2) a collection of ecosystem-based predictions of short- and long-term community dynamics, including resiliency to environmental change and to commercially and recreationally valued kelp forest fisheries.

Affiliated Program: PISCO

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Program Information

Comparative Analysis of Marine Ecosystem Organization (CAMEO)

Website: http://www.nsf.gov/geo/oce/programs/CAMEO_Webpage.jsp

CAMEO Science Plan (2012).

The Comparative Analysis of Marine Ecosystem Organization (CAMEO) program was implemented as a partnership between the NOAA National Marine Fisheries Service and National Science Foundation Division of Ocean Sciences. The purpose of CAMEO was to strengthen the scientific basis for an ecosystem approach to the stewardship of our ocean and coastal living marine resources. The program supported fundamental research to understand complex dynamics controlling ecosystem structure, productivity, behavior, resilience, and population connectivity, as well as effects of climate variability and anthropogenic pressures on living marine resources and critical habitats. CAMEO encouraged the development of multiple approaches, such as ecosystem models and comparative analyses of managed and unmanaged areas (e.g., marine protected areas) that can ultimately form a basis for forecasting and decision support. Central to the program was the emphasis on collaborations between academic and private researchers and federal agency scientists with mission responsibilities to inform ecosystem management activities. (adapted from CAMEO website)

This funding opportunity implemented CAMEO research by supporting the development of research tools and strategic approaches through the following types of proposals:

1. Development of strategies and methodologies for comparative analyses that can be applied consistently across spatial and temporal scales and ecosystems, and that facilitate the design of decision support tools for marine populations, ecosystems and habitats.

2. Development of models that address key scientific questions by comparing ecosystems and ecosystem processes. Models that are geographically and temporally portable, and that incorporate assessment of modeling skill, are particularly encouraged.

3. Retrospective studies that analyze, re-analyze or synthesize existing information (historic, time-series, ongoing program, etc.) using a comparative approach.

4. Studies that integrate the human dimension within ecosystem dynamics. The CAMEO program seeks to promote interdisciplinary research using comparative approaches to link marine ecosystem research with the social and behavioral sciences in new and vital ways.

To guide program priorities, a Science Steering Committee was formed through Dr. Linda Deegan and the initial Scientific Planning Office at the Marine Biological Laboratory in Woods Hole, MA. This Committee was designed to provide scientific advice and broad direction to NOAA and NSF regarding the CAMEO program.

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Funding

Funding Source	Award
NSF Division of Ocean Sciences (NSF OCE)	OCE-1041454

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