Mooring metadata with mooring ID from PISCO Ecological Time-Series station locations and the Oregon Coast Surf-Zone; 2008-2020 (Meta-Eco project)

Website: https://www.bco-dmo.org/dataset/3651
Version: 11 May 2012
Version Date: 2012-05-11

Project
» Scaling up from community to meta-ecosystem dynamics in the rocky intertidal - a comparative-experimental approach (Meta-Eco)

Contributors	Affiliation	Role
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Dataset Description

Moorings - Metadata - Test version with BCO-DMO generated mooring id

Methods & Sampling

Generated by BCO-DMO staff from the metadata forms

Data Processing Description

Generated by BCO-DMO staff from the metadata forms

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Data Files

File
Moorings_Metadata_Test.csv (Comma Separated Values (.csv), 2.66 KB) MD5:d5f550d5a5bcbec9c217ded4a58a1edc Primary data file for dataset ID 3651

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Parameters

Parameter	Description	Units
Mooring_Id	Mooring Id	text
Type	Mooring Type	text
Start_Date	Start Date of Deployment	text
End_Date	End Date of Deployment	text
Location	General Location	text
Lat	Mooring latitude (South is negative)	decimal degrees
Lon	Mooring longitude (West is negative)	decimal degrees
Depth	Mooring depth	text
Mooring_Name	Mooring Complete Identifier	text

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Deployments

OMEGAS-CARX00-GIFET

Website	https://www.bco-dmo.org/deployment/58809
Platform	PISCO Cape Arago Ecological Time-Series Station
Report	http://omegas.science.oregonstate.edu/?q=sites
Start Date	2008-04-01
End Date	2020-01-01
Description	surf-zone PAR, chlorophyll fluorescence, and temperature sensors

CBLX00

Website	https://www.bco-dmo.org/deployment/58810
Platform	PISCO Cape Blanco Ecological Time-Series Station
Start Date	2008-04-01
End Date	2020-01-01
Description	surf-zone PAR, chlorophyll fluorescence, and temperature sensors

CMEN00

Website	https://www.bco-dmo.org/deployment/58811
Platform	PISCO Cape Mendocino Ecological Time-Series Station
Start Date	2008-04-01
End Date	2020-01-01
Description	surf-zone PAR, chlorophyll fluorescence, and temperature sensors

FCKX00

Website	https://www.bco-dmo.org/deployment/58812
Platform	PISCO Fogarty Creek Ecological Time-Series Station
Start Date	2008-04-01
End Date	2020-01-01
Description	surf-zone PAR, chlorophyll fluorescence, and temperature sensors

IBODXX

Website	https://www.bco-dmo.org/deployment/58813
Platform	Bodega Head Ecological Time-Series Station
Start Date	2008-04-01
End Date	2020-01-01
Description	surf-zone PAR, chlorophyll fluorescence, and temperature sensors

IMOAXX

Website	https://www.bco-dmo.org/deployment/58814
Platform	Moat Creek Ecological Time-Series Station
Start Date	2008-04-01
End Date	2020-01-01
Description	surf-zone PAR, chlorophyll fluorescence, and temperature sensors

KHLX00

Website	https://www.bco-dmo.org/deployment/58815
Platform	Kibesillah Hill Ecological Time-Series Station
Start Date	2008-04-01
End Date	2020-01-01
Description	surf-zone PAR, chlorophyll fluorescence, and temperature sensors

POHX00

Website	https://www.bco-dmo.org/deployment/58816
Platform	PISCO Port Orford Head Ecological Time-Series Station
Start Date	2008-04-01
End Date	2020-01-01
Description	surf-zone PAR, chlorophyll fluorescence, and temperature sensors

RKPX00

Website	https://www.bco-dmo.org/deployment/58817
Platform	PISCO Rocky Point Ecological Time-Series Station
Start Date	2008-04-01
End Date	2020-01-01
Description	surf-zone PAR, chlorophyll fluorescence, and temperature sensors

SHLX00

Website	https://www.bco-dmo.org/deployment/58818
Platform	PISCO Strawberry Hill Ecological Time-Series Station
Start Date	2008-04-01
End Date	2020-01-01
Description	surf-zone PAR, chlorophyll fluorescence, and temperature sensors

SRKX00

Website	https://www.bco-dmo.org/deployment/58819
Platform	PISCO Seal Rock Ecological Time-Series Station
Start Date	2008-04-01
End Date	2020-01-01
Description	surf-zone PAR, chlorophyll fluorescence, and temperature sensors

YBHX00

Website	https://www.bco-dmo.org/deployment/58820
Platform	PISCO Yachats Beach Ecological Time-Series Station
Start Date	2008-04-01
End Date	2020-01-01
Description	surf-zone PAR, chlorophyll fluorescence, and temperature sensors

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Project Information

Scaling up from community to meta-ecosystem dynamics in the rocky intertidal - a comparative-experimental approach (Meta-Eco)

Coverage: US West Coast; North bounding latitude: 45.00N, South bounding latitude: 38.00N

Collaborative Research: Scaling up from community to meta-ecosystem dynamics in the rocky intertidal - a comparative-experimental approach

The meta-ecosystem concept hypothesizes that the dynamics of ecological communities reflect interdependence between local-scale and ecosystem processes that vary across large distances. Thus, variation among communities depends not only on locally-varying species interactions and abiotic factors, such as physical disturbance, but also on regionally- and globally-varying ecosystem processes, such as dispersal and flows of materials such as nutrients and carbon. This study of rocky intertidal communities and the factors underlying their variation addresses the issue of meta-ecosystem dynamics. The goal of this project is to understand how variability in oceanographic subsidies, such as nutrients and phytoplankton, influences benthic community structure in the northern California Current Large Marine Ecosystem. Local-scale variation in upwelling along the Oregon and northern California coasts will be used to understand how changes in nutrients and productivity influence benthic-pelagic coupling, its effect on benthic species interactions, and ultimately rocky intertidal community structure. A conceptual model, in which the independent variable is seawater temperature (SWT), is used to predict how the dual effect of nutrients and light on marine benthic and pelagic primary production generates different community outcomes in the low intertidal zone. The two "endpoints" of community structure are a dominance of filter feeding invertebrates or macroalgae. The model predicts that with low (cold) SWT, nutrient and light availability is high, and macrophytes are dominant. Under very high nutrients and light, competitively dominant kelps will prevail and possibly facilitate stress-intolerant macroalgal species, and as nutrients and light diminish, kelp dominance should switch to dominance by surfgrass and foliose understory algae. With higher (warmer) SWT, conditions favor high phytoplankton production, leading to dominance by sessile invertebrates. High phytoplankton also creates low light and low nutrient conditions, negatively affecting growth of macroalgae and their ability to compete with sessile invertebrates. Research will be conducted at 15 sites nested within five capes spanning the 1300 km range of the study region. A water sampling program will quantify concentrations of nutrients and phytoplankton, field-deployed remote sensors will provide time-series estimates of light and chlorophyll a, and surveys will quantify community structure. Manipulative field experiments will test the role of species interactions on community structure and how interactions vary with ecological subsidies.

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Funding

Funding Source	Award
NSF Division of Ocean Sciences (NSF OCE)	OCE-0726983
NSF Division of Ocean Sciences (NSF OCE)	OCE-0727611

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